SECTION 07 05 43
CLADDING SUPPORT SYSTEMS

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PART 1 GENERAL

1.1 SECTION INCLUDES

A. Cladding Support Systems for Exterior Cladding.

B. Thermally Isolated Cladding Support Systems for Exterior Cladding.

1.2 RELATED SECTIONS

A. Section 05 40 00 - Cold-Formed Metal Framing (05 40 00) - Cold-Formed Metal Framing. Exterior wall framing.

B. Section 06 16 36 - Wood Panel Product Sheathing (06 16 36) - Wood Panel Product Sheathing. Exterior wall sheathing.

C. Section 07 21 16 - Blanket Insulation (07 21 13) - Board Insulation. Exterior insulation.

D. Section 07 27 00 - Air Barriers (07 27 00) - Air Barriers. Air and vapor retarders.

E. Section 07 42 00 - Wall Panels (07 40 00) - Roofing and Siding Panels. Exterior cladding assemblies.

1.3 REFERENCES

A. ASTM International (ASTM):
1. ASTM B209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
2. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
3. ASTM E283/E283M - Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Skylights, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.
4. ASTM E330/E330M - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.
5. ASTM E331 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference.

B. National Fire Protection Association (NFPA):
   1. NFPA 285 - Standard Fire Test Method for Evaluation of Fire Propagation: Characteristics of Exterior Non-Load-Bearing Wall Assemblies Containing Combustible Components.

C. Underwriters Laboratories of Canada, Inc. (ULC):
   1. CAN/ULC-S134 – Standard Method of Fire Test of Exterior Wall Assemblies.

1.4 SUBMITTALS

A. Submit under provisions of Section 01 30 00 - Administrative Requirements.
   1. This Section includes items identified by the Architect or Engineer of Record as Delegated Design or Deferred Submittal.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Installation methods.

C. Shop Drawings: Submit complete shop drawings for approval prior to fabrication, including elevations, and sections of each condition. Such drawings shall also include metal thickness, finish, methods of installation, anchorage and expansion joints, width, bow, camber, and squareness tolerances necessary to accommodate thermal and moisture related movement.

D. Contractor Delegated Design: Submit calculations and drawings stamped and sealed by an Engineer registered in the state which the project is located.
   1. Structural Calculations including dead loads, wind loads, seismic loads, snow, and ice loads as applicable.

E. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square, representing actual product, color, and patterns.

F. Manufacturer's Certificates: Provide manufacturer's certificate certifying that products of this section meet or exceed specified requirements.

G. Closeout Submittals: Provide manufacturer's operating and maintenance instructions that include recommendations for periodic checking and adjustment and periodic cleaning and maintenance of all components.

H. Evaluation Service Reports: Affirm compliance with specified requirements.

I. Installer's Qualification Statement.

1.5 QUALITY ASSURANCE

A. Designer Qualifications: Perform design under direct supervision of a Professional Engineer experienced in design of this type of work and licensed in the State in which the Project is located.

B. Engineering Qualifications: Employ a registered Engineer licensed to practice in the jurisdiction where the Project is located.
   1. Engineer to design anchorage of cladding attachment system to the structure.
   2. Engineer to verify the adequacy of structural wall assembly in supporting the specified cladding system.

C. Manufacturer Qualifications: Company specializing in manufacturing products specified in

this section, with not less than one year of documented experience.

D. Installer Qualifications: Company specializing in performing the work of this section with minimum three years of experience.

E. Field Measurements: Prior to fabrication of exterior wall system, take field measurements of structure and substrates to receive cladding support and cladding system.

F. Project Site Documentation: Maintain at the project site a copy of each referenced document that prescribes execution requirements.

1.6 MOCK-UPS

A. Construct mock-ups with actual materials in sufficient time for Architect's review and to not delay construction progress. Locate mock-ups as acceptable to Architect and provide temporary foundations and support.
   1. Intent of mock-ups are to demonstrate quality of workmanship and visual appearance.
   2. If mock-ups are not acceptable, rebuild mock-ups until satisfactory results are achieved.
   3. Retain mock-ups during construction as a standard for comparison with completed work.
   4. Do not alter or remove mock-ups until work is completed or removal is authorized.

B. Mock-up Wall:
   1. Provide ___ Mock-up Walls, ___ ft (___ m) long by ___ ft (___ m) wide,
   2. Vertical or Horizontal Layout of the Cladding Attachment System: _____ vertical or horizontal layout, illustrating _____.

C. Mock-up Corner:
   1. Provide ___ Mock-up Corners ___ internal or external corner, at ___ degree angle.
   2. Side 1: ___ ft (___ m) long by ___ ft (___ m) wide.
   3. Side 2: ___ ft (___ m) long by ___ ft (___ m) wide.
   4. Vertical or Horizontal Layout of the Cladding Attachment System: _____ vertical or horizontal layout, Illustrating: _____.

D. Mock-up Window Termination:
   1. Provide ___ Mock-up Window Openings, ___ ft (___ m) long by ___ ft (___ m) wide with window opening, ___ ft (___ m) long by ___ ft (___ m) wide,
   2. Vertical or Horizontal Layout of the Cladding Attachment System: _____ vertical or horizontal layout, Illustrating: _____.

E. Mock-up Door Jamb Termination:
   1. Provide ___ Mock-up Door Jambs, ___ ft (___ m) long by ___ ft (___m) wide with door opening, ___ ft (___ m) long by ___ ft (___ m) wide.
   2. Vertical or Horizontal Layout of the Cladding Attachment System: _____ vertical or horizontal layout, Illustrating: _____.

F. Mock-up End Panel Termination:
   1. Provide ___ Mock-up End Panel Terminations, ___ ft (___ m) long by ___ ft (___ m) wide, Illustrating: _____, vertical or horizontal layout, of the cladding attachment system, Illustrating: _____.

1.7 PRE-INSTALLATION CONFERENCE

A. Convene a conference approximately two weeks before scheduled commencement of the Work. Attendees shall include Architect, Contractor and trades involved. Agenda shall include schedule, responsibilities, critical path items and approvals.

1. Coordination: Coordinate the alignment of metal framing with size, location, and installation of metal cladding support.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Deliver products in manufacturer's original, unopened, undamaged containers with identification labels intact.
   1. Protect products against transportation damage.
   2. Provide markings to identify components consistently with Drawings.
   3. Exercise care in unloading, storing, and installing panels to prevent bending, warping,
   4. twisting and surface damage.

B. Store products protected from exposure to harmful weather conditions and at temperature conditions recommended by manufacturer.
   1. Store in well ventilated space out of direct sunlight.
   2. Protect from moisture and condensation with tarpaulins or other suitable weather-tight covering installed to provide ventilation.
   3. Store at a slope to ensure positive drainage of any accumulated water.
   4. Do not store in any enclosed space where ambient temperature can exceed 120 degrees F (48 degrees C).
   5. Avoid contact with any other materials that might cause staining, denting, or other surface damage.

1.9 SEQUENCING

A. Comply with manufacturers' ordering instructions and lead time requirements to avoid construction delays.

B. Coordinate construction to ensure that assemblies fit properly to supporting and adjoining construction; coordinate schedule with construction progress to avoid delay of Work.

1.10 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

1.11 WARRANTY

A. See Section 01 78 23.19 - Preventative Maintenance Instructions.

B. Manufacturers standard twelve (12) year limited warranty.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: CLADIATOR, which is located at: 3114 Tonnelle Ave.; North Bergen, NJ 07047; Toll Free Tel: 833-258-2566; Email: sales@cladiator.com); Web: https://www.cladiator.com

B. Substitutions: Not permitted.

C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2 PERFORMANCE AND DESIGN REQUIREMENTS

A. Components:
   1. Design and size components to withstand loads caused by positive and negative wind pressure acting normal to plane of wall as calculated in accordance with applicable code.
   2. Components to be designed and constructed to resist seismic and gravity loads in accordance with applicable codes.
   3. Design for thermal and moisture movement of cladding in accordance with applicable codes. Design so that local ambient temperature fluctuations do not result in evidence of permanent deformations of assemblies or components and prevent overstressing of the support structure.

B. Cladding Wall Assembly: Design systems and components to be in accordance with applicable codes and adequate to support the following.
   1. Dead loads, wind loads, seismic loads, and snow and ice loads as applicable:
      a. As shown on the Structural Drawings for the Project.
      b. As shown on _____ for the project.

C. Exterior Wall Assembly/Attachment System:
   1. No framing component may penetrate the layer of continuous exterior insulation other than the THERMAClip polyamide clip and T-Track.
   2. Frequency and spacing of base track, T-track, flush mount and THERMAClip polyamide clip components as shown on the approved project specific shop drawings and in accordance with applicable codes and these specifications.
   3. Finishing Accessories to be used as shown on approved project specific shop drawings and in accordance with applicable codes and these specifications.

D. Exterior Wall Assembly/Attachment System:
   1. No framing component may penetrate the layer of continuous exterior insulation other than the SLOTTED-Z-FG.
   2. Frequency and spacing of SLOTTED-Z-FG as shown on the approved project specific shop drawings and in accordance with applicable codes and these specifications.
   3. Finishing Accessories to be used as shown on approved project specific shop drawings and in accordance with applicable codes and these specifications.

E. Thermal Performance:
   1. Complete system to meet U-Value and R-Value requirements of the project.
   2. Cladding support products to meet thermal target requirements as required for Project.

F. Drainage: Provide positive drainage to exterior for moisture entering or condensation occurring within cladding support system.

G. Ventilation: Vent openings at bottom and top of cladding and support system.

H. Insect Screens: Provide insect screening at locations noted in Drawings.

2.3 Cladding Support System

A. Basis of Design: CL 300; as manufactured by CLADIATOR.

B. Base Track:
   1. Material: Extruded 6063-T5 aluminum profile with dimension marks.
   2. Finish: Mill Finish.
   3. Finish: Black Anodized.
   4. Length: 120 inches (3048 mm).
   5. Length: ___ inches (____ mm).

C. THERMAclip Thermally Isolated Polyamide Clips:
   1. Engineered support system designed to integrate with exterior insulation and minimize thermal bridging.
   2. Tested in accordance with NFPA 285.
   3. Height: 4 inches (102 mm).
   4. Height: 6 inches (152 mm).
   5. Depth: 3-1/4 inch (83 mm). Accommodates 2 inches (51 mm) to 4 inches (102 mm) of insulation when connected with t-track.
   6. Material: Polyamide - PA 6.6.
   7. Color: Purple.
   8. Color: Black.

D. T-Track:
   1. Material: Extruded 6063-T5 aluminum profile with dimension marks.
   2. Finish: Mill Finish.
   3. Finish: Black Anodized.
   4. Length: 120 inches (3048 mm).
   5. Length: ___ inches (____ mm).

E. Flush-Mount:
   1. Material: Extruded 6063-T5 aluminum profile to fit with t-track 16 Inches (406 mm) on center.
   2. Finish: Mill Finish.
   3. Finish: Black Anodized.

F. Flush-Mount EXT:
   1. Material: Extruded 6063-T5 aluminum profile. May be cut on site or pre-cut to fit dimensions up to 32 inches (813 mm) on center.
   2. Finish: Mill Finish.
   3. Finish: Black Anodized.

G. Fasteners: Verify type of screws with Engineer for meeting or exceeding project specific wind loads, gravity loads, seismic loads, and code requirements for each wall type.
   1. Steel Stud Wall Screws:
      a. 1/4 inch No. 14 x 1 inch (25 mm) or 1-1/2 inch (38 mm) HWH SS for installing base track and THERMAClip to 16 gauge steel studs over sheathing.
      b. No. 10 x 3/4 inch (19 mm) or 1 inch (25 mm) HWH SS screws to connect adjustable T-track or with THERMAClip and flush mounts.
   2. Concrete Wall Screws:
      a. 1/4 inch No. 14 x 1 inch (25 mm) or 1-1/2 inch (38 mm) HWH SS for installing base track and THERMAClip to concrete walls.
      b. No. 10 x 3/4 inch (19 mm) or 1 inch (25 mm) HWH SS screws to connect adjustable T-track with THERMAClip and flush mounts.
   3. Finishing Accessory Screws:
      a. Termination track for windows, doors and termination points used same as screws for T-Track.
      b. Screws for corner base track used same as screws for Base Track.
      c. Screws for corner T-Stem and corner Half-T used same as screws for T-Track.

H. Finishing Accessories; Doors, Windows, and Terminations:
   1. Material: Extruded 6063-T5 aluminum profile.
   2. Finish: Mill Finish.
   3. Finish: Black Anodized.
   4. Length: 120 inches (3048 mm).
   5. Length: ___ inches (___ mm).

I. Corner Supports:

1. Material: Extruded 6063-T5 aluminum profile.
    a. Corner Base Track.
    b. Corner T-Stem.
    c. Corner Half-T.
2. Finish: Mill Finish.
3. Finish: Black Anodized.
4. Length: 120 inches (3048 mm).
5. Length: ___ inches (____ mm).

2.4 Thermally Isolated Cladding Support System

A. Basis of Design: SLOTTED-Z FG; as manufactured by CLADIATOR.

B. Z-Girts: SLOTTED Z-FG.
1. Material: Fiberglass.
2. Finish: Purple.
3. Finish: Black.
4. Length: 120 inches (3048 mm).
5. Length: ___ inches (___ mm).
6. Perforations: Perforated holes/slots have been added specifically for insulation securement and may also provide for additional ventilation and moisture/water egress.

C. Profiles: Re-engineered Z-girt with 1-1/2 inch (39 mm) wide exterior face designed to accommodate thickness of insulation and provide adequate exterior panel fastening area.
1. Depth: 2 inches (51 mm).
2. Depth: 2.5 inches (64 mm).
3. Depth: 3 inches (76 mm).
4. Depth: 3.5 inches (89 mm).
5. Depth: 4 inches (102 mm).
6. Depth: 4.5 inches (114 mm).
7. Depth: 5 inches (127 mm).
8. Depth: 5.5 inches (140 mm)
9. Depth: 6 inches (152 mm).

D. Fasteners: Verify type of screws with engineer for meeting or exceeding project specific wind loads, gravity loads, seismic loads, and code requirements for each wall type.
1. Steel Stud Wall Screws:
    a. 1/4 inch No. 14 x 1 inch (25 mm) or 1-1/2 inch (38 mm) HWH SS for installing SLOTTED-Z FG to 16 gauge steel studs over sheathing.
2. Concrete Wall Screws:
    a. 1/4 inch No. 14 HWH SS No. 12 x 1 inch (25 mm) or 1-1/2 inch (38 mm) HWH SS for installing SLOTTED-Z FG to concrete walls.

2.5 Accessories

A. ROCKETStick - Insulation Securement:
1. Material: Extruded 6063-T6 aluminum profile.
2. Finish: Mill finish with painted black outward facing side.
3. Profile Dimensions: 1 inch width by 2.796 inch height (25 mm x 71.02 mm).
4. Placement: ROCKETStick insulation securement extends 1.5 inches (39 mm) above SLOTTED-Z -profile surface and extends 1 (25 mm) below the SLOTTED-Z profile surface.
5. ROCKETStick is designed to secure insulation utilizing perforated slots within the design of the SLOTTED-Z products.
    a. Slots, 1 inch (25 mm) wide are spaced every 3 inches (76 mm) along the length of the SLOTTED-Z to accommodate the ROCKETStick.
    b. Two rows of 1 inch (25 mm) wide slots starting at the outer flange and at 1/2

inch (13 mm) inward secure insulation and allow for a 1/2 inch (13 mm) adjustment in insulation depth.

6. Profile Depth: 2 inches (51 mm).
    a. ROCKETStick Installed in Outer Slot:
        1) Mineral Wool: 2 inches (51 mm) thick.
            a) Net Free Area: None.
        2) Mineral Wool, XPS, or Polyiso: 1.5 inches (38 mm) thick.
            a) Net Free Area: 0.50.
    b. ROCKETStick Installed in Inner Slot:
        1) Mineral Wool, XPS, or Polyiso: 1 inches (25 mm) thick.
            a) Net Free Area: 1.00.
7. Profile Depth: 2.5 inches (64 mm).
    a. ROCKETStick Installed in Outer Slot:
        1) Mineral Wool: 2.5 inches (64 mm) thick.
            a) Net Free Area: None.
        2) Mineral Wool, XPS, or Polyiso: 2 inches (51 mm) thick.
            a) Net Free Area: 0.50.
    b. ROCKETStick Installed in Inner Slot:
        1) Mineral Wool, XPS, or Polyiso: 1.5 inches (38 mm) thick.
            a) Net Free Area: 1.00.
8. Profile Depth: 3 inches (76 mm).
    a. ROCKETStick Installed in Outer Slot:
        1) Mineral Wool: 3 inches (76 mm) thick.
            a) Net Free Area: None.
        2) Mineral Wool, XPS, or Polyiso: 2.5 inches (64 mm) thick.
            a) Net Free Area: 0.50.
    b. ROCKETStick Installed in Inner Slot:
        1) Mineral Wool, XPS, or Polyiso: 2 inches (51 mm) thick.
            a) Net Free Area: 1.00.
9. Profile Depth: 3.5 inches (89 mm).
    a. ROCKETStick Installed in Outer Slot:
        1) Mineral Wool: 3.5 inches (89 mm) thick.
            a) Net Free Area: None.
        2) Mineral Wool, XPS, or Polyiso: 3 inches (76 mm) thick.
            a) Net Free Area: 0.50.
    b. ROCKETStick Installed in Inner Slot:
        1) Mineral Wool, XPS, or Polyiso: 2.5 inches (64 mm) thick.
            a) Net Free Area: 1.00.
10. Profile Depth: 4 inches (102 mm).
    a. ROCKETStick Installed in Outer Slot:
        1) Mineral Wool: 4 inches (102 mm) thick.
            a) Net Free Area: None.
        2) Mineral Wool, XPS, or Polyiso: 3.5 inches (89 mm) thick.
            a) Net Free Area: 0.50.
    b. ROCKETStick Installed in Inner Slot:
        1) Mineral Wool, XPS, or Polyiso: 3 inches (76 mm) thick.
            a) Net Free Area: 1.00.
11. Profile Depth: 4.5 inches (114 mm).
    a. ROCKETStick Installed in Outer Slot:
        1) Mineral Wool: 4.5 inches (114 mm) thick.
            a) Net Free Area: None.
        2) Mineral Wool, XPS, or Polyiso: 4 inches (102 mm) thick.
            a) Net Free Area: 0.50.
    b. ROCKETStick Installed in Inner Slot:
        1) Mineral Wool, XPS, or Polyiso: 3.5 inches (89 mm) thick.
            a) Net Free Area: 1.00.

12. Profile Depth: 5 inches (127 mm).
    a. ROCKETStick Installed in Outer Slot:
        1) Mineral Wool: 5 inches (127 mm) thick.
            a) Net Free Area: None.
        2) Mineral Wool, XPS, or Polyiso: 4.5 inches (114 mm) thick.
            a) Net Free Area: 0.50.
    b. ROCKETStick Installed in Inner Slot:
        1) Mineral Wool, XPS, or Polyiso: 4 inches (102 mm) thick.
            a) Net Free Area: 1.00.
13. Profile Depth: 5.5 inches (140 mm).
    a. ROCKETStick Installed in Outer Slot:
        1) Mineral Wool: 5.5 inches (140 mm) thick.
            a) Net Free Area: None.
        2) Mineral Wool, XPS, or Polyiso: 5 inches (127 mm) thick.
            a) Net Free Area: 0.50.
    b. ROCKETStick Installed in Inner Slot:
        1) Mineral Wool, XPS, or Polyiso: 4.5 inches (114 mm) thick.
            a) Net Free Area: 1.00.
14. Profile Depth: 6 inches (152 mm).
    a. ROCKETStick Installed in Outer Slot:
        1) Mineral Wool: 6 inches (152 mm) thick.
            a) Net Free Area: None.
        2) Mineral Wool, XPS, or Polyiso: 5.5 inches (140 mm) thick.
            a) Net Free Area: 0.50.
    b. ROCKETStick Installed in Inner Slot:
        1) Mineral Wool, XPS, or Polyiso: 5 inches (127 mm) thick.
            a) Net Free Area: 1.00.
15. Recommended Insulation Materials:
    a. Mineral Wool Semi-Rigid or Rigid Insulation.
        1) CAVITYROCK.
        2) CAVITYROCK Black.
        3) RAINBARRIER 45.
    b. Semi-rigid or rigid foam board insulation

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that building framing members are ready to receive metal cladding support.

B. Do not begin installation until substrates have been properly constructed and prepared.

C. If substrate preparation is the responsibility of another installer, notify Architect in writing of unsatisfactory preparation before proceeding.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION - CLADDING SUPPORT SYSTEM

A. Install per manufacturer's written instructions.

B. Base Track:

1. Vertical Installation:
    a. Fasten to substrate.
    b. Install plumb and level to a uniform plane from left to right.
    c. No shimming is necessary as the vertical plumb 90 degrees from the interior to the exterior direction is done with the T-track to complete process.
    d. Fasten base track to the substrate at intervals indicated in the Details for each specific project.
2. Horizontal Installation:
    a. Orient base track with the larger of the two narrow channels, found on either side of the base track, on the top and the smaller channel on the bottom to stabilize the THERMAClip polyamide clip during installation.
    b. Fasten to substrate.
    c. Level.
    d. No shimming is necessary as the vertical plumb 90 degrees from the interior to the exterior direction is done with the T-track to complete process.
    e. Fasten Base Track to the substrate at intervals indicated in the Details for each specific project.

C. THERMAClip Polyamide Clip:
1. Insert into base track in accordance with the manufacturer's instructions.
2. Insert larger flange of the clip into the larger of the two narrow channels found on either side of the base track.
3. Secure each clip through the base track with fasteners in accordance with manufacturer's instructions.

D. Insulation: Install into the exterior cavity between the base track and THERMAClip polyamide clip and between the base track and T-track as indicated and in accordance with insulation manufacturer's instructions.
1. Insert into the narrow slot provided in the THERMAClip polyamide clip and slide to adjust to the insulation depth and ventilation requirement as shown on Drawings and fasten in accordance with manufacturer's instructions.
2. Complete final finite adjustments to plumb and level with the T-track.
3. Ensure assembly is plumb, level, and free of warp or twist; maintain dimensional tolerances and alignment with adjacent work.

E. Proprietary Panel Guidance, Secondary Structural Supports:
1. Install girts, angles, and other secondary structural panel support members and anchorage according to the Light Gage Structural Institute's "Guide Specifications," and Division 07 Roof and Wall Panels Sections.

F. Flush-Mount:
1. Install support onto the T-Track with fasteners as shown on Drawings and in accordance with manufacturer's instructions. Spacing as shown on Drawings and in accordance with the project design and engineering requirements.

G. Finishing Accessories, Termination Track, Window/Door/Termination:
1. Insert into the narrow slot provided in the THERMAClip polyamide clip and slide to adjust to the insulation depth and ventilation requirement as shown on Drawings and fasten in accordance with manufacturer's instructions.
2. Complete final finite adjustments to plumb and level with the Termination track.
3. Ensure assembly is plumb, level, and free of warp or twist; maintain dimensional tolerances and alignment with adjacent work.

H. Corners, Corner T-Stem, Corner Base Track, Half-T:
1. Install Corner Base Track by fastening to the substrate at the corner termination point.
2. Insert Corner T-Stem into the narrow slot provided in the THERMAClip polyamide clip and slide to adjust to the insulation depth and ventilation requirement as indicated and

fasten in accordance with manufacturer's instructions.

3. Place and complete final adjustments of each Half-T on either side of the Corner T-Stem and angle to align in accordance with the project design and engineering requirements.
4. Corner Accessories may be used to support acute or obtuse angles or provide additional support at 90-degree corners.
5. Ensure assembly is plumb, level, and free of warp or twist; maintain dimensional tolerances and alignment with adjacent work.

I. Install sufficient anchorage devices to fasten system securely and rigidly to building in accordance with Drawings and approved Shop Drawings. Fasteners to be concealed.

J. Provide anchors to be installed in other work, and setting details, in time for proper installation by trades concerned; verify correct placement.

K. Spacing for Thermal Expansion/Contraction at 120 inch (3046 mm) Length:
1. Base Track and Corner Base Track: 3/8 inch.
2. T-Track & Corner Half-T: 3/8 inch (10 mm).
3. Termination Track: 3/8 inch (10 mm).
4. Corner T-Stem: 3/8 inch (10 mm).

L. Built-In Work:
1. As work progresses, build in anchor bolts, flashing and other items supplied by other trades.
2. Install items plumb and true in accordance with manufacturer's instructions.
3. Do not build in organic materials subject to rot or deterioration.

3.4 Installation - Thermally Isolated Cladding Support System

A. Install per manufacturer's written instructions.
1. SLOTTED-Z FG Horizontal or Vertical Installation:
   a. Install plumb and level to a uniform plane.
   b. Fasten SLOTTED-Z FG to the substrate directly to the steel stud, concrete, or wood as applicable, at intervals indicated in the Details for each specific project.
2. Ensure assembly is plumb, level, and free of warp or twist; maintain dimensional tolerances and alignment with adjacent work.

B. Insulation:
1. Install into the exterior cavity SLOTTED-Z FG and in accordance with insulation manufacturer's instructions.
2. After placing the insulation material, use insulation clips for fixing the insulation.
3. Accommodates semi-rigid mineral wool insulation or rigid foam board insulation.

C. Proprietary Panel Guidance, Secondary Structural Supports:
1. Install girts, angles, and other secondary structural panel support members and anchorage according to the Light Gage Structural Institute's guide specifications and Related Roof and Wall Panel Sections.

D. Install sufficient anchorage devices to fasten system securely and rigidly to building in accordance with Drawings and approved Shop Drawings. Fasteners to be concealed.

E. Provide anchors to be installed in other work, and setting details, in time for proper installation by trades concerned; verify correct placement.

F. Spacing for Thermal Expansion/Contraction at 120 inch (3046 mm) Length: 3/8 inch (10 mm).

G. Built-In Work:
   1. As work progresses, build in anchor bolts, flashing and other items supplied by other trades.
   2. Install items plumb and true in accordance with manufacturer's instructions.
   3. Do not build in organic materials subject to rot or deterioration.

3.5 ERECTION TOLERANCES

A. Maximum Offset from True Alignment Between Adjacent Members Butting or In Line: 1/16 inch (1.6 mm).

B. Maximum Variation from Plane or Location Indicated on Drawings: 1/4 inch (6mm).

C. Tolerance: Accurately align and locate components to column lines and floor levels; adjust work to conform with following tolerances.
   1. Plumb: 1/8 inch (3 mm) in 10 feet (3046 mm) and 1/4-inch (6 mm) in 40 feet (12192 mm); non-cumulative.
   2. Level: 1/8 inch (3 mm) in 20 feet (6092 mm) and 1/4 inch (6 mm) in 40 feet (12192 mm); non-cumulative.
   3. Alignment:
      a. Limit offsets to 1/16 inch (1.6 mm) where surfaces are flush or less than 1/2 inch (13 mm) out of flush and separated by less than 2 inches (51 mm) by reveal or protruding work. Limit offsets to 1/8 inch (3 mm) in all other cases.
   4. Location: 3/8 inch (10 mm) maximum deviation from measured theoretical location of any member.

3.6 FIELD QUALITY CONTROL

A. Field Inspection: Coordinate field inspection in accordance with appropriate sections in Division 01.

3.7 CLEANING AND PROTECTION

A. Clean products in accordance with the manufacturers recommendations.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION