



CEILING SYSTEMS

[Between us, ideas become reality.]®

AXIOM® Building Perimeter System – Assembly and Installation Instructions

1 GENERAL

1.1 Description

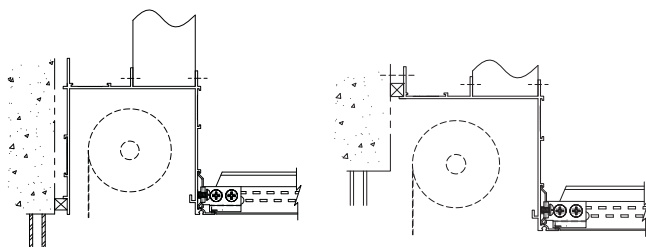
Axiom Building Perimeter Systems (ABPS) is a pre-engineered perimeter solution to accomplish the transition between the interior of a building's perimeter and the ceiling plane. This system will consist of multiple extruded parts that interlock, to form the perimeter compatible with most of Armstrong's acoustical and dry wall suspension systems.

Our perimeter components can incorporate drapery pockets, window shades, and air diffusers while also providing a solution for ceiling elevation changes at the perimeter.

Component Descriptions:

Axiom Building Perimeter Pocket:

Aluminum pockets form with distinct architectural detail, 2- or 3-sided pocket with special bosses to accept T-Bar Connection Clip and Splice Plate to provide positive mechanical lock with no visible fasteners, Factory or Field cut miters to match approved shop drawings. Pockets can work directly with the ceiling system or use Extensions and Diffuser Face Plates for other design options.

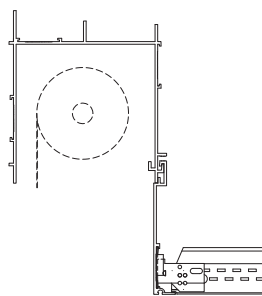


3-sided Axiom Perimeter Pocket

2-sided Axiom Perimeter Pocket

Axiom Building Perimeter Extensions:

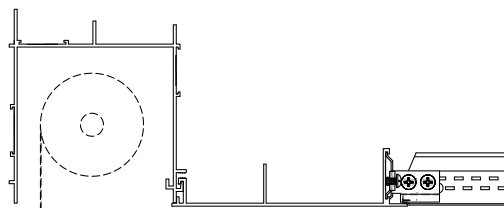
Pre-engineered extension component allows design flexibility for larger sized perimeter pockets and ceiling elevation changes. The aluminum extension component fully integrates with the perimeter pocket. Extensions are available 4", 6" and 8" heights.



3-sided Axiom Perimeter Pocket, Connection to Extension/Diffuser with Axiom Perimeter Extension 4"

Axiom Building Perimeter Diffuser Face Plates:

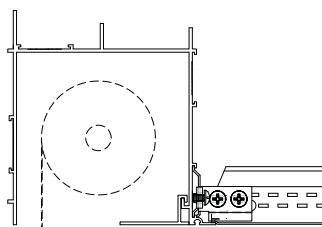
Pre-Engineered diffuser face plate allows for full perimeter diffuser integration. This aluminum diffuser face plate fully integrates with the perimeter pocket component. Diffuser plates are available 4" or 7" wide, un-slotted or slotted to provide air distribution at the perimeter.



3-sided Axiom Perimeter Pocket, Connection to Extension/Diffuser with Axiom Perimeter Diffuser Plate 7"

Axiom Building Perimeter Closure Clips:

Aluminum closure clip provides concealment of the perimeter pocket should a shade or blind be installed.



3-sided Axiom Perimeter Pocket, Acoustical / Drywall Transition with Axiom Perimeter Closure Clip 3"

See Axiom Building Perimeter System data page for the complete component list, identification and description

ABPS components are available in 10' long straight sections for field fabrication and assembly. This system may require field cutting and mitering. These cuts are best made using an appropriately sized sliding compound miter saw fitted with carbide tipped blade designed for cutting non-ferrous metals.

ABPS can be ordered as a custom fabricated assembly. Field fabrication for custom orders is limited to component assembly and minor adjustments to accommodate differences between design dimensions and actual field conditions.

These instructions are divided into sections detailing material delivery and identification, component assembly, suspended pocket and direct applied pocket applications, extension plates, diffuser plates, accessories and seismic.

Please carefully review all appropriate sections before proceeding with installation.

2 MATERIAL DELIVERY AND IDENTIFICATION

Standard ABPS components are delivered in full carton quantities. All hardware and instructions to assemble ABPS will be included in the packaging. Refer to the jobsite shop drawings for specific ABPS details and components. Identify all parts listed on the drawings and verify they are delivered to the site before starting the installation.

Exercise appropriate care to protect the finished surfaces of the trim.

(Custom Orders)

Custom Axiom Building Perimeter System orders will be shipped with detailed shop drawings. Please refer to these details for parts list and identification.

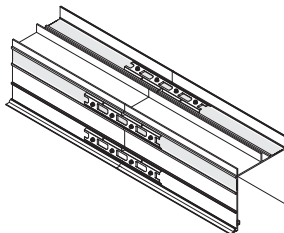
Review the shop drawings and packing slip to insure that the complete order has been delivered to the site and to familiarize you with the layout of the installation.

3 COMPONENT ASSEMBLIES

3.1 Splice Plates

Steel splice plates are used to align and secure joints between sections of ABPS trim. Each joint requires a splice plate at every set of channel bosses for the proper trim alignment. Join straight sections of ABPS using the AX4SPICEB (4 screws) splice plates. Splice plates are secured to the trim sections using factory-installed setscrews. A 1/8" hex key is included with the hardware.

CAUTION: Do not over-tighten these screws. Apply only enough force to lock the components together. Over tightening the screws can deform the exposed face of the channel trim.



Typical procedure

1. Insert splices into channel trim bosses
2. Close the joint
3. Tighten screws

Note – splice plates can slide completely into the channel bosses and then slide into the adjoining section after trim is aligned. This will aide splice plate connections for the last piece or mitered intersections.

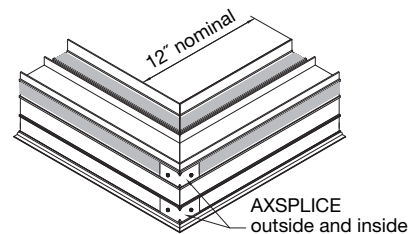
3.2 Factory Mitered Corners

ABPS perimeter pockets are available with factory mitered corners. Mitered sections of trim will measure nominal 12" along the inside flange of the miter. Factory mitered corners ship in sections and must be assembled on the job. All hardware is included. The mitered ends of ABPS are joined using the AXSPLICE (2 screw) splice plates. AXSPLICE plates are shipped flat. Hand-bend the plates as required for mitered intersections. Insert AXSPLICE in all outside and inside channel bosses. The square ends are attached to adjoining straight sections of Axiom trim using the AX4SPICEB (4 screw) splice plates.

ABPS pocket mitered corner trim should be installed before the straight sections. Work away from the corners and field cut straight sections as needed.

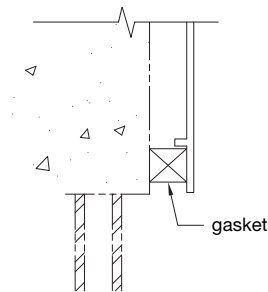
Field mitering ABPS Perimeter Pockets is not recommended due to the shape and size of the trim.

ABPS extension pieces and diffuser face plates can be cut and mitered in the field for the best fit. These cuts are best made using an appropriately sized sliding compound miter saw fitted with carbide tipped blade designed for cutting non-ferrous metals.



3.3 ABPS Foam Gasket

Self stick field applied 1/2" x 1/2" Foam gasket is required along the outside edge of ABPS Pocket trim to seal along the wall and make up for slight wall irregularities. Gasket is required for each linear foot of ABPS pocket.

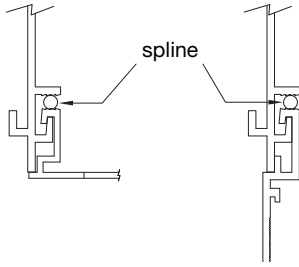


Typical procedure

1. Install the gasket just below the tab of the outside edge of the ABPS pocket
2. Peel the release paper off the gasket as it is applied by hand to the trim
3. Trim the gasket with a sharp utility knife or scissors

3.4 ABPS Spine

Axiom Building Perimeter Spine (AXPSPLINE) (0.175" diameter) is required to lock ABPS Perimeter Extensions and Diffuser Face Plates to the Pocket trim. The spine also helps maintain trim alignment. Spine is required for each linear foot of ABPS extension or diffuser trim. (See next drawing).



Typical procedure

1. Engage the ABPS extension/diffuser trim hook into the ABPS pocket connector.
2. Insert the spline by hand into the void above the hook.
3. Trim the gasket with a sharp utility knife or scissors

3.5 T-Bar Connection Clips

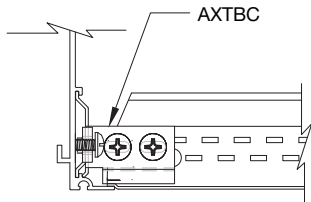
Axiom T-Bar Connection Clips (AXTBC, AXVTBC) are used to attach the ceiling grid systems to the ABPS trim components. These two-piece steel clips are supplied as an assembled unit with the steel locking screw factory installed. One clip is required at each location where the grid system intersects the ABPS trim.

There are two versions of the T-bar Connection Clip.

1. AXTBC is used with drywall, lay-in, tegular, concealed tile and installations of Vector panels that are all full size.
2. AXVTBC is used with cut Vector panels.

T-Bar Connection Clips are attached to the grid members using screws supplied by the installer. Framing screws (#6 x 7/16" or 1/2" long) are typical. Special conditions such as open cell installations may dictate the use of alternate methods of attachment such as pop rivets.

See installation section for alignment of the AXTBC connection clip to the grid member.

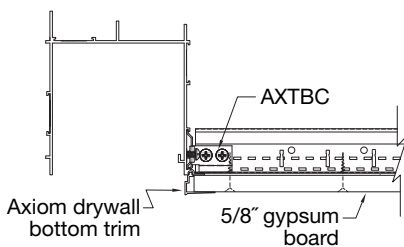


Typical procedure

1. Cut grid to length
2. Attach clip to grid member
3. Engage clip in channel bosses and tighten locking screw

3.6 Drywall Trim

Drywall bottom trim (AXBTSTR) is used to finish the edges of 5/8" drywall panels that are applied to the bottom surface of an ABPS trim installation. Drywall trim is fastened using standard drywall screws applied through the taping flange of the trim into the drywall suspension system. The trim is finished using standard drywall materials and techniques. Normally, the drywall and axiom trim is then painted to meet job requirements.

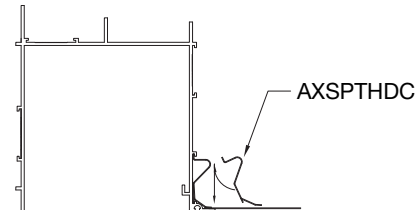


Typical Procedure

1. Attach the drywall grid system to the ABPS trim with an AXTBC
2. Attach 5/8" drywall to the system
3. Install Axiom drywall trim
4. Tape and finish drywall
5. Paint

3.7 Metal Panel Hold-down Clips

Metal panel hold-down clips (ABPSSPTHDC) are used to secure the cut edges of metal ceilings at the ABPS trim. Insert one clip for every foot of perimeter, or as needed to maintain contact between the panel edge and the flange of the trim.



Typical Procedure

1. Install the metal panel
2. Insert the top of the clip into the channel first
3. Press up to compress the clip
4. Insert the bottom leg into the channel.

3.8 ABPS perimeter POCKET INSTALLATION

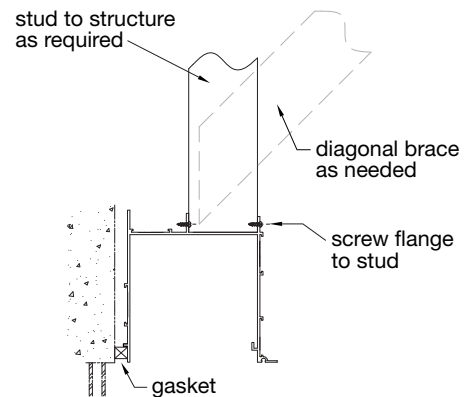
The ABPS Pocket is the main component for the building perimeter trim system. The pocket is available 3-sided or 2-sided depending on the design and installation requirements. Installation procedures are the same for 3- and 2-sided pockets.

ABPS pocket top flanges are spaced to fit standard 2-1/2" metal studs for support or bracing to structure. The ABPS pocket has two options for mounting to the structure; free floating from the wall or direct attached to the wall.

NOTE: Mechanically fastened connections at all locations are critical to the system support. Failed, damaged or stripped fasteners must be replaced. Follow the fastener manufacturers' installation recommendation.

3.8.1 ABPS Perimeter Pocket, Free Floating from Wall

Refer to the job plan to determine the elevation of the ABPS pocket.



Typical Procedure

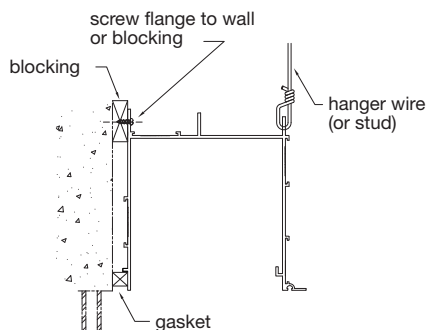
1. Fasten a 2-1/2" track or wood blocking to the structure directly above the ABPS perimeter pocket track location. Use appropriate fasteners along the track to carry the weight of the ABPS.

2. Cut nominal 2-1/2" metal studs to fit between the structure track and the ABPS Pocket track.
3. Install the 1/2" x 1/2" self stick foam gasket just below the tab along the bottom outside edge of the ABPS pocket.
4. Use a laser or leveling device and temporarily secure the ABPS pocket to several studs with clamps or vice grips.
5. Use sheet metal screws, typ. #8 x 1/2" framing screw, to attach both sides of the stud to the ABPS track.
6. Studs should be located every 24" inches (max stud spacing is 48" OC) along the track or as required by local authorities.
7. Use diagonal bracing to structure as needed to maintain the correct alignment of the ABPS pocket.

The foam gasket will seal the ABPS pocket along the wall and make up for slight wall irregularities.

3.8.2 ABPS Perimeter Pocket, Attached to Wall

Refer to the job plan to determine the elevation of the ABPS pocket. The pocket can be attached directly to the wall structure or blocking. Attach blocking to the structure and shim as needed to correct any wall irregularities. Attach the ABPS perimeter pocket to the blocking.



Typical Procedure

1. Attach blocking to the wall structure with the appropriate fasteners. Shim as needed at any wall irregularities to create a straight run.
2. Pre-drill clearance holes every 16" to 24" or as needed along the top wall flange of the pocket.
3. Install the 1/2" x 1/2" self stick foam gasket just below the tab along the bottom outside edge of the ABPS pocket.
4. Use a laser to level the pocket along the wall and secure it to the blocking every 16" to 24" or as required by local authorities.
5. The front of the pocket can be supported with 12 ga. wire or a strut. Pre-drill a clearance hole in the top front flange to attach a hanger wire. Attach hanger wire to structure, then to the pocket. Wire spacing should not exceed 48".

NOTE: All hanger wire holes must be drilled to have a minimum of 1/4" between the top of the hole and the top of the flange for load requirements.

