

THE SCHOOL DISTRICT OF PHILADELPHIA
Office of Capital Programs
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Addendum No. 002

Project: Envelope Repairs
SDP Contract Number: 2022-014-G

Location: Spring Garden Elementary School
1146 Melon Street, Philadelphia, PA 19123

This Addendum, dated July 20, 2022 shall modify and become part of the Contract Documents for the work of this project. Any items not mentioned herein, or affected by, shall be performed strictly in accordance with the original documents.

ATTENTION ALL BIDDERS – IMPORTANT NOTICE

ADDENDUM No. 002

The following clarification is being issued regarding exterior renovations.

QUESTIONS & ANSWERS:

Q1: The specifications list both a screen fabric and a blackout fabric, which is to be used?
Please confirm which windows receive new window shades.

A1: See revised Section 12 2413, Window Shades, this Addendum.

SPECIFICATIONS:

Section 08 5656

- Revised paragraph 2.01
- Section attached

Section 08 7100

- Updated hardware schedule
- Section attached

SDP CONTRACT NO. 2022-014-G

Section 12 2413

- Added schedule to Part 3
- Section attached

CHANGES TO DRAWINGS - None

CLARIFICATIONS - None

The Bid Due Date - Unchanged

END OF ADDENDUM #002

SECTION 08 5656
INTEGRAL SECURITY SCREENS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this section.

1.02 SUMMARY

- A. Windows shall incorporate an Integral Heavy-Duty Security Screen. The intent of this specification is to define a security screen complying with the performance and descriptions herein and to define that each screen shall be single sourced from the window manufacturer, factory attached by the window manufacturer and shipped as a complete system. The screen sub-frame shall be factory mounted to the window frame as an integral part of the window by the window manufacturer. Field installation of an independent security screen shall not be acceptable on Windows.

1.03 RELATED DOCUMENTS

- A. Related Sections:
 - 1. Division 8 Section "Aluminum Windows."
- B. Coordinate work with that of all construction contractors affecting or affected by work of this Contract. Cooperate with such contractors to assure the steady progress of the Work.

1.04 SYSTEM DESCRIPTION AND OPERATION

- A. Metal integral security screens shall be designed to furnish physical deterrence against forcible destruction of windows.
- B. Integral security screen shall consist of a sub-frame permanently fixed to the window framing members, and an operable main frame with a stainless-steel wire in-fill.
- C. Integral security screen shall be accessible and easily operated for maintenance purposes, including window cleaning and general maintenance.

1.05 QUALITY ASSURANCE

- A. General: Provide screen systems that comply with performance requirements specified as determined by testing manufacturer's standard assemblies representing those indicated for this Project.
- B. Test Requirements: Comply with test criteria of SMA 6001-2002.

1. Impact Test:
 - a. Security Screen: An impact of 50 ft/lbs of force causing a deflection of not more than 3" as specified for medium rating.
 2. Sag Test: 90 lbs of weight applied for 5 minutes with permanent sag of not more than 0.063" as specified for heavy rating.
 3. Force Entry Test: Three loads of force: A:150 lbs, B 300 Lbs, C 50 lbs applied to the screen as specified for heavy rating.
- C. Product Certificates: Performance and testing must comply with impact, sag, and forced entry resistance requirements of SMA 6001-2002. Manufacturer must submit qualifying test report from an AAMA certified test Laboratory.
- D. Single Source Responsibility: Furnish metal integral security screens supplied and applied to window frames by a single manufacturer.

1.06 SUBMITTALS

- A. Product Data and Shop Drawings: submit the following:
1. Materials list of all parts and components of integral security screen.
 2. Construction details and fabrication methods.
 3. Profiles and dimensions of individual components.
 4. Data on hardware, accessories, and finishes.
 5. Recommendations for maintaining and cleaning exterior surfaces.
- B. Integral security screen submittals shall be coordinated with, and submitted with, the aluminum window submittals so that they can be reviewed together. Refer to other sections for requirements for window submittals.
- C. Samples
1. Samples for Initial Color Selection: Submit samples of each specified finish on 10-inch-long sections of members. Where finishes involve normal color variations, include sample sets showing the full range of variations expected.
 2. In-fill Sample:
 - a. Security Screen: 8" x 8" of stainless-steel wire mesh used in the vandal screen, finished as specified.
 3. Full Scale Sample: Submit assembled, operational, full-scale sample including all required items to demonstrate operation of system. Sample shall be approximately 18" x 30" showing fabrication techniques and workmanship, and design of hardware and accessories.
- D. Manufacturer Certifications
1. Submit certification from the integral security screen manufacturer stating that the security screens comply with specified requirements.
 2. Manufacturer must submit qualifying test report from an AAMA accredited test Laboratory attesting that units comply with SMA 6001-2002.

E. PRODUCT HANDLING

1. Protection: Use all means necessary to protect materials of this Section before, during, and after installation and to protect installed work and materials of all other trades.
2. Replacements: In the event of damage, immediately make all repairs and replacements necessary to approval of the Architect and at no additional cost to the Owner.
3. Delivery and storage: Deliver all materials to the job site in their original unopened containers with all labels intact and legible at time of use. Store in strict accordance with the manufacturer's recommendations, as approved by the Architect.

1.07 WARRANTY

- A. Special Warranty: Submit a written warranty signed by integral security screen manufacturer agreeing to repair or replace security screen components that fail in materials or workmanship within the specified warranty period. Failures include, but, are not limited to, the following:
 1. Structural failures including excessive deflection.
 2. Faulty operation of security screen and hardware.
 3. Deterioration of metals, metal finishes, and other material beyond normal weathering.
- B. Warranty Period for The Integral Security Screen Unit: 10 years after date of substantial completion.
- C. Warranty Period for Metal Finishes: 10 years after date of substantial completion.

PART 2 – PRODUCTS

2.01 MANUFACTURERS

- △
- A. Acceptable Manufacturers: Subject to compliance with requirements, furnish metal integral security screens manufactured by the following:
 1. Graham Architectural Products Aegis 8902

2.02 MATERIALS

- A. Aluminum Extrusions: All frame and retainer sections shall be extruded aluminum shapes produced from commercial quality 6063- T5 alloy and shall be free from defect that impair strength and durability. Screen frame shall be mounted to window frame at the manufacturing facility.
- B. Sub Frame: All sub frame members to be made of extruded aluminum alloy with a nominal wall thickness of .062 that incorporates an aluminum snap on cover to conceal the installation fasteners. Frame members shall be mitered and mechanically fastened utilizing metal corner gussets. All frames to be factory machined and assembled by the window manufacture.

- C. Hinge: A minimum of two hinges shall be located at the jamb opposite of the operating mechanisms. Each hinge shall fit in an aluminum raceway that allows for removal of hinge or adding of hinges without the need of processing to the sub frame or screen. The hinges shall be powder-coated 3-5/8" long, pre assembled three knuckle design made of aluminum, using nylon bushings. Pins pressure plates and screws shall be stainless steel. A grub screw shall allow removal of pin, the grub screw shall only be accessible once the screen is opened.
- D. Screens: Screen to be full configuration and be operable. Screen main frame to be of mitered construction and contain a noise reduction gasket to prevent rattle between main frame and sub frame, frame members and tie bar to have a hollow, with .078 nominal wall thickness. Screen to lock in a closed secure position by means of a single point release lock.
- E. In-Fill:
 - 1. Security Screen: In-fill shall be 0.028 stainless steel 12 x 12 black powder coat finished mesh. Non painted mesh is not acceptable. Each edge of screen to have a
 - a. 1/2" 90-degree bends. Full screens may require two pieces of screen mesh.
- F. Locking Mechanism: Provide single handle multi-point mechanism that activates a minimum of three locking points. Provide exterior Locking Mechanism with Custodial Handle for Fixed Sash and Door Security Screens.
- G. Limit Device: An adjustable arm made of galvanized steel shall be located at the head to limit the screen from swinging open past 90° from the manufacturer, field adjustment shall be possible to accommodate existing conditions.
- H. Alignment Mechanism: Two-piece metal guide to properly position screen mainframe when in the closed position for locking hardware alignment and reduction of load on hinges.

2.03 FABRICATION

- A. Construction
 - 1. Frame members to be mitered and mechanically fastened by means of hydraulically crimped corners utilizing metal corner gussets that allow passage for internal cold welding to be achieved around its perimeter. Screen frame to be factory mounted to the window frame as an integral part of the window by the window manufacturer. Field installation of an independent security screen shall not be acceptable
 - 2. Tie-bar (when used) to be coped to fit tightly within frame at each end and be attached with mechanical gussets.
 - 3. Screen in-fill to be held in place:
 - a. Security screen - with extruded retainers fastened through the retainer and in-fill into the frame with #10 stainless steel zinc coated screws a minimum of every 4". Retainers shall have a minimal wall thickness of

- 1) .062" and contain a cover plate that conceals all fasteners. Retainer and cover are to be black in color to match in-fill.
4. Locks shall be factory installed and shipped as part of the complete screen unit.
5. Integral Security Screen: Screen frame to be factory mounted to the window frame as an integral part of the window by the window manufacturer. Field installation of an independent security screen shall not be acceptable.

2.04 FINISH

- A. The paint shall be an organic finish applied over five-stage aluminum pre-treatment. The screen frames and screen sash shall be factory finished to match the window frame. The finish shall conform to AAMA 2604.
- B. Aluminum Preparation: Prepare aluminum in accordance with coating manufacturer's recommendation.
 1. The paint finish coating for extruded aluminum window and screen framing shall be a two-coat factory applied, Kynar (polyvinylidene fluoride PVF2). The paint coatings cannot be field applied. Application of the paint finish shall be performed under specifications issued by coatings manufacturers and by an applicator specifically approved by the coating's manufacturer. Said applicator shall provide written notification of approval by the paint coating manufacturer prior to application of the paint finish. The paint coating system shall be applied to properly cleaned and pretreated aluminum and shall meet the requirements AAMA Spec. No. 2604-98 "Voluntary Specification, performance Requirements and Test Procedures for High Performance Organic Coatings on Architectural Extrusions and Panels."
 2. Finish: The paint shall be an organic finish applied over a five-stage aluminum pre-treatment. The screen frames and sub-frames shall be factory finished to match the window frame. The finish shall conform to AAMA 2604.
- C. Steel Finish Preparation: Prepare steel surfaces for painting as recommended by coating manufacturer.
- D. Screen In-fill Preparation: Prepare stainless in accordance with coating manufacturer's recommendations.
 1. Woven Wire Fabric Screen (WW)
 - a. Stainless steel wire in-fill shall have a shop electrostatically applied polyester black powder coated finish. Powder coating finish shall meet or exceed AAMA 2604.
- E. Colors: Furnish custom colors to match aluminum window framing at each security screen sub-frame and main frame. Stainless steel wire shall be black.

PART 3 – EXECUTION

3.01 OPERATION TESTING

- A. After completion of integral security screen and window assembly installation, the security screens shall be adjusted, in working order, and clean. Operate the locking mechanism, open and close security screens. The integral security screen shall be in good operating condition and free of any defects.

END OF SECTION 08 5656

SECTION 08 7100
DOOR HARDWARE

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Hardware for existing exterior hollow metal doors.
 - 2. Thresholds.
 - 3. Weatherstripping and gasketing.
- B. Related Sections:
 - 1. Section 07 9200 - Joint Sealants: Sealants for setting exterior door thresholds.

1.02 REFERENCE STANDARDS

- A. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design 2010.
- B. BHMA (CPD) - Certified Products Directory 2017.
- C. BHMA A156.1 - American National Standard for Butts and Hinges 2016.
- D. BHMA A156.3 - American National Standard for Exit Devices 2014.
- E. BHMA A156.4 - American National Standard for Door Controls - Closers 2013.
- F. BHMA A156.5 - American National Standard for Cylinders and Input Devices for Locks 2014.
- G. BHMA A156.6 - American National Standard for Architectural Door Trim 2015.
- H. BHMA A156.16 - American National Standard for Auxiliary Hardware 2013.
- I. BHMA A156.18 - American National Standard for Materials and Finishes 2016.
- J. BHMA A156.21 - American National Standard for Thresholds 2014.
- K. BHMA A156.22 - American National Standard for Door Gasketing and Edge Seal Systems, Builders Hardware Manufacturers Association 2017.
- L. BHMA A156.26 - American National Standard for Continuous Hinges 2012.
- M. BHMA A156.28 - American National Standard for Recommended Practices for Mechanical Keying Systems 2013.

- N. BHMA A156.115 - American National Standard for Hardware Preparation in Steel Doors and Steel Frames 2016.
- O. DHI (KSN) - Keying Systems and Nomenclature 1989.
- P. DHI (LOCS) - Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames 2004.
- Q. ICC A117.1 - Accessible and Usable Buildings and Facilities 2017.
- R. NFPA 101 - Life Safety Code Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- S. UL (DIR) - Online Certifications Directory Current Edition.

1.03 ADMINISTRATIVE REQUIREMENTS

- A. Coordinate the manufacture, fabrication, and installation of products that door hardware is installed on.
- B. Pre-Installation Meeting: Convene a pre-installation meeting one week prior to commencing work of this section; attendance is required by affected installers and the following:
 - 1. Installer's Architectural Hardware Consultant (AHC).
 - 2. Hardware Installer.
 - 3. Contractor.
 - 4. Owner's Representative.
- C. Furnish templates for door and frame preparation to manufacturers and fabricators of products requiring internal reinforcement for door hardware.
- D. Keying Requirements Meeting:
 - 1. Attendance Required:
 - a. Contractor.
 - b. Installer's Architectural Hardware Consultant (AHC).
 - c. Hardware Installer.
 - d. School District of Philadelphia's Representative.
 - 2. Agenda:
 - a. Establish keying requirements.
 - b. Verify locksets and locking hardware are functionally correct for project requirements.
 - c. Verify that keying and programming complies with project requirements.
 - d. Establish keying submittal schedule and update requirements.
 - 3. Incorporate "Keying Requirements Meeting" decisions into keying submittal upon review of door hardware keying system including, but not limited to, the following:
 - a. Key control system requirements.

4. Record minutes and distribute copies within two days after meeting to participants, with emailed electronic copies to Architect, Owner, participants, and those affected by decisions made.
5. Deliver established keying requirements to manufacturers.

1.04 SUBMITTALS

- A. Product Data: Manufacturer's catalog literature for each type of hardware, marked to clearly show products to be furnished for this project, and includes construction details, material descriptions, finishes, and dimensions and profiles of individual components.
- B. Shop Drawings - Door Hardware Schedule: Submit detailed listing that includes each item of hardware to be installed on each door. Use door numbering scheme as included in Contract Documents.
 1. Prepared by or under supervision of Architectural Hardware Consultant (AHC).
 2. Provide complete description for each door listed.
 3. Provide manufacturer name, product names, and catalog numbers; include functions, types, styles, sizes and finishes of each item.
- C. Manufacturer's Installation Instructions: Indicate special procedures and perimeter conditions requiring special attention.
- D. Maintenance Data: Include data on operating hardware, lubrication requirements, and inspection procedures related to preventative maintenance.
 1. Submit manufacturer's parts lists and templates.
- E. Keying Schedule:
 1. Submit electronic copies of Keying Schedule in compliance with requirements established during Keying Requirements Meeting unless otherwise indicated.
- F. Installer's Qualification Statement: Letter includes examples of three previous projects.
- G. Supplier's Qualification Statement: Letter includes the name and credentials of the certified Architectural Hardware Consultant (AHC) and that they are in good standing with the manufacturer.
- H. Warranty: Submit manufacturer's warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.
- I. Maintenance Materials and Tools: Furnish the following for Owner's use in maintenance of project.
 1. Lock Cylinders: Ten for each master keyed group.
 2. Tools: One set of each special wrench or tool applicable for each different or special hardware component, whether supplied by hardware component manufacturer or not.

1.05 QUALITY ASSURANCE

- A. Installer Qualifications: Company specializing in performing work of the type specified for commercial door hardware with at least three years of documented experience.
- B. Supplier Qualifications: Company with certified Architectural Hardware Consultant (AHC) to assist in work of this section.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Package hardware items individually; label and identify each package with door opening code to match door hardware schedule.

1.07 WARRANTY

- A. Warranty against defects in material and workmanship for period indicated, from Date of Substantial Completion.
 - 1. Closers: Five years, minimum.
 - 2. Exit Devices: Three years, minimum.
 - 3. Locksets and Cylinders: Three years, minimum.
 - 4. Other Hardware: Two years, minimum.

PART 2 PRODUCTS

2.01 DESIGN AND PERFORMANCE CRITERIA

- A. Provide specified door hardware as required to make doors fully functional, compliant with applicable codes, and secure to extent indicated.
- B. Provide individual items of single type, of same model, and by same manufacturer.
- C. Provide door hardware products that comply with the following requirements:
 - 1. Applicable provisions of federal, state, and local codes.
 - 2. Accessibility: ADA Standards and ICC A117.1.
 - 3. Applicable provisions of NFPA 101.
 - 4. Listed and certified compliant with specified standards by BHMA (CPD).
 - 5. Hardware Preparation for Steel Doors and Steel Frames: BHMA A156.115.
- D. Fasteners:
 - 1. Provide fasteners of proper type, size, quantity, and finish that comply with commercially recognized standards for proposed applications.
 - a. Aluminum fasteners are not permitted.
 - b. Provide phillips flat-head screws with heads finished to match door surface hardware unless otherwise indicated.
 - 2. Provide stainless steel machine screws and expansion shields for concrete and masonry substrates.

3. Concealed Fasteners: Do not use through or sex bolt type fasteners on door panel sides indicated as concealed fastener locations, unless otherwise indicated.

