Your First Source for Innovative Interior Soffit Solutions & Custom Engineered Fabrications

JG Innovations Inc.

INTERIOR STEEL SOFFIT SYSTEM

Installation & Care Guide

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THE SOFFI-STEEL® SYSTEM

JG INTERLOCK™ Concealment Systems

MADE IN THE USA

INSTALLATION GUIDE TO JG INNOVATIONS – INTERIOR STEEL SOFFIT SYSTEMS

Forward – Our custom interior soffit systems have been designed to conceal any type, size or combination of Fire Sprinkler Systems, Plumbing, Hydronic Piping, HVAC, Electrical or Cable/IT Wiring. There are presently four types of interior steel soffit offered; Architectural, Aesthetic, Commercial, and Security Grade, which should accommodate most project needs. Our Architectural, Aesthetic, and Commercial soffit systems are typically installed where aesthetics are the primary concern. Examples include buildings of residential/commercial/educational occupancy such as Nursing Homes, Hospitals, Hotels, Apartment Buildings, K-12 Educational Facilities, Universities, Greek Housing and Dormitories. On the other hand, our security soffit system is designed for Psychiatric Facilities, Prisons, Jails, Detention Centers, Institutions and other facilities where security is the pressing need. There are minimal differences between our Architectural/Aesthetic/Commercial/Security Soffit systems. Our Architectural, Aesthetic and Commercial lines utilize slip couplings for proper fastening of seams and are typically comprised of light to medium duty material; whereas our Security soffit system is manufactured in a heavier gauge material and requires riveted joints where seams occur.

The different installation procedures for these two systems are identified within the text of this guide. As fire sprinkler piping system installations generally entail more complete and specific concerns, restrictions, and details (specific sprinkler head locations, etc.), this guide will address the installation of our interior steel soffit systems as it is intended to accommodate fire sprinkler systems.

Handling and Storage – Reasonable care must be exercised in handling our steel soffit systems and accessories. Take caution to not drop the shield or any objects on the shield itself in order to minimize dents and damages. It is strongly recommended that our interior steel soffit systems and fittings should not be stored in a manner which compresses the components or would distort their shape.

Recommended Tools – One of the keys to a fast, smooth, and efficient installation of our interior steel soffit systems are having the proper tools to work with. Ideally, these tools would include:

1. Aviation Shears/Snips may be used for cutting material in lighter gauges, such as our 24 Gauge material. A hand seamer or hand break also assists with custom fabrications. For cutting material to length, notching and cutting holes for sprinkler heads or other devices in heavier gauges, a plasma cutter is typically sufficient. Other useful tools include a die grinder, industrial grade jigsaw or hand held saber saw/metal cutter.

2. If more than a few dozen outlet holes are required, a carbide tipped hole saw is recommended. This tool expedites hole cutting and increases accuracy. When using this tool, you will also need a power drill with a higher RPM and at least a 1/2” chuck. Standard hole saw sizes for sprinkler head cut-outs are between 2” and 2 3/4”

3. When encountering concrete structures a rotary hammer drill is essential for anchoring the cover clips. Typically, 3/16” x 8” length SDS carbide tipped hammer drill bits work well.

4. High speed rotary drill is required for drilling rivet holes and in cut ends, cutting sprinkler head holes, etc.

Additional suggested tools include:

- An 8” x 12” steel frame square
- A combination square (for measuring angles)
- Medium size rubber mallet or dead blow type hammer
- Pry bar/nail puller (for reaching behind the cover to spread shield cover clips and other fittings)
- 25’ tape measure
- Cordless drill for anchoring fasteners in drywall and drilling pop rivet holes
- Caulk gun
- Steel file for deburring

Required Accessories:

- Pop rivets (1/8" diameter x 1/4" length) of matching material/finish
- Substrate appropriate anchors/fasteners
- Commercial Grade (Sonneborn® NP-1) or Institutional Grade (Sonneborn® Ultra) Sealant
- Safety glasses and leather belts

Assembly – The following order of steps is recommended when installing fire sprinkler systems in conjunction with any of our interior steel soffits.

1. Piping and sprinkler layout (not covered in this guide) and steel soffit system covers, fittings and clip planning. For large projects (1,000ft or more), a complete mock-up installation is strongly recommended as a cross check
2. Pipe hanger and our interior soffit system shield clip placement and anchoring
3. Piping installation
4. Piping system testing (not covered in this guide)
5. Interior steel soffit covers, fitting fabrication and installation
6. Finishing

STEP 1: Planning –

Our Architectural/Aesthetics/Commercial/Security soffit systems are prefabricated, custom-fitted interior soffit systems; therefore soffit dimensions and locations must be determined prior to installation. The soffit dimensions and locations are the sole responsibility of the pipe/utility installer as soffit dimensions and locations are entirely dependent on the pipe/utility installation. Soffit dimensions can be derived from both the size of the pipe/utility and its centerline in conjunction with the wall and/or ceiling. All soffit dimensions and locations must be clearly indicated on the pipe/utility shop drawings prior to soffit installation. In doing so, any deviance from the pipe/utility installer shop drawings by the pipe/utility installer or the soffit installer can then be easily tracked.

The pipe hangers and cover system installation must be cross-checked for system compatibility (i.e. pipe location and clip locations as required by Steps 2, 3, and 5). The underlying support system for our interior steel soffit system’s installation must fulfill the individual support requirements of both the pipe and the shield. (Pipe support and support spacing must be in accordance with piping manufacturer’s guidelines where applicable). Soffit material support spacing must be in accordance with the maximum allowable spacing between supports as specified herein (See Step 2.2).

Step 2: Hangers & Clips –

IMPORTANT: A chalk line should be employed to assure all hangers and clips are installed in a straight line. When employing the L-Shield centerline, distance of the pipe hanger from the wall is critical for fitting piping within the shield.

2.1 **Hangers** – Pipe hangers must be of a design compatible with the dimensional constraints of the steel soffit material used. When using an L-Design shield, the pipe should be anchored firmly (minimum 200# pullout) to the wall within 2 feet of any sprinkler outlet.

2.2 **Clips –** Each of our two classic soffit material designs (L-Shield and U-Shield) entails the use of shield clips for soffit material support. To ensure proper attachment of the steel soffit material, alignment of clips must be perpendicular to the pipe run and should be flat against the mounting surface before anchoring. The clip is designed as a snap-on positioning and structural support for the cover and certain fittings. These clips should be installed to observe the following spacing maximums between cover supports. In areas with inconsistent substrates, clip placement will be dependent upon "high" and "low" spots as illustrated in Section 5.5 of this installation guide.

Suggested Spacing of Shield Clips along *each Edge* of Soffit Material		
Shield Type	*Commercial/Other Installations*	*Institutional Installations*
L-Shield	4 – 5 Clips Attaching Each Edge per 10' Section (1 Shield Clip Every 24" – 32" O.C.)	5 Clips Attaching Each Edge per 10'Section (1 Shield Clip Every 24" O.C.)
U-Shield	4 – 5 Clips Attaching Each Edge per 10' Section (1 Shield Clip Every 24" – 32" O.C.)	5 Clips Attaching Each Edge per 10'Section (1 Shield Clip Every 24" O.C.)

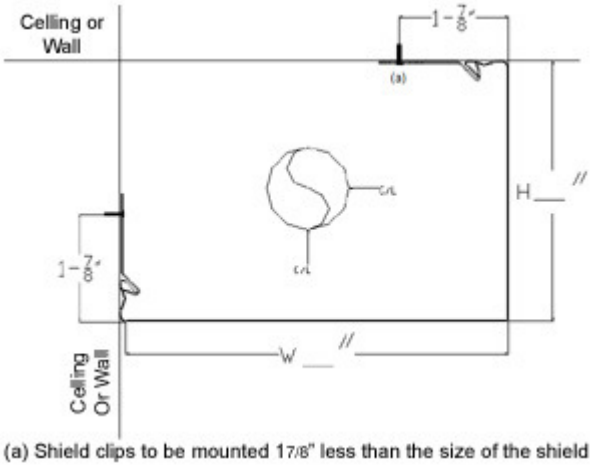
The clip should be located such as that the tip of its catch point will rest in the bottom of the cover catch point once assembled to minimize lineal distortion to the soffit material. Proper clip placement is best attained through the use of chalk lines.

Please note: Chalk lines for clip fastener placement should ordinarily be snapped 1-7/8" less than the exterior dimensions of soffit faces. For example:

- L-Shield soffit with dimensions of 6”h (down from the ceiling) x 4”w (out from the wall) will require a chalk line on the wall 4-1/8 ” down from the ceiling and a chalk line on the ceiling 2-1/8” out from the wall.

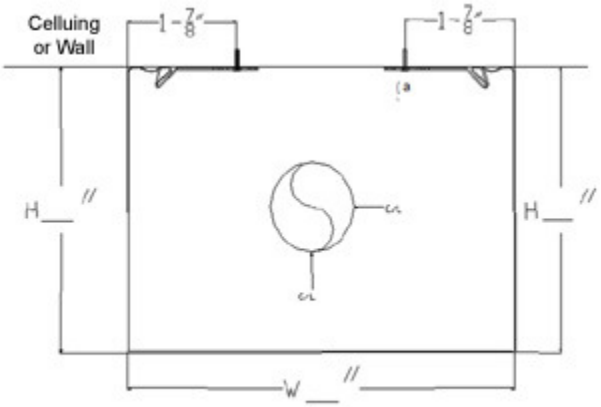
- U-Shield soffit with dimensions of 6”h (down from ceiling) x 6”w (width between sides) x 6”h (back up to ceiling) will be dependent on the centerline of the pipe/utility to be covered. Once the centerline of the pipe/utility has been established, measure out for the chalk lines on both sides of the centerline 1-1/8” [3” (half the width) minus 1-7/8”].

L-Shield



(a) Shield clips to be mounted 17/8" less than the size of the shield

U-Shield



For commercial installations and applications in which drywall or plaster comprise the cover mounting surface, ZIP-ITS or hollow wall anchors can be used. After hollow wall anchors are in place, the shield clips can be fastened with # 10 x 1 1/4” sheet metal screws that have a # 2 Phillips pan head.

When installing the L-shield, it is functional to use an 8" x 12” steel frame square as a template. Once you determine the proper position of the shield clip from the wall or ceiling, use the square to measure the distance from wall/ceiling juncture to the location of the pre-drilled anchor hole in the clip. Then simply drill holes in the steel frame square to serve as your template for drilling anchor holes. Check your work by using a level to assure the vertical side is plumb when assembled. If not, the inside corners and T-intersections cannot be made to be square, resulting in large and unsightly gaps.

All coupling joints should be supported within twelve (12) inches by a clip and each separate shield fitting should be likewise supported. Anchoring for shield clips must be of sufficient strength to hold the shield firmly against the mounting surface when the shield is snapped into the clips, in addition to withstanding a minimum pullout of 200 pounds. Individual back to top side and bottom clips for both L-shield and U-Shield profile should have lineal offset (alternating). Shield clips may be anchored in concrete structures using 1-1/4" or 1-1/2” Tap-Con screws or expansion shields.

STEP 3: Installing the Piping System –
After all required hangers and clips have been properly anchored; the piping system is assembled according to the piping manufacturer's recommendations.

IMPORTANT: Please check the Fire Sprinkler System assembly prior to proceeding with installation to assure the pipe position is compatible with your steel soffit system cover dimensions. This is the Pipe/Utility Installer responsibility; due to the various fittings used, JG Innovations Inc. cannot assume any liability for compounding errors.

STEP 4: Piping System Testing –
Testing of the piping system is not covered in this guide.

IMPORTANT: Fire Sprinkler Piping System must be pressure tested prior to installing our steel soffit material and fittings.

STEP 5: Laying Out, Fabricating and Assembling our Interior Steel Soffit Material and Fittings –
The primary difference between installation of our Architectural/Aesthetic/Commercial steel soffit systems and our Security soffit system primarily lies in the means of joining the cover sections.

Our Architectural/Aesthetic/Commercial steel soffit materials are readily joined via an internal slip coupling. The coupling easily slips into one end and is pinched in place by a hand seamer (refer to Recommended Tools section of this Installation Guide), thus forming a male end to be slipped into the next section. When working with 20G or heavier material and/or in situations where the substrate(s) are distorted and uneven, simply use 1/8" pop rivets as needed to hold corner sections square and pull seams together.

As for our security soffits, prefabricated ends are designed to form male/female overlapping joints via the use of integral (factory installed) couplings. The joints are then locked together with steel pop rivets (1/8" diameter) using a hand held riveter (this must be done by the installer). Rivet holes (1/8" diameter) must be drilled through the two joined sections. For field efficiency, the use of a template and a high speed drill are suggested.

IMPORTANT: Holes must be spaced at 2" intervals around the cover perimeter at a distance no greater than l" from the end of the female section.

5.1 **Sprinkler Outlets** – Outlet holes should be cut only after careful measuring to determine the precise location. Depending on the size of the escutcheon plate used, a 2"- 3" outlet hole is recommended in order to provide allowance for proper positioning.

A carbide tipped hole saw is suggested for cutting outlet holes. When required, a sprinkler outlet adapter ring is provided by the installing contractor. The purpose of the sprinkler outlet adapter ring is to prevent any possible gaping between the sprinkler escutcheon and the steel soffit material. These rings are simply cut lengths of pipe (usually plastic) of a size that will slip over the outlet branch of your pipe tee along the full length of such outlets prior to installing the cover. This device is optional but should be considered mandatory for high security (prison) installations.

5.2 **Steel Interior Soffit Systems Installation** – IMPORTANT: Always wear safety glasses and leather gloves when conducting field fabrications and handling our soffit materials.
With the shield cut to the proper length (see Recommended Tools section of this Installation Guide) and positioned, it is simply pressed onto each clip until a definite "snap" is heard from each clip arm. This is best accomplished by attaching one side of the shield cover first, followed by the opposite side, and is best done by applying direct pressure only at clip locations. A large rubber mallet is helpful, particularly for the heavier gauges. Be sure to record the clip locations prior to attempting to snap the cover on. These records will also allow for easy removal.
Field cut ends and outlet holes must be touched up with a matching paint prior to installation to protect the cover against corrosion.

5.3 **Sprinkler Head Accommodations** – Our Steel Soffit Systems can accommodate most any type of sprinkler head, including those intended for institutional use.

5.4 **Soffit System Fittings and Closure Sections** – Field fabricated fittings can be readily made on demand in the field with the use of factory made wall flanges. Examples of such fittings include: L-Shield x U-Shield T- Intersections, U-Shield x U-Shield T-Intersections, L-Shield Inside Corners, etc. Using aviation shears/snips, a hand held saber saw/metal cutter, or an industrial grade jigsaw (refer to Recommended Tools section in this Installation Guide), a slot is cut in the cover section for pipe emergence. When performing this function, we suggest you use the bracket itself as a template to mark the outline of the slot to be cut. For heavier gauge material, it is helpful to cut a hole to form the bottom of the slot, then cut down to the hole with a die grinder, cutoff saw, or plasma cutter. The flange is then attached to the cover (with pop rivets) around the slot with the offset sections then being likewise attached to the flange, thus tightly tying the two cover sections together.

IMPORTANT: The flange should be attached to the first section only after the first section has been installed. In this manner it can be positioned tightly against the construction surfaces. The catch points of the cover section interfacing with the flange must be snipped to allow the overlapping cover to closely hug the flange.

When forming inside corners with the L-Shield cover you will note there are left and right hand flanges, depending on the direction it is being installed from. While you will generally be supplied with a few extra of each, it is a good idea to keep this fact in mind and try to balance your requirements accordingly.

The key benefits of such field made fittings are design flexibility and the elimination of precision cutting otherwise required to accurately position pre-fabricated fitting.

Pre-Fabricated Fittings – Certain fittings are joined with splice couplings in the same manner as the lineal sections. Rivets can be applied in order to pull the seams together smoothly. The end cap serves as its own coupling and simply slips into the end of a lineal section and is then either caulked or riveted in place. Unless otherwise specified, JG Innovations Inc., will assume field fabricated fittings will be utilized where possible.

Wall Flanges – Can also be used as closure flanges where the shield ends directly at the wall (these are identical to those used for field fabricated fittings).

IMPORTANT: In all cases, the flange fits on the inside of the cover and the catch points/groove must be clipped from the cover section at the interfacing with the flange.

5.5 Trouble Shooting – Each project you encounter will have its nuances. These may include:

Asbestos Ceilings – A wall mounted L-Bracket sized to accommodate the ceiling level catch point of your particular soffit is available for any installations needing to accommodate asbestos ceilings.

Protrusions/Offsets – In situations where the substrate has small protrusions and offsets, typically the soffit material is over sized and notched as needed. For larger offsets, custom offset elbows and corners may be ordered.

Restricted Vertical Space - Where space is limited, i.e. high doorways, it may be necessary to use a smaller cover than what may otherwise be optimal. When installing a fire sprinkler system with side wall heads, it may then require "sprinkler housings" to accommodate "drops" to the sidewall sprinkler device at its listed elevation.

Excessively Wavy Construction Surfaces - Using a chalk line, determine the "low points" of such surfaces and mount the clips at these points. If the clips were mounted in the high points, it may be impossible to snap the soffit material on. Caulk the "high" sections where gapping between the shield and substrate has occurred.

Restricted Horizontal Lineal Space - Snip off the catch points from the soffit material section that would normally interface with a coupling or wall flange. This precludes the need for "sliding" over the coupling.

There are many ways to enhance the physical appearance if you are having problems with ceiling or wall distortion and other special situations described above. Our recommendations include:

- Small finishing nails can be used to hold shield ends square when butting shield up to a wall. After nail is in place, sealant can be applied. After sealant has cured, nail can be removed and corner is held in place. This is most commonly done in situations where clip placement is difficult or impossible.

- Wooden shims may be handy in situations where shield may need to be forced down from the ceiling surface or out from a wall to maintain a lineal and square appearance.

- Painters caulk can be utilized to fill in small openings in seam areas. Seams should not appear to be gapped or open; by utilizing this method, you are left with a smooth, paint-ready surface, free of blemishes or unsightly gapping.

5.6 Special Fabrications – In order to provide an exact concealment solution tailored to each individual project needs, our interior steel soffit systems are entirely custom-fabricated and built to order. Therefore, it is the responsibility of the designer and/or the installer to determine precisely what those needs may be. Filling these needs often require special fabrications. In those instances, please submit drawings, complete with dimensions, to JG Innovations, Inc., via fax at 608-314-8712 or electronically to sales@jgius.com for review, consultation, and pricing.

STEP 6: Finishing/Cleaning –
Upon completion of the installation, all cover and structure surface interfacing should be caulked with the appropriate sealant (see Recommend Accessories notation in this Installation Guide).
As a final step, the soffit material should be cleaned using one of the following: Mr. Clean Magic Eraser Cleaning Pads, Lysol Dual Action Wipes, or an ammonia based product such as your common household window cleaner. Verify that all cut ends and scratches have been touched up with paint, particularly in corrosive areas, to avoid rust (not necessary for stainless covers). It is a good idea to use an aerosol paint applicator to touch up unfinished ends.

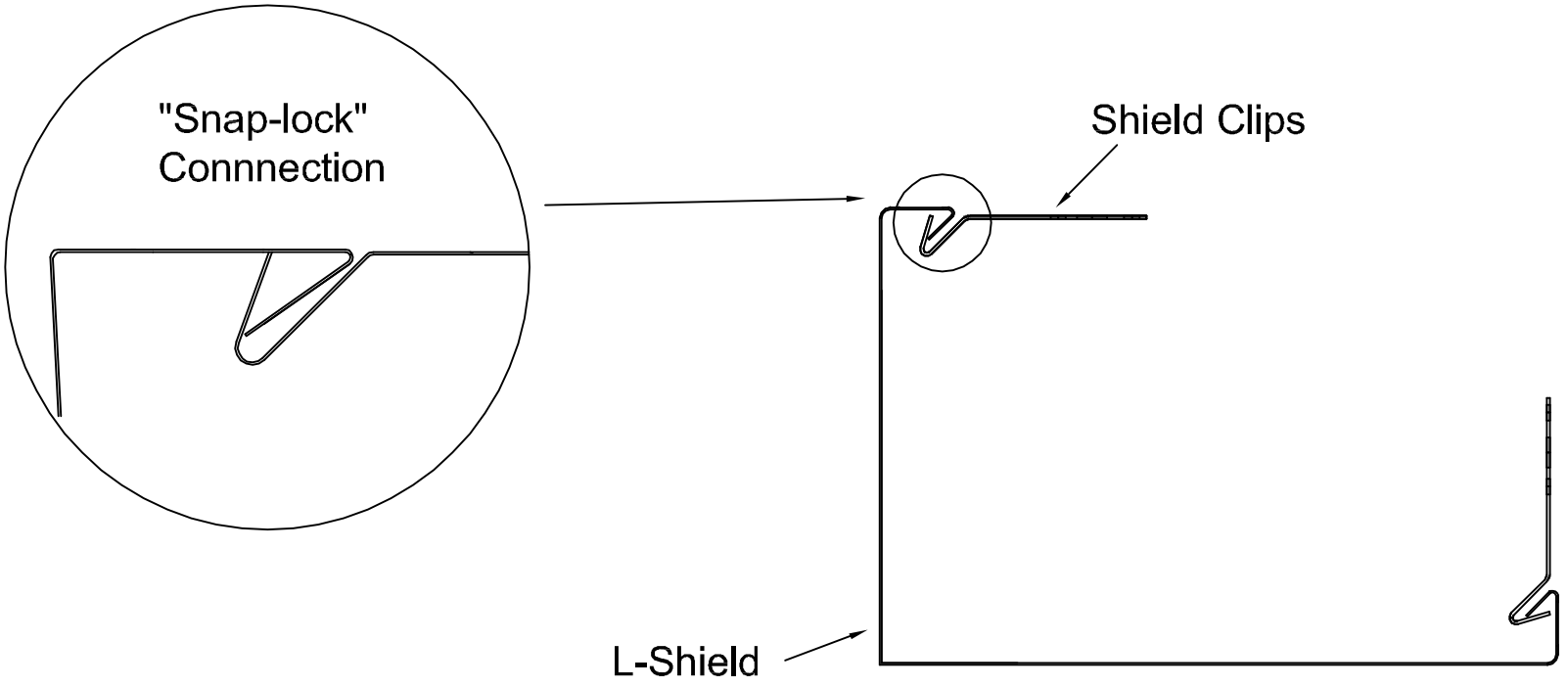
For Assistance – Call us toll free at 1-888-933-2248 to discuss your project's installation needs.

In Summary – Our Interior Steel Soffit Systems are custom fitted interior enclosure systems designed to provide a secure and durable, low-maintenance, streamlined solution for concealment of unsightly utilities.

However, as a custom-designed system, we strongly emphasize the contractor exercise extreme caution and conduct a thorough design analysis prior to ordering and installing our product. An initial mock up installation may be requested at the beginning of the utility installation in order to assure that our Interior Steel Soffit Systems are properly matched with your project's concealment needs.

*Interior Soffit Systems**

L-Shield Clip and Shield Detail



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* Available In Our Design, Illusions, Assurance, and Enforcer Soffit Lines

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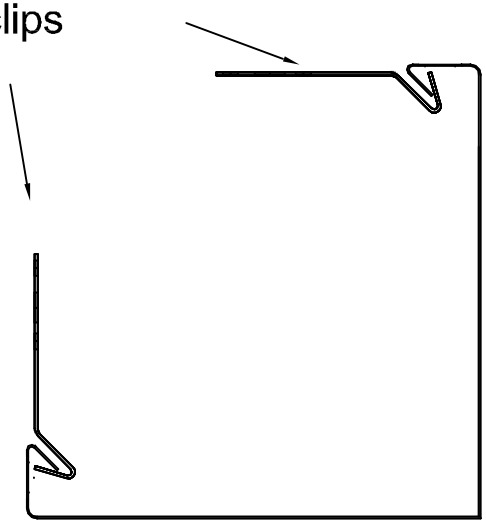
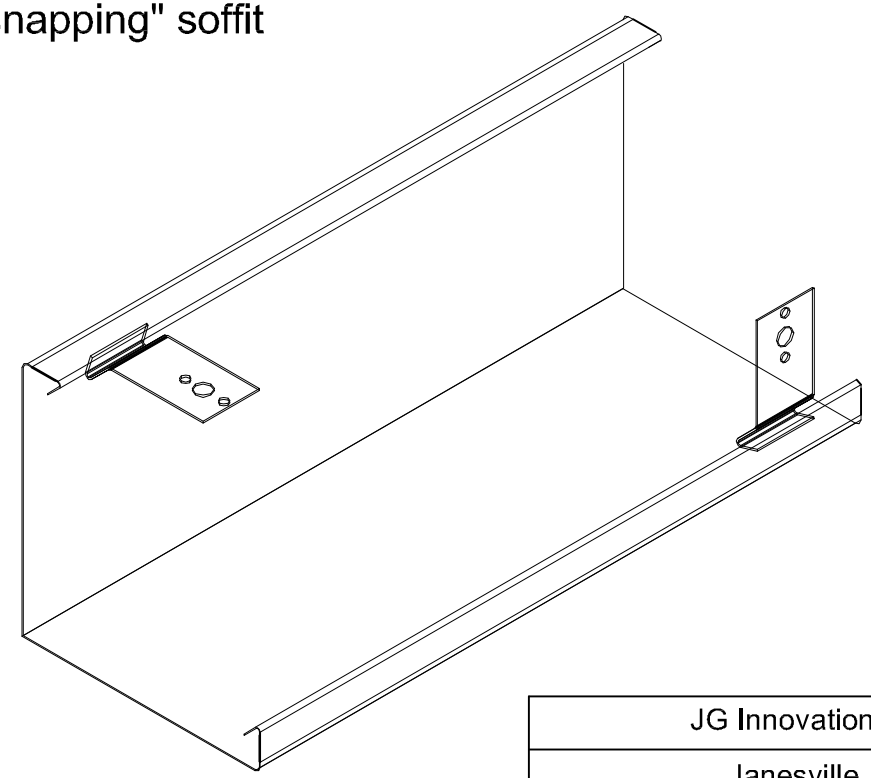
L-Shield Clip Assembly

Shield clips are attached to ceiling and/or walls using substrate appropriate anchors prior to "snapping" soffit onto clips