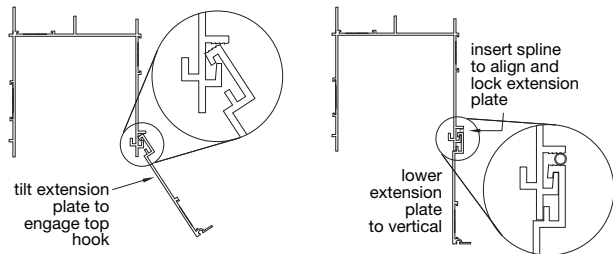
The foam gasket will seal the ABPS pocket along the wall and make up for slight wall irregularities.

3.9 ABPS Extension and Diffuser Face Plate Installation

ABPS can use extension and diffuser face plates to create a variety of solutions to meet perimeter trim design options. You must use ABPS perimeter pockets with connections for extension and diffuser face plates. Extensions and diffuser plates are field cut and mitered as required. These cuts are best made using an appropriately sized sliding compound miter saw fitted with carbide tipped blade designed for cutting non-ferrous metals. ABPS extensions and diffusers work with most of Armstrong's acoustical and dry wall suspension systems.

3.9.1 AXIOM Building Perimeter Extensions

ABPS extensions come in straight 10' lengths and nominal 4", 6" and 8" high. They are used for an elevation change between the pockets and finish height of the ceiling. Refer to job drawings for specific elevations and details.

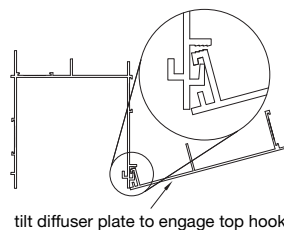


Typical Procedure

1. Use a full length section or field cut as required.
 2. Extension plate joints must be staggered or offset from the pocket joint by minimum of 12" for strength and proper system alignment.
 2. Insert the appropriate splice plates in channel bosses.
 3. Tilt the extension plate to allow the top hook to fit into the pocket connection
 4. Lower the extension plate to the vertical position and the extension hook locks under the bottom of the pocket.
 5. Insert the spline
 6. Vertical alignment may require diagonal bracing to structure.
- Continue installing extension plates as required, pull sections together tightly before securing the splice plate set screws.

3.9.2 ABPS Diffuser Face Plates

ABPS diffuser face plates come in straight 10' lengths and nominal 4", and 7" wide. They are used for full perimeter diffuser integration or as horizontal extension plates. Refer to job drawings for specific details.



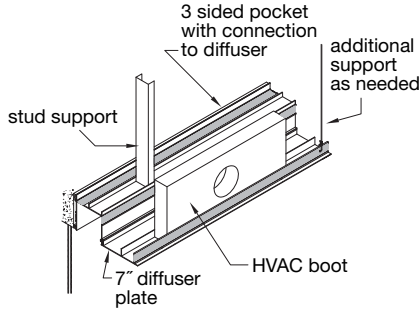
Typical Procedure

1. Use a full length section or field cut as required.
2. Diffuser plate joints must be staggered or offset from the pocket joint by minimum of 12" for strength and proper system alignment)
2. Insert the appropriate splice plates in channel bosses.
3. Tilt the diffuser plate to allow the top hook to fit into the pocket connection
4. Lower the diffuser plate to the horizontal position and the hook locks under the bottom of the pocket.
5. Insert the spline
6. Level the diffuser as needed with 12 gauge hanger wire or vertical strut. Each section of trim requires a minimum of two attachments to structure.

Continue installing diffuser plates as required, pull sections together tightly before securing the splice plate set screws.

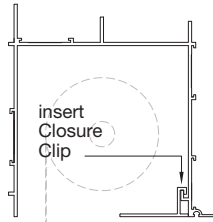
Installing HVAC Boots

1. Fit the HVAC boot over the slotted section of the diffuser plate.
2. Secure boot to the diffuser plate as per boot manufacturers' recommendation.
3. Provide additional support, 12 gauge hanger wire or stud as needed.



3.10 Perimeter Closure Clip

ABPS Perimeter Closure Clip fits inside the room side of the pocket to close off or reduce the opening of the pocket. It is available 2" and 3" wide and come 10' in length.

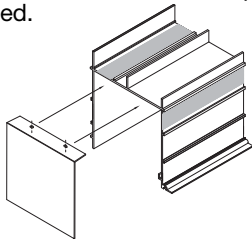


Typical Procedure

1. Use a full length section or field cut as required.
2. Closure clips joints must be staggered or offset from the pocket joint by minimum of 12" for strength and proper system alignment.
3. Install all hardware inside the pocket before installing the closure clip.
4. Insert the closure clip top hook into the channel on the inside of the pocket.
5. Lower the closure clip until the hooks engage and rest against the inside of the pocket.

3.11 Axiom Perimeter

Use the End Plate to close off the ABPS Pocket at open ends, to conceal curtain ends, seal the pocket at partition walls or as needed.



Typical Procedure

1. Fit end cap into the pocket with the attachment flange against the top.
2. Secure the end cap with self-drilling sheet metal screws (typ. #8 x 1/2") through the clearance holes in the flange.

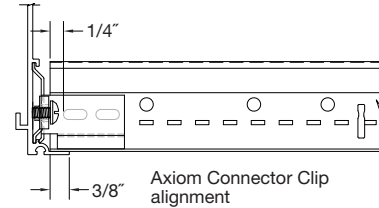
3.12 Installing Shades or Fixtures

ABP systems are designed to interface with shades and other fixtures along the building perimeter. Refer to shade or fixture manufacturer for installation and fastening recommendation of their product to the ABPS pocket.

Shade or fixture weights may require additional support or blocking of ABPS pockets to meet structure requirements. Refer to manufacturer's data pages for load data.

4.0 ATTACHING GRID TO ABPS

ABPS trim components are installed before the acoustical or drywall grid systems. Most acoustical and drywall grid systems will attach directly to all ABPS trims. There are several options for the Axiom connector clip used to attach the grid to the ABPS trim. Carefully review these options for the systems you are installing.

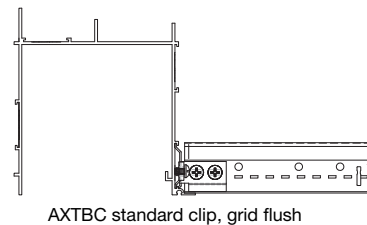


Typical Procedure

1. Refer to the reflected ceiling plan for the suspension system layout.
2. Determine the size of the border panel next to the ABPS trim.
3. Install the suspension system so the grid will rest 3/8" on the ABPS trim flange.
4. Select the correct Axiom Tee Bar connector clip (AXTBC) for your grid option listed below.
5. Rest the bottom of the clip on the flange of the grid.
6. Attach the clips by aligning the end of the elongated hole 1/4" from the cut end of the grid and inserting a standard framing screw into the center of the slot.
7. Use a Phillips screw driver to loosen the locking screw on the lower plate.
8. Engage the top ear of the connection clips under the boss of the ABPS channel trim. Slide the lower leg downward to engage the lower boss on the trim and secure by tightening the locking screw.
9. Loosen the locking screw and adjust the clip as necessary to properly align the grid.
10. Insert a second framing screw through the other hole in each of the connection clips.

Axiom Connector Clip Options

4.1. T – Bar grid for Prelude and Suprafine T-Bar grid that will rest on the lower flange of the Axiom Trim – (full size vector panels) Use standard AXTBC.

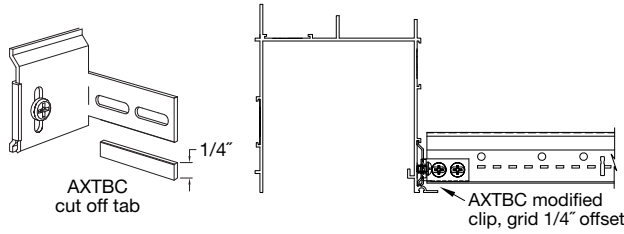


Follow steps 5 – 10 of typical procedure.

4.2. Silhouette, Interlude, Trimlok & Sonata (Systems with a 5/16" shoulder height), Tegular panels on Prelude or Superfine with the panel face resting on the trim flange & 5/8" concealed tile.

Grid must be held 1/4" above the ABPS flange.

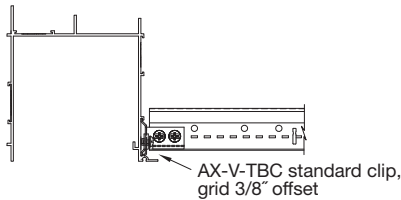
Modify the AXTBC by cutting 1/4" off the bottom of the clip at the score line.



Follow steps 5 – 10 of typical procedure.

4.2.3. MetalWorks Vector (cut panels) and 3/4" concealed tile – use standard AX-V-TBC.

Grid must be held 3/8" above the ABPS flange



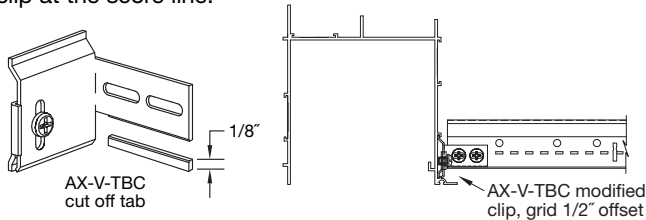
Follow steps 5 – 10 of typical procedure.

Use AXSPTHDC to hold down cut metal panel edges on ABPS trim.

4.2.4. Ultima, Optima & Wood Vector (cut panels) – use AX-V-TBC.

Grid must be held 1/2" above the ABPS flange

Modify the AX-V-TBC by cutting 1/8" off the bottom of the clip at the score line.



Follow steps 5 – 10 of typical procedure.

5.0 ABPS COMPONENT SUPPORT

The manufacturer requires that ABPS systems and the ceiling suspension systems be installed and supported in a manner that complies with all applicable codes and standards.

The follow chart provided recommendations for support of ABPS components.

| Pockets (2-sided / 3-sided) | Non-Seismic | Seismic |
|---|--------------------|---|
| Stud spacing (Floating pocket) | 2 ft OC | 16" OC or as required by local authority |
| Stud/wire spacing (Attached pocket) Hanger wire spacing | 4 ft OC 4 ft OC | 2 ft OC 2 ft OC |
| Diffuser Plate Stud spacing Hanger wire spacing | 4 ft OC 4 ft OC | 4 ft OC 4 ft OC |
| Vertical Extension Plate** Bracing | 4 ft OC | ** |
| Minimum of 2 studs/2 hanger wires are required per section of trim. Mitered corner assemblies require one stud / hanger per assembly. | | |

**Seismic Installations – In severe seismic areas, professional design engineering is required for lateral force bracing. Floating ABPS pockets requires diagonal bracing to structure every 48" OC. Seismic restraint requirements may require wires attached to each grid member within 8" of the cut end along the Axiom Building Perimeter Trim.

6.0 INSTALL CEILING PANELS, TILE OR DRYWALL

- 6.1** Cut and install tiles or panels using standard procedures for the specified products.
- 6.2** Treat exposed cut edges of ceiling panels as detailed in the project specifications.
- 6.3** For drywall applications, attach 5/8" gypsum panels to the suspension system per manufacturer's recommendations.

7.0 FINAL DETAILING

- 1. Check and adjust the alignment of grid and ceiling panels.
- 2. Clean exposed surfaces as required. Painted Axiom components may be wiped down with a mild household cleaner to remove fingerprints, oil, etc.
- 3. Touch up painted components as required. All painted custom Axiom shipments include a container of paint to be used for this purpose.

MORE INFORMATION

For more information, or for an Armstrong representative, call 1 877 ARMSTRONG.
 For complete technical information, detail drawings, CAD design assistance, installation information and many other technical services, call TechLine™ services at 1 877 ARMSTRONG or FAX 1 800 572 TECH.
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