

Exterior Insulation and Finish System (EIFS)

STF Elite MA

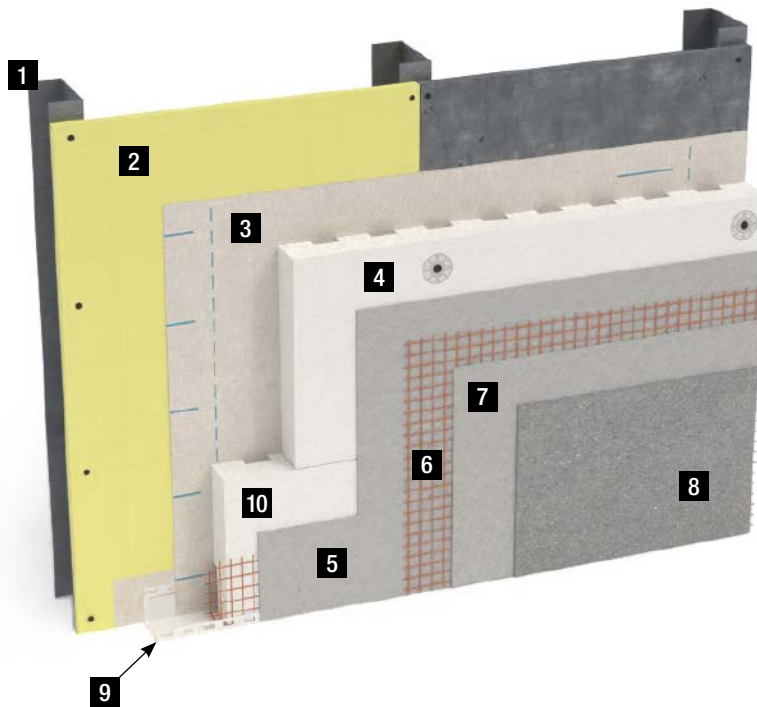
EIFS for exterior gypsum panels, concrete panels, concrete blocks and other approved substrates.

Pressure equalized EIF System that incorporates a secondary line of protection in conjunction with geometrically defined drainage features in the insulating panel. The EIF System integrates self-sealing mechanical fasteners to attach the insulating panels to the substrate. **STF Elite MA** meets the requirements for non-combustible construction. Used for residential or commercial construction. Includes application on wood substrates. EIFS awarded **CCMC 13232-R**.

Products used for installation

See technical data sheets for more information

- STF Elite GD Board
- Fiberglass Mesh
- Self Adhered Membrane (WPB)
- STF Stratum NC
- STF Prime
- STF Architectural Classics & STF Genesis



- 1** Steel structure
- 2** Approved Substrate
- 3** Self Adhered Membrane WPB)
- 4** Bituminous Self-Adhered Barrier Membranes
- 5** STF Stratum NC
- 6** Fiberglass mesh embedded in the base coat
- 7** STF Prime (Optional)
- 8** STF Architectural Classics & STF Genesis
- 9** PVC Starter Strip or Metal Flashing
- 10** STF Elite GD Starter Board for Fibreglass Mesh Backwrapping

The application instructions and performance characteristics are based on information we believe to be reliable. They are offered to the best of our knowledge, but without guarantee, as conditions and methods of use of our products are beyond our control.

Exterior Insulation and Finish Systems

STF Elite MA

GENERAL

1. System Description

- 1.1. Provide all labour, material and equipment to install the **STF Elite MA** System, a mechanically fastened, non-combustible Class PB system, meeting the Nation Building Code of Canada requirements under Sections 3.1.5.5 & 3.2.3.7, as manufactured and supplied by **STF Building Solutions inc.** The system includes applicable accessories, a secondary weather barrier, **STF Elite GD Board**, fasteners, **STF Stratum NC**, fibreglass reinforcing mesh, and **STF Finish Coat**, with all system materials supplied by **STF Building Solutions inc.**

Specifier Note: The designer shall decide which references are applicable to their particular project. Delete all references which do not apply.

Specifier Note: All applicable requirements from Section 3.1.5.5 & 3.2.3.7 of the National Building Code of Canada must be met for non-combustible construction.

2. References

- 2.1. American Society for Testing and Materials International (ASTM)
 - 2.1.1. ASTM C79, Specification for Gypsum Sheathing Board.
 - 2.1.2. ASTM C144, Standard Specification for Aggregate for Masonry Mortar.
 - 2.1.3. ASTM C150, Specification for Portland Cement.
 - 2.1.4. ASTM C168, Standard Terminology Relating to Thermal Insulation.
 - 2.1.5. ASTM C203, Test Method for Breaking Load and Flexibility of Block Type Thermal Insulation.
 - 2.1.6. ASTM C297/C297M, Standard Test Method for Flatwise Tensile Strength of Sandwich Construction.
 - 2.1.7. ASTM C518, Steady State Heat Flux Measurements and Thermal Transmission Properties by means of the Heat-Flow Meter Apparatus.
 - 2.1.8. ASTM C531, Test Method for Linear Shrinkage and Coefficient of Thermal Expansion of Chemical Resistant Mortars, Grouts, Monolithic Surfaces, and Polymer Concretes.
 - 2.1.9. ASTM C550, Standard Test Method for Measuring the Trueness and Squareness of Rigid Block and Board Insulation.
 - 2.1.10. ASTM C578, Specification for Rigid, Cellular Polystyrene Thermal Insulation
 - 2.1.11. ASTM C630, Specification for Water-Resistant Gypsum Backing Board.
 - 2.1.12. ASTM C1002, Standard Specification for Steel Self-Piercing Tapping Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs.
 - 2.1.13. ASTM C1177, Specification for Glass Mat Gypsum Substrate for Use as Sheathing.

- 2.1.14. ASTM D968, Standard Test Methods for Abrasion Resistance of Organic Coatings by the Falling Abrasive.
 - 2.1.15. ASTM D1621, Test Method for the Compressive Properties of Rigid Cellular Plastics.
 - 2.1.16. ASTM D1622, Test Method for the Apparent Density of Rigid Cellular Plastics.
 - 2.1.17. ASTM D1623, Test Method for Tensile and Tensile Adhesion Properties of Rigid Cellular Plastics.
 - 2.1.18. ASTM D2247, Standard Practice for Testing Water Resistance of Coatings in 100% Relative Humidity.
 - 2.1.19. ASTM D2842, Test Method for Water Absorption of Rigid Cellular Plastics.
 - 2.1.20. ASTM D3039, Standard Test Method for Impact Resistance of Rigid Plastic Sheeting or Parts by Means of a Tup.
 - 2.1.21. ASTM D3273, test Method for Resistance to Growth of Mould on the Surface of Interior Coatings in An Environmental Chamber.
 - 2.1.22. ASTM D3775, Test Method for Fabric Count of Woven Mesh.
 - 2.1.23. ASTM D3776, Test Methods for Mass per Unit Area (Weight) of Fabric.
 - 2.1.24. ASTM D5034, Test Methods for Breaking Force and Elongation of Textile Fabrics (Grad Test)
 - 2.1.25. ASTM D5035 Test Methods for Breaking Force and Elongation of Textile Fabrics (Strip Method).
 - 2.1.26. ASTM E96/E96M-04, Standard Test Methods for Water Vapor Transmission of Materials.
 - 2.1.27. ASTM E330, Test Method for Structural Performance by Uniform Static Air Pressure Difference.
 - 2.1.28. ASTM E1131, Test Method for Compositional Analysis by Thermogravimetry
 - 2.1.29. ASTM E1252, Practice for General Techniques for Qualitative Infrared Analysis.
 - 2.1.30. ASTM E2098-00, Standard Test Method for Determining Tensile Breaking Strength of Glass Fiber Reinforcing Mesh for Use in Class PB Exterior Insulation and Finish Systems (EIFS), after Exposure to a Sodium Hydroxide Solution.
 - 2.1.31. ASTM E2134-01, Standard Test Method for Evaluating the Tensile-Adhesion Performance of an Exterior Insulation and Finish System (EIFS).
 - 2.1.32. ASTM E2321-03, Standard Practice for Use of Test Methods E 96 for Determining the Water Vapor Transmission (WVT) of Exterior Insulation and Finish Systems (EIFS).
 - 2.1.33. ASTM E2430-05, Standard Specification For Expanded Polystyrene (EPS) Thermal Insulation Boards For Use In Exterior Insulation and Finish Systems (EIFS).
- 2.2. Canadian General Standards Board (CGSB)
 - 2.2.1. CAN/CGSB-1.162-2004, Emulsion Coating for Stucco and Masonry.
 - 2.2.2. CAN/CGSB-19.24-M90, Multicomponent, Chemical-Curing Saling Compound.
 - 2.2.3. CAN/CGSB-51.20, Thermal Insulation, Polystyrene, Boards and Pipe Covering.
- 2.3. Canadian Standards Association (CSA International)
 - 2.3.1. CAN/CSA-A82.27, Gypsum Board
 - 2.3.2. CAN/CSA-A3000-03, Cementitious Materials Compendium (Consists of A3001, A3002, A3003, A3004 and A3005).
 - 2.3.3. CSA -0437.0 OSB and Waferboard.
 - 2.3.4. CSA-A3001-F03, Cementitious Materials for Use in Concrete.

- 2.4. System Fire Performance
 - 2.4.1. CAN/ULC-S101, Standard Methods of Fire Endurance of Building Construction and Materials.
 - 2.4.2. CAN/ULC-S102, Standard Methods of Test for Surface Burning Characteristics of Building Construction and Materials.
 - 2.4.3. CAN/ULC-S114, Standard Methods of Test for Determination of Non-Combustibility in Building Materials.
 - 2.4.4. CAN/ULC-S134, Standard Method of Fire Test of Exterior Wall Assemblies.
 - 2.4.5. CAN/ULC-S701, Standard for Thermal Insulation, Polystyrene, Boards and Pipe Covering.
 - 2.4.6. CAN/ULC-S702, Standard for Mineral Fibre Thermal Insulation for Buildings.
 - 2.4.7. CAN/ULC-S716, Standard for Exterior Insulation and Finish Systems - Materials and Systems.
- 2.5. EIFS Industry Members Association (EIMA)
 - 2.5.1. EIMA Guideline Specification for EPS insulation Board.
 - 2.5.2. EIMA Guide for Use of Sealant With EIFS.
 - 2.5.3. EIMA 101.01, Standard Test Method for Resistance for Freeze-Thaw Resistance of an Exterior Insulation and Finish System (EIFS), Class PB
 - 2.5.4. EIMA 101.02, Standard Test Method for Resistance to Water Penetration of an EIFS.
 - 2.5.5. EIMA 101.03, Standard Test Method for Determining the Tensile Adhesion Strength of EIFS.
 - 2.5.6. EIMA 101.86, Standard Method Test for Impact Resistance.
 - 2.5.7. EIMA 105.01, Standard Tests Method for Alkali Resistance of Glass Fibre Reinforcing Mesh for Use in EIFS, Class PB
 - 2.5.8. EIMA 300.01, Standard Test for Method for Determining Peel Adhesion Properties of Sealants Applied to EIFS
- 2.6. General Reference Documents: Canadian Construction Materials Centre, CCMC Technical Guide for EIFS, Class PB, Masterformat Section 07240 EIMA Guideline Specifications for EIFS PD.

3. Definitions

- 3.1. Aesthetic joint: joint for appearance of installation ease. Also known as aesthetic reveals, grooves and reglets used to provide starting and stopping points during application of **STF** Finish Coat.
- 3.2. Adhesive: a polymer based, polymer modified or cementitious material, typically mixed with Portland cement used to attach insulation board to substrate.
- 3.3. Back wrapping: at edges (termination) of EIFS where the reinforcing mesh and base coat extend from the back side of the insulation around the termination edge and onto the front of the insulation.
- 3.4. Base coat adhesive: adhesive used in base coat.
- 3.5. Base coat: layer consists of polymer modified material, typically mixed with Portland cement and applied to face of insulation board and reinforced with one or more layers of mesh to function as a weather barrier.

- 3.6. Expansion joint: joint through EIFS to allow for movement.
- 3.7. **STF** Finish Coat: acrylic-based, decorative and protective coating applied to outside surface of base coat.
- 3.8. Lamina: base coat, reinforcing mesh and finish.
- 3.9. Mechanical fastener: mechanical device for attaching insulation to substrate.
- 3.10. Reinforcing mesh: balanced, open weave, glass fibre reinforcement to base coat providing impact resistance.
- 3.11. Substrate: surface to which EIFS is attached.

4. Performance Requirements

- 4.1. Installed modified polymer coat wall system to have following performance properties:
 - 4.1.1. Comply with CAN/ULC S134.
 - 4.1.2. Finish abrasion resistance: falling sand method to ASTM D968, no deleterious effects [after [500 litres (132 gal)] [____]] [____].
 - 4.1.3. Finish salt spray resistance: to ASTM B117, after 300 hours' exposure to 5% salt spray solution no effects.
 - 4.1.4. Finish moisture resistance: to [ASTM D2247 (U.S. Federal Test Standard 141A Method 6201)] [____], after 14 days exposure no deleterious effects.
 - 4.1.5. Accelerated weathering: to CAN/CGSB 1.162, 2000 hours no effect.
 - 4.1.6. Impact resistance: to [ASTM E 72, only slight dents observed up to 108.465J] [EIMA 101.86 [Level 1, 3 6] [Level 2, 6 10] [Level 3, 10 17] [Level 4, >17] joules].
 - 4.1.7. Bond strength: to [CAN/CGSB 1.162] [ASTM E2098] [ASTM C 297, dry, wet 2 hour dry, wet 7 day dry, minimum 1 MPa].
 - 4.1.8. Permeability: to [CAN/CGSB 1.162] [ASTM E96, [____] [5.93] [____] perms] [ASTM E2321].

5. Quality Assurance

- 5.1. The **STF Elite MA** System, including all associated products, must be designed, supplied and installed such that the completed EIF System is in full compliance with NBC Section 3.1.5 and Article 3.2.3.7.
- 5.2. The EIFS manufacturer shall be a member in good standing with the EIFS Council of Canada.
- 5.3. The EIFS manufacturer shall possess a current and valid CCMC Evaluation report for its major line of EIFS.
- 5.4. The EIF System shall meet the Ontario Association of Architects requirements for EIFS.
- 5.5. EIFS applicators shall have a minimum of five years experience in EIFS installation.
- 5.6. EIFS applicators must be approved by **STF Building Solutions inc.** and shall install the EIF System as per **STF Building Solutions's** Specifications.

- 5.7. The approved applicator shall employ only skilled and knowledgeable mechanics in the execution of the work.
- 5.8. Convene pre-installation meetings: one week prior to the beginning of work of this Section and on-site installations.
 - 5.8.1. Verify project requirements.
 - 5.8.2. Review installation conditions.
 - 5.8.3. Co-ordinate with other building subtrades.
 - 5.8.4. Review manufacturer's instructions and warranty requirements.

*Specifier Note: **STF Building Solutions inc.** is responsible for both the manufacture and installation of the EIF System, and as such, will ensure the EIF System installation is in conformance with manufacturer specifications.*

6. Delivery, Storage, and Handling

- 6.1. Deliver all materials supplied by **STF Building Solutions inc.** in original, unopened and undamaged packaging with legible manufacturer's identification and labels intact
- 6.2. Upon material arrival on site, inspect for damage, particularly freezing. Inform **STF Building Solutions inc.** of any discrepancies. Materials unsatisfactory to the fabrication are to be removed from site.
- 6.3. The manufacture shall supply with each product the following information: manufacturer's name, product name and description, storage requirements, handling requirements, instructions for use, and safety requirements.
- 6.4. Store all materials in a clean cool, and dry place protected from weather and at temperatures not less than 5°C (41°F) in a tightly sealed container.
- 6.5. Store and protect insulation from physical damage and direct exposure to weather. Stack insulation boards flat, a minimum of 200 mm (8") off the ground.

7. Environmental Conditions

- 7.1. Temperature, relative humidity, moisture content.
 - 7.1.1. Apply insulation only when surfaces and ambient temperatures are within manufacturers' prescribed limits.
 - 7.1.2. Maintain ambient temperature above 5°C (41°F) during basecoat application and until cured minimum 24 hours, unless appropriate protection and heat are provided.
 - 7.1.3. Such protection and heat shall maintain the substrate and EIFS material ambient temperature at a minimum of 5°C (41°F), during the installation and for a minimum of 24 hours after installation of wet materials. Longer periods of such protection may be necessary until the material is thoroughly dry and can be safely removed.

