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**SECTION 08522 (08 51 13.13)**

**ALUMINUM-FRAMED SLIDING GLASS WINDOWS**

Display hidden notes to specifier.

\*\* NOTE TO SPECIFIER \*\* All Weather Architectural Aluminum; Aluminum windows and doors

This section is based on the products of All Weather Architectural Aluminum. For over 50 years All Weather has hand crafted exceptional custom aluminum windows and doors. Utilizing the highest quality materials and applying the superior workmanship of true artisans, we have breathed life into thousands of building projects up and down the entire west coast and beyond.

Over the decades, All Weather's ability to provide creative solutions to challenging projects has been the company's cornerstone and continues to set All Weather apart from our competition. Our primary purpose is to offer custom products for our clientele, not to compete with mass quantity producers.

We believe in service beyond expectation and achieve this by listening to you. We are here to support you by providing expert product knowledge, a world-class customer service experience and on-time delivery of the best aluminum windows and doors in the market.

Now under 3rd generation family ownership, All Weather values you, your business, and the opportunity to make each of your projects more amazing with our stunning windows and doors.

1. GENERAL
	1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for project

* + 1. Aluminum sliding windows (Series 6200)
	1. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 07 27 19 - Plastic Sheet Air Barriers.
		2. Section 07 27 00 - Air Barriers.
		3. Section 07 60 00 - Flashing and Sheet Metal.
		4. Section 07 91 23 - Backer Rods.
		5. Section 08 40 00 - Entrances, Storefronts, and Curtain Walls.
		6. Section 08 83 13 - Mirrored Glass Glazing.
	1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section.

* + 1. American Architectural Manufacturer's Association (AAMA):
			1. AAMA/WDMA/CSA101/I.S.2/A440, North American Fenestration Standard/Specification for Windows, Doors, and Skylights.
			2. AAMA 502-12 Voluntary Specification for Field Testing of Newly Installed Fenestration Products.
			3. AAMA 609 Cleaning and Maintenance Guide for Architecturally Finished Aluminum.
			4. AAMA 920 Specification for operating cycle performance of side-hinged exterior door systems.
			5. AAMA 925 Specifications for determining the vertical loading resistance of side-hinged door leaves.
		2. ASTM International (ASTM):
			1. ASTM E283 Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and
			2. Doors Under Specified Pressure Differences Across the Specimen.
			3. ASTM E330 Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.
			4. ASTM E547 Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Cyclic Static Air Pressure Difference.
			5. ASTM E2068 Standard Test Method for Determination of Operating Force of Sliding Windows and Doors.
			6. ASTM F842 Standard Test Methods for Measuring the Forced Entry Resistance of Sliding Door Assemblies, Excluding Glazing Impact
		3. Glass Association of North America (GANA):
			1. GANA 01-0300 Proper Procedures for Cleaning Architectural Glass Products.
		4. National Fenestration Rating Council (NFRC):
			1. NFRC 100A Procedure for Determining Fenestration Attachment Product U-factors.
			2. NFRC 200A Procedure for Determining Fenestration Attachment Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence.
			3. NFRC 500 Procedure for Determining Fenestration Product Condensation Resistance Values.
		5. US Green Building Council (USGBC):
			1. LEED NC Version 2.2, LEED (Leadership in Energy and Environmental Design): Green Building Rating System Reference Package For New Construction and Major Renovations.
	1. SUBMITTALS
		1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
		2. Product Data:
			1. Manufacturer's data sheets on each product to be used.
			2. Preparation instructions and recommendations.
			3. Storage and handling requirements and recommendations.
			4. Manufacturer's standard head, jamb, and sill details.
			5. Installation methods.
				1. Submit manufacturer's written installation instructions.
			6. Certified test laboratory reports to show compliance with requirements.
				1. Windows with sizes exceeding gateway sizes do not qualify under these tests.
				2. Windows manufactured with configurations different from the tested configurations do not qualify under these tests.
				3. Windows can be tested for performance outside the already tested gateway sizes.
				4. Windows with hardware not referenced on the test reports do not qualify under these tests.

\*\* NOTE TO SPECIFIER \*\* Delete if not applicable to product type.

* + 1. Verification Samples: Two representative units of each type, size, pattern, and color.
			1. Window Corner Section: Submit 8 x 8 inch (203 x 203 mm) minimum sample of frame for each glazing type specified sed to verify construction, corner joint, frame finish, and color.
				1. Quantity: 5.
			2. Insulated Glazing; 12 x 12 inch (305 x 305 mm).
			3. Finish: AAMA 611-98 Anodized Architectural Coatings: Class 1 Anodized.
			4. Finish: AAMA 2605 for Organic Coatings on Aluminum Extrusions: Kynar.
		2. Shop Drawings: Shop Drawings: For each installation and for special components not dimensioned or detailed in manufacturer's product data.
			1. Details of construction and installation including but not limited to window location chart, window schedule, size, muntin type and design, sections and details of multiple window assemblies, hardware, glazing details, frame type, STC, glass types, screens, and handing operation. Show locations.
		3. Manufacturer's written instructions, including:
			1. Delivery, storage, and handling recommendations.
			2. Preparation and installation recommendations.
		4. Installer's Experience: Submit verification of evidence of similar work of this section.
		5. Warranty: Fully executed, issued in Owner's name, and registered with manufacturer, including:
			1. Manufacturer's 1 year warranty, from date of substantial completion, covering defects in materials.

\*\* NOTE TO SPECIFIER \*\* Delete if LEED is not required.

* + 1. Sustainable Design (LEED) Submittals:
			1. LEED Submittals: In accordance with the "LEED Requirements" specification in Division 1.
			2. Submit verification for items when appropriate as follows:
				1. MR 5 Regional Materials.
	1. QUALITY ASSURANCE
		1. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with a minimum ten years documented experience.
			1. Manufacturer must be certified through PPG Certified Window and Door Fabricator Program.
		2. Installer Qualifications: Company specializing in performing Work of this section with minimum three years documented experience with projects of similar scope and complexity.
		3. Source Limitations: Provide each type of product from a single manufacturing source to ensure uniformity.

\*\* NOTE TO SPECIFIER \*\* Include mock-up if the project size or quality warrant the expense. The following is one example of how a mock-up on might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.

* + 1. Mock-Up: Construct a mock-up with actual materials in sufficient time for Architect's review and to not delay construction progress. Locate mock-up as acceptable to Architect and provide temporary foundations and support.
			1. Intent of mock-up is to demonstrate quality of workmanship and visual appearance.
			2. If mock-up is not acceptable, rebuild mock-up until satisfactory results are achieved.
			3. Retain mock-up during construction as a standard for comparison with completed work.
			4. Do not alter or remove mock-up until work is completed or removal is authorized.
			5. Incorporation: Mock-up may be incorporated into final construction upon Owner's and Architect's approval.
	1. PRE-INSTALLATION CONFERENCE
		1. 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.
	2. DELIVERY, STORAGE, AND HANDLING
		1. Delivery of Materials:
			1. In accordance with manufacturer's written instructions.
			2. In manufacturer's original, unopened, undamaged containers or packaging with identification labels intact, product name and manufacturer clearly visible.
			3. In sizes to suit project.
		2. Material Storage: Protect from exposure to harmful environmental conditions. Keep clean, dry, frost-free and at manufacturer's recommended temperature and humidity levels.
		3. Handling:
			1. Exercise care during off-loading and installation to avoid damage and marring of finishes.
			2. Handle in a manner to distribute material load evenly to prevent twisting, bending, and cracking of windows, doors, and associated parts.
			3. Replace any products damaged during handling with new materials.
	3. PROJECT CONDITIONS
		1. 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.
	4. WARRANTY
		1. Manufacturer's Warranty.
			1. Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official.
			2. Manufacturer's warranty is in addition to and not intended to limit other rights.
			3. Replace any products damaged during handling.
1. PRODUCTS
	1. MANUFACTURERS
		1. Acceptable Manufacturer: All Weather Architectural Aluminum, which is located at: 777 Aldridge Rd.; Vacaville, CA 95688; Toll Free Tel: 800-680-5800; Tel: 707-452-1600; Fax: 707-452-1616 ; Email: request info (info@allweatheraa.com); Web: <https://www.allweatheraa.com>

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
		2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.
	1. SLIDING WINDOWS
		1. Basis of Design: Series 6200 Thermal Break Horizontal Sliding Window System as manufactured by All Weather’s Architectural Aluminum. An energy efficient window design. Narrow sightlines and contemporary aesthetic. Commercially and acoustically rated. Meets Title 24 compliance using the Prescriptive Method. For residential, multi-family and commercial applications. for buildings 12 stories and under.
		2. Performance and Design Requirements:

\*\* NOTE TO SPECIFIER \*\* All Weather has comprehensive files containing all historical testing. Each of the tests in the proceeding list are current, however, our archived testing may be more specific for your particular project and will be provided upon request.

* + - 1. Units ship with frame assembled and glazed panels installed.
			2. Panel Size Range (W x H): 18 to 48 x 18 to 84 inches (457 x 1219 to 457 x 2134 mm)
			3. Maximum Area: 28 sq ft (2.6 sq m). Maximum Weight: 180 lbs (81.64) kg.
			4. Maximum Casement: 96 x 84 inches (2438 x 2134 mm). Configuration: XO.
			5. Tested to AAMA/WDMA/CSA101/1.5.2/A440-05 standards as listed below:
				1. Series 6200 Thermal Break Horizontal Sliding Window XO – CW35
				2. Series 6200 Thermal Break Horizontal Sliding Window XOX– LC30
			6. Uniform Load Deflection and Uniform Load Structural to ASTM E330.
			7. ASTM E283, Air Leakage: 1.57 psf (0.075 kPa): 0.3 cfm per sq ft maximum.
			8. ASTM E547, Water Penetration: at 4.59 psf (0.22 kPa): No leakage.
			9. ASTM F842, Forced Entry Resistance:
			10. U-Value: \_\_\_\_.
			11. Solar Heat Gain Coefficient (SHGC): \_\_\_\_.
			12. Acoustical Performance: STC: \_\_\_\_.
			13. Acoustical Testing:

\*\* NOTE TO SPECIFIER \*\* Acoustical testing on several window configurations and glass make-ups have been performed beyond the configurations shown and can be provided upon request.

* + - * 1. XO Configuration 1/4 inch (6.35 mm) over 3/16 inch (4.75 mm) with 1 inch (25.4 mm) OA:

STC: 34 / OITC: 28.

* + - * 1. XO Configuration 1/4 inch (6.35 mm) over 5/16 inch (7.94 mm) Laminate with 1 inch (25 mm) OA:

STC: 33 / OITC: 29.

* + - * 1. XO Configuration 3/16 inch (4.75 mm) over 5/16 inch (7.94 mm) Laminate with 1 inch (25.4 mm) OA:

STC: 35 / OITC: 30.

* + - 1. Thermal Testing:
				1. Series 6200 horizontal sliding window has been simulated and tested according to NFRC 100/200/500.

U-factor: As low as 0.26 with triple glaze; 1-1/4 inch (31.75 mm) OA.

U-Factor: As low as 0.32 with dual glaze; 1 inch (25.4 mm) OA.

* + 1. Frame: 3-1/8 inch (79 mm) extruded aluminum. Frame Type: Nail on.
			1. Aluminum Type: 6063 age hardened to T-6 rating.

\*\* NOTE TO SPECIFIER \*\* Delete frame finish option not required.

* + - 1. Frame Finish: Aluminum to AA DAF-45. Class 1, Clear anodized.
			2. Frame Finish: Aluminum to AA DAF-45. Class 1, Dark Bronze anodized.
			3. Corners: Mitered.
		1. Thermal Break and Condensation Resistance: The frame and panels use the pour-and-debridge method.
			1. Profiles are extruded as a single extrusion with a cavity for the thermal break material.
			2. Cavity: Filled with two part polyurethane having a low coefficient of thermal conductivity.
			3. After Polyurethane Cures: A saw is used to debridge the profile by ripping the aluminum web of the cavity.
		2. Glazing: Insulated glass units and accessories to yield a wide range of energy performance as needed in accordance with the appropriate glazing specifications in Division 08.
			1. Glazing Thickness: 1 inch (25.4 mm) OA insulated glass.
			2. Glazing Thickness: 1-1/4 inch (31.7 mm) OA insulated glass.
			3. Dimensions: See Drawings for dimensions and configurations.
		3. Hardware:
			1. Lock: Amesbury Truth Positive Action Lock (PAL). Finish: Bronze.
			2. Lock: Amesbury Truth Positive Action Lock (PAL). Finish: Satin Nickel.
			3. Rollers: Fapim Hockey Rollers. Single or double configuration depending upon panel weight. Hockey Roller Weight Capacity: 180 lbs (86.65 kg).
			4. Recessed Finger Pull: Low profile. Modern aesthetic. Contemporary style. Finish: Silver.
			5. Recessed Finger Pull: Low profile. Modern aesthetic. Contemporary style. Finish: Dark Bronze.
		4. Screens: Extruded aluminum flat screen. Made with extruded screen channel, mitered corners, and an internal corner key. Factory drilled and tapped to receive screen attachment hardware.
			1. Finish: Match window frames.
		5. Weatherstripping:
			1. Pile weather-stripping.
			2. Triple fin and Quiet fin technology.
		6. Construction:
			1. Frame Corners: Vent and fixed panels are square cut and screwed together for structural integrity.
			2. Muntin and Other Intermediate Bars: Attach to their cross joints and abutting sash sections.
			3. Frame Sill: Contains weep provisions. All glazed surfaces to be marine glazed.
1. EXECUTION
	1. EXAMINATION
		1. All windows must be installed in prepared openings in accordance with AAMA recommendations and the below-listed manufacturers’ recommendations.
		2. Verification of Conditions: Verify that conditions of substrate previously installed under other Sections or Contracts are acceptable for aluminum window installation in accordance with manufacturer's written recommendations.
			1. Visually inspect substrate.
			2. Verify openings are dimensionally correct and within allowable tolerances, and substrates are plumb, level, and clean.
			3. Verify in the presence of the Architect that anchoring surface is in accordance with approved shop drawings.
			4. Inform Architect of unacceptable conditions immediately upon discovery.
			5. Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Architect.
			6. Starting window installation implies substrate conditions are acceptable for Work of this Section.
	2. PREPARATION
		1. Clean surfaces thoroughly prior to installation.
		2. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
		3. Installers: Use only installers who have training and experience of similar work of this section.
	3. INSTALLATION
		1. Install aluminum windows in accordance with manufacturer's written recommendations, approved submittals, and in proper relationship with adjacent construction.
			1. If shop drawings are required, please refer to approved shop drawings for installation.
			2. Ensure operable windows are closed and locked during installation.
		2. Each unit must be installed level, plumb and square with a 0.5 inch clearance on the jambs and the header of the door.
		3. Do not set items on the sill or use it for any other purpose.
		4. For nail-on applications, a bead of caulking material should be applied to the inside nail-on fin just before installation to insure a water-tight seal between the building and the window.
		5. Any attachment screws or bolts should be sealed during the process of installation.
		6. After installation is completed, building paper and stucco wire, if a stucco application, should overlap the window nail-on flange.
		7. Sealants: Apply sealant in accordance with manufacturer's written guidelines.

\*\* NOTE TO SPECIFIER \*\* Delete article or paragraphs in the article not required.

* 1. FIELD QUALITY CONTROL
		1. Comply with AAMA 502-12.
		2. Field Testing Performance: To AAMA 502-12, Section 1.1.
		3. Proper Execution of Field Test:
			1. Ensure window is plumb, level, and square.
				1. If conditions fall outside the plus or minus 1/8 inch (3 mm) tolerance, do not test the product.
				2. Test at a pressure greater than 2/3 the fenestration product laboratory test pressure.
		4. Qualification of Agency Performing Test: Ensure AAMA accreditation by independent testing agency.

\*\* NOTE TO SPECIFIER \*\* Edit the following paragraph to meet project requirements. Coordinate site visits with manufacturer or delete the paragraph and all subparagraphs if site visits are not required.

* + 1. Site Visits: Schedule to review work at stages listed:
			1. After delivery and storage of aluminum windows and when preparatory work on which work of this section depends is complete, but before application begins.
			2. Twice during progress of work at 25 and 60 percent complete.
			3. Upon completion of work, after cleaning is carried out.
			4. Obtain reports within three days of review and submit immediately to Architect.
	1. CLEANING AND PROTECTION
		1. Clean sealants, caulking and other materials from surfaces, including adjacent work.
		2. Clean frames, casings and glass using materials and methods recommended by the manufacturer.
			1. Clean using methods which comply with AAMA 609.
			2. Clean glass using methods which comply with GANA 01-0300.
		3. Protect installed products until completion of project.
		4. Protect installed aluminum windows from damage during construction.
		5. Repair or replace adjacent materials damaged by installation of aluminum window.
		6. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION