

PART 1 - GENERAL

1.1 RELATED  
SECTIONS

- .1 Section 01 33 00 - Submittal Procedures.
- .2 Section 01 47 15 - Sustainable Requirements:  
Construction.
- .3 Section 01 45 00 - Quality Control.
- .4 Section 01 61 00 - Common Product  
Requirements
- .5 Section 01 74 21 - Construction / Demolition  
Waste Managment System.
- .6 Section 01 78 00 - Closeout Submittals.

1.2 REFERENCES

- .1 The Aluminum Association, Inc.
    - .1 AA DAF-45-2003, Designation system for  
Aluminum Finishes - 9th Edition.
  - .2 American Society for Testing and Materials  
International (ASTM)
    - .1 ASTM D 1784-06a, Standard Specification  
for Rigid Poly (Vinyl Chloride) (PVC)  
Compounds and Chlorinated Poly (Vinyl  
Chloride) (CPVC) Compounds.
  - .3 Canada Green Building Council (CaGBC): LEED  
Green Building Rating system for New  
Construction, LEED Canada NC, latest edition  
plus Addenda.
  - .4 National Fire Protection Association (NFPA)
    - .1 NFPA 701-2004: Standard Methods of Fire  
Tests for Flame Propagation of Textiles and  
Films.
  - .5 Underwriters' Laboratories of Canada (ULC)
    - .1 CAN/ULC-S109-03, Flame Tests of Flame  
Fabrics and Fibres.
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1.3 DESIGN REQUIREMENTS

- .1 Design roller window shades to following requirements:
  - .1 Allow replacement of wear susceptible parts by user or the manufacturer.
  - .2 Guarantee of at least five years of available replacement parts following discontinued products manufacturer.
  - .3 Provide instructions for replacing or repairing worn parts, including inventory numbers for parts and procedures for ordering replacement parts.
  - .4 Program allowing for the refurbishing or return of used roller window shades.
  - .5 Permit disassembly of components in order to permit recycling of materials where recycling markets exist.
  - .6 Include stamps on all major plastic components indicating composition code to facilitate recycling efforts.

1.4 PERFORMANCE REQUIREMENTS

- .1 Fire performance characteristics: provide shade material tested in accordance with NFPA 701 and CAN/ULC-S109.

1.5 SUBMITTALS

- .1 Provide submittals in accordance with Section 01330 - Submittal Procedures
  - .2 Product data:
    - .1 Submit manufacturer's printed product literature and datasheet and include product characteristics, performance criteria, physical size, finish and limitations.
  - .3 Shop drawings: submit drawings as follows:
    - .1 Indicate dimensions in relation to window jambs, operator details, top and bottom rail, conditions between adjacent blinds, anchorage details, hardware and accessories, details, connections and required clearances.
  - .4 Samples:
    - .1 Submit one representative working sample of each type roller shade.
    - .2 Submit duplicate samples of manufacturer's standard colours, patterns and
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- 1.5 SUBMITTALS  
(Cont'd)
- .4 Samples:(Cont'd)  
.2 (Cont'd)  
textures of specified fabric for selection by Consultant.  
.3 After approval samples will be returned for incorporation in the Work.
- .5 Quality control submittals: submit following in accordance with Section 01 45 00 - Quality Control.  
.1 Manufacturer's Instructions: submit manufacturer's installation instructions and special handling criteria, installation sequence and cleaning procedures.
- .6 Closeout Submittals:  
.1 Provide operation and maintenance data for roller window shades for incorporation into manual specified inSection 01 78 00  
  
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Closeout Submittals .
- 1.6 DELIVERY,  
STORAGE AND  
HANDLING
- .1 Packing, shipping, handling and unloading:  
.1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements.  
.2 Deliver, store and handle materials in accordance with manufacturer's written instructions.
- .2 Waste Management and Disposal:  
.1 Separate waste materials for recycling in accordance with Section 01 74 21 - Construction / Demolition Waste Managment System.
- 1.7 EXTENT
- .1 Manually operated window shades for exterior windows, as per following specifications.
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PART 2 - PRODUCTS

2.1 COMPONENTS

- .1 Manually operated, chain driven, roller shade system, consisting of sprocket and spring brake mechanism with retainer cap permitting infinite positioning of the shade. Roller window shades shall consist of a total system of manual roller shades, mounted on the underside of bulkhead at window head structure and to extend from centre of mullion to centre of mullion or adjacent surface, complete with sunshade fabric and extruded aluminum valence/facia.
  - .2 Head rail: extruded aluminum roller tube complete with internal fins for stability, 1-3/4" (44 mm) diameter to permit maximum span without deflection. Mounting brackets to allow wall or ceiling attachment.
  - .3 Operating chain shall be No. 10 (4.5 x 6) qualified heavy duty stainless steel chain, 41 kg. load test, buffed finish. Chain to be complete with chain hold-down bracket/retainer, clear colour.
  - .4 External hembar shall be extruded aluminum with recess to secure fabric without visible seams, available round profile. Complete with vinyl end caps, black colour.
  - .5 Valence / Facia shall be one piece extruded aluminum complete with matching end brackets.
  - .6 Shade Fabric:
    - .1 Woven, bi-directional vinyl-coated fibreglass yarn, 36% fibreglass, 64% PVC;
    - .2 Minimum weight: 12.1 oz/yd<sup>2</sup> (410 g/m<sup>2</sup>); minimum thickness: 26 mil (0.65 mm); "A" side and "B" side colouring; 3% openness;
    - .3 Flame retardant as per NFPA-701 Small / Large Scale Test Method #1, US California Title 19;
    - .4 Ultra-sonic cut along edges to prevent fraying;
    - .5 GreenGuard Indoor Air Quality Certified;
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- 2.1 COMPONENTS  
(Cont'd)
- .6 Shade Fabric:(Cont'd)
    - .6 Acceptable material: 3G Mermet T-series, colours as selected by Consultant from the manufacturer's full standard colour range.
    - .7 With exception of pull chain, all exposed aluminum to be clear anodized finish and all exposed steel components to be white powder coat paint finish.
    - .8 10 year conditional warranty on hardware.
    - .9 Acceptable material:
      - .1 205 by Urban Edge Shading Inc.
      - .2 Moduline by Sun Project.
      - .3 Teleshade by Mecho Shade Systems.
      - .4 Manual Teleshade by Solarfective Products Limited.

PART 3 - EXECUTION

- 3.1 MANUFACTURER'S  
INSTRUCTIONS
- .1 Compliance: comply with manufacturer's written recommendations, including product technical bulletins, handling, storage and installation instructions, and datasheets.

- 3.2 EXAMINATION
- .1 Examine substrate and conditions for installation. Notify the Consultant in writing prior to installation when the project conditions are unacceptable for shade installation. Beginning of installation means acceptance of substrate and project conditions.
  - .2 Site measurements to be taken prior to order being placed for window shades. All on site conditions that restrict the operation of the window blinds and/or differ from the original drawings and specifications are to be rectified under this contract.

- 3.3 INSTALLATION
- .1 Install roller window shades in accordance with manufacturer's instructions.
  - .2 Securely fasten to bulkhead. Use non-corrosive metal fasteners for installation, concealed in final assembly, with recommended hardware and accessories.
  - .3 Install window shades square, plumb, true to line with operable parts adjusted for correct function and smooth operation without binding.
  - .4 Install units within the following tolerances:
    - .1 Maximum variation of gap at window opening perimeter: 1/4 inch, per 8 feet (+/- 1/8 inch) of shade height.
    - .2 Maximum offset from level: 1/8 inch.
    - .3 Follow manufacturer's edge-clearance specifications for shades where the width-to-height (W:H) ratio exceeds 1:3.
  - .5 Install all window shades to underside of bulkhead immediately inside aluminum window mullion frames as indicated. Centre shades on mullions. Allow +/- 5/8" light gap on chain side, +/- 3/8" on idle side, between blinds or adjacent surfaces.
- 3.4 ADJUSTING
- .1 Adjust units for smooth operation. Adjust shade and fabric to hang flat without buckling or distortion. Replace any units or components which do not hang properly or operate smoothly.
- 3.5 CLEANING
- .1 Touch up damaged finishes and repair minor damage in order to eliminate evidence of repair. Remove and replace work that cannot be satisfactorily repaired.
  - .2 Clean exposed surfaces, including metal and fabric, using non-abrasive materials and methods recommended by the fabric manufacturer. Remove and replace work which cannot be satisfactorily cleaned.
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3.6 DEMONSTRATION .1 Demonstrate operation method and instruct Owner's personnel in the proper operation and maintenance of the window shade systems.

3.7 SCHEDULES .1 Install single roller shades at the interior side of screen of office 102.