- 7.1.4. Ensure tarps or other means of enclosure are sufficiently enclosed at the parameters so that cold air currents cannot penetrate at perimeters and freeze top, bottom or side edges of the wet applied EIF System products.
 - 7.1.5. Place a sufficient number of thermometers within the enclosed area to verify that all wall areas are, in fact, properly heated
- 7.2. Safety: comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of insulation, adhesive and caulking materials.

8. Submittals

- 8.1. Before the project commences, the contractor shall provide the owner or architect with a sample of the system of suitable size as required for each colour and/or texture to be utilized on the project for approval.
- 8.2. Each sample shall be prepared using the same tools, equipment and techniques required for the actual application.
- 8.3. An approved sample shall be available and maintained on the job site and shall serve as the standard for approving the system that is being installed.

*Specifier Note: Please consult **STF Building Solutions inc.** for available warranties.*

9. Warranty

- 9.1. The EIF System applicator shall provide a [] year written performance and workmanship warranty to the owner(s) commencing from date of completion.
- 9.2. The EIF System manufacturer shall provide a [] year written to the owner(s) certifying that the materials are free from manufacturer defects commencing from the date of completion.
- 9.3. Upon completion of the installation, the contractor shall obtain and furnish to the Consultant, a statement from the manufacturer that their representative has visited the site and instructed the trades involved of the proper techniques and installation methods, that during the visits of the representative the manufacturer's products were properly installed with exceptions, if any, noted and conveyed to the Consultant during the course of the work.

PRODUCTS

1. Manufacturer

- 1.1. All components of the **STF Elite MA** System shall be supplied by:

STF Building Solutions inc.

839 Joseph-Louis-Mathieu

Sherbrooke (Québec)

J1R 0X3

Tel: 819 820-1188

Fax: 819 820-0237

Toll Free: 1-800-688-5990

- 1.2. No Substitutions or additions of other materials shall be allowed without prior written approval from **STF Building Solutions inc.**

2. Materials

Specifier Note: Consult with **STF Building Solutions inc.** for a detailed list of approved Substrates:

- 2.1. Substrate: Acceptable Substrates are as follow:

2.1.1. [] thick exterior grade gypsum board

2.1.2. [] thick plywood or OSB.

2.1.3. [] for other approved substrates please contact **STF Building Solutions inc.**

- 2.2. Secondary Weather Barrier: SBS self-adhered, polymer modified bituminous sheet membrane. Contact **STF Building Solutions inc.** for specific product approval.

Specifier Note: Maximum spacing of mechanical fasteners is 305 mm (12") o.c. vertically and 400 mm (16") o.c. horizontally

- 2.3. Mechanical Fasteners: Corrosion-resistance screw type fastener complete with a low profile, high density polypropylene plastic washer

2.3.1. Mechanical fastener to be a minimum of [] in length

2.3.2. [] minimum pull out strength.

2.3.3. [] vertical spacing

2.3.4. [] horizontal spacing

Specifier Note: Minimum insulation thickness is 38 mm (1½"), maximum insulation thickness when dealing with noncombustible construction is 125 mm (5").

- 2.4. EPS Insulation – **STF Elite GD Board** Moulded (expanded) polystyrene (EPS): to CAN/ULC-S701-05, Type. [1] [2], ASTM E2430, RSI as indicated.
 - 2.4.1. Shall be produced by a manufacturer approved by **STF Building Solutions inc.**
 - 2.4.2. Shall be grooved at the back to allow for drainage.
 - 2.4.3. Insulation thickness []
- 2.5. Reinforcing Mesh – Open Weave Glass fibre mesh as manufactured by **STF Building Solutions inc.**
 - 2.5.1. Shall be alkali-resistant according to ANSI 99-A-2001.
 - 2.5.2. Shall meet ASTM E-2098 and ASTM D-5035 standards.
 - 2.5.3. Mesh Weights:
 - 2.5.3.1. **STF** Standard Mesh (190g/m²) (5.6 oz/yd²) – For applications requiring normal impact resistance.
 - 2.5.3.2. **STF** Intermediate Mesh (508g/m²) (15 oz/yd²) – For applications requiring increased impact resistance
 - 2.5.3.3. **STF** Corner Mesh (296g/m²) (8.7 oz/yd²) – For increased impact resistance specifically at corners and system terminations
- 2.6. Base Coat: **STF Stratum NC**, 100% polymer acrylic based, asbestos-free as manufactured by **STF Building Solutions inc.** Base coat product is mixed with 30% cement by weight in accordance with **STF Building Solutions**'s installation instructions.
- 2.7. **STF** Finish Coat - 100% polymer acrylic based, as manufactured by **STF Building Solutions inc.** Finish and colours to be approved by the [Owner] [Consultant]
- 2.8. Sealants – [In accordance with Section 07 92 00 Joint Sealants.] [Sealants applied by others shall be compatible with **STF Building Solutions inc.** materials, as recommended by **STF Building Solutions inc.**, and sealants are subject to approval by **STF Building Solutions inc.**]
- 2.9. Cement: Portland Cement Type 10.
- 2.10. Water: Shall be clean and potable.
- 2.11. Accessories: As per **STF Building Solutions**'s recommendations.

3. Mixes

- 3.1. **STF Stratum NC:**
 - 3.1.1. Stir the base coat in its original shipping container for at least three minutes, using a large paddle attached to a drill, until uniform consistency is achieved.
 - 3.1.2. Evenly divide the base coat into two clean containers. Into each container add, in small increments, Type 10 Portland Cement to a ratio of 30% Cement to 70% **STF Stratum NC** by weight, while mixing thoroughly with a large paddle, until the mixture has a smooth and pasty consistency.

- 3.1.3. When necessary, small amounts of clean and potable water may be added to adjust workability.
- 3.1.4. Allow the mixture to set for five minutes and then re-mix.
- 3.1.5. The mixture shall be used within one hour of mixing. Materials that are mixed then used later in the day must be remixed prior to use.
- 3.1.6. Mixed base coat materials not used by the end of the day must be discarded.
- 3.1.7. Under no circumstances shall any other additions be made to **STF Building Solutions's STF Stratum NC**.
- 3.1.8. **STF Stratum NC**, in compliance with CAN/ULC-S114, "Determination of Non-Combustibility in Building Materials," is a non-combustible material.

3.2. Finish Coat:

- 3.2.1. Thoroughly mix **STF Building Solutions inc.** factory prepared **STF** Finish Coat. Using a high speed mixer, stir the material until a uniform and workable consistency is obtained
- 3.2.2. When necessary, small amounts of clean and potable water may be added to adjust workability.

EXECUTION

1. Preparation

1.1. Protection:

- 1.1.1. Protect adjacent surfaces from damage resulting from Work of this Section.
- 1.1.2. Protect finished Work from water penetration at end of each day or on completion of each section of Work.
- 1.1.3. Protect installation from moisture for 48 hours minimum after completion of each portion of Work.

Specifier Note: Use next section when installing the **STF Elite MA** system on exterior sheathing.

- 1.2. Install [exterior gypsum] [plywood] sheathing as indicated on the drawings using galvanized, self tapping screws meeting ASTM C1002.
- 1.3. Surface preparation:
 - 1.3.1. Ensure environmental and site conditions are suitable for installation of system.
 - 1.3.2. Prepare [new] [existing] surfaces in accordance with SBS modified bitumen membrane manufacturer's written instructions.
- 1.4. Install all secondary weather barrier, metal flashing and rubberized metal flashing as indicated on the drawings and in accordance to manufacturer's written instructions. At locations where rubberized flashing membrane is to be installed over existing concrete wall coating, the substrate has to be power washed or mechanically ground as required to remove all oil, and loose coating.

2. Installation

- 2.1. Install system in accordance with CAN/ULC-S101 and CAN/ULC-S134.
- 2.2. Application and installation of **STF Elite GD Board**:
 - 2.2.1. Apply insulation boards over dry substances in courses, with long edge oriented horizontally. Begin the first course from a level base line and work upwards.
 - 2.2.2. Vertical joints should be staggered in successive courses to produce a running bond pattern.
 - 2.2.3. The joints of the insulation boards shall not coincide with the substrate joints.
 - 2.2.4. Interlock insulation pieces at the corners.
 - 2.2.5. Abut boards tightly at joints within and between each course to produce a flush, continuously even surface without gaps or raised edges between insulation boards. Any gaps of 1.6 mm (1/16") or more between insulation board joints shall be filled with EPS slivers.
 - 2.2.6. Rasp flush any irregularities in surface of insulation
 - 2.2.7. Pre-cut insulation boards to fit openings, corners and projections precisely and to produce edges and shapes conforming to details indicated.

*Specifier Note: Use the following when installing the **STF Elite MA** over exterior sheathing boards installed on either wood or steel studs.*

- 2.2.8. Secure insulation boards using self-drilling screws and plastic washer. Use screws of sufficient length to provide adequate support for the insulation. Screws are to be spaced [305 mm (12")] o.c. vertically and [400 mm (16")] o.c. horizontally.

*Specifier Note: Use the following when installing the **STF Elite MA** over masonry, concrete or other hard surfaces.*

- 2.2.9. Pre-drill hole through exterior sheathing and into [masonry] [concrete] substrate below. Insert screw with plastic washer and tighten with the appropriate tool.
 - 2.2.10. The outside face of the fastener head must be flush with the outside face of the insulation board. To ensure that the washer head is seated properly, use a depth stop device.
 - 2.2.11. The fastener must go into a structural material. [Thus, the work must be laid out prior to installing fasteners, to ensure that the fasteners will line up with the studs, while also being in the right location with respect to the insulation board.
 - 2.2.12. Ensure that the correct fastener is used for the substrate type as recommended by **STF Building Solutions inc.**
 - 2.2.13. All fasteners shall be covered with one layer of **STF Stratum NC** and allowed to dry prior to the installation of the full base coat layer.
- 2.3. Backwrapping:
 - 2.3.1. Back wrap reinforcing mesh at corners, window and door parameters, all terminations top and bottom, and at all penetrations.
 - 2.3.2. Extend back wrapped mesh a minimum of 38 mm (1½") along the back surface of the insulation boards.

- 2.4. Preparation of Insulation Board surface:
 - 2.4.1. Fill open joints in insulation board with slivers of insulation or spray foam as recommended by **STF Building Solutions inc.**
 - 2.4.2. Rasp surface to achieve smooth, level, even surface after insulation boards have firmly adhered to substrate.
 - 2.4.3. Remove ultraviolet ray damage.
 - 2.4.4. Rasp smooth any irregularities in insulation board greater than 1.6 mm (1/16"). Ensure insulation board tolerance not greater than 6 mm (¼") in 2,500 mm (96") in accordance with manufacturer's written instructions.

- 2.5. Joints:
 - 2.5.1. Reveals and Aesthetic Grooves:
 - 2.5.1.1. Cut reveals and aesthetic grooves with appropriate tool in locations indicated.
 - 2.5.1.2. Offset reveals minimum 75 mm (3") from insulation joints.
 - 2.5.1.3. Maintain minimum 19 mm (¾") insulation board thickness at bottom of groove after cutting.

 - 2.5.2. Expansion joints:
 - 2.5.2.1. Install expansion joints in locations indicated and to manufacturers written instructions.
 - 2.5.2.2. Install expansion joints at locations where movement is expected.

- 2.6. Backwrapping completion:
 - 2.6.1. Complete backwrapping procedure by applying base coat to exposed edges of insulation board and 100 mm (4") onto face of insulation board.
 - 2.6.2. Pull mesh tight around board and embed it in base coat with trowel.
 - 2.6.3. Use corner trowel for clean, straight lines.
 - 2.6.4. Smooth wrinkles or gaps in mesh.

- 2.7. Mesh and Base Coat Application:
 - 2.7.1. Apply 225 x 300 mm (9" x 12") diagonal strips of detail mesh at corners of windows, doors and penetrations through insulation. Embed strips in wet base coat and trowel from centre to mesh edge to avoid wrinkles.
 - 2.7.2. Apply detail mesh at reveals. Embed mesh in wet base coat and trowel from base of reveal to mesh edges.
 - 2.7.3. Apply corner mesh at inside and outside corners. Embed mesh in wet base coat and trowel from corner of mesh edges.
 - 2.7.4. High impact mesh application: Apply base coat over insulation board to uniform thickness of approximately 3 mm (1/8"). Work horizontally or vertically in 1000 mm (40") strips, and immediately embed mesh into wet base coat by trowelling from centre to edge of mesh. Butt mesh at seams. Allow base coat to dry.
 - 2.7.5. Standard mesh application:
 - 2.7.5.1. Apply base coat over insulation board, including areas with high impact mesh to uniform thickness of approximately 3 mm (1/8").

- 2.7.5.2. Work horizontally or vertically in 1000 mm (40") strips, and immediately embed mesh into wet base coat by trowelling from centre to mesh edge.
- 2.7.5.3. Overlap mesh 64 mm (2½") minimum at mesh seams and overlaps of detail mesh.
- 2.7.5.4. Feather seams and edges.
- 2.7.5.5. Double wrap inside and outside corners with minimum 100 mm (4") overlap in each direction. Embed corner mesh in wet base coat, allow to dry, then overlap up to corner with standard reinforcing mesh embedded in base coat.
- 2.7.5.6. Apply diagonal mesh to corners of all openings using 230 mm (9") wide strips of reinforcing mesh laid at a 45 degree angle.
- 2.7.5.7. Avoid wrinkles in mesh.
- 2.7.5.8. Fully embed mesh so that no mesh colour shows through base coat when dry.
- 2.7.5.9. Ensure minimum base coat thickness 1.6 mm (1/16") when dry. Re-skim base coat if 1.6 mm (1/16") thickness not achieved during initial application. Allow base coat to thoroughly dry before applying primer or finish coat.
- 2.7.5.10. Allow base coat a minimum of 24 hours to cure. Protect the base coat from weather and physical damage while curing.

2.8. **STF** Finish Coat Application:

- 2.8.1. Apply finish coat in accordance with manufacturer's writing installation instructions.
- 2.8.2. Apply finish coat directly over base coat, only after base coat has thoroughly dried.
- 2.8.3. Apply finish by trowel in a continuous operation maintaining a wet edge at all times so as to obtain a uniform appearance.
- 2.8.4. Do not install separate batches of finish coat side by side.
- 2.8.5. Do not apply finish into or over sealant joints. Apply finish to outside of wall only.
- 2.8.6. Do not apply finish over irregular or unprepared surfaces.
- 2.8.7. Apply textured or aggregate finishes to wall areas as selected by the [Owner] [Consultant].
- 2.8.8. Allow the finish coat a minimum of 24 hours to cure. Protect from weather, dust and physical damage while curing.

3. Sills and Horizontal Projection

3.1. Base Coat Application:

3.1.1. Standard mesh application:

- 3.1.1.1. Apply base coat over insulation board, including areas with high impact mesh to uniform thickness of approximately 3 mm (1/8").
- 3.1.1.2. Work horizontally or vertically in strips of 1000 mm (40"), and immediately embed mesh into wet base coat by troweling from centre to mesh edge.
- 3.1.1.3. Overlap mesh not less than 64 mm (2½") at mesh seams and at overlaps of detail mesh.
- 3.1.1.4. Feather seams and edges.
- 3.1.1.5. Double wrap inside and outside corners with minimum 100 mm (4") overlap in each direction. Embed corner mesh in wet base coat, allow to dry, then overlap up to corner with standard reinforcing mesh embedded in base coat.

- 3.1.1.6. Avoid wrinkles in mesh.
- 3.1.1.7. Fully embed mesh so that no mesh colour shows through base coat when dry.
- 3.1.1.8. Ensure minimum base coat thickness of 1.6 mm (1/16") when dry. Re-skim base coat if 1.6 mm (1/16") thickness not achieved during initial application. Allow base coat to thoroughly dry before applying primer or finish coat.
- 3.1.1.9. Apply waterproof base coat and mesh over dry standard application base coat and mesh on sloped surface and immediately above and below grade.

3.2. **STF** Finish Coat Application:

- 3.2.1. Apply finish coat in accordance with manufacturer's written installation instructions.
- 3.2.2. Prime dry base coat and allow to dry thoroughly before applying finish coat.
- 3.2.3. Apply finish directly over base coat, or primed base coat, only after base coat or primer has thoroughly dried.
- 3.2.4. Apply finish by spray or trowel as recommended by manufacturer.
- 3.2.5. Apply finish in continuous application, and work towards wet edge.
- 3.2.6. Do not apply separate batches of finish coat side by side.
- 3.2.7. Do not apply finish into or over sealant joints. Apply finish to outside of wall only.
- 3.2.8. Do not apply finish over irregular or unprepared surfaces.
- 3.2.9. Apply textured or aggregate finishes to wall areas as indicated and in accordance with manufacturer's written instructions.

4. Sealing

- 4.1. Apply joint sealant at base coat at all joints around window and door frames, around perimeter of every external opening, including all extended. Sealant joints to be 19 mm (¾") in width or as directed by the designer.

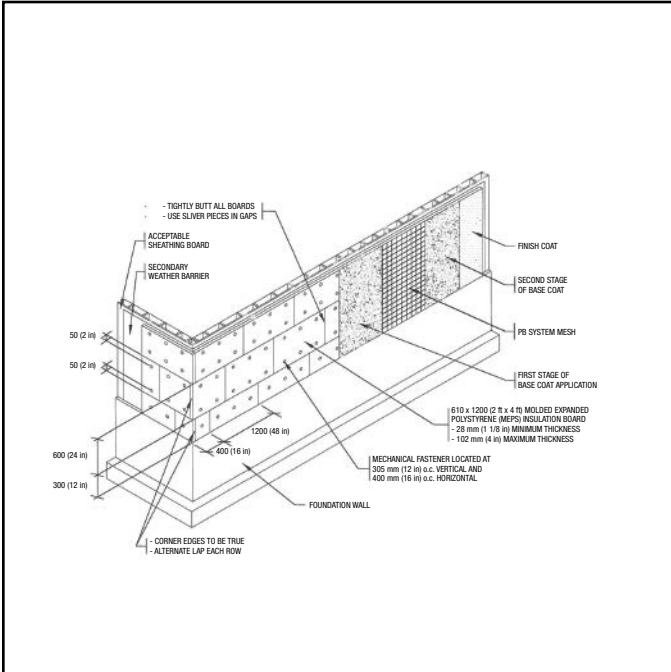
5. Cleaning

- 5.1. Upon completion of installation, remove excess materials, droppings and debris, tools and equipment barriers. Clean adjacent surfaces.

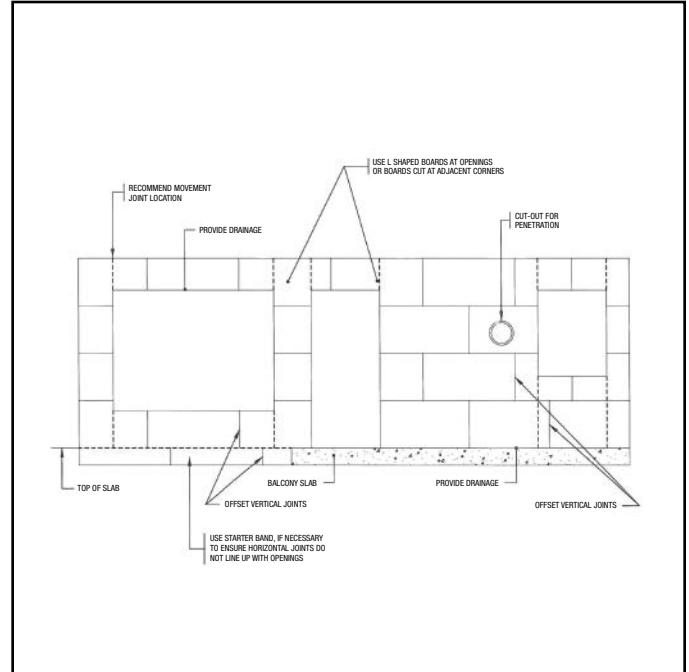
6. Protection

- 6.1. Do not permit finished surface to become soiled or damaged.

The application instructions and performance characteristics are based on information we believe to be reliable. They are offered to the best of our knowledge, but without guarantee, as conditions and methods of use of our products are beyond our control.



ISOMETRIC WALL SECTION



INSULATION BOARD LAYOUT AND RECOMMENDED LOCATION OF EXPANSION JOINTS

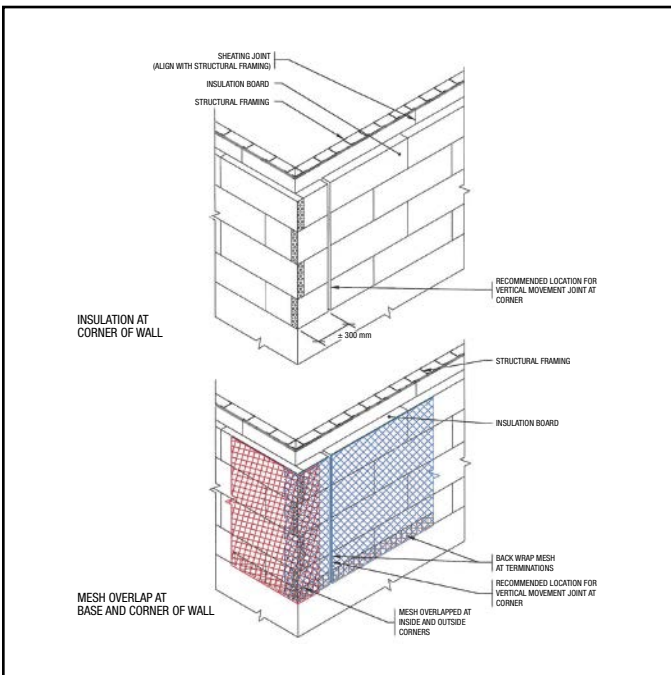


ILLUSTRATION OF INSULATION AT CORNER OF WALL
MESH OVERLAP AT BASE AND CORNER OF WALL

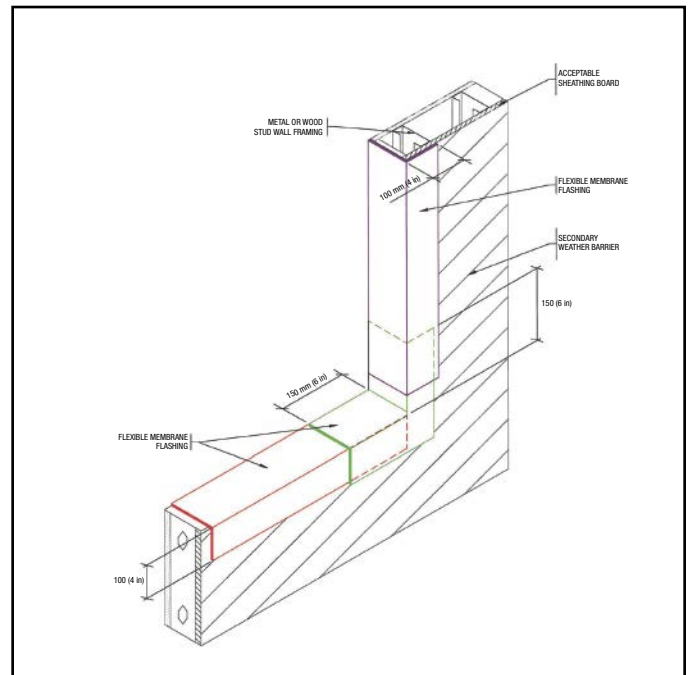
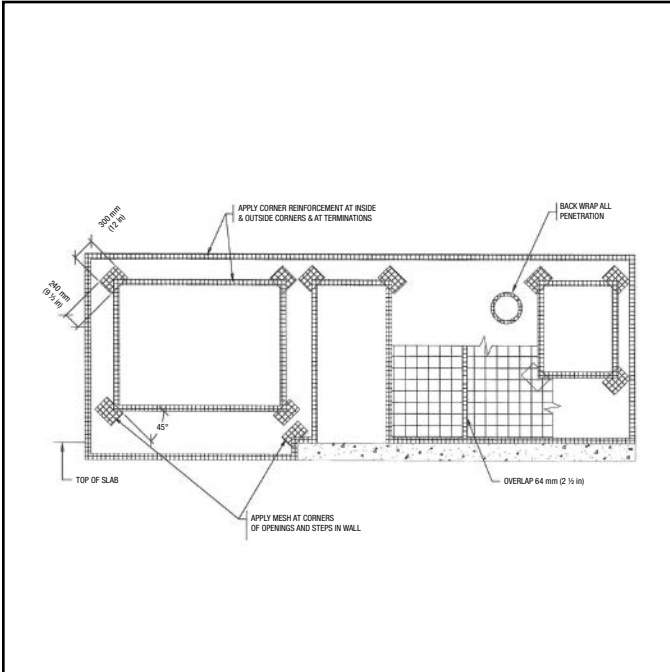
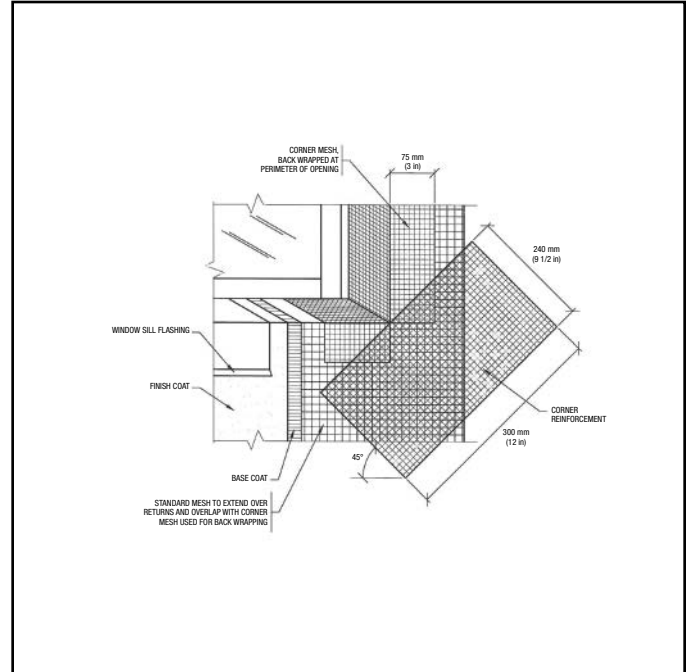


ILLUSTRATION OF PROPER INSTALLATION OF SECONDARY WEATHER BARRIER

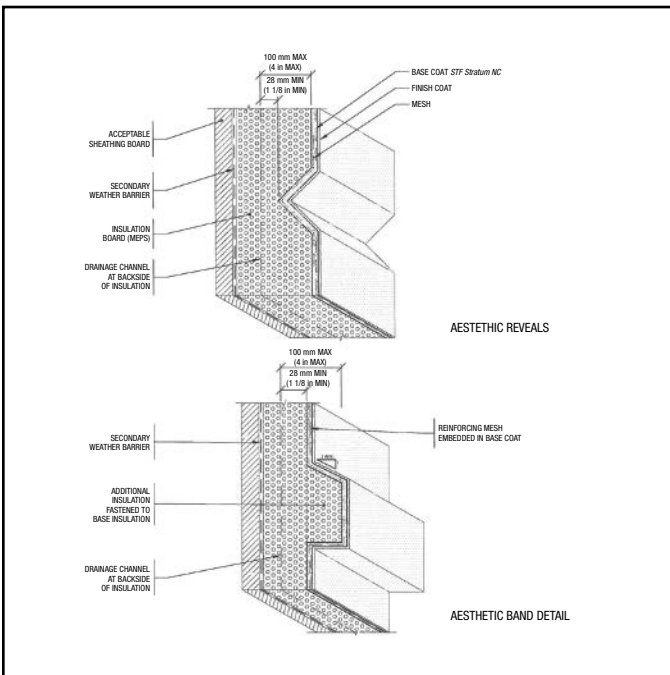
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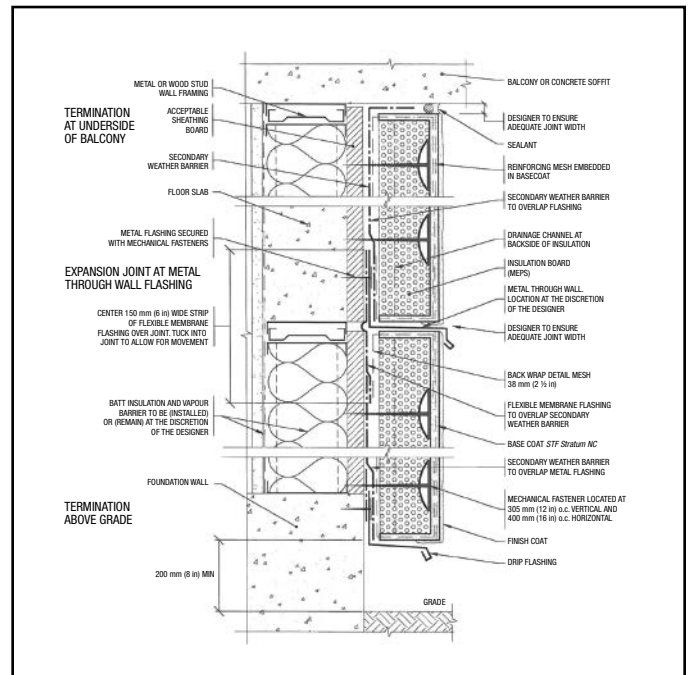
REINFORCING MESH INSTALLATION



SYSTEM INSTALLATION AT INSIDE CORNERS AND OPENINGS

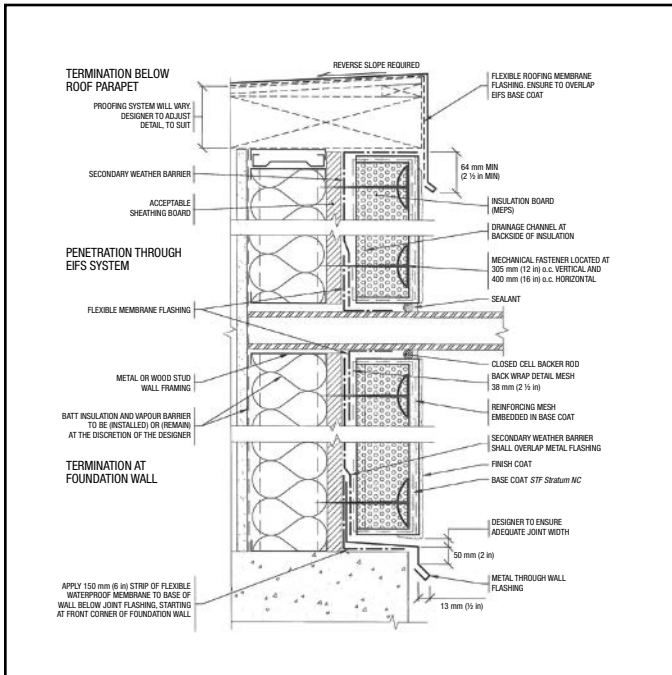


AESTHETIC REVEALS, HORIZONTAL OR VERTICAL
AESTHETIC BAND DETAIL

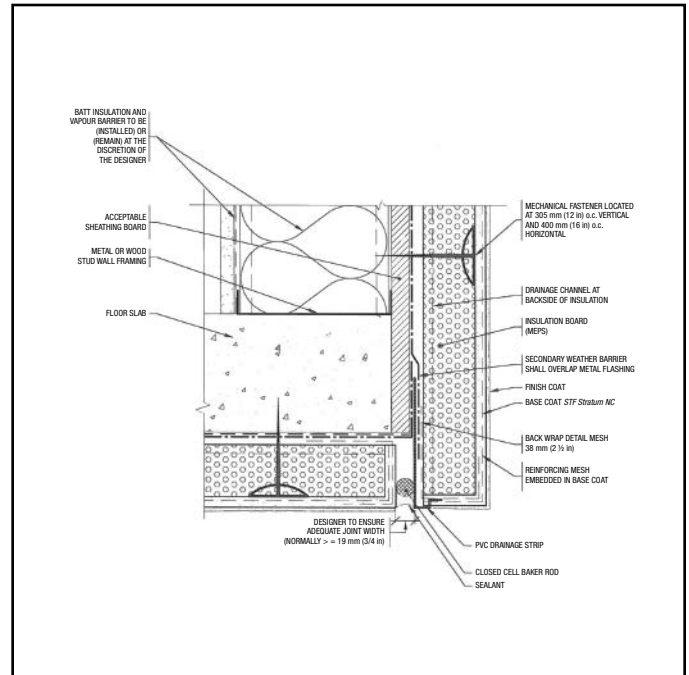


HORIZONTAL TERMINATION AT UNDERSIDE OF BALCONY OVERHANG
Horizontal Expansion Joint with Sealant
Horizontal Termination Above Grade

