SECTION 10 73 00

CUSTOM ALUMINUM PROTECTIVE COVERS AND RETRACTABLE CANOPIES

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\*\* NOTE TO SPECIFIER \*\* ShadeFX; aluminum pergolas and retractable shades for residential, and commercial spaces.
This section is based on the products of ShadeFX, which is located at:2340 Meadowvale Blvd., Unit 8Mississauga, ON, Canada L5N 0H1Toll Free Tel: 855-509-5509Fax: 905-528-4439Email: [request info (spec@shadefx.com)](https://arcat.com/rfi?action=email&company=ShadeFX&message=RE%253A%2520Spec%2520Question%2520(10730sfx)%253A%2520&coid=50995&spec=10730sfx&rep=&fax=905-528-4439)
Web: <https://www.shadefx.com>
 [ [Click Here](https://arcat.com/company/shadefx-50995) ] for additional information.
With a rich history of innovation and excellence, ShadeFX has become a leader in transforming outdoor areas into functional and engaging spaces. Our journey began two decades ago with the revolutionary single track canopy system, and since then, we have expanded into an international operation known for our cutting-edge design and manufacturing.
Our expertise lies in crafting bespoke structures that offer unparalleled size, performance, and adaptability to meet the unique demands of our discerning clientele. We are committed to delivering high-quality, versatile solutions that enhance the usability and aesthetics of outdoor spaces.
At ShadeFX, we believe that creating a protected and comfortable outdoor environment should be a seamless and rewarding experience. Our technical experts work closely with clients to design and implement the perfect retractable shade solutions, ensuring every project is tailored to specific needs and preferences.

1. GENERAL
	1. SECTION INCLUDES

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

* + 1. Custom outdoor structures.
		2. Retractable fabric roof and canopy cover systems.
	1. RELATED SECTIONS

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

* + 1. Section 03 30 00 - Cast-in-Place Concrete: Concrete footings, anchor bolts.
		2. Section 09 91 13 - Exterior Painting: Paint finish on framing members.
		3. Section 26 27 26 - Wiring Devices: Finish requirements for wall controls specified in this section.
	1. REFERENCES

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

* + 1. Aluminum Design Manual 2015.
		2. American Architectural Manufacturers Association (AAMA):
			1. AAMA 611 - Voluntary Specification for Anodized Architectural Aluminum 2020.
			2. AAMA 2603 - Voluntary Specification, Performance Requirements and Test Procedures for Pigmented Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix) 2022.
			3. AAMA 2604 - Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix) 2022.
		3. American National Standards Institute (ANSI):
			1. ANSI/AWS D1.2, Structural Welding Code - Aluminum.
		4. American Society of Civil Engineers (ASCE):
			1. ASCE 7-16 - Minimum Design Loads for Building and Other Structures.
		5. American Welding Society (AWS).
		6. ASTM International (ASTM):
			1. ASTM B209, Specification for Aluminum and Aluminum Alloy Sheet and Plate.
			2. ASTM B210/B210M - Standard Specification for Aluminum and Aluminum-Alloy Drawn Seamless Tubes 2019a.
			3. ASTM B211/B211M - Standard Specification for Aluminum and Aluminum-Alloy Rolled or Cold Finished Bar, Rod, and Wire 2019.
			4. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes 2021.
			5. ASTM B241/B241M - Standard Specification for Aluminum and Aluminum-Alloy Seamless Pipe and Seamless Extruded Tube 2022.
			6. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
			7. ASTM G21 - Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi 2015, with Editorial Revision (2021).
		7. CSA Group (CSA):
			1. CAN/CSA S157.1-17 - Strength Design in Aluminum.
			2. CSA A23.3-04 - Design of Concrete Structures.
		8. International Residential Code for One- and Two-Family Dwellings 2018.
		9. International Building Code 2018.
		10. National Building Code of Canada 2015 (NBCC).
		11. National Fire Protection Association (NFPA):
			1. NFPA 70 - National Electrical Code Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
			2. NFPA 701 - Standard Methods of Fire Tests for Flame Propagation of Textiles and Films 2023, with Errata.
		12. Ontario Building Code 2012 (OBC).
		13. Underwriters Laboratories (UL):
			1. UL 325 - Standard for Door, Drapery, Gate, Louver, and Window Operators and Systems Current Edition, Including All Revisions.
	1. DEFINITIONS
		1. PVDF: Polyvinylidene Fluoride.
	2. 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. Data on fabric covering, color fastness, stitching and seaming methods, attachment devices to framing system.
				1. Motorized Retractable Covering: Power requirements and standard wiring diagrams for specified products.
			3. Preparation instructions and recommendations.
			4. Storage and handling requirements and recommendations.
			5. Typical installation methods.

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

* + 1. Verification Samples: Two representative units of each type, size, pattern, and color.
			1. Covering: Submit 12 x 12 inch (300 by 300 mm) sample of covering with representative hemstitch detail, seam with reinforcement, and attachment devices to framing system.
			2. Framing: Submit two samples, \_\_\_ inches (\_\_\_mm) long of framing members, elbow; prefinished.
		2. Shop Drawings: Include details of materials, construction, and finish. Include relationship with adjacent construction.
			1. Indicate retractable canopy layout, sizes, connection attachments, anchorage, size and type of fasteners, graphic images, patterns, and accessories.
			2. Motorized Retractable Covering: Provide schematic system riser diagram indicating component interconnections. Include requirements for interface with other systems.
		3. Design Data: Submit comprehensive structural analysis of design for specified loads. Stamp and sign calculations by professional engineer.
		4. Designer's qualification statement.
		5. Manufacturer's qualification statement.
		6. Installer's qualification statement.
		7. Executed warranty.
		8. Specimen warranty.
	1. QUALITY ASSURANCE
		1. Designer Qualifications: Perform design under direct supervision of Professional Engineer experienced in design of this type of work and licensed in the State in which the Project is located.
		2. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section.
			1. Documented Experience: A minimum of 3 years.
			2. Documented Experience: A minimum of 15 years fabricating aluminum structures.
		3. Installer Qualifications: Company specializing in performing Work of this section with minimum two years documented experience with projects of similar scope and complexity.
		4. Licensed Professionals: Professional Engineer to be licensed in the project state.
		5. Source Limitations: Provide each type of product from a single manufacturing source to ensure uniformity.
	2. PRE-INSTALLATION CONFERENCE
		1. Convene a conference approximately two weeks before the scheduled commencement of the Work. Attendees shall include Architect, Contractor and trades involved. Agenda: To include schedule, responsibilities, critical path items and approvals.
	3. DELIVERY, STORAGE, AND HANDLING
		1. Store and handle in strict compliance with manufacturer's written instructions and recommendations.
			1. Delivery and Acceptance:
				1. Upon receipt, open packages and pallets and inspected for damage.
				2. Missing or damaged components must be noted on the delivery receipt with the carrier before shipment acceptance.
			2. Storage and Handling:
				1. Upon inspection completion, repackage and store where protected from moisture, dirt, and excessive heat.
				2. Do not wrap material so that heat or moisture can become trapped.
				3. Ensure items are level and fully supported and have airflow between parts.
				4. Handle to protect materials, coatings, and finishes during transportation and installation to prevent damage or staining.
			3. Protect from damage due to weather, excessive temperature, and construction operations.
	4. PROJECT CONDITIONS
		1. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by the manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.
	5. WARRANTY
		1. Manufacturer's standard limited warranty unless indicated otherwise.
			1. See Section 01 78 23.19 - Preventative Maintenance Instructions0 - Closeout Submittals for additional warranty requirements.
			2. Manufacturer Warranty:

\*\* NOTE TO SPECIFIER \*\* Delete warranty options not required.

* + - * 1. Retractable fabric roof and canopy cover systems: 12 years.

Complete forms in Owner's name and register with manufacturer.

* + - * 1. Aluminum Structures: 10 years Limited Commercial Warranty.
				2. Powder Coat Finish: 10 years Warranty.
1. PRODUCTS
	1. MANUFACTURERS
		1. Acceptable Manufacturer: ShadeFX, which is located at:2340 Meadowvale Blvd., Unit 8Mississauga, ON, Canada L5N 0H1Toll Free Tel: 855-509-5509Fax: 905-528-4439Email: [request info (spec@shadefx.com)](https://arcat.com/rfi?action=email&company=ShadeFX&message=RE%253A%2520Spec%2520Question%2520(10730sfx)%253A%2520&coid=50995&spec=10730sfx&rep=&fax=905-528-4439);Web: <https://www.shadefx.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 the provisions of Section 01 60 00.

