ALUMICOR GUIDE NOTE: This master specification section includes ALUMICOR GUIDE NOTEs identified as “ALUMICOR GUIDE NOTE” for information purposes and to assist the specification writer in making appropriate decisions. The ALUMICOR GUIDE NOTE always immediately precedes the text to which it is referring. The section serves as a guideline only and should be edited with deletions and additions to meet specific project requirements.

ALUMICOR GUIDE NOTE: This specification section follows the recommendations of the Construction Specifications Canada, Manual of Practice including MasterFormat, SectionFormat, and PageFormat. Optional text is indicated by square brackets [ ]; delete the optional text including the brackets in the final copy of the specification. Delete the ALUMICOR GUIDE NOTEs in the final copy of the specification. Trade/brand names with appropriate product model numbers, styles and types are used in ALUMICOR GUIDE NOTEs and in the specification text Article or Paragraph titled Acceptable Material. The Section is written for the Canadian industry with units of measurement shown in SI Metric and Imperial measurement following in parentheses.

ALUMICOR GUIDE NOTE: This Section is based upon Alumicor Ltd., 2900AW Trueline.

1 GENERAL

1.01 SUMMARY OF WORK

.1 This Section specifies thermally broken, rain screen designed, flush front non-operable aluminum framed windows and accessories.

1.02 RELATED REQUIREMENTS

ALUMICOR GUIDE NOTE: Include in this Paragraph only those sections and documents that directly affect the work of this section. If a reader of this section could reasonably expect to find a product or component specified in this section, but it is actually specified elsewhere, then the related section number(s) should be listed in the Paragraph below. Do not include Division 00 Documents or Division 01 Sections since it is assumed that all technical sections are related to all project Division 00 Documents and Division 01 Sections to some degree. Refer to other documents with caution since referencing them may cause them to be considered a legal part of the Contract. Edit the following paragraphs to suit specific project conditions.

.1 Section [07 26 00 - Vapour Retarders].

.2 Section [07 27 00 - Air Barriers].

.3 Section [07 62 00 - Metal Flashing and Trim: Flashings].

.4 Section [07 84 00 - Firestopping: Firestopping insulation].

.5 Section [07 92 00 - Joint Sealing].

.6 Section [08 80 50 - Glazing: Insulating glass units].

ALUMICOR GUIDE NOTE: In the following Article, include only those reference standards which appear in the finished version of the project specification.

1.03 REFERENCE STANDARDS

.1 Aluminum Association (AA)

.1 DAF 45 [2003], Designation System For Aluminum Finishes.

.2 American Architectural Manufacturers Association (AAMA).

.1 AAMA-2603-[2002], Voluntary Specification, Performance Requirements and

Test Procedures for Pigmented Organic Coatings on Aluminum Extrusions and Panels.

.3 AAMA-2604-[2005], Voluntary Specification, Performance Requirements and

Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels.

.4 AAMA-2605-[2005], Voluntary Specification, Performance Requirements and

Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels.

.1 AAMA CW-10-[2004], Care and Handling of Architectural Aluminum From Shop to Site.

.3 ASTM International (ASTM).

.1 ASTM B209-[07], Specification for Aluminum and Aluminum-Alloy Sheet and Plate.

.2 ASTM B221-[08], Specification for Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.

.3 ASTM D2240 – [05], Standard Test Method for Rubber Property—Durometer Hardness.

.4 Canada Green Building Council (CaGBC).

.1 LEED® Canada-NC Version 1.0-[2004], LEED (Leadership in Energy and Environmental Design): Green Building Rating System Reference Package For New Construction and Major Renovations including Addendum 2007.

.5 Canadian General Standards Board (CGSB).

.1 CAN/CGSB-12.8-[97], Insulating Glass Units.

.2 CAN/CGSB-12.20-[M89], Structural Design of Glass for Buildings.

.3 CAN/CGSB-19.13-[M87], Sealing Compound, One-Component, Elastomeric, Chemical

Curing.

.6 CSA International (CSA)

.2 CAN/CSA-S157‑[2005], Strength Design in Aluminum.

.3 CAN/CSA-S136–[2007], North American Specification for the Design of Cold-Form Steel Structural Members.

.4 CAN/CSA W59.2‑[M1991(R2003)], Welded Aluminum Construction.

