CUPCCAA SPECIAL CONDITIONS

1.1 Application of Special Conditions. These Special Conditions are a part of the Contract Documents for the Work generally described as: Window Shades Installation at Cesar Chavez Elementary School

1.2 Contract Time/Milestone Schedule and Description of Phases

All Phase times indicated are from start of Contractor's access to work area to Substantial Completion for each Phase. All punch list work shall be completed within 30 days of Substantial Completion for each phase.

Contract Time and Milestone Schedule:

- Notice To Proceed (NTP): 02/24/2016
- Phase 1: 02/24/2016 to 04/21/16
- Phase 2: 04/22/2016 to 05/11/2016
- Substantial Completion: 05/12/2016
- Final Completion: 06/22/2016. 119 calendar days from Notice to Proceed.

Description of Phase 1:
The work includes, but is not limited to: Field measure and submittals

Description of Phase 2:
The work includes, but is not limited to: Demo existing and Installation New Shades

Description of Phase 3:
The work includes, but is not limited to: Punchlist Corrections, Closeout Documents & Retention Release

1.3 Description of General Phasing Requirements:

A. These descriptions of the phases are general in nature and in no way offer the complete and concise description of all the work required by the Contract Documents.
B. The start dates represented in the milestone schedule are preliminary and the District reserves the right to modify these dates based on when the Notice to Proceed is issued.
C. The Contractor is responsible for providing the manpower and scheduling the shifts necessary to complete the work in accordance with the Contract Time and Milestone Schedule.
D. The School will remain open during the academic year. The Work of this project must take into account that the site will be occupied by students and staff and will be phased as generally described above and in other contract documents.
E. Non-School hours are defined as hours before 7:00 AM, and after 3:30 PM on days when school is in session.
F. All work will be taking place during Non-School hours (before 7:00am and after 3:30PM and during weekends).

G. Hazmat work prohibited between **7:00 AM and 6:00 PM.** Haz-Mat Abatement cannot be performed while students or school staff is on site.

H. Follow City of San Francisco Noise Ordinance

I. Work that is hazardous, noisy, or that causes vibration may not be performed in the buildings or on the site during school hours, without written approval from the District Representative. This includes but is not limited to the following work activities:
   1. Haz-Mat Abatement
   2. Concrete bushing, chipping, grinding, jack hammering.
   3. The use of Powder-Actuated (PAT’s)
   4. Floor grinding to remove adhesive.
   5. Chemicals used in quantities that cause excessive odor and can not be effectively ventilated. As determined by the Owners Representative.
   6. Wall tile removal. Hand scraping or chipping may be acceptable as approved by the Owners Representative.
   7. Electric Tile Cutter, may be used if isolated in a temporary sound deadening room constructed by the Contractor as approved by the Owners Representative.
   8. Large impact drills for use in concrete.
   9. Smaller Bulldog type impact drills for ¼” holes or less.
   10. Operation of cranes in occupied areas, including drilling rigs, and concrete pump trucks unless the occupants can be sufficiently isolated from the swing zone.
   11. Chop Saws for metal studs or other metal cutting. These may be used if isolated in a temporary sound deadening room constructed by the Contractor as approved by the Owner’s representative.
   12. The use of abrasive or “hot” saws to cut steel decking.
   13. Earthwork compaction, including the operation of vibratory compaction equipment.

J. School Academic Testing: No work which creates noise or a vibration in the structure which can be heard and/or felt in occupied classrooms may be done on the following dates between 7:00 a.m. and 12:30 p.m. due to academic testing. These dates are approximate and Contractor shall confirm each school with the District during the school year
   1. English Learners: 3 days between September and October.
   2. STAR Testing: 15 days between April and May.
   3. Other Testing: To be verified with the District

K. All work remaining on a phase after the Substantial Completion date of that phase shall be done during non-school hours.

L. Temporary hard barriers as necessary for each phase shall be constructed prior to the start of each phase of work in accordance with section 01520 “Construction Facilities”. On a site plan indicate lay down areas, pedestrian walkways, and contractor parking areas Snow fencing is not acceptable as hard fencing. The Contractor shall submit diagrams for each phase one week prior to start of construction of that phase, indicating the construction zone, and barricades and access for students and School Personnel, for approval by the District Representative. The Contractor must provide and maintain access and code compliant egress to and from all occupied spaces. Contractor shall post temporary
signage (appropriate and secure) shall be posted to redirect students and staff for emergency exiting.

M. The Contractor shall diligently maintain all construction zone barricades and fencing. Fence panels shall be secured with two fence clamps per joint. The Contractor shall secure end panels in a manner acceptable to the District Representative. The use of tie wire will not be an acceptable method for securing fence panels. Construction zone gates shall be secured with chains and District provided padlocks.

N. When school is in session any work that occurs in the building and cannot be safely segregated from students must be performed during non-school hours.

O. The existing fire alarm system shall remain operational twenty four (24) hours/day, seven (7) days/week. If at any time during the Project the existing fire alarm system is not fully operational, the Contractor, at its own expense, shall provide a “Fire Watch” acceptable to the District Representative and San Francisco Fire Department or install temporary devices including smoke and/or heat detectors and horn/strobes. Temporary devices shall be no less than 25 feet from an exit door and no further than 75 feet between devices and shall be programmed into the Fire Alarm Control Panel. Wiring for temporary devices may be secured/fastened to the wall and/or ceiling and is not required to be in conduit. All temporary devices shall be removed from programming when permanent fire alarm system is in place, tested, and accepted as fully operational.

P. Liquidated damages are assessed per phase.

Q. The Contractor’s Construction Schedule shall reflect the work sequence and time period for each phase of the Project.

R. Contractor to verify the dates and obtain approval for the timing, demolition, and construction of the Work in each area and phase with the District.

S. The Work of each phase shall include the building or buildings indicated (if applicable) and the adjacent site work required for safe access and egress for District Occupancy at Substantial Completion of each phase.

T. The Contractor shall carefully review the Drawings and other Contract Documents to fully understand the interdependency of the phases, the buildings, and the site work.

U. Work on weekends, evenings or holidays may be required to meet the project phasing schedules. Provide 72 hours notification to the District representative to ensure necessary inspections, monitoring, testing, etc. are provided during these work hours.

V. The District may withhold payments for late submittals. The District is willing to consider alternate means of phasing the project proposed by the Contractor. The acceptance of any alternate means of phasing is at the sole discretion of the District.

W. The District may withhold payments for late submittals.

1.4 Liquidated Damages

A. **Substantial Completion:** The delayed Substantial Completion of any phase of the Work will result in the assessment and withholding of Liquidated Damages for each day of delayed Substantial Completion beyond the Contract Time for Substantial Completion of that phase of the Work in the amount of **Five Hundred ($500.00)** per day. See Section 01770 “Closeout Procedures” for requirements by phase of the project.

B. **Final Completion.** The delayed Final Completion of the Work will result in the
assessment and withholding of Liquidated Damages for each day of delayed Final Completion beyond the Contract Time for Final Completion of the Work in the amount of \textbf{Five Hundred Dollars ($500.00)} per day until all punch list items are completed.

1.5 **Labor Compliance Program (LCP).** A LCP is required for this project (see section 00350).

1.6 **Building Access.** Access to the school buildings and entry to buildings, classrooms, restrooms, mechanical rooms, electrical rooms, or other rooms, for construction purposes, must be coordinated with District and onsite District personnel before Work is to start.

A. Upon request, the District may, at its own discretion, provide a master key to the school site for the convenience of the Contractor. The Contractor agrees to pay all expenses to re-key the entire school site and all other affected District buildings if the master key is lost or stolen or if any unauthorized party obtains a copy of the key or access to the school.

1.7 **Utility Work.**

A. The Contractor is advised that Work is to be performed in spaces regularly scheduled for instruction. Interruption and/or periods of shutdown of public access, electrical service, water service, lighting, or other utilities shall be only as arranged in advance with the District. Contractor shall provide temporary services to all facilities interrupted by Contractor's Work.

B. The Contractor shall maintain in operation during duration of Contract, drainage lines, storm drains, sewers, water, gas, electrical, steam, irrigation systems and other utility service lines (including but not limited to low voltage systems and fire sprinkler systems) within working area.

1.8 **Weather Days.** Delays due to adverse weather conditions will only be permitted in compliance with the provisions in the General Conditions, 00700 Article 8.02.A and only if the number of days of adverse weather exceeds the following parameters and only if Contractor can verify that adverse weather caused delays exceeds the following number of calendar days:

January, [11]; February [10]; March [10]; April [6]; May [3]; June [1]; July [0]; August [0]; September [1]; October [4]; November [7]; December [10].

1.9 **Standardized Forms.** Each and every document generated and/or submitted by the Contractor relating to cost breakdowns, applications for payment, change order requests, requests for information, submittals, verified reports, progress reports, and all other matters relating to the administration of the Work as set forth in the General Conditions, shall be prepared by the Contractor on such forms as may be directed by the District. Unless otherwise expressly provided for in the Contract Documents, all such documents shall be submitted to the District with such frequency as the District may require in its sole reasonable discretion.
1.10 **District Tests/Inspections.** Pursuant to Article 13.05 of the General Conditions, within fourteen (14) calendars days of the date of award of the Contract, the Contractor, the District, and the Architect shall meet and confer to establish, by mutual agreement, the specific tests/inspections to be conducted by or on behalf of the District and to establish limits on costs incurred by the District to complete such tests/inspections. If mutual agreement is not reached as to tests/inspections to be completed by or on behalf of the District or the limitations on the District’s costs to complete such tests/inspections, the Architect shall issue a final binding determination. The Contractor shall be responsible for all costs of tests/inspections exceeding those established pursuant to the provisions of Title 24, Part 1, Section 4-355(b).

1.11 **Allowed Number of Hazardous Material Abatement Shifts.** Within the overall construction schedule, the total allotted time for completion of all identified hazardous material abatement work of the Project shall be limited to the number of work shifts (of stated duration) specified in Appendix A, Section 01011. The Contractor shall be responsible for all additional Environmental Consultant and analytical laboratory costs associated with exceeding the specified total number of work shifts allowed in accordance with the 00700 General Conditions, Article 9.09 Related Damages.

1.12 **Identification Vests/Badges.**

A. The District reserves the right to require the Contractor to do the following:

No employee or independent contractor to the Contractor or any Subcontractor, of any tier, shall be permitted access to the Site at any time unless such individual wears, in a prominent visual manner, a photographic identification badge issued by the District. The identification badge shall be prominently worn at all times while at the Site. Any person performing any Work at the Site without wearing a duly issued District photographic identification badge will be immediately removed from the Site. The District will issue photographic identification badges only to those individuals who are identified on a Fingerprinting Certification of the Contractor or a Subcontractor. The photographic identification badges are the sole and exclusive property of the District. The Contractor shall promptly return to the District each photographic identification badge once an employee or independent contractor to the Contractor or any Subcontractor of any tier has completed his Work at the Site or is absent from the Site for a period of thirty (30) consecutive days, whichever first occurs.

All cost associated with this requirement are at the Contractors expense.

B. No employee or independent contractor to the Contractor or any Subcontractor, of any tier, shall be permitted access to the Site at any time unless such individual wears, in a prominent visual manner, a safety vest that has been approved by the District. All vests must include the General Contractors company logo, with an area is at least 144 square inches. Any person performing any Work at the Site without wearing an approved safety vest will be immediately removed from the Site.

C. The Contractor’s compliance with the requirements of this Paragraph and/or the District’s enforcement of the requirements of this Paragraph shall not result in adjustment of the Contract Time or the Contract Price.
1.13 **Parking:** The Contractor is responsible for off site parking for their personnel. The Contractor is not permitted to park any vehicles on campus. **Catering Trucks:** No catering trucks are permitted on District property.

1.14 **Systems Survey.** In the presence of the District Representative the contractor will perform a survey of all the fire alarm, phone, data, power outlets, P/A system (public address system) clocks/bells, thermostats, building management system controls, and security systems in each room prior to the start of each phase. Any testing that might affect other portions of the school must be completed during non-school hours. Each outlet and/or device is to be checked and tested to verify that they are working. The survey will be submitted and reviewed by the District Representative prior to the start of demolition for each phase.

1.15 **Emergency Shut off Survey.** Before construction begins Contractor shall field survey the building/buildings and site and contact the appropriate SFUSD personnel to develop an Emergency Shut-off Plan. The plan will show graphically all shut-off locations for utilities clearly identified along with any special instructions and contact procedures. The plan will include an emergency contact list for the Contractor, SFUSD Project Manager, Construction Manager, Building and Grounds, Fire Department, PUC, PG & E and Water District. The Contractor shall assemble any specialty tools required and keys for any locked areas. The Emergency Shut-off Plan shall be posted in Contractor’s construction office with a copy of all items to be located in the CM office.

1.16 **Theatrical Equipment and Furnishings.** The Contractor is prohibited from using any existing theatrical equipment and furnishings in the auditorium and/or multi-purpose room during construction. The Contractor is required to protect and/or remove theatrical equipment and furnishings as directed by the District and at their own expense. The Contractor, at its own expense will provide any and all temporary lighting necessary to accomplish the work.

1.17 **District Standards.** In accordance with California Public Contract Code section 3400, a designee of the District has made a finding that particular materials, products, things, and/or services are to be designated in the Contract Documents by specific brand or trade name for the following purpose: in order to match other products in use on a particular public improvement either completed or in the course of completion (“District Standards”). The District Standards are set forth in Section 00013 San Francisco Unified School District Construction Standards. The particular materials, products, things, and/or services designated in the District Standards shall be used in the Work.

1.18 **Web-Based Project Management Software (PMS).**

- **Purpose**
  PMS will be used to facilitate communication and track project documentation among the SFUSD Team Members and the Contractor. The Contractor shall utilize the collaborative tool as directed by the District. The Contractor shall participate in all required training as needed to assure the tool is used as intended.
B. Scope
Communications not pertaining to the job established over the provided internet connection are not permitted. This includes but is not limited to the use of internet radio, streaming audio/video, personal instant messaging software, and other similar chat programs.

PMS will be used to log and track project related documents that include but are not limited to; Contractor request for information (RFI), Architect’s supplemental instructions (ASI), submittals, change orders, project transmittals, Contractor daily logs, meeting notes and request for inspections.

C. General Guidelines and Use
PMS program may only be used by individuals who are members of SFUSD Team, and only for purposes that are consistent with the requirements and objectives of the SFUSD project. Use of the site is contingent upon compliance with the following rules of usage:

- Members must protect their login account and password information from unauthorized disclosure.

- Members may only use PMS for legitimate purposes related to this project. Members may not use the site for non-project commercial purposes or personal purposes.

- Members shall abide by the Guidelines in this document. Specifically, members shall not alter the organization or structure of the site without first consulting with the website Coordinator.

- Members may not send harassing, offensive, unlawful, fraudulent, abusive, libelous or threatening messages in any form to another member or outside party using the site. Use of vulgar language and obscenities, and the uploading or viewing or distributing of pornographic materials through the site is strictly prohibited.

1.19 The Environmental Protection Agency (EPA) regulation 40 CFR Part 745 became fully effective June 23, 2008 which requires all firms, including sub-contracted firms who impact lead-based paint (LBP) at Child Occupied Facilities to be EPA certified; have an EPA “Certified Renovator”; provide “on-the-job” training for workers; conduct pre-renovation notifications; follow specific work practice procedures for containment, disturbance and final clean-up; and inspection requirements. Renovation is defined as the modification to any existing structure or portion that results in the disturbance of LBP surfaces, unless the activity is performed as part of an abatement. In essence this regulation includes all work construction activities that disturb LBP surfaces.
END OF SECTION 00800
SECTION 01730
CUTTING AND PATCHING

1. GENERAL

1 RELATED DOCUMENTS

a Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

2 SUMMARY

a This Section includes procedural requirements for cutting and patching.

3 DEFINITIONS

a Cutting: Removal of existing construction necessary to permit installation or performance of other Work.

b Patching: Fitting and repair work required to restore surfaces to original conditions after installation of other Work.

4 SUBMITTALS

a Cutting and Patching Proposal: Submit a proposal describing procedures at least 10 days before the time cutting and patching will be performed, requesting approval to proceed. Include the following information:

i Extent: Describe cutting and patching, show how they will be performed, and indicate why they cannot be avoided.

ii Changes to Existing Construction: Describe anticipated results. Include changes to structural elements and operating components as well as changes in building’s appearance and other significant visual elements.

iii Products: List products to be used and firms or entities that will perform the Work.

iv Dates: Indicate when cutting and patching will be performed.

v Utilities: List utilities that cutting and patching procedures will disturb or affect. List utilities that will be relocated and those that will be temporarily out of service. Indicate how long service will be disrupted.

vi Structural Elements: Where cutting and patching involve adding reinforcement to structural elements, submit details and engineering calculations showing integration of reinforcement with original structure.
District’s Approval: Obtain approval of cutting and patching proposal before cutting and patching. Approval does not waive right to later require removal and replacement of unsatisfactory work.

5 QUALITY ASSURANCE

a Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio.

b Operational Elements: Do not cut and patch the following including but not limited to operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety.

i Primary operational systems and equipment.
ii Air or smoke barriers.
iii Fire-protection systems and security alarm and camera systems.
iv Control systems, including electrical or pneumatic lines.
v Communication systems.
vi Conveying systems.
vii Electrical wiring systems. This shall also include all computer/data and fiber optic cabling.
viii Operating systems of special construction in Division 13 Sections.
ix Building maintenance control systems/thermostats.

c Miscellaneous Elements: Do not cut and patch the following elements or related components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety.

i Water, moisture, or vapor barriers.
ii Membranes and flashings.
iii Exterior curtain-wall construction.
iv Equipment supports.
v Piping, ductwork, vessels, and equipment.
vi Noise- and vibration-control elements and systems.

d Visual Requirements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

e Cutting and Patching Conference: Before proceeding, meet at Project site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.
6   WARRANTY
   a   Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or
damaged during cutting and patching operations, by methods and with materials so as
not to void existing warranties.

2.   PRODUCTS

1 MATERIALS
   a   General: Comply with requirements specified in other Sections of these Specifications.
   b   Existing Materials: Use materials identical to existing materials. For exposed surfaces,
use materials that visually match existing adjacent surfaces to the fullest extent
possible.
      i  If identical materials are unavailable or cannot be used, use materials that, when
installed, will match the visual and functional performance of existing materials.

EXAMINATION
   c   Examine surfaces to be cut and patched and conditions under which cutting and
patching are to be performed.
      i  Compatibility: Before patching, verify compatibility with and suitability of
substrates, including compatibility with existing finishes or primers.
      ii Proceed with installation only after unsafe or unsatisfactory conditions have been
corrected.

2 PREPARATION
   a   Temporary Support: Provide temporary support of Work to be cut.
   b   Protection: Protect existing construction during cutting and patching to prevent
damage. Provide protection from adverse weather conditions for portions of Project
that might be exposed during cutting and patching operations.
   c   Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free
passage to adjoining areas.
   d   Existing Services: Where existing services are required to be removed, relocated, or
abandoned, bypass such services before cutting to avoid interruption of services to
occupied areas.

3 PERFORMANCE
a General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.

i Cut existing construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.

b Cutting: Cut existing construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.

i In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.

ii Existing Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.

iii Concrete and/or Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.

iv Excavating and Backfilling: Comply with requirements in applicable Division 2 Sections where required by cutting and patching operations.

v Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.

vi Proceed with patching after construction operations requiring cutting are complete.

c Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections of these Specifications.

i Inspection: Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.

ii Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.

iii Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove existing floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.

1 Where patching occurs in a painted surface, apply primer and intermediate paint coats over the patch and apply final paint coat over entire unbroken surface, from corner to corner and floor to ceiling, containing the patch. Provide additional coats until patch blends with adjacent surfaces.
iv Ceilings: Patch, repair, or re-hang existing ceilings as necessary to provide an even-plane surface of uniform appearance.

v Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weather tight condition.

END OF SECTION 01730
SECTION 12490

WINDOW ROLLING BLACK-OUT SHADES

1. GENERAL
   1. SUMMARY
      a. Section includes window rolling black-out shade assemblies complete with
         accessories and installation materials.

2. SUBMITTALS
   a. Data: Manufacturer Product Data for each type of product indicated. Include
      styles, material descriptions, construction details, dimensions of individual
      components and profiles, features, finishes, and operating instructions.
   b. Shop drawings: Large scale, dimensioned drawings showing location and extent
      of window shades.
      i. Elevations, sections, details, and dimensions not shown in Product Data.
      ii. Installation details, mountings, attachments to other work, operational
          clearances, and relationship to adjoining work.
      iii. Head, jamb and sill details as necessary to coordinate work with surrounding
           conditions and construction.
      iv. Shade schedule coordinating room number, window type, opening size(s),
          quantities and key to details.
   c. Selection Samples:
      i. Window shade manufacturer’s standard size shade cloth fabric swatches for
         initial fabric color selection from manufacturer’s full range of available fabrics.
      ii. Standard aluminum finish color Samples from manufacturer’s range of
          standard colors.
   d. Verification Samples:
      i. One fully operational window shade assembly of each type required, 30-inch
         square complete with selected shade cloth including sample of seam/batten
         when applicable. Disassemble sample to demonstrate compliance with the
         requirements of this Section.
      ii. One complete set of all shade components, unassembled, demonstrating
          compliance with the specified requirements.
   e. Design Data, Test Reports, and Certificates: Current reports from independent
      testing laboratories demonstrating specified requirements.
   f. Manufacturers’ instructions: Manufacturer standard installation instructions.
   g. Qualification data: For Installer.
   h. Maintenance data: Furnish maintenance manuals with the following information:
      i. Methods for maintaining roller shades and finishes.
      ii. Precautions about cleaning materials and methods that could be detrimental
          to fabrics, finishes, and performance.
3. QUALITY ASSURANCE
   a. Manufacturer qualifications: Firm with minimum 5 years experience manufacturing products comparable to those specified.
   b. Installer qualifications: Firm with minimum 5 years experience, having completed installation of roller shades similar in material, design, and extent to that indicated for the Project and whose work has resulted in a record of successful in-service performance.
   c. Source limitations and material standards: Obtain roller shades through one source from a single manufacturer.
   d. Mockup: Build a full size shade mockup to verify selections made under sample submittals and to demonstrate aesthetic effects and qualities of materials and execution.
      i. Build mockup in the location and of the size indicated or, if not indicated, as directed by the Architect.
      ii. Approved mockup may become part of the completed Work if undisturbed at time of Substantial Completion.

4. HANDLING
   a. Storage and protection:
      i. Do not deliver items to the Project until all wet work has been completed and is dry.
      ii. Deliver shades to Project site in labeled protective packaging, uniquely labeled to identify each shade for each opening, using same room designations indicated and scheduled.
      iii. Schedule delivery to prevent delays to completion of work but to minimize on site storage time.
      iv. Store materials in a dry secure place. Protect from weather, surface contaminants, corrosion, construction traffic and all other potential damage.

5. PROJECT CONDITIONS
   a. Environmental limitations: Do not install roller shades until construction and wet and dirty finish work in spaces, including painting, is complete and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.
   b. Field measurements:
      i. Where roller shades are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication and indicate measurements on Shop Drawings.
      ii. Allow clearances for operable glazed units’ operation hardware throughout the entire operating range. Notify Architect of discrepancies.

6. MAINTENANCE
   a. Provide spare parts amounting to 10 percent of matching products installed.
   b. Package with protective covering for storage and identified with labels describing contents.

7. SPECIAL WARRANTIES
   a. Shade cloth and all other components of shade system to be fit for the use intended for a minimum of 5 years.
   b. In the event of a warranted product failure, the shade manufacturer shall, at no cost to the Owner, facilitate acquisition and delivery of all necessary components.
8. PRODUCTS
   a. Acceptable MANUFACTURERS
      i. Draper, Inc. – FlexShade system.
         Hauser Shade Company.
         Mariak Contract.
         MechoShade Systems, Inc.
         Or equal.
   b. Materials/components
      i. Shading and black-out material:
         ii. Product: Phifer SheerWeave Performance Plus Interior Sun Control Fabric
             Style 2500 (or approved equal) - non-combustible fiber, inherently flame-
             retardant and permanently flame-resistant. Material shall pass tests per
             NFPA 701-1999, Test Methods 1 and 2, and Greenguard certified.
             I. Fire rating: NFPA Class A.
             II. Openness factor: One percent.
             III. Shade colors:
                 · Classrooms: Black for room darkening control.
                 · Offices and toilet rooms: White.

9. Rollers:
   a. Clutch mechanism: Heavy-duty single spring that creates a positive mechanical
      relationship between the roller shade tube unit and the universal installation bracket
      to ensure stationary positioning in the static state. When activated the wrap spring
      shall release and permit the clutch to turn while reducing friction on the clutch. Clutch
      mechanisms with multiple springs are not acceptable.
   b. Clutch bracket: Fixed to the installation bracket with tech screws, and shall be
      removable without having to remove the installation brackets from the wall. Clutch
      mechanism shall be fastened with screws and not riveted to the brackets. Include
      spring-loaded and retractable idle end cap – with retractable pin end to provide
      secure anchorage into end bracket.
   c. Provide spring roller diameter length and material as needed to support shade
      length, width and material weight 1-1/2 inch diameter min. by width needed to cover
      window.
   d. Use steel rollers for all shades exceeding 45 inches wide, heavy-duty springs and
      positive locking mechanisms.
   e. Mounting brackets:
      i. Diameter to match roller, closed end projection adequate to clear all
         hardware galvanized steel finish, compatible with aluminum if aluminum sash,
         isolate if necessary.
      ii. Brackets shall have nylon insert on pin side. Mount brackets with 1/4-inch hex
          head screws.
      iii. Installation brackets shall support 150 percent of the full weight of the shade.
          Clutch mechanism shall be screwed to the clutch side of the installation
          brackets.
   f. Idler end mounting bracket:
      i. Include a ball bearing idler socket for quiet and ultra-smooth rotation.
      ii. Include a built-in height leveling adjustment to minimize shade telescoping.
   g. Pulleys:
SFUSD Project No.: 11497
School Site: Cesar Chavez Elementary School
Project Name: Window Shade Replacement

i. Include closed end stop pulleys on all shades, and design them so that spacing between pulley roller and pulley roller bracket arm holding the pulley roller prevent shade cord from catching.

ii. Mount metal roller catches with 1/4-inch hex head screws.

h. Cords:
   i. Stainless steel chain. 90-lb-rated nickel plated steel chains are not acceptable.
   ii. Include cord clasp to be mounted at appropriate height above window sill side wall.
   iii. Braided fabric cord is not acceptable.

i. Fascia:
   i. Continuous extruded aluminum “L”-shaped profile to conceal the roller shade tube mechanism. It shall be attached to the tube mounting brackets by snapping it in place on a hinge rib clip, without the use of adhesives, magnetic strips, or exposed fasteners. It shall be able to be installed across two or more shade bands in one piece.
   ii. Minimum thickness of 5/16-inch with paint finish in color as selected.
   iii. Provide bracket/fascia end caps where mounting conditions expose outside of roller shade brackets.
   iv. Notching of fascia for manual drive chain is not acceptable.

j. Hem bars/slots:
   i. Kiln dried hard maple, mahogany, or poplar, size as required but none less than 1-1/4 inch by 5/16 inch, length to equal width of shade material across window.
   ii. Hem (sew) ends of hem bar or slat to shade material.
   iii. Side and sill channels for room darkening or blackout shades: 2-piece extruded 25 gage aluminum channels with light seals and designed to eliminate light gaps at sides and bottoms of shades as shades are drawn down and closed.
   iv. Brass screw eyes: Screw eyes shall not be oversized. Splitting of slats caused by screw eye installation will be rejected.

k. Fabrication
   i. Shades shall be hemmed top and bottom, with both hems double needle stitched and backstitched at 6 edges. Hems must be turned so that stitching passes through three thicknesses of fabric.
   ii. Sufficient length of material shall allow 2 complete wraps around roller when shade is fully extended, with roller in hem to prevent fabric from being pulled off roller.
   iii. Attach fabric with double 9-inch wide staples. No adhesive is allowed.

2. EXECUTION
   1. EXAMINATION
      a. Examine substrates, areas, and conditions for installation tolerances, operational clearances, accurate locations of connections to building electrical system, and other conditions affecting performance.
      b. Correct detrimental conditions before proceeding with installation.

2. SHADE INSTALLATION
a. Install shades in accordance with the approved Shop Drawings and their manufacturer's instructions for the type of mounting and operation required.
b. Mount units plumb, level, and securely anchored in place with recommended hardware and accessories to provide smooth operation without binding.
c. Install units within the following tolerances:
   i. Maximum variation of gap at window opening perimeter: 1/4-inch, per 8 feet (plus or minus 1/8-inch) of shade height.
   ii. Maximum offset from level: 1/16-inch per 5 feet of shade width.
d. Allow clearances for window operation hardware.
e. Do not install shades on removable glass stops.

3. ADJUSTING
a. Adjust and balance shades to operate smoothly, easily, safely, and free from binding or malfunction throughout entire operational range.

4. CLEANING AND PROTECTING
a. Clean shade surfaces after installation in compliance with their manufacturer's instructions.
b. Provide final protection and maintain conditions, in a manner acceptable to manufacturer and installer that ensure that shades are without damage or deterioration at Substantial Completion.
c. Replace damaged shades that cannot be repaired, in a manner approved by Architect, before Substantial Completion.

5. FIELD QUALITY CONTROL
a. Upon completion of installation, conduct tests to ensure the proper operation of the shades.
b. Adjust and lubricate as required for safe and efficient operation.
c. Review the maintenance data with the Owner's representative.
d. Restore marred or abraded surfaces to original condition using same primer used for shop painting.

6. DEMONSTRATION
a. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain the assemblies.

END OF SECTION 12490
SECTION 12494
MANUAL WINDOW SHADES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes: Provide manual chain operated window solar shades with brackets and accessories as required for complete finished operational installation.

1. SFUSD Requirements: Carefully review and conform to specific “Window Shades” requirements in SFUSD Standards.

a. Specifications are intended to be consistent with SFUSD requirements but may not list every requirement and wording of original document should be referenced to ensure compliance.

1.2 REFERENCES


1.3 SYSTEM DESCRIPTION

A. System: Provide manual shades as complete units produced by one manufacturer, including hardware, accessory items, mounting brackets and fastenings.

1.4 SUBMITTALS

A. Product Data: Furnish manufacturer's literature.

B. Samples: Submit samples of each fabric indicating finishing of top, bottom and sides, and section of frame indicating finish.

C. Certificate of Flame Proofing or Flame Resistance: Submit certification, recommendations and instructions for laundering of specified fabrics and maintenance of entire installation.

1. Instructions: Specifically applicable to this installation.

D. Environmental Requirement Submittals: Submit information necessary to establish compliance with both CHPS and CALGreen requirements.

1.5 QUALITY ASSURANCE

A. Regulatory Requirements:


2. Fire Resistant Fabrics: Required to have passed one of following:
a. NFPA 701.
   b. FS CCC-T-191, test 5903.

1.6 DELIVERY, STORAGE, AND HANDLING
   A. Do not deliver shades until building is ready for
      installation. B. Number and identify shades as to locations in
      Project.

1.7 PROJECT CONDITIONS
   A. Before installation, physically measure and inspect space after limiting conditions
      are established.
      1. Note floor and ceiling may not be level.

PART 2 - PRODUCTS

2.1 MATERIALS
   A. Shade Operating System: Manual type chain operated roller shade system
      with adjustable slip clutch.
      1. Basis of Design: MechoShade as indicated on Finish Legend.
      2. Additional Acceptable Manufacturers:
         a. Draper, Inc./FlexShade System.
   B. Solar Shade Fabric: As indicated on Finish Legend.
   C. Accessories: Provide accessories, brackets, fittings and fastenings as necessary
      for proper operation and installation of shades; conceal fasteners or finish flush,
      painted to match exposed metal finish.
   D. Exposed Metal Finish: Manufacturer's standard white painted finish.

2.2 FABRICATION
   A. Fabric: Heat set to prevent edges from unraveling when knife cut.
      1. Fabricate shades with threads square. Allow sufficient overage to
         provide finished shades required from single run of fabric.
   B. Cutting: Edge sealing hot knife system.
   C. Sewing: Locked or blind stitch, done on power machines using tension and spacing
      as required to be permanent and to avoid pulling.
      2. Seams: Flat double back or lock-over-lock, with hems and seams free from pucker.
3. Length: Finish length so bottom clearance is by 1", with 1/4" tolerance acceptable.

D. Bottom: Provide weighted hembar sealed within bottom hem.

E. Center Seams: Use single widths of fabric with no center seams for each shade.

F. Shade Mounting System: Allow for shade removal and replacement without disassembling hardware assembly.

G. Operating System: Provide upper and lower stop limits to prevent over-winding and unrolling.
   1. Provide for left or right hand operation.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install shades in accordance with manufacturer's recommendations and installation instructions. Install shades level, plumb, secure, and at proper height; cooperate with other trades for securing shades to substrate and finished surfaces.

B. Hang shades to be straight and even, employing hand sewing of seams and hems as necessary for carefully matched installation with even, horizontal top and bottom hems, and quiet, smoothly operating system.

C. Fabricate and install shades so when open, closed or while operating shades will not be abraded by window frame, ceiling or sill.

END OF SECTION 12494
12.01.01 Window Shades

12.01.02 General Requirements

1. Install with clearance, for window operation level and plumb, secure for unencumbered operation.
2. Recessed ceiling shade pockets at suspended acoustical ceiling or dropped drywall ceilings are discouraged. However because of pre-existing or new building conditions, such feature has to be implemented, consult District Architect or District Glass Shop Supervisor for further evaluation.
3. Side and Sill Channels: For room darkening shades or blackout shades, provide 2-piece extruded aluminum side and sill channels to eliminate left, right and bottom edge light gaps. One-piece side channels will not be acceptable.
4. Shades should be considered as part of an overall strategy to reduce heat and glare while maximizing daylighting and allowing user to darken classrooms and performance areas as necessary.
5. Warranty – 5 years for installation and 5 years for product
6. Acceptable Products:
   A. MechoShade Systems, Inc.
   B. Draper, Inc. – FlexShade System
   C. Hauser Shade Company
   D. Mariak Contract

12.01.03 Tilting Sash Shades

1. Use on project venting sash awning type windows lock pulley for both upper and lower shades held tight in all window. Positions tensioning through pulleys protects shades from wind damage.
2. Transom style shades for hopper windows above doors.

12.01.04 Shade Cloth Material

1. All curtains and drapes shall be made of non-PVC, interwoven non-combustible fiber, inherently flame-retardant and permanently flame-resistant with a reflective metallized coating on the exterior face. Material shall pass tests per NFPA 701-1999, Test Methods 1 and 2. Fire rating: NFPA Class A. Greenguard certified.
2. Shades shall be hemmed top and bottom, with both hems double needle stitched and backstitched at edges. Hems must be turned so that stitching passes through three thicknesses of fabric.
3. Sufficient length of material to allow two complete wraps around roller when shade is fully extended. Roller in hem construction prevents fabric from being pulled of roller. Fabric is to be attached by double wide staples. No adhesive is allowed.
4. Acceptable Material for general and blackout shading shall be:
   A. Phifer SheerWeave Performance Plus Interior Sun Control Fabric Style 2500,
   B. Ultimate Achievement 802 or Verosol Enviroscreen G2.
5. Shade Colors:
   A. Classrooms – Dark colors for room darkening control
   B. Offices – white

6. Fabric Openness Factor:
   A. North-facing windows: 1%
   B. South-facing windows: 1%
   C. West-facing windows: 1%
   D. East-facing windows: 1%

12.01.05 Rollers

1. Clutch mechanism: Provide a heavy-duty single spring that creates a positive mechanical relationship between the roller shade tube unit and the universal installation bracket to ensure stationary positioning in the static state. When activated the wrap spring shall release and permit the clutch to turn while reducing friction on the clutch. Clutch mechanisms with multiple springs are not acceptable.

2. Clutch bracket: The clutch shall be fixed to the installation bracket with tech screws. It must be removable without having to remove the installation brackets from the wall. Clutch mechanism shall be fastened with screws and not riveted to the brackets.

3. Spring loaded and retractable idle end cap – with retractable pin end to provide secure anchorage into end bracket and to provide for simple and easy installation.

4. Spring roller diameter length and material as needed to support shade length, width and material weight 1-1/2"diameter min. x width needed to cover window.

5. Use steel rollers for all shades exceeding 45" in width; heavy-duty springs and positive locking mechanisms.

12.01.06 Mounting Brackets

1. Diameter to match roller, closed end projection adequate to clear all hardware galvanized steel finish, compatible with aluminum if aluminum sash, isolate if necessary.

2. Brackets must have nylon insert on pin side. Mount brackets with ¼” hex head screws.

3. Installation brackets are not universal in design. They shall support 150 percent of the full weight of the shade. Specify brackets either for ceiling mount, right wall mount and/or left hand wall mount installation. Clutch mechanism shall be screwed to the clutch side of the installation brackets for superior durability.

4. Idler End Mounting Bracket: The idler end installation shall include a ball bearing idler socket for quiet and ultra-smooth rotation. It shall also include a built-in height leveling adjustment to minimize shade telescoping.

5. Provide wall backing between wall studs to align with fasteners.

6. Shade brackets cannot be installed on removable glass stops.

12.01.07 Pulleys

1. Tolerances are critical to performance.

2. Spacing between pulley roller and pulley roller bracket arm holding the pulley roller must not allow shade cord to catch.
3. Closed end stop pulleys on all shades.
4. All metal roller catches mounted with ¼” hex head screws.

### 12.01.08 Cord

1. Shall be stainless steel chain. Nickel plated steel chain not acceptable. Include cord clasp to be mounted at appropriate height above window sill side wall.
2. Braided fabric cord is not acceptable.
3. Bead chain loop: 120 lb Stainless steel bead chain with double ball stops.
4. Bead Chain Hold Down: Spring-Loaded Tensioner. Install with no sag in chain. Chain must be taught

### 12.01.09 Fascia

1. Continuous extruded aluminum "L"-shaped profile to conceal the roller shade tube mechanism. It shall be attached to the tube mounting brackets by snapping it in place on a hinge rib clip, without the use of adhesives, magnetic strips, or exposed fasteners. It shall be able to be installed across two or more shade bands in one piece as specified.
2. Fascia minimum thickness of 5/16-inch with powder-coated finish in color as selected.
3. Provide bracket/fascia end caps where mounting conditions expose outside of roller shade brackets.
4. Notching of fascia for manual drive chain shall not be acceptable.

### 12.01.10 Hem Bar/Slat

1. Hem Bar / Slat shall be 13/16” aluminum dowel encased in bottom hem with heat sealed ends.

### 12.01.10 Screw Eyes

1. Screw eyes: Screw eyes shall not be oversized. Any splitting of slats caused by screw eye installation shall be rejected.
2. Warranty – 5 years for installation and 5 years for product
3. Acceptable Manufacturers:
   A. MechoShade Systems, Inc.
   B. Draper, Inc. – FlexShade System
   C. Hauser Shade Company
   D. Mariak Contract

END OF SECTION 12000