

ADDENDUM

Project Name:	Hamtramck Public Schools Window Replacements – Phase 2 Holbrook Elementary	Addendum No:	Two (2)
Project Number:	22-148	Issue Date:	February 16, 2023
Project Location:	Hamtramck, Michigan		

This Addendum forms a part of the above described Contract Documents and supersedes, supplements or clarifies parts thereof to the extent defined by the terms set forth in this Addendum.

This addendum consists of (1) typed page and the following attachments:

Specifications: 011000 (3 pages), 084413 (7 pages)
Drawings: A0-03, A0-04

SPECIFICATIONS:

- Item SP1** Specification Section 011000 – Summary (re-issued)
- A. Modify section 1.3.A.5 SCHEDULE to reflect District's willingness to accept a substantial completion date should lead times not allow for dates as listed.
 - B. Modify section 1.3.A.6 SCHEDULE to reflect District's willingness to accept a completion date should lead times not allow for dates as listed.
- Item SP2** Specification Section 084413 – Glazed Aluminum Curtain Walls (issued in its entirety)

ARCHITECTURAL DRAWINGS:

- Item A1** Drawing A0-03; WINDOW TYPES, DETAILS & INTERIOR ELEVATIONS (revised and re-issued)
- A. Revise opening heights at all window openings.
 - B. Revise vertical mullion dimensions to reflect sub-frame installation.
 - C. Add W-10 as curtain wall installation.
- Item A2** Drawing A0-04; OPENING DETAILS & SECTIONS (re-issued)
- A. Revise details D1, D2, and D3 to reflect sub-frame installation.
 - B. Add details D7, D8, and D9.

****END OF ADDENDUM****

SECTION 011000 – SUMMARY

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
 - 1. Work covered by the Contract Documents.
 - 2. Schedule.
 - 3. Use of premises.
 - 4. Owner's occupancy requirements.
 - 5. Specification formats and conventions.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Identification: Hamtramck Public Schools – Window Replacements, Phase 2
- B. Project Location:
 - 1. Holbrook Elementary
2361 Alice St., Hamtramck MI 48212
- C. Owner: Hamtramck Public Schools, 3201 Roosevelt, Hamtramck, MI 48212
 - 1. Owner's Representative: Richard Wawrzynski, Director of Buildings and Grounds –
 - 2. (313) 580-0340.
- D. Architect: PARTNERS in Architecture, PLC, 65 Market Street, Mount Clemens, Michigan 48043. Phone: (586) 469-3600; Fax: (586) 469-3607
- E. The Work includes (but is not limited to) the following:
 - 1. Renovations include removal and replacement of window systems, roller shades at new windows, masonry infill at several existing window openings, plaster repair, painting at interior and exterior window openings and other work indicated in the contract documents.
- F. General: Cooperate fully with separate contractors so work on those contracts may be carried out smoothly, without interfering with or delaying work under this Contract. Coordinate the Work of this Contract with work performed under separate contracts.

1.3 SCHEDULE

- A. The projected schedule milestones are as follows:
 - 1. The project is scheduled to be awarded at the March 8, 2023 Board of Education Meeting.
 - 2. Notice of award will be issued via "Letter of Intent" on March 9, 2023.
 - 3. Shop drawing submittals and other required contract submittals shall begin immediately following notice of award and be completed no later than April 28, 2023.
 - 4. Construction may begin after June 15, 2023.

5. It is the intent of the District to have this project be completed as soon as possible while coordinating around the School's Operations and occupancy schedule, with the intention of substantial completion September 22, 2023. Due to possible long lead time items, the District is willing to extend the substantial completion date upon verification of such items, to January 5, 2024. If lead times do not allow for installation in this time frame, provide a schedule for installation on bid form.
6. Project is to achieve final completion no later than October 20, 2023. If extension of completion is approved by District, final completion date will be January 30, 2024. If lead times do not allow for installation in this time frame, provide a final completion date on bid form.
7. Designated staging area will be minimal and will be set for material handling equipment and operations to remove demolition materials and moving new materials to the site.

1.4 WORK HOURS

- A. Buildings are typically available to accommodate work hours between: 7:00am – 9:00 pm; Monday – Friday with the notation that work at student occupied buildings must be coordinated and scheduled when there are no students occupying the building.
- B. Extended work hours beyond those specified above and weekend hours can be arranged with the District if needed (pending District's approval).

1.5 USE OF PREMISES

- A. General: Contractor shall have limited use of premises for construction operations. Comply with schedule and work hours as designated above. Coordinate specifics with Owner.
- B. Use of Site: Limit use of premises to work in areas designated. Do not disturb portions of Project site beyond areas in which the Work is indicated. Work areas shall be cleaned each day and ready for use and occupancy the following day.
 1. Limits: Confine constructions operations to work areas within the building and on site. Other areas inside or outside the building may be available for use, but must be approved by the District.
 2. Owner Occupancy: Buildings will be occupied during construction.
 3. Driveways and Entrances: Keep driveways, loading areas and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.

1.6 OWNER'S OCCUPANCY REQUIREMENTS

- A. Full Owner Occupancy: Owner will occupy site and existing building during entire construction period. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's day-to-day operations. Maintain existing exits unless otherwise indicated.
 1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and approval of authorities having jurisdiction.
 2. Notify Owner not less than (72) hours in advance of activities that will affect Owner's operations.
 3. Coordinate schedule with Owner if after schools hours or weekends will be needed to complete work.

1.7 SPECIFICATION FORMATS AND CONVENTIONS

- A. Specification Format: The Specifications are organized into Divisions and Sections using the 33-division format and CSI/CSC's "MasterFormat" numbering system.
 - 1. Division 1: Sections in Division 1 govern the execution of the Work of all Sections in the Specifications.

- B. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
 - 1. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred as the sense requires. Singular words shall be interpreted as plural and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates.
 - 2. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section Text for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.
 - a. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.

END OF SECTION 011000

SECTION 084413 - GLAZED ALUMINUM CURTAIN WALLS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes glazed aluminum curtain walls.

1.2 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: Include plans, elevations, sections, full-size details, and attachments to other work.
 - 1. Show connection to and continuity with adjacent thermal, weather, air, and vapor barriers.
- C. Samples: For each exposed finish required.
- D. Delegated-Design Submittal: For glazed aluminum curtain walls indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1.4 INFORMATIONAL SUBMITTALS

- A. Field quality-control reports.
- B. Sample warranties.

1.5 CLOSEOUT SUBMITTALS

- A. Maintenance data.

1.6 QUALITY ASSURANCE

- A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.
- B. Testing Agency Qualifications: Qualified according to ASTM E 699 for testing indicated.

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GLAZED ALUMINUM CURTAIN WALLS
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- C. Product Options: Information on Drawings and in Specifications establishes requirements for aesthetic effects and performance characteristics of assemblies. Aesthetic effects are indicated by dimensions, arrangements, alignment, and profiles of components and assemblies as they relate to sightlines, to one another, and to adjoining construction.
 - 1. Do not change intended aesthetic effects, as judged solely by Architect, except with Architect's approval. If changes are proposed, submit comprehensive explanatory data to Architect for review.

1.7 WARRANTY

- A. Total Curtain Wall Installation
 - 1. The responsible contractor shall assume full responsibility and warrant for one year the satisfactory performance of the total curtain wall installation. This includes the glass (including insulated units), glazing, anchorage and setting system, sealing, flashing, etc. as it relates to air, water, and structural adequacy and the specifications and approved shop drawings.
 - 2. Any deficiencies due to such elements not meeting the specifications shall be corrected by the responsible contractor at their expense during the warranty period.
- B. Window Material and Workmanship
 - 1. Provide written guarantee against defects in material and workmanship for 3 years from the date of final shipment.
- C. Glass
 - 1. Provide written warranty for insulated glass units, that they will be free from obstruction of vision as a result of dust or film formation on the internal glass surfaces caused by failure of the hermetic seal due to defects in material and workmanship.
 - 2. Warranty period shall be for 10 (ten) years.
- D. Finish
 - 1. Warranty period shall be for 10 years from the date of final shipment.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Engage a qualified professional engineer, as defined in Section 014000 "Quality Requirements," to design glazed aluminum curtain walls.
- B. General Performance: Comply with performance requirements specified, as determined by testing of glazed aluminum curtain walls representing those indicated for this Project without failure due to defective manufacture, fabrication, installation, or other defects in construction.
 - 1. Glazed aluminum curtain walls shall withstand movements of supporting structure including, but not limited to, story drift, twist, column shortening, long-term creep, and deflection from uniformly distributed and concentrated live loads.
 - 2. Failure also includes the following:

- a. Thermal stresses transferring to building structure.
 - b. Glass breakage.
 - c. Noise or vibration created by wind and thermal and structural movements.
 - d. Loosening or weakening of fasteners, attachments, and other components.
 - e. Failure of operating units.
- C. Test Units
1. Air, water, and structural test unit size shall be a minimum of two stories high and three lites wide.
 2. Thermal test unit sizes shall be 80" (2032 mm) wide x 80" (2032 mm) high with one intermediate vertical mullion and two lites of glass.
- D. Structural Loads:
1. Wind Loads: As required by authority having jurisdiction.
 2. The system shall be designed to withstand the following loads normal to the plane of the wall:
 - a. Positive pressure of 25 psf at non-corner zones.
 - b. Negative pressure of 32 psf at non-corner zones.
 - c. Negative pressure of 32 psf at corner zones.
- E. Deflection of Framing Members:
1. Test is accordance with ASTM E 330.
 2. Deflection under design load shall not exceed L/175 for spans less than 162" (4114 mm).
 3. Deflection under design load shall not exceed L/240 +1/4" (6 mm) for spans greater than 162" (4114 mm).
- F. Structural:
1. Test is accordance with ASTM E 330 at pressure 1.5 times the design wind pressure in 2.1.E2.
 2. At conclusion of the test there shall be no glass breakage, permanent damage to fasteners, curtain wall parts, or any other damage that would cause the curtain wall to be defective.
- G. Air Infiltration: Test according to ASTM E 283 as follows:
1. Fixed Framing and Glass Area:
 - a. Maximum air leakage of 0.06 cfm/sq. ft. (0.30 L/s per sq. m) at a static-air-pressure differential of 6.24 lbf/sq. ft. (300 Pa).
- H. Water Resistance: Test according to ASTM E 331 as follows:
1. The test for static water penetration (ASTM E 331) shall be conducted at an air pressure difference of 15.0 psf (720 Pa). There shall be no water leakage as defined by AAMA 501.1, paragraph 5.5.
- I. Energy Performance: Certify and label energy performance according to NFRC as follows:
1. Thermal Transmittance (U-factor):
 - a. With ventilators closed and locked, test unit in accordance with NFRC 100-2010.
 - b. Conductive thermal transmittance (U-Factor) shall not be more than .40 BTU/hr•ft²•°F

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- (.40 W/m²•K) when glazed with .24 center of glass U-Factor. Seismic Performance
- c. Test unit in accordance to AAMA 501.4 system to meet design displacement of 0.010 x the greater adjacent story height and ultimate displacement of 1.5 x the design displacement.
 2. Solar Heat Gain Coefficient: Fixed glazing and framing areas shall have a solar heat gain coefficient of no greater than .43 as determined according to NFRC 200.
 3. Condensation Resistance:
 - a. Test unit in accordance with AAMA 1503.1
 - b. Condensation Resistance Factor (CRF) shall not be less than 66 (frmae) when glazed with .24 center of glass U-Factor.
 4. Sound Transmission Loss
 - a. Test unit in accordance with ASTM E 90-02.
 - b. Sound Transmission Class (STC) shall not be less than 29.

2.2 MANUFACTURERS

- A. Basis-of-Design Product: Subject to compliance with requirements, provide Series 5600 Wall System (2" x 6") outside glazed, exterior glazed as provided by EFCO Corporation or comparable product by one of the following:
 - a. Kawneer
 - b. Oldcastle Building Envelope
 - c. Manko
 - d. Wausau Window and Wall System.
 - e. YKK AP
- B. Curtain Wall System must be by the same manufacturer as the window system per specification 085113.

2.3 FRAMING

- A. Framing Members: Manufacturer's extruded- or formed-aluminum framing members of thickness required and reinforced as required to support imposed loads.
 1. Construction: Thermally broken.
 2. Glazing System: Retained mechanically with gaskets on four sides.
 3. Glazing Plane: Front.
 4. Finish: Dark Bronze.
- B. Pressure Caps: Manufacturer's standard aluminum components that mechanically retain glazing.
 1. Include snap-on aluminum trim that conceals fasteners.
- C. Brackets and Reinforcements: Manufacturer's standard high-strength aluminum with nonstaining, nonferrous shims for aligning system components.
- D. Materials:
 1. Aluminum: Alloy and temper recommended by manufacturer for type of use and finish indicated.
 - a. Sheet and Plate: ASTM B 209 (ASTM B 209M).

- b. Extruded Bars, Rods, Profiles, and Tubes: ASTM B 221 (ASTM B 221M).
 - c. Extruded Structural Pipe and Tubes: ASTM B 429/B 429M.
 - d. Structural Profiles: ASTM B 308/B 308M.
2. Steel Reinforcement: Manufacturer's standard zinc-rich, corrosion-resistant primer complying with SSPC-PS Guide No. 12.00; applied immediately after surface preparation and pretreatment. Select surface preparation methods according to recommendations in SSPC-SP COM, and prepare surfaces according to applicable SSPC standard.
- a. Structural Shapes, Plates, and Bars: ASTM A 36/A 36M.
 - b. Cold-Rolled Sheet and Strip: ASTM A 1008/A 1008M.
 - c. Hot-Rolled Sheet and Strip: ASTM A 1011/A 1011M.

2.4 GLAZING

- A. Glazing: Comply with Section 088000 "Glazing."
- B. Glazing Gaskets: Manufacturer's standard sealed-corner pressure-glazing system of black, resilient elastomeric glazing gaskets, setting blocks, and shims or spacers.
- C. Glazing Sealants: As recommended by manufacturer.
- D. Outside glazed curtain wall system shall be dry glazed with an exterior aluminum pressure plate and snap cover with interior and exterior dense EPDM preset gaskets.

2.5 FABRICATION

- A. Form or extrude aluminum shapes before finishing.
- B. Weld in concealed locations to greatest extent possible to minimize distortion or discoloration of finish. Remove weld spatter and welding oxides from exposed surfaces by descaling or grinding.
- C. Fabricate components that, when assembled, have the following characteristics:
 - 1. Profiles that are sharp, straight, and free of defects or deformations.
 - 2. Accurately fitted joints with ends coped or mitered.
 - 3. Physical and thermal isolation of glazing from framing members.
 - 4. Accommodations for thermal and mechanical movements of glazing and framing to maintain required glazing edge clearances.
 - 5. Provisions for field replacement of glazing from exterior.
 - 6. Fasteners, anchors, and connection devices that are concealed from view to greatest extent possible.
 - 7. Components curved to indicated radii.
- D. Fabricate components to resist water penetration as follows:
 - 1. Internal guttering system or other means to drain water passing joints, condensation occurring within framing members, and moisture migrating within glazed aluminum curtain wall to exterior.

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2. Pressure-equalized system or double barrier design with primary air and vapor barrier at interior side of glazed aluminum curtain wall and secondary seal weeped and vented to exterior.

E. Factory-Assembled Frame Units:

1. Rigidly secure nonmovement joints.
2. Prepare surfaces that are in contact structural sealant according to sealant manufacturer's written instructions to ensure compatibility and adhesion.
3. Preparation includes, but is not limited to, cleaning and priming surfaces.
4. Seal joints watertight unless otherwise indicated.
5. Install glazing to comply with requirements in Section 088000 "Glazing."

F. After fabrication, clearly mark components to identify their locations in Project according to Shop Drawings.

2.6 ALUMINUM FINISHES

A. Color Anodic Finish: AAMA 611, AA-M12C22A42/A44, Class I, 0.018 mm or thicker.

1. Color: To be selected by Architect from manufacturers standard colors.

PART 3 - EXECUTION

3.1 INSTALLATION

A. General:

1. Comply with manufacturer's written instructions.
2. Do not install damaged components.
3. Fit joints to produce hairline joints free of burrs and distortion.
4. Rigidly secure nonmovement joints.
5. Install anchors with separators and isolators to prevent metal corrosion and electrolytic deterioration and to prevent impeding movement of moving joints.
6. Where welding is required, weld components in concealed locations to minimize distortion or discoloration of finish. Protect glazing surfaces from welding.
7. Seal joints watertight unless otherwise indicated.

B. Metal Protection:

1. Where aluminum is in contact with dissimilar metals, protect against galvanic action by painting contact surfaces with primer, applying sealant or tape, or installing nonconductive spacers as recommended by manufacturer for this purpose.
2. Where aluminum is in contact concrete or masonry, protect against corrosion by painting contact surfaces with bituminous paint.

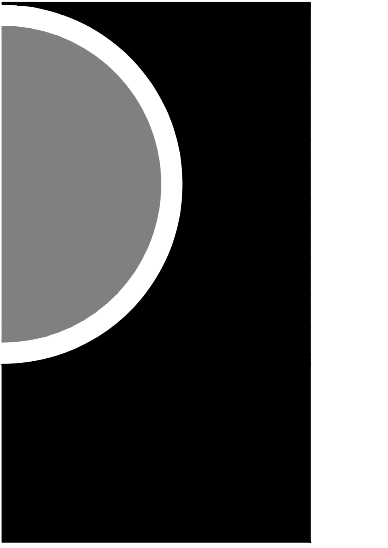
C. Use only skilled tradesmen with work done in accordance with approved shop drawings and established specifications.

- D. Install components to drain water passing joints, condensation occurring within framing members, and moisture migrating within glazed aluminum curtain wall to exterior.
- E. Install components plumb and true in alignment with established lines and grades.
- F. Install glazing as specified in Section 088000 "Glazing."

3.2 FIELD QUALITY CONTROL

- A. Testing Agency: Engage a qualified testing agency to perform tests and inspections.
- B. Test Area: Perform tests on representative areas of glazed aluminum curtain walls.
- C. Test Units
 - 1. Air, water, and structural test unit size shall be a representative sample of typical construction and shall have no outstanding punch list or other visible defects. If no test area and/or location have been identified, the persons doing the test shall select an area. This area shall be selected to provide representative performance data, usually a minimum of 100 ft². The area to be tested shall include perimeter caulking, typical splices, frame intersections, and, if applicable, at least two entire vision lites and two entire spandrel lites containing an intermediate horizontal member. All operable components within the test area shall be isolated and exempt from the test procedure.
- D. Test Procedures and Performance
 - 1. Air Infiltration Test
 - a. Test unit in accordance with AAMA 503-03 for field testing. The unit test shall be conducted at a minimum uniform static test pressure differential of at least 1.57 psf (75 Pa), but at a pressure differential not to exceed 6.24 psf (300 Pa).
 - b. The maximum allowable rates of air leakage for field testing shall not exceed 1.5 times the project specification rate or .09 cfmSF (.45 l/s•m²), whichever is greater.
 - 2. Water Resistance Test
 - a. Test unit in accordance with AAMA 503-03.
 - b. The field water penetration resistance tests shall be conducted at a static test pressure of two-thirds of the specified project water penetration test pressure, but not less than 6.24 psf (300 Pa).
- D. See Section 014000 "Quality Requirements" for retesting and reinspecting requirements and Section 017300 "Execution" for requirements for correcting the Work.
- E. Glazed aluminum curtain walls will be considered defective if they do not pass tests and inspections.
- F. Prepare test and inspection reports.

END OF SECTION 084413



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CONSULTANT

KEY PLAN

OWNER

Hamtramck Public Schools

PROJECT NAME

**Window Replacements Phase 2
 Holbrook Elementary**

2361 Alice St
 Hamtramck, MI 48212

PROJECT NO.

22-148

ISSUES / REVISIONS

Bidding & Construction 01/31/2023
 Addendum #2 02/21/2023

DRAWN BY

CTG

CHECKED BY

ACS

APPROVED BY

MAM

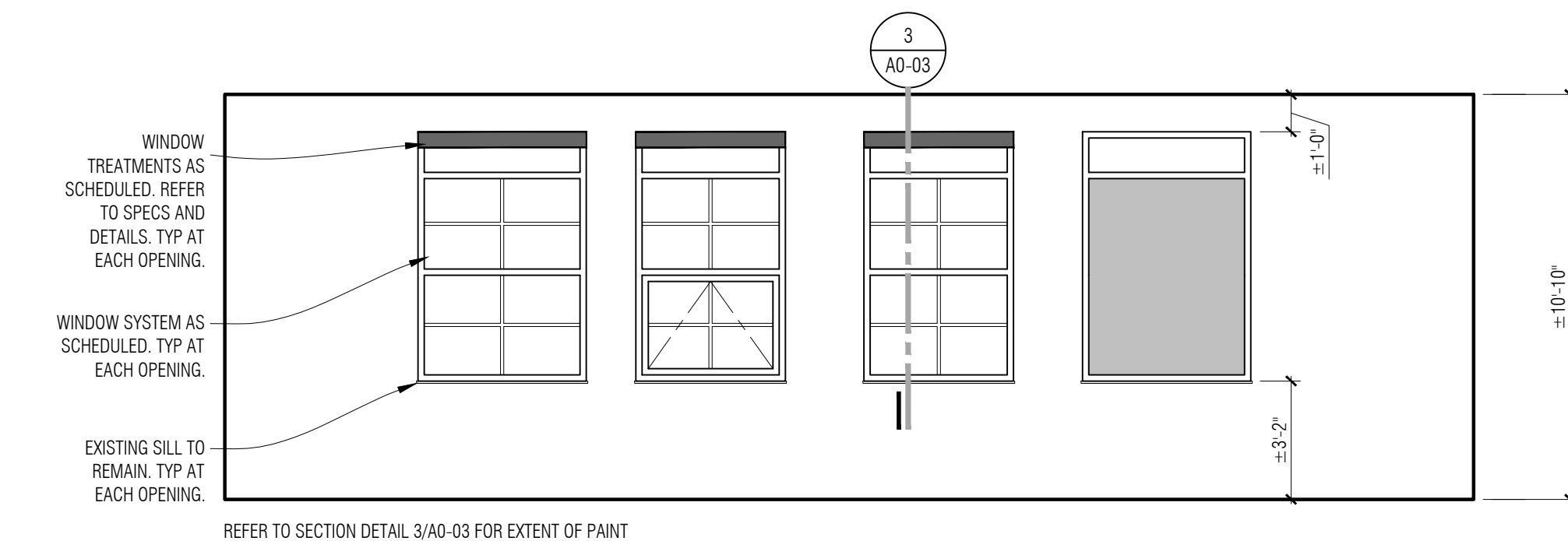
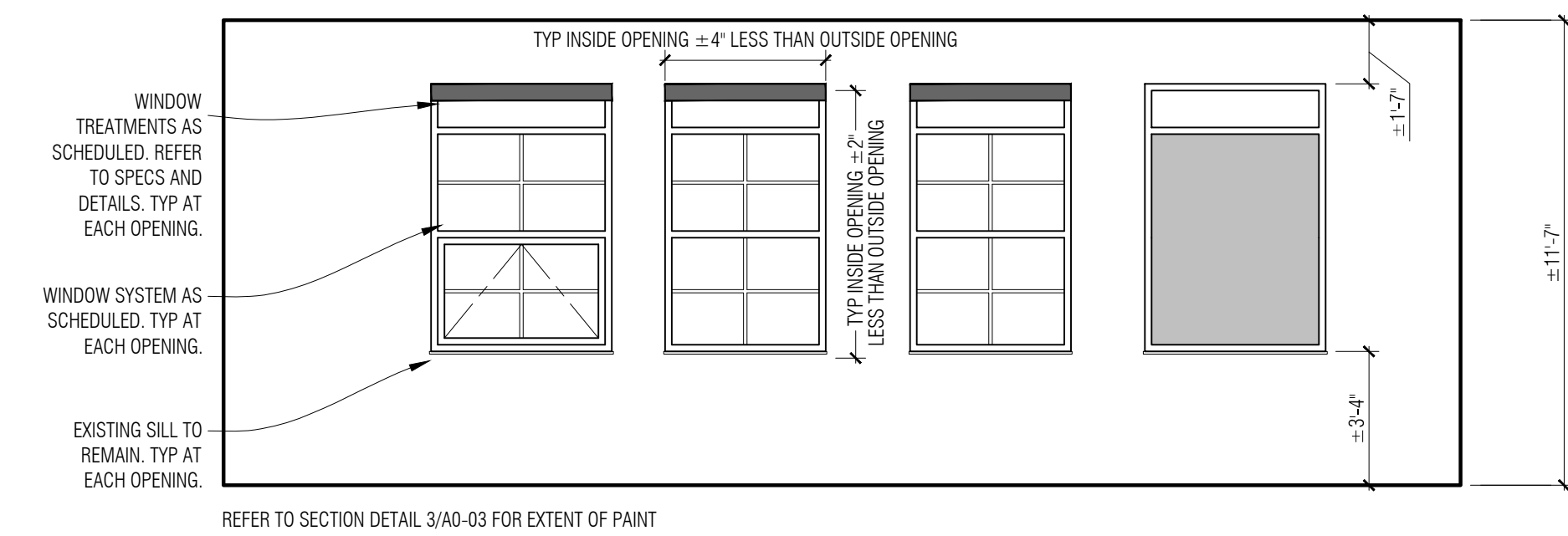
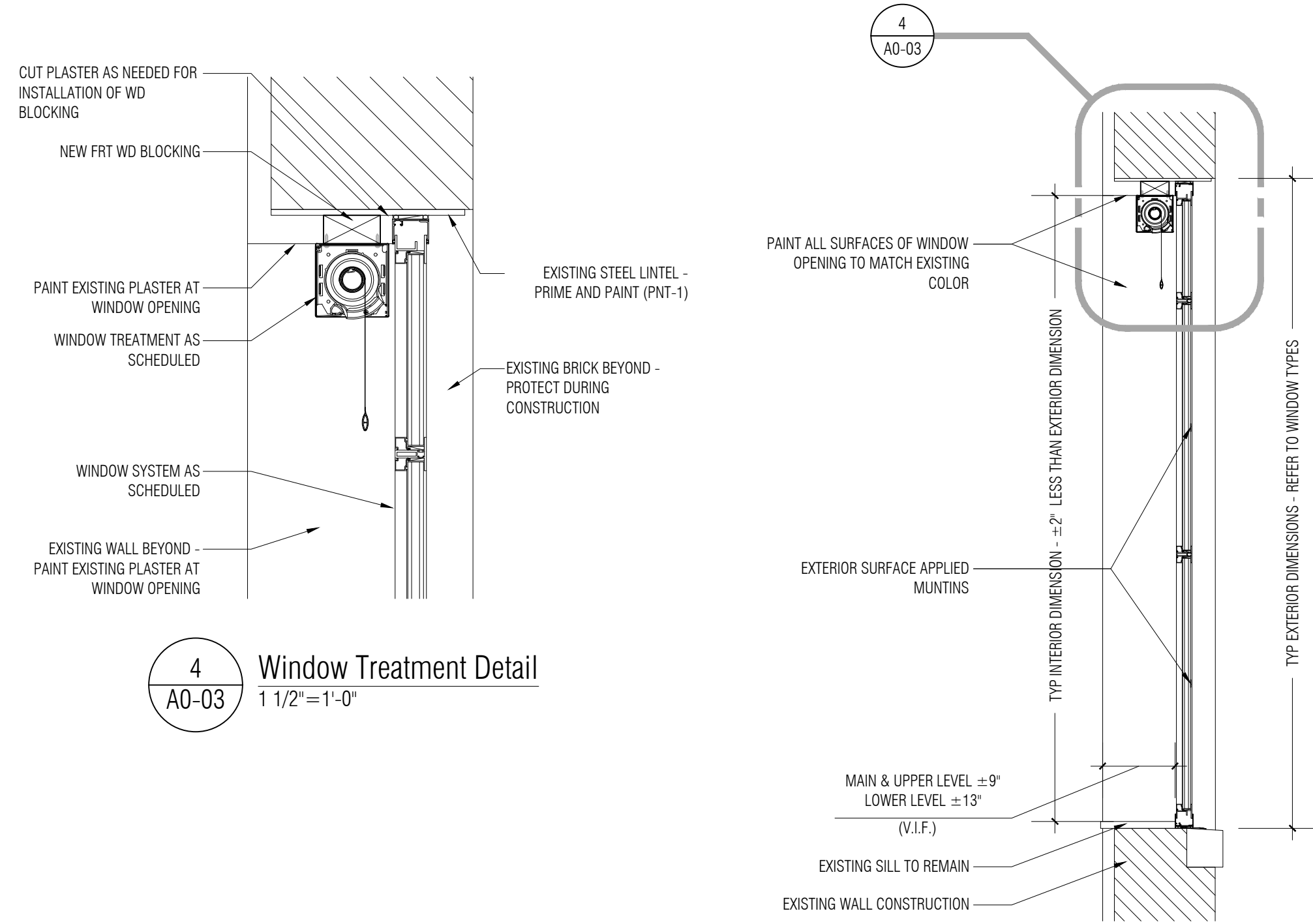
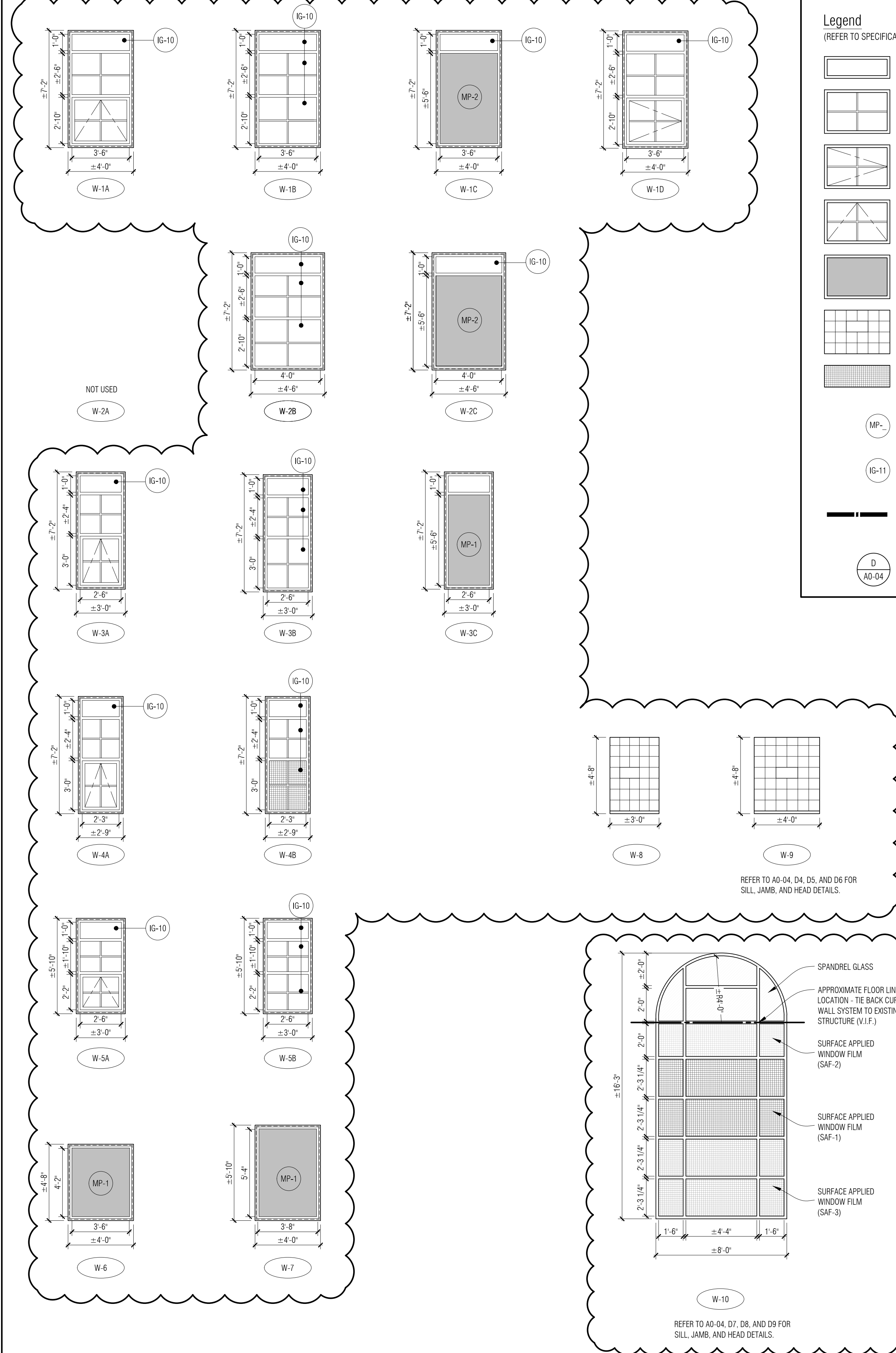
SHEET NAME

**WINDOW TYPES,
 DETAILS &
 INTERIOR
 ELEVATIONS**

SHEET NO.

A0-03

Window Types (Outside Dimensions Noted)



INTERIOR ELEVATIONS GENERAL NOTES:

- ANY DAMAGES TO PLASTER ARE TO BE FILLED / FIXED PRIOR TO INSTALLING NEW WINDOWS
- WINDOW SILLS TO BE CLEANED OF ALL PAINT PRIOR TO INSTALLING NEW WINDOWS

