SMARTci™

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GREENVILLE TECHNICAL COLLEGE
SOUTH CAROLINA

HORIZONTAL INSTALLATION GUIDE
3-IN-1 SYSTEMS

System Installation Guide for Horizontal GreenGirt Weather Barrier Applications Utilizing Rigid Foam Insulation Over Open Framing

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GreenGirt.com

aap™ ADVANCED ARCHITECTURAL PRODUCTS


SMARTci

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Disclaimer

IMPORTANT

Please read all information related to the project before receiving materials at the job site and before starting the installation.

This installation guide is only to be used in combination with SMARTci installation drawings and Advanced Architectural Products, LLC's (henceforth also A2P) suggested details. Details shown in project shop drawings take priority over any similar information in this manual. Shop drawings may be created either by A2P or by the system installation contractor. A2P's Technical Service Department is available to aid the system installation contractor in the review of shop drawings. This guide is meant to furnish the system installation contractor with recommended methods, procedures and guidelines for the installation of the SMARTci system for commercial/industrial applications. Information presented is accurate but may not cover all circumstances, building conditions and/or details of the specific project. Consult an A2P technical representative where this guide does not cover every unique construction condition. It is the sole responsibility of the project engineer and system installation contractor to ensure specified air and weather tightness of a building by good design and workmanship in accordance with approved drawings, using only approved sealants/tapes. It is the sole responsibility of the owner's representative and system installation contractor to uphold quality workmanship in accordance with approved shop drawings to ensure the best operation of the system. A2P recommends installers read this document completely before receiving materials at the job site. Guide is subject to change without notice. Installation information is available through A2P at (269) 355-1818. Follow the architect's approved shop drawings and engineering computations for project-specific fastening designs. The engineer of record is liable for verifying applicable design loads and system fastening requirements. All safety methods are the duty of the installer, general contractor or construction manager.

Tools & Accessories Required

Abrasive Chop Saw &
Abrasive Wheeled Cutters

Levels

Heat Gun

Corded / Cordless
Screw Guns

Corded / Cordless
Drills

Caulk Guns

Hand Saws

Leather Gloves

Basic Safety Equipment

Rubber Mallet

Clamps

Important

Personnel working with cutting equipment and power tools should wear proper eye protection and safety equipment at all times to prevent injury.

Galvanized Metal Angles & Strapping

Tape

Expandable Sealant

Approved Fasteners

Approved Sealant

Plastic Shims

⚠ Caution

GreenGirt must NOT be cut with plywood or toothed blades, as it is composed of metal, resin and glass fibers. Use only abrasive chop saw / hand saw blades. Do not use actuated fasteners, im-pact hammers / impact drills or reciprocating saws!

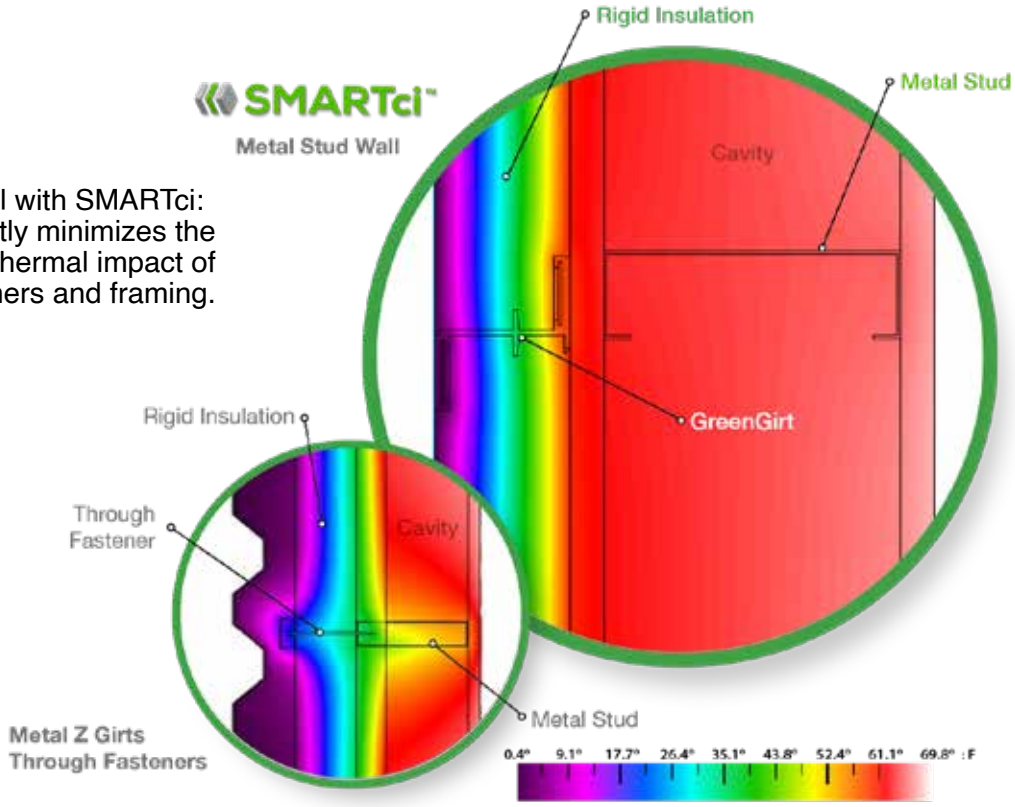
Why SMARTci?

The Problem: Thermal Bridging

When metal is used to connect the exterior components of a building directly to the interior framing it causes a thermal bridge. This thermal path of least resistance allows heat (or cold) to escape, creating a vulnerability (or cold spots), and allows moisture problems. Using materials that eliminate the thermal bridge help avoid unnecessary heating and cooling costs.

Stud wall with SMARTci: greatly minimizes the thermal impact of fasteners and framing.

Stud wall with a conventional system: fasteners and framing contribute to energy loss.



The Solution: SMARTci

SMARTci was designed to address the inadequacies of other continuous insulation solutions. Its individual parts were created as a simple, complete solution to help create smarter buildings. Plus, it's the best assembly to help earn points toward LEED certification. Unlike other attachment systems, SMARTci completely prevents thermal bridging that is created by metal fasteners and framing. It doesn't create cold spots for condensation inside your walls. It has a universal attachment design for virtually any cladding and it can be used over multiple surfaces, not just stud walls.

* U.S. and Global Patents Pending

Introduction

Welcome to SMARTci by Advanced Architectural Products, LLC. This document serves as the installation guidelines for SMARTci.

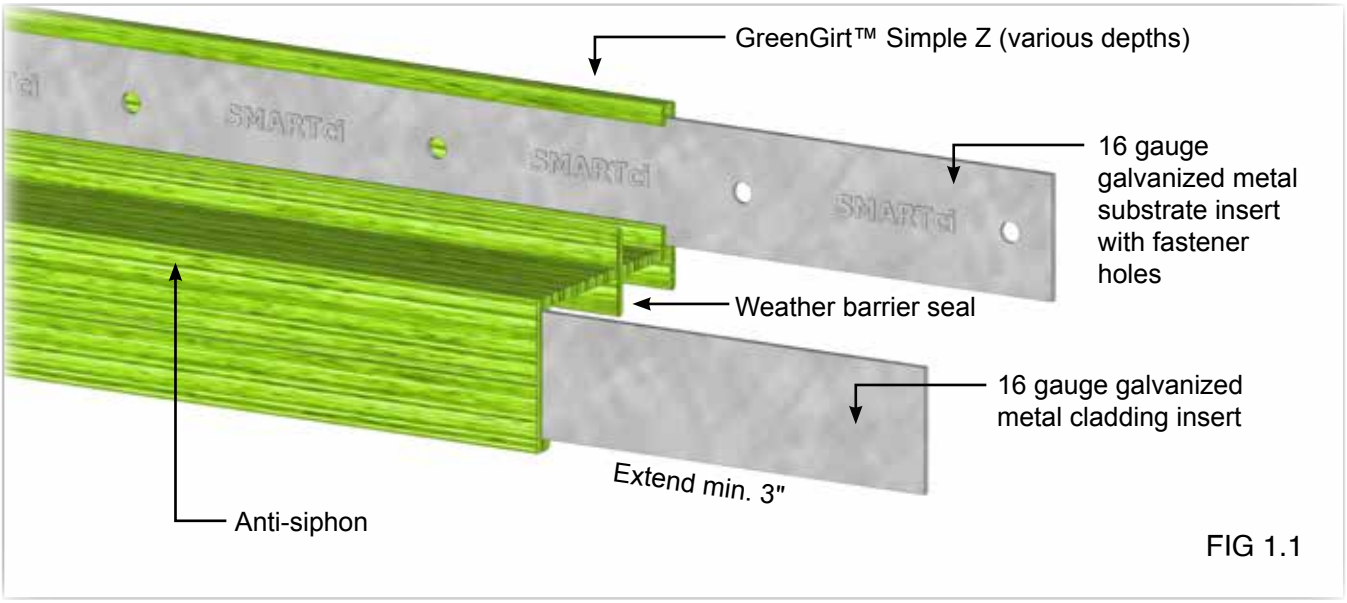
SMARTci provides buildings with a continuous insulation system and thermal break, as well as a mounting platform for the cladding application. It is an open design that works with almost any substrate, insulation or cladding.

SMARTci was created with one goal in mind: to make buildings more efficient. Specially designed to block off heat gaps that other systems neglect, SMARTci's thermal efficiency makes it a greener, long-term building investment for the future.

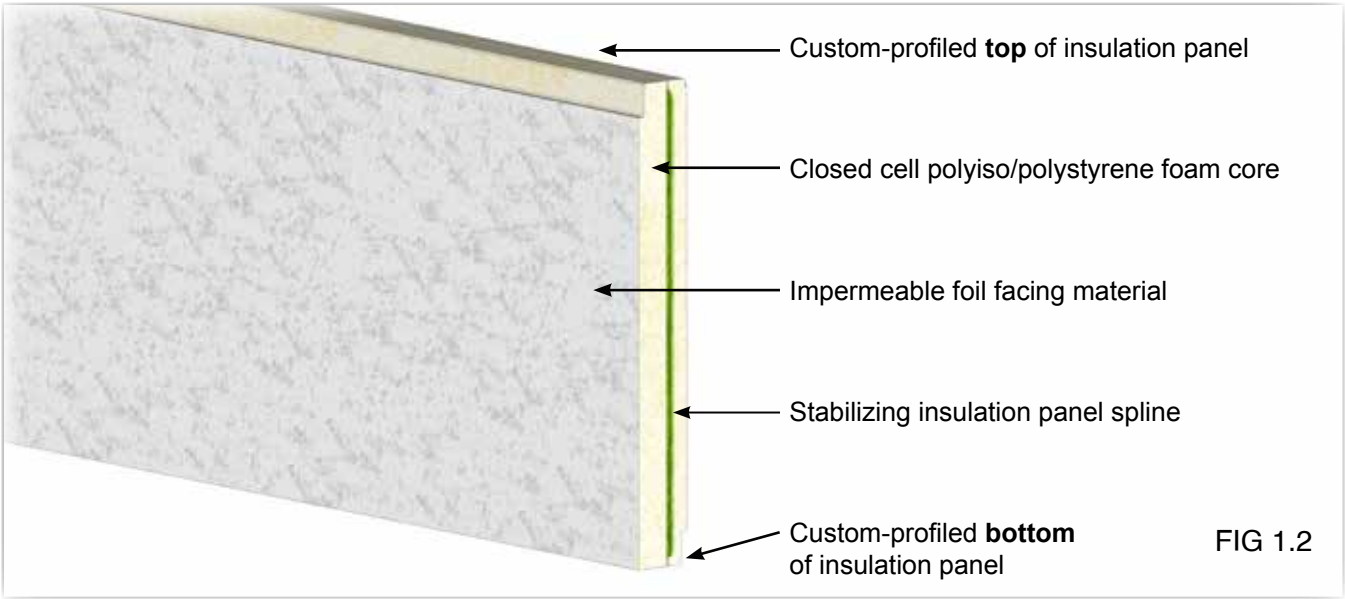
The SMARTci System consists of innovative insulated composite GreenGirt™ subframing, a primary insulator and auxiliary accessories as needed.

The 3-in-1 system is available in 2", 2.5", 3", 3.5", and 4" depths and can be installed horizontally. Standard girt length is 96". GreenGirt spacing is typically 16", or 24" on center. Consult an A2P Technical Representative for loading design and capabilities for dead and live loads.

1. System Diagrams

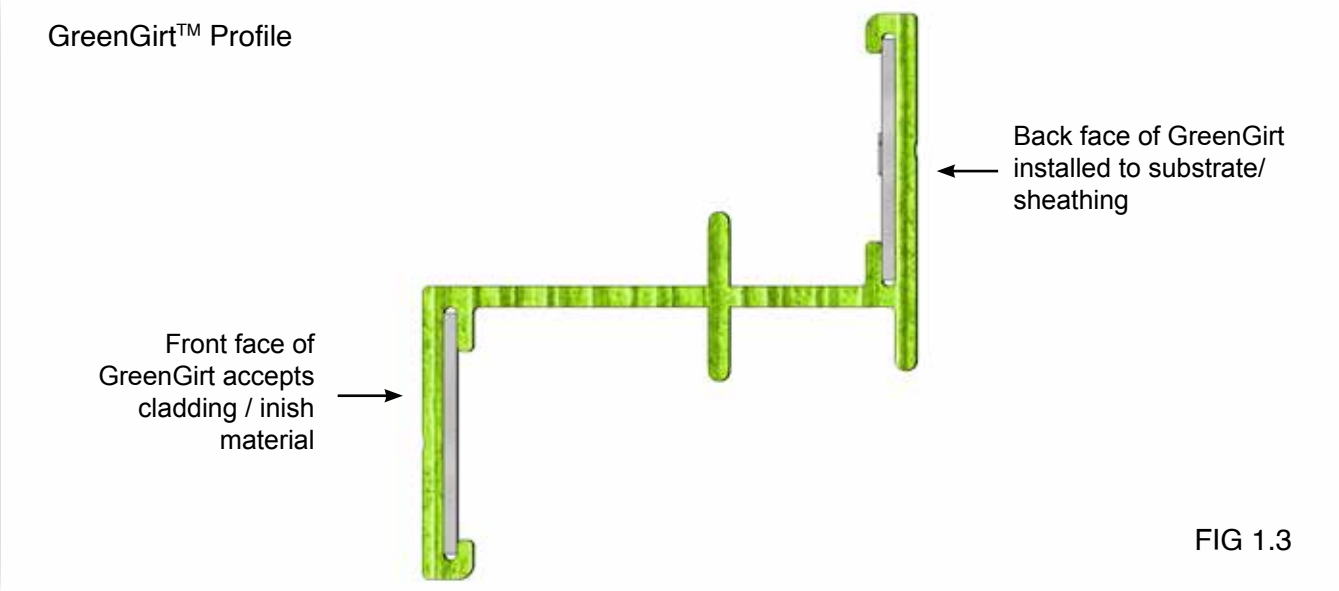


GreenGirt components shown, not to scale.

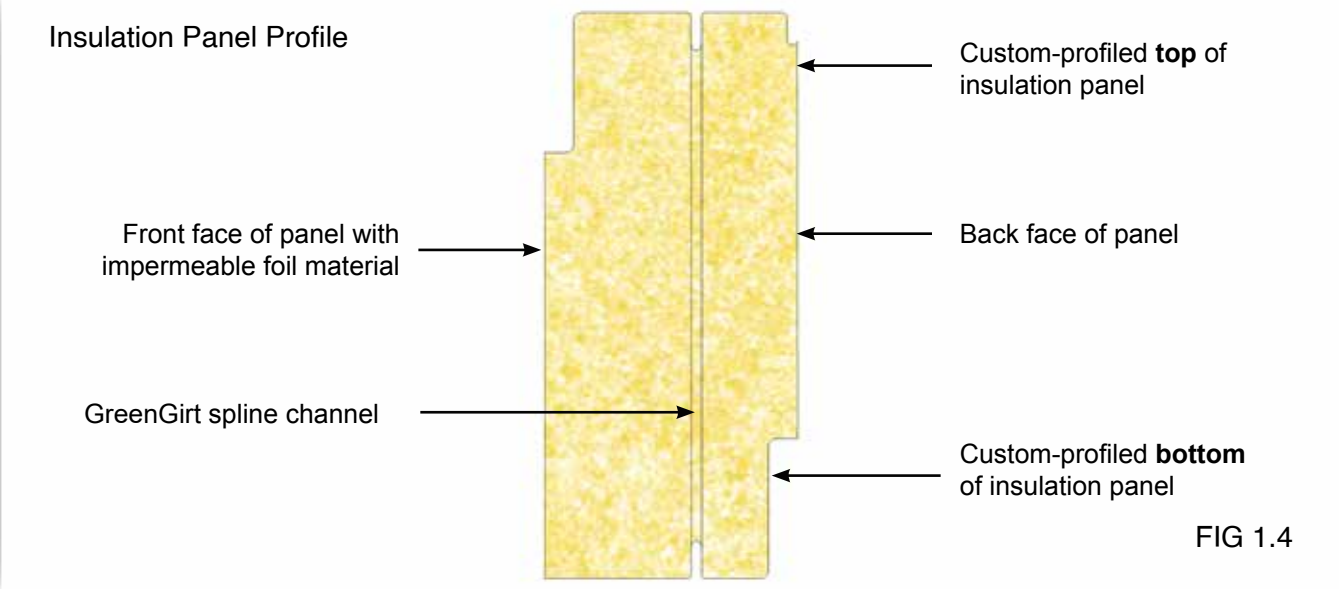


Typical rigid, closed-cell polyisocyanurate insulation panel, shown with spline inserted, not to scale.

1. System Diagrams



GreenGirt profile is shown, not to scale, indicating the orientation related to the building substrate.



Typical rigid, closed-cell polyisocyanurate insulation panel profile is shown, not to scale, indicating the orientation related to the building substrate. The top of the panel is identified by the two routed edge profile, while the bottom of the panel is identified by only a single routed edge profile.

1A. Description and Uses

- **SMARTci is an innovative, complete insulation solution. Engineered as a continuous insulation system, SMARTci includes composite girt/attachment members (called GreenGirt™), insulation, an engineered installation package, and optional accessories.**

- **GreenGirt joins the building cladding and insulation to a building structure. It's an insulated composite sub-framing component inside the SMARTci assembly that can be installed horizontally and vertically.**

2. Technical Information

2.1 Performance & Quality

Please note, failure to follow the precise procedures outlined in this Installation Guide, all applicable laws, ordinances and codes, and/or accepted industry safety procedures will render any and all warranties null and void. A2P will not be responsible in any way for merchandise, installed or not, that is damaged or defective as a result of negligible practices and/or a failure to follow these guidelines, deficiencies in workmanship or construction, or dangerous site conditions.

Warranties and other product information are available from A2P. For information regarding general and product-specific warranties, please contact A2P at (269) 355-1818.

3. Inspection Upon Delivery

SMARTci insulation panels and GreenGirt™ are professionally packaged, wrapped and carefully shipped on flat bed trailers to the construction site. When a shipment is received, check all items against the shipping document for quantities, dimensions, colors, transit damage, etc. Document any shortage of panels, girts and accessories or any damage on the bill of lading and have it signed by the driver. It is the receiver's responsibility to make any damage claims immediately. Please note that although every effort is made to prevent shipping damage, A2P is not responsible for damage which may occur during transportation, delivery, storage or on-site handling.

4. System Handling

4.1 Pallets Handled by Forklift

Inspect travel route to assure a reasonable level and compacted surface free of ruts and excavations.

The recommended loading/unloading method for bundles less than or equal to 8' is to use a single forklift with appropriately-spaced forks placed under the center of the bundle, transporting only one at a time.

Extreme caution is suggested when moving pallets of SMARTci insulation panels, as the corners and edges are ***VERY FRAGILE***, and damage could render them unusable.

4.2 Pallets Handled by Crane

To prevent damage while lifting, carefully pick up bundles one at a time.

The recommended crane lifting method is to use nylon straps positioned at a minimum of two points along the length of the bundle. Suitable wood spreaders should be used and located at the top and bottom of the bundles at the strap positions to protect the edges.

Extreme care should be taken to avoid bumping and snatching of the bundles when lifting.

5. System Storage On Site

Site must have adequate storage space to receive and store SMARTci components. This space must be level, firm, clean and free from standing water. Components, especially insulation panels, should be stored in a dry condition, off of the ground, covered continuously when not in use. Avoid outdoor storing for longer than 45 days.

IMPORTANT

SMARTci insulation panels and GreenGirt packages are non-load bearing! Do NOT stack other objects on top of the bundles, such as bricks, metal, lumber, and other materials.

Panels should be inspected upon delivery for presence of moisture. If moisture is present, packaging should be opened immediately to allow ventilation and drainage. Do not store insulation panels in direct sun.

If SMARTci is to be used immediately, bundles should be placed at preplanned strategic locations around the building perimeter, as close as possible to the specific work areas. Review installation shop drawings to determine the best locations.

Insulation panels in opened bundles should be covered by a plastic sheet or tarp at the end of the working day. The covering and bundles must be securely fastened to prevent wind damage.

When handling SMARTci, ropes, steel cables or chains must not be used. Insulation panel pallets should not be stacked more than two high in the field.

6. Handling and Storage of Auxiliary Accessories

Care should be taken during unloading and storage to prevent damage to small items, such as; GreenGirt™, clips, tape, fasteners, sealants, etc.

Cover all pallet crates or boxes to protect materials from weather but allow for ventilation to prevent condensation. Temperature sensitive items such as butyl tapes and sealants should be stored under controlled conditions to maintain suitable application characteristics.

7. Structural Alignment

Review shop drawings prior to installation to verify that structural members are in the correct location.

Installer must examine the alignment of the structural steel before installation of SMARTci. The substrate must be square, and support members to which panels are attached must be in the same plane, flat and free of obstructions such as weld marks, bolts or screw heads.

Support members shall be installed within the following tolerances of plus or minus 1/8" (3.17 mm) in 10 feet (3048 mm) in any direction along plane of framing, with non-accumulative spaces.

Any variance from tolerances can affect both performance and aesthetics and must be reported to the architect and general contractor, and corrected by the responsible party before installation begins.

8. Installation & Surface Preparation

Before installing GreenGirt™ or SMARTci insulation panels, ensure that the substrate is dry, clean, sound and free of any debris, residue and any other surface contaminants.

8.1 Installer Selection

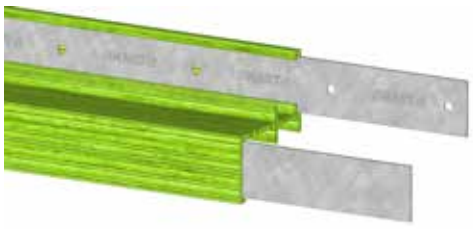
A2P recommends that SMARTci is only installed under the direct supervision of an experienced craftsperson, trained in the proper application of its diverse offering of products and services. Please call (269) 355-1818 for information regarding authorized installer selection and training programs.

8.2 Masonry & Concrete

Remove high spots and fill in low spots prior to attaching GreenGirt to concrete or masonry substrate. Remove any extra materials protruding on surface of walls, such as chunks of mortar or concrete, and even wall surface to within 1/4" per 8 feet. All high and low spots should be leveled to provide an even wall surface.

8.3 Steel & Wood Stud

Verify the substrate is flat, without steps or voids greater than 1/4".



CAUTION!

GreenGirt must NOT be cut with a plywood or toothed saw blades, as it is composed of metal, resin, and glass fiber. Use ONLY abrasive chop saw/ hand blades. Do NOT use actuated fasteners, impact hammers/ impact drivers or reciprocating saws!

9. Structural Alignment

The SMARTci system is installed horizontally from the bottom up, starting at a transition/ termination point. Depending on the starting location, refer to general and/or project-specific Construction Details to determine how to begin the installation. Please refer to the Construction Details section.

1. Install the interior galvanized steel corner (min. 22 gauge) from the bottom upward, ensuring at least a 1" ship lap at all joints, with approved sealant

2. Apply two continuous 1/4" min. beads of approved sealant to both sides of the interior galvanized metal corner, behind GreenGirts™ and insulation panels

3. (Optional) Correctly size to length the pre-cut bottom starter insulation panel, and add approved sealant along the top edge, roughly every 6".

4. Press the starter GreenGirt into the starter insulation panel gently, ensuring a tight fit, and tamping with a rubber mallet and notched block as needed. Apply the GreenGirt to the substrate with approved fasteners, per directions. Allow for a 1/2" gap between the panel and base (if applicable) for approved expandable sealant.

5. Install the first row of insulation panels above the starter row of GreenGirt per installation guidelines.

6. Install the next row of GreenGirt by gently tamping it down in place along the length of the panel. Ensure that the Compression Air Seal of the GreenGirt aligns with the coordinating channel at the top of the insulation panel to prevent damage, before tamping.

7. Apply two continuous 1/4" min. marriage beads of approved sealant at all transitions and terminations, and onto GreenGirt, behind insulation panels before installing them (Ref. FIG. 10.4.2 and 10.4.3).

8. Apply approved, expandable sealant at all gaps, as required.

9. Install exterior galvanized metal corners from bottom up, attaching to each GreenGirt with approved, low-profile, corrosion-resistant fasteners.

10. Install strapping clips (if required) at parapet transitions, at a minimum of 24" on center.

11. Use approved tape to seal over all GreenGirts and over all panel joints. (Ref. DETAILS starting on page 24).

10. System Installation: GreenGirt

10.1 General Notes

With approved engineering, GreenGirt is designed to be installed horizontally, spanning 16" or 24" apart, with fasteners attaching them to the substrate at 16" or 24" centers. This spacing is determined by the type and size of insulation used, the material and scale of the final cladding, or both.

When attaching fasteners to GreenGirt, the following general guidelines are to be observed (FIG: 10.1.1):

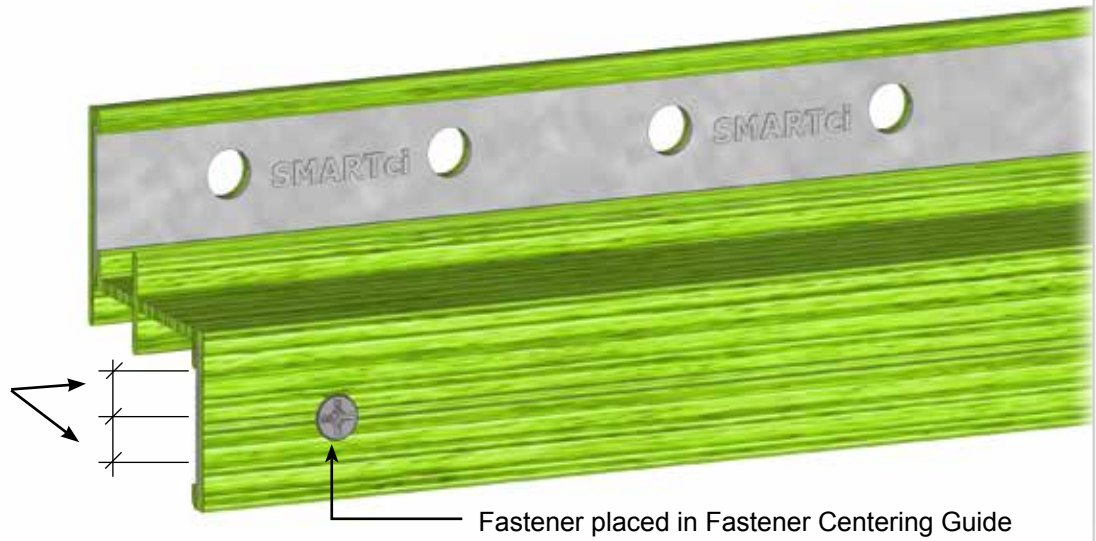
1. The edge distance of any fastener-hole shall be a minimum of 1/2" from the edge of the profile to the closest side of the fastener-hole.

2. The minimum clear distance between holes is 5x diameter.

3. The minimum edge (edge of profile to edge of hole) distance in the longitudinal direction is 3x diameter.

4. The minimum edge (edge of profile to edge of hole) distance in the transversal direction is 2x diameter.

FIG 10.1.1



When attaching any sheathing (plywood, fiberglass gypsum, etc.) to GreenGirts, the ideal location for approved fasteners is in alignment with the Fastening Center Guide. A maximum deviation of 1/4" from the centerline of the fastener to the centerline of the guide is also acceptable.

10.2 Steel Fastening

Fastening GreenGirt™ to steel framing can be performed with self-drilling fasteners of sufficient diameter and loading capacity for the application, utilizing the pre-drilled holes in the metal retention plates.

10.3 Concrete Fastening

Fastening GreenGirt to a concrete or CMU substrate can be accomplished by using threaded concrete fasteners of sufficient design to accommodate the design load. Pre-drill the GreenGirt metal substrate insert as needed. Refer to specific project documents for fastener types and sizes.

10.4 GreenGirt™ Attachment

It is essential that the starting row of GreenGirt be properly secured to the substrate, and is level and true. The height of the first GreenGirt row above the base is generally determined by project-specific factors, such as type of insulation used, size and scale of exterior cladding material, and/or substrate-specific conditions. Generally, SMARTci should begin at a transition/termination point. See Construction Details for more information.

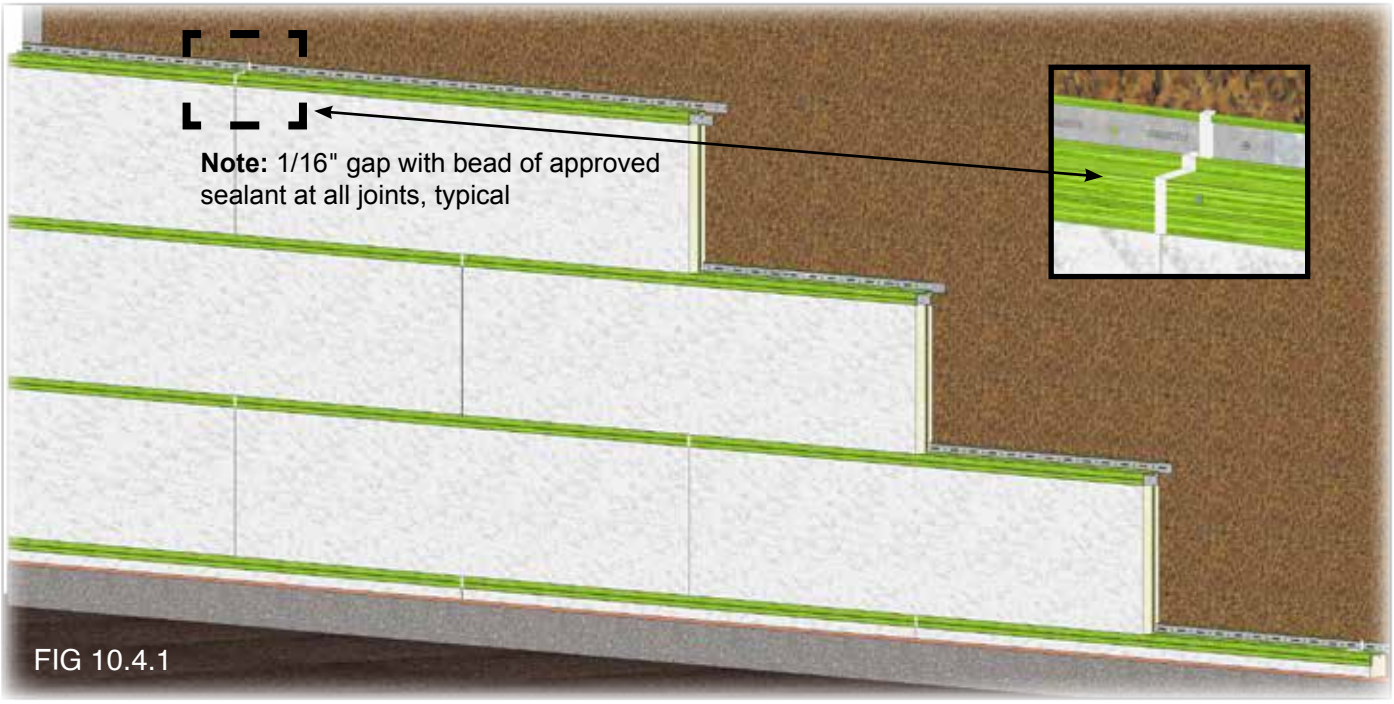


FIG 10.4.1

GreenGirt shown on solid substrate construction, installed horizontally, with staggered joints. Blowup shows the 1/16" gap with 1/4" min. bead of approved sealant at each joint, typical. Refer to project-specific conditions, architectural and engineering documents to determine proper starting and spacing.

10. System Installation: GreenGirt - Continued

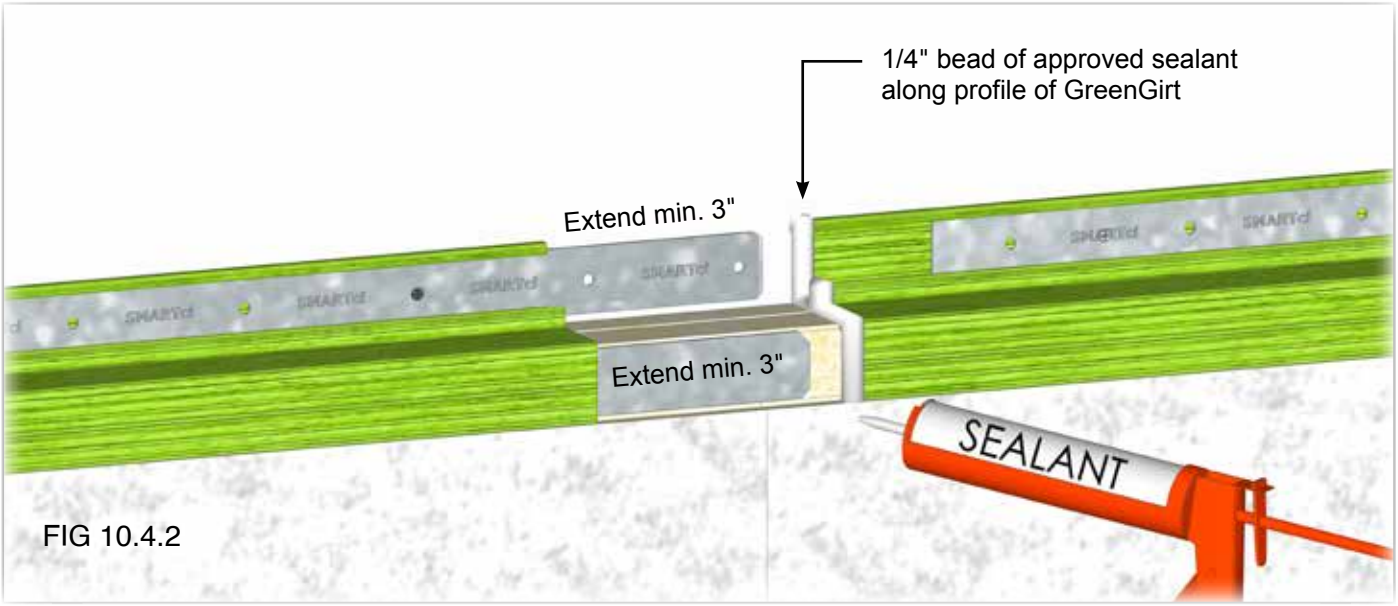


FIG 10.4.2

STEP 1: GreenGirt galvanized metal inserts fit into new GreenGirt, with a 1/4" min. continuous bead of approved sealant applied to the adjoining end, with a minimum of 3" overlap.

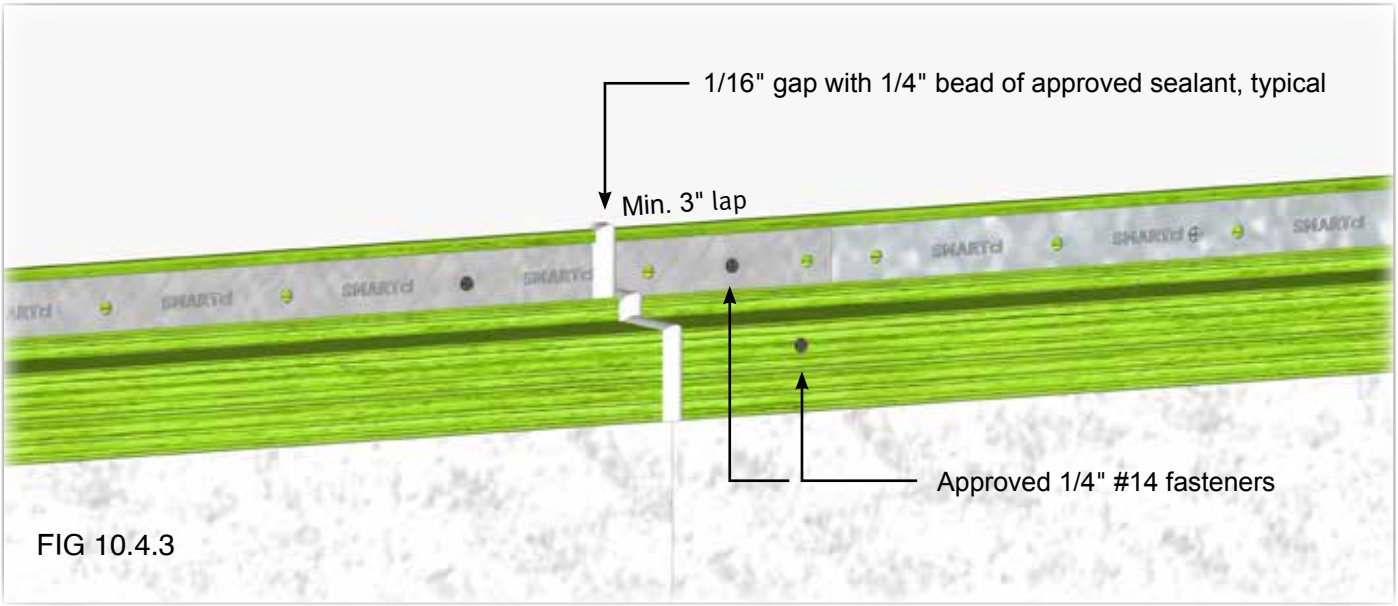


FIG 10.4.3

STEP 2: The GreenGirt pieces are connected with galvanized metal inserts lapped at least 3", with a continuous bead of approved sealant in the 1/16" gap between, and fasteners to stabilize them (shown on steel stud wall construction).

10.5 GreenGirt™ Connections

When connecting two pieces of GreenGirt, these steps ***must be followed***:

1. Place a 1/4" minimum continuous bead of approved sealant onto the end of the receiving GreenGirt. (FIG. 10.4.2.)

2. Carefully slide the extended galvanized metal substrate insert and cladding insert into the corresponding channels of the receiving GreenGirt with a 1/16" gap and minimum of 3" overlap. (FIG. 10.4.2.)

3. Fasten the GreenGirt through the overlapped galvanized metal inserts into the substrate with approved fasteners. (FIG. 10.4.3.)

4. Remove any debris or moisture from the installed GreenGirt before continuing to add sealants or insulation panels.

11. System Installation: Insulation Panels

11.1 General Notes

When installed correctly, the components of SMARTci GreenGirt and supplied insulation panels) provide a weather-resistant vapor barrier. It is important when using the system for this purpose that the detailed installation instructions for SMARTci are followed precisely, with no deviation from the suggested methods.

Sequencing the installation of the SMARTci system as laid out in this guide, and using only supplied/approved auxiliary materials/accessories, is vital for the function and longevity of the system's performance and integrity. SMARTci should not be installed in applications below grade, or to damp and/or frozen surfaces.

11.2 Insulation

- Protect surrounding areas and surfaces from damage.

- Do not apply SMARTci insulation panels over walls while they are vulnerable to water intrusion from above or behind.

- Do not block flashing, weeps or other drainage paths with panels.

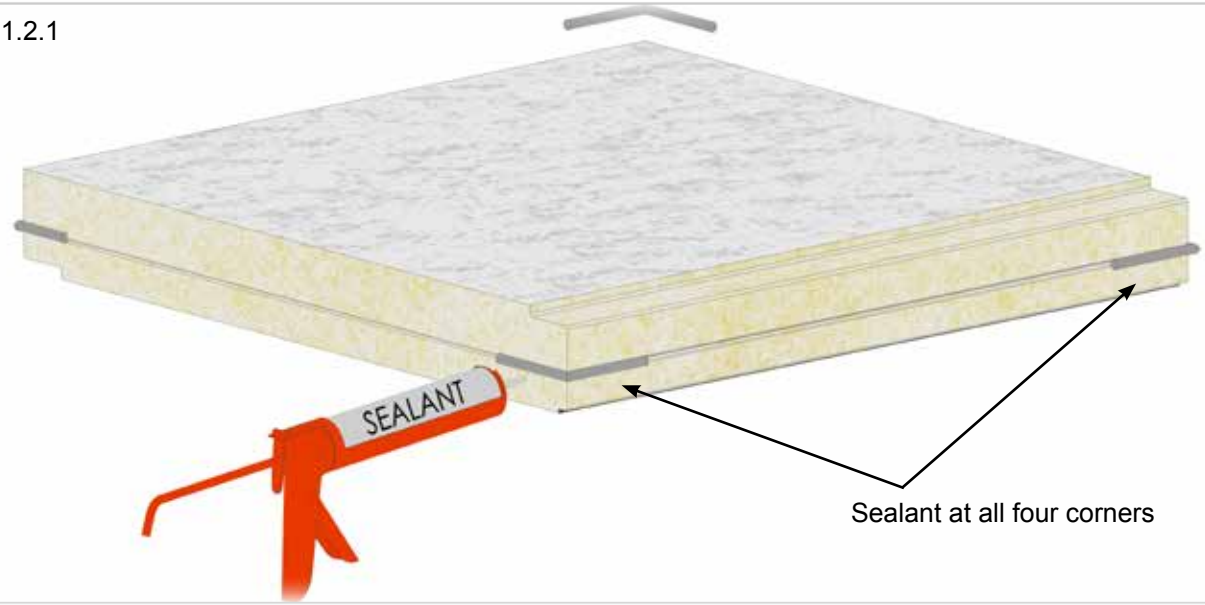
- SMARTci insulation panels should be applied in a running bond pattern using maximum board lengths to minimize number of joints.

- Honor expansion joints as indicated on the drawings. Do not span expansion joints.

- Verify all materials are installed in accordance with current, published literature and local code requirements.

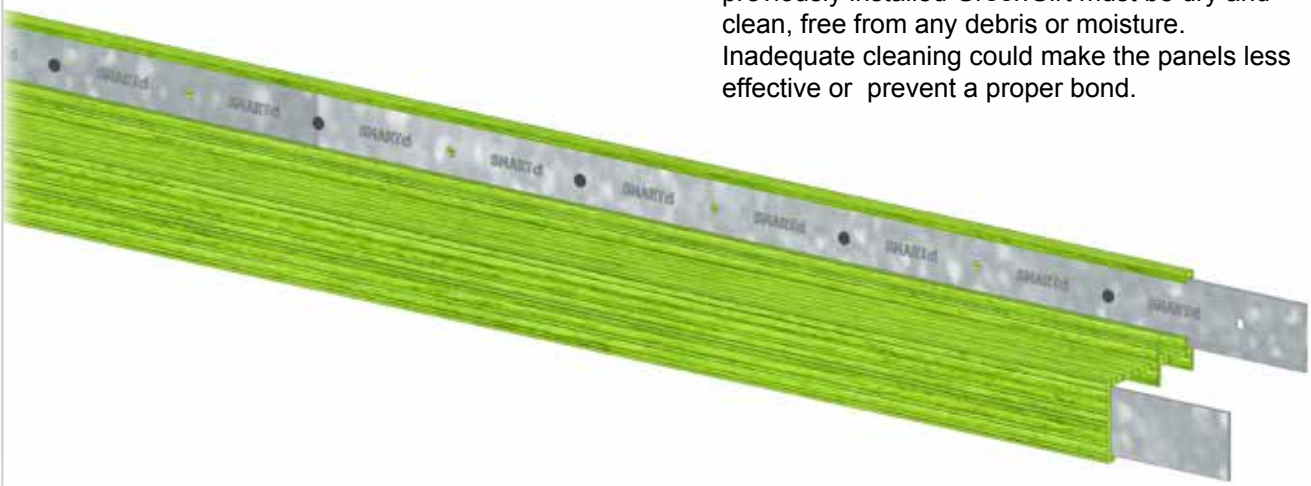
11. System Installation: Insulation Panels

FIG 11.2.1



STEP 1: Apply a 1/4" min. continuous bead of approved sealant, at least 2" long in each direction, at all four corners of the panel to be installed, inside the preformed center profile channel.

FIG 11.2.2



Note: Before installing any insulation panels, previously installed GreenGirt must be dry and clean, free from any debris or moisture. Inadequate cleaning could make the panels less effective or prevent a proper bond.

STEP 2: After installing the starting GreenGirts, clean off all construction debris on the GreenGirts. There should be no dirt, dust or moisture present when the panel installation begins, which could cause damage and/or compromise their efficiency.

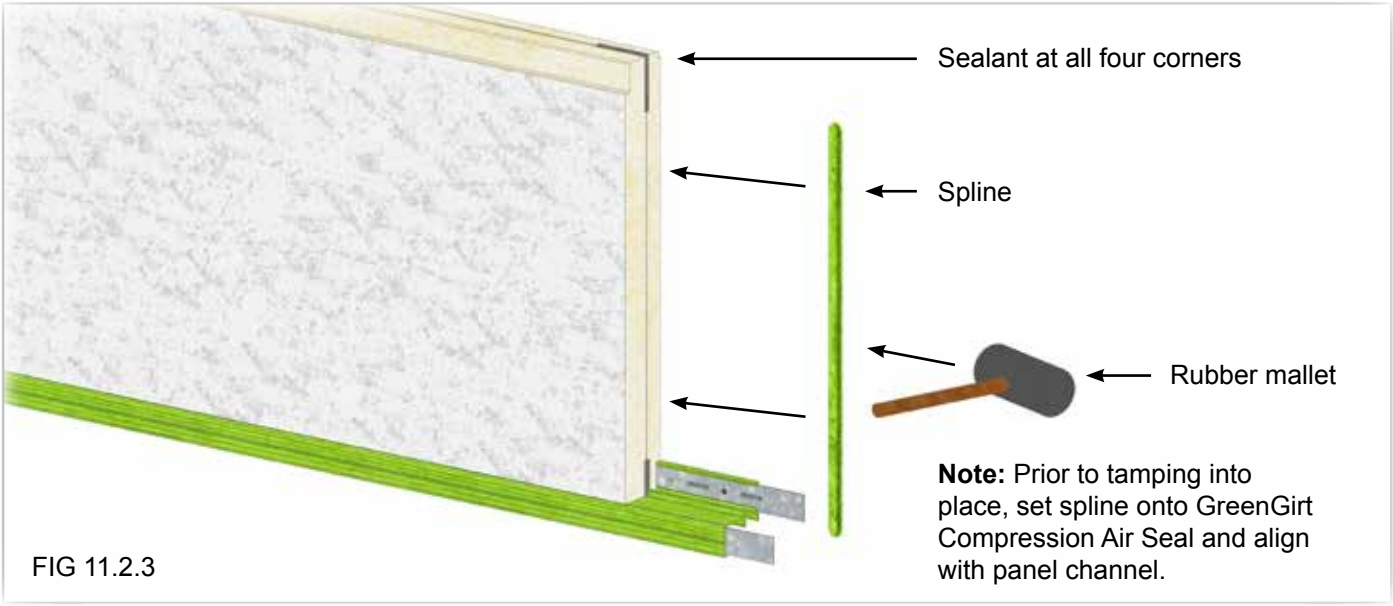


FIG 11.2.3

STEP 3: After cleaning all debris and any moisture from the GreenGirt, place the SMARTci insulation panel firmly into the starting GreenGirt member; align the Compression Air Seal into the groove properly. Insert the GreenGirt spline into the end vertical channel with a rubber mallet, gently tamping to ensure a snug fit with the corner sealant beads.

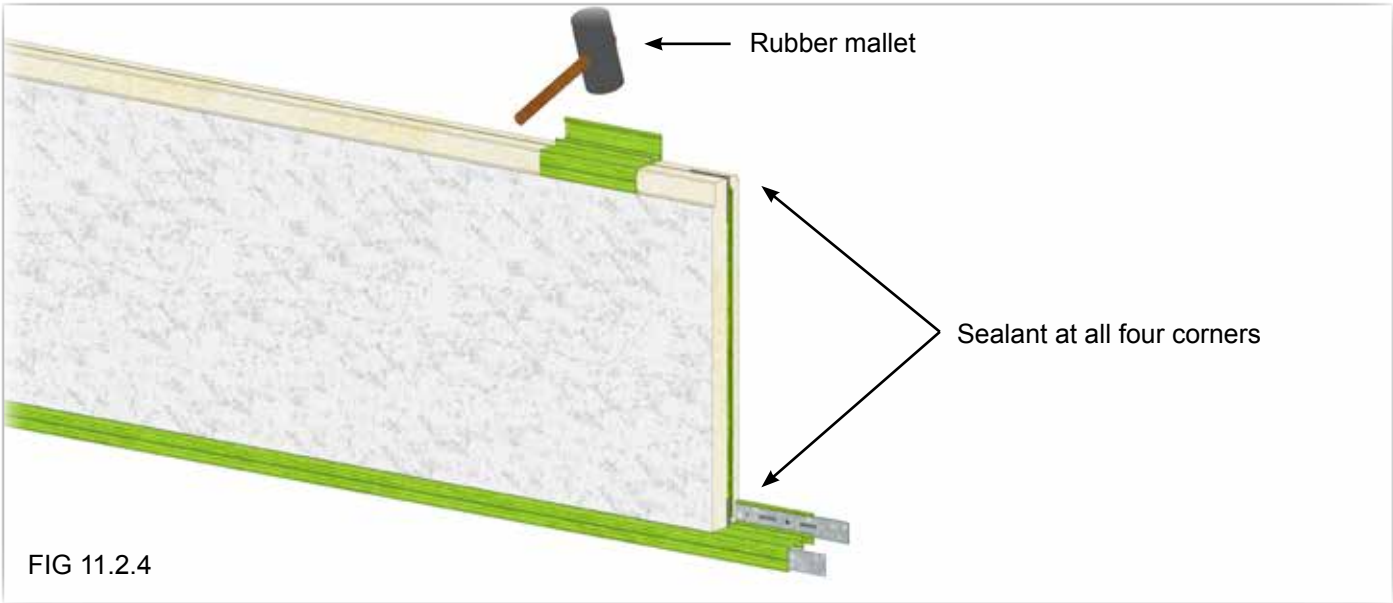


FIG 11.2.4

STEP 4: Using a spare piece of GreenGirt as a buffer, gently tamp down onto the installed insulation panel with a rubber mallet, ensuring a firm bond, and that no damage is done to the insulation panel.

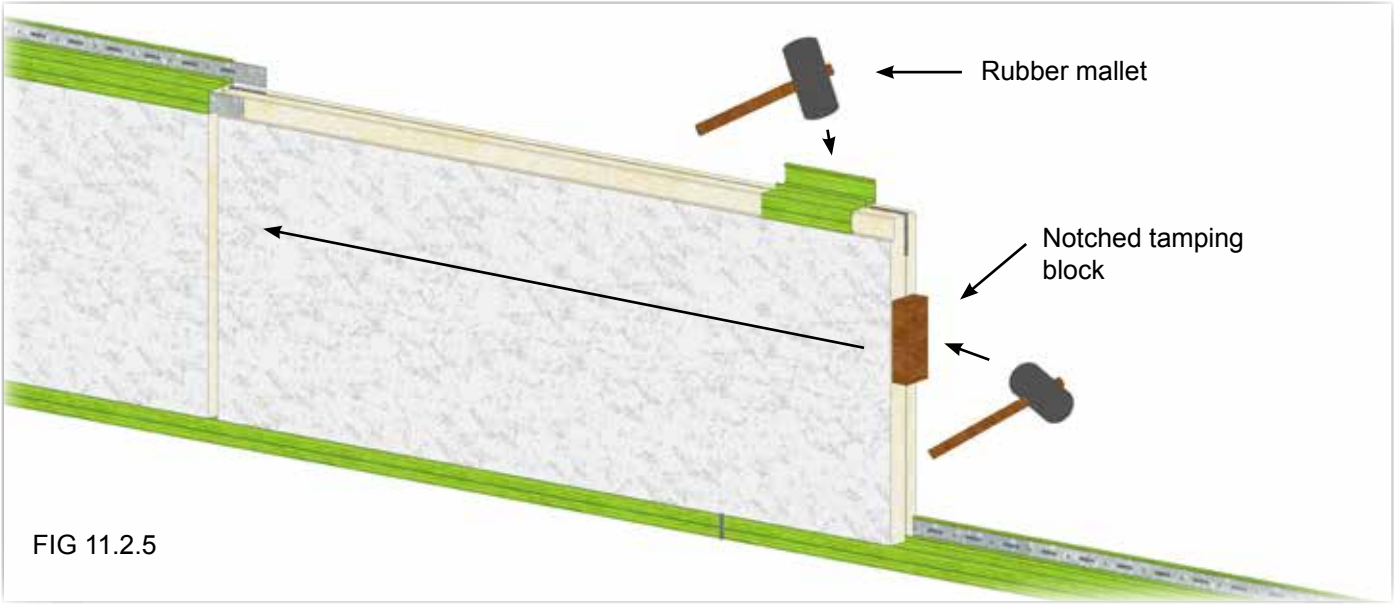


FIG 11.2.5

STEP 5: When installing the next adjacent insulation panel, do not slide the panel into place. Use the spare piece of GreenGirt™ to gently tamp it into place along the length of the top. Use the provided notched tamping block to gently tamp the two panels together to create a firm bond with the Spline between them along the height of the end. Continue installing SMARTci insulation panels in this way, bottom to top. Ensure that joints are staggered, and that secure, flush bonds are achieved between full panels.

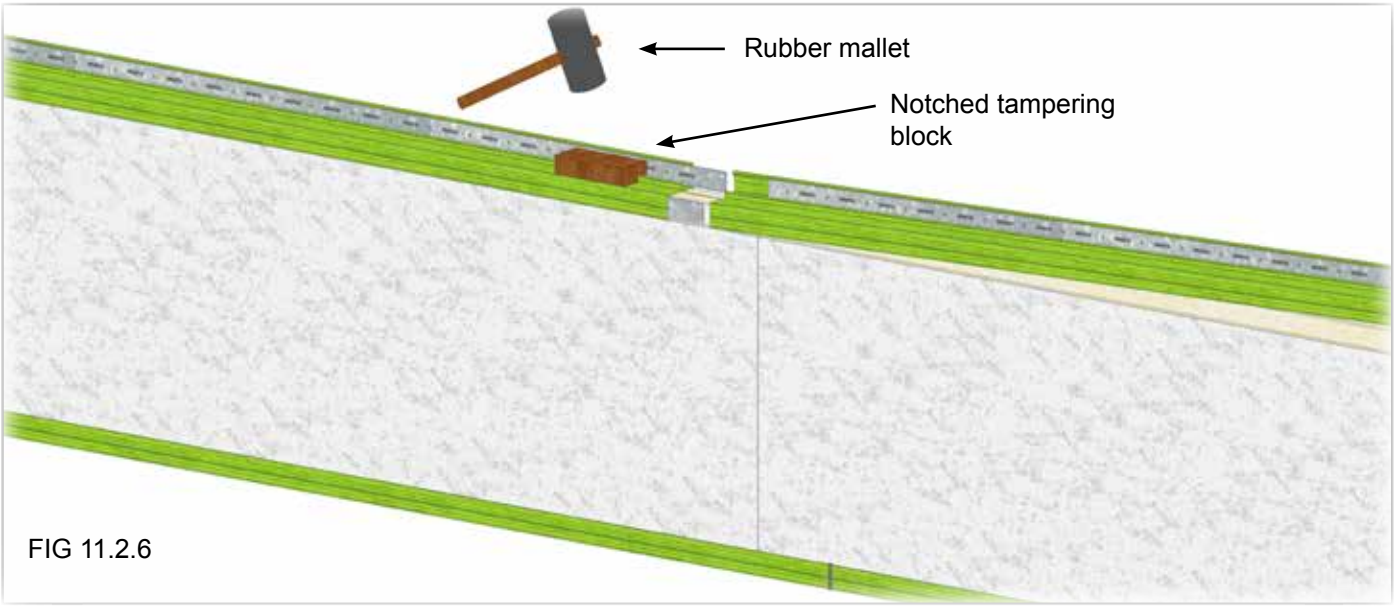


FIG 11.2.6

STEP 6: Continue installing the next course of GreenGirt above the previously installed insulation panels. Using the provided notched tamping block and a rubber mallet, gently tamp down onto the new girt to ensure a firm bond. The next adjacent piece of GreenGirt will be connected at a slight angle above the previously installed insulation panel. Insert fasteners through lap at back flange and front flange.

12. System Installation: Insulation Panel Cutting & Routing

12.1 Custom Panel Cutting

There is a specific sequence to cutting SMARTci insulation panels to custom sizes. Once the length, width or both have been determined for the panel, the first step is a standard, straight cut. For installation at foundations, openings, corners, angled roofs or other typical construction details, these flat panel faces need no further routing to be installed correctly.

When cutting panels, do not use knives, razor blades, or hand/reciprocating/jig saws. Use a circular saw with a toothed, plywood-type blade only, and a square to ensure straight, flush cuts of the material. Clean edges of any loose foil pieces before installing the panels as outlined in this guide.

12.2 Custom Panel Routing

The second step in installing custom-sized panels is necessary when the newly-sized panel is connecting to another panel or into a GreenGirt. Using the provided SMARTci Spline Router and SMARTci Edge Router profiling attachments, follow the procedures as indicated in Ref. FIG 12.2.1.

FIG 12.1.1

Step 1: To cut panels to a custom length or width, use a sturdy, raised surface to support it. Do not cut the panel on the ground, while supported by anything unstable, or individuals. Using a chalk line and square will ensure a clean, straight cut.

12. System Installation: Insulation Panel Cutting & Routing - Continued

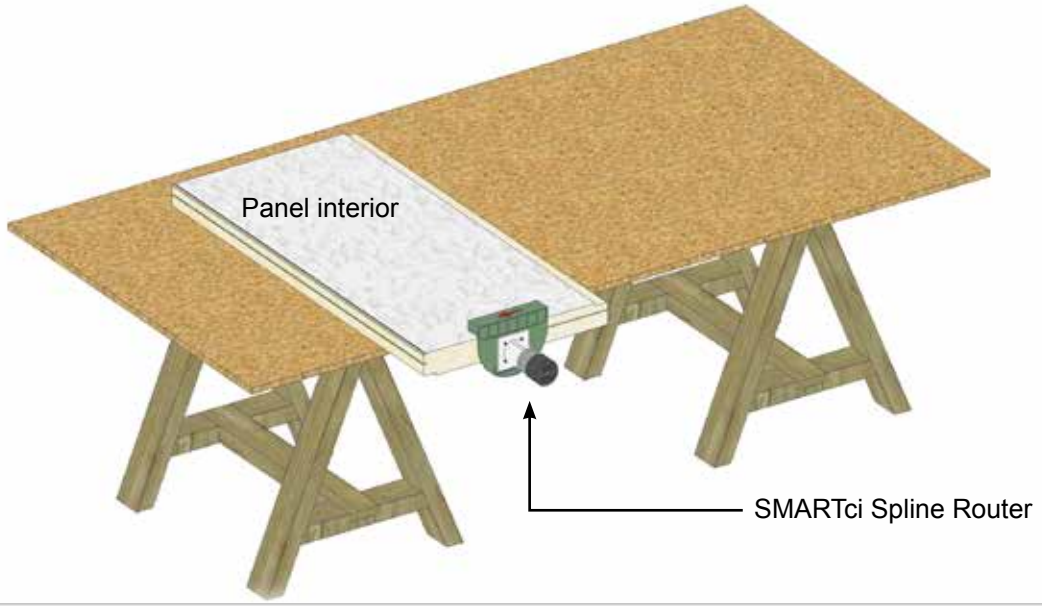


FIG 12.2.1

STEP 2: If the newly-sized panel is to be connected to another panel along the end(s), run the appropriately-sized SMARTci Spline Router squarely along the outside end edge(s) of the insulation panel, in the direction of the arrows located on the router's base, to add the channel for the GreenGirt Compression Air Seal(s) and spline(s).

FIG 12.2.2

STEP 3: In the end(s) of the custom cut panel where it is to be connected to another panel, a custom-cut spline must be sized to fit snugly into the newly-routed channel. The spline should fit tightly against the bottom and top Compression Air Seals of the GreenGirts.

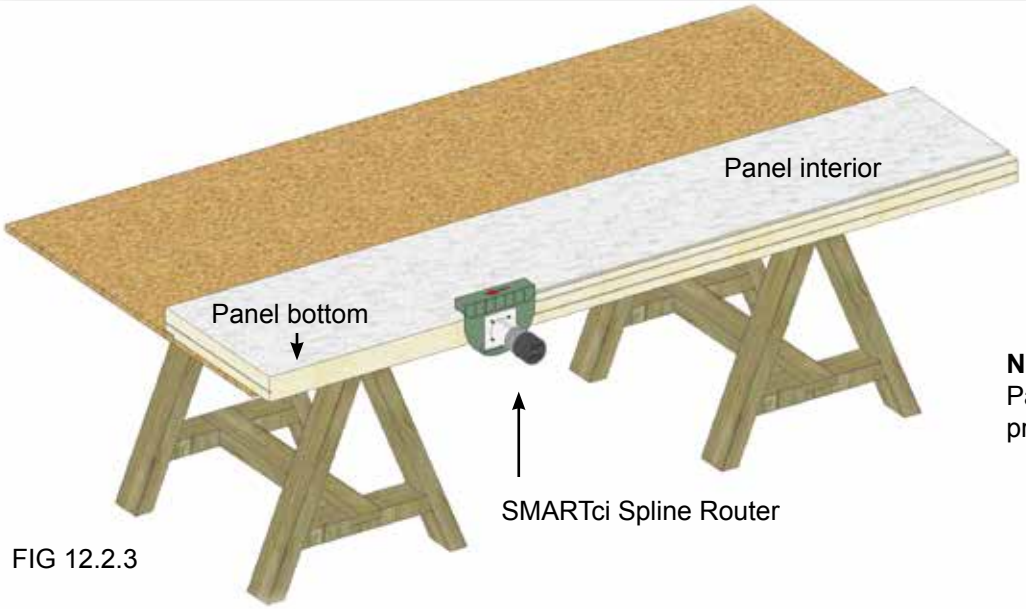


FIG 12.2.3

Note: Refer to Insulation Panel Profile p.19 for proper panel orientation.

STEP 4: For a custom-cut panel width, first run the appropriately-sized SMARTci Spline Router squarely along the bottom of the insulation panel, in the direction of the arrows located on the router's base, to create the profile for GreenGirt Compression Air Seal.

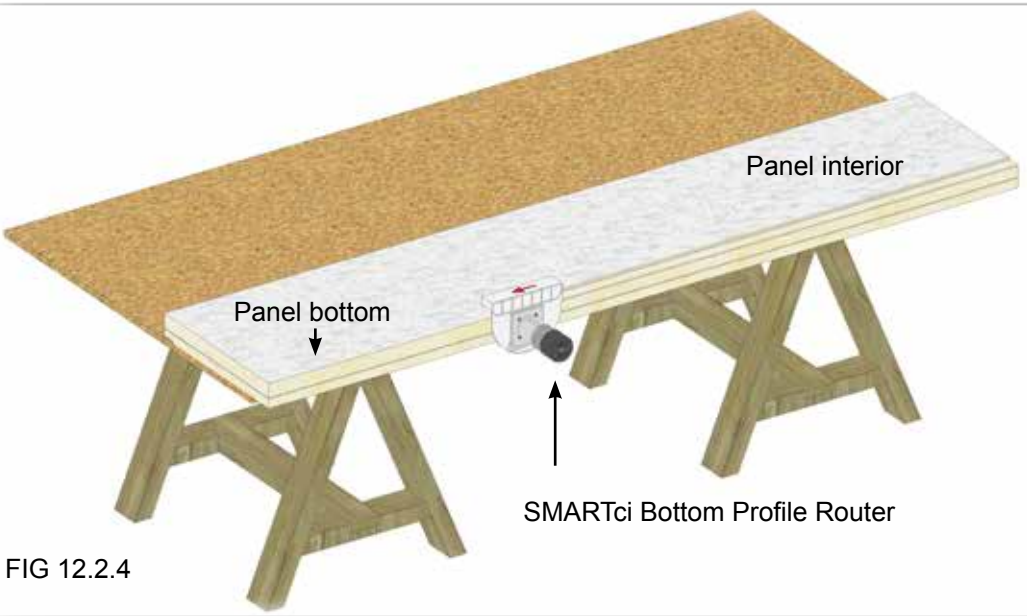


FIG 12.2.4

Note: Refer to Insulation Panel Profile p.19 for proper panel orientation.

STEP 5: Second, follow in the same way with the appropriately-sized SMARTci Bottom Profile Router. Ensure that only the bottom of the panel is cut to create a custom-size, as this is the profile created by the supplied router.

13. System Installation: Openings Sequence

13.1 General Notes

When using the SMARTci™ system around openings in any structure, it is important to follow the carefully-designed sequence of framing and sealing openings properly. Failure to follow these simple steps may result in building shell vulnerability.

SMARTci Trim (FRP angles) should be used to frame openings in conjunction with the SMARTci system. All angles are formed at 90 degrees and must be installed from the bottom up, and ship lapped to avoid bucking water. Available angle depths are 2" x 3" and 4" x 6". Cut the SMARTci Trim to overlap/shiplap at all corners of the opening. Provide a 1/2" gap between SMARTci Trim and insulation for approved expandable sealant. The assembly should then be sealed with approved tape.

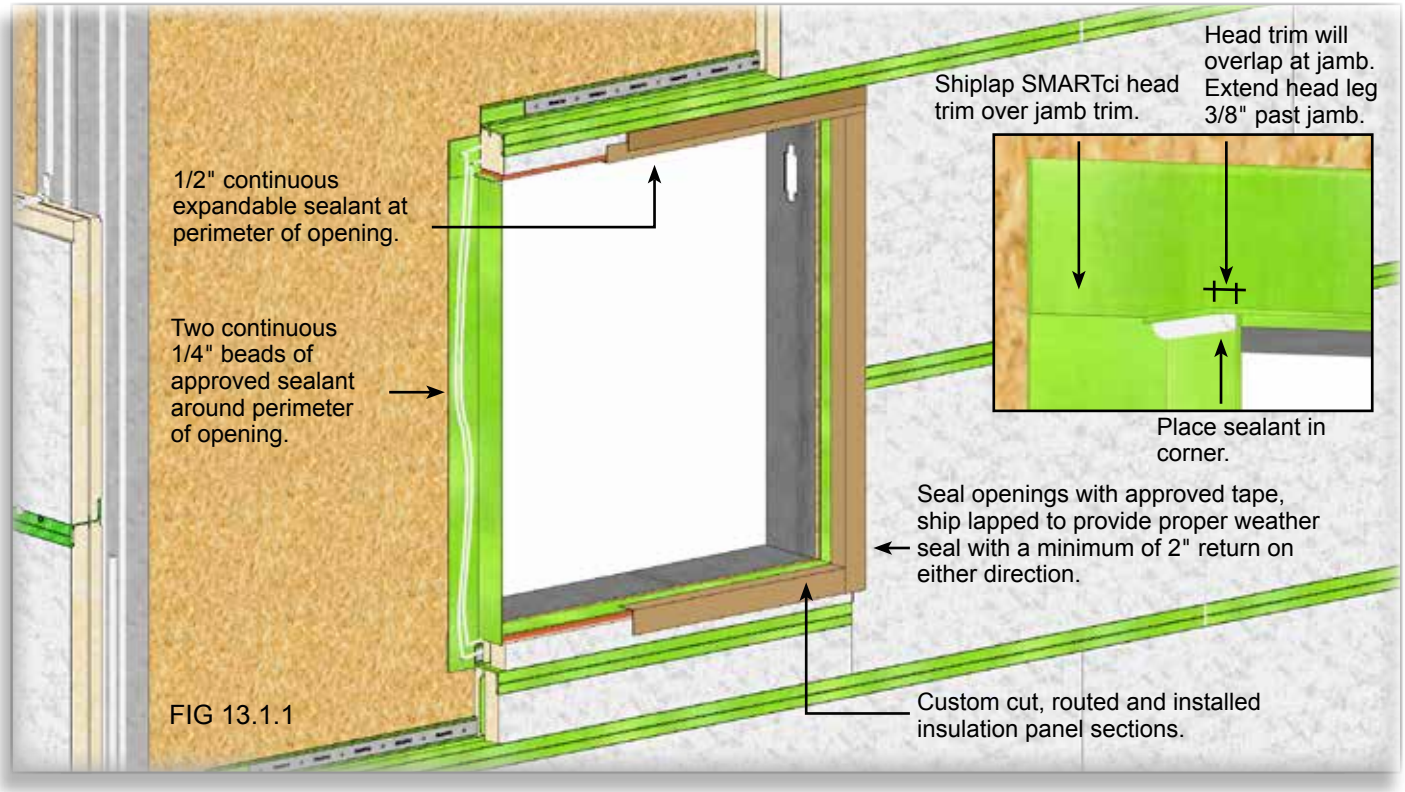
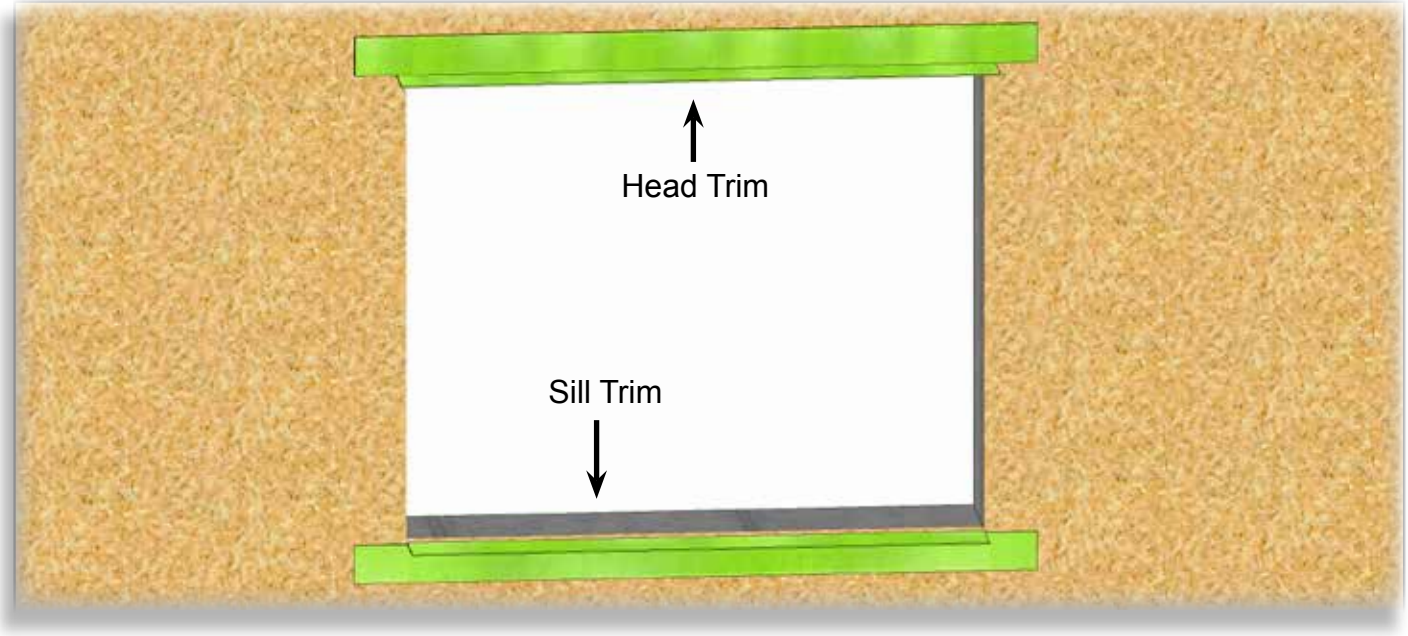
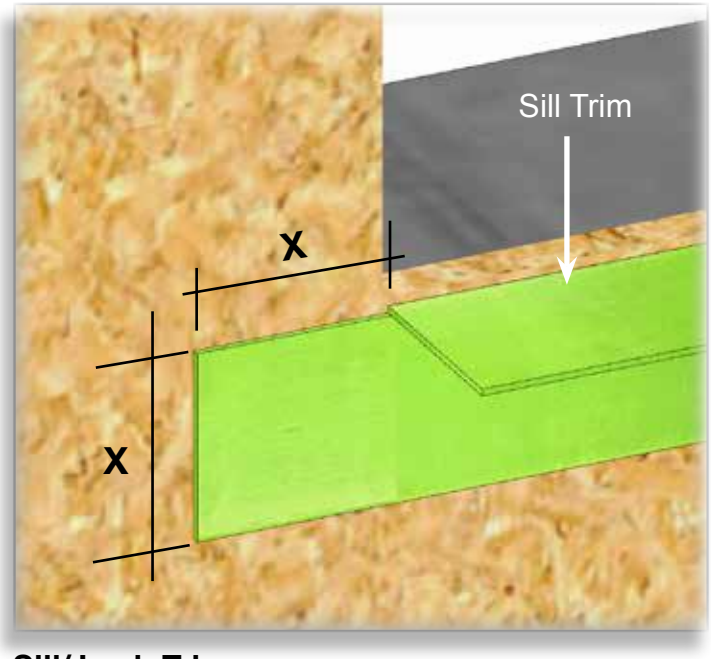


FIG 13.1.1

A full opening assembly is shown on a solid substrate with insulation panels cut to fit above and below.

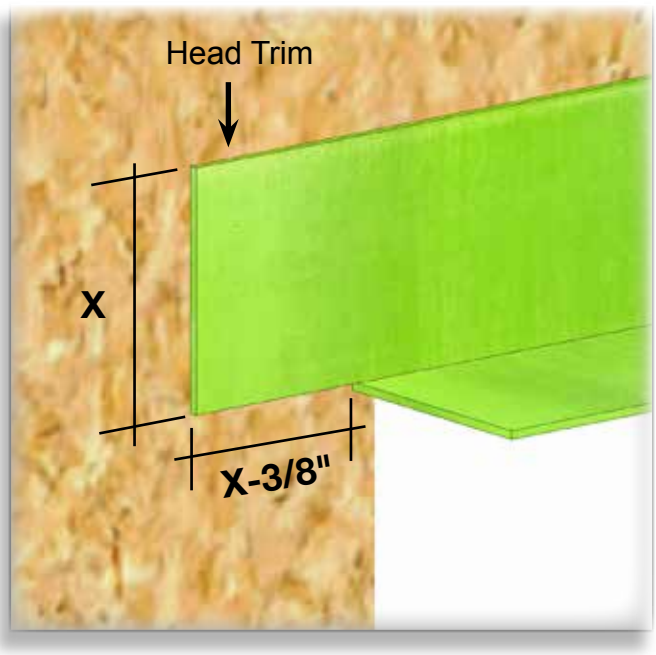
**** Jambs not shown for clarity ****





Sill/Jamb Trim

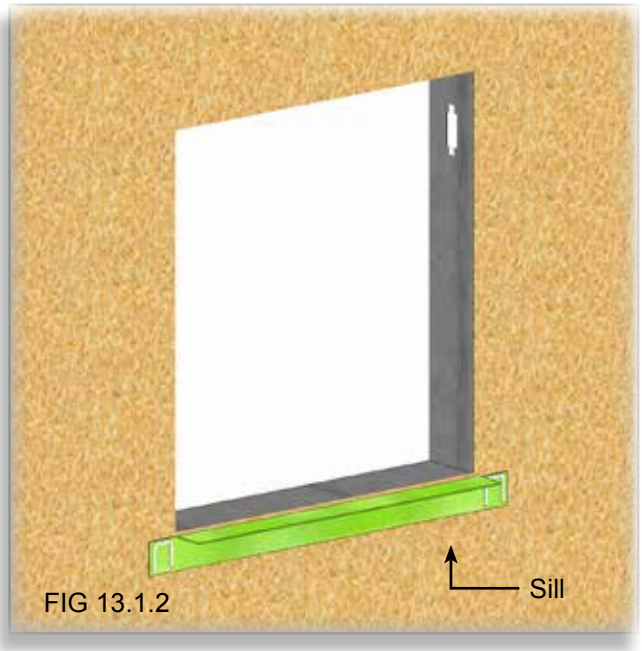
Cut SMARTci Trim for sill and jamb members to an appropriate size. Jambs should be cut 3/8" longer to achieve overlap of jamb past sill. Notch out each side as shown in the figure above, matching the dimensions of the SMARTci Trim used.



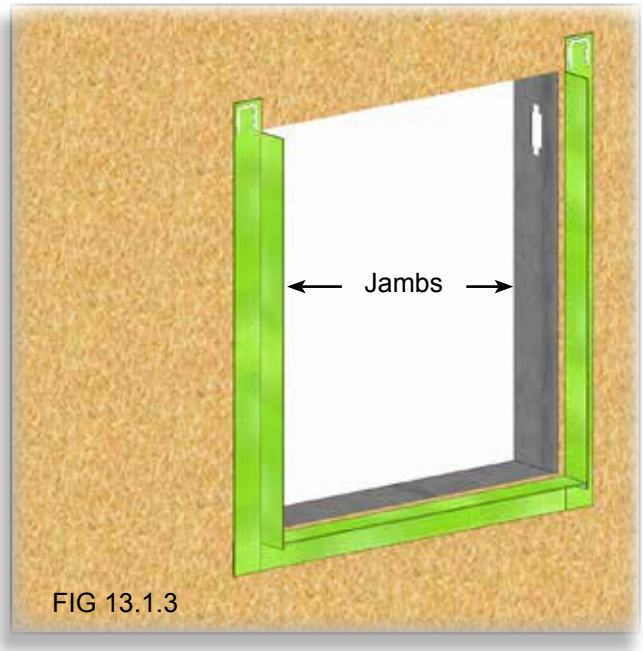
Head Trim

Cut SMARTci Trim for head member to an appropriate size. Notch out each side as shown in the figure above and the breakout box on page 24, matching the dimensions of the SMARTci Trim used.

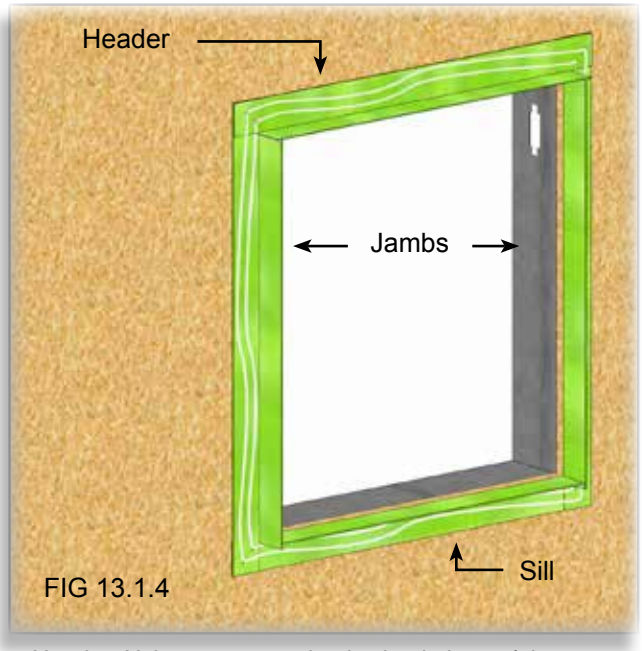
**** Note: For 3-in-1 system, prior to installing SMARTci Trim, place a continuous 1/4" bead sealant around ALL openings as shown in the details on pages 35-37. ****



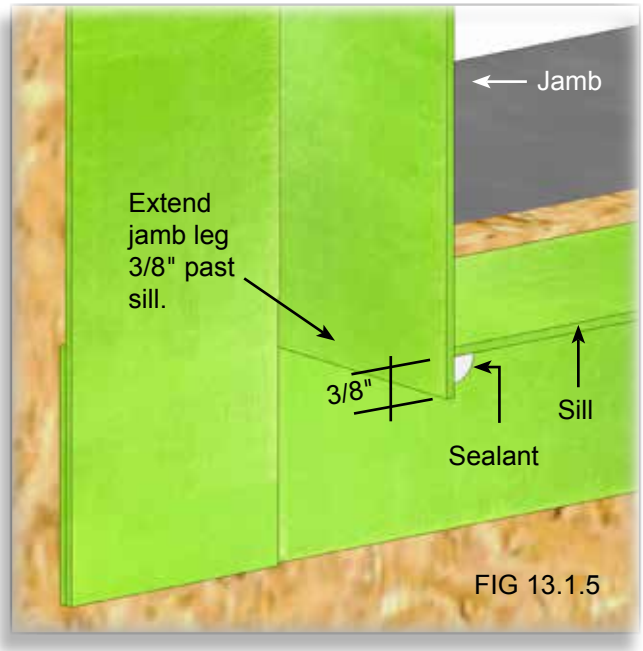
1-Sill: Using an appropriately sized piece of the SMARTci Trim, place the trim as shown above to allow for the ship lap of each jamb trim. Place a 1/4" (min.) horseshoe-shaped bead of sealant as shown prior to shiplapping jamb trim. Attach to substrate as required. Reference details beginning on page 29.



2-Jambs: Using an appropriately sized piece of the SMARTci Trim, ship lap the jamb pieces of trim over the trim at the sill. Place a bead of sealant at the underside of each corner. Place a 1/4" (min.) horseshoe-shaped bead of sealant where the jamb trim will ship lap with the header. Attach to substrate as required. Reference details beginning on page 29.



3-Header: Using an appropriately sized piece of the SMARTci trim, ship lap the header piece of trim over the trim at the jambs. Place a 1/4" bead of sealant at the underside of each corner. Attach to substrate as required. Add two 1/4" (min.) continuous beads of approved sealant as shown prior to installing insulation. Reference details beginning on page 29.



4-Corners: Overhang sill and jamb trims as shown above and in the breakout box on page 23. A 1/4" (min.) bead of sealant should be placed along the underside of all four corners. Reference details beginning on page 29.

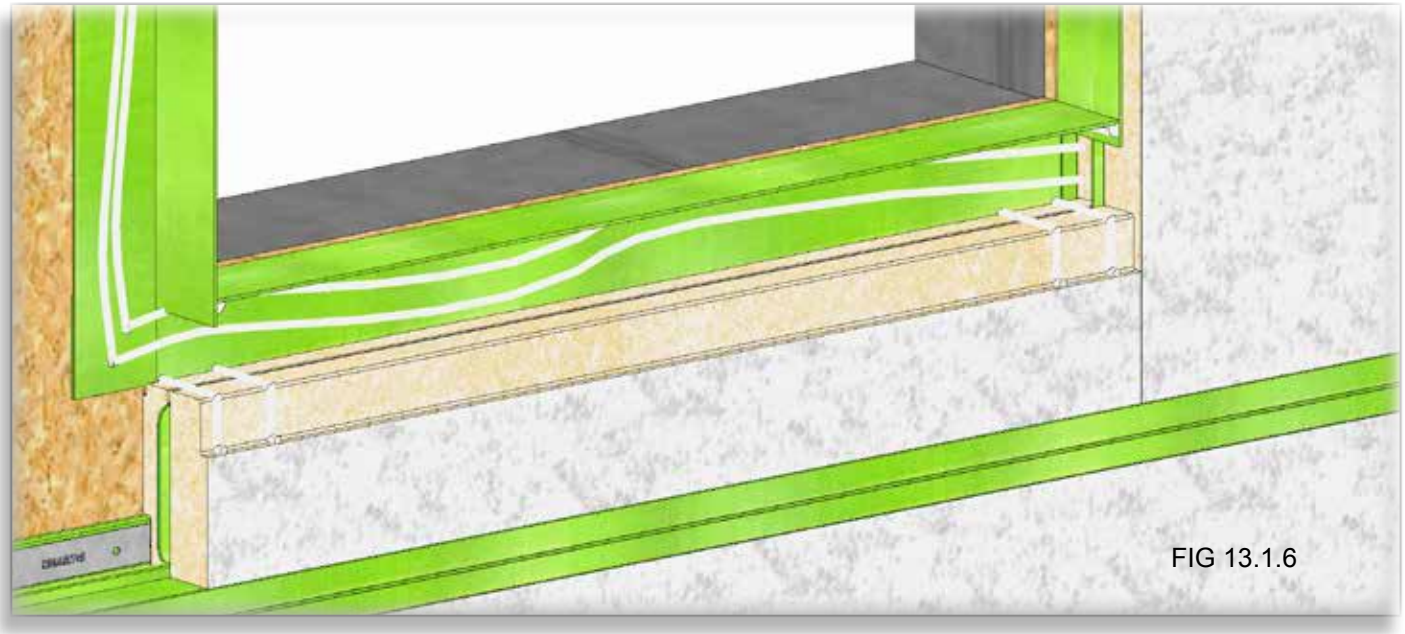


FIG 13.1.6

When installing the custom-cut insulation panels below any opening, two 1/4" minimum continuous beads of approved sealant are required at each end to provide watertight seal.

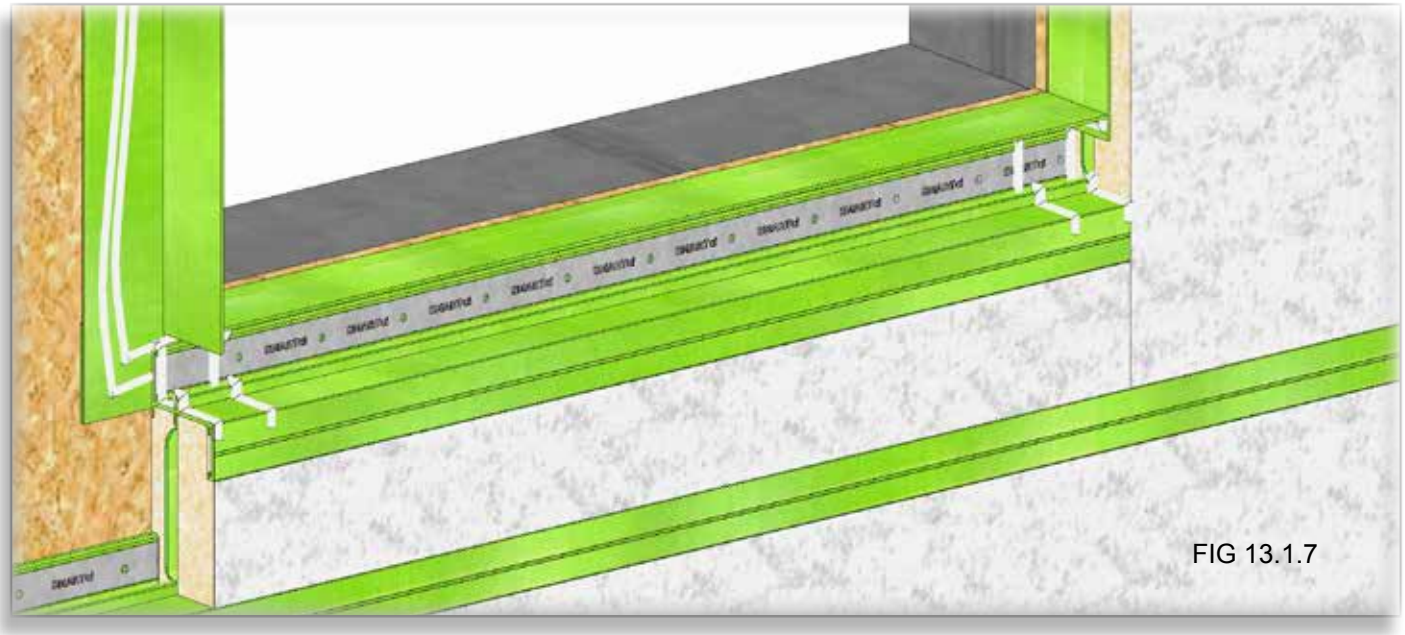
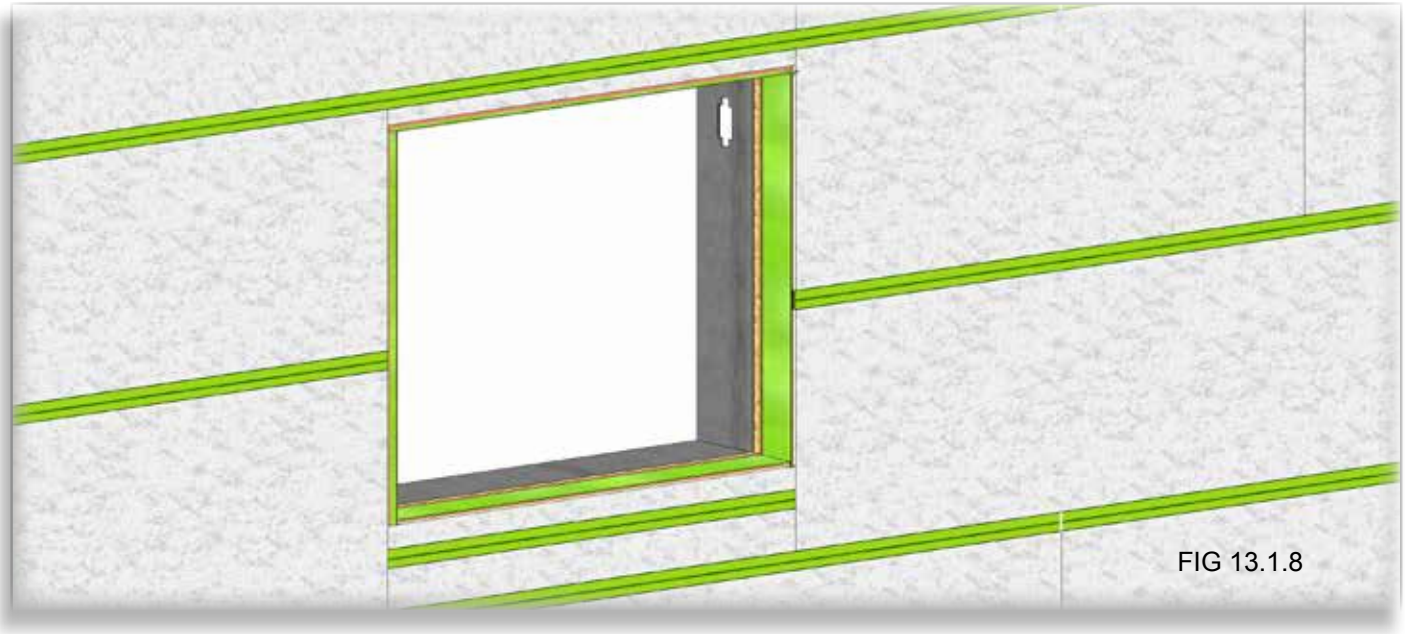


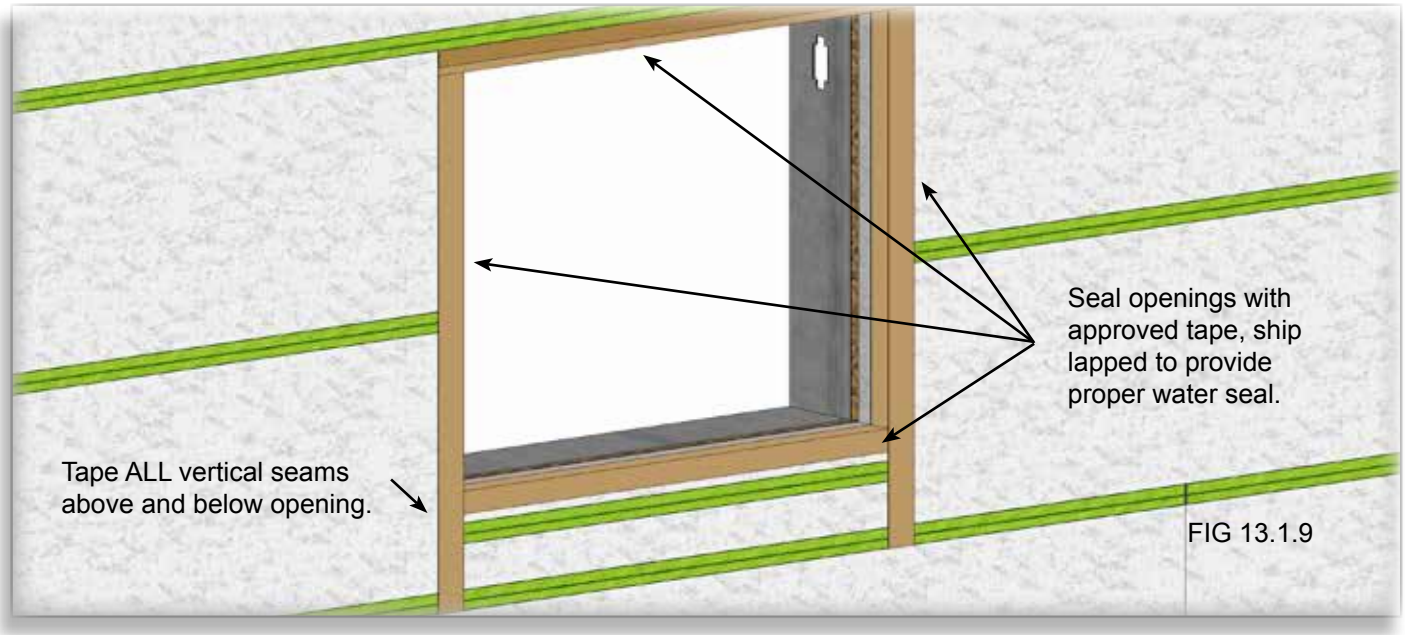
FIG 13.1.7

When installing the GreenGirt below any opening, two 1/4" minimum continuous beads of approved sealant are required at each end to provide watertight seal.

13. System Installation: Openings Sequence – Continued

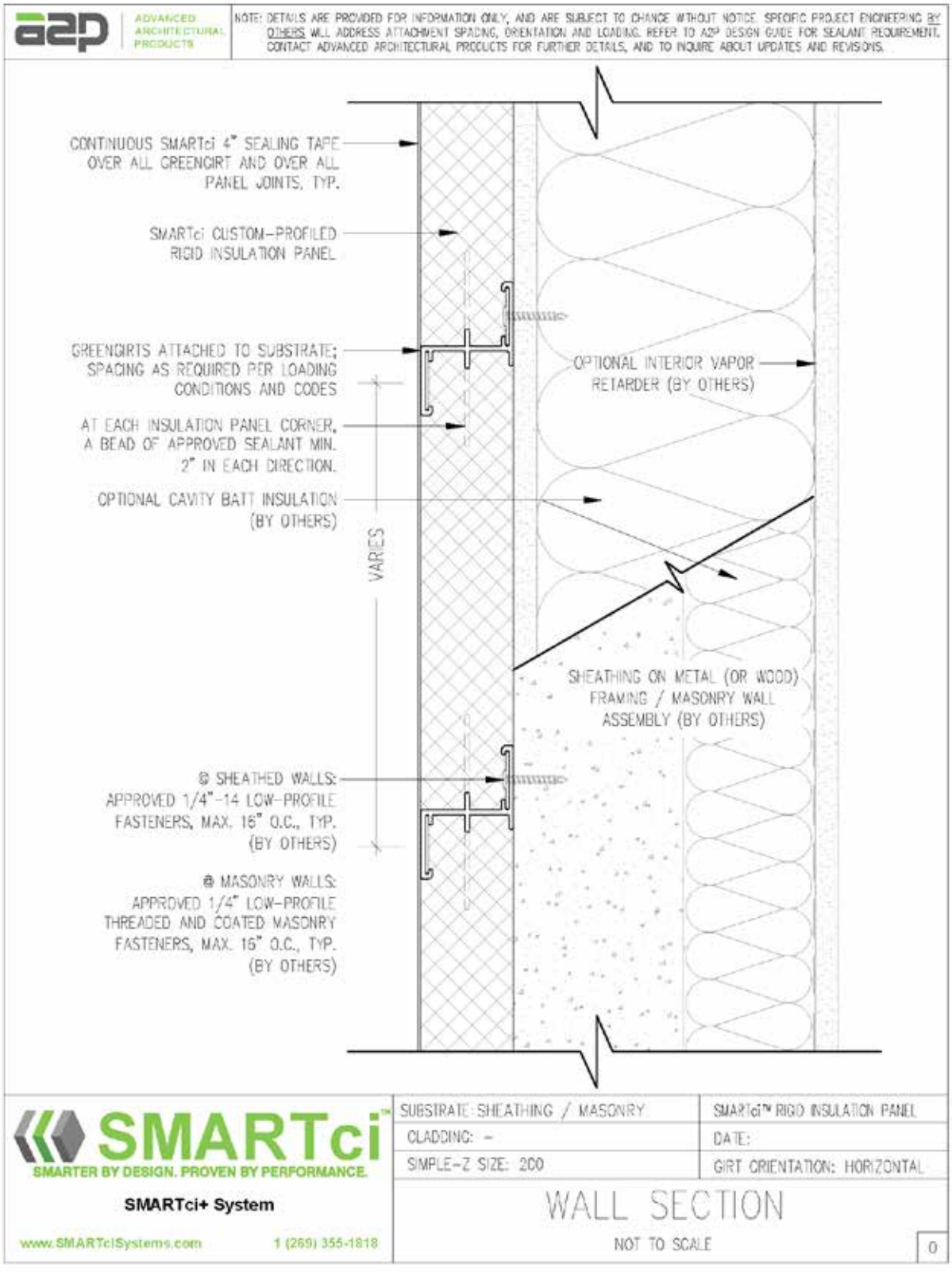


Completed opening with custom-cut and routed insulation panels and GreenGirts, and 1/2" gap filled with expandable sealant (without tape). For taping instructions, see FIG 13.1.1; FIG 13.1.9 and the details starting on page 29.



A fully completed opening assembly is illustrated with SMARTci system installed.

Details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CONTINUOUS SMARTci 4" SEALING TAPE OVER ALL GREENGIRT AND OVER ALL PANEL JOINTS, TYP.
SMARTci CUSTOM-PROFILED RIGID INSULATION PANEL
GREENGIRTS ATTACHED TO SUBSTRATE; SPACING AS REQUIRED PER LOADING CONDITIONS AND CODES
AT EACH INSULATION PANEL CORNER, A BEAD OF APPROVED SEALANT MIN. 2" IN EACH DIRECTION.
OPTIONAL CAVITY BATT INSULATION (BY OTHERS)
VARIES
OPTIONAL INTERIOR VAPOR RETARDER (BY OTHERS)
SHEATHING ON METAL (OR WOOD) FRAMING / MASONRY WALL ASSEMBLY (BY OTHERS)
@ SHEATHED WALLS: APPROVED 1/4"-14 LOW-PROFILE FASTENERS, MAX. 16" O.C., TYP. (BY OTHERS)
@ MASONRY WALLS: APPROVED 1/4" LOW-PROFILE THREADED AND COATED MASONRY FASTENERS, MAX. 16" O.C., TYP. (BY OTHERS)
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SIMPLE-Z SIZE: 200
GIRT ORIENTATION: HORIZONTAL
WALL SECTION
NOT TO SCALE
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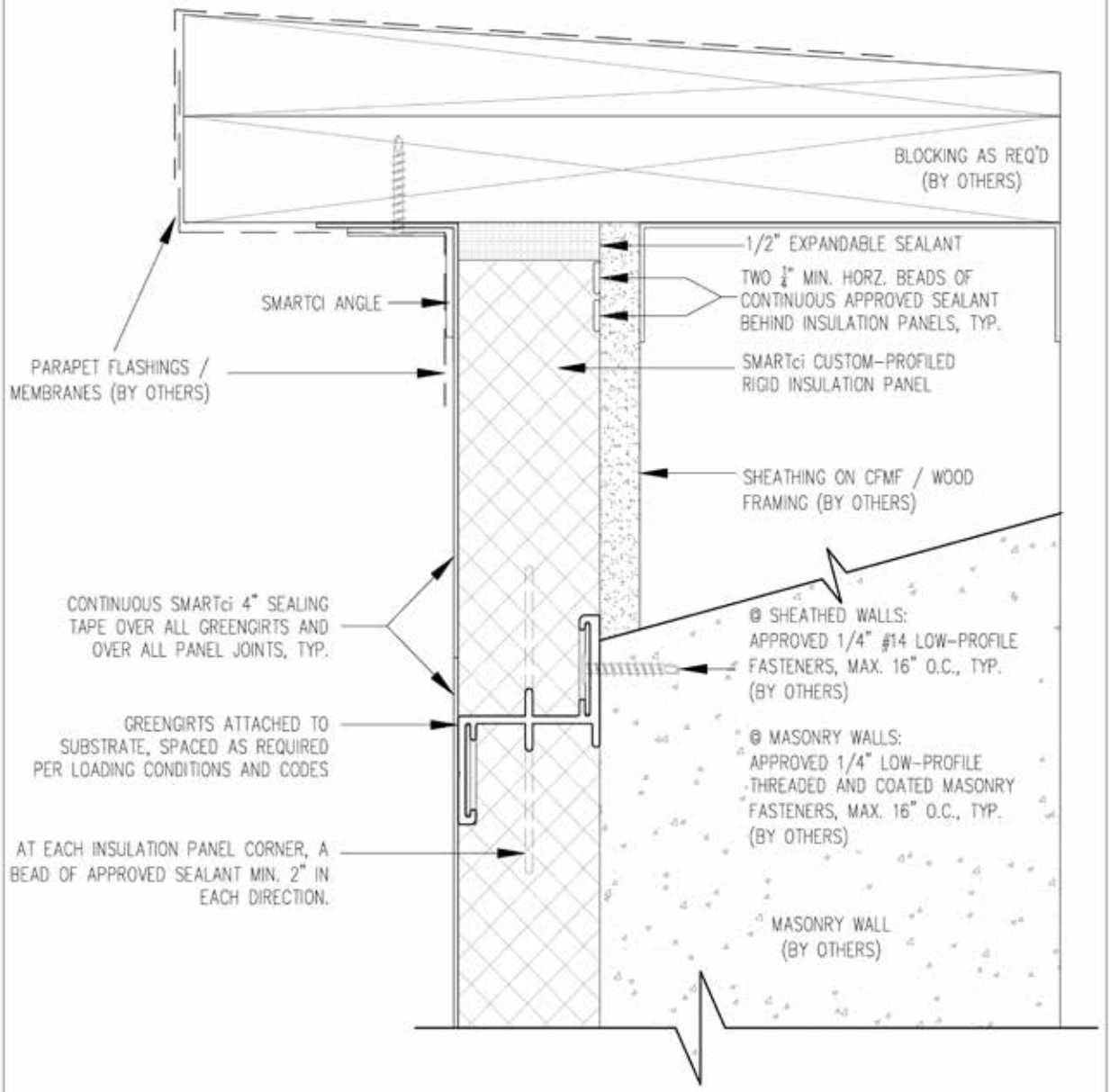

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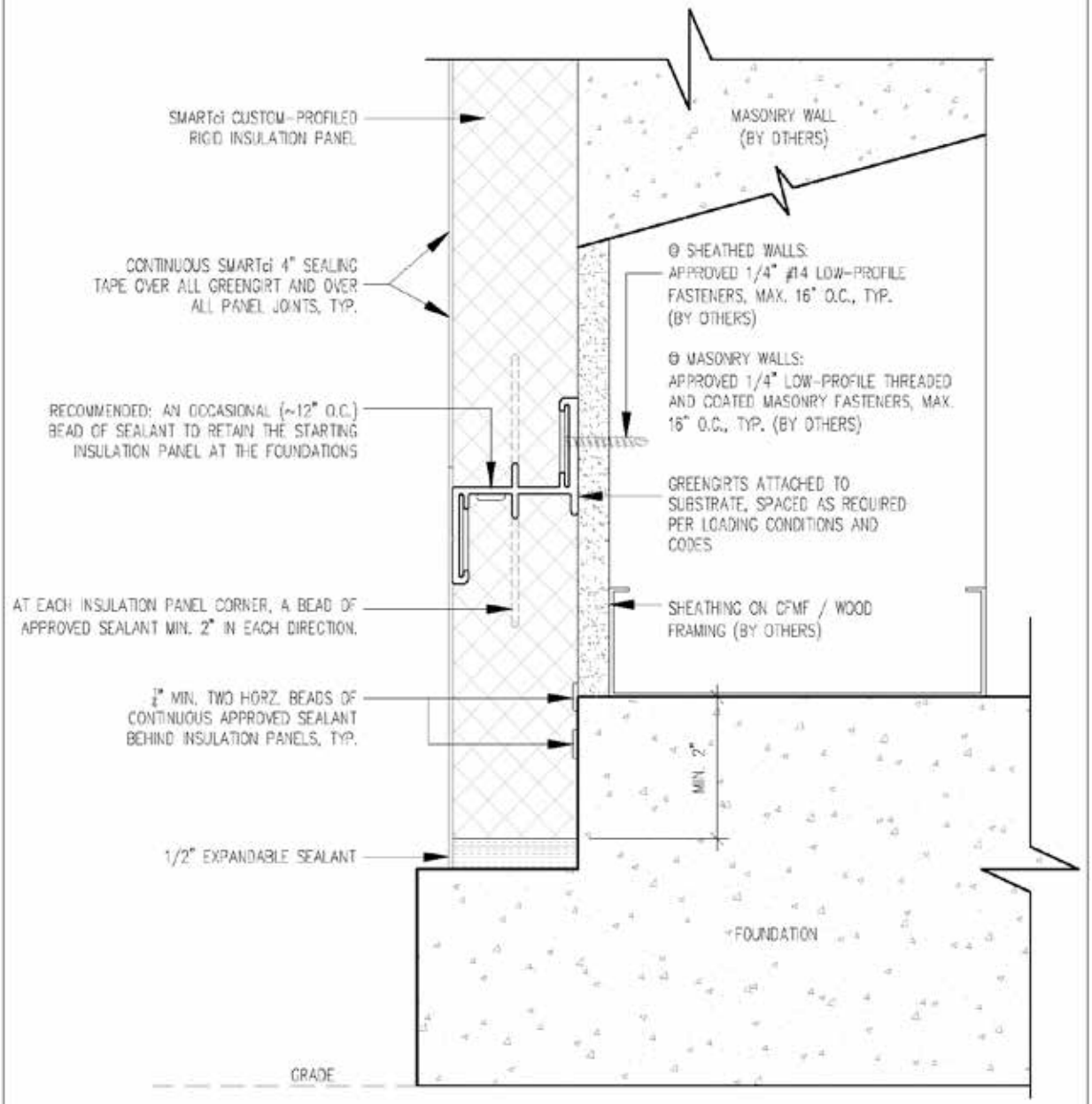

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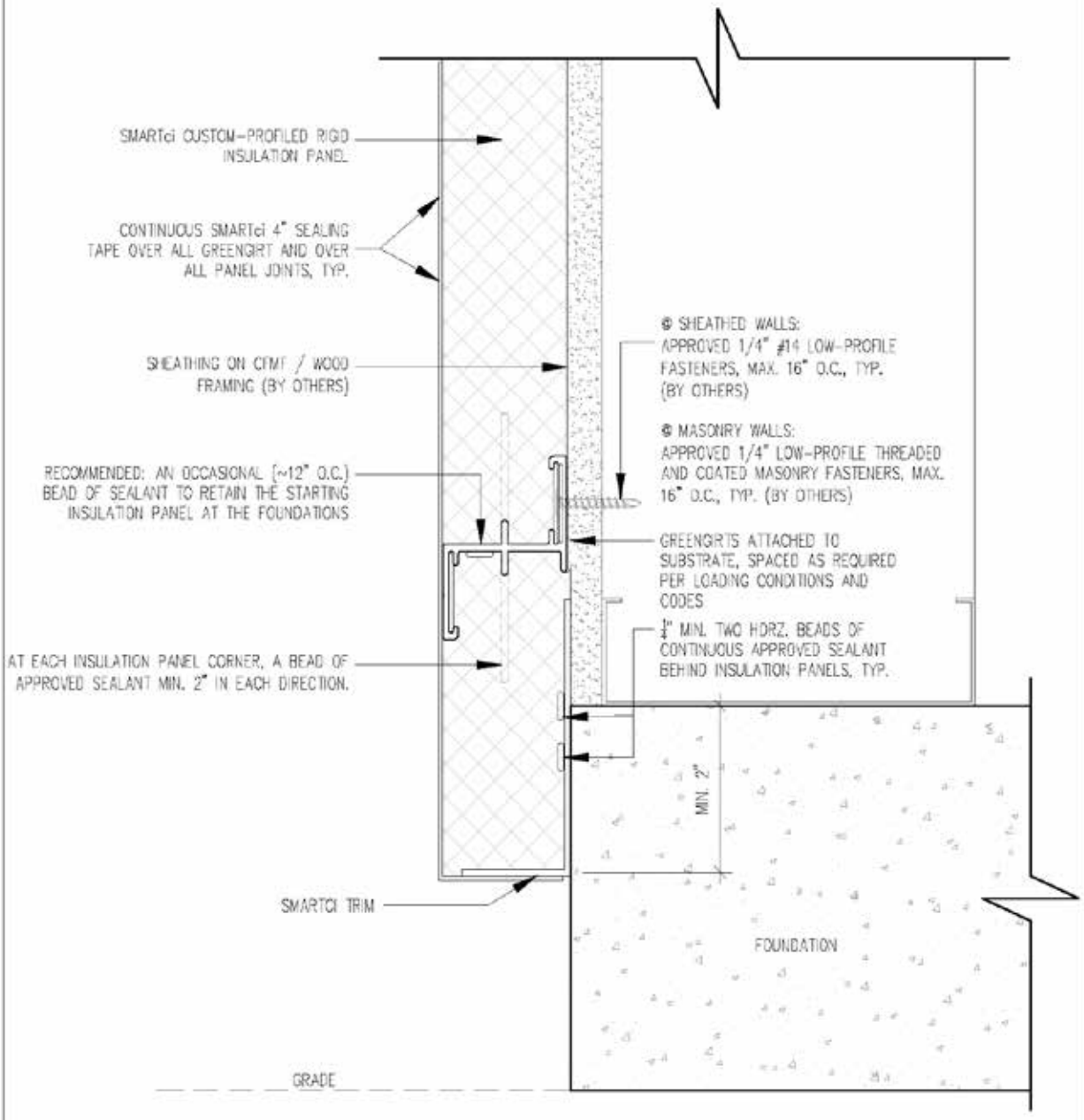

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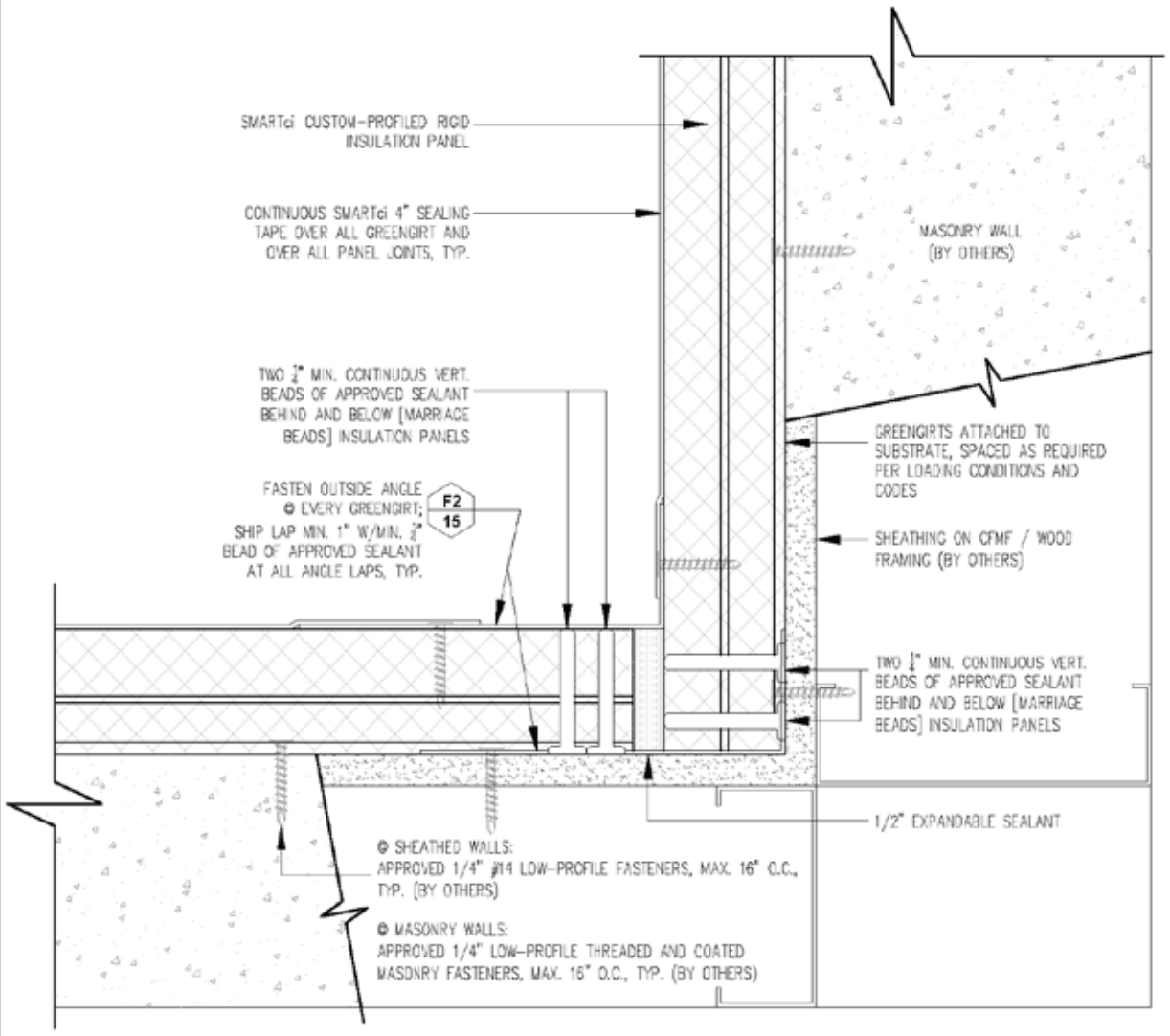

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INSIDE CORNER DETAIL

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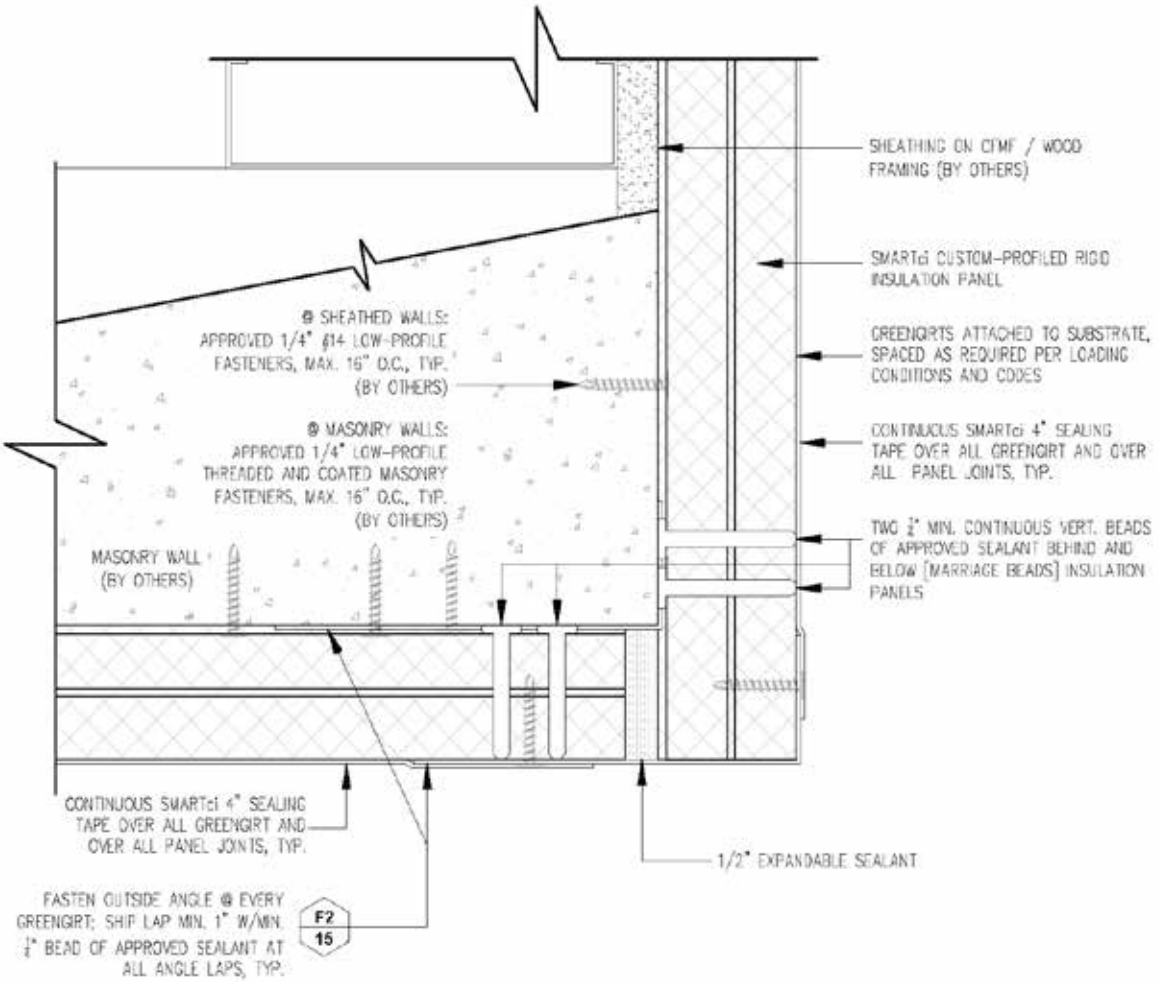

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OUTSIDE CORNER DETAIL

NOT TO SCALE

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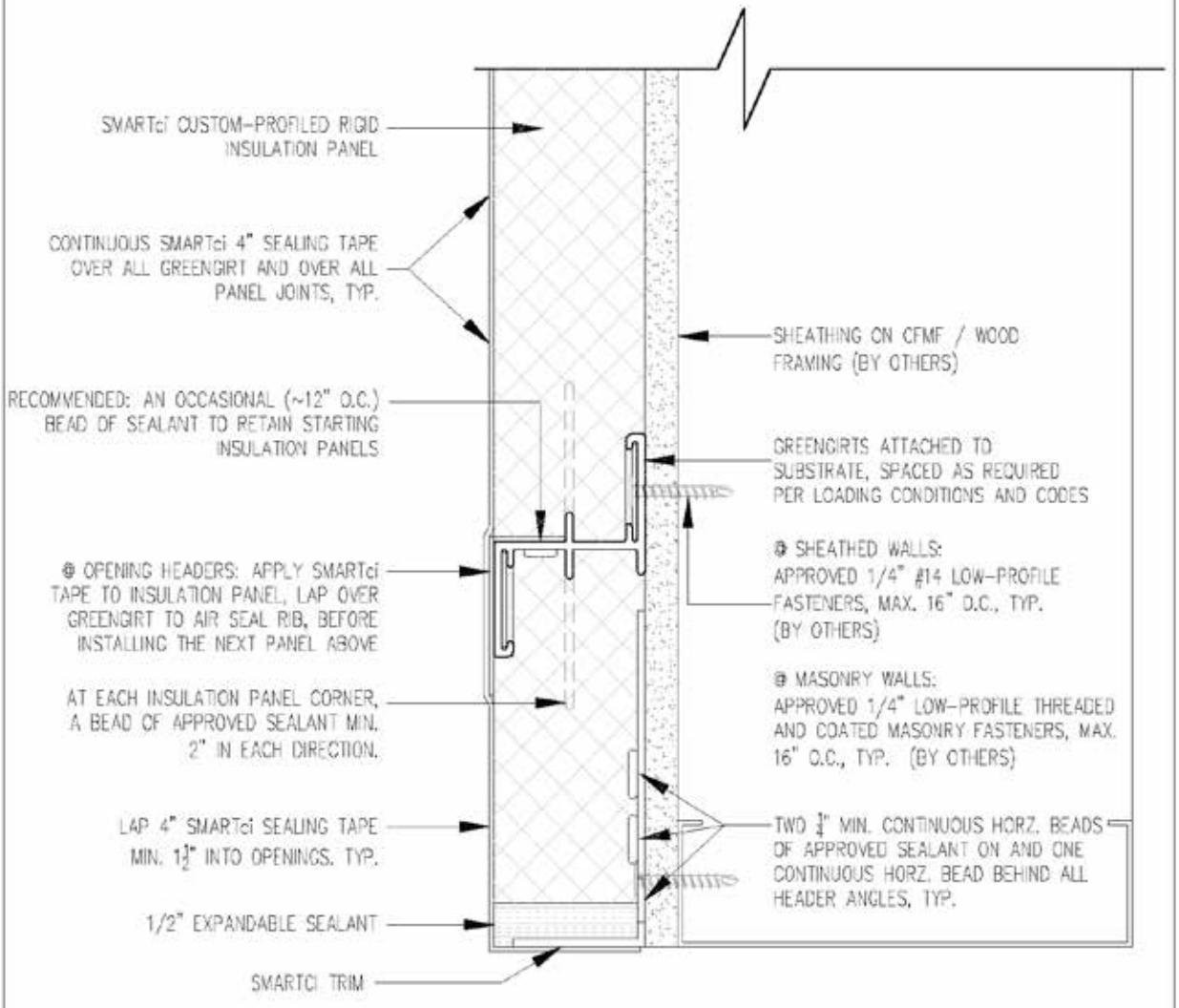

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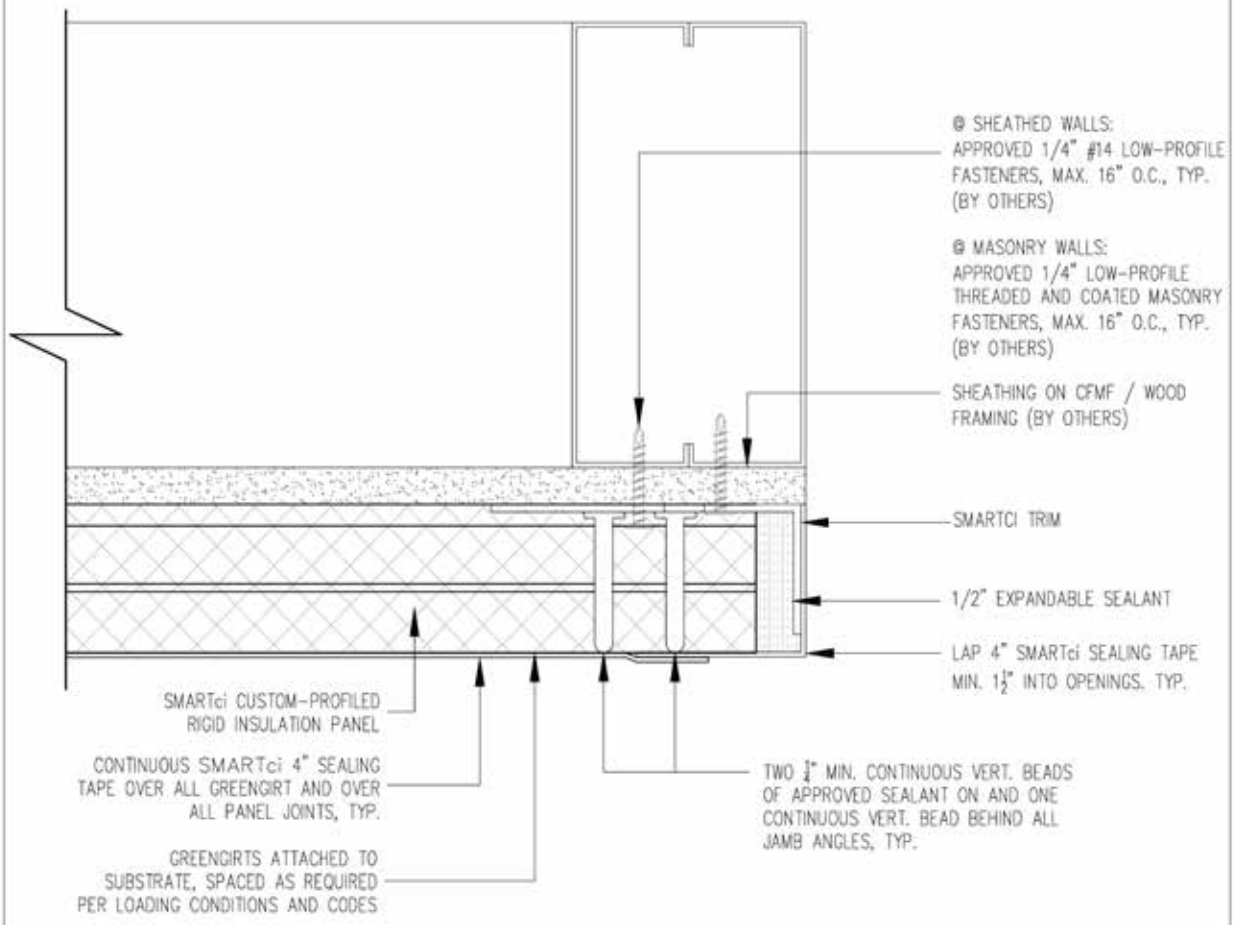

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JAMB DETAIL

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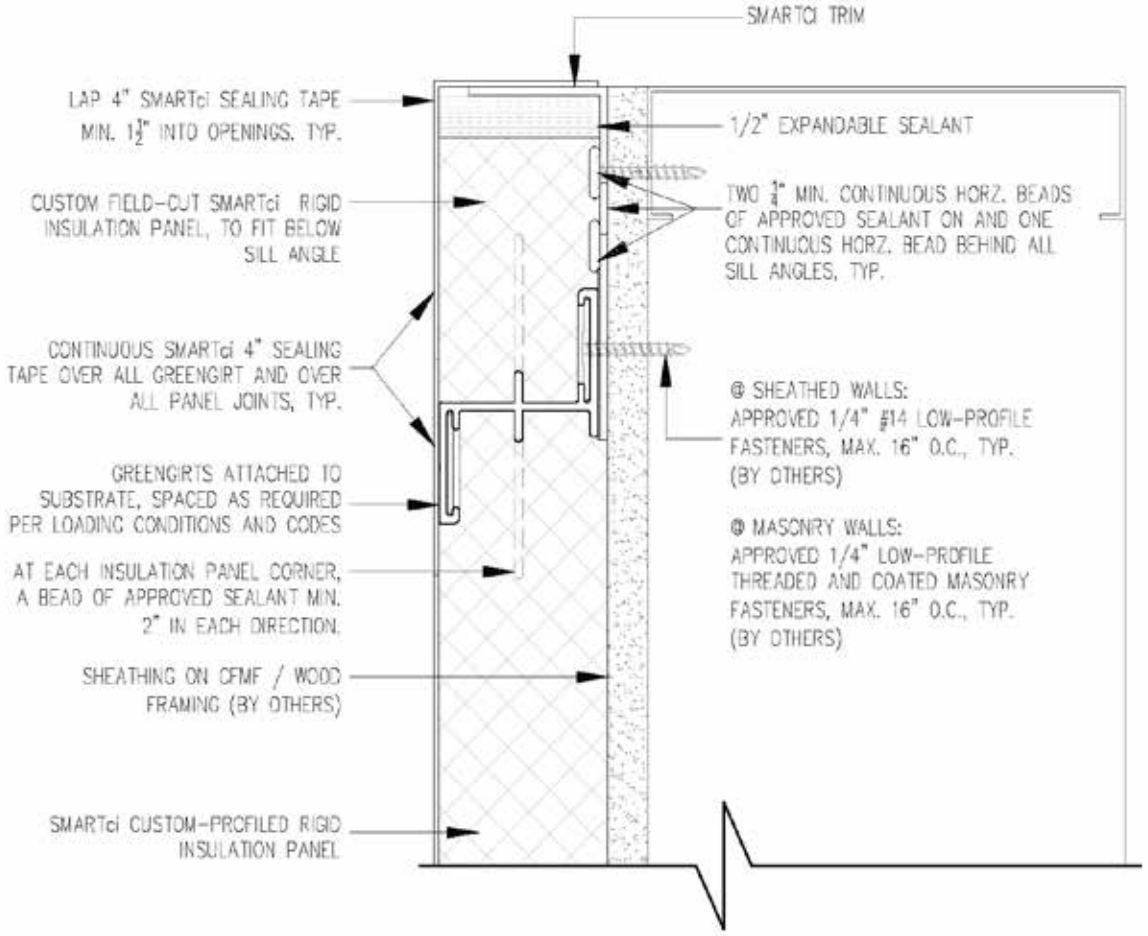

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SILL DETAIL

NOT TO SCALE

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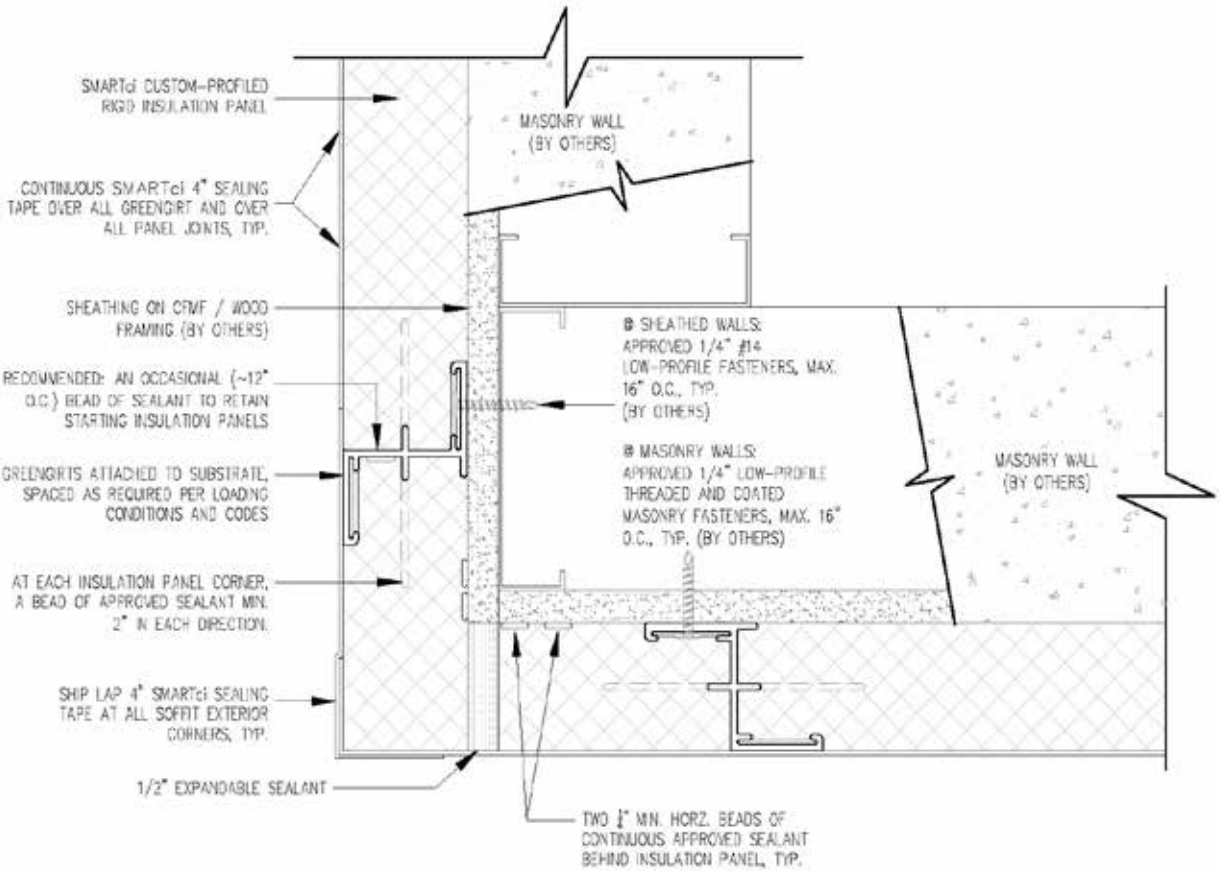

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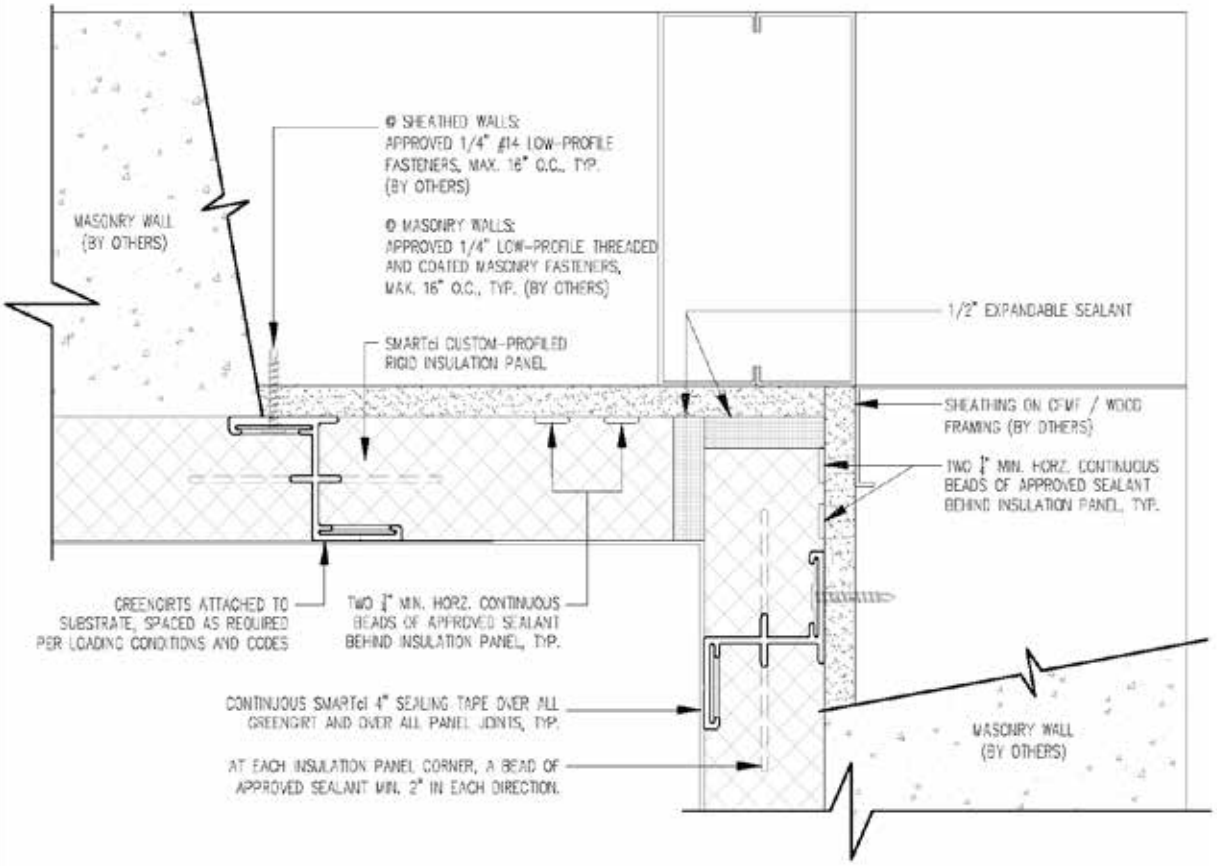

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SIMPLE-Z SIZE: 200	GIRT ORIENTATION: HORIZONTAL

SOFFIT INSIDE DETAIL-1

NOT TO SCALE

10

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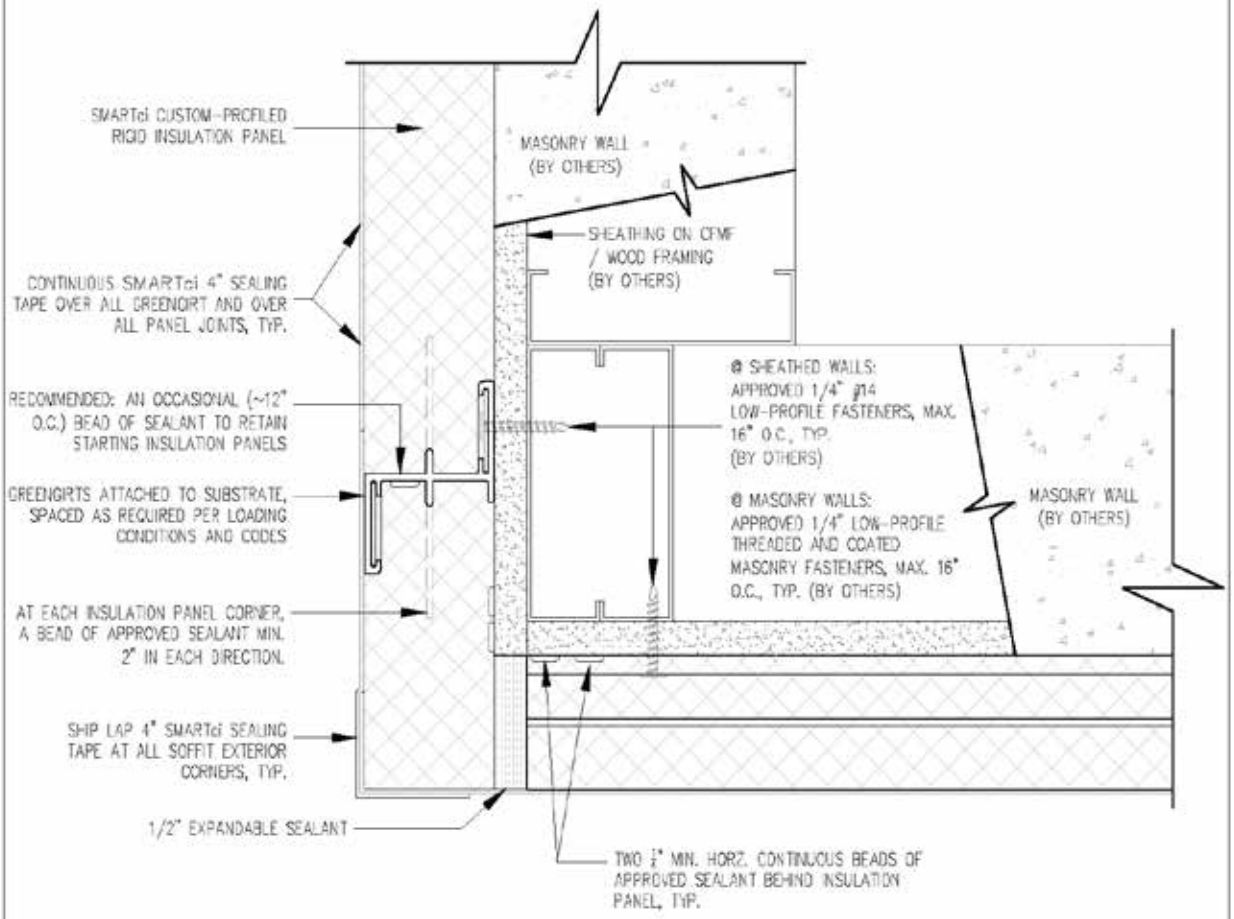

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NOT TO SCALE

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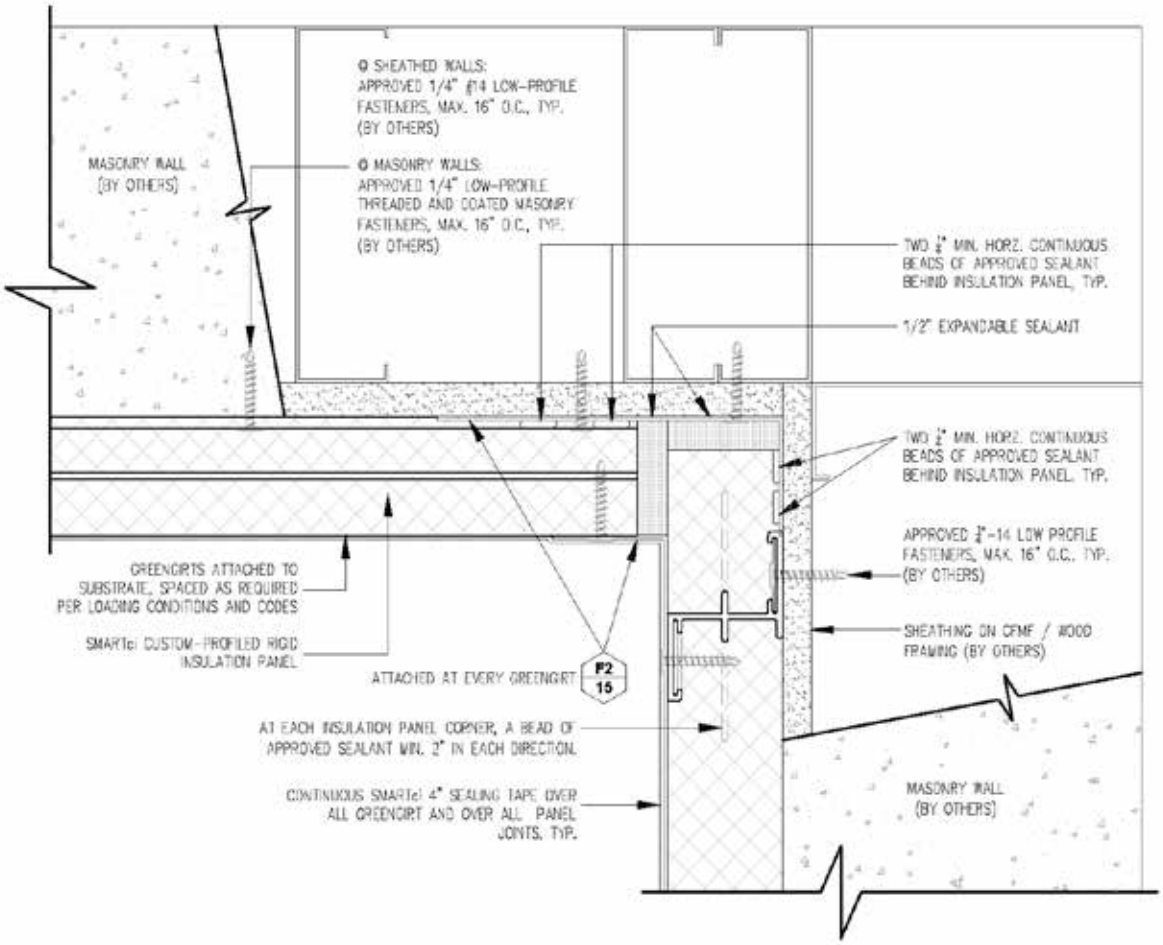

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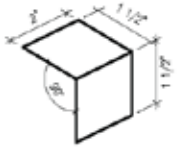
F1 / 15

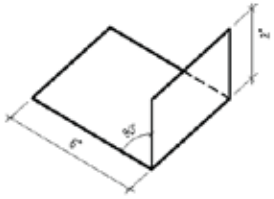
MARK	GIRTH	BREAKS
F1	3	1



MIN. 22 GAUGE METAL 1 1/2" x 1 1/2" ANGLED RETENTION CLIPS, MAX 24" O.C.

F2 / 15

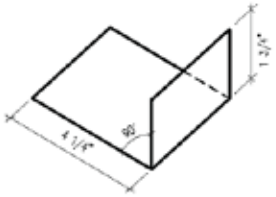
MARK	GIRTH	BREAKS
F4	8	1



MIN. 22 GAUGE CONTINUOUS GALVANIZED STEEL 6" X 2" ANGLE CORNER CLOSURE, FASTENED AT EVERY GREENGIRT

F3 / 15

MARK	GIRTH	BREAKS
F3	6	1



MIN. 22 GAUGE CONTINUOUS GALVANIZED STEEL 1 3/4" X 4 1/4" ANGLE CORNER CLOSURE, FASTENED AT EVERY GREENGIRT

NOTE! REQUIRED ACCESSORIES AND METAL FLASHINGS MUST BE USED WITH THIS SYSTEM. THESE COMPONENTS CAN BE MANUFACTURED AND / OR PROVIDED BY ADVANCED ARCHITECTURAL PRODUCTS, OR BY THE CUSTOMER. THEY ARE NOT OPTIONAL, AND ARE NECESSARY FOR THE PROPER INSTALLATION AND FUNCTION OF THE SYSTEM.

PLEASE CONTACT AN A2P SALES REPRESENTATIVE WITH ANY QUESTIONS, FOR PRICING INFORMATION, OR TO INQUIRE ABOUT CUSTOM-SIZED METAL FLASHINGS AND ACCESSORIES.

GREENGIRTS AND CUSTOM-PROFILED RIGID INSULATION PANELS ARE PROVIDED FOR THIS PROJECT AS A THERMALLY-BROKEN COMPOSITE SUB-FRAMING SYSTEM AND CONTINUOUS INSULATION. THIS SYSTEM DOES NOT INCLUDE MOISTURE DRIVE DESIGN OR VAPOR BARRIER DESIGN AND PLACEMENT. WEATHER PROOFING, RESISTANCE AND / OR WATER TIGHTNESS IS THE SOLE RESPONSIBILITY OF OTHERS. PROPER FLASHINGS & COUNTER FLASHINGS MUST BE INSTALLED BY OTHERS, AND IT IS RECOMMENDED THAT PROVEN CONSTRUCTION BEST PRACTICES BE FOLLOWED AT ALL TIMES.

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USE PLASTIC HORSESHOE SHIMS WHERE REQUIRED TO ACHIEVE ± 1/16" DEFLECTION; MAX. SHIM DEPTH IS 1/4". USE SPRAY FOAM AT ALL VOIDS TO ENSURE CONTINUOUS INSULATION. DO NOT USE IMPACT HAMMERS, IMPACT DRILLS OR SIMILAR TOOLS TO INSTALL GREENGIRT!

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SMARTci+ System

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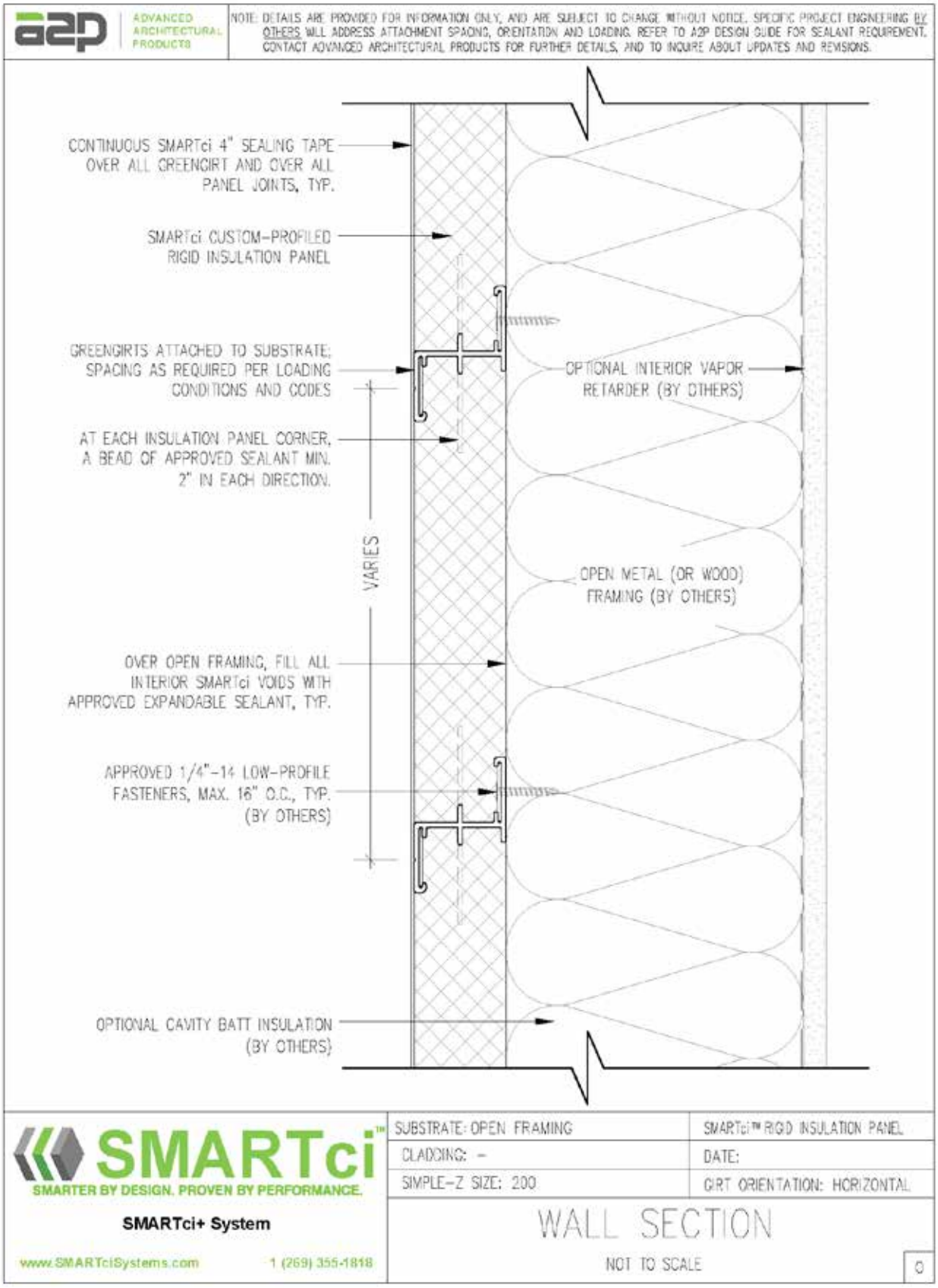
SUBSTRATE: SHEATHING / MASONRY	SMARTci™ RIGID INSULATION PANEL
CLADDING: -	DATE:
SIMPLE-Z SIZE: 200	GIRT ORIENTATION: HORIZONTAL

ACCESSORIES & GEN. NOTES

NOT TO SCALE

15


a2p
ADVANCED ARCHITECTURAL PRODUCTS
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CONTINUOUS SMARTci 4" SEALING TAPE OVER ALL GREENGIRT AND OVER ALL PANEL JOINTS, TYP.
SMARTci CUSTOM-PROFILED RIGID INSULATION PANEL
GREENGIRTS ATTACHED TO SUBSTRATE; SPACING AS REQUIRED PER LOADING CONDITIONS AND CODES
AT EACH INSULATION PANEL CORNER, A BEAD OF APPROVED SEALANT MIN. 2" IN EACH DIRECTION.
VARIES
OPTIONAL INTERIOR VAPOR RETARDER (BY OTHERS)
OPEN METAL (OR WOOD) FRAMING (BY OTHERS)
OVER OPEN FRAMING, FILL ALL INTERIOR SMARTci VOIDS WITH APPROVED EXPANDABLE SEALANT, TYP.
APPROVED 1/4"-14 LOW-PROFILE FASTENERS, MAX. 16" O.C., TYP. (BY OTHERS)
OPTIONAL CAVITY BATT INSULATION (BY OTHERS)
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www.SMARTciSystems.com
1 (269) 355-1818
SUBSTRATE: OPEN FRAMING
SMARTci™ RIGID INSULATION PANEL
CLADDING: -
DATE:
SIMPLE-Z SIZE: 200
GIRT ORIENTATION: HORIZONTAL
WALL SECTION
NOT TO SCALE
0

ADVANCED ARCHITECTURAL PRODUCTS

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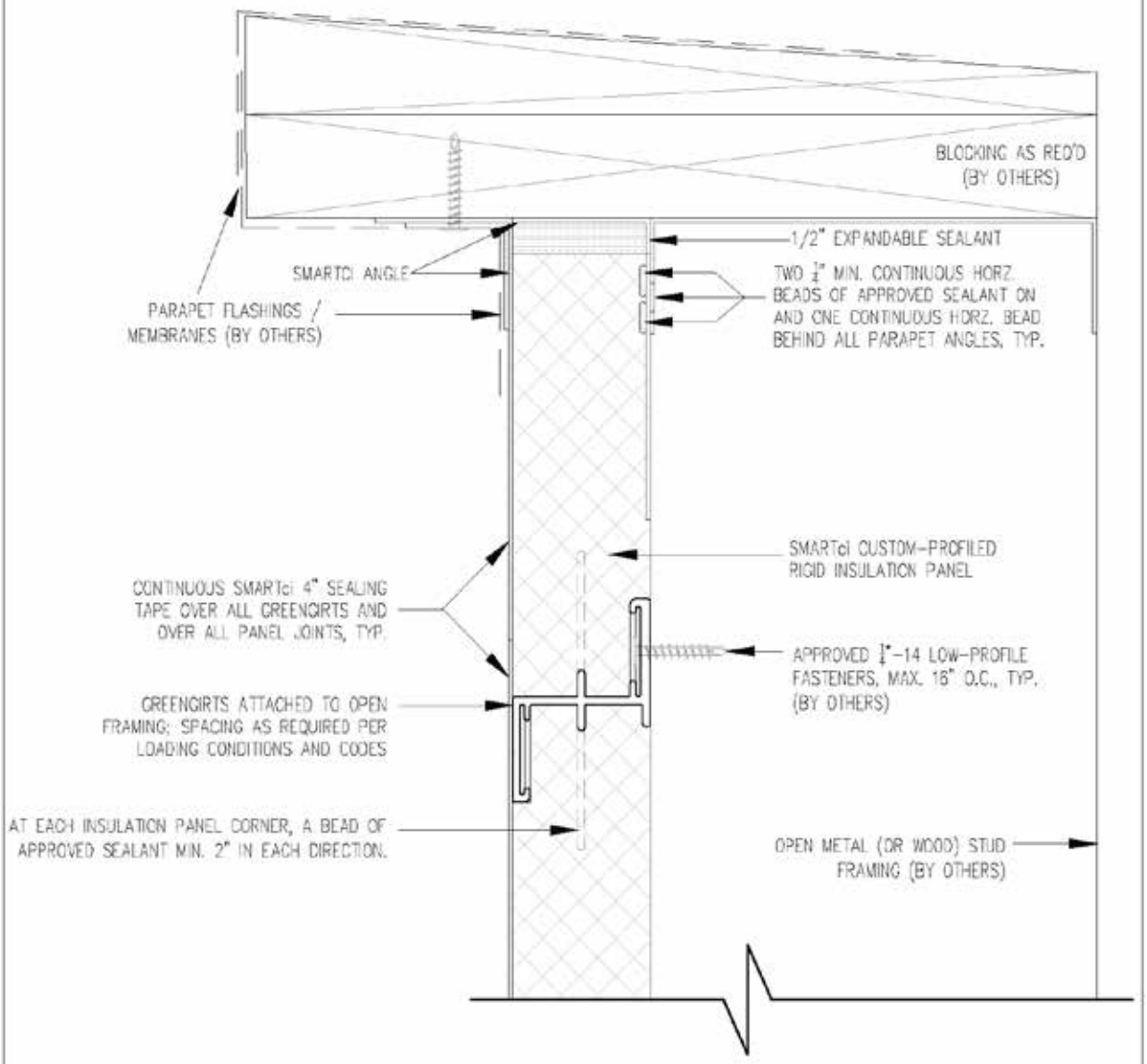

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SUBSTRATE: OPEN FRAMING	SMARTci™ RIGID INSULATION PANEL
CLADDING: -	DATE:
SIMPLE-Z SIZE: 200	GIRT ORIENTATION: HORIZONTAL

PARAPET DETAIL

NOT TO SCALE

1

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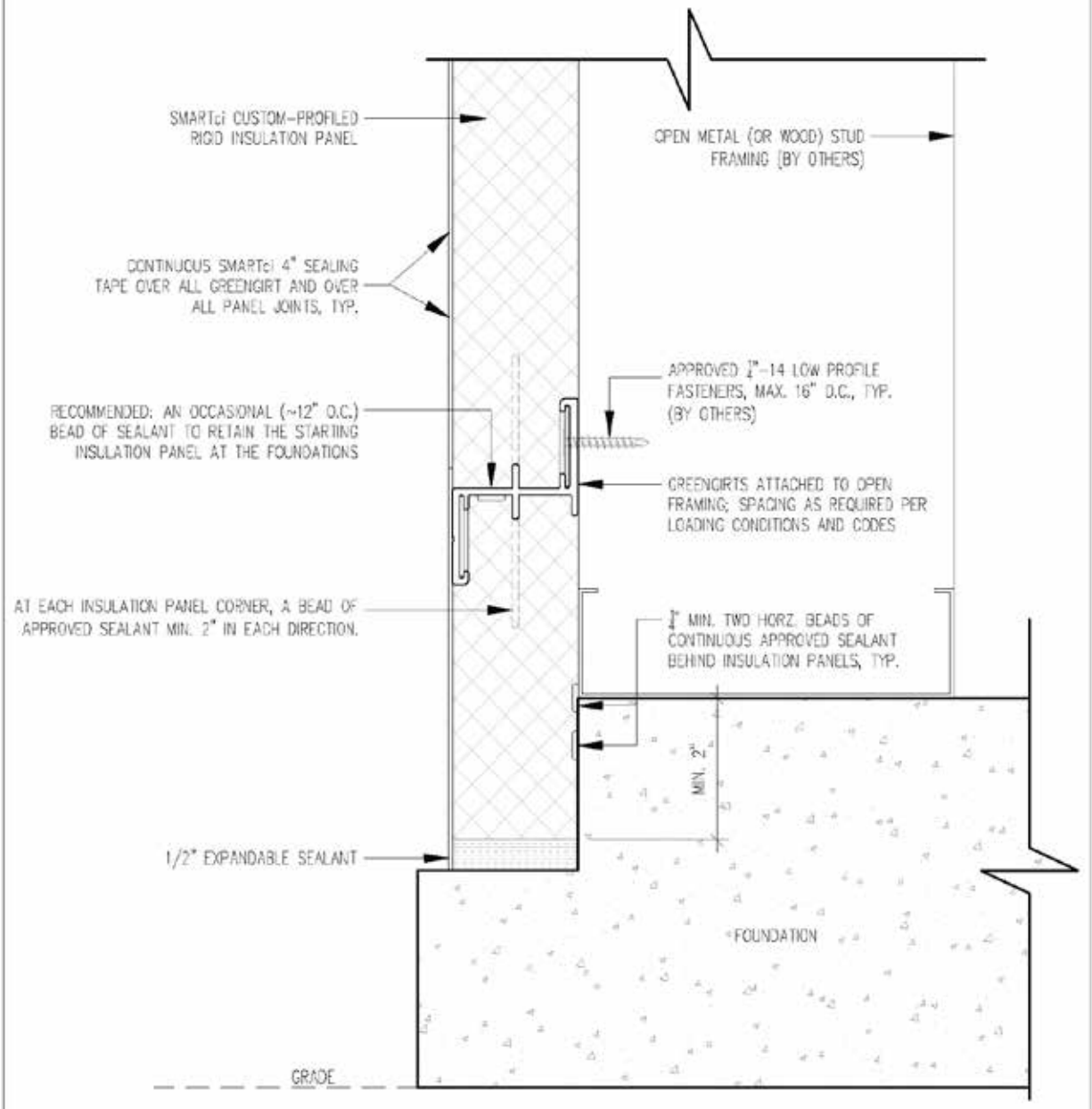

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SUBSTRATE: OPEN FRAMING	SMARTci™ RIGID INSULATION PANEL
CLADDING: -	DATE:
SIMPLE-Z SIZE: 200	GIRT ORIENTATION: HORIZONTAL

FOUNDATION NOTCH DETAIL

NOT TO SCALE

2

ADVANCED ARCHITECTURAL PRODUCTS

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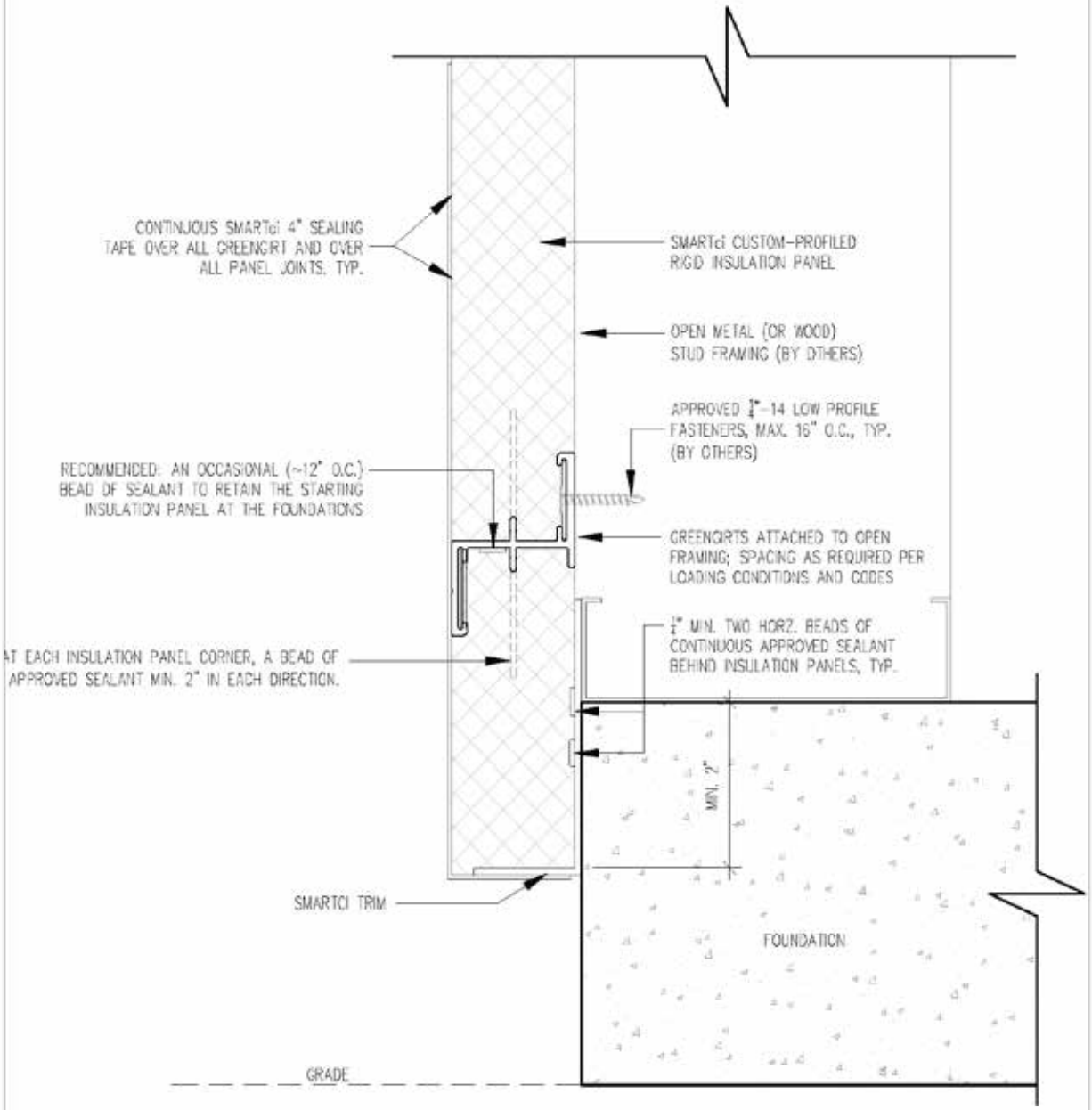

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SUBSTRATE: OPEN FRAMING	SMARTci™ RIGID INSULATION PANEL
CLADDING: –	DATE:
SIMPLE-Z SIZE: 200	GIRT ORIENTATION: HORIZONTAL

FOUNDATION FLUSH DETAIL

NOT TO SCALE

3

ADVANCED ARCHITECTURAL PRODUCTS

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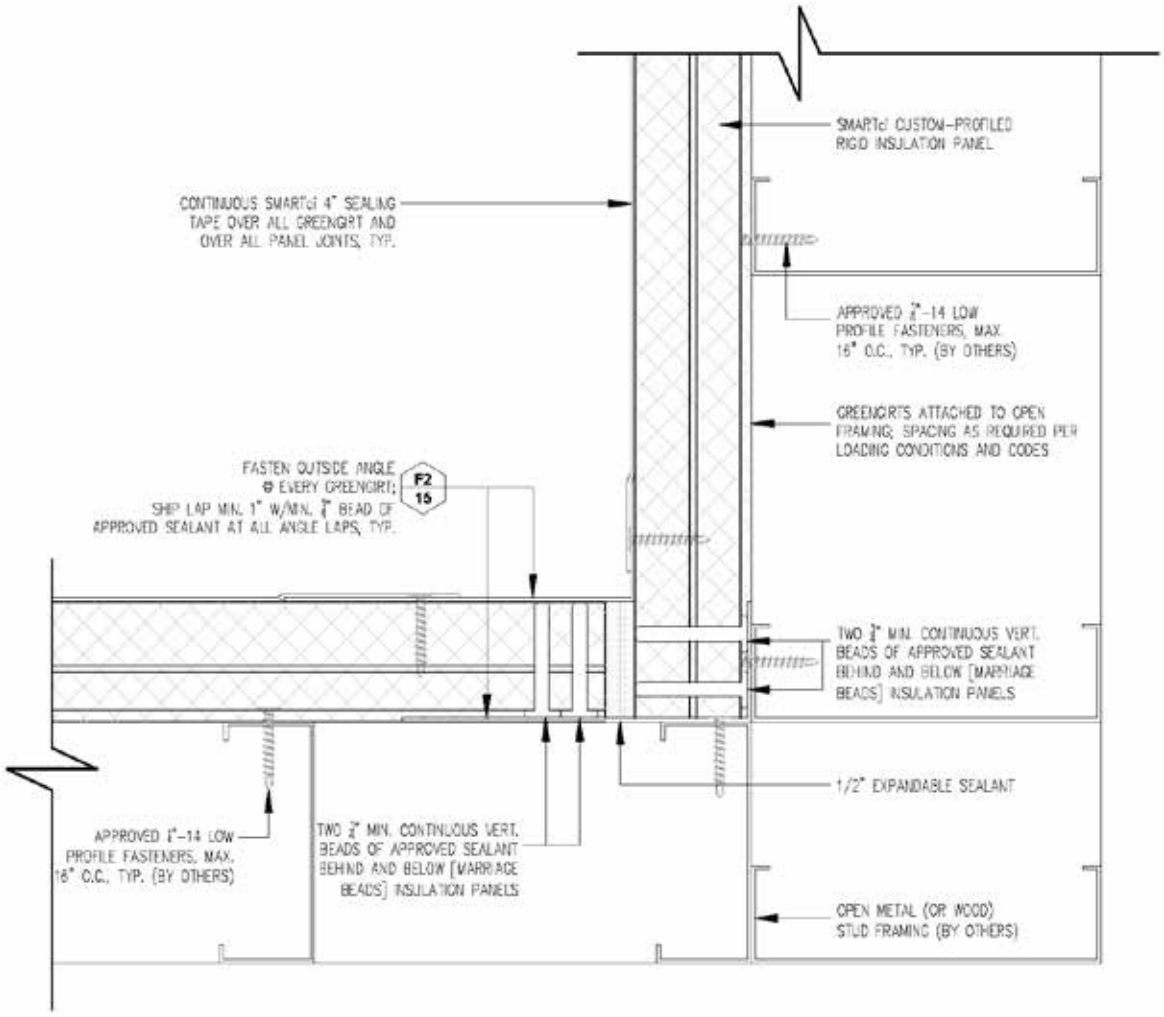

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SUBSTRATE: OPEN FRAMING	SMARTci™ RIGID INSULATION PANEL
CLADDING: –	DATE:
SIMPLE-Z SIZE: 200	GIRT ORIENTATION: HORIZONTAL

INSIDE CORNER DETAIL

NOT TO SCALE

4

ADVANCED ARCHITECTURAL PRODUCTS

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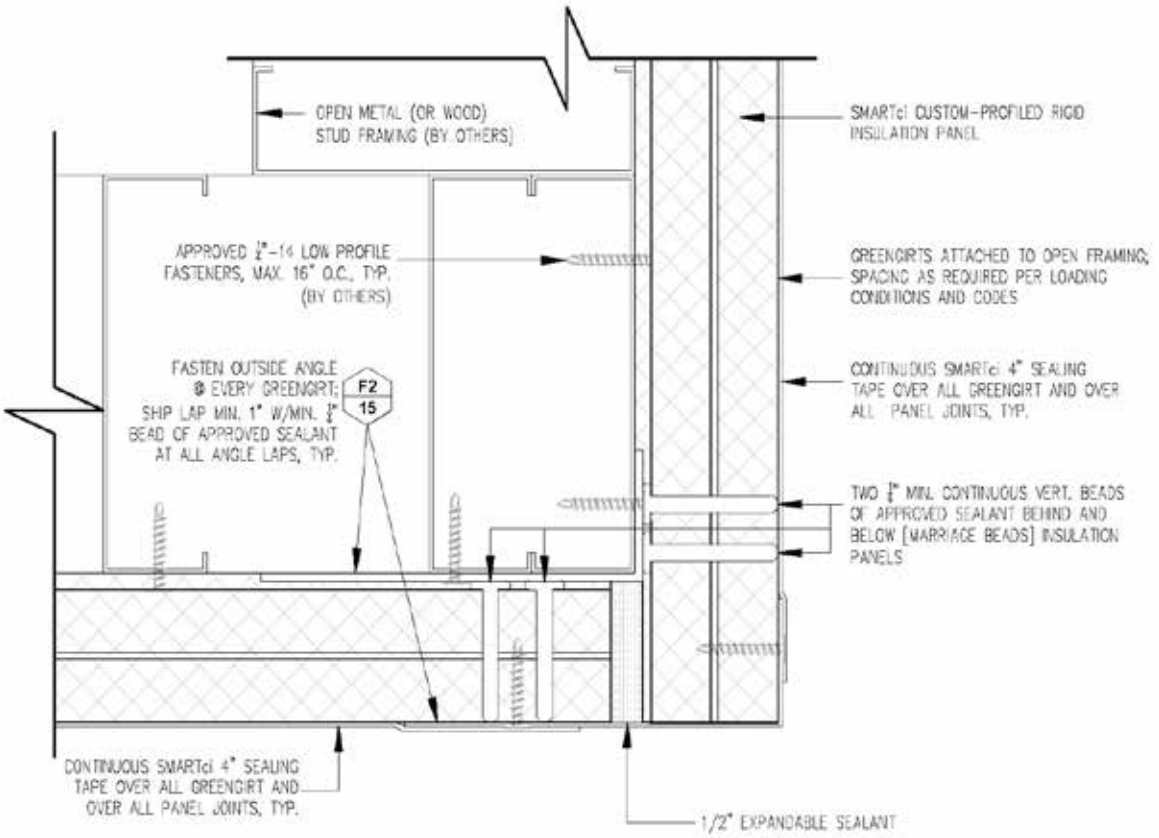

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SUBSTRATE: OPEN FRAMING	SMARTci™ RIGID INSULATION PANEL
CLADDING: –	DATE:
SIMPLE-Z SIZE: 200	GIRT ORIENTATION: HORIZONTAL

OUTSIDE CORNER DETAIL

NOT TO SCALE

5

ADVANCED ARCHITECTURAL PRODUCTS

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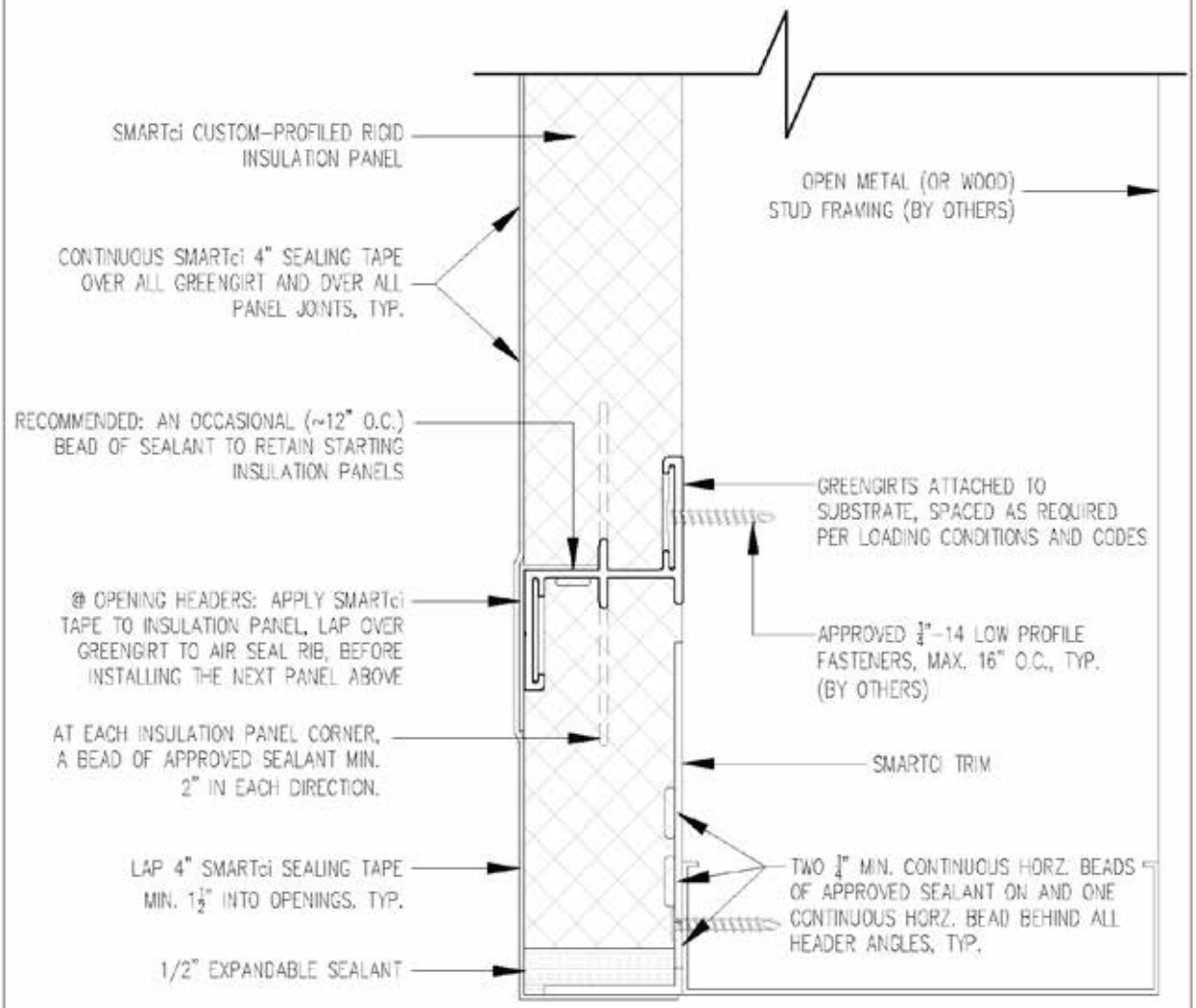

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SUBSTRATE: OPEN FRAMING	SMARTci™ RIGID INSULATION PANEL
CLADDING: -	DATE:
SIMPLE-Z SIZE: 200	GIRT ORIENTATION: HORIZONTAL

HEADER DETAIL

NOT TO SCALE

6

ADVANCED ARCHITECTURAL PRODUCTS

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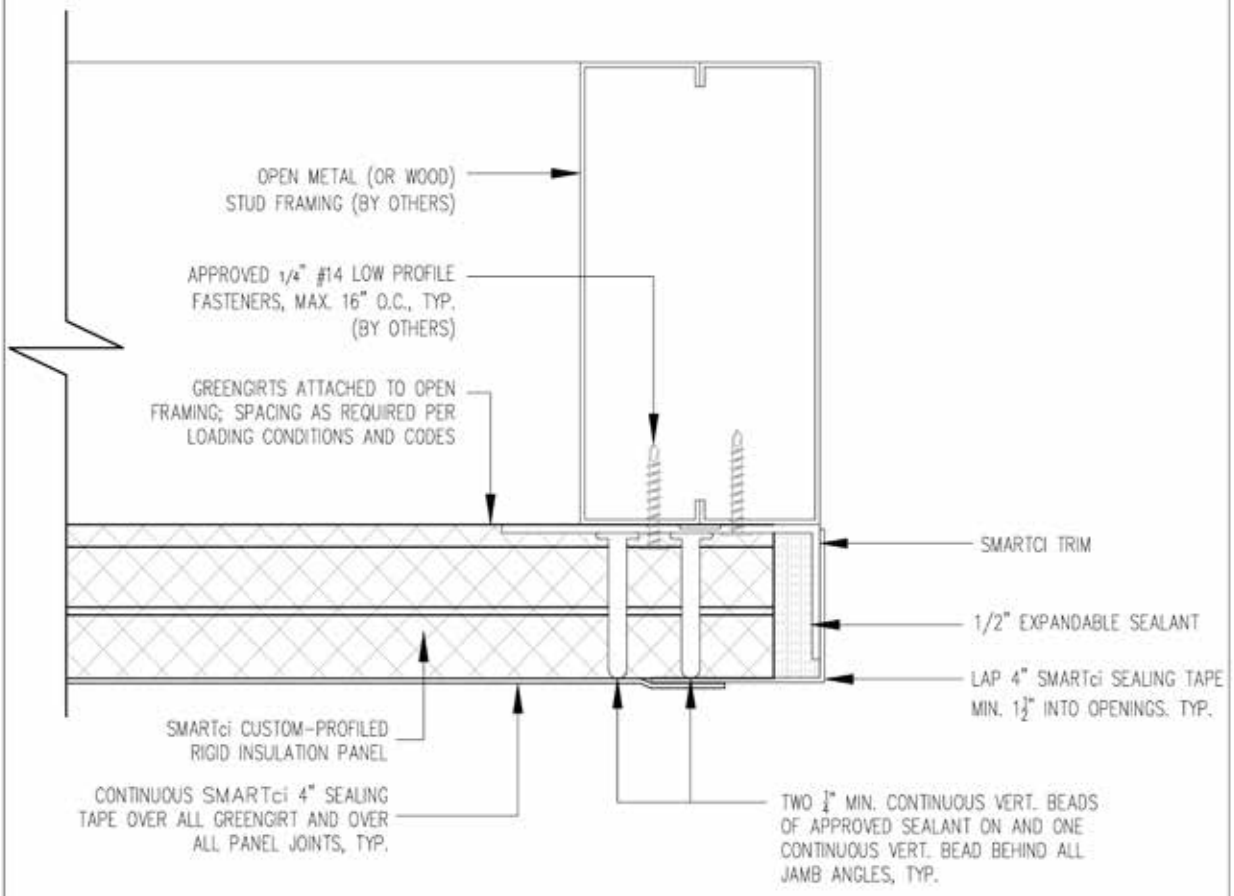

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SUBSTRATE OPEN FRAMING	SMARTci™ RIGID INSULATION PANEL
CLADDING: –	DATE:
SIMPLE-Z SIZE: 200	GIRT ORIENTATION: HORIZONTAL

JAMB DETAIL

NOT TO SCALE

7

ADVANCED ARCHITECTURAL PRODUCTS

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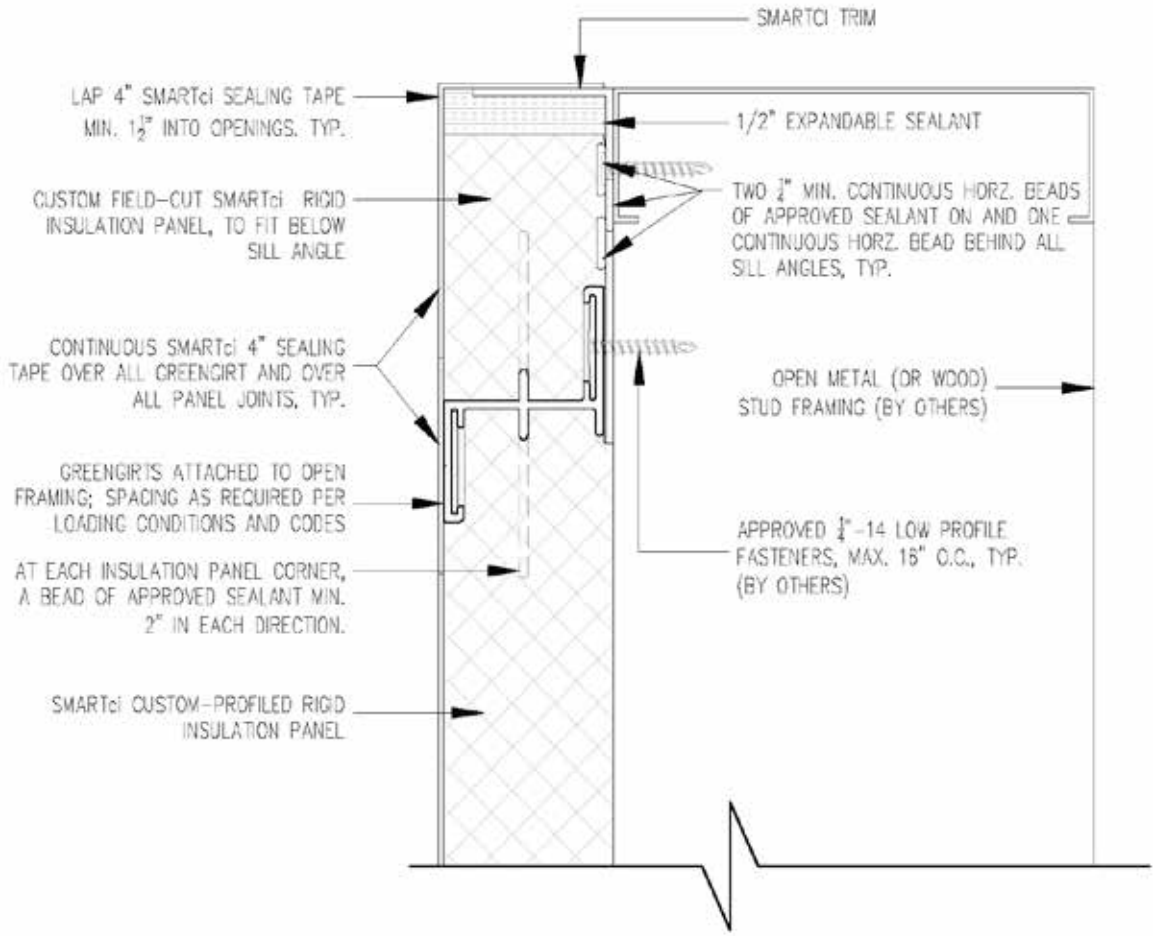

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SUBSTRATE: OPEN FRAMING	SMARTci™ RIGID INSULATION PANEL
CLADDING: -	DATE:
SIMPLE-Z SIZE: 200	GIRT ORIENTATION: HORIZONTAL

SILL DETAIL

NOT TO SCALE

8

ADVANCED ARCHITECTURAL PRODUCTS

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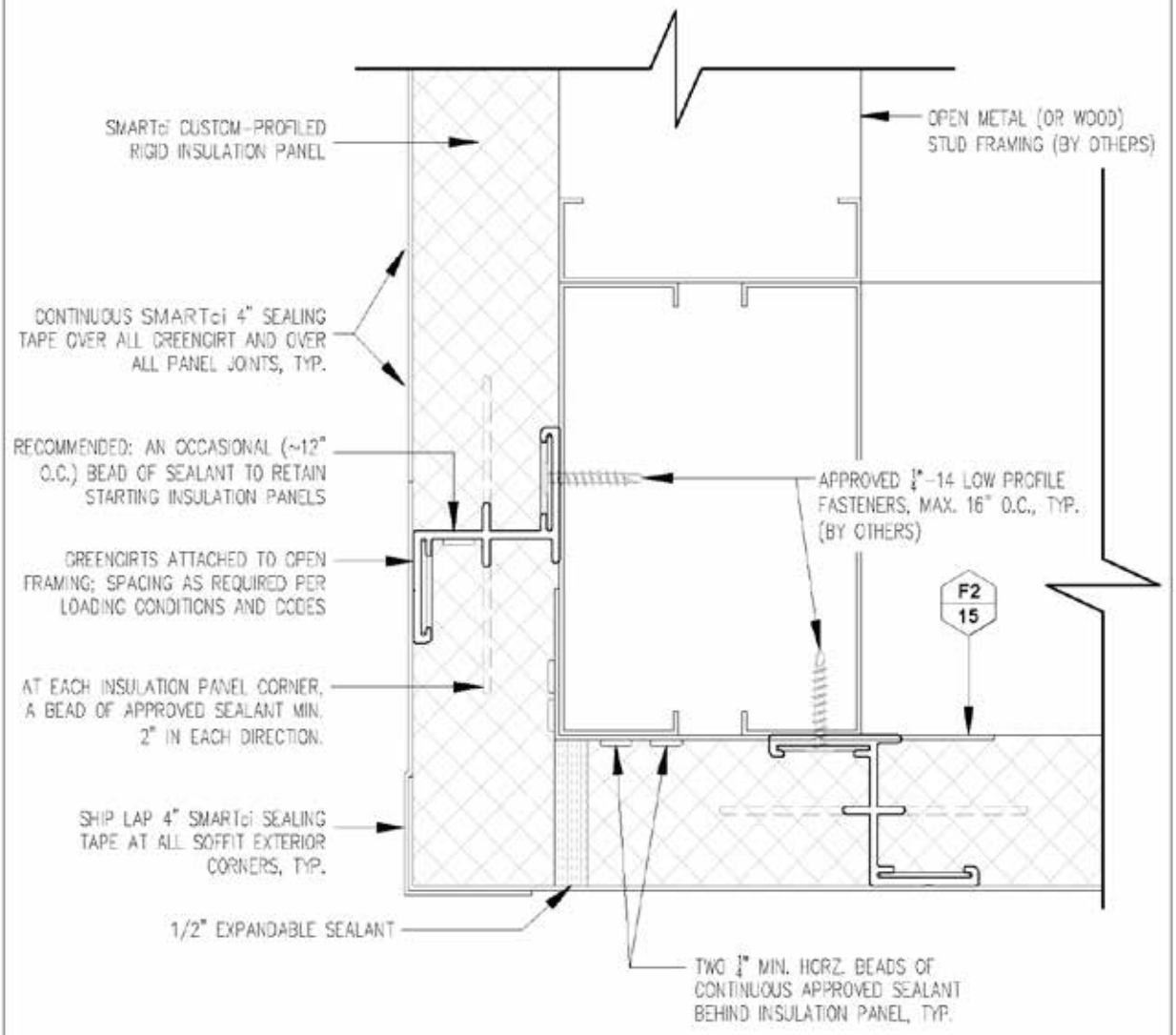

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SUBSTRATE: OPEN FRAMING	SMARTci™ RIGID INSULATION PANEL
CLADDING: -	DATE:
SIMPLE-Z SIZE: 200	GIRT ORIENTATION: HORIZONTAL

SOFFIT OUTSIDE DETAIL-1

NOT TO SCALE

9

ADVANCED ARCHITECTURAL PRODUCTS

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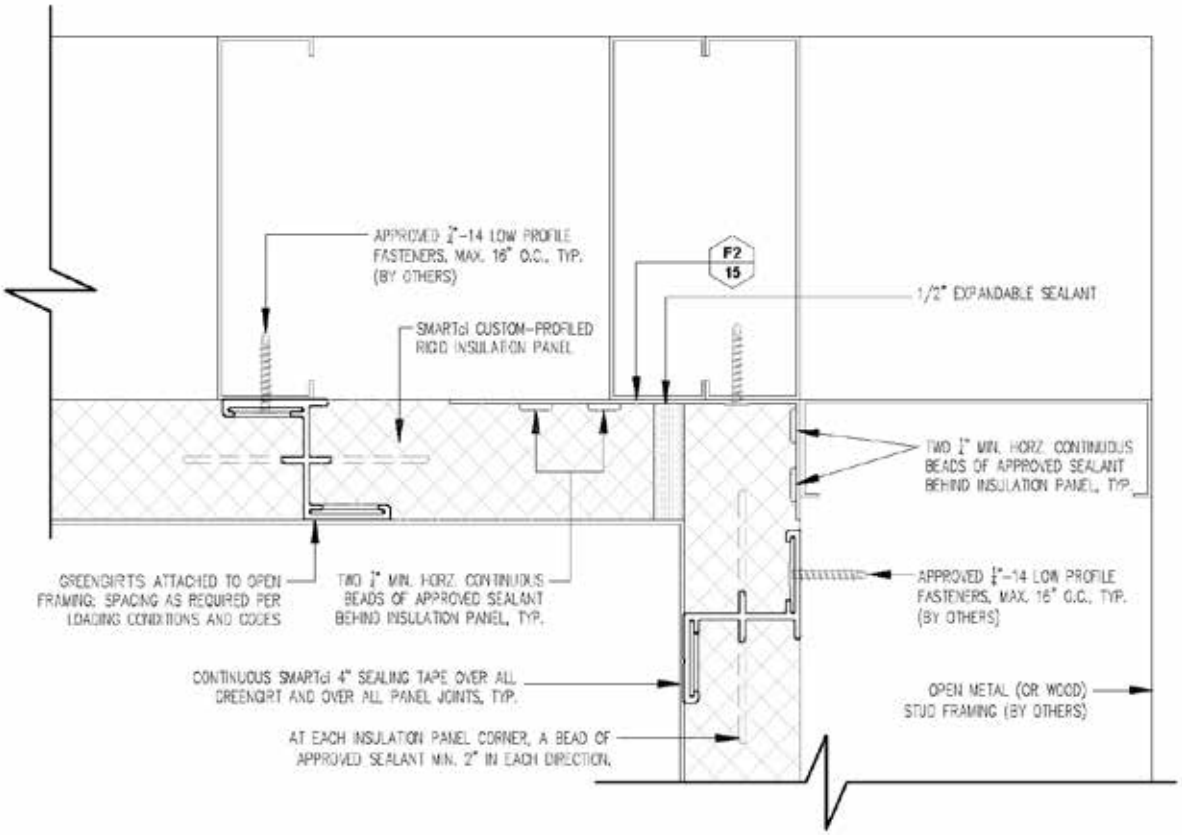

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SUBSTRATE: OPEN FRAMING	SMARTci™ RIGID INSULATION PANEL
CLADDING: -	DATE:
SIMPLE-Z SIZE: 200	GIRT ORIENTATION: HORIZONTAL

SOFFIT INSIDE DETAIL-1

NOT TO SCALE

10

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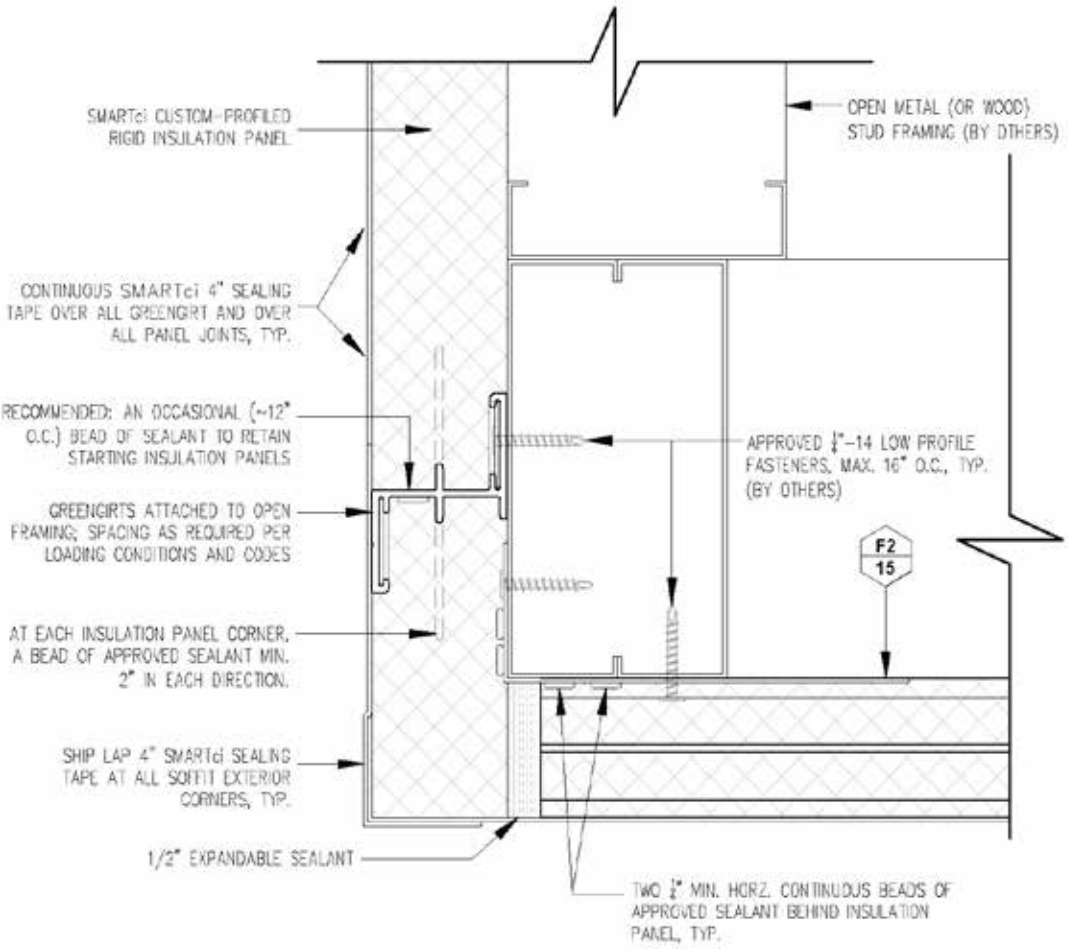

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SUBSTRATE: OPEN FRAMING	SMARTci™ RIGID INSULATION PANEL
CLADDING: -	DATE:
SIMPLE-Z SIZE: 200	GIRT ORIENTATION: HORIZONTAL

SOFFIT OUTSIDE DETAIL-2

NOT TO SCALE

11

ADVANCED ARCHITECTURAL PRODUCTS

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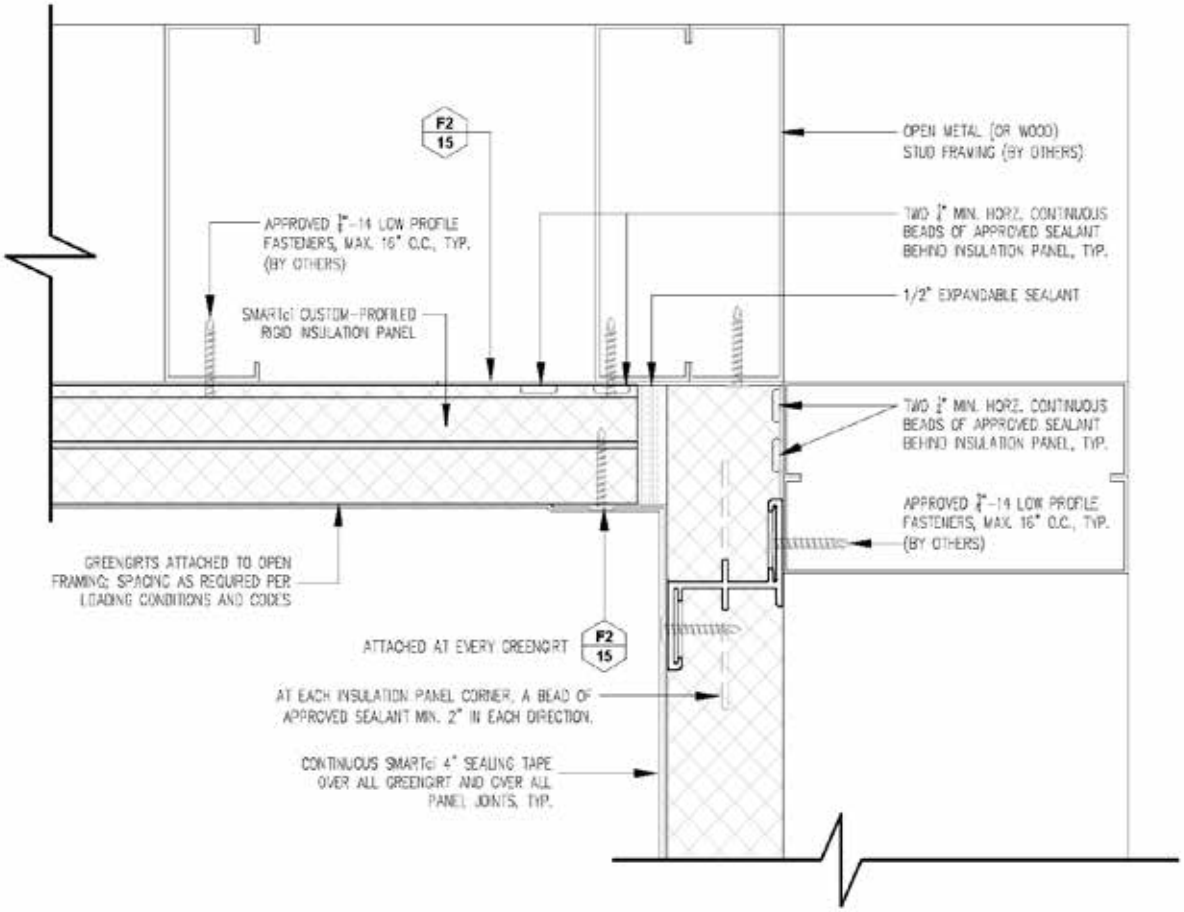

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SUBSTRATE: OPEN FRAMING	SMARTci™ RIGID INSULATION PANEL
CLADDING: -	DATE:
SIMPLE-Z SIZE: 200	GIRT ORIENTATION: HORIZONTAL

SOFFIT INSIDE DETAIL-2

NOT TO SCALE

12

ADVANCED ARCHITECTURAL PRODUCTS

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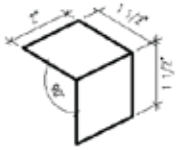
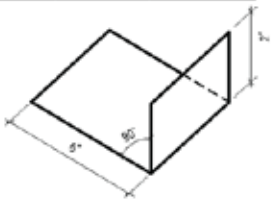
F1 / 15	MARK	GIRTH	BREAKS
	F1	3	1



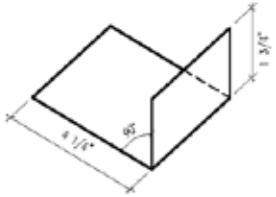
MIN. 22 GAUGE METAL 1 1/2" x 1 1/2" ANGLED RETENTION CLIPS, MAX 24" O.C.

F2 / 15	MARK	GIRTH	BREAKS
	F4	8	1



MIN. 22 GAUGE CONTINUOUS GALVANIZED STEEL 6" X 2" ANGLE CORNER CLOSURE, FASTENED AT EVERY GREENGIRT

F3 / 15	MARK	GIRTH	BREAKS
	F3	6	1



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NOTE! REQUIRED ACCESSORIES AND METAL FLASHINGS MUST BE USED WITH THIS SYSTEM. THESE COMPONENTS CAN BE MANUFACTURED AND / OR PROVIDED BY ADVANCED ARCHITECTURAL PRODUCTS, OR BY THE CUSTOMER. THEY ARE NOT OPTIONAL, AND ARE NECESSARY FOR THE PROPER INSTALLATION AND FUNCTION OF THE SYSTEM.

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USE PLASTIC HORSESHOE SHIMS WHERE REQUIRED TO ACHIEVE ± 1/16" DEFLECTION; MAX. SHIM DEPTH IS 1/4". USE SPRAY FOAM AT ALL VOIDS TO ENSURE CONTINUOUS INSULATION. DO NOT USE IMPACT HAMMERS, IMPACT DRILLS OR SIMILAR TOOLS TO INSTALL GREENGIRT!

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SUBSTRATE: OPEN FRAMING	SMARTci™ RIGID INSULATION PANEL
CLADDING: -	DATE:
SIMPLE-Z SIZE: 200	GIRT ORIENTATION: HORIZONTAL

ACCESSORIES & GEN. NOTES

NOT TO SCALE

15

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