2.02 HINGES

A. Manufacturers:

1. McKinney; an Assa Abloy Group company; MCK-25HD 628
: www.assaabloydss.com/#sle.

B. Hinges: Comply with BHMA A156.1, Grade 1.

1. Continuous Hinges: Comply with BHMA A156.26.
2. Provide hinges on every swinging door.
3. Provide non-removable pins on exterior outswinging doors.

2.03 EXIT DEVICES

A. Manufacturers:

1. Corbin Russwin; an Assa Abloy Group company; ED5200S X M52
: www.assaabloydss.com/#sle.

B. Exit Devices: Comply with BHMA A156.3, Grade 1.

1. Lever design to match lockset trim.
2. Provide cylinder with cylinder dogging or locking trim.
3. Provide exit devices properly sized for door width and height.
4. Provide strike as recommended by manufacturer for application indicated.
5. Provide UL (DIR) listed exit device assemblies for fire-rated doors and panic device assemblies for non-fire-rated doors.

2.04 LOCK CYLINDERS

A. Manufacturers:

1. Best, dormakaba Group; 1E72: www.bestaccess.com/#sle.

B. Lock Cylinders: Provide key access on outside of each lock, unless otherwise indicated.

1. Provide small format interchangeable core (SFIC) type cylinders, Grade 1, with seven-pin core in compliance with BHMA A156.5 at locations indicated.
2. Provide cylinders from same manufacturer as locking device.
3. Provide cams and/or tailpieces as required for locking devices.
4. Within specific Door Sections, when provisions for lock cylinder are being referenced to this Section, provide specified lock cylinder and keyed to building keying system, unless otherwise indicated.

2.05 DOOR PULLS AND PUSH PLATES

A. Door Pulls and Push Plates: Comply with BHMA A156.6.

1. Pull Type: Offset, unless otherwise indicated.

2. Push Plate Type: Flat, with rounded ends, unless otherwise indicated.
 - a. Edges: Beveled, unless otherwise indicated.
3. Material: Stainless steel, unless otherwise indicated.
4. Provide door pulls and push plates on doors without a lockset, latchset, exit device, or auxiliary lock unless otherwise indicated.
5. On solid doors, provide matching door pull and push plate on opposite faces.

2.06 CLOSERS

- A. Manufacturers; Surface Mounted:
 1. LCN, an Allegion brand; 40 Series Heavy Duty: www.allegion.com/us/#sle.
- B. Closers: Comply with BHMA A156.4, Grade 1.
 1. Type: Surface mounted to door.
 2. Provide door closer on each exterior door.
 3. At corridor entry doors, mount closer on room side of door.
 4. At outswinging exterior doors, mount closer on interior side of door.

2.07 KICK PLATES

- A. Manufacturers:
 1. Trimco; 630: www.trimcohardware.com/#sle.
- B. Kick Plates: Provide along bottom edge of push side of every door with closer, unless otherwise indicated.
 1. Size: 8 inch high by 2 inch less door width (LDW) on push side of door.

2.08 FLOOR STOPS

- A. Floor Stops: Comply with BHMA A156.16, Grade 1 and Resilient Material Retention Test as described in this standard.
 1. Type: Manual hold-open, with pencil floor stop.
 2. Material: Aluminum housing with rubber insert.

2.09 WALL STOPS

- A. Wall Stops: Comply with BHMA A156.16, Grade 1 and Resilient Material Retention Test as described in this standard.
 1. Type: Bumper, concave, wall stop.
 2. Material: Aluminum housing with rubber insert.

2.10 THRESHOLDS

- A. Manufacturers:
 1. Pemko; an Assa Abloy Group company; 2005AN: www.assaabloydss.com/#sle.
- B. Thresholds: Comply with BHMA A156.21.

1. Provide threshold at each exterior door, unless otherwise indicated.
2. Type: Rabbeted with door stop.
3. Material: Aluminum, with neoprene weatherstripping.
4. Threshold Surface: Fluted horizontal grooves across full width.
5. Field cut threshold to profile of frame and width of door sill for tight fit.
6. Returned closed ends at openings where threshold extends beyond frame face.
7. Provide non-corroding fasteners at exterior locations.

2.11 WEATHERSTRIPPING AND GASKETING

- A. Manufacturers:
1. Pemko; an Assa Abloy Group company: www.assaabloydss.com/#sle.
- B. Weatherstripping and Gasketing: Comply with BHMA A156.22.
1. Head and Jamb Type: Adjustable and Self-Adhesive.
 2. Door Sweep Type: Door shoe.
 3. Material: Aluminum, with weatherstripping as listed in Hardware Sets.
 4. Provide weatherstripping on each exterior door at head, jambs, and meeting stiles of door pairs, unless otherwise indicated.
 5. Provide door bottom sweep on each exterior door, unless otherwise indicated.

2.12 KEY CONTROL SYSTEMS

- A. Key Control Systems: Comply with guidelines of BHMA A156.28.
1. Provide keying information in compliance with DHI (KSN) standards.
 2. Keying: Master keyed.
 3. Key to existing keying system.
 4. Supply keys in following quantities:
 - a. 6 of each Master keys, and 3 keys per cylinder.
 5. Deliver keys with identifying tags to Owner by security shipment direct from hardware supplier.

2.13 FINISHES

- A. Finishes: Provide door hardware of same finish, unless otherwise indicated.
1. Primary Finish: 630; satin stainless steel, with stainless steel 300 series base material (former US equivalent US32D); BHMA A156.18.
 2. Secondary Finish: 626; satin chromium plated over nickel, with brass or bronze base material (former US equivalent US26D); BHMA A156.18.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that doors and frames are ready to receive this work; labeled, fire-rated doors and frames are properly installed, and dimensions are as indicated on shop drawings.

3.02 INSTALLATION

- A. Install hardware in accordance with manufacturer's instructions and applicable codes.
- B. Use templates provided by hardware item manufacturer.
- C. Do not install surface mounted items until application of finishes to substrate are fully completed.
- D. Door Hardware Mounting Heights: Distance from finished floor to center line of hardware item. As indicated in following list; unless noted otherwise in Door Hardware Schedule or on drawings.
 - 1. For Steel Doors and Frames: Install in compliance with DHI (LOCS) recommendations.
 - 2. Mounting heights in compliance with ADA Standards:
 - a. Locksets: 40-5/16 inch.
 - b. Push Plates/Pull Bars: 42 inch.
 - c. Deadlocks (Deadbolts): 48 inch.
 - d. Exit Devices: 40-5/16 inch.
- E. Set exterior door thresholds with full-width bead of elastomeric sealant at each point of contact with floor providing a continuous weather seal; anchor thresholds with stainless steel countersunk screws.
 - 1. See Section 07 9200 for additional requirements.

3.03 FIELD QUALITY CONTROL

- A. Provide an Architectural Hardware Consultant (AHC) to inspect installation and certify that hardware and installation has been furnished and installed in accordance with manufacturer's instructions and as specified.

3.04 ADJUSTING

- A. Adjust hardware for smooth operation.
- B. Adjust gasketing for complete, continuous seal; replace if unable to make complete seal.

3.05 CLEANING

- A. Clean finished hardware in accordance with manufacturer's written instructions after final adjustments have been made.
- B. Clean adjacent surfaces soiled by hardware installation.
- C. Replace items that cannot be cleaned to manufacturer's level of finish quality at no additional cost.

3.06 PROTECTION

- A. Do not permit adjacent work to damage hardware or finish.

3.07 HARDWARE SETS

Manufacturers:

- | | |
|-------------------|-----|
| 1. Corbin Russwin | CBR |
| 2. McKinney | MCK |
| 3. Norton | NOR |
| 4. Pemko | PEM |
| 5. Trimco | TRM |

B. Hardware Set #1 (SDP Hardware Set 1)

Exterior HM - Pair of Doors, Ingress/Egress

Doors: D5

2	Continuous Hinges	MCK-25HD	628	MCK
1	Exit Device	ED5200S x M52 x K157 RHR	630	CBR
1	Exit Device	ED5200S M52 LHR	630	CBR
1	Cylinder	1E72 RHR	626	BES
1	Cylinder	1E74 Dogging	626	BES
2	Door Closers	40 Series Heavy Duty EDA	AL	LCN
1	Door Pull	1097HA SP	630	TRM
2	Kick Plates	8" x 2" LDW, Push Side	630	TRM
1	Threshold	2005AN	AL	PEM
2	Door Sweeps	18061_NB	Nylon	PEM
1	Weatherstripping	303DS, Head & Jambs	Silicone	PEM
1	Weatherstripping	PK33D Mullion	Silicone	PEM
1	Rain Drip	346D, full frame width	AL	PEM
2	Flush Bolts (match existing)		630	

C. Hardware Set #2 (SDP Hardware Set 2)

Exterior HM - Pair of Doors, Egress Only

Doors: D1, D2, D3, D4

2	Continuous Hinges	MCK-25HD	628	MCK
2	Exit Device	ED5200S	630	CBR
1	Cylinder	1030.118 Mullion	626	CBR
2	Door Closers	40 Series Heavy Duty EDA	AL	LCN
2	Kick Plates	8" x 2" LDW, Push Side	630	TRM
1	Threshold	2005AN	AL	PEM
2	Door Sweeps	18061_NB	Nylon	PEM
1	Weatherstripping	303DS, Head & Jambs	Silicone	PEM
1	Weatherstripping	PK33D Mullion	Silicone	PEM
1	Rain Drip	346D, full frame width	AL	PEM

2

2 Flush Bolts (match existing)

630

D. Hardware Set #3 (SDP Hardware Set 5)

Exterior HM - Single Door, Egress Only

Doors: D6

1	Continuous Hinge	MCK-25HD	628	MCK
1	Exit Device	ED5200S x M51	630	CBR
1	Door Closers	40 Series Heavy Duty EDA	AL	LCN
1	Kick Plates	8" x 2" LDW, Push Side	630	TRM
1	Threshold	2005AN	AL	PEM
2	Door Sweeps	18061_NB	Nylon	PEM
1	Weatherstripping	303DS, Head & Jambs	Silicone	PEM
1	Rain Drip	346D, full frame width	AL	PEM
1	Flush Bolt	(match existing)	630	

END OF SECTION 08 7100

SECTION 12 2413
WINDOW SHADES

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Manual black-out shades.
 - 2. Manual light filtering shades.
- B. Related Sections:
 - 1. Section 08 5113: Aluminum Windows.

1.02 SUBMITTALS

- A. 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: Show location and extent of roller shades. Include elevations, sections, details, and dimensions not shown in Product Data. Show installation details, mountings, attachments to other Work, operational clearances, and relationship to adjoining work.
- C. Samples for Initial Selection: Sections of fabric demonstrating complete range of colors available, for Architect's selection.
- D. Samples for Verification:
 - 1. Complete, full-size operating unit not less than 16 inches (400 mm) wide for each type of roller shade indicated.
 - 2. Shade Material: Not less than 12-inch- (300-mm-) square section of fabric, from dye lot used for the Work, with specified treatments applied. Show complete pattern repeat. Mark top and face of material.
- E. Window Treatment Schedule: Include roller shades in schedule using same room designations indicated on Drawings.
- F. Product Certificates: For each type of roller shade product, signed by product manufacturer.
- G. Product Test Reports: For each type of roller shade product.
- H. Maintenance Data: For roller shades to include in maintenance manuals. Include the following:
 - 1. Methods for maintaining roller shades and finishes.

2. Precautions about cleaning materials and methods that could be detrimental to fabrics, finishes, and performance.
3. Operating hardware.

1.03 QUALITY ASSURANCE

- A. **Installer Qualifications:** An experienced installer who has completed installation of roller shades similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.
- B. **Source Limitations:** Obtain roller shades through one source from a single manufacturer.
- C. **Fire-Test-Response Characteristics:** Provide roller shade band materials with the fire-test-response characteristics indicated, as determined by testing identical products per test method indicated below by UL or another testing and inspecting agency acceptable to authorities having jurisdiction:
 1. **Flame-Resistance Ratings:** Passes NFPA 701.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Deliver shades in factory packages, marked with manufacturer and product name, fire-test-response characteristics, and location of installation using same room designations indicated on Drawings and in a window treatment schedule.

1.05 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:** 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. Allow clearances for operable glazed units' operation hardware throughout the entire operating range. Notify Architect of discrepancies. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. **Basis of Design:** MechoShade System, Inc.
- B. **Other Acceptable Manufacturers:**
 1. Draper Shade & Screen Co., Inc.

2. Hunter Douglas Vertical
3. Levolor Contract; a Newell Company.
4. Silent Gliss USA, Inc

2.02 BASIS OF DESIGN PRODUCTS

- A. Manual Single-Roller Shades: Provide Mecho/5 Wide Bracket System by MechoShade, with optional fascia or equal.

2.03 MATERIALS

- A. Glare Control Fabric, 3% Open Mesh Type: 100% polyester, recyclable fabric; "EcoVeil Sheer" Collection, 6750 Series, in color as scheduled or equal.
- B. Room Darkening Fabric, Opaque Type: 66% acrylic (coating), 34% fiberglass (yarn), opaque fabric; "Equinox Blackout" Collection, 0100 Series (0% open), in color as scheduled, or equal.
- C. Brackets: Plated steel, with adequate projection to clear all window fixtures.
- D. Aluminum Extrusions: Alloy and temper recommended by manufacturer for use intended and as required for proper application of finish indicated but not less than the strength and durability properties specified in ASTM B 221 for 6063-T5.

2.04 FABRICATION

- A. Product Description: Roller shade consisting of a roller, a means of supporting the roller, a flexible sheet or band of material carried by the roller, a means of attaching the material to the roller, a bottom bar, and an operating mechanism that lifts and lowers the shade.
- B. Components: Noncorrosive, self-lubricating materials.
- C. Rollers: Electrogalvanized or epoxy primed steel or extruded-aluminum tube of diameter and wall thickness required to support and fit internal components of operating system and the weight and width of shade band material without sagging; designed to be easily removable from support brackets; with manufacturer's standard method for attaching shade material.
- D. Direction of Roll: Regular, from back of roller.
- E. Mounting Brackets:
 1. Single Roll Shades: Galvanized or zinc-plated steel, style for between jamb mounting unless otherwise indicated
- F. Fascia: L-shaped, formed-steel sheet or extruded aluminum; long edges returned or rolled; continuous panel concealing front and bottom of shade roller, brackets, and operating hardware and operators; length as required for between the jambs mounting; removable design for access.

- G. Bottom Bar: Steel or extruded aluminum, with plastic or metal capped ends. Provide concealed, by pocket of shade material, internal-type bottom bar with concealed weight bar as required for smooth, properly balanced shade operation.
- H. Light-Blocking Shade Hardware: Designed for eliminating all visible light gaps when shades are fully closed; manufacturer's standard side channels and perimeter seals, including sill light seal attached to bottom bar, for eliminating light gaps when shades are closed.
 - 1. Provide Exposed Light Seal Hem Bar with soft vinyl welt at bottom in lieu of sill channel for all blackout shades.
- I. Shade Operation: Manual; with continuous loop bead chain, clutch, and cord tensioner and bracket lift operator.
 - 1. Position of Clutch Operator: Right side of roller, as determined by hand of user facing shade from inside, unless otherwise indicated on Drawings.
 - 2. Clutch: Capacity to lift size and weight of shade; sized to fit roller or provide adaptor.
 - 3. Loop Length: Length required to make operation convenient from floor level
 - 4. Bead Chain: Stainless steel.
- J. J. Shade Units: Obtain units fabricated in sizes to fill window and other openings as follows, measured at 74 deg F (23 deg C):
 - 1. Shade Units Installed between (Inside) Jamb: Edge of shade not more than 1/4 inch (6 mm) from face of jamb. Length equivalent to head to sill dimension of opening in which each shade is installed.
- K. Installation Fasteners: Fabricated from metal that is noncorrosive to shade hardware and adjoining construction and to support shades as required by manufacturer's written instructions.
- L. Color-Coated Finish: For metal components exposed to view, apply manufacturer's standard baked finish complying with manufacturer's written instructions for surface preparation including pretreatment, application, baking, and minimum dry film thickness.
- M. Colors of Metal and Plastic Components Exposed to View: As selected by Architect from manufacturer's full range unless otherwise indicated.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, operational clearances, and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 ROLLER SHADE INSTALLATION

- A. Install roller shades level, plumb, square, and true according to manufacturer's written instructions, and located so shade band is not closer than 2 inches (50 mm) to interior face of glass. Allow clearances for window operation hardware.
- B. Install metal parts isolated from concrete or mortar to prevent corrosion.
- C. Install mounting brackets with not less than 2 fasteners per bracket.

3.03 ADJUSTING

- A. Adjust and balance roller shades to operate smoothly, easily, safely, and free from binding or malfunction throughout entire operational range.

3.04 CLEANING AND PROTECTION

- A. Clean roller shade surfaces after installation, according to manufacturer's written instructions.
- B. Provide final protection and maintain conditions, in a manner acceptable to manufacturer and Installer, that ensure that roller shades are without damage or deterioration at time of Substantial Completion.
- C. Replace damaged roller shades that cannot be repaired, in a manner approved by Architect, before time of Substantial Completion.

3.05 SCHEDULE

- A. Glare Control Fabric: Provide in all spaces except restrooms and rooms scheduled to receive room darkening fabric. Rooms to receive glare control fabric include classrooms, teacher's rooms, offices, lunch rooms, and gymnasium.
- B. Room Darkening Fabric: Provide in Auditorium and dressing rooms.

2

END OF SECTION 12 2413

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