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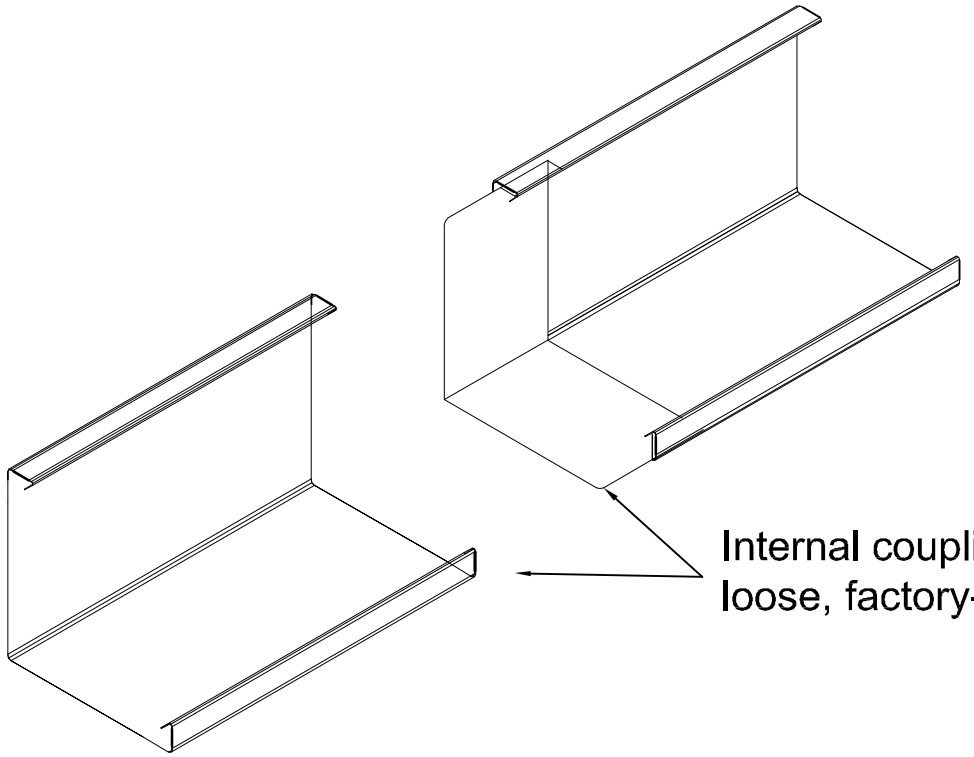
L-Shield Coupling Assembly



***Note: Rivets are used to attach the coupling when working with 20G and heavier material, or during installations in which the substrate is not consistently square or level.

Internal coupling mechanism available loose, factory-crimped or factory-riveted

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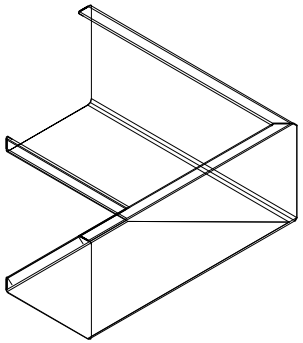
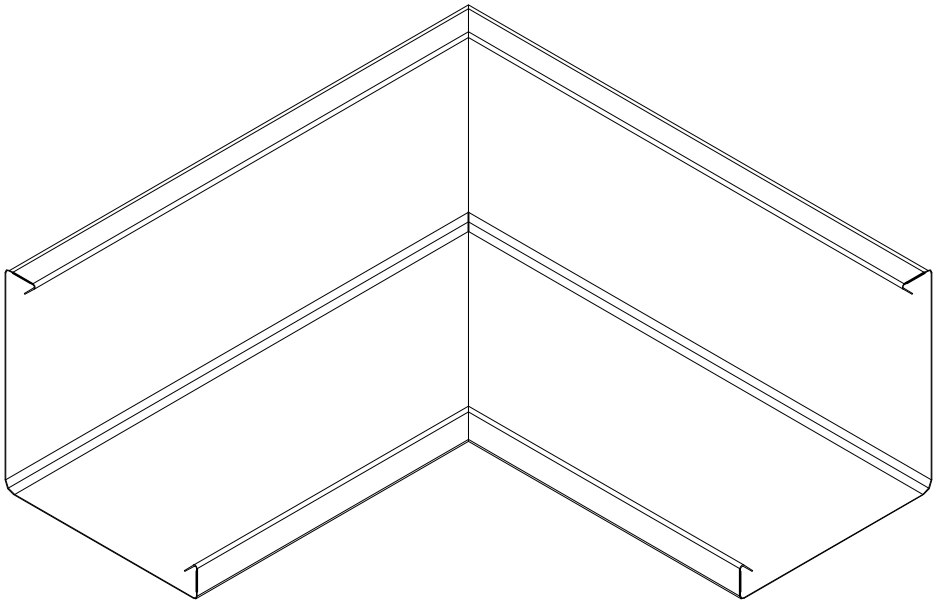
Factory-Fabricated L-Shield Outside Corner





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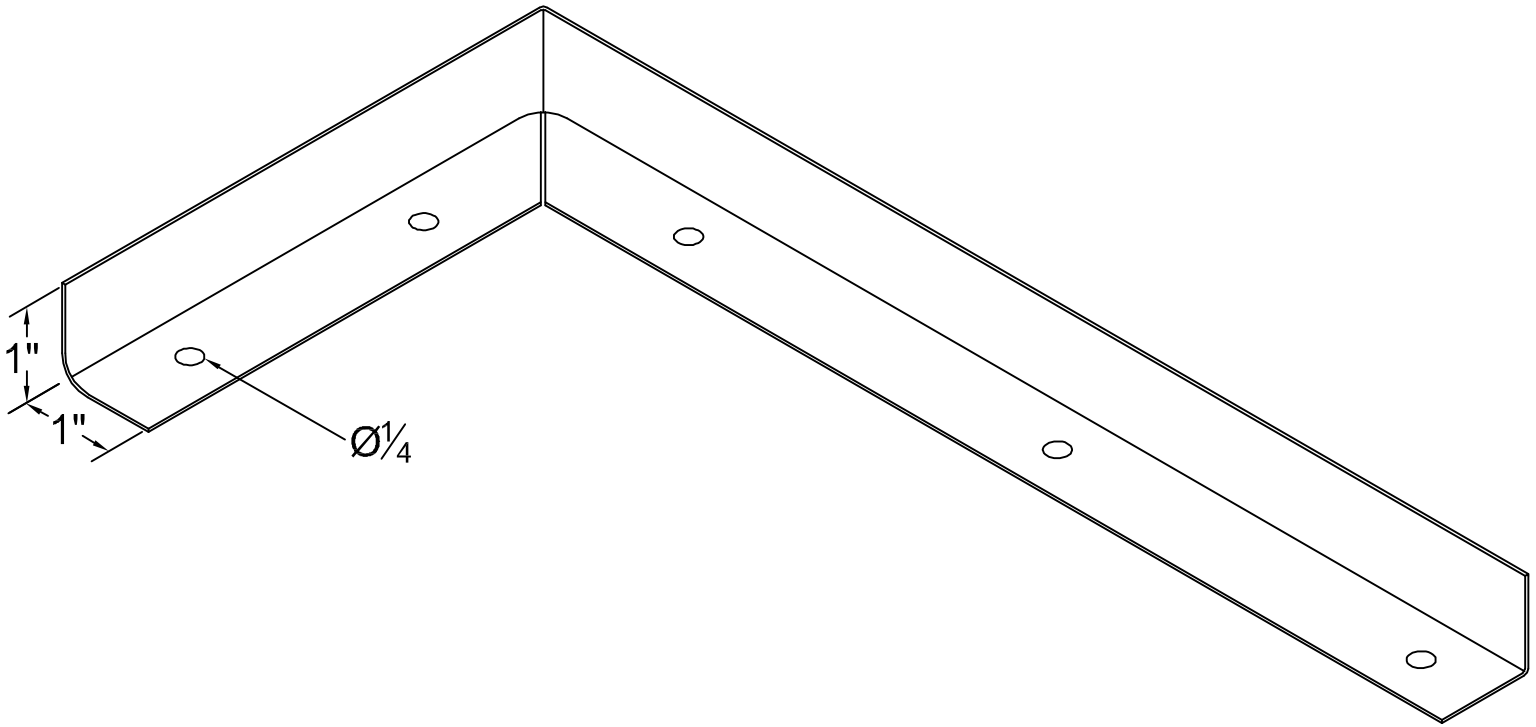
L-Shield Wall Flange



Note: Specify Left or Right Hand Wall Flange When Ordering

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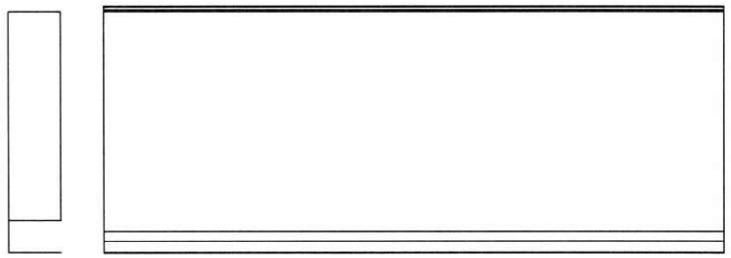
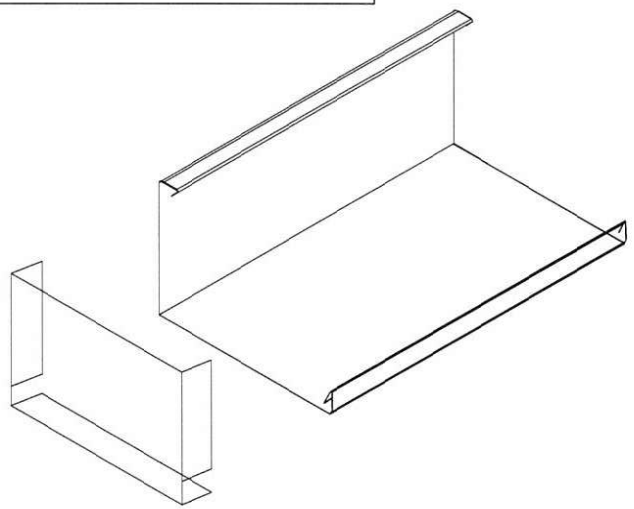
L-Shield End Cap Assembly





End Cap slides into L-Shield and is secured with rivets or caulk

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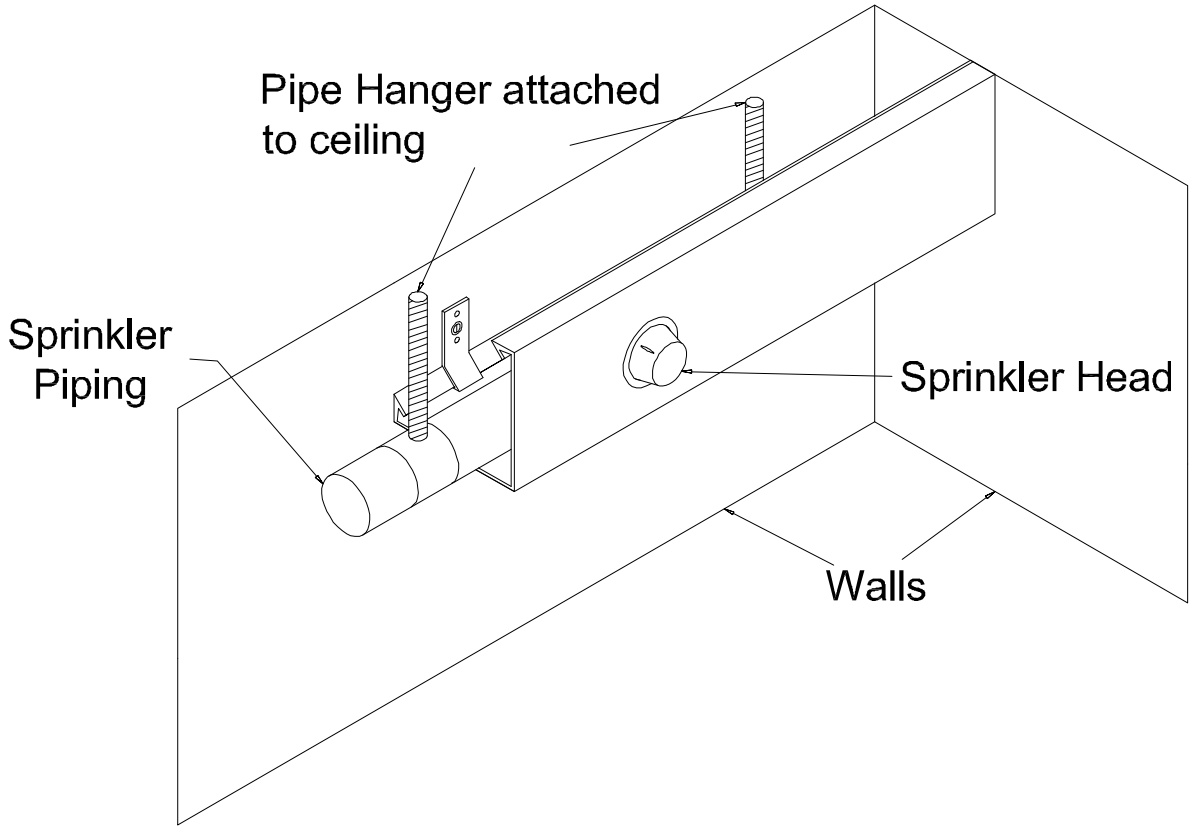
L-Shield Fire Sprinkler Pipe Concealment



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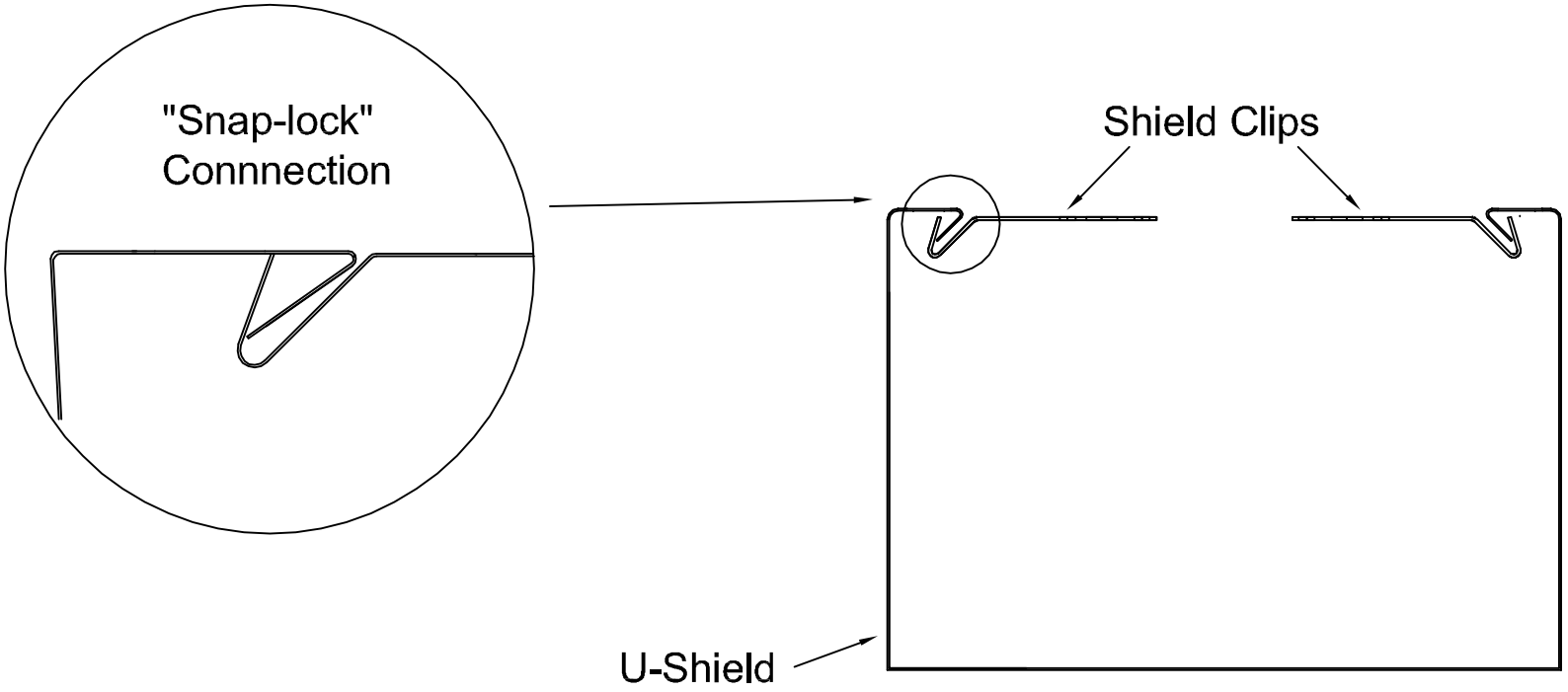
*Interior Soffit Systems**

U-Shield Clip & Shield Detail



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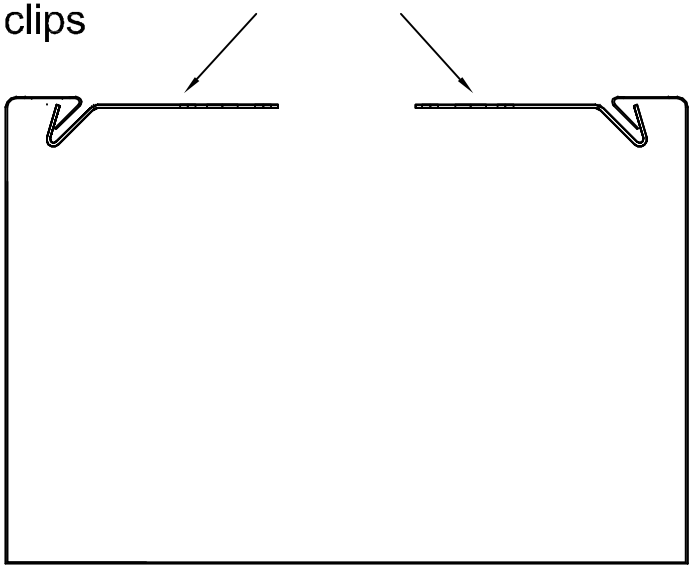
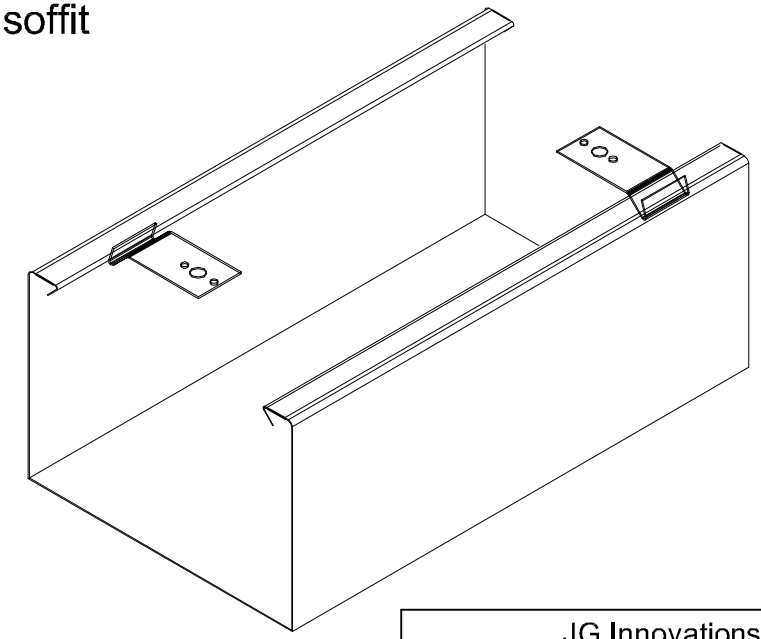
U-Shield Clip Assembly

Shield clips are attached to ceiling and/or walls using substrate appropriate anchors prior to "snapping" soffit onto clips





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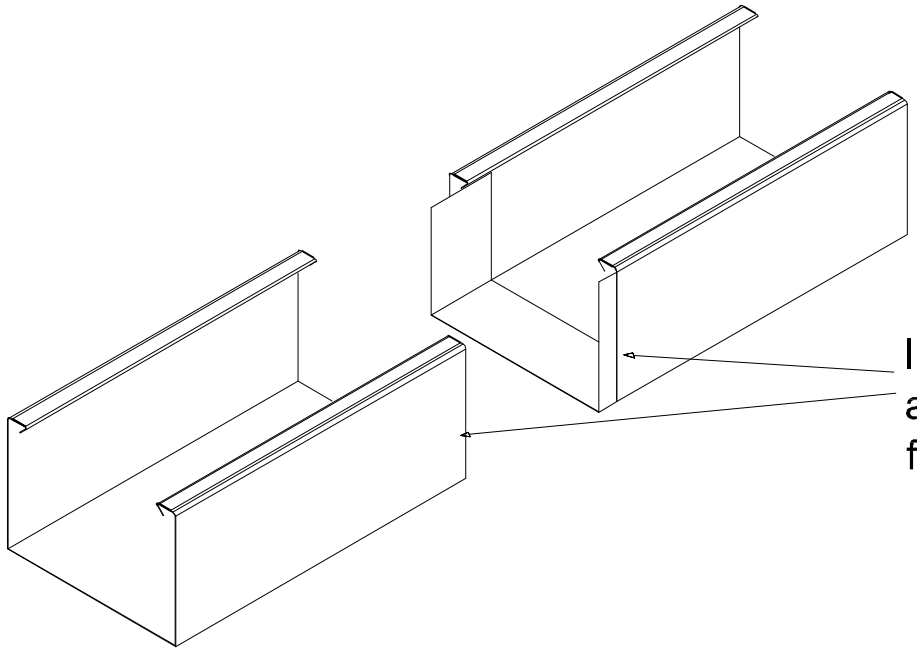
U-Shield Coupling Assembly



Internal coupling mechanism is available loose, factory-crimped or factory-riveted

***Note: Rivets are used to attach the coupling when working with 20G and heavier material, or during installations in which the substrate is not consistently square or level.

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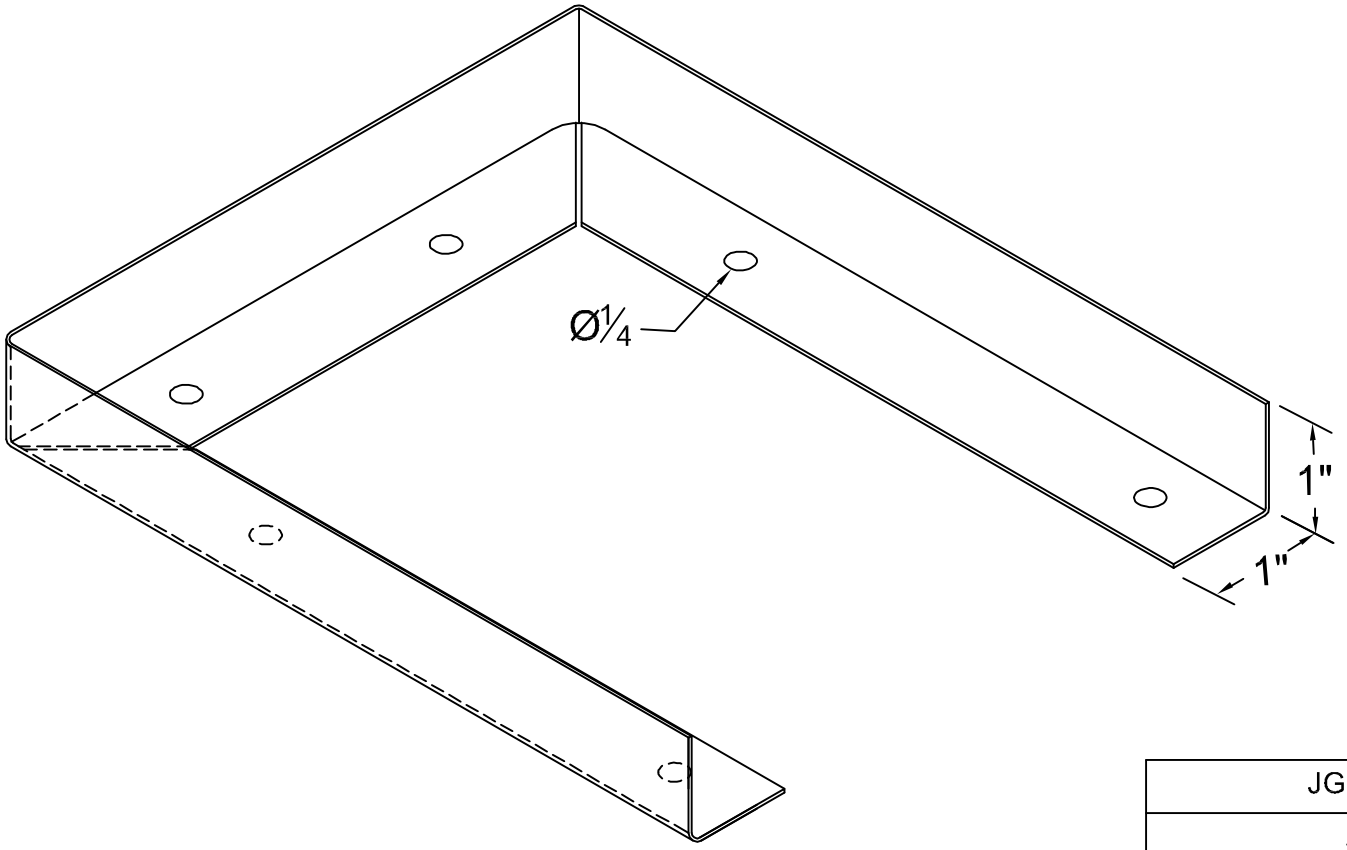
*Interior Soffit Systems**

U-Shield Wall Flange



* Available In Our Design, Illusions, Assurance, and Enforcer Soffit Lines

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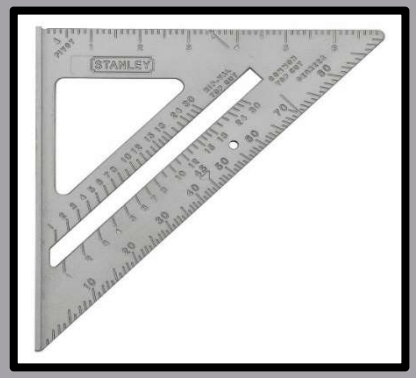
RECOMMENDED TOOLS

DRILL BIT – RECOMMENDED SIZE #30



ANCHOR OPTIONS:

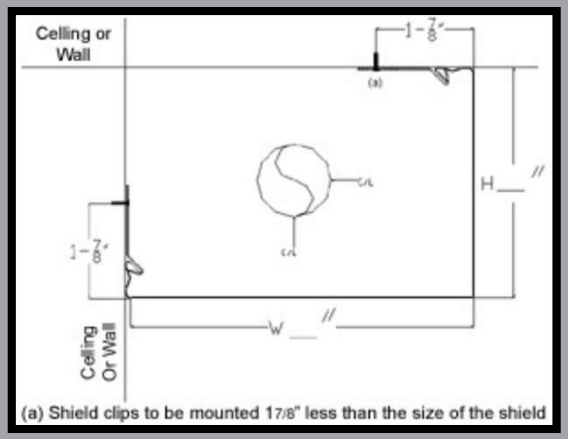
Common Installation- Getting Started

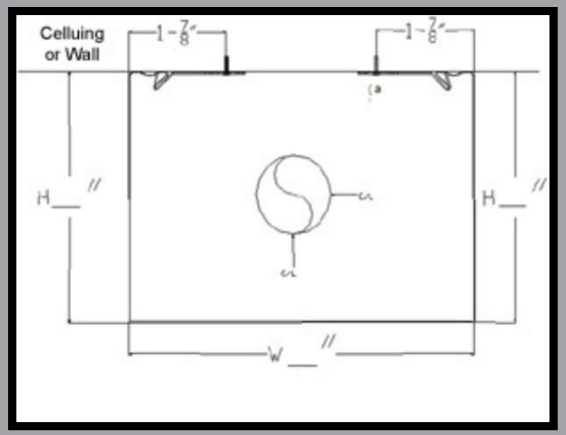
Installation process shown for fire sprinkler piping. Process applies to all exposed mechanicals.

1. ENTIRELY EXPOSED SPRINKLER PIPE

2. PARTIALLY ENCLOSED SPRINKLER PIPE

3. CHALK LINES FOR SHIELD CLIPS/FASTENER PLACEMENT SHOULD BE 1 7/8" LESS THAN EXTERIOR DIMENSION OF SOFFIT FACES





4. ANCHOR SPRING STEEL SHIELD CLIPS ON CHALK LINE

How Do The Spring Steel Clips Secure?

ALIGN SHIELD TO SECURED SPRING STEEL SHIELD CLIP

APPLY PRESSURE TO SHIELD

SPRING STEEL SHIELD CLIP OPENS TO ACCEPT CATCHPOINT OF SHIELD

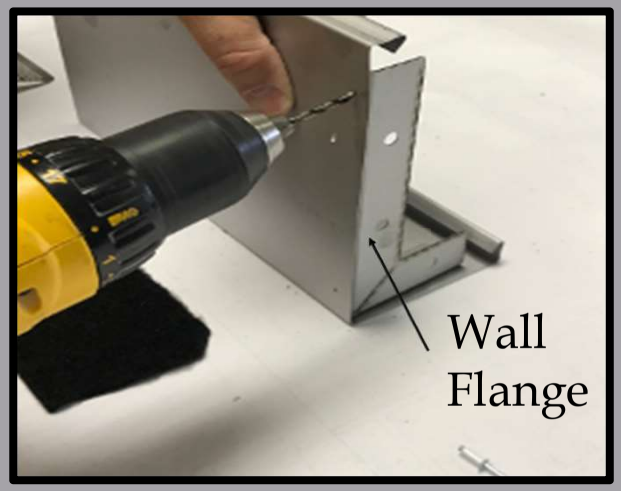
SPRING STEEL SHIELD CLIP "SNAPS AND LOCKS" SHIELD INTO PLACE

Common Installation – Wall Flanges

Unpainted Internal Component

***FOR DEMONSTRATION PURPOSES ONLY, WALL FLANGE NEEDS TO BE SECURED TO WALL SUBSTRATE FIRST. REFER TO WRITTEN INSTALLATION INSTRUCTIONS.**

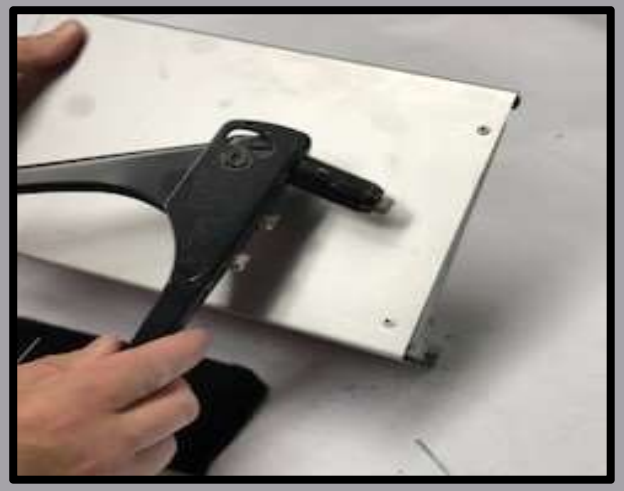
1. DRILL PILOT HOLE FOR RIVETS *



2. INSTALL WALL FLANGES

3. FIT PIPE ENCLOSURE OVER WALL FLANGE, SNAP SHIELD ONTO CLIPS

4. SECURE FLANGE TO ENCLOSURE WITH RIVET *



Common Installation – Attaching Riveted Couplings

1. SLIDE COUPLING INTO PIPE ENCLOSURE END

2. ALIGN & STRAIGHTEN COUPLING

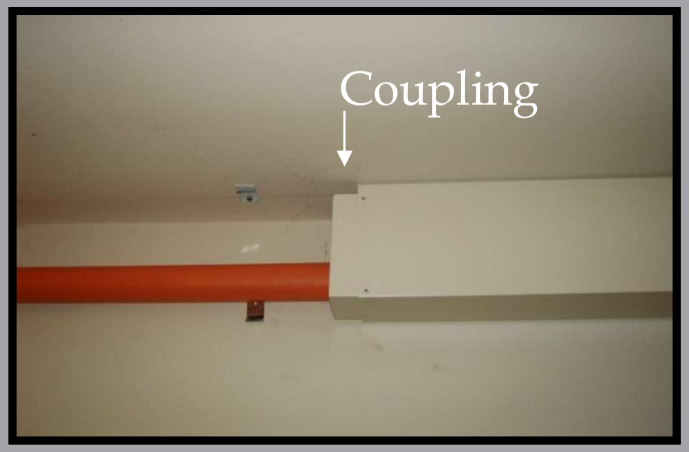
3. CLAMP COUPLING INTO PLACE

* Apply Rivets at 2″ intervals for institutional application and as needed for commercial/ residential application

4. APPLY RIVETS, SECURELY ATTACHING COUPLING

Common Installation – Attaching Riveted Couplings

5. ATTACH MATERIAL WITH COUPLING TO SUBSTRATE



6. SLIDE ADJACENT SECTION OF MATERIAL OVER COUPLING

7. DRILL & RIVET THROUGH INTERIOR COUPLING BY MATERIAL SEAM ON CONNECTING PIECE

APPLY PRESSURE

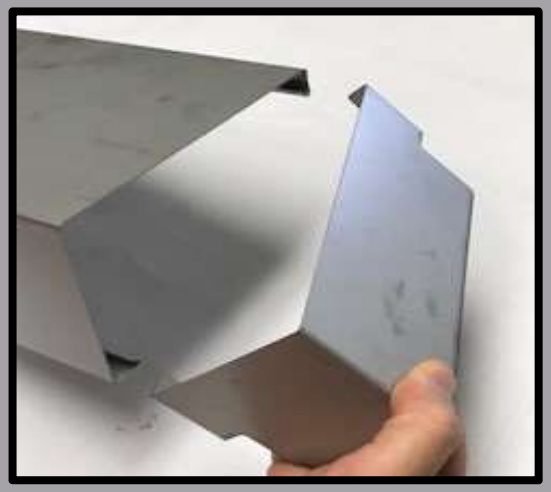
-Spring steel clip will open

-Snap and Lock the shield into place

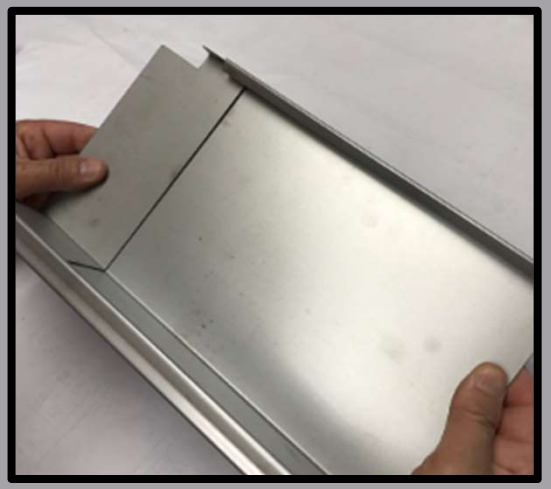
**NOTE: Rivets are used to attach the coupling on an installation in which the substrate is not consistently square or level.

Common Installation – Attaching Pinched Couplings

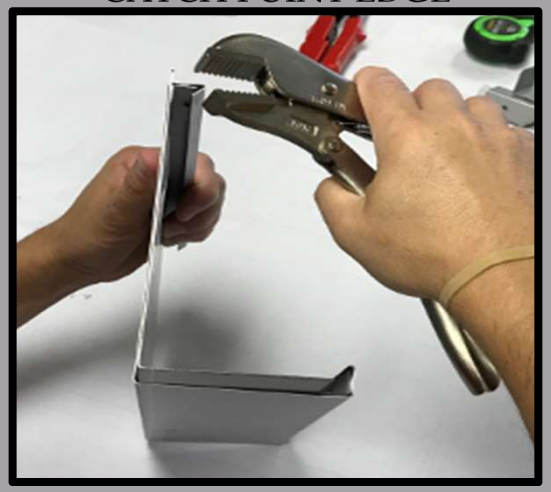
1. SLIDE COUPLING INTO PIPE ENCLOSURE END



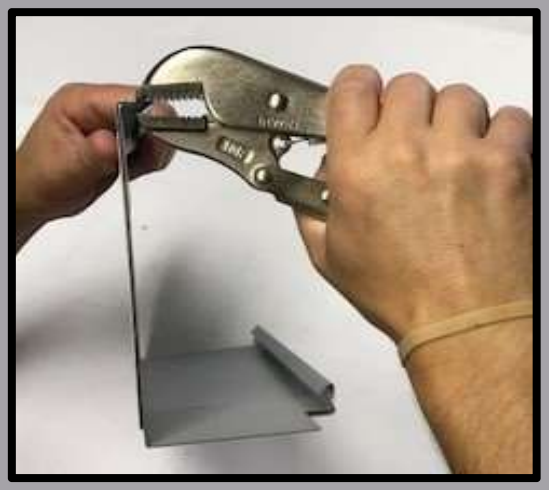
2. ALIGN & STRAIGHTEN COUPLING (INSIDE VIEW)



3. ALIGN VICE GRIP OR CHANNEL LOCK ON ENCLOSURE CATCH POINT EDGE



4. LOCK VICE GRIP OR CHANNEL LOCK ON CATCH POINT EDGE



5. SQUEEZE TIGHT

6. REPEAT OPPOSITE EDGE

Common Installation – Sprinkler Outlet

1. COMPLETE YOUR MEASUREMENTS

Measure to center of sprinkler head from the ceiling and from adjoining soffit or substrate

2. MARK OUT YOUR SPRINKLER OUTLET

3. DRILL TO MARK THE CENTER OF YOUR OUTLET

4. DRILL YOUR SPRINKLER OUTLET

Common Installation – Sprinkler Outlet

5. COMPLETED SPRINKLER OUTLET

6. HANG YOUR PIPE ENCLOSURE

7. ADD THE ESCUTCHEON PLATE

Common Installation – Inside Corners

1. NOTCH OUT INTERIOR SOFFIT MATERIAL FOR PIPE TO PASS

2. ATTACH WALL FLANGE TO PIPE ENCLOSURE AND HANG NEXT ADJOINING SECTION OF SOFFIT

3. DRILL ALONG THE JOINT

4. INSTALL RIVETS TO KEEP CORNER FROM SHIFTING

5. APPLY CAULK TO FILL VOIDS

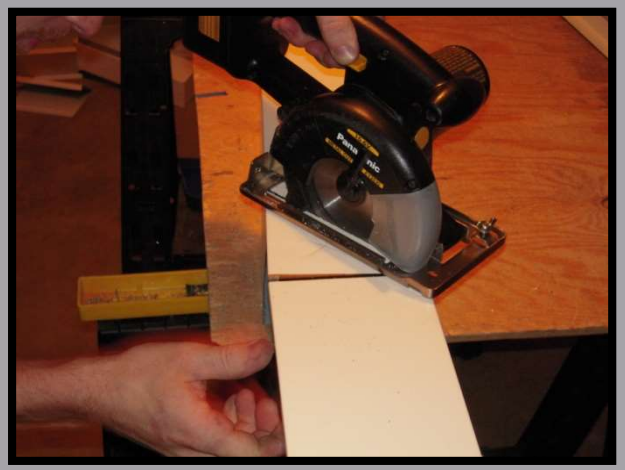
6. COMPLETED INSIDE CORNER INSTALLATION

Common Installation – Outside Corners

1. MARK THE EDGES OF YOUR CUT

2. NOTCH A "V" INTO THE EDGE OF YOUR PIPE ENCLOSURE

3. APPLY CUTS AT 90 & 45 DEGREES



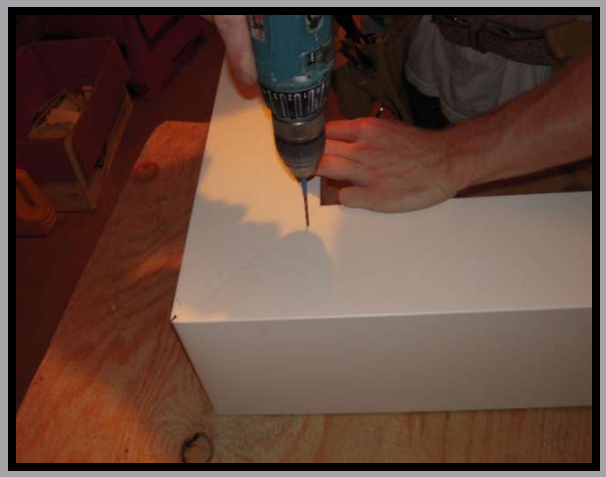
4. FILE & SMOOTH ANY ROUGH EDGES

Common Installation – Outside Corners

5. FOLD MATERIAL INTO A 90 DEGREE ELBOW

6. USING A SPEED SQUARE, CONFIRM & CLAMP AT 90 DEGREES

7. DRILL & RIVET ALONG THE SEAM

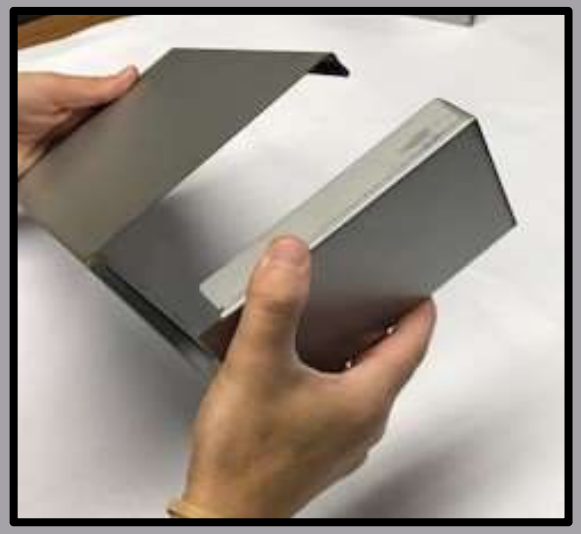


8. COMPLETED OUTSIDE CORNER INSTALLATION

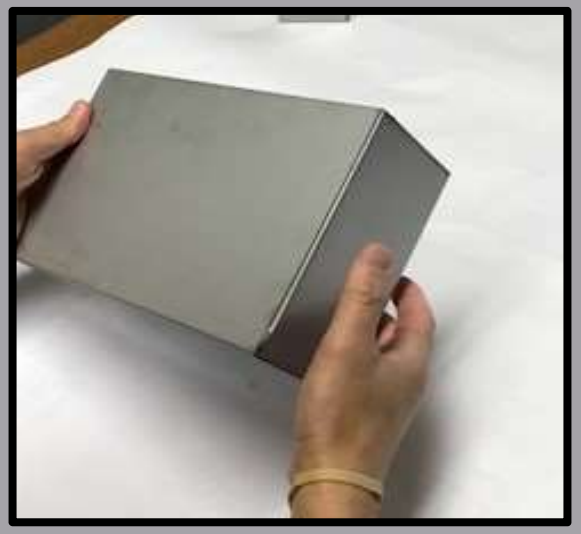
Common Installation – End Caps

End caps can be installed when shield is located on worktable or after shield has been installed

1. ALIGN END CAP & SHIELD



2. SLIDE END CAP INTO EXPOSED END



3. DRILL PILOT HOLE FOR RIVETS *

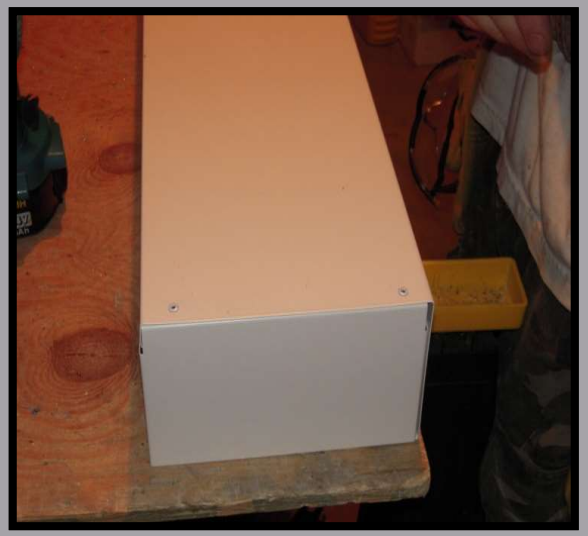
* Apply Rivets at 2″ intervals for institutional application and as needed for commercial/ residential application

4. AFTER A FLUSH ALIGNMENT, RIVET END CAP INTO PLACE

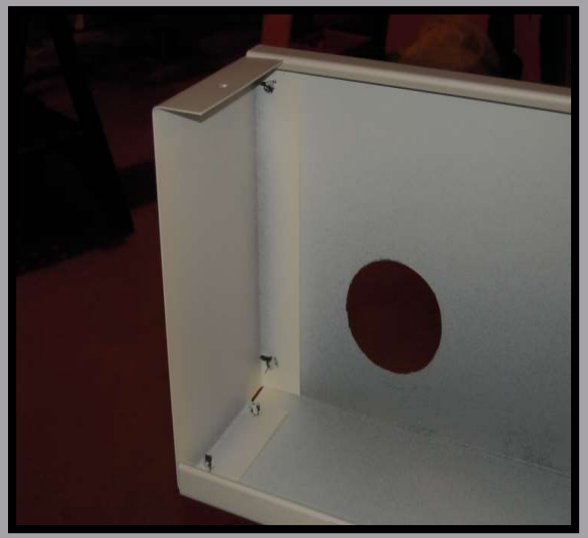
Common Installation – End Caps

5. SECURE WITH RIVET

6. EXTERIOR VIEW OF COMPLETELY RIVETED END CAP



7. INTERIOR VIEW OF COMPLETELY RIVETED END CAP



Common Installation –Finishing

1. SNAP MATERIALS ONTO SPRING STEEL SHIELD CLIPS

2. CLEAN MATERIAL WITH SOFT TERRY CLOTH, CITRUS CLEANER, AMMONIA BASED CLEANER OR "MAGIC ERASER"

3. APPLY CAULK, FILLING IN GAPS/VOIDS

4. SMOOTH OUT EXCESS CAULKING

Common Installation –Finishing

5. COMPLETED INSTALLATION