

# APPLICATION FOR SUBMITTAL OF POST-APPROVAL DOCUMENT

This application is for submittal of documents, after the initial approval of the project (post-approval documents), that require Division of the State Architect (DSA) review and approval. This form shall be completed by the Design Professional in General Responsible Charge of the project, in accordance with California Code of Regulations, Title 24, Part 1, Sections 4-317, 4-323 and 4-338 and in compliance with DSA IR A-6: Construction Change Document Submittal and Approval Process.

DSA documents referenced v	within this form are available on the	e <u>DSA Fo</u>	orms or DSA Publications w	ebpages.		
1. SUBMITTAL TYPE: (Is	this a resubmittal? Yes V No	)				
Deferred Submittal □	Addendum Number: 2	Revision	on Number:	CCD Nur	nber:	Category A ☐ or B ✓
2. PROJECT INFORMATI	ON:					
School District/Owner: Wa	shington Unified School District				DSA File Numbe	er: 10-H19
Project Name/School: Was	shington Union High School - Stude	ent Servi	ces		DSA Application	Number 02 123307
3. APPLICANT INFORMA	TION:					
Date Submitted: 11/21/25			Attached Pages? No Yes Number of pages? 38			
Firm Name: Integrated De	signs		Contact Name: Felipe Ce	ballos		
Work Email: fceballos@sor	nam.com		Work Phone: (559) 436-08	881		
Firm Address: 6011 N. Fre	sno, Suite 130		City: Fresno		State: CA	Zip Code: 93710
4. REASON FOR SUBMIT	TTAL: (Check applicable boxes)					
☑ For revision or addendur	n prior to construction.			☐ For a	project currently ι	under construction.
☐ For a project that has a f a 90-Day Letter issued.	orm DSA 301-N: Notification of Re	equiremer	nt for Certification, DSA 301	-P: Posted	Notification of Re	equirement for Certification or
☐ To obtain DSA approval	of an existing uncertified building	or buildin	gs.			
☐ For Category B CCD this	is: ☐a voluntary submittal, ☐a D	SA requi	red submittal (attach DSA n	otice requi	iring submission).	
5. DESIGN PROFESSION	IAL IN GENERAL RESPONSIBLE	CHARG	E:			
Name of the Design Profes	sional In General Responsible Cha	arge: Fel	ipe Ceballos			
Professional License Number: C12834 Discipline: Architect						
Design Professional in General Responsible Charge Statement: The attached post-approval documents have been examined by me for design intent and appear to meet the appropriate requirements of Title 24, California Code of Regulations and the project specifications. They are acceptable for incorporation into the construction of the project.  Signature:						
DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE  6. CONFIRMATION, DESCRIPTION AND LISTING OF DOCUMENTS:						
For addenda, revisions, or of Design Professional listed of Use of Construction Docum	CCDs: CHECK THIS BOX ✓ to co on form DSA 1: Application for App nents Prepared by Other Profession le, for signature and seal requirem	onfirm that proval of I nals, and	t <i>all</i> post-approval documer Plans and Specifications for	this projec	ct. (For <i>Deferred</i> S	Submittals, refer to IR A-18:
Provide a brief description of	of construction scope for this post-	approval	document (attach additiona	l sheets if	needed):	
Revise specification sections	s and add a correction detail.					
List of DSA-approved draw	ings affected by this post-approval	docume	nt:			
DOA HOE ONLY						
		ט	SA USE ONLY Retur	rned		DSA STAMP
SSS HJL Date Comments:	12/1/25	oroved 🗆 N				APPROVED OF THE STATE ARCHITECT

FLS<u>JO</u>

Comments:

Comments:

APP: 02-123307 INC:

DATE:

REVIEWED FOR

FLS ☑ ACS ☑ 12/01/2025

\_Date\_11/26/25\_ XApproved □Disapproved □Not Required

\_\_\_\_\_ □Approved □Disapproved □Not Required

APPROVED
DIV. OF THE STATE ARCHITECT
APP: 02-123307 INC:
REVIEWED FOR
SS FLS ACS DATE: 12/01/2025

# **ADDENDUM NO. 2**

# **PROJECT MANUAL**

WASHINGTON UNION HIGH SCHOOL STUDENT SERVICES

Project No.: 5613 DSA File No. 10-H19 DSA App No. 02-123307 November 14 2025



This Addendum and Addendum drawings form a part of the Contract Documents. It modifies the original Project Manual and Drawings. Bidders are required to acknowledge receipt of this Addendum in the space provided in the Bid Form. Failure to acknowledge receipt of each addendum may subject bidder to disqualification.

Project No. 5613

# **GENERAL**

- **2-01** The deadline for pre-Bid contractor RFI submittals is November 18, 2025.
- **2-02 FRONT END DOCUMENTS:** Remove the following sections from Article II "Insurance and Bonds":
  - a. 11.6.2 Tidal Wave Insurance
  - b. 11.6.3 Earthquake Insurance
  - c. 11.1.6 Builder's risk "all risk"

# **PROJECT MANUAL**

- 2-03 PROJECT MANUAL, SPECIFICATION SECTION 000110 TABLE OF
  - **CONTENTS:** Replace specification section in its entirety
- 2-04 PROJECT MANUAL, SPECIFICATION SECTION 033546 CONCRETE TOPICAL TREATMENT: Add specification section in its entirety.
- 2-05 PROJECT MANUA L, SPECIFICATION SECTION 082236 OVERHEAD COILING DOOR: Remove specification section in its entirety.
- **2-06** PROJECT MANUAL, SPECIFICATION SECTION 087100 DOOR HARDWARE: Replace specification section in its entirety. Note clouds and delta 2 for changes.
- **2-07 PROJECT MANUAL, SPECIFICATION SECTION 093000 TILING:** Replace specification section in its entirety.
- 2-08 PROJECT MANUAL, SPECIFICATION SECTION 098435 WOOD SLAT ACOUSTICAL WALL PANELS: Add specification section in its entirety.

# **DRAWINGS**

**2-09 DRAWING, DETAIL "EXTERIOR WALL CERAMIC TILE":** Add detail ADD.02 in its entirety.

**END ADDENDUM NO. 2** 

# 5613 WASHINGTON UNION HIGH SCHOOL STUDENT SERVICES TABLE OF CONTENTS

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#### PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

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

### 1.2 SUMMARY

- A. Section includes Sealing concrete finishing.
  - 1. Concrete for sealing concrete, including formwork, reinforcement, concrete materials, mixture design, placement procedures, initial finishing, and curing is specified in Section 033000 "Cast-in-Place Concrete."

# B. Related Requirements:

1. Section 033000 "Cast-in-Place Concrete"

### 1.3 DEFINITIONS

A. Design Reference Sample: Sample designated by Architect in the Contract Documents that reflects acceptable surface quality and appearance of polished concrete.

### 1.4 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.
  - 1. Before submitting design mixtures, review concrete design mixture and examine procedures for ensuring quality of concrete materials. Require representatives of each entity directly concerned with sealing concrete to attend, including the following:
    - a. Contractor's superintendent.
    - b. Independent testing agency responsible for concrete design mixtures.
    - c. Ready-mix concrete manufacturer.
    - d. Cast-in-place concrete subcontractor.
    - e. Concrete sealing Subcontractor.
  - 2. Review cold- and hot-weather concreting procedures, curing procedures, construction joints, concrete repair procedures, concrete finishing, and protection of sealing concrete.

# 1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Sealing Schedule: Submit plan showing sealing concrete surfaces and schedule of sealing operations for each area of sealing concrete before start of sealed operations. Include locations of all joints, including construction joints.

# 1.6 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer.

5613 – CONCRETE TOPICAL TREATMENTS

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ADDENDUM 2

- B. Material Certificates: For each of the following, signed by manufacturers:
  - 1. Repair materials.
  - 2. Liquid floor treatments (sealer).

# 1.7 QUALITY ASSURANCE

- A. Field Sample Panels: After approval of verification sample and before casting concrete, produce field sample panels to demonstrate the approved range of selections made under Sample submittals. Produce a minimum of three sets of full-scale panels, approximately 48 by 48 inches minimum, to demonstrate the expected range of finish, and appearance variations.
  - 1. Locate panels as indicated or, if not indicated, as directed by Architect.
  - 2. Maintain field sample panels during construction in an undisturbed condition as a standard for judging the completed Work.
  - 3. Demolish and remove field sample panels when directed.

#### PART 2 - PRODUCTS

### 2.1 SEALED CONCRETE FINISHING SYSTEM

- A. Basis-of-Design Product: Subject to compliance with requirements, provide Sealed Concrete Finishing System manufactured by ProSoco, LS premium Concrete Sealer or comparable product by one of the following:
  - 1. Americrete, Inc.
  - 2. Perfect Polish.
  - 3. W. R. Meadows, Induroshine.

#### PART 3 - EXECUTION

### 3.1 STAINING

- A. Newly placed concrete shall be at least 30 days old before sealing.
- B. Prepare surfaces according to manufacturer's written instructions and as follows:
  - 1. Clean concrete thoroughly by scraping, applying solvents or stripping agents, sweeping and pressure washing, or scrubbing with a rotary floor machine and detergents recommended by stain manufacturer. Rinse until water is clear and allow surface to dry.
  - 2. Test surfaces with droplets of water. If water beads and does not penetrate surface, or penetrates only in some areas, profile surfaces by grinding, sanding, or abrasive blasting. Retest and continue profiling surface until water droplets immediately darken and uniformly penetrate concrete surfaces.
  - 3. Neutralize concrete surfaces and rinse until water is clear. Test surface for residue with clean white cloth. Test surface according to ASTM F 710 to ensure pH is between 7 and 8.
- C. Scoring: Score decorative jointing in concrete surfaces 1/16 inch deep with diamond blades to match pattern indicated. Rinse until water is clear. Score before staining.
  - 1. Joint Width: 1/4 inch.

D.	Allow concrete surface to dry before applying sealer. Verify readiness of concrete to receive sealer according to ASTM D 4263 by tightly taping 18-by-18-inch, 4-mil-thick polyethylene sheet to a representative area of concrete surface. Apply sealer only if no evidence of moisture has accumulated under sheet after 16 hours.
	has accumulated under sheet after 16 hours.

END OF SECTION 033546

#### PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

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

### 1.2 SUMMARY

#### A. Section Includes:

- 1. Mechanical door hardware for the following:
  - a. Swinging doors.
- 2. Section 064116 "Plastic-Laminate-Faced Architectural Cabinets" for cabinet door hardware provided with cabinets.
- 3. Section 083113 "Access Doors and Frames" for access door hardware **including** cylinders.
- 4. Section 083326 "Overhead Coiling Grilles" for door hardware provided as part of overhead coiling grille assemblies.

### 1.3 COORDINATION

- A. Installation Templates: Distribute for doors, frames, and other work specified to be factory prepared. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.
- B. Security: Coordinate installation of door hardware, keying, and access control with Owner's security consultant.

### 1.4 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.
  - 1. Conference participants shall include Installer's Architectural Hardware Consultant
- B. Keying Conference: Conduct conference at Project site.
  - 1. Conference participants shall include Installer's Architectural Hardware Consultant.
  - 2. Incorporate conference decisions into keying schedule after reviewing door hardware keying system including, but not limited to, the following:
    - a. Flow of traffic and degree of security required.
    - b. Preliminary key system schematic diagram.
    - c. Requirements for key control system.
    - d. Requirements for access control.
    - e. Address for delivery of keys.

# 1.5 ACTION SUBMITTALS

A. Product Data: For each type of product.

- 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
- B. Door Hardware Schedule: Prepared by or under the supervision of Installer's Architectural Hardware Consultant. Coordinate door hardware schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.
  - 1. Submittal Sequence: Submit door hardware schedule concurrent with submissions of Product Data, and Shop Drawings. Coordinate submission of door hardware schedule with scheduling requirements of other work to facilitate the fabrication of other work that is critical in Project construction schedule.
  - 2. Format: Use same scheduling sequence and format and use same door numbers as in door hardware schedule in the Contract Documents.
  - 3. Content: Include the following information:
    - a. Identification number, location, hand, fire rating, size, and material of each door and frame
    - b. Locations of each door hardware set, cross-referenced to Drawings on floor plans and to door and frame schedule.
    - c. Complete designations, including name and manufacturer, type, style, function, size, quantity, function, and finish of each door hardware product.
    - d. Fastenings and other installation information.
    - e. Explanation of abbreviations, symbols, and designations contained in door hardware schedule.
    - f. Mounting locations for door hardware.
    - g. List of related door devices specified in other Sections for each door and frame.
- C. Keying Schedule: Prepared by or under the supervision of Installer's Architectural Hardware Consultant, detailing Owner's final keying instructions for locks. Include schematic keying diagram and index each key set to unique door designations that are coordinated with the Contract Documents.

#### 1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer and Architectural Hardware Consultant.
- B. Product Test Reports: For compliance with accessibility requirements, for tests performed by manufacturer and witnessed by a qualified testing agency, for door hardware on doors located in accessible routes.
- C. Field quality-control reports.
- D. Sample Warranty: For special warranty.

# 1.7 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For each type of door hardware to include in maintenance manuals.
- B. Schedules: Final door hardware schedule.

# 1.8 QUALITY ASSURANCE

A. Installer Qualifications: Supplier of products and an employer of workers trained and approved by product manufacturers and of an Architectural Hardware Consultant who is available during

the course of the Work to consult Contractor, Architect, and Owner about door hardware and keying.

- 1. Warehousing Facilities: In Project's vicinity.
- 2. Scheduling Responsibility: Preparation of door hardware and keying schedule.
- B. Architectural Hardware Consultant Qualifications: A person who is experienced in providing consulting services for door hardware installations that are comparable in material, design, and extent to that indicated for this Project and who is currently certified by DHI as an Architectural Hardware Consultant.
- C. Tag each item or package separately with identification coordinated with the final door hardware schedule, and include installation instructions, templates, and necessary fasteners with each item or package.

Deliver keys to Owner by registered mail or overnight package service.

### 1.9 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace components of door hardware that fail in materials or workmanship within specified warranty period.
  - 1. Failures include, but are not limited to, the following:
    - a. Structural failures including excessive deflection, cracking, or breakage.
    - b. Faulty operation of doors and door hardware.
    - c. Deterioration of metals, metal finishes, and other materials beyond normal weathering and use.
  - 2. Warranty Period: Three years from date of Substantial Completion unless otherwise indicated below:
    - a. Exit Devices: Two years from date of Substantial Completion.
    - b. Manual Closers: 10 years from date of Substantial Completion.

# PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

A. Source Limitations: Obtain each type of door hardware from single manufacturer.

# 2.2 PERFORMANCE REQUIREMENTS

- A. Means of Egress Doors: Latches do not require more than 15 lbf to release the latch. Locks do not require use of a key, tool, or special knowledge for operation.
- B. Accessibility Requirements: For door hardware on doors in an accessible route, comply with 2022 CBC chapter 11B.
  - 1. Provide operating devices that do not require tight grasping, pinching, or twisting of the wrist and that operate with a force of not more than 5 lbf.
  - 2. Comply with the following maximum opening-force requirements:
    - a. Interior, Non-Fire-Rated Hinged Doors: 5 lbf applied perpendicular to door.

- b. Sliding or Folding Doors: 5 lbf applied parallel to door at latch.
- c. Fire Doors: Minimum opening force allowable by authorities having jurisdiction.
- 3. Bevel raised thresholds with a slope of not more than 1:2. Provide thresholds not more than 1/2 inch high.
- 4. Adjust door closer sweep periods so that, from an open position of 90 degrees, the door will take at least 5 seconds to move to a position of 12 degrees from the latch.

### 2.3 SCHEDULED DOOR HARDWARE

- A. Provide products for each door that comply with requirements indicated in Part 2 and door hardware schedule.
  - 1. Door hardware is scheduled in door schedule.

# 2.4 SCHEDULED DOOR HARDWARE

- A. General: Provide door hardware for each door to comply with requirements in Door Hardware Sets and each referenced section that products are to be supplied under.
- B. Designations: Requirements for quantity, item, size, finish or color, grade, function, and other distinctive qualities of each type of door hardware are indicated in the Door Hardware Sets at the end of Part 3. Products are identified by using door hardware designations, as follows:
  - 1. Named Manufacturer's Products: Product designation and manufacturer are listed for each door hardware type required for the purpose of establishing requirements.

    Manufacturers' names are abbreviated in the Door Hardware Schedule.
- C. Substitutions: Requests for substitution and product approval for inclusive mechanical and electromechanical door hardware in compliance with the specifications must be submitted in writing and in accordance with the procedures and time frames outlined in Division 01, Substitution Procedures. Approval of requests is at the discretion of the architect, owner, and their designated consultants.

# 2.5 HANGING DEVICES

- A. Hinges: ANSI/BHMA A156.1 certified butt hinges with number of hinge knuckles and other options as specified in the Door Hardware Sets.
  - 1. Quantity: Provide the following hinge quantity:
    - a. Two Hinges: For doors with heights up to 60 inches.
    - b. Three Hinges: For doors with heights 61 to 90 inches.
    - c. Four Hinges: For doors with heights 91 to 120 inches.
    - d. For doors with heights more than 120 inches, provide 4 hinges, plus 1 hinge for every 30 inches of door height greater than 120 inches.
  - 2. Hinge Size: Provide the following, unless otherwise indicated, with hinge widths sized for door thickness and clearances required:
    - a. Widths up to 3'0": 4-1/2" standard or heavy weight as specified.
    - b. Sizes from 3'1" to 4'0": 5" standard or heavy weight as specified.
  - 3. Hinge Weight and Base Material: Unless otherwise indicated, provide the following:

- a. Exterior Doors: Heavy weight, non-ferrous, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate standard weight.
- b. Interior Doors: Standard weight, steel, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate heavy weight.
- 4. Hinge Options: Comply with the following:
  - a. Non-removable Pins: With the exception of electric through wire hinges, provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while door is closed; for the all out-swinging lockable doors.

### 5. Manufacturers:

- a. Hager Companies (HA).
- b. McKinney Products; ASSA ABLOY Architectural Door Accessories (MK).
- c. Stanley Hardware (ST).

### 2.6 DOOR OPERATING TRIM

- A. Flush Bolts and Surface Bolts: ANSI/BHMA A156.3 and A156.16, Grade 1, certified.
  - 1. Flush bolts to be furnished with top rod of sufficient length to allow bolt retraction device location approximately six feet from the floor.
  - 2. Furnish dust proof strikes for bottom bolts.
  - 3. Surface bolts to be minimum 8" in length and U.L. listed for labeled fire doors and U.L. listed for windstorm components where applicable.
  - 4. Provide related accessories (mounting brackets, strikes, coordinators, etc.) as required for appropriate installation and operation.
  - 5. Manufacturers:
    - a. Door Controls International (DC).
    - b. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).
    - c. Trimco (TC).
- B. Coordinators: ANSI/BHMA A156.3 certified door coordinators consisting of active-leaf, hold-open lever and inactive-leaf release trigger. Model as indicated in hardware sets.
  - 1. Manufacturers:
    - a. Door Controls International (DC).
    - b. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).
    - c. Trimco (TC).

# 2.7 MECHANICAL LOCKS AND LATCHES

- A. Manufacturers: Schlage is the District standard.
- B. Lock Functions: As indicated in door hardware schedule.
- C. Lock Throw: Comply with testing requirements for length of bolts required for labeled fire doors, and as follows:
  - 1. Bored Locks: Minimum 1/2-inch latchbolt throw.
  - 2. Mortise Locks: Minimum 3/4-inch latchbolt throw.

- 3. Deadbolts: Minimum 1-inch bolt throw.
- D. Lock Backset: 2-3/4 inches unless otherwise indicated.
- E. Lock Trim:
  - 1. Description: Trim plate.
  - 2. Levers: Cast.
    - a. Rhodes.
  - 3. Escutcheons (Roses): Cast.
  - 4. Dummy Trim: Match lever lock trim and escutcheons.
- F. Strikes: Provide manufacturer's standard strike for each lock bolt or latchbolt complying with requirements indicated for applicable lock or latch and with strike box and curved lip extended to protect frame; finished to match lock or latch.
  - 1. Flat-Lip Strikes: For locks with three-piece antifriction latchbolts, as recommended by manufacturer.
  - 2. Extra-Long-Lip Strikes: For locks used on frames with applied wood casing trim.
  - 3. Rabbet Front and Strike: Provide on locksets for rabbeted meeting stiles.
- G. Bored Locks: BHMA A156.2; Grade 1.
- H. Mortise Locks: BHMA A156.13; Operational Grade 1; stamped steel case with steel or brass parts; Series 1000.

# 2.8 AUTOMATIC AND SELF-LATCHING FLUSH BOLTS

- A. Automatic and Self-Latching Flush Bolts: BHMA A156.16; minimum 3/4-inch throw; designed for mortising into door edge. Include wear plates.
  - 1. IvesFB31P-12-MDTop and bottom flush bolts. Provide dust proof flush bolt strike.
  - 2. Rockwood, model 2842 set for metal doors provide dust proof flush bolt strike.
  - 3. Trimco 3810x3810 automatic flush bolts Provide dust proof flush bolt strike...

### 2.9 CONVENTIONAL EXIT DEVICES

- A. General Requirements: All exit devices specified herein shall meet or exceed the following criteria:
  - 1. At doors not requiring a fire rating, provide devices complying with NFPA 101 and listed and labeled for "Panic Hardware" according to UL305. Provide proper fasteners as required by manufacturer including sex nuts and bolts at openings specified in the Hardware Sets.
  - 2. Where exit devices are required on fire rated doors, provide devices complying with NFPA 80 and with UL labeling indicating "Fire Exit Hardware". Provide devices with the proper fasteners for installation as tested and listed by UL. Consult manufacturer's catalog and template book for specific requirements.
  - 3. Except on fire rated doors, provide exit devices with hex key dogging device to hold the pushbar and latch in a retracted position. Provide optional keyed cylinder dogging on devices where specified in Hardware Sets.

- 4. Devices must fit flat against the door face with no gap that permits unauthorized dogging of the push bar. The addition of filler strips is required in any case where the door light extends behind the device as in a full glass configuration.
- 5. Lever Operating Trim: Where exit devices require lever trim, furnish manufacturer's heavy duty escutcheon trim with threaded studs for thru-bolts.
  - a. Lock Trim Design: As indicated in Hardware Sets, provide finishes and designs to match that of the specified locksets.
  - b. Where function of exit device requires a cylinder, provide a cylinder (Rim or Mortise) as specified in Hardware Sets.
- 6. Vertical Rod Exit Devices: Where concealed vertical rod exit devices are used at interior openings, provide as less bottom rod (LBR) unless otherwise indicated. Provide dust proof strikes where thermal pins are required to project into the floor.
- 7. Medium Stile Applications: At doors constructed with medium stiles, or as specified in Hardware Sets, provide devices designed for maximum 2" wide stiles.
- 8. Dummy Push Bar: Nonfunctioning push bar matching functional push bar.
- 9. Rail Sizing: Provide exit device rails factory sized for proper door width application.
- 10. Through Bolt Installation: For exit devices and trim as indicated in Door Hardware Sets.
- B. Conventional Push Rail Exit Devices (Heavy Duty): ANSI/BHMA A156.3, Grade 1 Certified Products Directory (CPD) listed panic and fire exit hardware devices furnished in the functions specified in the Hardware Sets. Exit device latch to be stainless steel, pullman type, with deadlock feature.
  - 1. Manufacturers:
    - a. Von Duprin (VD) 98 XP Series, district standard.

### 2.10 LOCK CYLINDERS

- A. Lock Cylinders: Tumbler type, constructed from brass or bronze, stainless steel, or nickel silver Provide cylinder from same manufacturer of locking devices.
  - 1. Schlage.
- B. Standard Lock Cylinders: BHMA A156.5; Grade 1 permanent cores; face finished to match lockset.
  - 1. Core Type: Interchangeable.
- C. Construction Master Keys: Provide cylinders with feature that permits voiding of construction keys without cylinder removal. Provide 10 construction master keys.
- D. Construction Cores: Provide construction cores that are replaceable by permanent cores. Provide 10 construction master keys.

#### 2.11 KEYING

- A. Keying System: Factory registered, complying with guidelines in BHMA A156.28, appendix. Provide one extra key blank for each lock
  - 1. Master Key System: Coordinate with District ,change keys and a master key operate cylinders.

- a. Provide three cylinder change keys and five master keys.
- 2. Grand Master Key System: Change keys, a master key, and a grand master key operate cylinders.
  - a. Provide three cylinder change keys and five each of master and grand master keys.
- 3. Great-Grand Master Key System: Change keys, a master key, a grand master key, and a great-grand master key operate cylinders.
  - a. Provide three cylinder change keys and five each of master, grand master, and great-grand master keys.
- 4. Existing System:
  - a. Master key or grand master key locks to Owner's existing system.
  - b. Re-key Owner's existing master key system into new keying system.
- 5. Keyed Alike: Key all cylinders to same change key.
- B. Keys: Nickel silver.
  - 1. Stamping: Permanently inscribe each key with a visual key control number and include the following notation:
    - a. Notation: "DO NOT DUPLICATE."

### 2.12 ACCESSORIES FOR PAIRS OF DOORS

- A. Coordinators: BHMA A156.3; consisting of active-leaf, hold-open lever and inactive-leaf release trigger; fabricated from steel with nylon-coated strike plates; with built-in, adjustable safety release.
- B. Astragals: BHMA A156.22.

# 2.13 SURFACE CLOSERS

- A. Surface Closers: BHMA A156.4; rack-and-pinion hydraulic type with adjustable sweep and latch speeds controlled by key-operated valves and forged-steel main arm. Comply with manufacturer's written instructions for size of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Provide factory-sized closers, adjustable to meet field conditions and requirements for opening force.
  - 1. Corbin Russwin Hardware (RU) DC6000 Series.
  - 2. LCN Closers (LC) 4040 Series.
  - 3. Norton Door Controls (NO) 7500 Series.

### 2.14 DOOR STOPS AND HOLDERS

- A. General: Door stops and holders to be of type and design as specified below or in the Hardware Sets.
- B. Door Stops and Bumpers: ANSI/BHMA A156.16, Grade 1 certified door stops and wall bumpers. Provide wall bumpers, either convex or concave types with anchorage as indicated, unless floor or other types of doorstops are specified in Hardware Sets. Do not mount floor

stops where they will impede traffic. Where floor or wall bumpers are not appropriate, provide overhead type stops and holders.

- 1. Manufacturers:
  - a. Hiawatha, Inc. (HI).
  - b. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).
  - c. Trimco (TC).

# 2.15 ARCHITECTURAL SEALS

- A. General: Thresholds, weatherstripping, and gasket seals to be of type and design as specified below or in the Hardware Sets. Provide continuous weatherstrip gasketing on exterior doors and provide smoke, light, or sound gasketing on interior doors where indicated. At exterior applications provide non-corrosive fasteners and elsewhere where indicated.
- B. Smoke Labeled Gasketing: Assemblies complying with NFPA 105 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for smoke control ratings indicated, based on testing according to UL 1784.
  - 1. Provide smoke labeled perimeter gasketing at all smoke labeled openings.
- C. Fire Labeled Gasketing: Assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to UL-10C.
  - 1. Provide intumescent seals as indicated to meet UL10C Standard for Positive Pressure Fire Tests of Door Assemblies, and NPFA 252, Standard Methods of Fire Tests of Door Assemblies.
- D. Sound-Rated Gasketing: Assemblies that are listed and labeled by a testing and inspecting agency, for sound ratings indicated.
- E. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strips are easily replaceable and readily available from stocks maintained by manufacturer.
- F. Manufacturers:
  - 1. National Guard Products (NG).
  - 2. Pemko Products; ASSA ABLOY Architectural Door Accessories (PE).
  - 3. Reese Enterprises, Inc. (RE).

### 2.16 FABRICATION

- A. Manufacturer's Nameplate: Do not provide products that have manufacturer's name or trade name displayed in a visible location except in conjunction with required fire-rating labels and as otherwise approved by Architect.
  - 1. Manufacturer's identification is permitted on rim of lock cylinders only.
- B. Base Metals: Produce door hardware units of base metal indicated, fabricated by forming method indicated, using manufacturer's standard metal alloy, composition, temper, and hardness. Furnish metals of a quality equal to or greater than that of specified door hardware units and BHMA A156.18.

- C. Fasteners: Provide door hardware manufactured to comply with published templates prepared for machine, wood, and sheet metal screws. Provide screws that comply with commercially recognized industry standards for application intended, except aluminum fasteners are not permitted. Provide Phillips flat-head screws with finished heads to match surface of door hardware unless otherwise indicated.
  - Concealed Fasteners: For door hardware units that are exposed when door is closed, except for units already specified with concealed fasteners. Do not use through bolts for installation where bolt head or nut on opposite face is exposed unless it is the only means of securely attaching the door hardware. Where through bolts are used on hollow door and frame construction, provide sleeves for each through bolt.
  - 2. Fire-Rated Applications:
    - a. Wood or Machine Screws: For the following:
      - 1) Hinges mortised to doors or frames; use threaded-to-the-head wood screws for wood doors and frames.
      - 2) Strike plates to frames.
      - 3) Closers to doors and frames.
    - b. Steel Through Bolts: For the following unless door blocking is provided:
      - 1) Surface hinges to doors.
      - 2) Closers to doors and frames.
      - 3) Surface-mounted exit devices.
  - 3. Spacers or Sex Bolts: For through bolting of hollow-metal doors.
  - 4. Gasketing Fasteners: Provide noncorrosive fasteners for exterior applications and elsewhere as indicated.

### 2.17 FINISHES

- A. Provide finishes complying with BHMA A156.18 as indicated in door hardware schedule.
- B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

#### PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, labeled fire-rated door assembly construction, wall and floor construction, and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

C. Notify Architect of any discrepancies or conflicts between the door schedule, door types, drawings and scheduled hardware. Proceed only after such discrepancies or conflicts have been resolved in writing.

#### 3.2 PREPARATION

- A. Hollow Metal Doors and Frames: Comply with ANSI/DHI A115 series.
- B. Wood Doors: Comply with ANSI/DHI A115-W series.

### 3.3 INSTALLATION

- A. Install each item of mechanical and electromechanical hardware and access control equipment to comply with manufacturer's written instructions and according to specifications.
  - 1. Installers are to be trained and certified by the manufacturer on the proper installation and adjustment of fire, life safety, and security products including: hanging devices; locking devices; closing devices; and seals.
- B. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:
  - 1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
  - 2. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."
  - 3. Where indicated to comply with accessibility requirements, comply with ANSI A117.1 "Accessibility Guidelines for Buildings and Facilities."
  - 4. Provide blocking in drywall partitions where wall stops or other wall mounted hardware is located.
- C. Retrofitting: Install door hardware to comply with manufacturer's published templates and written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 9 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.
- D. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."
- E. Storage: Provide a secure lock up for hardware delivered to the project but not yet installed. Control the handling and installation of hardware items so that the completion of the work will not be delayed by hardware losses before and after installation.

# 3.4 FIELD QUALITY CONTROL

A. Field Inspection (Punch Report): Reference Division 01 Sections "Closeout Procedures". Produce project punch report for each installed door opening indicating compliance with approved submittals and verification hardware is properly installed, operating and adjusted. Include list of items to be completed and corrected, indicating the reasons or deficiencies causing the Work to be incomplete or rejected.

- Organization of List: Include separate Door Opening and Deficiencies and Corrective
  Action Lists organized by Mark, Opening Remarks and Comments, and related Opening
  Images and Video Recordings.
- 2. Submit documentation of incomplete items in the following formats:
  - a. PDF electronic file.
  - b. Electronic formatted file integrated with the Openings Studio<sup>TM</sup> door opening management software platform.

# 3.5 ADJUSTING

- A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.
  - 1. Door Closers: Adjust sweep period to comply with accessibility requirements and requirements of authorities having jurisdiction.

### 3.6 CLEANING AND PROTECTION

- A. Clean adjacent surfaces soiled by door hardware installation.
- B. Clean operating items as necessary to restore proper function and finish.
- C. Provide final protection and maintain conditions that ensure that door hardware is without damage or deterioration at time of Substantial Completion.

# 3.7 MAINTENANCE SERVICE

A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.

### 3.8 DOOR HARDWARE SCHEDULE

- A. Manufacturer's Abbreviations:
  - 1. MK McKinney
  - 2. RO Rockwood
  - 3. SCH- Schlage
  - 4. RF Rixson
  - 5. NO Norton
  - 6. PE Pemko
  - 7. TC Trimco
  - 8. VD-Von Duprin

# Hardware Set: 1 DOOR 101A, 101B

			DOOR 101A, 101B			
6	~	Hinges (Heavy Weight)	T4A 3306	US31D NRP	MK /2	
$\begin{cases} \chi \\ 2 \end{cases}$	Υ	Exit Device	AX 78 L-NL 3 SNB HM S 632	US32D	VD	
	ب	سسس	سسست	ىىىى		
1		Cylinder	Primus	US32D	SCH	
2		Door Closers	PR 7500	689	NO	
$\stackrel{2}{\sim}$	$\sim$	Kick Plate	K1050 10" HIGH ESK	US32D	RO	
$\sum_{i=1}^{n}$	•	Floor Stop	1209	US26D	TRIMCO 2	
$\xi_2$		Threshold	FHSL14 2750		PE $\Rightarrow$	
$\sum_{i}^{2}$		Gasket	544D HEA`D & JAMBS		PE }	
$\sum_{2}$		Sweep	31SCN		PE	
			Hardware Set: 2			
	001	RS: 107, 128B, 134B, 138F				
3		Hinges (Heavy Weight)	T4A 3786	US26D	MK	
1		Privacy Lock	ND40 RHO	UC26D	SCH	
1		Cylinder				
1		Surface Closer	2800 RHO ST	689	NO	
1		Kick Plate	K1050 10" HIGH X GSK	US32D	RO	
1		Floor Stop	1209	US32D	TRIMCO	
3		Silencers		608	RO	
		Provide indicator trim on privacy lock.				
	Provide emergency key part no. 35-270 for each key					
Hardware Set: 3						
<b>D</b> (3	OOl	RS: 105, 111, 120, 138A Hinges (Heavy Weight)	T4A 3786	US26D	MK	
1		Entrance Lock	ND53 RHO	US32D	SCH	
1		Cylinder	Match District Standard			
1		Door Closer	PR 7500	689	RO	

1	Floor Stop	1209	US26D	TRIMCO			
		Hardware Set : 4					
<b>DOO</b> 3	PRS: 110, 141 Hinges (Heavy Weight)	T4A 3786	US26D	MK			
1	Store Lock	ND80 RHO	US32D	SCH			
1	Cylinder						
1	Floor Stop	1209	US26D	TRIMCO			
	17 Ft Gasket (110 Only)	SD44GR		PE			
	Hardware Set: 5 DOORS: 119A, 119B, 119C, 119D, 119E, 119F, 119G, 119H, 119I, 128A, 131A, 131B, 131C, 133A, 133B, 133C, 138B, 138C, 138E, 143A, 143B						
3	Hinges (Heavy Weight)	T4A 3786	US36D	MK			
1	Office Lock	ND50 RHO	US32D	SCH			
1	Floor Stop	1209	US26D	TREMCO			
1	Cylinder						
3	Silencers	608		RO			
		Hardware Set: 6					
<b>DOO</b> 3	PRS: 146, 148A Hinges (Heavy Weight)	T4A 3386	US32D NRP	MK			
1	Storeroom Lock	ND80 RHO	US32D	SCH			
3	Silencer		608	RO			
Hardware Set: 7							
<b>DOO</b> 3	ORS: 144	T4 & 2704	HC22D	MK			
	Hinges (Heavy Weight)	T4A3786	US32D				
1	Accessible Storeroom Lock	ND81	RHO US32D	SCH			
1	Floor Stop	1209	US26D	TREMCO			
3	Silencers		608	RO			
		Hardware Set: 8					
<b>DOO</b> 3	PRS: 127, 132, 142 Hinges	T4A 3786	US36D	MK			

1	Vanguard Entrance Lock	ND92 RHO	US32DA	SCH
1	Cylinder			
1	Closure	PR7500	689	NO
1	Kick Plate	K1050 10" HIGH CSK	US32D	RO
1	Floor Stop	1209	US26D	TRIMCO
1	Threshold	RHSL 14	2750	PE
1	Gasket	S44P		
1	Sweep	315 CN		PE
		Hardware Set: 9		
DOO	RS: 135, 138D	Haluwale Set. 7		
6	Hinges (Heavy Weight)	T4A 3386	US32D NRP	MK
1	Vanguard Store Room Lock	ND96 RHO	US32D	SCH
2	Door Closers	PR7500	689	NO
1	AutoFlush BoltSet	2842/2942	US32D	RO
1	Dust Proof Strike	570	US26D	RO
1	Cylinder			
1	Coordinator	2600xFBxMTGBR	US28	RO
2	Armor Plate	K1050 34'X34'X.050	US32D SS	RO
1	Threshold	FHSL H 2750		PE
1	Gasket	S44D		PE
2	Sweep	315 CN		PE
1	Astrigal	357 SP (or by door mfr)		PE
		Hardware Set 10		
DOORS: 128C, 133D, 134A.				
3	Hinges (Heavy Weight)	T4A 3386	US32D NRP	MK
1	Exit Device	8804 P700 NexLever Trim	US32D	SA
1	Cylinder	Match District Standard		
1	Door Closer	PR7500	689	NO

		H 1 C 111		
1	Sweep	315 CN		PE
1	Gasket			
1	Threshold	RHSL14 2750		PE
1	Floor Stop	1209	US26D	TRIMCO
1	Kick Plate	K1050 10" HIGH CSJ	US32D	RO

Hardware Set 11

**DOORS: 102** 

2 Pivit Hinges L147 RIXON (Heavy Weight)

END OF SECTION 087100

### PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

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

### 1.2 SUMMARY

### A. Section Includes:

- 1. Porcelain tile.
- 2. Ceramic tile.
- 3. Glazed wall tile.
- 4. Cementitious backer units.

# B. Related Requirements:

- 1. Section 071326 "Self-Adhering Sheet Waterproofing" for waterproofing tile installation on exterior walls.
- 2. Section 079200 "Joint Sealants" for sealing of expansion, contraction, control, and isolation joints in tile surfaces.
- 3. Section 092400 "Cement Plastering" for scratch coat for thickset mortar setting-bed installations.

# 1.3 DEFINITIONS

- A. General: Definitions in the ANSI A108 series of tile installation standards and in ANSI A137.1 apply to Work of this Section unless otherwise specified.
- B. ANSI A108 Series: ANSI A108.01, ANSI A108.02, ANSI A108.1A, ANSI A108.1B, ANSI A108.1C, ANSI A108.4, ANSI A108.5, ANSI A108.6, ANSI A108.8, ANSI A108.9, ANSI A108.10, ANSI A108.11, ANSI A108.12, ANSI A108.13, ANSI A108.14, ANSI A108.15, ANSI A108.16, and ANSI A108.17, which are contained in "American National Standard Specifications for Installation of Ceramic Tile."
- C. Module Size: Actual tile size plus joint width indicated.
- D. Face Size: Actual tile size, excluding spacer lugs.

# 1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: Show locations of each type of tile and tile pattern. Show widths, details, and locations of expansion, contraction, control, and isolation joints in tile substrates and finished tile surfaces.
- C. Samples for Initial Selection: For each type of tile and grout indicated. Include Samples of accessories involving color selection.

# D. Samples for Verification:

1. Full-size units of each type of trim and accessory for each color and finish required.

# 1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified Installer.
- B. Product Certificates: For each type of product, signed by product manufacturer.

# 1.6 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials that match and are from same production runs as products installed and that are packaged with protective covering for storage and identified with labels describing contents.
  - 1. Tile and Trim Units: Furnish quantity of full-size units equal to 3 percent of amount installed for each type, composition, color, pattern, and size indicated.
  - 2. Grout: Furnish quantity of grout equal to 3 percent of amount installed for each type, composition, and color indicated.

# 1.7 QUALITY ASSURANCE

- A. Source Limitations for Tile: Obtain tile from one producer.
  - 1. Obtain tile of each type and color or finish from same production run and of consistent quality in appearance and physical properties for each contiguous area.
- B. Source Limitations for Setting and Grouting Materials: Obtain ingredients of a uniform quality for each mortar, adhesive, and grout component from one manufacturer and each aggregate from one source or producer.
- C. Source Limitations for Other Products: Obtain each of the following products specified in this Section from a single manufacturer for each product:
  - 1. Joint sealants.

# 1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver and store packaged materials in original containers with seals unbroken and labels intact until time of use. Comply with requirements in ANSI A137.1 for labeling tile packages.
- B. Store tile and cementitious materials on elevated platforms, under cover, and in a dry location.
- C. Store aggregates where grading and other required characteristics can be maintained and contamination can be avoided.
- D. Store liquid materials in unopened containers and protected from freezing.
- E. Handle tile that has temporary protective coating on exposed surfaces to prevent coated surfaces from contacting backs or edges of other units. If coating does contact bonding surfaces of tile, remove coating from bonding surfaces before setting tile.

#### 1.9 PROJECT CONDITIONS

Environmental Limitations: Do not install tile until construction in spaces is complete and A. ambient temperature and humidity conditions are maintained at the levels indicated in referenced standards and manufacturer's written instructions.

#### PART 2 - PRODUCTS

#### 2.1 PRODUCTS, GENERAL

- A. ANSI Ceramic Tile Standard: Provide tile that complies with ANSI A137.1 for types, compositions, and other characteristics indicated.
  - 1. Provide tile complying with Standard grade requirements unless otherwise indicated.
- ANSI Standards for Tile Installation Materials: Provide materials complying with B. ANSI A108.02, ANSI standards referenced in other Part 2 articles, ANSI standards referenced by TCA installation methods specified in tile installation schedules, and other requirements specified.
- C. Factory Blending: For tile exhibiting color variations within ranges, blend tile in factory and package so tile units taken from one package show same range in colors as those taken from other packages and match approved Samples.

#### 2.2 **TILE PRODUCTS**

- Tile Type CT-1: Glazed wall tile. A.
  - Basis-of-Design Product: Subject to compliance with requirements, provide glazed 1. ceramic tile Dal Tile Classic or comparable product by one of the following:
    - American Olean. a.
    - b. Crossville, Inc.
    - Lone Star Ceramics Company.
    - Composition: Impervious natural clay or porcelain. 2.
    - Module Size: 3.
      - Wall Tile: 6-inch by 6-inch. a.
    - 4. Thickness: 5/16 inch.
    - Face: Pattern of design indicated, with square edges. 5.
    - Surface: Smooth, without abrasive admixture. 6.
    - Finish: Mat, clear glaze.
    - Tile Color and Pattern: As selected by Architect from manufacturer's full range. 8.
    - Grout Color: As selected by Architect from manufacturer's full range.
    - Trim Units: Coordinated with sizes and coursing of adjoining flat tile where applicable and matching characteristics of adjoining flat tile. Provide shapes as follows, selected from manufacturer's standard shapes:
      - External Corners for Thin-Set Mortar Installations: Surface bullnose, module size 2 by 2 inches.

- В. Ceramic Tile Type CT-2: Glazed porcelain wall tile.
  - Basis-of-Design Product: Subject to compliance with requirements, provide glazed ceramic tile Dal Tile Rivermont Oro or comparable product by one of the following:
    - American Olean.
    - Crossville, Inc. b.
    - c. Lone Star Ceramics Company.
  - 2. Module Size: 24-inch by 24-inch.
  - Face Size Variation: Rectified.
  - Thickness: 5/16 inch. 4.
  - Face: Pattern of design indicated, with manufacturer's standard edges. 5.
  - 6. Finish: Mat, opaque glaze.
  - Tile Color and Pattern: As selected by Architect from manufacturer's full range. 7.
  - Grout Color: As selected by Architect from manufacturer's full range. 8.
  - Trim Units: Coordinated with sizes and coursing of adjoining flat tile where 9. applicable and matching characteristics of adjoining flat tile. Provide shapes as follows, selected from manufacturer's standard shapes:
    - Wainscot Cap for Portland Cement Mortar Installations: Bullnose cap, module size a. 6 by 2 inches.
    - Wainscot Cap for Thinset Mortar Installations: Surface bullnose, module size 6 by b. 6 inches.
    - External Corners for Portland Cement Mortar Installations: Bullnose shape with radius of at least 3/4 inch unless otherwise indicated.
    - External Corners for Thinset Mortar Installations: Surface bullnose, same size as d. adjoining flat tile.
    - Internal Corners: Field-butted square corners. For coved base and cap use angle e. pieces designed to fit with stretcher shapes.

#### 2.3 SETTING MATERIALS

- A. Portland Cement Mortar (Thickset) Installation Materials: ANSI A108.02.
  - 1. Latex Additive: Manufacturer's standard water emulsion, serving as replacement for part or all of gaging water, of type specifically recommended by latex-additive manufacturer for use with field-mixed portland cement and aggregate mortar bed.
- B. Dry-Set Portland Cement Mortar (Thin Set): ANSI A118.1.
  - Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
    - Bonsal American; an Oldcastle company.
    - Bostik, Inc.
    - C-Cure. c.
    - Custom Building Products. d.
    - Jamo Inc. e.
    - f. Laticrete International, Inc.
    - Summitville Tiles, Inc. g.

2. For wall applications, provide mortar that complies with requirements for nonsagging mortar in addition to the other requirements in ANSI A118.1.

#### 2.4 **GROUT MATERIALS**

- Polymer-Modified Tile Grout: ANSI A118.7. A.
  - Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
    - Bonsal American; an Oldcastle company. a.
    - b. Bostik, Inc.
    - c. C-Cure.
    - d. Custom Building Products.
    - Jamo Inc.
    - f. Laticrete International, Inc.
    - Summitville Tiles, Inc. g.
  - 2. Polymer Type: Ethylene vinyl acetate or acrylic additive, in dry, redispersible form, prepackaged with other dry ingredients.

#### 2.5 **ELASTOMERIC SEALANTS**

- General: Provide sealants, primers, backer rods, and other sealant accessories that comply with A. the following requirements and with the applicable requirements in Section 079200 "Sealants."
  - 1. Sealants shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
  - 2. Use primers, backer rods, and sealant accessories recommended by sealant manufacturer.
- B. Colors: Provide colors of exposed sealants to match colors of grout in tile adjoining sealed joints unless otherwise indicated.
- C. One-Part, Mildew-Resistant Silicone Sealant: ASTM C 920; Type S; Grade NS; Class 25; Uses NT, G, A, and, as applicable to nonporous joint substrates indicated, O; formulated with fungicide, intended for sealing interior ceramic tile joints and other nonporous substrates that are subject to in-service exposures of high humidity and extreme temperatures.
  - 1. Products: Subject to compliance with requirements available products that may be incorporated into the Work include, but are not limited to, the following:
    - DAP Inc.; Titanium Enriched Kitchen and Bath Sealant. a.
    - b. Dow Corning Corporation; Dow Corning 786.
    - GE Silicones; a division of GE Specialty Materials; Sanitary 1700. c.
    - Laticrete International, Inc.; Latasil Tile & Stone Sealant. d.
    - e. Pecora Corporation; Pecora 898 Sanitary Silicone Sealant.
    - Tremco Incorporated; Tremsil 600 White. f.

# 2.6 MISCELLANEOUS MATERIALS

- A. Trowelable Underlayments and Patching Compounds: Latex-modified, portland cement-based formulation provided or approved by manufacturer of tile-setting materials for installations indicated.
- B. Tile Cleaner: A neutral cleaner capable of removing soil and residue without harming tile and grout surfaces, specifically approved for materials and installations indicated by tile and grout manufacturers.
- C. Grout Sealer: Manufacturer's standard silicone product for sealing grout joints and that does not change color or appearance of grout.
  - 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following]:
    - a. Bonsal American; an Oldcastle company; Grout Sealer.
    - b. Bostik, Inc. CeramaSeal Grout & Tile Sealer.
    - c. C-Cure; Penetrating Sealer 978.
    - d. Custom Building Products; Surfaceguard
    - e. Sealer.
    - f. MAPEI Corporation; KER 003, Silicone Spray Sealer for Cementitious Tile Grout.
    - g. Southern Grouts & Mortars, Inc.; Silicone Grout Sealer.
    - h. Summitville Tiles, Inc.; SL-15, Invisible Seal Penetrating Grout and Tile Sealer.

#### 2.7 MIXING MORTARS AND GROUT

- A. Mix mortars and grouts to comply with referenced standards and mortar and grout manufacturers' written instructions.
- B. Add materials, water, and additives in accurate proportions.
- C. Obtain and use type of mixing equipment, mixer speeds, mixing containers, mixing time, and other procedures to produce mortars and grouts of uniform quality with optimum performance characteristics for installations indicated.

### PART 3 - EXECUTION

# 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions where tile will be installed, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of installed tile.
  - 1. Verify that substrates for setting tile are firm, dry, clean, free of coatings that are incompatible with tile-setting materials including curing compounds and other substances that contain soap, wax, oil, or silicone; and comply with flatness tolerances required by ANSI A108.01 for installations indicated.
  - 2. Verify that installation of grounds, anchors, recessed frames, electrical and mechanical units of work, and similar items located in or behind tile has been completed.
  - 3. Verify that joints and cracks in tile substrates are coordinated with tile joint locations; if not coordinated, adjust joint locations in consultation with Architect.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

#### 3.2 **PREPARATION**

Blending: For tile exhibiting color variations, verify that tile has been factory blended and A. packaged so tile units taken from one package show same range of colors as those taken from other packages and match approved Samples. If not factory blended, either return to manufacturer or blend tiles at Project site before installing.

#### 3.3 TILE INSTALLATION

- Comply with TCA's "Handbook for Ceramic Tile Installation" for TCA installation methods A. specified in tile installation schedules. Comply with parts of the ANSI A108 Series "Specifications for Installation of Ceramic Tile" that are referenced in TCA installation methods, specified in tile installation schedules, and apply to types of setting and grouting materials used.
- B. Extend tile work into recesses and under or behind equipment and fixtures to form complete covering without interruptions unless otherwise indicated. Terminate work neatly at obstructions, edges, and corners without disrupting pattern or joint alignments.
- C. Accurately form intersections and returns. Perform cutting and drilling of tile without marring visible surfaces. Carefully grind cut edges of tile abutting trim, finish, or built-in items for straight aligned joints. Fit tile closely to electrical outlets, piping, fixtures, and other penetrations so plates, collars, or covers overlap tile.
- D. Provide manufacturer's standard trim shapes where necessary to eliminate exposed tile edges.
- E. Jointing Pattern: Lay tile in grid pattern unless otherwise indicated. Lay out tile work and center tile fields in both directions in each space or on each wall area. Lay out tile work to minimize the use of pieces that are less than half of a tile. Provide uniform joint widths unless otherwise indicated.
  - Where adjoining tiles on base, walls, or trim are specified or indicated to be same size, 1. align joints.
  - Where tiles are specified or indicated to be whole integer multiples of adjoining tiles on 2. base, walls, or trim, align joints unless otherwise indicated.
- F. Joint Widths: Unless otherwise indicated, install tile with the following joint widths:
  - 1. Wall Tile: 1/4 inch.
- G. Expansion Joints: Provide expansion joints and other sealant-filled joints, including control, contraction, and isolation joints, where indicated. Form joints during installation of setting materials, mortar beds, and tile. Do not saw-cut joints after installing tiles.
- Grout Sealer: Apply grout sealer to grout joints according to grout-sealer manufacturer's Η. written instructions. As soon as grout sealer has penetrated grout joints, remove excess sealer and sealer from tile faces by wiping with soft cloth.

#### 3.4 CLEANING AND PROTECTING

- Cleaning: n completion of placement and grouting, clean all ceramic tile surfaces so they are A. free of foreign matter.
  - 1. Remove latex-portland cement grout residue from tile as soon as possible.
  - Clean grout smears and haze from tile according to tile and grout manufacturer's written 2. instructions but no sooner than 10 days after installation. Use only cleaners recommended by tile and grout manufacturers and only after determining that cleaners are safe to use by testing on samples of tile and other surfaces to be cleaned. Protect metal surfaces and plumbing fixtures from effects of cleaning. Flush surfaces with clean water before and after cleaning.
- B. Protect installed tile work with kraft paper or other heavy covering during construction period to prevent staining, damage, and wear. If recommended by tile manufacturer, apply coat of neutral protective cleaner to completed tile walls.
- Before final inspection, remove protective coverings and rinse neutral protective cleaner from C. tile surfaces.

#### 3.5 EXTERIOR TILE INSTALLATION SCHEDULE

- A. Exterior Wall Installations, Cement Plaster:
  - Ceramic Tile Installation: TCNA W201 and ANSI A108.1C; cement mortar bed (thickset) on metal lath over vapor-retarder membrane.
    - Ceramic Tile Type: CT-2. a.
    - Bond Coat for Wet-Set Method: Modified dry-set mortar. b.
    - Grout: Sand-portland cement grout.

#### INTERIOR TILE INSTALLATION SCHEDULE 3.6

- Interior Wall Installations, Wood Studs or Furring: A.
  - 1. Tile Installation W244E: Thin-set mortar on moisture resistant gyp board.
    - Tile Type: CT-1. a.
    - Thin-Set Mortar: Latex-portland cement mortar. b.
    - Grout: Polymer-modified sanded grout.

END OF SECTION 093000

#### PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

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

### 1.2 SUMMARY

- A. Section includes shop-fabricated, wood slat acoustical panel units tested for acoustical performance, including the following:
  - 1. Sound-diffusing wall panels.
- B. Related Requirements:
  - 1. Section 061053 "Miscellaneous Rough Carpentry" for installation of wood furring.
  - 2. Section 062063 "Interior Finish Carpentry" for application of prefinished wood trim.

### 1.3 DEFINITIONS

A. NRC: Noise Reduction Coefficient.

# 1.4 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

# 1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product.
  - 1. Include wood slat edge, insulation material, and mounting indicated.
- B. Shop Drawings: For unit assembly and installation.
  - 1. Include plans, elevations, sections, and mounting devices and details.
  - 2. Include details at panel head, base, joints, and corners. Indicate panel edge profile and insulation materials.
  - 3. Include details at cutouts and penetrations for other work.
- C. Samples for Initial Selection: For each type of wood panel finish.
- D. Samples for Verification: For the following products:
  - 1. Assembled Panels: Approximately 36 by 36 inches, including joints and mounting methods.

### 1.6 INFORMATIONAL SUBMITTALS

A. Coordination Drawings: Elevations and other details, drawn to scale, on which the following items are shown and coordinated with each other, using input from installers of the items involved:

- 1. Items penetrating or covered by units including the following:
  - a. Speakers.
  - b. Alarms.
  - c. Sprinklers.
  - d. Access panels.
- B. Product Certificates: For each type of unit.
- C. Sample Warranty: For manufacturer's special warranty.

### 1.7 CLOSEOUT SUBMITTALS

A. Maintenance Data: For each type of unit to include in maintenance manuals. Include manufacturers' written cleaning and stain-removal instructions.

# 1.8 QUALITY ASSURANCE

- A. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for materials, fabrication, and installation.
  - 1. Build mockup of typical wall area as shown on Drawings
  - 2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
  - 3. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

# 1.9 DELIVERY, STORAGE, AND HANDLING

- A. Comply with perforated paneling manufacturers' written instructions for minimum and maximum temperature and humidity requirements for shipment, storage, and handling.
- B. Deliver materials and units in unopened containers and store in a temperature-controlled dry place with adequate air circulation.

# 1.10 FIELD CONDITIONS

- A. Environmental Limitations: Do not install units until spaces are enclosed and weathertight, wetwork in spaces is complete and dry, work at and above ceilings is complete, and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.
- B. Air-Quality Limitations: Protect units from exposure to airborne odors, such as tobacco smoke, and install units under conditions free from odor contamination of ambient air.
- C. Field Measurements: Verify unit locations and actual dimensions of openings and penetrations by field measurements before fabrication, and indicate them on Shop Drawings.

### 1.11 WARRANTY

A. Special Warranty: Manufacturer agrees to repair or replace units and components that fail in materials or workmanship within specified warranty period.

- 1. Failures include, but are not limited to the following:
  - a. Acoustical performance.
  - b. Warping of panels.
- 2. Warranty Period: Two years from date of Substantial Completion.

### PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

A. Source Limitations: Obtain wall units specified in this Section from single source from single manufacturer.

# 2.2 PERFORMANCE REQUIREMENTS

- A. Fire-Test-Response Characteristics: Units shall comply with "Surface-Burning Characteristics" or "Fire Growth Contribution" Subparagraph below, or both, as determined by testing identical products by UL or another testing and inspecting agency acceptable to authorities having jurisdiction:
  - 1. Surface-Burning Characteristics: Comply with ASTM E 84 or UL 723; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
    - a. Flame-Spread Index: 25 or less.
    - b. Smoke-Developed Index: 450 or less.
  - 2. Fire Growth Contribution: Comply with acceptance criteria of local code and authorities having jurisdiction when tested according to NFPA 265 Method B Protocol or NFPA 286.
- A. Wood Slat Acoustical Wall Panels: Basis-of-Design Product Subject to compliance with requirements, provide Wood Slat Acoustical Wall Panels manufactured by Slat Solutions or comparable product by one of the following:
  - 1 AKU Wood Panel.
  - 2 TerrAcoustics
  - 2 Murano Acoustics.
  - 3. Topakustik, USA.
- B. Wood Slat Acoustical Wall Panel: Manufacturer's standard panel construction consisting of natural wood pickets adhered to insulation backing.
  - 1. Fire Rating: Class A.
  - 2. Panel Shape: Flat.
  - 3. Mounting: Screw and glue mounted on gypsum board.
  - 4. Edge Construction: Manufacturer's standard edging.
  - 5. Reveals between Panels: ½ inch.
  - 6. Facing Material: As selected by Architect.
  - 7. Acoustical Performance: Sound absorption NRC of 0.60 to 0.70 according to ASTM C 423.
  - 8. Thicknss:7\8 inches.

- 9. Panel Width: 24 inches.
- 10. Panel Height: 94.5 inches.

### 2.3 ACESSORIES:

- A. Wood trim as required for semi-exposed edges.
- B. Panel Fasteners: Flat head wood screws head screws. 410 stainless steel.

### 2.4 FABRICATION

- A. Dimensional Tolerances of Finished Units: Plus or minus 1/16 inch for the following:
  - 1. Thickness.
  - 2. Edge straightness.
  - 3. Overall length and width.
  - 4. Squareness from corner to corner.

#### **PART 3 - EXECUTION**

### 3.1 EXAMINATION

- A. Examine fabricated units, substrates, areas, and conditions for compliance with requirements, installation tolerances, and other conditions affecting unit performance.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

#### 3.2 INSTALLATION

- A. Install units in locations indicated. Unless otherwise indicated, install units with vertical surfaces and edges plumb, top edges level and in alignment with other units, faces flush, and scribed to fit adjoining work accurately at borders and at penetrations.
- B. Comply with manufacturer's written instructions for installation of units using type of mounting indicated. Mount units securely to supporting substrate.
- C. Install to furring with self-drilling bugle-head screws

### 3.3 INSTALLATION TOLERANCES

- A. Variation from Plumb and Level: Plus or minus 1/16 inch in 48 inches, noncumulative.
- B. Variation of Joint Width: Not more than 1/32-inch variation from hairline in 48 inches.

# 3.4 CLEANING

A. Clean panels on completion of installation to remove dust and other foreign materials according to manufacturer's written instructions.

# END OF SECTION 098435

