



Part 1: General Information

1.01 Program Focus

- A. Sustainable products provide environmental social and economical benefits while protecting public health, welfare and the environment over full commercial cycle of the product – from extraction to final disposition. By using more efficient building methods and materials it is estimated that the energy, resource consumption and / or waste production could be reduced by 50-60% without decreasing value, aesthetics or function. With the understanding of the Earth's finite resources and the knowledge that manufactured products, such as the rollershade industry, have an effect on our resources. It is becoming increasingly important to make wise decisions regarding the use of such limited resources in order to protect the environment and sustain ourselves.

1.02 Goal:

- A. Use the design and construction process to educate clients, employees, subcontractors, and general public about environmental impacts of building and how these impacts can be minimized.
- B. Provide a durable and aesthetic roller shade product that adds to the sustainability life cycle of a building/project.

1.03 Criteria

- A. Design
- B. Materials
- C. Jobsite and Business Practices

1.04 Manufacturer

- C. SOS™ "Sun Or Shade", a division of Inside Outfitters, Inc.
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Part 2: Criteria

2.01 Design

- A. Optimize Material Use: Packaging Program - Smaller Is Better. Reduce the amount of packaging while securely protecting the product from shipping damage. Eliminates excessive waste and reshipment costs. Minimize waste by designing for standard sizes. Avoid waste by using optimum-value engineering techniques.
- B. Energy efficiency: Passive Solar Heating: Integrate automated system controls with HVAC and lighting equipment to optimize available resources and lower costs. Can be incorporated with solar heating and cooling to incorporate renewable energy.
- C. Reuse and Adaptability: Choose materials and components that can be reused or recycled. Disposal and Replacement Programs.
- D. Renovate Older Buildings: Provide products to retro fit existing building construction.

2.02 Materials

- A. Use Durable Products and Materials in Manufacturing: A product that lasts longer or requires less maintenance saves energy and contribute less to the solid waste problem.





- B. Avoid Harmful Chemicals and Waste: Use equipment that does not emit or require harsh chemicals for operation. Be sure to reclaim ozone depleting chemicals such as CFC or HCFC's when servicing or disposing of equipment
- C. Buy locally produced building materials: Transportation is costly in both energy use and pollution generation. Look for locally produced materials to replace products imported to your area.
- D. Use building products made from recycled Materials: Reduce landfill pressure and save natural resources by using salvaged materials. Make sure that the materials are safe (lead and asbestos) and do not sacrifice energy efficiency covering old windows with e salvaged building material when possible
- E. Avoid Materials that will off gas pollutants: Solvent based finished, adhesives, carpeting, particle board, and many other building products release formaldehyde and volatile organic compounds into the air. These materials can affect workers and occupants' health as well as contribute to smog and ground level ozone pollution outside.
- F. Minimize Packaging Waste: Avoid excessive packaging. Value engineer shipping packages for standard sizes, minimum packaging to resist bursting in shipment and thus excessive waste, and incorporate recycled, biodegradable, or recyclable materials. Return Deposit packaging program.

2.03 Jobsite and Business Practices

- A. Minimize Job waste: On the jobsite or during product installation centralize crew work operations to reduce waste and simplify sorting procedures to save time. Recycle jobsite or installation packaging at proper jobsite locations; if not available return waste to shop to reuse or recycle.
- B. Be Prepared: Have the product ready to be installed on schedule to progress the natural work flow of any given project. This will eliminate waste across the entire project participants.
- C. Transportation: Eliminate excessive travel costs by gathering necessary tools and equipment before proceeding to the jobsite. Car pool when necessary and purchase company vehicles that are fuel efficient. Schedule site visits and errands to minimize unnecessary driving.
- D. Suppliers and Vendors: Ask the suppliers and vendors if they take the necessary precautions to be involved in the sustainable product cycle. Through supporting vendors that are conscience of sustainable products others will follow the trend.
- E. Make business operations more environmentally responsible: Make your office as energy efficient as possible. In the office purchase recycled paper and supplies and recycle office paper waste. Use coffee mugs instead of disposal cups and recycle beverage containers on the job site.
- F. Training: Actively incorporate training and classes to educate employees, vendors, suppliers, and customers about the best method to ensure sustainability for a products lifecycle.
- G. Engineering: Continually pursue better ways to accomplish sustainability throughout the products lifecycle.

Part 3: Roller Shade Specification

3.01 Materials

- A. Shade Fabrics: The fabric color shall be selected from standard color line. The fabric is to be colorfast and shall not be affected by moisture or heat. The fabric must have sufficient rigidity to insure straight hanging, resist curl, twist, bowing and distortion. It must be dimensionally stable and will not shrink or stretch. All seams are to be heat-sealed; sewing is not accepted. (See specification information: "Fabric Care and Maintenance Sheet" for proper fabric care instructions)
 - 1. Hexcel: PVC Free Fabrics
 - a. Trans 1277 – O.F. 1%
 - b. BO1260 – O.F. 0%
 - c. Dim-Out 1301 – O.F. 1%
 - d. Dim-Out 1309 – O.F. 1%
 - e. Nature Screen – O.F.1%





2. Mermet: PVC Free Fabrics
 - a. Obion – O.F. 1%
 - b. Flocke – O.F. 0%
3. Verosol: 100% Trevira Fabrics. PVC Free.
 - a. TRANS 816 – O.F. 24%
 - b. SEMI812 – O.F. 5%
 - c. NON809 – O.F. 4%
 - d. BO875 – O.F. 0%
4. Ferrari Fabrics
 - a. Soltis-86 (14%)
 - b. Soltis-92 (3%)
 - c. Soltis-B92-N (0%)
 - d. Soltis-99
5. Meritec Fabrics
 - a. 8014 – diffusion
 - b. 8015 – diffusion
 - c. 8016 – diffusion
 - d. 8017 – diffusion
 - e. 8018 – diffusion
 - f. 8021 – diffusion
 - g. 7990 – O.F. 3%
 - h. 7991 – O.F. 5%
 - i. 7992 – O.F. 4%

- B. Tube: The fabric shades shall be mounted on to 2”, 2 ½” or 3” diameter aluminum tube depending on the width of the shade and fabric chosen for the shade. Custom size tubes available when dictated by size of shade composition.
- C. Idler End: Idler end must be spring loaded to provide easy installation and reduce light gap. Static Idler ends will not be accepted.
- D. Motor Control Systems: All systems utilize a Somfy “**STARHEAD**” motor or group of motors, “*world’s largest manufacturer of tubular motors*”. Roundhead motors shall not be accepted due to increased light gap. All motors are thermally protected, totally enclosed and maintenance free. (SOMFY UL approved motors can be found in the following file numbers: E60495, E60888, E63714.) Each Motor is selected appropriately to operate each shade based on size and weight. All systems utilize low voltage controls.
- Electrical requirements: 120V, one phase 60 hertz. Amp .7-1.8 depending on size of shade.

Choose system below:

1. **Simpple System**™--Deemed “simpple”, this system utilizes a reduced number of wires as compared with other systems. It also allows the end user to forgo any switches in lieu of a remote unlike any other system. Or the end user may choose to have a remote and a wall switch or just a wall switch, as was the option with most traditional motorized systems. This system allows the end user a maximum of five groups via an unlimited number of motors.
 - See wiring diagram labeled “Simpple System” for technical specifications.
2. **Smmart System**™-- This system allows total building automation through integration of lighting, heating/cooling, sun sensors, timers, etc. with the shade system via a PC. This is an intelligent system that maximizes efficiencies with minimal human management





necessary. It can be used to automate a single room or an entire building. The system can be installed as a stand-alone system or in conjunction with an integration software package if desired. As a stand-alone system the user has available four intermediate stop points to which can be used to maximize energy efficiencies and minimize glare. If the Smmart™ System is integrated with a LonWorks™ compatible automation system 254 intermediate stop points are available. These additional intermediate stop points can be tied into an additional software package called Suntracker™ which can help reduce summer cooling costs up 40%. This system also allows the user to redefine the groups at any time via the PC without rewiring any controls.

- See wiring diagram labeled “Smmart System” for technical specifications.

Options:

- Remote Control: allows control via a transmitter.
- Sun Sensor: continually monitors sun intensity, triggering the control unit and motor to raise or lower the shades as needed.
- Digital Timer: provides seven-day automatic control.
- Individual Group Control: provides control of one or more motors in groups and/or individually from one or more locations. This system can be configured in a variety of ways, i.e. individual window control, floor control, total building control.
- Group Control: permits low voltage control of up to four motors with one or more switches from one or more locations. This system does not have the capability of operating each motor individually. This system can be configured to allow floor control or total building control.

3. **Smmart System II** – Integrates form, function, and energy conservation while staying true to important features such as budget, ease of installation and ease of maintenance. This system is “Smmart” because it maximizes solar energy by efficiently managing natural light, indoor temperatures, glare, and heat gain/loss. This Smmart System II not only saves the owner money but also reduces consumption of energy resources used to create comfortable work environments. The basis of this system is Somfy’s animeo IB+ creating a lifetime of savings—our precious natural resources. The “Sun Or Shade” Smmart System II makes a difference in our future

- See wiring diagram labeled “Smmart System II” for technical specifications.

4. **GC System “Group Control”**—This system is ideal for situations where you want control of all shades in an area as one group. You can create building control via a switch utilizing sub groups by floors, facades or specific areas.

- See wiring diagram labeled “ GC System” for technical specifications.

Options:

- Remote Control
- Sun Sensor
- Digital Timer
- Interface with centralized building automation or lighting system

5. **IGC System “Individual Group Control”**—This system allows the user to operate shades as a group or individually. This allows the user to have individual window control, floor control and total building control.

- See wiring diagram labeled “IGC System” for technical specifications.

Options:

- Remote Control





- ii. Sun Sensor
- iii. Digital Timer
- iv. Interface with centralized building automation or lighting system

6. **2-4-1 System**—This system allows two motors to be wired to one switch. It is ideal in situations where there are a maximum of two motors per room.
- See wiring diagram labeled “2-4-1 System” for technical specifications.

Options:

- i. Switch: Rocker, Toggle or Decorator

7. **ABC System** – *All Battery Controlled Motorized System* – this system allows for the operation of a shade up to 15 lbs. Weight is according to fabric type and total component / element weight. Infrared and Radio Frequency options available. Controlled via remote control.

Options:

- i. IR or RF remote
- ii. 9 V or 12 V motor

- E. Shade Mounting Brackets: Steel, 1/8” thick type as required to suit indicated mounting and necessary torque. Center bracket utilized as needed to suit span, shade weight and indicated mounting. Fascia brackets shall be painted to match Fascia color.
- F. Hembar: Shall be a continuous aluminum bar 1” X 3/16” with sufficient weight to allow the shade to close without buckling or sagging.
- 1. **Exposed Hembar (Option):** This hembar is mounted on the exterior of the bottom hem of shade. It is constructed of extruded aluminum and is weighted to properly raise and lower the shade without buckling or sagging. Finishes: See specification section “ACCESSORIES”, *Exposed Hembar* for color selection and detail.
- G. Fascia System (Option): All fascia systems shall be prime painted with baked enamel utilizing the powder paint method to ensure an environmental friendly application. Wet paint method shall not be accepted. (Finishes: See Specification Section “ACCESSORIES”, *Fascia Systems* for color selection and detail.)
- 1. **L-Angle Fascia:** Fascia panels shall be made from extruded aluminum. Fascia face shall be 3”, 4”, or 7 ½” to accommodate shade roll. Fascia shall clip to brackets and snap easily into place. It shall be easily removed for any necessary maintenance. Color must be chosen from standard colors. Custom colors available upon request (minimum quantities required).
- H. Pocket System (Option): This system allows the shade to be recessed into the ceiling. (Finishes: See Specification Section “ACCESSORIES”, *Pocket Systems* for color selection, size and details.)
- 1. **Headbox/Closure Flap:** An extruded aluminum box that is sized to completely conceal rollershade when the shade is in the open position. Shade shall recede into headbox without rubbing. The “Closure Flap” is a removable closure to cover the roll.
 - 2. **Headbox/Closure Flap—Ceiling Grid Support:** An extruded aluminum box that is sized to completely conceal rollershade when the shade is in the open position. Shade shall recede into headbox without rubbing. The “Closure Flap” is a removable closure to cover the roll. Headbox provides 1 1/8” aluminum grid strip to support ceiling tile.
 - 3. **Hook/Closure Flap Assembly:** Extruded aluminum Hook is fastened to drywall pocket. Closure Flap hangs from hook to provide pocket closure.





4. Hook/Closure Flap—Ceiling Grid Support: Extruded aluminum Hook attaches to drywall pocket with 1 1/8" aluminum grid strip to support ceiling tile, Closure Flap hangs from hook to provide pocket closure.

Part 3 Execution

3.01 Installation:

- A. Install the shades where shown on the contract drawings in accordance with printed instructions provided by the manufacturer, SOS Shade Systems or a modification as approved by the manufacturer.
- B. The shade fabric shall hang flat without buckling or distortion. The edge when trimmed, shall hang straight without curling or raveling. Unguided roller fabrics shall roll without shifting side ways more than 1/4" in either direction. Tolerance for brackets shall not exceed 3/4" on either side.
- C. Verify that all surfaces and openings are ready to receive the work. Do not commence the work until the installer verifies field measurements.
- D. Beginning the installation indicates the installer accepts the substrate.

3.02 Adjusting

- A. The system shall be adjusted and balanced by the installer for smooth operation. All completed shades will be operated in the presence of the owner or his representative.
- B. Instruct the owners or his representative as to the proper operating procedures and maintenance of the system.

