

Building with conscience.





Design Guide

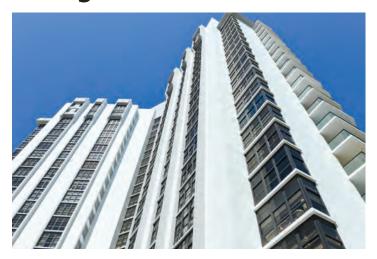


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ATTENTION

The final design of any project is the sole responsibility of the Design Professional, with considerations for compliance of local building and design codes and requirements. Sto Corp. accepts no liability for design, engineering, or workmanship of any project. The information provided herein is in addition to other technical data provided by Sto Corp. (System Bulletin, Specification, Guide Details, etc). For more information, please visit www.stocorp.com

Sto Corp.

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StoPowerwall®ci

StoPowerwall® ci is a portland cement stucco wall covering that is intended for use over code compliant concrete, concrete masonry, and frame wall construction. It incorporates a fluid applied air and water-resistive barrier, code compliant paper or felt water-resistive barrier (WRB), drainage cavity, code compliant metal plaster base, portland cement stucco, Sto primers, and Sto textured or custom cast finishes.

StoPowerwall stucco is ASTM C926 compliant and is installed in two coats (scratch and brown coat) in conformance with ASTM C926 practices, as part of a three-coat stucco wall assembly. StoPowerwall stucco is available as a concentrate to which graded sand is added at the job site, or pre-sanded to simplify mixing in the field. Sto proprietary integrally colored textured finishes, StoCast finishes or Sto specialty finishes are used in lieu of portland cement stucco finish to achieve brighter, richer colors and textures, and offer a wide variety of finish looks such as stone, brick, or wood on a single substrate. Aside from Sto proprietary blends of stucco, Sto Corp. also maintains a list of stucco vendors, whose products are suitable for use and warranted in StoPowerwall stucco wall assemblies. Refer to Sto specifications for a listing of vendors, stucco types, information on building code compliance, and any limitations that may apply.

NOTE: Sto documents referenced in this booklet are in **bold** and can be viewed or downloaded by visiting the documentation center at www.stocorp.com, where other information - Guide Specification, System Bulletin, and Product Bulletins – is also available.

Fluid-Applied Membranes



Sto Gold Coat® - Spray or roller applied vapor-permeable air and water-resistive barrier for use behind most claddings and as part of StoTherm®ci, StoPowerwall®, StoQuik® and StoVentec® systems.



Sto Gold Coat® TA - Trowel applied vapor-permeable air and water-resistive barrier for use with StoTherrm®ci, StoPowerwall® and StoQuik® systems.



Sto GoldSeal™ STPE - Spray or roller applied vapor-permeable air and water-resistive barrier for use with StoTherrm[®]ci, StoPowerwall[®] and StoQuik[®] systems. Some exceptions apply.



Sto AirSeal® - Spray or roller applied vapor-permeable air and water-resistive barrier for use behind most claddings and as part of StoTherm®ci, StoPowerwall®, StoQuik® and StoVentec® systems.



StoGuard VaporSeal® - Spray or roller applied Class 1 vapor retarder. Also functions as an air and water-resistive barrier for use behind most claddings and as part of StoTherm®ci, StoPowerwall®, StoQuik® and StoVentec® systems.

Self-Adhered Membranes



StoShield™SA Membranes - Versatile, easy to install self-adhered membranes that can be used over prepared vertical above-grade concrete, concrete masonry, wood sheathing, glass mat gypsum sheathing, and cementitious sheathing. Available in VP (vapor permeable) and NP (non-permeable) versions.



Detail Component Products



Sto RapidGuard® - A one-component air and water-resistive barrier used as a rapid drying flashing at exterior wall openings, and to seal sheathing joints, seams, cracks, penetrations, and other transitions in above grade wall



StoGuard® Conformable Membrane - A versatile, easy to install self-adhered membrane that can be used anywhere StoGuard® Detail Components are required, including dynamic joints and to make connections with adjoining construction and dissimilar materials.



StoGuard® Fabric - Non-woven cloth reinforcement used to treat sheathing joints and rough openings when embedded in Sto Gold Coat®, Sto AirSeal® or StoGuard® VaporSeal®.



StoGuard® RediCorner - A preformed StoGuard® fabric piece used in the corners of rough openings for quicker installation.



Sto Gold Fill® - Trowel applied compound used with StoGuard® Mesh or StoGuard® Detail Mesh to treat rough openings and sheathing joints.



StoGuard® Mesh - Self-adhesive, glass fiber reinforcement used with Sto Gold Fill and Sto Gold Coat® TA.



Sto Mesh & Sto Detail Mesh - Glass fiber reinforcement used with Sto Gold Fill and Sto Gold Coat TA.

Insulation Adhesive



Sto TurboStick® - is a ready-to-use, single component polyurethane foam adhesive used for securing insulation panels to the substrate and filling seams and gaps in insulation board surface.

Drainage



Sto DrainScreen® - is a tangled filament drainage and ventilation mat for use in above grade vertical wall assemblies. It provides continuous ventilation and drainage to remove incidental moisture and helps protect the integrity of the wall assembly.

Stucco



StoPowerwall® Stucco - is a controlled blend of Portland cement, that performs like traditional stucco when combined with sand and water at the jobsite.



StoPowerwall® Pre-Blended - is a pre-blend of Portland cement with graded sand that performs like traditional stucco when combined with sand and water at the jobsite.



StoPowerwall® Scratch & Brown - is an ASTM 926 compliant, factory prepared portland cement stucco base coat to which sand and water are added at the job site. It is an integral component of a conventional one hour fire-rated stucco assembly.



Crack Defense System (optional)

Sto Armor Mat & Sto Armor Mat XX - A heavy, specifically designed coated glass fiber mesh used to provide ultra-high impact resistance in Sto claddings.

Sto Stucco Mesh - is a tri-directional weave, flexible treated glass fiber mesh for use with portland cement stucco brown coats in vertical above grade wall construction.



Sto BTS® Xtra - A trowel or spray applied, lightweight factory blended one component polymer modified portland cement based extra high build base coat.

Sto Primer/Adhesive - A two-component polymer modified, trowel applied base coat consisting of an acrylic admixture mixed with Type I portland cement.

Sto Primer/Adhesive-B - A trowel or spray applied, one-component, polymer-modified, cement based, dry powder material used as a base coat.

Sto RFP - A trowel or spray applied, ready mixed acrylic based fiber reinforced base coat material used as an adhesive and base coat.

Sto Flexyl - A trowel or spray applied, ready mixed acrylic based fiber reinforced base coat material used as an adhesive and base coat.

Primer (optional)

StoPrime® Hot - A roller, brush or sprayed applied primer that is alkali resistant and is used over prepared vertical above grade wall surfaces. This primer is required for some specialty finishes.

StoPrime® - A roller, brush or sprayed applied, tintable, sanded primer used to reduce surface water absorption of the base coat, and to enhance finish color, texture, and coverage of finishes.

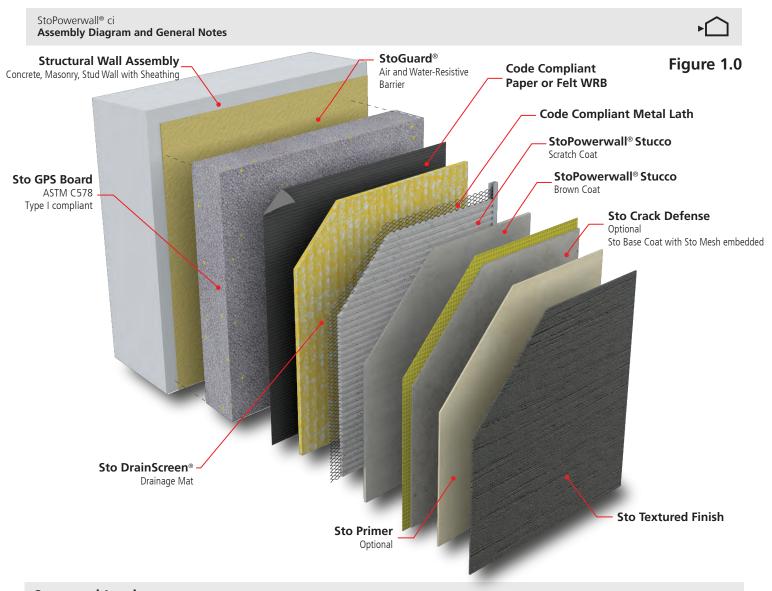
StoPrime® Smooth - A roller, brush or sprayed applied, tintable primer used to reduce surface water absorption of the base coat, and to enhance finish color, texture, and coverage of finishes.

Finishes

Sto Powerflex®Silco - A trowel or sprayed applied, silicone-enhanced elastomeric textured wall coating available in a variety of graded marble aggregates in standard and specialty textures.

StoLit® Lotusan® - A trowel or sprayed applied, ready-mixed, acrylic-based wall finish with Lotus-Effect® Technology for highest water repellency and resistance to soiling. Available in a variety of graded marble aggregates, as well as standard and specialty textures.

NOTE: Please visit www.stocorp.com for more information on a wide range of available Sto Finish options for StoPowerwall® ci including; StoSignature, StoCast (Wood and Brick), Stolit® X, Sto Powerflex, StoPowerwall®, Sto Essence DPR, and Sto Powercryl finishes.



Structural Loads

- 1. <u>Racking Loads, Load Bearing Walls</u>: racking resistance in StoPowerwall ci wall assemblies is provided by the structural backup wall of concrete, masonry, or frame wall construction. When the structural backup wall is load bearing it must carry roof and floor loads. In all cases, stresses from racking and gravity loads are not to be transferred to the stucco wall covering, as they can cause cracking in the stucco.
- 2. <u>Wind Loads</u>: StoPowerwall ci transfers positive wind loads to the supporting wall construction and resists negative wind loads via mechanical attachment to the structural wall. The pull-out or withdrawal capacity of fasteners (not furnished by Sto Corp.) used to attach lath into supporting wall construction must be verified to ensure adequate attachment relative to design wind pressures. Design for maximum allowable deflection, normal to the plane of the wall of L/360, and in conformance with applicable building code requirements. Consult Sto ICC ESR-2323 for allowable wind pressures (published values in ICC-ES reports have a safety factor of 3 applied to ultimate loads).
- 3. <u>Gravity Load on Fasteners</u>: the dead load of stucco is 11 lb/ft2 at 7/8 inch thick (0.46 kg/m2 at 22mm). When stucco is installed over continuous insulation the cantilevered screw fasteners that anchor metal lath to supporting wall construction must carry the stucco dead load. Based on testing and analytical work directed by Sto Corp. the thickness of insulation is limited to 3 inches (76mm) to restrict bending of fasteners and creep. Special designs may allow for thicker sections of GPS when supported with engineering analysis by a qualified licensed engineer.
- 4. <u>Fixture Attachments</u>: StoPowerwall ci should not be used as a base for mechanical anchoring of attachments such as signage or light fixtures.



Fire Protection

- 1. <u>Noncombustible Construction</u>: StoPowerwall ci can be used on Types I, II, III, and IV noncombustible wall construction. It is also suitable for use on Type V, combustible wall construction. Use on noncombustible construction is limited to a maximum insulation thickness of 3 inches (76mm). Refer to ICC ESR 1233, Table 2, for assembly information.
- 2. <u>Fire Resistance-Rated Wall Assemblies</u>: A proprietary StoPowerwall ci fire-resistance rated wall assembly is published in this Design Guide with a maximum 3 inches (51mm) of insulation. **Refer to Sto Detail 64s.FP**. Engineering judgments, modeling, or rational analysis by qualified fire protection engineers can also be used to determine if a particular wall assembly that includes StoPowerwall ci will achieve an hourly rating.

Moisture Protection

1. General:

Do not use StoPowerwall ci on roofs or roof-like conditions. Do not use StoPowerwall ci on parapets, weather exposed projecting ledges, sills, or other projecting features, unless supported by framing or other structural support and protected with metal coping or flashing. Refer to Sto Details.

Do not use StoPowerwall ci on surfaces subject to continuous or intermittent water immersion or hydrostatic pressure. Prevent the accumulation of water behind StoPowerwall ci, either by condensation or water leakage into the wall construction, in the design and detailing of the wall assembly, and with proper sequencing and protective measures during construction.

For further information see Sto Tech Hotline No. 0403-BSc, **Critical Detail Checklist for Wall Assemblie**s, Sto Tech Hotline No. 0603-BSc, **Moisture Control Principles for Design and Construction of Wall Assemblies**, and Sto Tech Hotline No.01001-BSc, **Effects of Temporary Heating on Construction Materials in Cold Weather**.

2. Air Barrier and Water-Resistive Barrier:

StoGuard® is the air and water-resistive barrier component in StoPowerwall ci. It is installed over wood-based sheathing, glass mat gypsum sheathing, cementitious sheathing, concrete, and concrete masonry substrates. StoGuard provides protection against moisture damage during the construction process and in the event of a breach in StoPowerwall ci while in service. It is not intended to correct faulty workmanship such as the absence or improper integration of flashing in the wall assembly, nor is it intended to correct defective components of construction such as windows that leak into the wall assembly. Flashing should always be integrated in the wall assembly to direct water to the exterior, not into the wall assembly, particularly at potential leak sources such as windows.

As a component of an air barrier assembly StoGuard minimizes the risk of condensation within the building envelope by resisting mass transfer of moisture in the air to a cold surface in the wall assembly. A complete air barrier system consists of individual air barrier materials and the connections between them. The air barrier materials must be continuously connected with compatible air barrier components such that walls, roof, foundation, windows, doors, and other penetrations through the wall perform as an effective air barrier system to minimize condensation caused by air movement. The design/construction professional must take construction sequencing into account when designing an "airtight" assembly to ensure continuity and long-term durability. The effects of air tightness on mechanical ventilation should also be included in the overall project design.

An air barrier should not be confused with a vapor retarder, which may also be used in the wall assembly to retard water vapor diffusion and reduce the risk of condensation. Generally, a vapor retarder is placed on the warm side of the insulation. Specifically, it is placed on the interior side of the insulation in cold climates. A vapor retarder may not be necessary, or appropriate, depending on the wall components and the range of temperature/humidity conditions inside and outside. A vapor retarder should not be used on the inside of walls in hot, humid climates. A dew point analysis and/or dynamic hygrothermal modeling should be performed to determine whether a vapor retarder is appropriate. Sto manufactures vapor permeable, vapor retarder, and vapor impermeable air barriers/water-resistive barriers for use in StoPowerwall ci.



Moisture Protection (cont'd)

3. Flashing:

Flashing is required to direct water to the exterior where it is likely to penetrate components in the wall assembly and to divert water away from, not into, the exterior wall, including, above window and door heads, beneath window and door sills, at roof/wall intersections, decks, abutments of lower walls with higher walls, above projecting features, at floor lines, and at the base of the wall.

4. Grade Condition:

Stucco is required to terminate minimum 4-inches (102mm) above earth grade, and minimum 2-inches above hardscape (pavers/sidewalk). Increased clearance should be provided in freeze/thaw climate zones where snow drifts can accumulate against the wall surface. Do not specify StoPowerwall ci for use below grade.

Thermal Insulation

StoPowerwall ci is insulated on the exterior with continuous insulation for the most efficient and effective use of thermal insulation, and for use where continuous insulation is required by building codes. Insulation may also be added in stud cavities of frame wall construction. Two types of insulation are offered:

- 1. Sto GPS (graphite enhanced polystyrene) Board in conformance with ASTM C578 Type I requirements. R-value is R-4.7 F•ft²•h/Bt per inch thickness at 75°F (RSI-0.83 K•m²/W per 25mm at 24°C). Minimum thickness is 1-1/16 inch (27mm). Maximum thickness is 3 inches (76mm).
- 2. Sto listed XPS (extruded polystyrene) board in conformance with ASTM C578 Type IV requirements, Dupont™ Styrofoam™ Brand XPS. R-value is 5 F•ft²•h/Btu per inch thickness at 75°F (RSI-0.88 K•m²/W per 25mm at 24°C). Minimum thickness is 1 inch (25mm). Maximum thickness is 2 inches (51mm).

Impact Resistance

StoPowerwall ci is an impact resistant wall system, often specified for use on ground floors and other areas where abuse and impact resistance are important. A proprietary hurricane impact resistant StoPowerwall stucco wall assembly is listed by Miami-Dade County for large and small missile impact resistance. Refer to **StoPowerwall HVHZ (High Velocity Hurricane Zone) Systems** at www.stocorp.com.

Color Selection

- Certain highly saturated colors such as dark blue, violet, or fire engine red require the use of organic tints to achieve their color.
 Organic tints are more prone to fade than inorganic tints. See Sto Tech Hotline No. 0893-EC, Fading in EIFS and Architectural Coatings, for further information on this topic and how to avoid color problems.
- 2. Surface alkalinity (pH) can also affect final color of finishes and is an important consideration for stucco surfaces that will receive acrylic or acrylic elastomeric finishes, such as those specified for use in StoPowerwall ci. A surface pH of less than 10 is recommend -ed. pH should be checked at multiple locations on the wall before primer or finish is applied. A minimum cure time of 28 days is generally recommended before applying finishes to allow the pH of the stucco surface to neutralize. StoPrime Hot is the preferred primer for use on stucco surfaces as it "masks" surface alkalinity and reduces the time period between application of stucco and finish, allowing for finish application in less than 28 days. Refer to Sto Tech Hotline No. 1202-CF, **Alkaline Substrates and Polymeric Finishes**.



Joints

- 1. Expansion and control joints are required in stucco wall assemblies to prevent or minimize the risk of cracking. Below is a list of general rules for the use of joints and accessories. Also, refer to Sto Details.
- · Provide two-piece expansion joints in the stucco assembly where building movement is anticipated: at joints in the substrate or supporting construction, where the system is to be installed over dissimilar construction or substrates, at changes in building height, at floor lines, and at columns and cantilevered areas.
- Provide one piece expansion joints every 144 ft² (13 m²). Cut and wire tie lath to the expansion joint accessory so lath is discontinuous at or beneath the accessory. Do not exceed length to width ratio of 2-1/2:1 in expansion joint layout and do not exceed more than 18 feet (5.5 m) in any direction without an expansion joint. Where casing bead is used back-to-back as the expansion joint, back the joint with the appropriate StoGuard transition detail component.
- · Provide one piece expansion joints at through wall penetrations, for example, at corners above and below doors and windows.
- · Provide minimum 3/8 inch (9 mm) wide sealant joints where the stucco abuts windows, doors and other through wall penetrations, and terminate the stucco with casing bead.
- · Provide appropriate accessories at stucco terminations and joints.
- · Avoid the use of channel reveal accessories which can interfere with proper drainage and proper stress relief (channel reveal accessories do not function as control or expansion joints, unless specifically designed to accommodate movement; nor can they drain incidental water unless specifically designed and detailed for this purpose).
- · Provide appropriate sealant at stucco terminations and at stucco accessory butt joints.
- · Indicate location of joints, accessories, and accessory type on architectural drawings.
- · Maintain air and water-resistive barrier continuity at joints with the appropriate StoGuard detail component.

Trim, Reveals, and Projecting Architectural Features

In general, trim around windows, at floor lines, and other areas of construction is simpler and faster to achieve with Sto GPS board or XPS board foam trim than forming it with stucco. All foam trim and projecting architectural features should have a minimum 1:2 [27°] slope along their top surface. Minimum ¾-inch (19 mm) foam thickness must remain beneath all finished reveals. All horizontal reveals should have a minimum 1:2 [27°] slope along their bottom surface. Slope should be increased for northern climates to prevent accumulation of ice/snow and water on the sloped surface. Where foam trim or the bottom surface of reveals project more than 2-inches (51 mm) from the face of the StoPowerwall ci wall plane, the top surface should be protected with waterproof base coat. Periodic inspections and increased maintenance may be required to maintain appearance and surface integrity of finishes installed on weather exposed sloped surfaces. Limit projecting features to easily accessible areas and limit total area to facilitate and minimize maintenance. Refer to Sto Details.



Efflorescence

Efflorescence is a normal occurrence in portland cement-based products and can affect final appearance of finish products installed over stucco. Efflorescence is generally caused by water getting into or behind the stucco and migrating to the exterior while carrying soluble salts that are within concrete, masonry, stucco and other portland cement-based materials. To prevent or minimize efflorescence proper proportioning of stucco ingredients, proper placement of stucco, and moist curing of the stucco to fully hydrate the portland cement in the stucco mix, will provide a stucco that is resistant to water penetration. The use of a primer such as StoPrime Hot, specifically designed to resist efflorescence, and Sto high performance finishes, will add to the water penetration resistance of the stucco wall assembly. Protective measures during construction to prevent water from getting into the wall, along with the use of flashing, coping, overhangs and other methods of construction that keep water away from the wall will also help to prevent or minimize efflorescence.

Cracking

Some degree of cracking is normal in portland cement stucco and should be expected. Cracking is generally not caused by a material defect in the stucco and can be minimized by following sound design and construction practice such as: proper installation of lath, proper incorporation of stress relief joints in the construction, the use of properly graded sand, proper proportioning of stucco mix ingredients, use of the minimum amount of water in the stucco mix for placement and avoiding the use of excess water, moist curing of the stucco after it has been applied, and proper sequencing of construction to avoid stresses in the freshly placed stucco. For example, roof loads should be in place before stucco is applied to exterior load bearing frame walls, and interior drywall should be installed on exterior walls before the stucco is installed to avoid stress transfer to freshly placed stucco.

Additional protection against cracking can be achieved by adding Sto Crack Defense, a Sto glass fiber mesh reinforced layer embedded in Sto base coat, to the outer surface of the cured stucco brown coat, before the exterior finish is installed. Refer to Sto Details.

Accessories

Accessories for use with StoPowerwall® ci are:

- · Weep screed, casing bead, corner bead, corner lath, and expansion and control joint accessories in compliance with ASTM C1063 and its referenced documents. All accessories must have perforated or expanded flanges and must be designed with grounds for the specified thickness of stucco.
- StoSeal STPE joint sealant, a high-movement, low modulus, non-sag one-component silyl-terminated polyether joint sealant in conformance with ASTM C920.



Table 1.1 - StoGuard® Air & Water-Resistive Barrier Detail Components

StoGuard [®] Detail Component	Sheathing Joints and Corners	Flashing and Rough Opening Protection	Penetrations	Static Joints and Seams	Dynamic Joints
Sto RapidGuard®	√	√	√	√	
StoGuard [®] Conformable Membrane	√	√	√	√	√
StoGuard® Fluid Applied Air & Water-Resistive Barrier¹ with StoGuard® Fabric	√	√	✓		
Sto Gold Fill with StoGuard® Mesh (or Sto Detail Mesh embedded)	√	√	√		
Sto Gold Coat® TA with StoGuard® Mesh	√	√	√		

¹ StoGuard® Fluid Applied Air & Water-Resistive Barriers: Sto Gold Coat®, Sto GoldSeal™ STPE, StoGuard® VaporSeal® and Sto AirSeal®

 $^{^2}$ StoGuard® Self-Adhered Membranes: StoShield $^{\mathsf{TM}}$ SA NP and StoShield $^{\mathsf{TM}}$ SA VP.



Design Details

Components System Components with StoCast Brick System Components with StoCast Wood System Components with Crack Defense System	63s.00 SCB
Installation at Grade Termination at Grade: Sheathing Flush with Foundation	
Installation at Windows Rough Opening Protection with StoGuard Conformable Membrane Rough Opening Protection with StoGuard Fabric Rough Opening Protection with StoGuard Mesh Box Window at Sill, Jamb, Head	63s.04 F 63s.04 M
Installation at Soffits Soffit Return	63s.07
Installation at Floor Line Floor Line without Deflection Track Floor Line with Deflection Joint	
Installation at Joints and Corners Horizontal Joint at Dissimilar Material Vertical Joint at Dissimilar Material Vertical Joint at Inside Corner: Common Substrate Vertical Joint at Inside Corner: Different Substrate Outside Corner: Common Substrate	63s.11 63s.12 63s.13
Installation at Parapet, Roof/Wall Abutment and Saddle Flashing Termination at Parapet Roof/Wall Abutment Saddle Flashing at Lower to Higher Wall Abutment	63s.16
Penetrations, Attachments and Buildouts Penetrations Through Wall (Pipe or Scupper) Sign Attachment Foam Buildout	63s.19
Fire Protection Fire Protection Assembly	63s.FP



StoPowerwall®ci System Components

StoGuard® Detail Component (See Note 1) Glass Mat Gypsum Sheathing Metal Frame (ASTM C1177 Compliant) StoGuard® Air & Water-Resistive Barrier (See Note 1) Sto GPS Board (ASTM C578 Type I compliant) Code Compliant Paper or Felt WRB (water-resistive barrier) Sto DrainScreen® Galvanized Self-Furred Diamond Mesh (Expanded Metal Lath) Sto Powerwall® Scratch Coat (See Note 6) Sto Powerwall® **Brown Coat** (See Note 6) Sto Primer (Optional) Sto Textured Finish

Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construc-

Detail No.: 63s.00

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Sto GPS Insulation Board in compliance with ASTM C 578.
- 4. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
- 5. Minimum 2.5 lb/yd² (1.4 kg/m²) self-furred galvanized diamond mesh metal lath.
- 6. Stucco scratch and brown coat material in compliance with ASTM C926 and manufactured or listed by Sto Corp.
- 7. Components not identified as Sto are furnished by other manufacturers and are not necessarily installed by trades who install the Sto products. Refer to project specific contract documents.

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Sto products are intended for use by qualified professional contractors, not consumers, as a component of a larger construction assembly as specified by a qualified design professional, general contractor or builder. They should be installed in accordance with those specifications and Sto's instructions. Sto Corp, disclaims all, and assumes no, liability for on-site inspections, for its products applied improperly, or by unqualified persons or entities, or as part of an improperly designed or constructed building, for the nonperformance of adjacent building components or assemblies, of for other construction activities beyond Sto's control. Improper use of Sto products or use as part of an improperly designed or constructed larger assembly or building may result in serious damage to Sto products, and to the structure of the building or its components.

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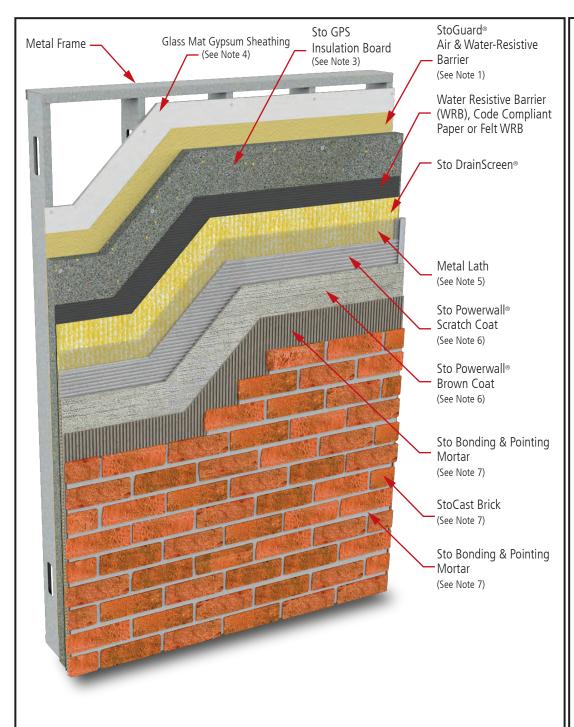






StoPowerwall® ci with StoCast Brick

Detail No.: 63s.00 SCB Date: August 2023



Notes:

- 1. Refer to StoGuard Product
 Use Chart (Table 1.1) for
 StoGuard detail components; joint
 treatment, rough opening
 protection, backing for masonry
 anchors, or transitions to
 dissimilar materials, joints and
 seams in construction.
- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Sto GPS Insulation Board in compliance with ASTM C 578.
- 4. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
- 5. Minimum 2.5 lb/yd² (1.4 kg/m²) self-furred galvanized diamond mesh metal lath.
- 6. Stucco scratch and brown coat material in compliance with ASTM C926 and manufactured or listed by Sto Corp.
- 7. Refer to the StoCast Brick Application Guide for more information.
- 8. Components not identified as Sto are furnished by other manufacturers and are not necessarily installed by trades who install the Sto products. Refer to project specific contract documents.

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Sto products are intended for use by qualified professional contractors, not consumers, as a component of a larger construction assembly as specified by a qualified design professional, general contractor or builder. They should be installed in accordance with those specifications and Sto's instructions. Sto Corp. disclaims all, and assumes no, liability for on-site inspections, for its products applied improperly, or by unqualified persons or entities, or as part of an improperly designed or constructed building, for the nonperformance of adjacent building components or assemblies, of for other construction activities beyond Sto's control. Improper use of Sto products or use as part of an improperly designed or constructed larger assembly or building may result in serious damage to Sto products, and to the structure of the building or its components.

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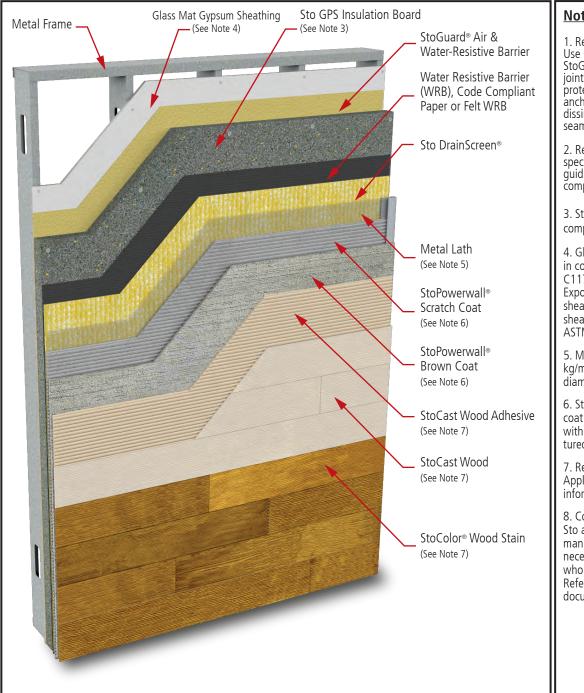




StoPowerwall® ci with StoCast Wood

Detail No.: 63s.00 SCW

Date: August 2023



Notes:

- 1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.
- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Sto GPS Insulation Board in compliance with ASTM C 578.
- 4. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
- 5. Minimum 2.5 lb/yd² (1.4 kg/m²) self-furred galvanized diamond mesh metal lath.
- 6. Stucco scratch and brown coat material in compliance with ASTM C926 and manufactured or listed by Sto Corp.
- 7. Refer to the StoCast Wood Application Guide for more information.
- 8. Components not identified as Sto are furnished by other manufacturers and are not necessarily installed by trades who install the Sto products. Refer to project specific contract documents.

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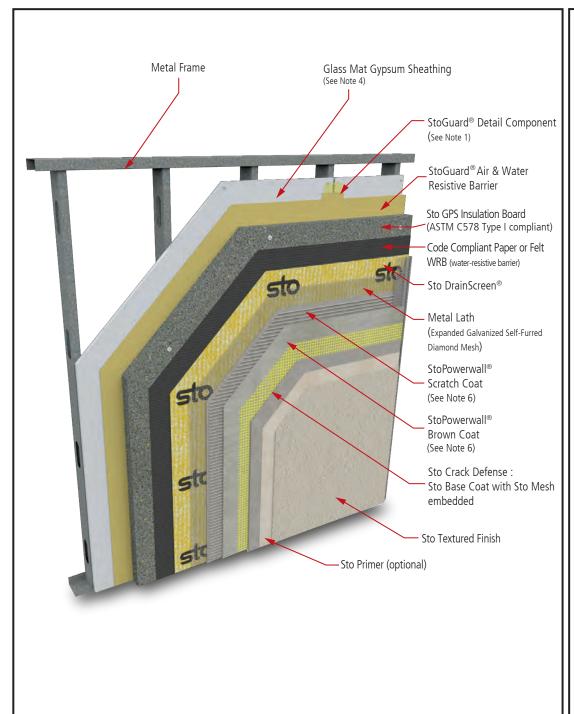
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StoPowerwall®ci System Components with Sto Crack Defense System



Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 63s.01

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Sto GPS Insulation in compliance with ASTM C 578.
- 4. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
- 5. Minimum 2.5 lb/yd² (1.4 kg/m²) self-furred galvanized diamond mesh metal lath.
- 6. Stucco scratch and brown coat material in compliance with ASTM C926 and manufactured or listed by Sto Corp.
- 7. Components not identified as Sto are furnished by other manufacturers and are not necessarily installed by trades who install the Sto products. Refer to project specific contract documents.

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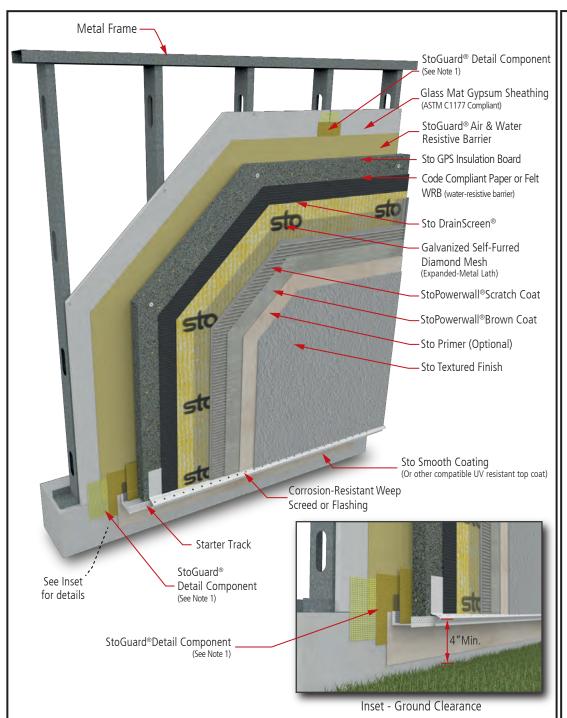




StoPowerwall®ci

ATTENTION

Termination at Grade: Sheathing Flush with Foundation



Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 63s.02

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Sto GPS Insulation in compliance with ASTM C 578.
- 4. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
- 5. Minimum 2.5 lb/yd² (1.4 kg/m²) self-furred galvanized diamond mesh metal lath.
- 6. Stucco scratch and brown coat material in compliance with ASTM C926 and manufactured or listed by Sto Corp.
- 7. Cladding termination minimum 4" (101 mm) above finish grade, minimum 2" (51mm) above paved surfaces.
- 8. Components not identified as Sto are furnished by other manufacturers and are not necessarily installed by trades who install the Sto products. Refer to project specific contract documents.

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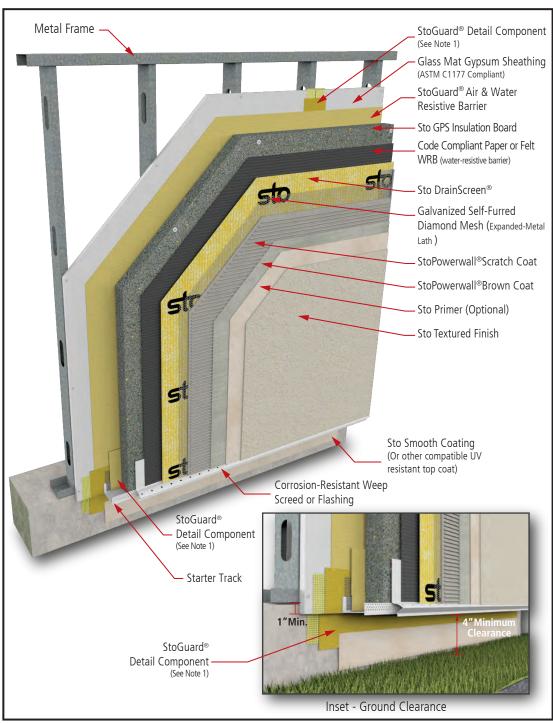




StoPowerwall®ci

ATTENTION

Termination at Grade: Sheathing over Foundation



Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 63s.03

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Sto GPS Insulation in compliance with ASTM C 578.
- 4. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
- 5. Minimum 2.5 lb/yd² (1.4 kg/m²) self-furred galvanized diamond mesh metal lath.
- 6. Stucco scratch and brown coat material in compliance with ASTM C926 and manufactured or listed by Sto Corp.
- 7. Cladding termination minimum 4" (101 mm) above finish grade, minimum 2" (51mm) above paved surfaces.
- 8. Components not identified as Sto are furnished by other manufacturers and are not necessarily installed by trades who install the Sto products. Refer to project specific contract documents.

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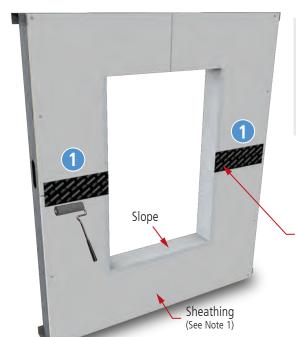




StoPowerwall®ci Rough Opening Protection with StoGuard®Conformable Membrane

Detail No.: 63s.04CM Date: August 2023

Page 1 of 3



STEP 1

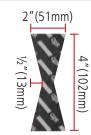
Install 4"(102mm) StoGuard® Conformable Membrane on the horizontal substrate seams of the sheathing at the window opening. After placement, apply firm, uniform pressure by rolling with a hard rubber roller.

4"(102mm) StoGuard® Conformable Membrane

STEP 2

Cut a 4"(102mm) long section of StoGuard® Conformable Membrane approximately 2"(51mm) wide to create a "butterfly" section as shown below. Apply membrane sections in diagonal strips at rough opening sill and head corners.

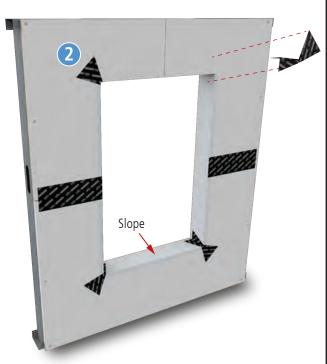




ROLL AFTER

APPLYING

Butterfly Section



Notes:

- 1. Glass mat gypsum sheathing in compliance with ASTM C1177, Exterior Grade or Exposure 1 wood-based sheathing, or cementitious sheathing in compliance with ASTM C1325 Type A.
- 2. Apply StoGuard® Conformable Membrane with 2"(51mm) shingle lap overlaps.
- 3. **IMPORTANT:** After StoGuard® Conformable Membrane application is in place, immediately apply firm, uniform pressure using a hard rubber roller to create a wrinkle-free surface.
- 4. Components not identified as Sto are furnished by other manufacturers and are not necessarily installed by trades who install the Sto products. Refer to project specific contract documents.
- 5. Use 6" or 9" (102mm or 229mm) StoGuard® Conformable Membrane for use with 2"x 4" rough opening framing and 9" (229mm) StoGuard® Conformable Membrane with 2"x 6" rough opening framing.

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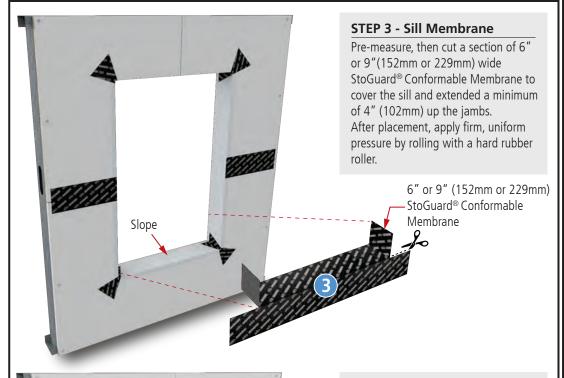




StoPowerwall®ci Rough Opening Protection with StoGuard®Conformable Membrane

Detail No.: 63s.04CM Date: August 2023

Page 2 of 3



Slope Jamb flaps (cut away at top and bottom)

ATTENTION

STEP 4 - Jamb Membrane

Next, pre-measure and cut sections of 6" or 9"(152mm or 229mm: see note 5) StoGuard® Conformable Membrane to cover both jambs. The membrane must be cut long enough to provide a minimum of 2"(51mm) shingle lap over the sill membrane and also above the header. Cut away jamb flaps at top and bottom to facilitate installation. After placement, apply firm, uniform pressure by rolling with a hard rubber roller.

6" or 9" (152mm or 229mm) StoGuard® Conformable Membrane



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Notes:

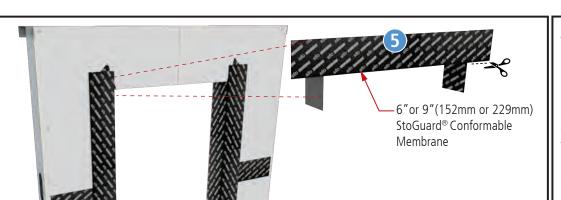
- 1. Glass mat gypsum sheathing in compliance with ASTM C1177, Exterior Grade or Exposure 1 wood-based sheathing, or cementitious sheathing in compliance with ASTM C1325 Type A.
- 2. Apply StoGuard® Conformable Membrane with 2"(51mm) shingle lap overlaps.
- 3. **IMPORTANT:** After StoGuard® Conformable Membrane application is in place, immediately apply firm, uniform pressure using a hard rubber roller to create a wrinkle-free surface.
- 4. Components not identified as Sto are furnished by other manufacturers and are not necessarily installed by trades who install the Sto products. Refer to project specific contract documents.
- 5. Use 6" or 9"(102mm or 229mm) StoGuard® Conformable Membrane for use with 2"x 4" rough opening framing and 9"(229mm) StoGuard® Conformable Membrane with 2"x 6" rough opening framing.





StoPowerwall®ci Rough Opening Protection with StoGuard®Conformable Membrane

Detail No.: 63s.04CM Date: August 2023 Page 3 of 3



4"(102mm) StoGuard®

Conformable Membrane

Slope

Slope

Notes:

- 1. Glass mat gypsum sheathing in compliance with ASTM C1177, Exterior Grade or Exposure 1 wood-based sheathing, or cementitious sheathing in compliance with ASTM C1325 Type A.
- 2. Apply StoGuard® Conformable Membrane with 2"(51mm) shingle lap overlaps.
- 3. **IMPORTANT:** After StoGuard® Conformable Membrane application is in place, immediately apply firm, uniform pressure using a hard rubber roller to create a wrinkle-free surface.
- 4. Components not identified as Sto are furnished by other manufacturers and are not necessarily installed by trades who install the Sto products. Refer to project specific contract documents.
- 5. Use 6" or 9" (102mm or 229mm) StoGuard® Conformable Membrane for use with 2"x 4" rough opening framing and 9" (229mm) StoGuard® Conformable Membrane with 2"x 6" rough opening framing.

STEP 5 - Head Membrane

After the jamb membranes are installed, pre-measure, then cut a section of 6" or 9" (152mm or 229mm) StoGuard® Conformable Membrane to cover the window head, providing a minimum of 2" (51mm) shingle lap over the iamb membrane and extending a minimum 2"(51mm) horizontally past the jamb membrane at each jamb. Remove one side of the split release liner progressively as the membrane is placed along one side of the head and smooth by hand. Then repeat with the other side. Next, cut a section of 4"(102mm) StoGuard® Conformable Membrane to cover the vertical substrate seam at the window opening. After placement, apply firm, uniform pressure by rolling with a hard rubber roller.

_6" or 9"(152mm or 229mm) StoGuard® Conformable Membrane



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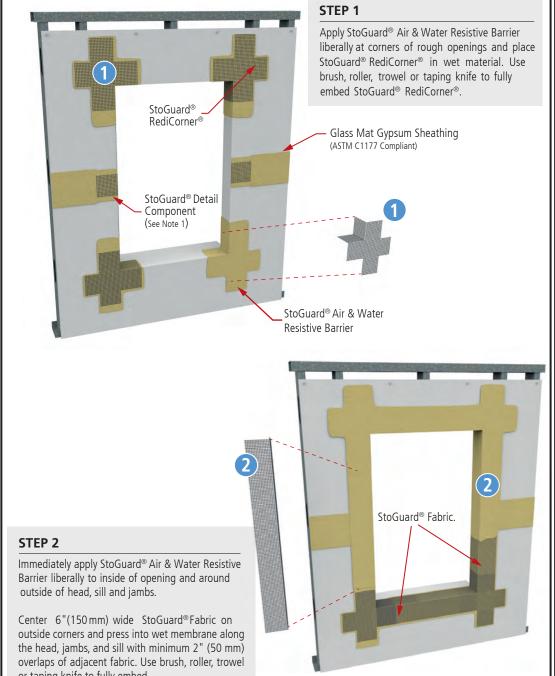
StoPowerwall®ci Rough Opening Protection with StoGuard®Fabric

Detail No.: 63s.04F Date: August 2023

Page 1 of 2



- 1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.
- 2. Refer to General Notes for specific information and design quidance on wall assembly components.
- 3. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
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or taping knife to fully embed.

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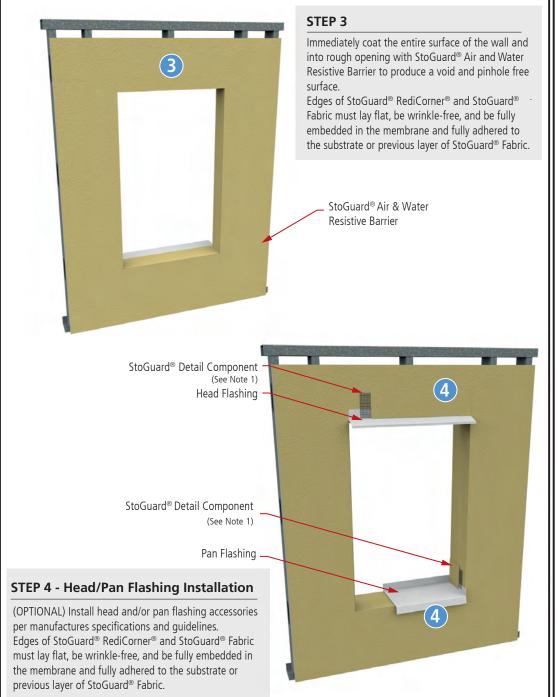
StoPowerwall®ci Rough Opening Protection with StoGuard®Fabric

Detail No.: 63s.04F Date: August 2023

Page 2 of 2



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- 3. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
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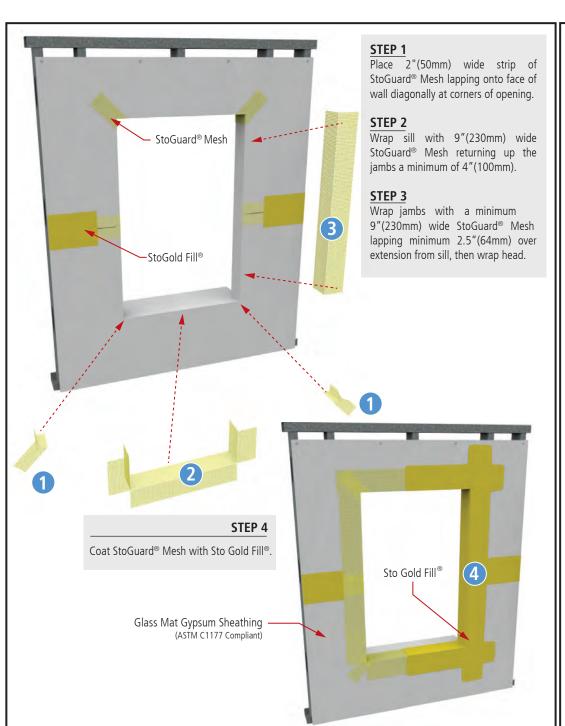




StoPowerwall®ci Rough Opening Protection with StoGuard®Mesh

Detail No.: 63s.04M Date: August 2023

Page 1 of 2



Notes:

- 1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.
- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
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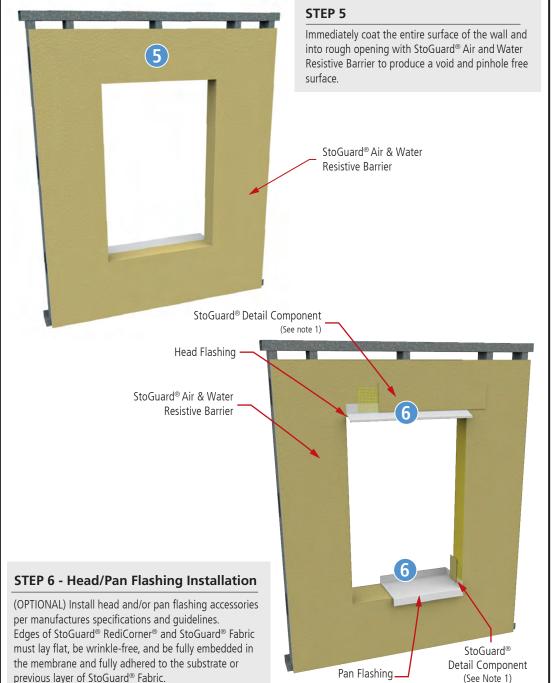
StoPowerwall®ci Rough Opening Protection with StoGuard®Mesh

Detail No.: 63s.04M Date: August 2023

Page 2 of 2

Notes: 1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

- 2. Refer to General Notes for specific information and design quidance on wall assembly components.
- 3. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
- 4. Components not identified as Sto are furnished by other manufacturers and are not necessarily installed by trades who install the Sto products. Refer to project specific contract documents.



previous layer of StoGuard® Fabric.

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StoPowerwall®ci Box Window at Sill, Jamb, and Head

Metal Frame One-piece Expansion/Control Joint (typical) Head Flashing Sealant dab at control joint termination (to divert water to exterior) Glass Mat Gypsum Sheathing (ASTM C1177 Compliant) StoGuard® Air & Water Resistive-Barrier Sto GPS Insulation Board Code Compliant Paper or Felt WRB See Page 2 (water-resistive barrier) for details Window Sto DrainScreen® Galvanized Self-Furred See Page 3 Diamond Mesh for details (Expanded-Metal Lath) StoPowerwall® Scratch Coat StoPowerwall® Brown Coat Sto Primer Sto Textured Finish Sill Flashing

Detail No.: 63s.05 Date: August 2023 Page 1 of 3

Notes:

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- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Sto GPS Insulation in compliance with ASTM C 578.
- 4. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
- 5. Minimum 2.5 lb/yd² (1.4 kg/m²) self-furred galvanized diamond mesh metal lath.
- 6. Stucco scratch and brown coat material in compliance with ASTM C926 and manufactured or listed by Sto Corp
- 7. Consult with window and sealant manufacturers to verify window installation and detailing to assure no leakage into the wall assembly. Consult with window manufacturer regarding window and flashing assemblies with thermal breaks to avoid condensation. Test the final assembly using materials and sub-trades associated with the project to verify performance.
- 8. Components not identified as Sto are furnished by other manufacturers and are not necessarily installed by trades who install the Sto products. Refer to project specific contract documents.

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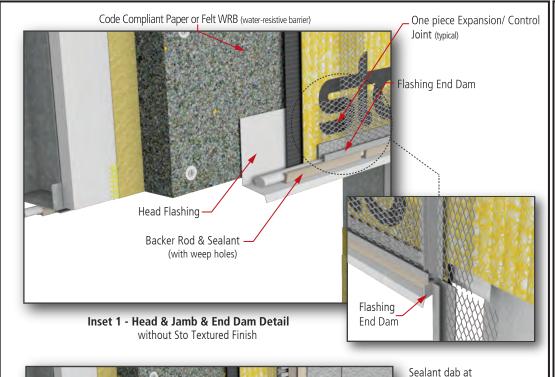


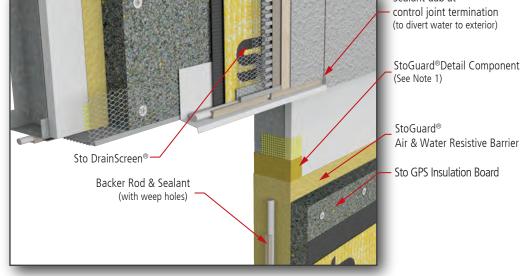


StoPowerwall®ci Box Window at Head/Jamb

Detail No.: 63s.05 Date: August 2023

Page 2 of 3





Inset 2 - Head & Jamb Detail
with Sto Textured Finish

ATTENTION

Notes:

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- 5. Minimum 2.5 lb/yd² (1.4 kg/m²) self-furred galvanized diamond mesh metal lath.
- 6. Stucco scratch and brown coat material in compliance with ASTM C926 and manufactured or listed by Sto Corp.
- 7. Consult with window and sealant manufacturers to verify window installation and detailing to assure no leakage into the wall assembly. Consult with window manufacturer regarding window and flashing assemblies with thermal breaks to avoid condensation. Test the final assembly using materials and sub-trades associated with the project to verify performance.
- 8. Components not identified as Sto are furnished by other manufacturers and are not necessarily installed by trades who install the Sto products. Refer to project specific contract documents.

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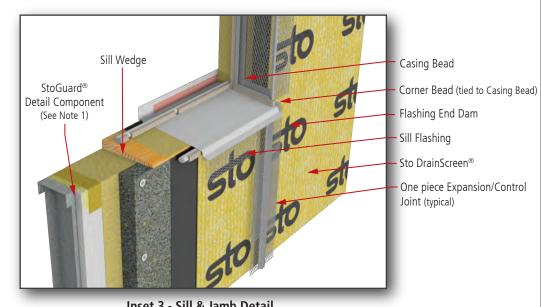




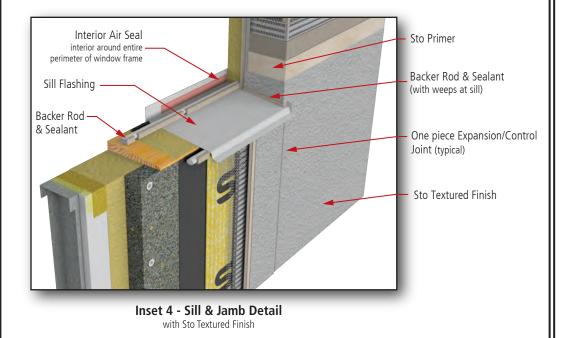
StoPowerwall®ci Box Window at Sill/Jamb

Detail No.: 63s.05 Date: August 2023

Page 3 of 3



Inset 3 - Sill & Jamb Detail
without Sto Textured Finish



Notes:

- 1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.
- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Sto GPS Insulation in compliance with ASTM C 578.
- 4. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325
- 5. Minimum 2.5 lb/yd² (1.4 kg/m²) self-furred galvanized diamond mesh metal lath.
- 6. Stucco scratch and brown coat material in compliance with ASTM C926 and manufactured or listed by Sto Corp.
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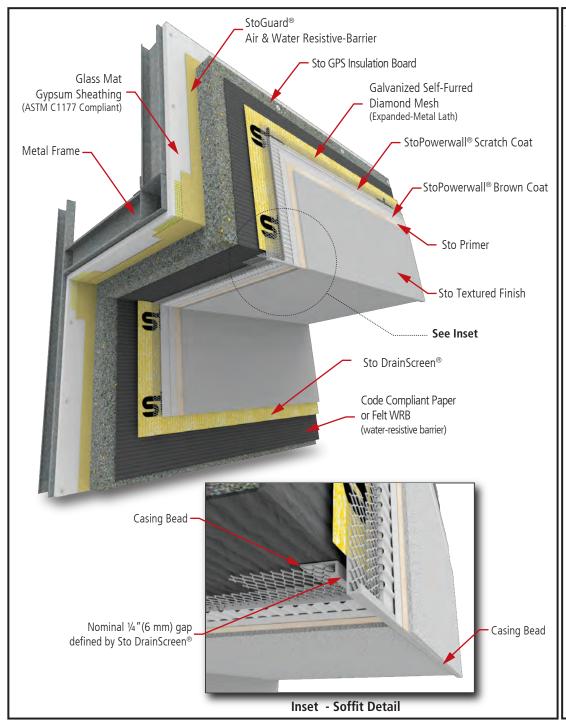
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StoPowerwall®ci Soffit Return

ATTENTION



Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 63s.07

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Sto GPS Insulation in compliance with ASTM C 578.
- 4. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
- 5. Minimum 2.5 lb/yd² (1.4 kg/m²) self-furred galvanized diamond mesh metal lath.
- 6. Stucco scratch and brown coat material in compliance with ASTM C926 and manufactured or listed by Sto Corp.
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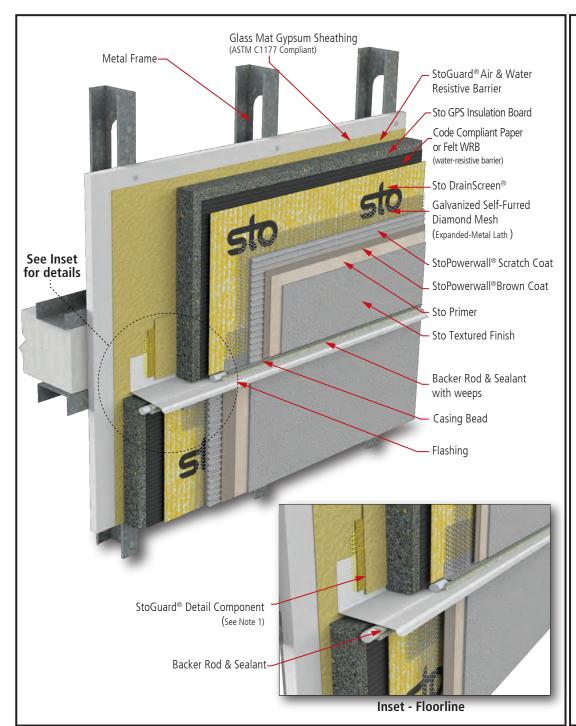








StoPowerwall®ci Floorline without Deflection Track



Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 63s.08

Date: August 2022

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Sto GPS Insulation in compliance with ASTM C 578.
- 4. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
- 5. Minimum 2.5 lb/yd² (1.4 kg/m²) self-furred galvanized diamond mesh metal lath.
- 6. Stucco scratch and brown coat material in compliance with ASTM C926 and manufactured or listed by Sto Corp.
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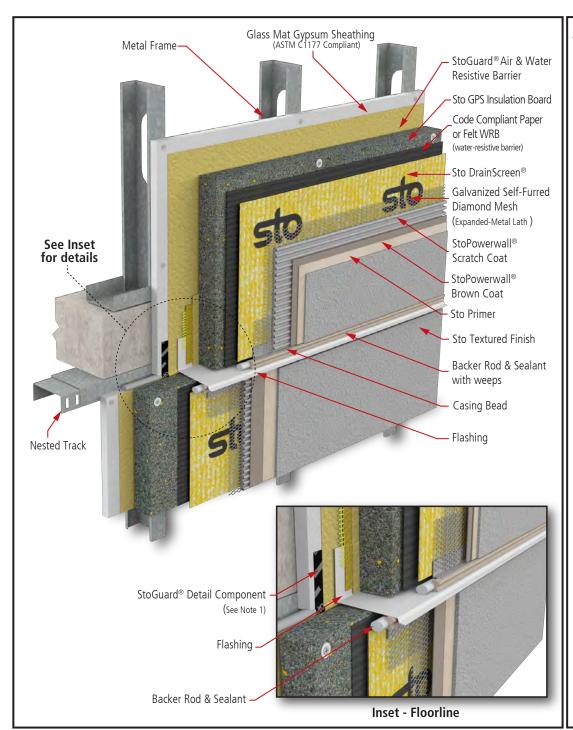






StoPowerwall®ci Floorline with Deflection Track

ATTENTION



Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 63s.09

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Sto GPS Insulation in compliance with ASTM C 578.
- 4. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
- 5. Minimum 2.5 lb/yd² (1.4 kg/m²) self-furred galvanized diamond mesh metal lath.
- 6. Stucco scratch and brown coat material in compliance with ASTM C926 and manufactured or listed by Sto Corp.
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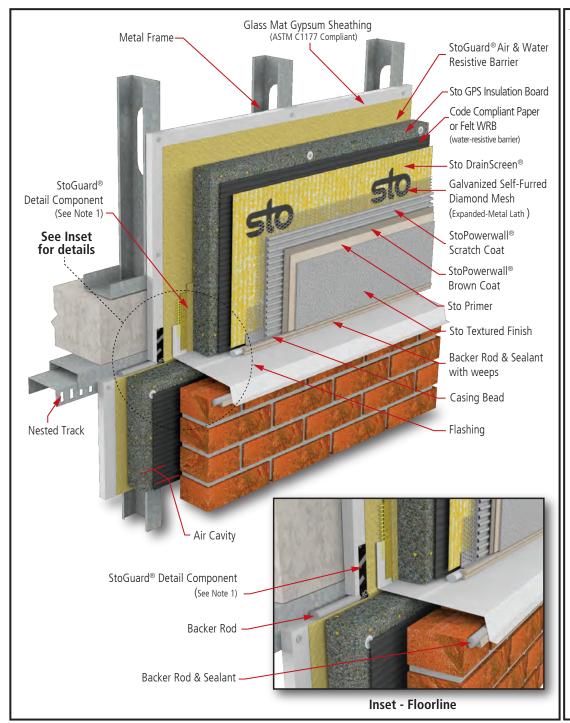
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StoPowerwall®ci Horizontal Joint at Dissimilar Material



Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 63s.10

Date: August 2022

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Sto GPS Insulation in compliance with ASTM C 578.
- 4. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
- 5. Minimum 2.5 lb/yd² (1.4 kg/m²) self-furred galvanized diamond mesh metal lath.
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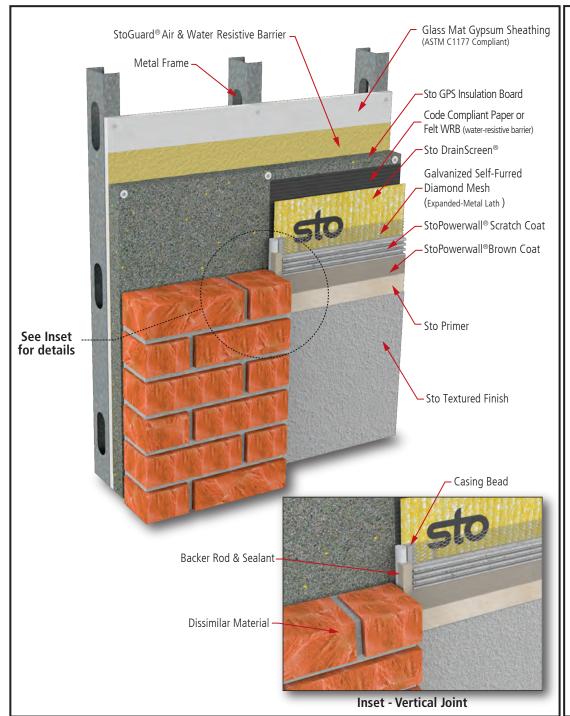
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StoPowerwall®ci Vertical Joint at Dissimilar Material



Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 63s.11

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Sto GPS Insulation in compliance with ASTM C 578.
- 4. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
- 5. Minimum 2.5 lb/yd² (1.4 kg/m²) self-furred galvanized diamond mesh metal lath.
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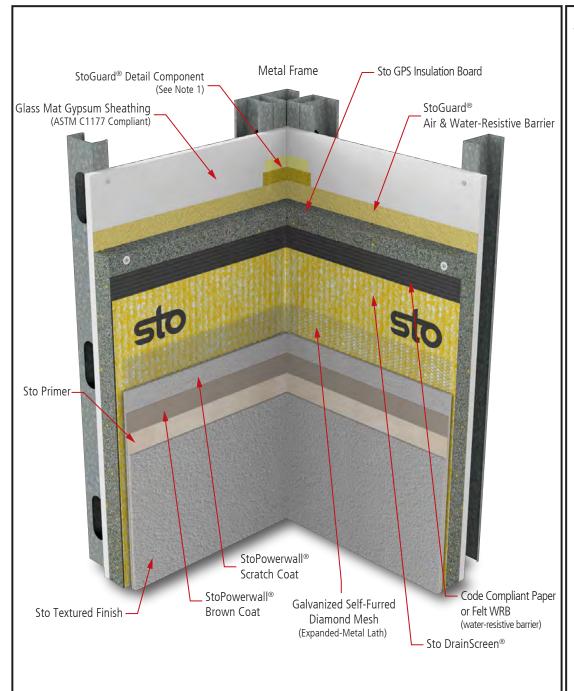
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StoPowerwall® ci **Inside Corner: Common Substrate**



Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 63s.12

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Sto GPS Insulation in compliance with ASTM C 578.
- 4. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
- 5. Minimum 2.5 lb/yd² (1.4 kg/m²) self-furred galvanized diamond mesh metal lath.
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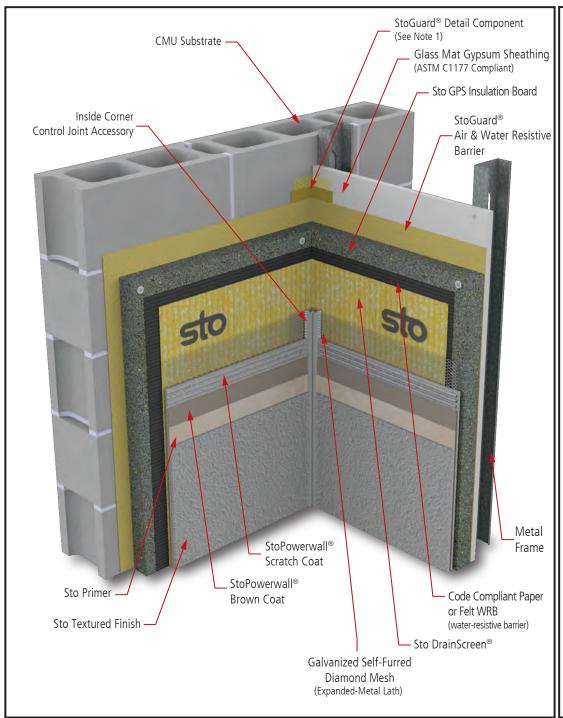
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ATTENTION





StoPowerwall®ci Vertical Joint at Inside Corner: Different Substrate



Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 63s.13

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Sto GPS Insulation in compliance with ASTM C 578.
- 4. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
- 5. Minimum 2.5 lb/yd² (1.4 kg/m²) self-furred galvanized diamond mesh metal lath.
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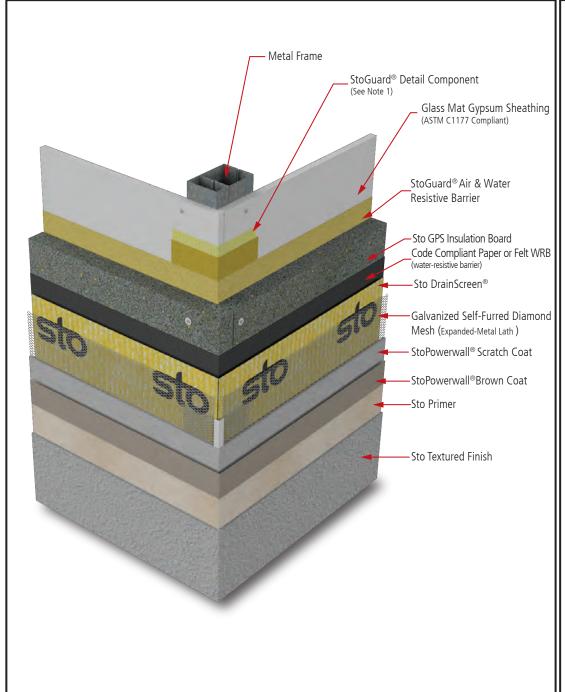
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StoPowerwall®ci Outside Corner: Common Substrate



Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 63s.14

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Sto GPS Insulation in compliance with ASTM C 578.
- 4. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
- 5. Minimum 2.5 lb/yd² (1.4 kg/m²) self-furred galvanized diamond mesh metal lath.
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StoPowerwall®ci Termination at Parapet

ATTENTION

Blocking Metal Frame StoGuard® Roof Membrane Detail Component Cap Flashing (See Note 1) Cap Attachment Roof Membrane Cleat & Sealant Galvanized Self-Furred Diamond Mesh (Expanded-Metal Lath) StoPowerwall® Scratch Coat StoPowerwall® **Brown Coat** Sto Primer Sto Textured Finish Sto DrainScreen® Code Compliant Paper or Felt WRB (water-resistive barrier) Sto GPS Insulation Board StoGuard®Air & Water Resistive Barrier Glass Mat Gypsum Sheathing (ASTM C1177 Compliant)

Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 63s.15

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Sto GPS Insulation in compliance with ASTM C 578.
- 4. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
- 5. Minimum 2.5 lb/yd² (1.4 kg/m²) self-furred galvanized diamond mesh metal lath.
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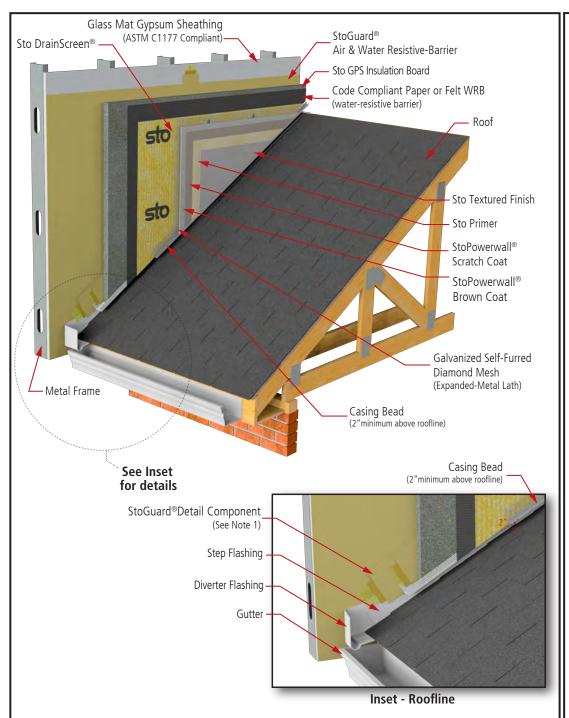






StoPowerwall®ci Roof / Wall Abutment

ATTENTION



Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 63s.16

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Sto GPS Insulation in compliance with ASTM C 578.
- 4. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
- 5. Minimum 2.5 lb/yd² (1.4 kg/m²) self-furred galvanized diamond mesh metal lath.
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StoPowerwall®ci Saddle Flashing

ATTENTION

StoGuard® Air & Water Glass Mat Gypsum Sheathing Metal Frame Resistive Barrier (ASTM C 1177 Compliant) StoGuard®Detail Component (See Note 1) XPS Insulation Board Sto DrainScreen® Galvanized Self-Furred Diamond Mesh See Page 2 for (Expanded-Metal Lath) Flashing Assembly details StoPowerwall® Scratch Coat StoPowerwall®Brown Coat Sto Primer Sto Textured Finish Weep Screed Saddle Flashing Assembly (see Page 2) Membrane waterproofing Parapet Cap Flashing StoGuard® Detail Component (See Note 1) See Page 2 for StoGuard® Installation on Parapet details Casing Bead Casing Bead Code Compliant Paper-Backer Rod or Felt WRB and Sealant (water-resistive barrier)

Detail No.: 63s.17 Date: August 2023

Page 1 of 2

Notes:

- 1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.
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- 3. Sto GPS Insulation in compliance with ASTM C 578.
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StoPowerwall®ci Saddle Flashing

ATTENTION

Step 1 Turnout Flanges (to match the thickness of the component layers to the finished surface plus 1/4" (6mm)) Upturned Flange Step 2 Glass Mat Gypsum Sheathing (ASTM C1177 Compliant) Interlocking Legs StoGuard® Air & Water Resistive Barrier StoGuard® Detail Component (See Note 1)

Detail No.: 63s.17 Date: August 2023

Page 2 of 2

Notes:

- 1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.
- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Sto GPS Insulation in compliance with ASTM C 578.
- 4. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
- 5. Minimum 2.5 lb/yd² (1.4 kg/m²) self-furred galvanized diamond mesh metal lath.
- 6. Stucco scratch and brown coat material in compliance with ASTM C926 and manufactured or listed by Sto Corp.
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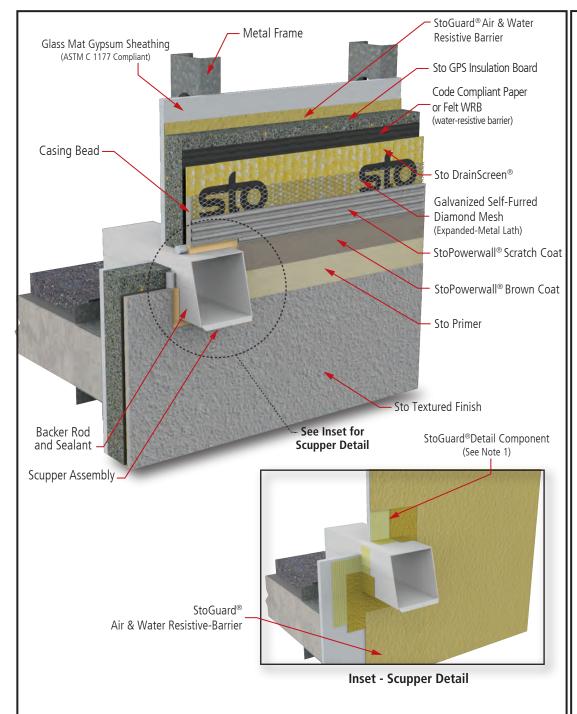








Sto Powerwall®ci Scupper Penetration Through Wall



Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 63s.18

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Sto GPS Insulation in compliance with ASTM C 578.
- 4. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
- 5. Minimum 2.5 lb/yd² (1.4 kg/m²) self-furred galvanized diamond mesh metal lath.
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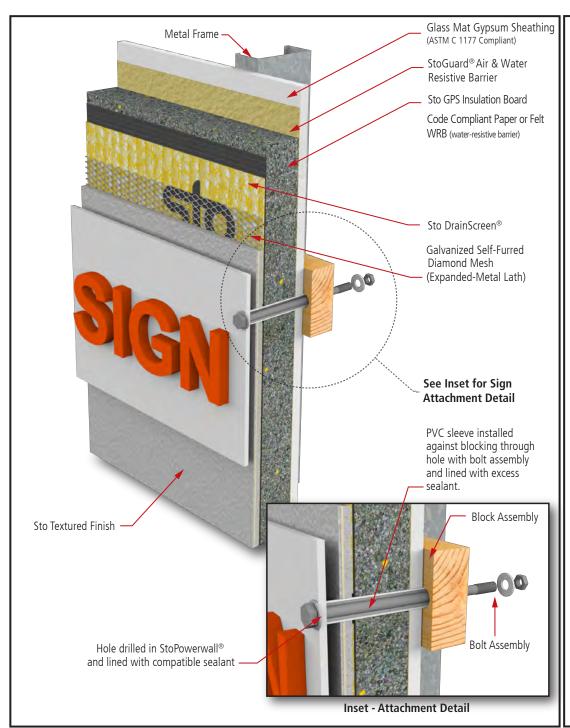
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Sto Powerwall®ci Sign Attachment



Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 63s.19

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Sto GPS Insulation in compliance with ASTM C 578.
- 4. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
- 5. Minimum 2.5 lb/yd² (1.4 kg/m²) self-furred galvanized diamond mesh metal lath.
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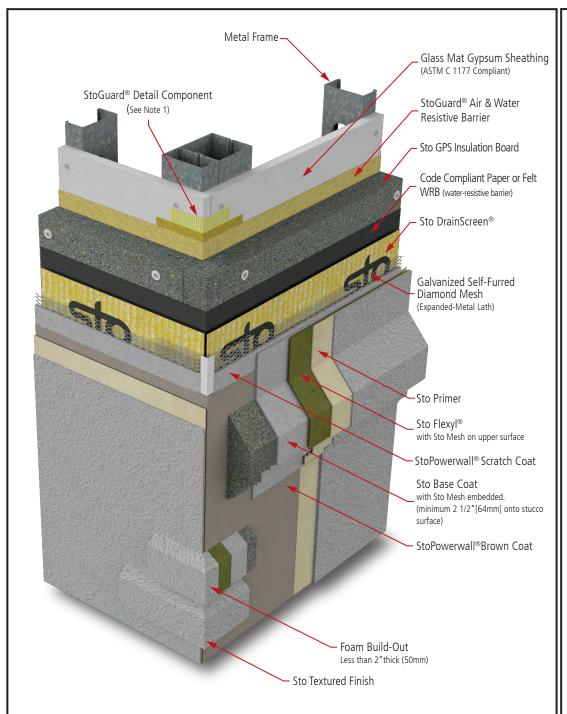






Sto Powerwall®ci Foam Buildouts

ATTENTION



Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

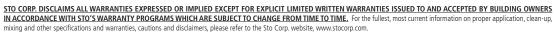
Detail No.: 63s.20

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Sto GPS Insulation in compliance with ASTM C 578.
- 4. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
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Sto Powerwall®ci

ATTENTION

Fire Protection - Noncombustible Type Construction (NFPA 285) and 1 Hour Non-Load Bearing Fire-Resistive Rated Wall Assembly (ASTM E 119)



Notes:

1. Refer to StoGuard Product Use Chart (Table 1.1) for StoGuard detail components; joint treatment, rough opening protection, backing for masonry anchors, or transitions to dissimilar materials, joints and seams in construction.

Detail No.: 63s.FP

Date: August 2023

- 2. Refer to General Notes for specific information and design guidance on wall assembly components.
- 3. Sto GPS Insulation in compliance with ASTM C 578.
- 4. Glass mat gypsum sheathing in compliance with ASTM C1177, exterior grade and Exposure 1 wood based sheathing, or cementitious sheathing in compliance with ASTM C1325.
- 5. Minimum 2.5 lb/yd² (1.4 kg/m²) self-furred galvanized diamond mesh metal lath.
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