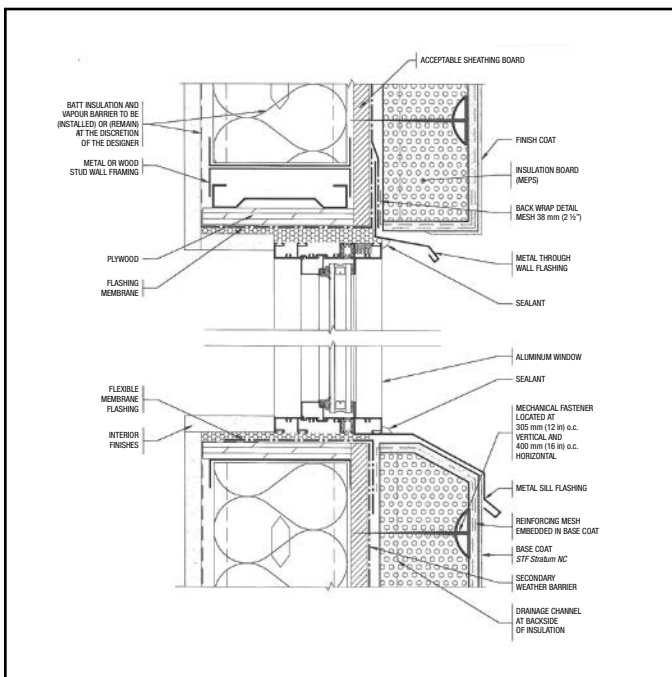
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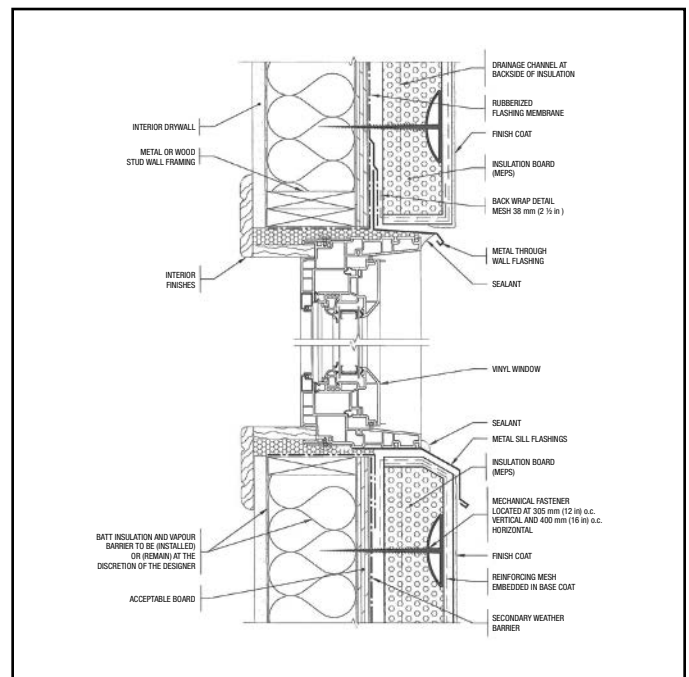
HORIZONTAL TERMINATION BELOW PERIMETER OF ROOFING SYSTEM
Penetration through STF EIF System
Horizontal Termination at Foundation Wall



SOFFIT TERMINATION

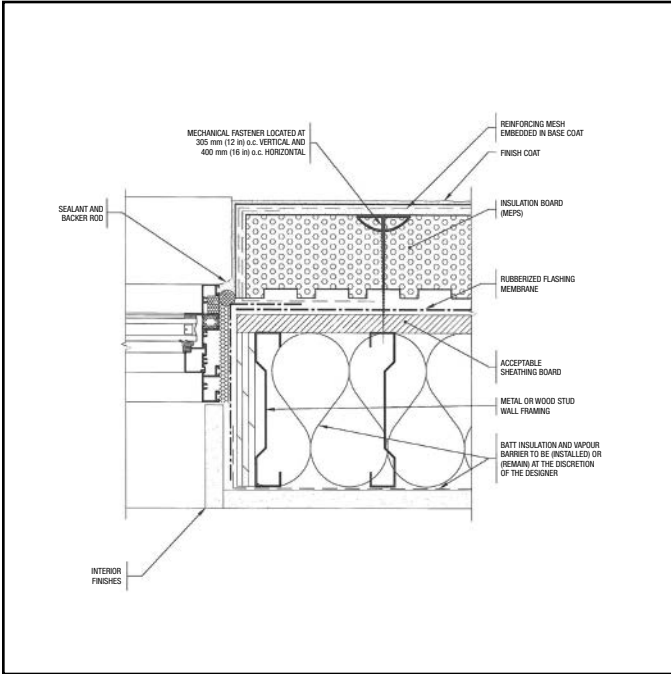


STEEL STUD - ALUMINUM WINDOW (NEW)

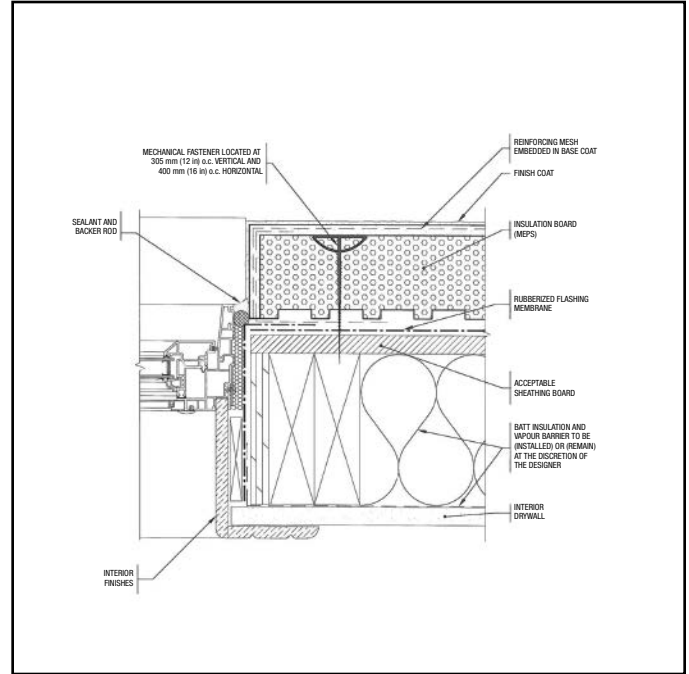


RESIDENTIAL (NEW)

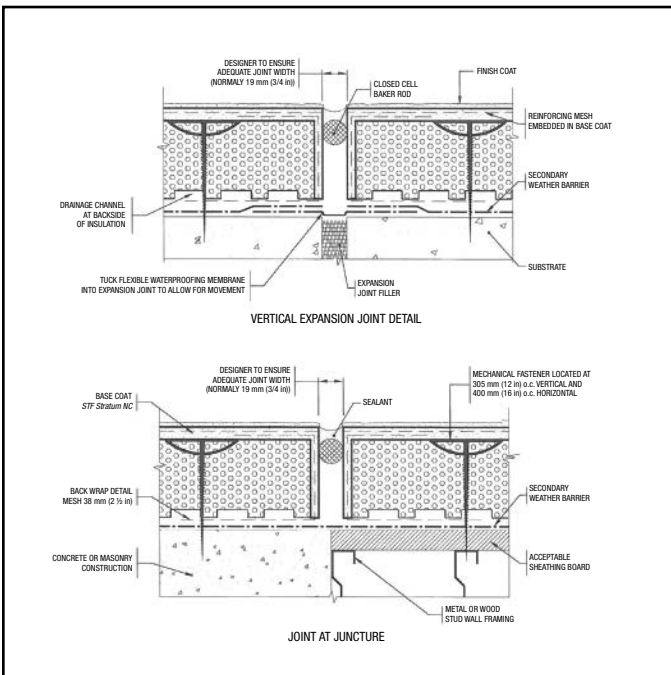
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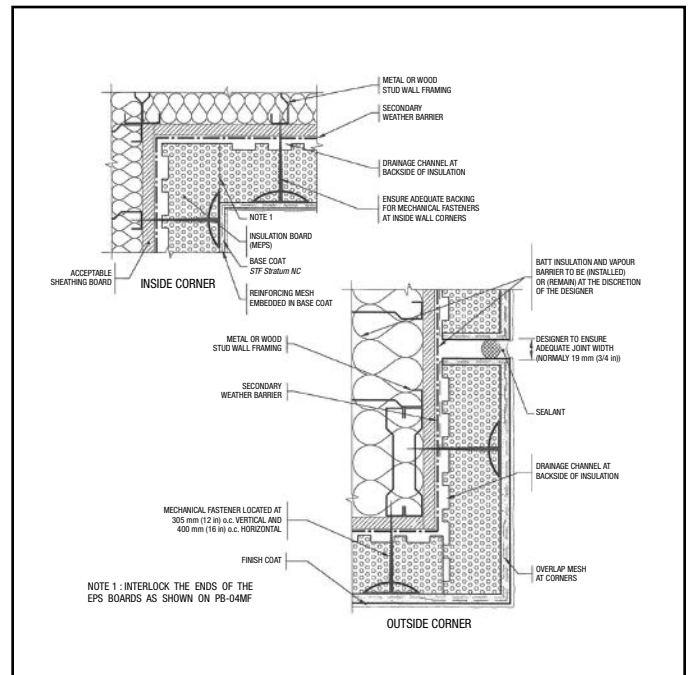
JAMB COMMERCIAL (ALUMINUM WINDOW)



RESIDENTIAL JAMB (VINYL WINDOW)

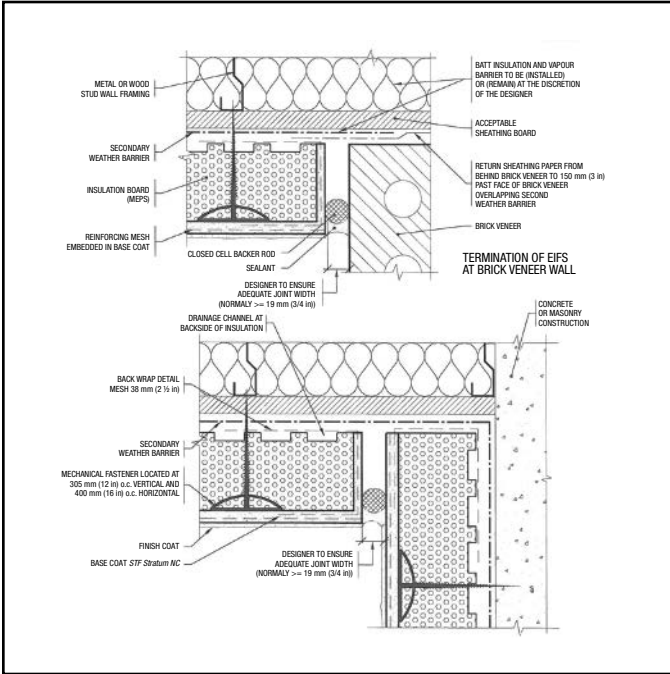


VERTICAL EXPANSION JOINT DETAIL

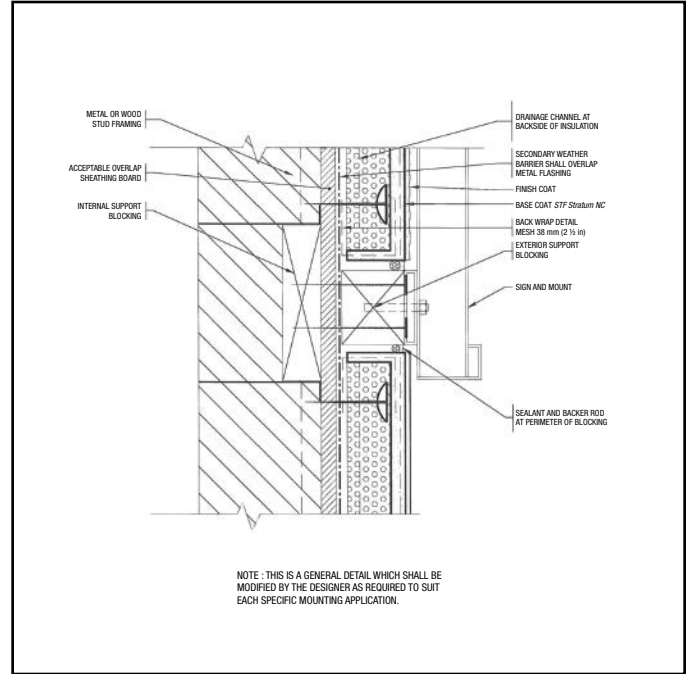


INSIDE AND OUTSIDE CORNERS

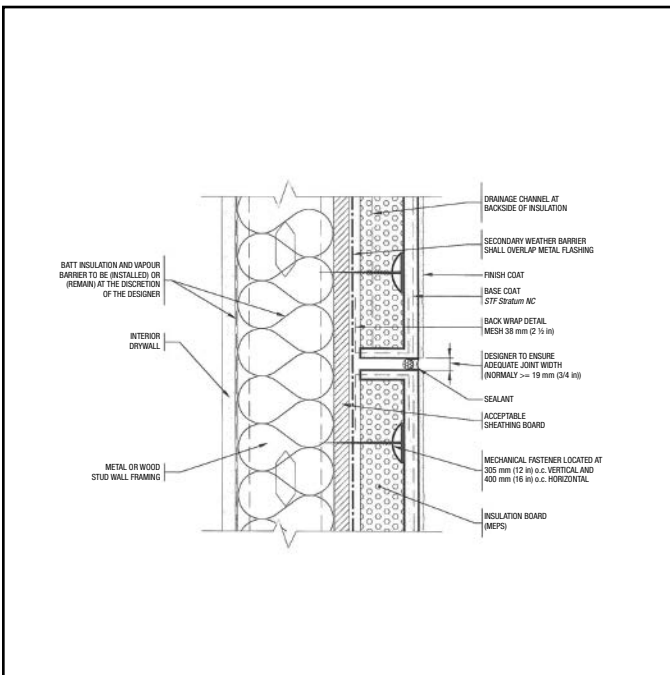
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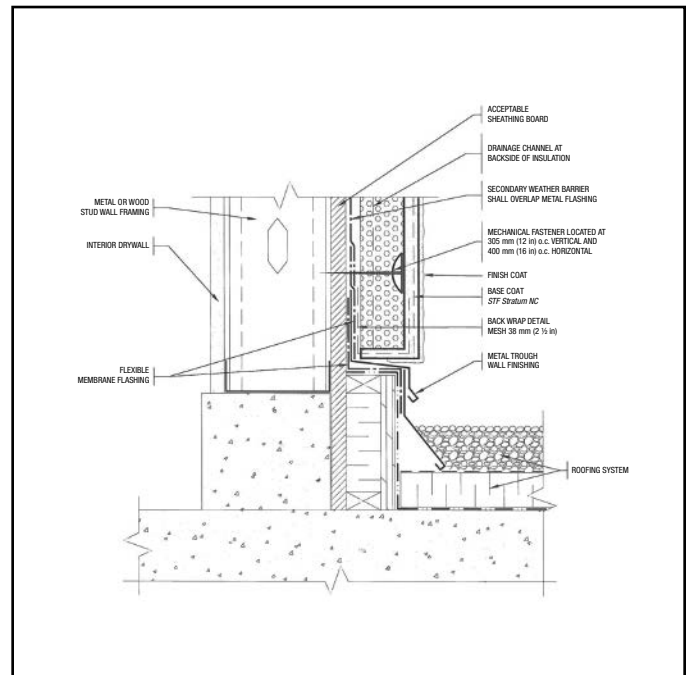
VERTICAL TERMINATION OF EIFS AT BRICK VENEER WALL
VERTICAL TERMINATION OF INTERSECTING EIFS WALLS
DIFFERENT SUBSTRATES



SIGN MOUNTING DETAIL



HORIZONTAL EXPANSION JOINT



ROOFING DETAIL

*by others