

Part 1 General

1.1 REFERENCES

- .1 American Society for Testing and Materials International, (ASTM).
 - .1 ASTM B221, Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Shapes and Tubes.
 - .2 ASTM E648, Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source.
 - .3 ASTM D-2047-11, Standard Test Method for Static Coefficient of Friction of Polish-Coated Flooring Surfaces as Measured by the James Machine.
- .2 Canada Green Building Council (CaGBC)
 - .1 LEED Canada Reference Guide for Green Building Design and Construction 2009

1.2 SUBMITTALS

- .1 Provide manufacturer's product data in accordance with the requirements of Section 01 33 00 – Submittal Procedures.
- .2 Product data for each type of floor grid and frame specified, including manufacturer's specifications and installation instructions.
- .3 Shop drawings in sufficient detail showing layout of grid and frame specified including details indicating construction relative to materials, direction of traffic, spline locations, profiles, anchors and accessories.
- .4 Samples for verification purposes: Submit an assembled section of floor grid and frame members with selected tread insert showing each type of color for exposed floor grid, frame and accessories required.
- .5 Maintenance data in the form of manufacturer's printed instructions for cleaning and maintaining floor grids.
- .6 Flammability in accordance with ASTM E648, Class I, Critical Radiant Flux, minimum 0.45 watts/m².
- .7 Slip resistance in accordance with ASTM D-2047-96, Coefficient of Friction, minimum 0.60 for accessible routes.
- .8 Utilize superior structural stainless steel Type 304 components.

1.3 CLOSEOUT SUBMITTALS

- .1 In accordance with Section 01 77 00 – Closeout Procedures.
- .2 Manufacturer's Maintenance Instructions for field touch-up of finishes, cleaning, and maintenance.
- .3 Warranty Documentation: Submit sample of manufacturer's warranty.

1.4 DELIVERY, STORAGE, AND HANDLING

- .1 Deliver materials to the project Site ready for use and fabricated in as large sections and assemblies as practical, in unopened original factory packaging clearly labeled to identify manufacturer.
- .2 Deliver floor grid system to jobsite in new, clean, unopened crates of sufficient size and strength to protect materials during transit.
- .3 Store components in original containers in a clean, dry location.

1.5 PROJECT CONDITIONS

- .1 Field measurements:
 - .1 Check actual openings for grids by accurate field measurements before fabrication.
 - .2 Record actual measurements on final shop drawings.
 - .3 Coordinate fabrication schedule with construction progress to avoid delay of Work.
- .2 Coordinate frame installation with concrete construction to ensure recess and frame anchorage are accurate and that the base is level and flat. Defer frame installation until building enclosure is complete and related interior finish Work is in progress.

1.6 QUALITY ASSURANCE

- .1 Manufacturer shall be ISO 9001 Certified.
- .2 Manufacturer shall have a minimum of ten (10) years of experience in the fabrication of floor grid assemblies.
- .3 Installer: Firm with not less than three (3) years of successful experience in the installation of systems similar to those required by this project and acceptable to the manufacturer of the system.

1.7 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate and recycle waste materials in accordance with Section 01 74 19 – Waste Management and Disposal.
- .2 Place materials defined as hazardous or toxic waste in designated containers.
- .3 Ensure emptied containers are sealed and stored safely for disposal away for public.
- .4 Use chemical hardeners that are non-toxic, biodegradable and have zero or low VOC's.
- .5 Dispose of surplus chemical and finishing materials in accordance with Federal, Provincial and Municipal regulations.

1.8 WARRANTY

- .1 Submit manufacturer's warranty that materials furnished will perform as specified for a period of not less than two (2) years for floor grids for floor mats when installed in accordance with manufacturer's recommendations.

Part 2 Products

2.1 ACCEPTABLE MANUFACTURERS

- .1 Manufacturer: Construction Specialties Canada, 895 Lakefront Promenade, Mississauga, Ontario L5E 2C2 Canada, Phone: (888) 895-8955. (or approved equal in accordance with B7).

2.2 MATERIALS

- .1 Stainless steel - Type 304 stainless steel for surface wires and U-clip support structures.

2.3 FLOOR GRIDS

- .1 G6 GridLine, as manufactured by Construction Specialties Canada (or approved equal in accordance with B7), shall be manufactured from type 304 stainless steel in 5/8" (15.97 mm) depth. Wires to be .090" (2.28mm) x .150" (3.81mm) electronically welded and spaced .145 (3.68mm) apart.
- .2 Unit must withstand 500 lb./ wheel loads (load applied to a solid 5" x 2" wide polyurethane wheel, 1000 passes without damage).
- .3 Boot grates drained):
 - .1 Gridline G6 - 5/8" Gridline with Level Base Frame, Hidden Lock Downs, and Drain Pan.

2.4 GRID FRAMES

- .1 SSA-DP - Stainless Steel Angle Frame with drain pan shall be Type 304 stainless steel with 1/8" (3.2mm) exposed surface (or approved equal in accordance with B7). Drain pan to be .050" (1.3mm) Aluminum with general purpose PVC drain with stainless steel strainer.

2.5 LOCK DOWN MECHANISM

- .1 HL - Hidden Lock Down shall be a hidden device to secure the GridLine to the concrete surface; Made from Type 304 stainless steel.

2.6 SUBSTITUTIONS

- .1 Refer to Section B7 – Substitutes of Bid Opportunity 748-2013.

Part 3 Execution

3.1 EXAMINATION

- .1 Contractor shall verify that field measurements [and recessed dimensions] are as shown on shop drawings prior to releasing materials for fabrication by the manufacturer.
- .2 Installer shall examine conditions under which Work is to be performed and shall notify the Contractor in writing of unsatisfactory conditions. Installer shall not proceed until
- .3 Unsatisfactory conditions have been corrected in a manner acceptable to the installer.

3.2 INSTALLATION

- .1 Install floor grid system in accordance with the governing regulations, the industry standards applicable to the Work and the manufacturer's written installation instructions.
- .2 Work shall be aligned plumb, level, and, where required, flush with adjacent surfaces.
- .3 Set grid type at height recommended by manufacturer for most effective cleaning action.
- .4 Coordinate top of grid surfaces with bottom of doors that swing across to provide ample clearance between door and grid.
- .5 Anchors shall be spaced at 24 inches o.c.

3.3 ADJUSTING AND PROTECTION

- .1 Inspect system components for proper fit. Adjust, repair or replace components not conforming to requirements. Repair or replacement of an individual unit shall be as approved by the Contract Administrator.
- .2 Advise the Contractor of procedures required to protect the finished Work from damage during the remainder of the construction period.
- .3 Finished units shall be without damage. Units damaged during shipping or construction shall be repaired by the Contractor at the expense of the party damaging the material, in accordance with the Contract requirements.
- .4 Protect installation from damage by Work of other Sections. After installation of frame, install temporary filler of plywood in recesses and cover frames with plywood protective flooring.
- .5 Maintain protection until construction traffic has ended and project is near time of Substantial Completion.
- .6 Install grids near time of Substantial Completion.

END OF SECTION

Part 1 General

1.1 REFERENCES

- .1 National Fire Protection Association (NFPA)
 - .1 NFPA 701: Standard Methods of Fire Tests for Flame Resistant Textiles and Films.
- .2 Canada Green Building Council (CaGBC)
 - .1 LEED Canada Reference Guide for Green Building Design and Construction 2009

1.2 SUBMITTALS

- .1 Submit for approval. A sample shade, installed where directed, fully representing the shades to be provided. Submit samples of fabrics and finish colours for selection and approval.
- .2 Fire-Performance Characteristics: Provide shade material tested in accordance with NFPA 701 - Vertical-Burn Test and rated "PASS". AND CAN USC 109.

1.3 QUALITY ASSURANCE

- .1 Qualifications: Shade systems specified in this Section shall be provided by one manufacturer who takes full responsibility for design, engineering and installation.

1.4 DELIVERY, STORAGE AND HANDLING

- .1 All materials shall be free of damage when delivered to the Site. Protect all Work with suitable heavy wrapping before delivery to the Site. Maintain protection until final clean up.
- .2 Store parts in a designed area to permit natural ventilation over their finished surfaces.
- .3 Protect the Work of this Section from damage resulting from the Work of other Sections.

1.5 MAINTENANCE

- .1 Submit maintenance and operating instructions, detailing the care, maintenance and cleaning of fabric.

1.6 SITE CONDITIONS

- .1 Check dimensions at the Site before fabrication commences, and report to Contract Administrator in writing all discrepancies.
- .2 Where dimensions are not available before fabrication is commenced, the dimension required to be agreed upon between the various Sections concerned.

1.7 WARRANTY

- .1 Provide an extended warranty of the Work of this Section, covering the period for five (5) years beyond the expiration of the one year warranty period.
- .2 Promptly correct, at no expense to the the City, any defects or deficiencies which become apparent within Warranty Period.
- .3 Warranty shall provide for steadfastness of dye colours, fade-proof fabric, free from deterioration in any fashion due to exposure to sunlight, to be permanently flame-retardant and shrink.

1.8 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate and recycle waste materials in accordance with Section 01 74 19 – Waste Management and Disposal.
- .2 Place materials defined as hazardous or toxic waste in designated containers.
- .3 Ensure emptied containers are sealed and stored safely for disposal away for public.
- .4 Use chemical hardeners that are non-toxic, biodegradable and have zero or low VOC's.
- .5 Dispose of surplus chemical and finishing materials in accordance with Federal, Provincial and Municipal regulations.

Part 2 Products

2.1 ROLLER SHADE

- .1 Manufacturer: SunProject Inc. Concord, Ontario, Canada. Contact: Michael Bermudez, 1-888-836-6980 or (1-888) 836-6980 (or approved equal in accordance with B7).
- .2 Product: SunProject Model- DEKO Lite-Lift S-70 Cassette Roller System (or approved equal in accordance with B7).
- .3 Operation:
 - .1 Operating System: Lite-Lift mechanism
 - .1 The unit shall consist of a tension activated lifting mechanism providing easy lift action utilizing a multi-layer coil spring system. The lifting mechanism must contain a memory lock, which shall maintain pre-tensioning when the shade is removed from the bracket, and shall not require re-tensioning when shade is re-inserted into the bracket. The multi-layer coil spring mechanism must be free-floating along a grooved non –drive mechanism must be reversible for future alterations and maintenance on Site.
 - .2 Special designed Internal tension idler (I.T.I) limiter automatically adjusts and controls the amount of torque and speed ratio in order to provide a constant smooth operation of the shade system regardless of width and height.

- .3 Drive sprocket must contain a planetary gear system for increased operational performance, speed ratio control, smoothness of lift, and balance to the chain and shade system.
- .4 Operating system easy lift action shall alleviate stress on the chain in order to avoid any chain breakage.
- .5 Shade must be able to be pulled down by the bottom bar without stripping or damaging the mechanism
- .6 Shade mechanism must not be able to be stripped or damaged -
- .7 Noise reduction seals must be used for sound isolation and absorption of the mechanism.
- .4 Assembly:
 - .1 Shade unit shall be supplied to Site fully assembled in a one piece fully extruded aluminum cassette closed on all six sides, top, back, sides and bottom return with plastic injected-molded end caps.
 - .2 Mounting detail:
 - .1 Ceiling mounted on underside of the ceiling
 - .2 Inside mount in window depth
 - .3 Face /Wall mounted on mullion.
 - .4 Recessed above the ceiling in a pocket.
 - .3 Shade Orientation:
 - .1 Regular-roll, shade cloth to roll at window side of roller.
 - .2 Reverse-roll, shade cloth to roll at room side of roller
- .5 Shade roller Tube:
 - .1 Rigid roller tubes shall be all aluminum extruded available in 38mm, or 46 mm with reinforced internal ribs to provide maximum span without tube deflection. Tube sizes will depend on shade size.
- .6 Tube end plug:
 - .1 Internal tension idler (I.T.I) limiter automatically adjusts and controls the amount of torque being generated for constant smooth operation of the shade system. The (I.T.I) must automatically release during down-travel, and automatically engage during up-travel of the shade system.
 - .2 Concealed locking fastener must lock the tube and end pin of the shade tube to prevent accidental disengaging of the roller assembly.
- .7 Operating chain:
 - .1 Shall be no. 10 qualified heavy-duty stainless steel bead chain 90 lb load test.
- .8 7/8" Exterior oval hem bar clear anodized:
 - .1 Shall be tubular extruded aluminum with recess to secure fabric without visible seams. End plugs shall be screwed securely on ends showing no exposed aluminum.
- .9 Chain Hold Down:

- .1 Optional operating chain shall be fully secured to SP chain holder.
- .10 Universal Hidden Mounting Brackets:
 - .1 Shall be aluminum construction capable of interchangeable mounting bracket designed for ceiling or wall mount. Secure screw-in locking system to ensure no dis-engaging of the shade or bracket once fixed.
- .11 Cassette box :
 - .1 Cassette design shall be slim line design as a one piece aluminum extruded box closed on all four sides, top, back, sides, and bottom return.
 - .2 Cassette section to be 70mm in square profile. Cassette section with internal groove to accommodate a self-cleaning brush to insure fabric maintenance as well as a gap brush on top back side of cassette to provide for a light seal.
 - .3 Wall thickness to be 1.52mm.
 - .4 Cassette end caps shall be 2mm. Delrin plastic with four countersunk flat headed screw holes.
 - .5 Cassette to have removeable closure panel for reverse roll.
- .12 Fabric:
 - .1 BO 100 Blackout - Woven fibreglass base textile, opaque fire retardant, washable, stain resistant.
 - .1 Colour: BO-105D

2.2 SUBSTITUTIONS

- .1 Refer to Section B7 – Substitutes of Bid Opportunity 748-2013.

Part 3 Execution

3.1 INSPECTION

- .1 Contractor shall be responsible for inspection on Site, approval of mounting surfaces, installation conditions and field measurement for this Work.
- .2 Other interacting trades shall receive drawings of shade systems, dimensions, assembly and installation methods from subcontractor upon request.

3.2 INSTALLATION

- .1 Installation shall comply with manufacturer's specifications, standards and procedures as detailed on contract drawings.
- .2 Adequate clearance shall be provided to permit unencumbered operation of shade and hardware.
- .3 Install hardware using non-corrosive metal toggle bolts concealed in final assembly.
- .4 Install square, plumb, true to line with operable parts adjusted for correct function.

- .5 Install in accordance with reviewed shop drawings.

3.3 SCHEDULE

- .1 Install blinds for all windows as indicated.

3.4 CLEANING

- .1 Clean finish installation of dirt and finger marks. Leave Work area clean and free of debris.

3.5 COMMISSIONING

- .1 Demonstrate operation method and instruct the City's personnel in the proper operation, cleaning and maintenance of the blinds.

END OF SECTION