\*\* NOTE TO SPECIFIER \*\* Delete article if not required. Note that custom outdoor structures can include Items in the Article, "Retractable Fabric Roof and Canopy Cover Systems."

* 1. CUSTOM OUTDOOR STRUCTURES
		1. Performance and Design Requirements:
			1. State/Province and project specific stamping available.
			2. Design in accordance with applicable fire code and provide data on ASTM E84 testing.

\*\* NOTE TO SPECIFIER \*\* Delete structure type option not required.

* + - 1. Structure Type: Freestanding
			2. Structure Type: Attached to a building wall.
			3. Structure Design: General.
				1. Comprehensive engineering analysis by a qualified engineer, using structural performance requirements and design criteria indicated.
				2. Withstand the following with no permanent deformation of canopy components or permanent damage to fasteners and anchors.

Effects of gravity loads.

Loads and stresses within limits and under conditions indicated, specific to the project location and code requirements.

Members to withstand wind loads in accordance with ASCE 7-16 and applicable code.

Required allowable ground snow load in accordance with applicable code.

* + - * 1. Wind Rating: A minimum of 80 mph (129 kmh).
			1. Foundations: To be in accordance with the applicable code for the specific structure and site conditions.

\*\* NOTE TO SPECIFIER \*\* Delete coverage options not required.

* + - 1. Horizontal Coverage: Retractable canopies.
			2. Horizontal Coverage: Roofs.
			3. Horizontal Coverage: Louvers.
			4. Horizontal Coverage: Traditional rafters in various profile sizes, mounting positions, and overhangs.
			5. Vertical Coverage: Curtains.
			6. Vertical Coverage: Roll down privacy/bug screens.
			7. Vertical Coverage: Privacy walls.

\*\* NOTE TO SPECIFIER \*\* The following two paragraphs are optional. Delete whichever option is not required or delete both. Note these items are specified in other areas of the specification.

* + - 1. Retractable Fabric Roof: Specified in the Article, "Retractable Fabric Roof and Canopy Cover Systems."
			2. Canopy Cover System: Specified in the Article, "Retractable Fabric Roof and Canopy Cover Systems."
			3. Fabrics: Waterproof, and fire retardant are available.
				1. Colors and patterns: In excess of 100 standard colors and patterns.
			4. Prefabricated and delivered to job site ready for assembly.
				1. Minimize need for on-site cutting or sizing and ensure ease of deployment.

\*\* NOTE TO SPECIFIER \*\* Delete accessories options not required.

* + - 1. Accessories:
				1. Lights.
				2. Heaters.
				3. Speakers.
				4. \_\_\_\_\_\_\_\_.

\*\* NOTE TO SPECIFIER \*\* Delete paragraph if not required.

* + - 1. Freestanding Canopies:
				1. Mounting Type: As detailed on the Drawings.
				2. Mounting Type: \_\_\_\_\_\_\_\_.
				3. Tilting Positions: As detailed on the Drawings.
				4. Tilting Positions: \_\_\_\_\_\_\_\_\_.
				5. Fabric Type: As detailed on the Drawings.
				6. Fabric Type: \_\_\_\_\_\_\_\_.

Pattern: \_\_\_\_\_\_\_\_.

Color: \_\_\_\_\_\_\_\_.

* + - * 1. Two-Post Freestanding Canopy: Prefabricated commercial grade aluminum.

\*\* NOTE TO SPECIFIER \*\* Delete the following paragraph if not required.

Pairs retractable canopies with commercial grade aluminum frames.

* + 1. Materials:
			1. Aluminum Components:
				1. Extruded aluminum ASTM B221, 6000 series alloy.
				2. Aluminum Sheet: ASTM B209, 5000 or 6000 series alloy
			2. Fasteners: 300 or 400 series stainless steel
		2. Finishes:
			1. Powder coating in accordance with AAMA 2604.

\*\* NOTE TO SPECIFIER \*\* Delete color option not required. Over 100 RAL colors and custom colors are available.

* + - 1. Color: \_\_\_\_\_\_\_\_.
			2. Color: As determined by the Architect.
		1. Accessories:

\*\* NOTE TO SPECIFIER \*\* Delete accessories options not required.

* + - 1. Wiring: To be concealed unless otherwise noted.
			2. Fan Blocks: Provided as indicated on architectural drawings.
			3. Low-Voltage Lights: To be provided as indicated on architectural drawings.

\*\* NOTE TO SPECIFIER \*\* Delete article if not required.

* 1. RETRACTABLE FABRIC ROOF AND CANOPY COVER SYSTEMS.
		1. Canopies - General:
			1. Configuration: As indicated on drawings.
			2. Concrete Footings: See Section 03 30 00 for additional requirements.
			3. Design Criteria:
				1. Comply with requirements for Contractor's design-related professional design services indicated in Section 01 40 00 - Quality Requirements.

\*\* NOTE TO SPECIFIER \*\* Delete deign loads option not required.

* + - * 1. Design Loads: As indicated on drawings.
				2. Design Loads:

Wind: \_\_\_ psf (\_\_\_ kPa) positive, \_\_\_ psf (\_\_\_ kPa) negative; minimum.

Live: \_\_\_ psf (\_\_ kPa); minimum.

Thermal Movement: Plus/minus 1/8 inch (3 mm), maximum.

* + - 1. Provide a complete system ready for erection at the project site.
		1. Retractable Fabric Roof and Canopy Cover Systems: Motor-operated sliding folding fabric cover assembly with mounting brackets, hardware, and accessories.
			1. Configuration: Pergola or shade structure attached to building.
			2. Cover Performance Criteria: Provides shade and \_\_\_\_\_; water resistant.
			3. Type: Flat cover.
			4. Size: As indicated on drawings.
			5. Fabric Cover Assembly: Single fabric panel cover suspended from wings supported by one track and stabilizers.
				1. Retracts: Retracts by sliding across opening and folding on one side.
				2. Mounting: Suspended below supporting structure; parallel to rafters.
				3. Stabilizers: Angle stabilizers.
				4. Support Tube Deflection: 3-5/16 inches (84 mm).
				5. High-End Deflection: 1/2 inch (13 mm).
				6. Low-End Deflection: 6 inches (152 mm).
				7. Fabric Support Tubes: Aluminum.

Spacing: Manufacturer's standard.

* + - * 1. Sliding Hardware: Fabric support tube wheeled carriers, driven by manual or motorized toothed belt in one centered, slotted track drive beam.
				2. Slotted Track Drive Beams: Aluminum.
		1. Retractable Fabric Roof System: Motor-operated sliding folding fabric cover assembly with mounting brackets, hardware, and accessories.
			1. Configuration: Freestanding pergola or shade structure.
			2. Cover Performance Criteria: Provides shade and \_\_\_\_\_; water resistant.
			3. Type: Flat cover.
			4. Size: As indicated on drawings.
			5. Fabric Cover Assembly: Single fabric panel; fabric cover mounted on top of wings supported by one track; retracts by sliding across opening and folding on one side.
				1. Mounting: Screwed to top of supporting structure; parallel to rafters.
				2. Stabilizers: G-channel stabilizers.
				3. Fabric Support Tubes: Aluminum.
				4. Spacing: Manufacturer's standard.
				5. Sliding Hardware: Fabric support tube wheeled carriers, driven by motorized toothed belt in one centered, slotted track drive beam.
				6. Slotted Track Drive Beams: Aluminum.
		2. Adjustable Freestanding Retractable Canopy: Wand-operated sliding folding fabric cover assembly with mounting brackets, hardware, and accessories.
			1. Configuration: Freestanding shade structure.
			2. Cover Performance Criteria:
				1. Provides shade
				2. Water resistant.
				3. \_\_\_\_\_\_\_\_.
			3. Type: Adjustable cover capable of tilting 20 degrees forward and 20 degrees backward from flat position.
			4. Size: As indicated on drawings.
			5. Fabric Cover Assembly: Single fabric panel; fabric cover suspended from wings supported by one track and stabilizers; retracts by sliding across opening and folding on one side.
				1. Mounting: Suspended below supporting structure.
				2. Fabric Support Tubes: Aluminum.
				3. Spacing: Manufacturer's standard.
				4. Sliding Hardware: Fabric support tube wheeled carriers, driven by manually operated toothed belt in one centered, slotted track drive beam.
				5. Slotted Track Drive Beams: Aluminum.
		3. Operating Devices:
			1. Manual Operation for Retractable Fabric Covering:
				1. Control Wand: Powder-coated metal wand with removable handle.
				2. Rope: Exit location on the left side.
			2. Motorized Operation for Retractable Fabric Covering: Listed or recognized in UL 325.
				1. Comply with NFPA 70.
				2. Electrical Components: Listed, classified, and labeled as suitable for purpose intended. Provide FCC compliant components where applicable.
				3. Motors: Size and configuration as recommended by manufacturer for type, size, and arrangement of covering; integrated into covering operating components and concealed from view; fully compatible with controls.
				4. Voltage: 120 V, 2 A, 60 Hz.
				5. Controls:

Required equipment, conduit, boxes, wiring, connectors, hardware, supports, accessories, software, or system programming as necessary for complete operating system that provides control intent indicated.

Components and connections are necessary to interface with other systems as indicated.

Wireless Controls Range: 30 feet (9 m).

Control Functions:

Extend Automatic: Automatically move controlled coverings to fully extended position when the button is pressed.

Retract Automatic: Automatically move controlled coverings to fully retracted position when the button is pressed.

Extend Manual: Extend controlled coverings only while button is pressed.

Retract Manual: Retract controlled coverings only while button is pressed.

Stop: Ceases operation of covering in motion.

Presets: For selection of predetermined covering positions.

Multiple Covering Groups: Individual controls for each covering group as indicated.

Wall Controls: Provided by the covering manufacturer.

Number of Channels: One.

Finish: White.

Product: Somfy Systems, Inc; DecoFlex 1 Channel RTS WireFree Wall Switch: [www.somfysystems.com/](http://www.somfysystems.com/) #sle.

Wall Controls: See Section - 6.

Handheld Remote Controls: Battery powered; wireless, radio frequency; provided by covering manufacturer.

Number of Channels: One.

Finish: White.

Quantity: As indicated on drawings.

Product: Somfy Systems, Inc; Situo 1 RTS Pure Single Channel Remote: [www.somfysystems.com/](http://www.somfysystems.com/) #sle.

Home Automation Interface: Dry contact interface capable of communication between third-party automation system and canopy; provided by covering manufacturer.

Mobile Device Controls: Software application allowing control of canopy from mobile devices.

Application: Manufacturer's standard.

Application: Somfy Systems, Inc; TaHoma App: [www.somfysystems.com/](http://www.somfysystems.com/) #sle.

Motor Accessories: Wind sensor with radio receiver.

* + 1. Aluminum Framing:
			1. Aluminum Outriggers, Fascia, Diagonal Supports, Mounting Brackets, and Base Plate Covers: ASTM B211/B211M, 6061 alloy, T6 temper.
			2. Framing: \_\_\_\_ inch (\_\_\_\_ mm) diameter tubing, complying with ASTM B241/B241M.
			3. Fittings: Elbows, T-shapes, wall brackets; cast aluminum.
			4. Mounting: Aluminum base plates for screwing into concrete.
		2. Fabric Coverings:
			1. Covering Materials: Comply with applicable code for fire resistance ratings for roof covering.
				1. Vinyl Laminated Polyester: 11.3 oz/sq yd (383 gm/sq m), resistant to ultraviolet light, mildew, and water, flame resistant treated; color as selected.

Products:

Trivantage; HarborTime: [www.trivantage.com/](http://www.trivantage.com/) #sle.

\_\_\_\_\_\_\_\_.

\_\_\_\_\_\_\_\_.

Substitutions: Not permitted.

* + - * 1. Solution Dyed Acrylic: 9.25 oz/sq yd (240 gm/sq m), resistant to ultraviolet and color degradation, mildew, and water resistant; color as selected.

Products:

Sunbrella; \_\_\_\_\_: [www.sunbrella.com/](http://www.sunbrella.com/) #sle.

\_\_\_\_\_\_\_\_.

\_\_\_\_\_\_\_\_.

Substitutions: Not permitted.

* + - * 1. PVDF Coated Polyester: 14.45 oz/sq yd (490 gm/sq m), resistant to ultraviolet light, mildew, and water, flame resistant treated; color as selected.

Products:

Serge Ferrari; \_\_\_\_\_\_\_\_: [www.sergeferrari.com/](http://www.sergeferrari.com/) #sle.

\_\_\_\_\_\_\_\_.

\_\_\_\_\_\_\_\_.

Substitutions: Not permitted.

* + - * 1. Performance Requirements:

Flammability: Pass NFPA 701 large and small tests.

* + - * 1. Covering Attachment: Manufacturer's standard method.
		1. Fabrication; Framing:
			1. Shop fabricate to the greatest extent possible; disassemble if necessary for shipping.
			2. Accurately form components to suit each other and to building structure.
			3. Fit and shop assemble components in largest practical sizes for delivery to site.
			4. Fabricate components with joints tightly fitted and secured.
			5. Fabricate anchors and related components of same material and finish as framing, except where specifically noted otherwise.
			6. Continuously seal joined pieces with intermittent welds and plastic filler.
			7. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.
		2. Fabrication; Covering:
			1. Provide covering in one piece wherever possible, sized and configured to suit framing.
			2. Fabricate covering in accordance with manufacturer's instructions.
		3. Aluminum Finishes:
			1. Class I Color Anodized Finish: AAMA 611 AA-M12C22A42, integrally colored anodic coating not less than 0.7 mil (0.018 mm) thick.
			2. High-Performance Organic Coatings: AAMA 2604, multiple coats, thermally cured fluoropolymer system.
			3. Pigmented Organic Coatings: AAMA 2603, polyester or acrylic baked enamel finish.
			4. Painted Finish: Refer to Section 09 91 00 - Painting3.
			5. Finish Color: As indicated on drawings.
			6. Finish Color: As selected by Architect from manufacturer's standard range.
		4. Accessories:
			1. Fixed Gutters: Integrated into support structure.
			2. Lighting: Integrated into support structure.
			3. Speakers: Integrated into support structure.
			4. Exposed Fasteners: Flush countersunk galvanized steel screws or bolts; consistent with design of system.
			5. Concealed Fasteners: Noncorrosive; as recommended by retractable fabric roof manufacturer.
1. EXECUTION
	1. EXAMINATION
		1. Do not begin installation until the substrates have been properly constructed and prepared.
			1. Verify that substrate anchors are acceptable and are ready to receive work.
			2. Examine foundations and anchor bolts for location and elevation; notify Architect of inaccuracies. Correct unacceptable conditions before beginning installation.

\*\* NOTE TO SPECIFIER \*\* Delete the following paragraph if not required.

* + - 1. Examine rough-in of required electrical services prior to placement of retractable canopy.
				1. If substrate preparation is the responsibility of another installer, notify Architect in writing of unsatisfactory preparation before proceeding.
	1. 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.
	2. INSTALLATION
		1. Install in accordance with manufacturer's instructions, approved submittals, and in proper relationship with adjacent construction.
		2. Framing:
			1. Install in accordance with manufacturer's instructions.
			2. Install components plumb and level, accurately fitted, free from distortion or defects.
			3. Anchor framing to structure with manufacturer's standard anchors and related components.

\*\* NOTE TO SPECIFIER \*\* Delete paragraph if not required.

* + 1. Fabric Covering:
			1. Install in accordance with manufacturer's instructions.
			2. Install covering over framing members, stretched taut without creases or folds.
			3. Attach covering and fasten securely.
		2. Tolerances:
			1. Maximum Variation from Plumb: 1/4 inch (6 mm) per story, noncumulative.
			2. Maximum Misalignment from True Position: 1/4 inch (6 mm).
	1. FIELD QUALITY CONTROL
		1. Field Inspection: Coordinate field inspection in accordance with appropriate sections in Division 01.

\*\* NOTE TO SPECIFIER \*\* Include if manufacturer provides field quality control with onsite personnel for instruction or supervision of product installation, application, erection, or construction. Delete if not required.

* + 1. Manufacturer's Services: Coordinate manufacturer's services in accordance with appropriate sections in Division 01.
	1. CLEANING AND PROTECTION
		1. Clean products in accordance with the manufacturer's recommendations.
		2. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION