

Purpose and Applications: This guide specification document covers FreMarq Innovations ZERO.NET PW2500 aluminum pressure wall system with both a fiberglass and glass reinforced polymer thermal break. The company began with a goal of providing the highest energy efficiency curtain wall system ever developed, with an overall system U-factor value of less than 0.30 with 1-inch insulated, single Low-E glass. To date we offer U factors ranging from 0.10 to 0.28.

Product Features: FreMarq Innovations has over 25 years of experience in project applications ranging from new buildings to the retrofitting and upgrading of existing systems. The company has developed a unique patented thermal break process that completely isolates the inside metal from all exterior elements. The process incorporates either a composite fiberglass or glass reinforced polymer component that is attached to the interior framing. There are no penetrations from the exterior to interior. This thermal break in a curtain wall provides U-factor values of less than 0.28 with 1-inch insulated single Low-E glass and condensation resistance factor (CRF) values of 82 and above. Glazing can be fully captured on all four sides, 2 sided SSG or 4 sided SSG. Once installed, the thermal break is completely concealed leaving only finished framing or covers exposed to view.

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Editor Note: Edit document to suit Project requirements and specifier practice. Specifier notes are shown in blue text like this. Optional text [**is shown in bold with brackets like this**]. Locations where language for Project-specific requirements is to be inserted are shown like this: **<Insert requirements>**. Remove specifier notes and unused optional text in final version of the specification document.

Editor Note: The Construction Specifications Institute (CSI) recommends and supports use of its current MasterFormat section title and numbering system. Possible section numbers and titles are shown below. Edit to suit Project requirements.

SECTION 08 51 13 – ALUMINUM WINDOWS
(SECTION 08 44 13 – GLAZED ALUMINUM CURTAIN WALLS)
(SECTION 08 44 00 – CURTAIN WALL AND GLAZED ASSEMBLIES)
(SECTION 08 40 00 – ENTRANCES, STOREFRONTS, AND CURTAIN WALLS)

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes: Glazed aluminum curtain wall. Shop assembled framing with exterior pressure plates as required. Field or shop glazing as required.

Editor Note: Revise paragraph below to suit Project requirements. Add division or section numbers and titles according to CSI MasterFormat and specifier practice. This paragraph is intended for use only when a reader might reasonably expect to find work requirements in this Section, but those requirements are actually located in another related section.

B. Related Sections: Sections related to this Section include:

1. **<Insert Division or Section Number>: <Insert title>.**

Editor Note: Standards numbers and titles in the article below are provided for specifier information and reference. The purpose of this Article is to fully identify standards that are referenced elsewhere using abbreviated nomenclature. Retain, edit or delete article to suit specifier practice and Project requirements.

1.2 REFERENCES

A. General: Standards listed by reference form a part of this specification section. Standards listed are identified by issuing authority, abbreviation, designation number, title or other designation. Standards subsequently referenced in this Section are referred by issuing authority abbreviation and designation only.

B. Aluminum Association:

1. Aluminum Alloys - Aluminum 6063/6063A Properties, Fabrication and Applications (AA 6063T5, AA 6063T6).

C. American Architectural Manufacturers Association (AAMA):

1. AAMA 501.1 – Standard Test Method for Water Penetration of Windows, Curtain Walls and Doors Using Dynamic Pressure.
2. AAMA 501.2 – Quality Assurance and Diagnostic Water Leakage Field Check of Installed Storefronts, Curtain Walls and Sloped Glazing Systems.

3. AAMA 501.5 – Test Method for Thermal Cycling of Exterior Walls.
4. AAMA 1503: Voluntary Test Method for Thermal Transmittance and Condensation Resistance of Windows, Doors and Glazed Wall Sections.
5. AAMA CW-DG-1: Curtain Wall Design Guide Manual.

D. ASTM International (ASTM):

1. ASTM C794 – Standard Test Method for Adhesion-in-Peel of Elastomeric Joint Sealants.
2. ASTM C920 – Standard Specification for Elastomeric Joint Sealants.
3. ASTM C1036 – Standard Specification for Flat Glass.
4. ASTM C1048 – Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass.
5. ASTM C1184 – Standard Specification for Structural Silicone Sealants.
6. ASTM E90 – Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
7. ASTM E283 – Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.
8. ASTM E330 – Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.
9. ASTM E331 – Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference.
10. ASTM E783 – Standard Test Method for Field Measurement of Air Leakage Through Installed Exterior Windows and Doors.
11. ASTM E1105 – Standard Test Method for Field Determination of Water Penetration of Installed Exterior Windows, Skylights, Doors, and Curtain Wall by Uniform or Cyclic Static Air Pressure.
12. ASTM E2190 – Standard Specification for Insulating Glass Unit Performance and Evaluation.

E. Insulating Glass Certification Council (IGCC): Insulating Glass Unit Certification.

F. Insulating Glass Manufacturers Alliance of Canada (IGMAC) and Canadian General Standards Board (CGSB): Insulating Glass Units Standard CAN/CGSB 12.8-97.

G. International Organization for Standardization (ISO):

1. ISO 14021 – Environmental Labels and Declarations.

H. National Fenestration Rating Council (NFRC):

1. NFRC 100 – Procedure for Determining Fenestration Product U-factors.
2. NFRC 200 – Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence.

1.3 ADMINISTRATIVE REQUIREMENTS

Editor Note: Retain paragraph below if pre-installation meetings are required and edit to suit Project requirements.

- A. Pre-installation Meetings: Conduct pre-installation meeting to clarify Project requirements, substrate conditions, manufacturer installation recommendations and manufacturer warranty provisions.

1.4 ACTION SUBMITTALS

- A. Product Data: For each component, include manufacturer's site preparation instructions and recommendations, methods of installation, profiles and dimensions, details, anchorage, interfaces with materials not supplied by curtainwall system manufacturer, accessories, requirements for installation, storage, handling and other recommendations.

Editor Note: Retain paragraph below if compliance with a whole-building rating system (such as USGBC LEED, GBI Green Globes, or other), or specific sustainability-related design and construction aspects, is required. Edit to suit Project requirements.

- B. Sustainable Design Submittals: In compliance with **[ISO 14021]** [or] **[Section 01 81 13 – “Sustainable Design Requirements”]**.
- C. Shop Drawings: Showing methods of installation, specified loads, plans, sections, elevations and details, identifying all proposed component parts and finishes including flashings, vents, sealants and interfaces with all materials not supplied by curtain wall manufacturer.
- D. Samples: Selection and verification samples for finishes and colors. Submit two complete sample sets of each type of material required.
- E. Sealant compatibility report prepared by sealant manufacturer.
- F. Certificate of compliance from manufacturer that applied finishes meet AAMA standards.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification statements for manufacturer and installer.

- B. Product test reports indicating the proposed system is in compliance with specified performance requirements and contract drawings
- C. Product specific Environment Product Declaration (EPD)
- D. Sample warranty documents.

1.6 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: For installed system components.
- B. Warranty Documents: Final manufacturer warranty documents.

1.7 QUALITY ASSURANCE

A. Manufacturer Qualifications:

1. Over 25 years' experience in the custom curtain wall industry.
2. Capable of demonstrating an extended history of successfully supplying fabricated custom wall systems and a holistic approach to system design, innovation, production, application and installation.
3. Capable of providing delegated engineering design and documentation including Shop Drawings for the wall system.

B. Installer Qualifications:

1. Minimum five years' experience in the commercial installation of products required for the Project.
2. Experience on at least five projects of similar size, type and complexity as the Project.
3. An entity utilizing workers competent in techniques required by manufacturer for product types and applications indicated.

C. Source Limitations:

1. Obtain system components from a single manufacturer, bearing country of origin label "Made in USA" indicating that products are "all or virtually all" made in the United States of America.
2. Obtain aluminum extrusions from a manufacturer with more than 5 years' experience in the architectural aluminum industry.

1.8 DELIVERY, STORAGE AND HANDLING

- A. Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.
- B. Palletize loose fabricated extrusions by like size and protect to ensure surface finishes are not damaged during shipping and handling.
- C. Deliver components to Project in manufacturer's original unopened, undamaged containers with identification labels intact.
- D. Storage and Protection: Store components protected from exposure to damage from construction activities and to adverse weather and harmful environmental conditions, at temperature and humidity conditions recommended by manufacturer.

Editor Note: Coordinate article below with Conditions of the Contract and with Division 01 Closeout Submittals (Warranty) Section.

1.9 WARRANTY

- A. Special Warranty: Manufacturer's transferrable, non-prorated limited warranty in which manufacturer agrees to repair or replace curtain wall system components that fail within the warranty period.

- 1. Warranty Period, Workmanship and Components: [**1 year**], [**5 years**] [**10 years**] <Insert years> from date of substantial completion.

Editor Note: AMMA 2605 finish, 70 percent PVDF provides a standard warranty of 10 years and up to 20 years at additional cost. Finish will not chip, crack or peel. It will not chalk in excess of ASTM D4214, number 8 rating. It will not change color more than 5 delta-E Hunter units as determined by ASTM method D2244. Metallics Delta L only for color change. Exotic finishes require recommended clear top coat.

- 2. Warranty Period, Painted Finish, AAMA 2605 (70 percent PVDF): [**10 years**] [**20 years**] <Insert years> from date of substantial completion.

Editor Note: AAMA 2604 finish, 50 percent PVDF provides a standard warranty of 5 years and up to 10 years at additional cost. Finish will not chip, crack or peel. It will not chalk in excess of ATM D4214 number 8 rating. It will not change color more than 5 Delta-E Hunter units as determined by ASTM method D2244.

- 3. Warranty Period, Painted Finish, AAMA 2604 (50 percent PVDF): [**5 years**] [**10 years**] <Insert years> from date of substantial completion.

Editor Note: AAMA 2603 baked enamel finish provides a 1 year warranty with slight chalk and fade.

- 4. Warranty Period, Baked Enamel Finish, AAMA 2603: [**1 year**] <Insert years> from date of substantial completion.

Editor Note: Class I Anodized finish is provided with a standard warranty of 5 years and up to 10 years at additional cost. Finish will resist cracking, crazing, flaking or blistering. It will not chalk in excess of ASTM D4218 number 8 rating. It will not change color more than 5 Delta-E Hunter units as determined by ASTM method D2244.

5. Warranty Period, Anodized Finish: **[5 years] [10 years] <Insert years>** from date of substantial completion.

Editor Note: Retain sub-paragraph below if glazing is specified in this Section and edit to suit Project requirements. Glazing warranty period varies and is dependent on the type and configuration of the glazing and its manufacturer. Consult with the Project curtain wall and glazing manufacturers for more information.

6. Warranty Period, Glazing: **[5 years] [10 years] <Insert years>** from date of substantial completion.

B. Special Warranty: Installer's transferrable, non-prorated limited warranty in which installer agrees to repair or replace curtain wall system components that fail within the warranty period.

1. Warranty Period: **[3 years] [5 years] <Insert years>** from date of substantial completion.

PART 2 PRODUCT

Editor Note: Add product features, performance characteristics, material standards, and descriptions as applicable. Use of terms such as "or equal" or "approved equal" or similar may cause ambiguity in specifications, requiring verification (procedural, legal and regulatory) and assignment of responsibility for the determination of "equal" products. Therefore, it is recommended that terms such as these be avoided.

2.1 MANUFACTURER : FreMarq Innovations, 1101 North Mil Street, Merrill, WI

A. General: Provide a curtain wall system complying with design and performance requirements indicated within this specification as well as the contract drawings.

B. Basis-of-Design Product: Subject to compliance with requirements, provide FreMarq Innovations: ZERO.NET PW2500 Aluminum Pressure Wall System.

C. Substitution Limitations: **[No substitutions] [All other manufacturers: Submit substitution request in accordance with Section 01 25 00 – "Substitution Procedures"] <Insert substitution limitations>**.

Editor Note: Performance requirements for any given project may vary widely. Add or edit requirements in this article to suit Project requirements.

2.2 PERFORMANCE REQUIREMENTS – PRESSURE WALL

A. General Performance:

1. Product to comply with the specified performance requirements without failure due to defective manufacture, fabrication, installation or other defects in construction, as determined by testing of glazed aluminum curtain walls representing those indicated for this project.
2. Glazed aluminum curtain walls shall withstand movements of supporting structure including, but not limited to, story drift, long-term creep, column shortening, and deflection from uniformly distributed live loads.
3. Failure includes any of these events:
 - a. Glass breakage
 - b. Thermal stresses transferring to building structure.
 - c. Failure of operating units
 - d. Loosening or weakening of fasteners, attachments, and other components.

B. Delegated Design:

1. Design glazed aluminum curtain walls, including comprehensive engineering analysis by a qualified professional engineer, using the performance requirements and design criteria indicated.

Editor Note: Provide wind load design pressure in PSF and include applicable building code and year edition.

C. Wind Loads:

1. The curtain wall system shall include anchorage that is capable of withstanding the following wind load design pressures:
 - a) Inward: (____) psf
 - b) Outward (____) psf
2. Design pressures are based on the (____) Building code, (____) Edition

D. Structural Test Performance: Test in accordance with ASTM E330

D. Air Infiltration:

1. Maximum air leakage through fixed glazing and framing areas of 0.06 cfm/ft² of fixed wall area as determined according to ASTM E283 at a minimum static air pressure of 6.24 psf.

E. Deflection of Framing Members:

1. Limit deflection of clear span framing members to $L/175$ or $3/4"$, whichever is less, for spans less than or equal to 13'-6". For spans greater than 13'-6", limit deflection to $L/240$ plus $1/4"$.

F. Water Resistance:

1. Static:
 - a) Shall be tested in accordance with ASTM E331
 - b) Shall be no leakage at a minimum static air pressure differential of 15 psf
2. Dynamic:
 - a) Shall be tested in accordance with AAMA 501.1

b) Shall be no leakage at an air pressure differential of 15 psf

G. Thermal Cycling and Condensation Assessment:

1. Conduct thermal cycling test in accordance with AAMA 501.5.

J. Energy Performance:

Editor Note: Coordinate requirements in following sub-paragraphs with specific assembly construction in the “Glazing” article below. The assembled U factor is reliant on glass performance and what the glass make up is. Glass infills of 1” to 1 ¾” thick can be accommodated. FreMarq can obtain ASSEMBLED U factors as low as 0.10 and range up to 0.28. U factors of 0.24 through 0.28 can be achieved with 1” insulated glass. All U factors are based on NFRC gateway sizes, not project size. It is recommended the NFRC sizes are used for specified U factors to ensure project performance. Consult manufacturer to determine glass type required for desired U factor.

1. Assembly Thermal Transmittance (U-factor):
 - a. Assembled U factor to determined through simulation per NFRC-100 utilizing NFRC gateway size for curtain walls of 79” x 79” with a vertical intermediate.
 - b. Assembled U factor to be validated through physical testing in accordance with NFRC 102
 - c. Assembled U Factor = **[0.25] <Insert requirements>**.
2. Solar Heat Gain Coefficient:
 - a. Solar Heat Gain to be determined in accordance with NFRC-200: **<Insert requirements>**.
3. Frame Condensation Resistance Factor (CRF):
 - a. Condensation resistance test results in accordance with AAMA 1503 and are on Argon filled clear low-emissivity coated glass with warm edge spacer.
 - b. For 1” glass, when tested in accordance with AAMA 1503, the CRF_{frame} shall not be less than 82.
 - c. For 1-3/4” glass, when tested in accordance with AAMA 1503, the CRF_{frame} shall not be less than 86.

L. Sealants:

1. Design of sealant joints and application shall comply with sealant manufacturer recommendations.
2. Provide in the form of a written report for Owner, results of sealant manufacturer adhesion tests to ensure material compatibility and adequate adhesion.

2.3 MATERIALS – PRESSURE WALL

A. Pressure Plate to be aluminum, fiberglass or glass reinforced polymer depending on desired thermal performance. Snap Cover to be Aluminum alloy, AA 6063T5 or AA 6063T6.

B. Reinforcement:

1. Steel, supplied by punched window manufacturer and as required to meet design loads indicated for typical and corner zone building conditions.
2. Coated with primer or bituminous paint prior to installation in aluminum framing.
3. Dimensions and attachment as shown in **[Drawings] [and] [Shop Drawings]**.

C. Thermal Barrier:

1. Glass fiber-reinforced polymer, completely covering exterior face of structural aluminum framing member, designed to support weight of glazing infill, with no exposed aluminum in glazing pocket.

2.4 FRAMING – PRESSURE WALL

A. Framing Members:

1. Aluminum alloy, AA 6063T5 or AA 6063T6 to comply with structural requirements, minimum 1/8-inch wall thickness with screw spline assembly for hair-line joinery with no visible fasteners.
2. Dual-gasket, split vertical mullion, continuous pultruded fiberglass or polymer thermal break mechanically retained and fastened with stainless steel hex-washer-head fasteners.
3. System to be **[four-sided captured], structural silicone-glazed, vertical] [four-sided structural silicone-glazed]** and male to female engagement on vertical mullions with full-length integral extruded anti-rotation clip.
4. Glazing infill thickness **[1" inch] [1-1/4 inches] [1-3/8 inches] [1-1/2 inches] <Insert requirements>**.

B. Accessories:

1. Setting Blocks: Extruded silicone.
2. Exterior Gasket: EPDM
3. Interior Gasket: EPDM
4. Isolator Gasket: EPDM.
5. Mullion Weathering Gasket: EPDM
6. End Water Dams: EPDM sponge rubber, closed cell.

7. Glass Pocket Filler: PVC, rigid, black.
8. Deadload and Windload Anchors: [**Primer-coated steel**] [**Extruded aluminum**], engineered and supplied by curtain wall manufacturer.

C. Fasteners:

1. 1/4-20 hex-washer head, Zinc plated steel frame assembly screws, not exposed at joinery.
2. 1/4 inch stainless steel hex-washer head fastener at pressure plate to fiberglass thermal break, not exposed at joinery.

Editor Note: Retain article below if glazing is specified in this section and edit to suit Project requirements. Alternatively, delete article below and coordinate requirements in “Division 08 – Glazing” and the “Related Sections” paragraph above in the “Summary” article within this Section.

2.5 GLAZING – PRESSURE WALL

A. Insulated Glazing Units (IGUs): Provide insulating glass units certified through [**Insulating Glass Certification Council as conforming to the requirements of IGCC and ASTM E2190**] [**Insulating Glass Manufacturers Alliance of Canada (IGMAC) conforming to the requirements of Canadian General Standards Board CAN/CGSB 12.8**].

Editor Note: Glass unit configurations shown in paragraphs below are typical and are provided for general specifier information. Other combinations to achieve the same performance levels indicated are possible and other combinations to achieve different performance levels are also possible. Contact manufacturer for more information.

Editor Note: Retain paragraph below when assembly U-factor value of 0.28 is required and edit to suit Project requirements. Center of Glass (COG) U-factor value is 0.25. Coordinate with “PERFORMANCE REQUIREMENTS” article above.

B. Glass Unit Makeup for Assembly U-Factor Value 0.28:

1. Manufacturer Designation: <**Insert manufacturer designation**>.
2. Glazing Configuration: Dual-pane.
3. Exterior Glass: 1/4 inch, soft coat Low-E coating on #2 surface, [**clear**] [**tinted**] <**Insert color requirements**> [**annealed, ASTM C1036**] [**fully tempered, ASTM C1048**].
4. Interior Glass: 1/4 inch, clear, [**annealed, ASTM C1036**] [**fully tempered, ASTM C1048**].
5. Gas Fill: Argon 90/10.
6. Warm-Edge Spacer: 1/2 inch, Foam (Quannex Tri-Seal, Viracon VTS).

D. Consult manufacturer for other U factors.

E. Gaskets: Isolator gasket between thermal barrier and pressure plate.

F. Weatherproofing Sealant: Silicone, meeting ASTM C794, ASTM C920, ASTM C1184, for weather seal at vertical mullion stack joint, at intersection of horizontal to vertical joints and for installation and sealing of foam end dams to vertical and horizontal thermal barrier as shown in **[Drawings]** **[and]** **[Shop Drawings]**.

1. Basis-of Design Product: Dow Corning **[795]** **[985]** **<Insert product designation>**.

2.6 ACCESSORY MATERIAL

Editor Note: Coordinate requirements for mineral wool insulation with Insulation Section.

A. Spandrel Insulation: Mineral wool, **[2]** **[3]** **[4]** inches thick, **<Insert density requirements>** attached to exterior side of galvanized steel back pan using welded stick pins installed 12 inches on centers.

1. Basis-of Design Product: **[Thermafiber]** **[Roxul]** **<Insert product designation>**.

B. Safing Insulation: Mineral wool, **[2]** **[3]** **[4]** inches thick, **<Insert density requirements>** installed according to manufacturer's recommendations in safing area between slab edge and back of spandrel panel insulation.

1. Basis-of Design Product: **[Thermafiber]** **[Roxul]** **<Insert product designation>**.

2.7 FABRICATION

A. Formed: Break-formed metal flashings and trim shall be free of warping or oil canning. Form or weld exposed sheet metal prior to finishing. Rough, raw or unfinished exposed edges will not be permitted.

B. Extruded: Inspect all metal for surface quality and absence of bow and warp. Die lines and scratches on visible surfaces will not be permitted.

C. Fabricated: Cut extrusions square and free of burrs or sharp edges. Weather-seal frame joinery in factory. Remove waste metal shavings and chips during fabrication of framing system.

D. Fixed and Zero sightline operable windows to be factory fabricated assembled and glazed

2.8 METAL FINISHES

Editor Note: Retain one or more paragraphs below and edit to suit Project requirements.

A. Clear Anodized, AAMA 611: High-performance Class I acid-etched, minimum thickness 0.7 mils.

B. Color Anodized, AAMA 611: High-performance Class I acid-etched, minimum thickness 0.7 mils. **[Black] [Dark Bronze] [Medium Bronze] [Light Bronze] [Champagne]**.

C. Basic Pigmented Coating, AAMA 2603: Baked enamel, minimum dry film thickness 8 mils.

D. High Performance Organic, AAMA 2604: PVDF fluoropolymer finish containing minimum 50 percent PVDF resins in a **[two] [three] <Insert requirements>** coat system, minimum thickness 1.2 mils.

E. High Performance Organic, AAMA 2605: PVDF fluoropolymer finish containing minimum 70 percent PVDF resins in a **[two] [three] <Insert requirements>** coat system, minimum thickness 1.2 mils.

PART 3 EXECUTION

3.1 EXAMINATION

A. Site Verification of Conditions: Verify that substrate and worksite conditions meet or exceed manufacturer recommendations for installation.

B. Do not begin installation until substrates have been properly prepared and any conditions not in compliance with manufacturer recommendations have been corrected.

3.2 PREPARATION

A. Clean substrates thoroughly prior to installation.

B. Conduct pre-installation steps in accordance with manufacturer's written recommendations.

3.3 INSTALLATION

- A. General: Comply with all manufacturer recommendations, including but not limited to FreMarq installation information in manufacturer product literature and on product packaging.
- B. Comply with recommendations in AAMA for preglaze window installation
- C. Comply with Drawings [**and Shop Drawings**] for installation of all system components and accessories.

3.4 TOLERANCES

- A. Install punched windows to comply with the following:
 - 1. Plumb: **<Insert requirements>**.
 - 2. Level: **<Insert requirements>**.
 - 3. Alignment: **<Insert requirements>**.
 - 4. Location: **<Insert requirements>**.

3.5 FIELD QUALITY CONTROL

- A. Manufacturer Field Services: Provide manufacturer field service consisting of system use recommendations and installation in accordance with manufacturer recommendations.
- B. Testing Agency: **<Insert requirements>**.
- C. Testing Services:
 - 1. Air Infiltration Test, ASTM E783: **<Insert requirements>**.
 - 2. Water Penetration Test, ASTM E1105: **<Insert requirements>**.
 - 3. Water Spray Test, AAMA 501.2: **<Insert requirements>**.

3.6 PROTECTION

- A. Remove temporary coverings and protection of adjacent work areas after curtain wall installation.
- B. Repair or replace damaged installed products.
- C. Clean installed products in accordance with manufacturer recommendations.
- D. Remove and lawfully dispose of construction debris from Project site.

E. Protect installed curtain wall system and all components from damage until completion of Project and acceptance by Owner.

(END OF SECTION 08 44 13 – GLAZED ALUMINUM CURTAIN WALLS)

(END OF SECTION 08 44 00 – CURTAIN WALL AND GLAZED ASSEMBLIES)

(END OF SECTION 08 40 00 – ENTRANCES, STOREFRONTS, AND CURTAIN WALLS)