.7 NAFS – AAMA/WDMA/CSA 101/I.S.2/A440

.8 Environmental Choice Program (ECP)

.1 CCD‑45‑[1995], Sealants and Caulking Compounds.

.9 Underwriter’s Laboratories of Canada (ULC)

.1 CAN/ULC-S710.1 [2005], Standard for Thermal Insulation – Bead-Applied One Component Polyurethane Air Sealant Foam, Part 1: Materials Standard for Thermal Insulation - Bead - Applied One Component Polyurethane Air Sealant Foam, Part 1: Materials.

1.04 ADMINISTRATIVE REQUIREMENTS

.1 Co-ordination: Co-ordinate work of this Section with work of other trades for proper time and sequence to avoid construction delays.

.2 Pre-installation Meeting: Convene pre-installation meeting after Award of Contract and one week prior to commencing work of this Section to verify project requirements, substrate conditions and coordination with other building sub-trades, and to review manufacturer’s written installation instructions.

.1 Comply with Section [01 31 19 ‑ Project Meetings] and co-ordinate with other similar pre‑installation meetings.

.2 Notify attendees 2 weeks prior to meeting and ensure meeting attendees include as minimum:

.1 Owner;

.2 Consultant;

.3 Glazing subcontractor;

.4 Manufacturer’s Technical Representative.

.3 Ensure meeting agenda includes review of methods and procedures related to aluminum window installation including co-ordination with related work.

.4 Record meeting proceedings including corrective measures and other actions required to ensure successful completion of work and distribute to each attendee within 1 week of meeting.

ALUMICOR GUIDE NOTE: Article below includes submittal of relevant data to be supplied by Contractor.

1.05 ACTION AND INFORMATIONAL SUBMITTALS

.1 Make submittals in accordance with Contract Conditions and Section [01 33 00 ‑ Submittal Procedures].

.2 Product Data: Submit product data including manufacturer’s literature for aluminum window frames, glazing, components and accessories, indicating compliance with specified requirements and material characteristics.

.1 Submit list on window manufacturer’s letterhead of materials, components and accessories to be incorporated into Work.

.2 Include product names, types and series numbers.

.3 Include contact information for manufacturer and their representative for this Project.

.3 Shop Drawings: Submit drawings stamped and signed by Professional Engineer registered or licensed in [Province] [Territory] of [\_\_\_\_\_], Canada.

.1 Indicate materials and details in full size scale for head, jamb and sill, profiles of components, interior and exterior trim, junction between combination units, elevations of unit, anchorage details, description of related components and exposed finishes, fasteners, and caulking.

.2 Indicate location of manufacturer's nameplates.

.4 Samples:

.1 Submit duplicate 300 x 300 mm (12 x 12 inches) sample sections showing prefinished aluminum surface, finish, colour and texture, and including frame corner details

.2 Submit duplicate 300 x 300 mm (12 x 12 inches) sample sections of insulating glass unit showing glazing materials and edge and corner details.

.5 Thermal Performance: Submit verification that Insulating Glass Units used meet [Usi] [(U)] centre of glass values specified.

.6 Test Reports:

.1 Submit test reports showing compliance with specified performance characteristics and physical properties including air and water infiltration.

.7 Field Reports: Submit manufacturer’s field reports within 3 days of manufacturer representative’s site visit and inspection.

.8 Sustainable Design (LEED).

.1 LEED Submittals: In accordance with Section [01 35 21 – LEED Requirements]

.9 Installer Qualifications:

.1 Submit letter verifying installer’s experience with work similar to work of this Section.

1.06 CLOSEOUT SUBMITTALS

.1 Operation and Maintenance Data: Supply maintenance data for windows for incorporation into manual specified in Section [01 78 00 ‑ Closeout Submittals].

ALUMICOR GUIDE NOTE: If LEED is not a part of the project delete the following Paragraph in its entirety.

.2 Sustainable Design Closeout Documentation (LEED).

.1 Provide calculations on end-of-project recycling rates, salvage rates, and landfill rates for work of this Section demonstrating percentage of construction wastes which were recycled.

.2 Submit verification from recycling facility showing receipt of materials.

.3 Record Documentation: In accordance with Section [01 78 00 ‑ Closeout Submittals].

.1 List materials used in windows work.

.2 Warranty: Submit warranty documents specified.

1.07 QUALITY ASSURANCE

.1 Sustainability Standards Certification (LEED).

.1 LEED Canada-NC Version 1.0 submittals: in accordance with Section [01 35 21 ‑ LEED Requirements].

ALUMICOR GUIDE NOTE: The following Article although not part of Quality Assurance, can be used to enhance the quality of materials by ensuring that they are delivered and handled properly at the work site.

1.08 DELIVERY STORAGE AND HANDLING

.1 Delivery and Acceptance Requirements:

.1 Deliver material in accordance with Section 01 61 00 ‑ Common Product Requirements.

.2 Deliver aluminum windows in manufacturers original packaging with identification labels intact and in sizes to suit project.

.3 Brace frames to maintain squareness and rigidity during shipment.

.2 Material Handling: To AAMA CW-10.

.3 Storage and Handling Requirements: Store materials off ground and protected from exposure to harmful weather conditions and at temperature conditions recommended by manufacturer.

.1 Material storage: To AAMA CW-10.

.4 Packaging Waste Management:

ALUMICOR GUIDE NOTE: For smaller projects that do not have a separate Section for waste management and disposal, delete the following paragraph.

.1 Separate and recycle waste packaging materials in accordance with Section [01 74 19 ‑ Construction Waste Management and Disposal].

.2 Remove waste packaging materials from site and dispose of packaging materials at appropriate recycling facilities.

ALUMICOR GUIDE NOTE: For smaller projects that do not have a Waste Management Plan, delete the option referring to a Waste management Plan.

.3 Collect and separate for disposal paper and plastic material in appropriate on-site storage containers for recycling[ in accordance with Waste Management Plan].

1.09 WARRANTY

.1 Project Warranty: Refer to Contract Conditions for project warranty provisions.

.2 Manufacturer’s warranty: Submit, for Owner’s acceptance, manufacturer’s standard warranty document executed by authorized company official. Manufacturer’s warranty is in addition to and not intended to limit other rights Owner may have under Contract Conditions.

ALUMICOR GUIDE NOTE: Coordinate article below with manufacturer’s warranty requirements.

.3 Warranty period: [1] [2] years commencing on Date of Substantial Performance of Work.

2 PRODUCTS

2.01 MANUFACTURER

.1 Manufacturer: Alumicor Limited, 290 Humberline Drive, Toronto, Ontario, Canada M9W 5S2, Phone: (416) 745-4222 or (877) ALUMICOR, e-mail: **info@Alumicor.com**, URL: [**www.Alumicor.com**](http://www.Alumicor.com).

2.02 DESCRIPTION

.1 Thermally broken, rain screened, aluminum framed, windows with double [triple] glazed insulating glass units and flush front design.

2.03 DESIGN CRITERIA

.1 Design aluminum components to CAN/CSA S157.

.2 Window Classification: To NAFS – AAMA/WDMA/CSA 101/I.S.2/A440-11 & CSA A440S1-17

.1 Performance Class and Grade: AW-PG80-FW

.2 Air tightness: <0.5 L/s▪m2 @ 300Pa- Canadian level: Fixed, [<0.1 cfm/ft2 @ 6.27psf]

.2 Water tightness: 720Pa [15.03psf]

.3 Wind load resistance: 3840Pa [80.2psf]

.4 Forced entry resistance test: Grade 40.

.3 Thermal Transmittance and Condensation Resistance Performance Requirements

.1 Thermal transmittance (U-factor) for window system shall not exceed [\_\_\_\_] BTU/hr-ft2-OF as determined in accordance with NFRC 100.

|  |  |
| --- | --- |
|  | **SYSTEM U-FACTOR** (BTU/hr-ft2-OF) [W/m²•K]  |
|  **CENTER OF GLASS U-FACTOR** (BTU/hr-ft2-OF)[W/m²•K]  | **2900AW Trueline****1” [25mm] Glass** |
| ***aluminum spacer*** | ***warm edge spacer*** |
| **0.302** [1.715] |  **0.366** [2.078] | **0.353** [2.004] |
| **0.290** [1.647] | **0.357** [2.027] | **0.343** [1.948] |
| **0.280** [1.590] | **0.347** [1.970] | **0.333** [1.891] |
| **0.263** [1.493] | **0.334** [1.896] | **0.320** [1.817] |
| **0.240** [1.363] | **0.312** [1.772] | **0.299** [1.698] |
| **0.232** [1.317] | **0.304** [1.726] | **0.290** [1.647] |
| **0.198** [1.124] | **0.276** [1.567] | **0.262** [1.488] |
| **0.185** [1.050] | **0.264** [1.499] | **0.249** [1.414] |

|  |  |
| --- | --- |
|  | **SYSTEM U-FACTOR** (BTU/hr-ft2-OF) [W/m²•K]  |
|  **CENTER OF GLASS U-FACTOR** (BTU/hr-ft2-OF)[W/m²•K] | **2900AW Trueline****1 11/16” [43mm] Glass** |
| ***aluminum spacer*** | ***warm edge spacer*** |
| **0.285** [1.618] | **0.352** [1.999] | **0.339** [1.925] |
| **0.191** [1.084] | **0.273** [1.550] | **0.259** [1.471] |
| **0.165** [0.937] | **0.252** [1.431] | **0.237** [1.346] |
| **0.158** [0.897] | **0.246** [1.397] | **0.232** [1.317] |
| **0.148** [0.840] | **0.238** [1.351] | **0.223** [1.266] |
| **0.132** [0.749] | **0.224** [1.272] | **0.209** [1.187] |
| **0.128** [0.727] | **0.221** [1.255] | **0.206** [1.170] |
| **0.089** [0.505] | **0.206** [1.170] | **0.167** [0.948] |

.4 Solar Heat Gain Coefficient (SHGC) for the window area shall not exceed [\_\_\_\_] as determined in accordance with NFRC 200.

.5 Condensation Resistance Factor (CRF) shall meet or exceed [\_\_\_\_]CRFframe and \_\_\_\_]CRFglass as determined in accordance with AAMA 1503.

.6 Condensation Resistance Index (Temperature Index) shall meet or exceed [\_\_\_\_] as determined in accordance with CSA A440.2-19, Section 11.

|  |
| --- |
| **2900AW** |
| **GLASS TYPE** | **FRAME** | **GLASS** | **Temperature Index** |
| **1" [25mm] (dual glazed)** | **78** | **76** | **70** |
| **1 11/16" [43mm] (triple glazed)** | **84** | **85** | **77** |

2.04 Window MATERIALS

Alumicor Guide Note: Choose 108mm or 127mm deep frame for double glazed, 127mm or 146mm deep frame for triple glazed.

.1 Main Frame and glass stops: Extruded aluminum: To ASTM B221, 6063 alloy with T5 or T6 temper.

.1 Main Frame Depth: [108] [127] [146] mm [(4.25 inches)] [(5.00 inches)] [(5.75 inches)].

Alumicor Guide Note: Choose colours from manufacturer’s standard colour range.

.2 Interior colour: [\_\_\_\_\_\_].

.3 Exterior colour: [\_\_\_\_\_\_].

Alumicor Guide Note: Retain the following paragraph if insulating glass units are specified in another Section. Delete the paragraph if they are specified here.

.2 Insulating glass units: In accordance with Section [08 80 50 – Glazing].

Alumicor Guide Note: Retain the following paragraph if insulating glass units are specified here. Delete the paragraph if they are specified in another Section.

.3 Insulating glass units: To [CAN/CGSB-12.8], double [triple] glazed, hermetically sealed, argon filled insulating glass units with low conductance [black] [stainless steel] [non-metallic] warm edge spacer. Overall thickness [25.4mm (1.00 inches)] [43 mm (1 11/16 inches) ]

.1 Outer lite: [6] mm ([0.25] inches) [insert glass type].

Alumicor Guide Note: Retain the following paragraph if a triple glazed insulating glass unit is used. Delete the paragraph for double glazed units.

 .2 [Centre lite: [6] mm ([.25] inches) [insert glass type].

.3 Inner lite: [6] mm ([0.25] inches) [insert glass type].

ALUMICOR GUIDE NOTE: The U value for aluminum windows is totally dependent on the components of the insulating glass unit. Check the IGU manufacturer’s technical literature and consult with Alumicor technical representative before specifying the total system U value.

.4 Centre of glass thermal resistance: Usi [\_\_\_\_\_\_] (U [\_\_\_\_\_\_])].

.4 Thermal Break: Glass fibre reinforced polyamide porthole extrusion.

.5 Primary seal gasket: EPDM, 70 Durometer

.6 Rain screen gasket: EPDM, 70 Durometer

.7 Glass stop pressure gasket: EPDM, 70 Durometer

.8 Interior and Exterior Sills: [Sheet] [Extruded] aluminum to [ASTM B209], of type and size [as detailed] [to suit project conditions]; minimum [3] mm thick, complete with joint covers, jamb drip deflectors, chairs, anchors and anchoring devices.

2.05 fixed windows

.1 Acceptable Material: Alumicor Ltd., 2900AW Trueline with flush front design.

2.07 Window FABRICATION

.1 Fabricate windows to CAN/CSA A440/A440.1 and manufacturer’s instructions.

.1 Do glazing in accordance with Section [08 80 00 – Glazing]. Ensure proper installation of prime seal gasket whether shop or field glazed.

.2 Fabricate aluminum assemblies of extruded sections to sizes and profiles indicated.

.1 Ensure vertical and horizontal members are tubular extrusions designed for shear block and/or screw spline corner construction.

 .2 Provide drainage path from glazing cavity in accordance with rain screen design practices and manufacturer’s instructions to permit drainage of extraneous water to the exterior.

.3 Construct units square, plumb and free from distortion, waves, twists, buckles or other defects detrimental to performance or appearance.

.1 Brace frames to maintain squareness and rigidity during installation.

.4 Fabricate units square and true with tolerance of plus or minus 1.5 mm (0.06 inches) maximum for units with diagonal measurement of 1800 mm (6 feet) maximum and plus or minus 3 mm (0.125 inches) maximum for units with diagonal measurement greater than 1800 mm (6 feet).

.5 Accurately fit and secure joints and corners.

.1 Ensure joints are flush, hairline, [and weatherproof].

 .2 Seal joints and corners in accordance with manufacturer’s instructions

.6 Face dimensions detailed are maximum permissible sizes.

.7 Use only concealed tamperproof fasteners

.1 Where fasteners cannot be concealed, countersunk screws finished to match adjacent material may be used upon receipt of written approval from Consultant.

.8 Visible manufacturer’s labels are not permitted.

FINISHES

ALUMICOR GUIDE NOTE: Choose one of the following three paragraphs to specify the finish on exposed aluminum exterior surfaces.

.1 Exterior exposed aluminum surfaces: To [AAMA 2604, 2-coat, thermal setting enamel consisting of primer and topcoat] [AAMA 2605, 3-coat, thermal setting enamel consisting of primer, colour coat and clear coat] with [70] % minimum fluoropolymer resin and polvinyldiene fluoride (PVDF)], [0.025 mm (1 mil)] [0.03 mm (1.2 mil)] minimum total thickness coloured [\_\_\_\_\_\_].

ALUMICOR GUIDE NOTE: Duranar XL is a thicker more durable finish than Duranar. Some colours such as metallics are only available as Duranar XL finishes.

.1 Acceptable material; PPG Industries Inc., [Duranar] [Duranar XL].

ALUMICOR GUIDE NOTE: For Alumicor products, Class 1 is available in Clear, Champagne, Light Bronze and Black. Class II is only available as a Clear anodized finish.

.2 Exterior exposed aluminum surfaces: To AA DAF-45-M10C21A41, Architectural [Class I], [clear] anodized [18 µm (0.0007 inches)] minimum thickness coloured [\_\_\_\_\_\_].

.1 Acceptable material: Alumicor Ltd., Class I Anodic Finish.

.3 Exterior exposed aluminum surfaces: To AA DAF-45-M10C21A31, Architectural Class II, clear anodized [10 µm (0.0004 inches)] minimum thickness.

.1 Acceptable material: Alumicor Ltd., Class II Anodic Finish.

ALUMICOR GUIDE NOTE: Choose one of the following three paragraphs to specify the finish on exposed aluminum interior surfaces.

.4 Interior exposed aluminum surfaces: To [AAMA 2603, 1-coat pigmented organic thermal setting finish] [AAMA 2604, 2-coat, thermal setting enamel consisting of primer and topcoat with [70] % minimum fluoropolymer resin and polyvinylidene fluoride (PVDF)], [0.019 mm (0.75 mil)] [0.025 mm (1 mil)] minimum total thickness coloured [bronze].

ALUMICOR GUIDE NOTE: Duranar is a thicker more durable finish than Duracron, Duracron should not be used for exterior finishes. Some colours such as metallics are only available as Duranar XL finishes.

Acceptable material; PPG Industries Inc., [Duracron] [Duranar].

ALUMICOR GUIDE NOTE: For Alumicor products, Class 1 is available in Clear, Champagne, Light Bronze and Black. Class II is only available as a Clear anodized finish.

.5 Interior exposed aluminum surfaces: To AA DAF-45-M10C21[A41][A44], Architectural Class I, anodized [18 µm (0.0007 inches)] minimum thickness coloured [clear].

.1 Acceptable material: Alumicor Ltd., Class I Anodic Finish.

.6 Interior exposed aluminum surfaces: To AA DAF-45-M10C21A31, Architectural Class II, clear anodized [10 µm (0.0004 inches)] minimum thickness.

.1 Acceptable material: Alumicor Ltd., Class II Anodic Finish.

ALUMICOR GUIDE NOTE: Project design requirements will indicate need for having air barrier or vapour retarder installed and sealed to window frames.

2.09 Air barrier and vapour retarder

.1 Equip window frames with [factory] [site] installed [air barrier] [and] [vapour retarder] material for sealing to building [air barrier] [and] [vapour retarder] as follows:

.1 Material: identical to, or compatible with, building air barrier and vapour retarder materials to provide required air tightness and vapour diffusion control throughout exterior envelope assembly. Acceptable products: Tremco ProGlaze ETA or other approved by Consultant.

.2 Material width: adequate to provide required air tightness and vapour diffusion control to building [air barrier] [ and] [vapour retarder] from interior.

2.10 ACCESSORIES

ALUMICOR GUIDE NOTE: The application of caulking releases volatile organic compounds (VOCs) into the atmosphere. VOCs contribute to numerous environmental problems including the degradation of indoor air quality, the formation of ground level ozone and photochemical smog. The specification of caulking and sealants that have a low VOC content and reduced toxicity will help to protect the environment and reduce possible adverse health effects. The specification of products that are certified to meet the specification of the Environmental Choice Program CCD-45 will provide reduced environmental impacts. The use of lower VOC products contributes more towards LEED credits.

.1 Gasketing: To [CCD-45] Black EPDM gaskets.

.2 Setting Blocks: To [CCD-45] and [ASTM D2240], [neoprene] [EPDM] [silicone], [80 - 90] Shore A Durometer hardness. Manufacturer’s standard, notched to permit water drainage through the glazing cavity.

.3 Spacers: To [CCD-45] and [ASTM D2240], [neoprene] [EPDM] [silicone], [50 - 60] Shore A Durometer hardness.

.4 Sealant: To [CAN/CGSB-19.13], Class 40, one-component, cold-applied, non-sagging silicone.

.1 Acceptable material: Dow Corning 795.

.5 Sealant Bond Breaker: Open cell foam backer rod sized to suit project requirements.

.6 Flashings: [3] mm (0.125 inches) thick aluminum flashing to profiles indicated [and in accordance with Section 07 62 00 ‑ Sheet Metal Flashing and Trim].

2.11 PRODUCT SUBSTITUTIONS

.1 Substitutions: [In accordance with Section 01 23 13 - Product Substitution Procedures] [No substitutions permitted].

2. Ensure components come from one manufacturer.

3 EXECUTION

3.01 INSTALLERS

Alumicor Guide Note: Alumicor authorized installers use only Alumicor manufactured or approved components. Other installers may substitute other manufacturer’s materials.

.1 Use only [Alumicor authorized dealers for] [installers with 2 years minimum experience in work similar to] work of this Section.

3.02 EXAMINATION

.1 Verification of Conditions: Verify that conditions of substrate previously installed under other Sections or Contracts are acceptable for window installation in accordance with manufacturer’s written instructions.

.1 Visually inspect substrate in presence of Consultant.

.2 Inform Consultant of unacceptable conditions immediately upon discovery.

.3 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Consultant.

3.03 window INSTALLATION

.1 Install windows in accordance with manufacturer’s written instructions and to CAN/CSA A440/A440.1.

.2 Install perimeter prime seal gasket in accordance with manufacturer’s instructions, seal corners. Continuous wet seal heel beads are not permitted.

.2 Arrange components to prevent abrupt variation in colour.

.3 Co-ordinate attachment and seal of perimeter vapour retarder in accordance with Section [07 26 00 – Vapour Retarders].

.4 Co-ordinate attachment and seal of perimeter air barrier in accordance with Section [07 27 00 – Air Barriers].

3.04 Sill installation

.1 Install aluminum sills with uniform wash to exterior, level in length, straight in alignment with plumb upstands and faces.

.2 Cut sills [to fit] [[\_\_\_\_\_\_] mm ([\_\_\_\_\_\_] inches) longer than] window opening.

.3 Secure sills in place with anchoring devices located at ends [and joints of continuous sills] and evenly spaced [600] mm ([24] inches) on centre in between.

.4 Fasten [expansion joint cover plates] [and] [drip deflectors] with tamperproof, self tapping cadmium plated stainless steel screws.

.5 Maintain [6 to 9] mm ([0.25 to 0.375] inches) space between butt ends of continuous sills. For sills over 1200 mm in length, maintain 3 to 6 mm space at each end.

3.05 caulking

.1 Apply sealant in accordance with Section [07 92 00 - Joint Sealing]. Conceal sealant within window units except where exposed use is approved in writing by Consultant.

.2 Seal joints between windows and window sills with sealant. Bed sill expansion joint cover plates and drip deflectors in bedding compound.

.1 Caulk between sill upstand and window frame. Caulk butt joints in continuous sills.

3.06 FIELD QUALITY CONTROL

.1 Field Inspection: Coordinate field inspection in accordance with Section [01 45 00 ‑ Quality Control].

.2 Site Installation Tolerances: Install windows square and true with tolerance of plus or minus 1.5 mm (0.06 inches) maximum for units with diagonal measurement of 1800 mm (6 feet) maximum and plus or minus 3 mm (0.125 inches) maximum for units with diagonal measurement greater than 1800 mm (6 feet).

ALUMICOR GUIDE NOTE: Specify requirements if manufacturers are to provide field quality control with onsite personnel for instruction or supervision of product installation, application, erection or construction.Manufacturer field reports are included under PART 1, Action and Informational Submittals.

.3 Manufacturer’s Services:

ALUMICOR GUIDE NOTE: Use the following Paragraphs only when manufacturer’s technical support and assistance services are required to help assess the suitability of product application and the quality of the fabricated and/or installed components. Establish the nature, number and duration of the technical services to be provided by the manufacturer and specify below. Consult the manufacturer for services required. Delete if field services are not required.

.1 Coordinate manufacturer’s services with Section [01 45 00 - Quality Control].

.2 Submit to Consultant a written agreement from the manufacturer to perform the manufacturer’s services.

.3 Schedule manufacturer’s review of work procedures at stages listed:

1. Product Application: [1] off site review[s].
2. Fabrication and Handling: [1] review[s] at authorized installers fabrication facilities.
3. Installation: [3] site reviews at [commencement of Work] [50% completion of Work] [Upon completion of Work].

.4 Submit manufacturer’s written reports to Consultant describing:

.1 The scope of work requested.

.2 Date, time and location.

.3 Procedures performed.

.4 Observed or detected non-compliances or inconsistencies with manufacturers’ recommended instructions.

.5 Limitations or disclaimers regarding the procedures performed.

.6 Obtain reports within seven days of review and submit immediately to Consultant.

3.08 CLEANING

ALUMICOR GUIDE NOTE: For smaller projects that do not have a separate Division 01 Section for cleaning, delete the reference to Section 01 74 00 – Cleaning in the following two Paragraphs.

.1 Progress Cleaning: Perform cleanup as work progresses [in accordance with Section 01 74 00 ‑ Cleaning and Waste Management].

.1 Remove sealant and caulking drippings as work progresses.

.2 Leave work area clean end of each day.

.2 Final leaning: Upon completion, remove surplus materials, rubbish, tools, and equipment [in accordance with Section 01 74 00 – Cleaning and Waste Management].

.3 Waste Management:

.1 Co-ordinate recycling of waste materials with 01 74 19 ‑ Construction Waste Management and Disposal.

.2 Collect recyclable waste and dispose of or recycle field generated construction waste created during construction or final cleaning related to work of this Section.

.3 Remove recycling containers and bins from site and dispose of materials at appropriate facility.

3.09 PROTECTION

.1 Protect installed windows and components from damage during construction.

.2 Repair damage to adjacent materials caused by aluminum window installation.

END OF SECTION 08 51 13 - Aluminum (Fixed) Windows