SCOPE OF WORK. The City and Borough of Wrangell, hereinafter referred to as the OWNER, invites sealed bids for the supply of the **Primary School Door and Hardware Procurement.** The successful Bidder shall furnish and deliver the product to Wrangell, Alaska.

DATE AND TIME FOR BID OPENING. Sealed bids will be received by the City and Borough of Wrangell, Post Office Box 531, Wrangell, Alaska 99929, or located at the Borough Clerk's Office, 205 Brueger Street, Wrangell, Alaska 99929, until **2:00 PM prevailing time on May 29**, **2020**. The Bids will be publicly opened and read aloud at this time in Assembly Chambers. All bids must be submitted in sealed envelopes bearing, on the outside, the name of the project for which the bid is submitted. It is the sole responsibility of the Bidder to see that his bid is received in proper time. Any bids received after the scheduled closing date and time for receipt of bids will be returned, unopened, to the Bidder.

BIDDING. The Contract Documents, may be obtained through download from the City and Borough of Wrangell's website (www.wrangell.com) under the "Bids and RFPs" section. Downloading Contract Documents from the City and Borough of Wrangell's website requires registration with the Borough Clerk in order to be placed on the Plan Holders List and to ensure receipt of subsequent Addenda. Failure to register may adversely affect your proposal. It is the Offeror's responsibility to ensure that they have received all Addenda affecting this Solicitation. To be registered, contact the Borough Clerk at 907-874-2381.

FIRM OFFER. For the purpose of award, offers made in accordance with this Invitation for Bid must be held firm for a period of sixty (60) calendar days from the date of the bid opening.

REJECTION OF BID. The City and Borough of Wrangell (CBW) reserves the right to reject any and all bids and to waive any informality or irregularity in the bids received whenever such rejection or waiver is in the best interest of Wrangell. The CBW reserves the right to modify the contract after its award.

QUALITY OF WORK. All materials shall conform to the specifications, industry standards and practices, and the manufacturer's requirements.

IMMATERIAL DIFFERENCES. The CBW reserves the right to determine whether equipment that complies substantially in quality and performance with the specifications are acceptable, and whether any variance listed by the Bidder in a bid is material or immaterial.

# EVALUATION OF BIDS AND SELECTION AND AWARD

1. An award will be made to the lowest, responsive and responsible Bidder whose Bid

is determined to be most advantageous to the CBW.

2. Where a local bid is in all material respects equal to a lower, nonlocal bid, a 5% Local Bidder Preference shall apply to the Price criteria under the Evaluation Ranking Criteria. To be considered a qualifying bidder, bidders shall meet the requirements of the Local Bidder Preference ordinance, according to WMC 5.10.040 (D). The Owner may request documentation to support entries made on this form.

AWARD OF CONTRACT AND AGREEMENT. The form of Agreement which the Contractor shall be required to execute shall be a Purchase Order and the terms of the Invitation to Bid and Technical Specifications, including any issued Addenda, shall become a part of the contract documents. The CBW reserves the sole right to cancel the Contract, immediately, in the event of the contractor's failure to perform the work in conformance with the Contract Documents.

PAYMENT SCHEDULE. Payment will be made within thirty (30) days upon receipt of invoice and acceptance of product delivery.

LIABILITY. The Contractor shall hold and save the City and Borough of Wrangell, its officers, agents, and employees harmless from liability of any nature. This includes any costs, expenses, suits or damages of any kind sustained by any person(s) or property by any virtue of performance resulting from the Project.

BONDS. None required.

LIEN RELEASE: The Contractor warrants that they shall save harmless the City and Borough of Wrangell from any liens or claims arising out of this procurement contract.

QUESTIONS CONCERNING THIS BID. Contact Amber Al-Haddad, Capital Facilities Director at (907) 874-3902.

# SUBMISSION OF BIDS.

- BID. The Bid form shall reflect a lump sum for the complete equipment listed in the specifications made a part hereto. All prices should be FOB Destination, Wrangell, Alaska, according to the delivery options listed in PART 1 – GENERAL, Section 1.4 DELIVERY, A. The lump sum price bid shall also cover the cost to provide submittals of product data, material certifications and all other requirements listed in the specifications.
- 2. The Bid Schedule must acknowledge any and all Addenda.

- 3. Bids must be typewritten or completed with pen and ink, signed by the vendor or their authorized representative, with all erasures or corrections initialed and dated by the official signing the bid schedule. Bidders are encouraged to review carefully all provisions of this document prior to completion. Each bid constitutes an offer and may not be withdrawn except as provided herein.
- 4. Submit bids plainly marked with "Bid for Primary School Door and Hardware Procurement, City and Borough of Wrangell." Bids shall be delivered to:
  - a. Mailing Address: City and Borough of Wrangell, P.O. Box 531, Wrangell, AK 99929
  - b. Hand Delivery Address: City and Borough of Wrangell, 205 Brueger St., Wrangell, AK 99929
- 5. The Bidder must have a valid business license prior to receiving a contract award.

No bid will be received or accepted after the bid deadline. Bids submitted after the designated date and time will be deemed invalid and returned unopened to the Bidder. The City and Borough of Wrangell is not responsible for lost or misdirected mail. It is the Bidder's responsibility to ensure no late bid is submitted. No bid may be withdrawn within sixty (60) days after the bid opening and bids shall remain firm through that period. Any Bidder may modify their bid by submitting a written bid modification form, signed by the Bidder, either by email communication to email address: <u>clerk@wrangell.com</u>, or by facsimile communication to fax number: 907-874-3952 at any time prior to the scheduled bid closing time for receipt of bids, provided such communication is received by the OWNER prior to the bid closing time.

ADDENDA. Each bid shall include specific acknowledgment in the space provided for receipt of all addenda issued during the bidding period. Failure to so acknowledge may result in the proposal being rejected as not responsive.

# PART 1 - GENERAL

# 1.2 SCOPE OF WORK.

- A. The City and Borough of Wrangell is requesting bids for the procurement of exterior doors and hardware for the Wrangell Primary School. The material procurement specifications are identified in PART 2 PRODUCTS TECHNICAL SPECIFICATIONS of this solicitation.
- B. The procurement under this Invitation to Bid is for the doors and hardware shown on the drawings as the BASE BID, DOORS 101, 102, 103, 110, 118 only. The Alternative Bid for additional doors listed in the drawings is not a part of this procurement.

# 1.3 DELIVERY

All freight and delivery charges to FOB delivery location are to be included in the bid price.

- 1. Delivery Location: Bidder shall deliver the transformer unit as FOB Port of Wrangell, Alaska.
- 2. Delivery Time: Delivery of the materials, to their delivery location, shall be made within 90 calendar days of the execution of the agreement; otherwise liquidated damages in the amount of \$100/calendar day will be assessed.

# END OF PART 1

# PART 2 - PRODUCTS - TECHNICAL SPECIFICATIONS

- 2.1 SECTION 013300 SUBMITTAL PROCEDURES, PRIMARY SCHOOL DOOR AND HARDWARE PROCUREMENT (attached)
- 2.2 SECTION 017823 OPERATION AND MAINTENANCE DATA, PRIMARY SCHOOL DOOR AND HARDWARE PROCUREMENT (attached)
- 2.3 SECTION 081113 HOLLOW METAL DOORS AND FRAMES, PRIMARY SCHOOL DOOR AND HARDWARE PROCUREMENT (attached)
- 2.4 SECTION 0871000 DOOR HARDWARE, PRIMARY SCHOOL DOOR AND HARDWARE PROCUREMENT (attached)
- 2.5 EXTERIOR DOOR REPLACEMENT ARCHITECTURAL DRAWINGS, JENSEN YORBA WALL, INC. (attached)

# END OF PART 2

#### BID

Bid To: City and Borough of Wrangell, Alaska

- 1. The undersigned Bidder offers and agrees, if this Bid is accepted, to enter into an Agreement with the Owner to perform the work as described in the contract documents entitled *Invitation to Bid*, *City and Borough of Wrangell*, *Primary School Door and Hardware Procurement*.
- 2. Bidder accepts all of the terms and conditions of the contract documents, including without limitations those in the Request for Bid.
- 3. The Bid will remain open for sixty (<u>60 days</u>), as stipulated in the Invitation to Bid.
- 4. The Bidder agrees to complete the work required under the contract documents within the time stipulated and accepts payment in full based on the contract price named in the Bid.
- 5. Bidder has examined the contract documents in full, including the following Addenda, receipt of which is hereby acknowledged by the undersigned:

ADDENDUM	DATE OF RECEIPT	SIGNED
NUMBER	OF ADDENDUM	<b>ACKNOWLEDGMENT</b>
One		
Two		

(Note: Failure to acknowledge receipt of any addenda may be considered an irregularity in the proposal and grounds for rejection of the bid.)

- 6. The Bidder has read this Bid and agrees to the conditions as stated herein by providing their signature in the space provided below.
- 7. A Local Bidder Preference of five percent (5%) may be utilized on this project, according to the contract language.

<u>Quantity</u>	Item	Lump Sum Price
1 Lump Sum	Primary School Door and Hardware Procurement	\$
Bid Amount in writing	(	)
Bidder's Name:		
Bidder's Representative	e's Signature:	
Bidder's Address:		
Bidder's Telephone Nu	mbers and Email Address:	
Bidder's Business Licer	nse No.:	
Date:		

#### SECTION 013300 - SUBMITTAL PROCEDURES

# PART 1 - GENERAL

#### 1.1 SUMMARY

A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.

#### 1.2 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

- A. Architect's Digital Data Files: Electronic copies of digital data files of the Contract Drawings will be provided by Architect for Contractor's use in preparing submittals.
  - a. Architect makes no representations as to the accuracy or completeness of digital data drawing files as they relate to the Contract Drawings.
- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
- C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
  - 1. Initial Review: Allow 15 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
  - 2. Resubmittal Review: Allow 15 days for review of each resubmittal.
- D. Paper Submittals: Place a permanent label or title block on each submittal item for identification.
- E. Electronic Submittals: Identify and incorporate information in each electronic submittal file.
- F. Options: Identify options requiring selection by Architect.
- G. Deviations: Identify deviations from the Contract Documents on submittals.
- H. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
- I. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Architect's action stamp.

# **PART 2 - PRODUCTS**

#### 2.1 SUBMITTAL PROCEDURES

- A. General Submittal Procedure Requirements:
  - 1. Submit electronic submittals via email as PDF electronic files.
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
  - 1. Submit Product Data in either of the following formats:
    - a. PDF electronic file or
    - b. Four paper copies of Product Data unless otherwise indicated. Architect will return one copy.
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
  - 1. Submit Shop Drawings in either of the following formats:
    - a. PDF electronic file.
    - b. Four opaque copies of each submittal. Architect will retain three copies; remainder will be returned.
- D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.

# PART 3 - EXECUTION

#### 3.1 CONTRACTOR'S REVIEW

- A. Action and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.
- B. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

#### 3.2 ARCHITECT'S ACTION

A. General: Architect will not review submittals that do not bear Contractor's approval stamp and will return them without action.

- B. Action Submittals: Architect will review each submittal, make marks to indicate corrections or revisions required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action.
- C. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.
- D. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.
- E. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

# END OF SECTION 013300

# SECTION 017823 - OPERATION AND MAINTENANCE DATA

# PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:
  - 1. Operation and maintenance documentation directory.
  - 2. Emergency manuals.
  - 3. Operation manuals for systems, subsystems, and equipment.
  - 4. Product maintenance manuals.
  - 5. Systems and equipment maintenance manuals.
- B. Related Requirements:
  - 1. Section 013300 "Submittal Procedures" for submitting copies of submittals for operation and maintenance manuals.
  - 2. Divisions 2 through 16 Sections, as applicable, for specific operation and maintenance manual requirements for the Work in those Sections.

#### 1.3 DEFINITIONS

- A. System: An organized collection of parts, equipment, or subsystems united by regular interaction.
- B. Subsystem: A portion of a system with characteristics similar to a system.

# 1.4 CLOSEOUT SUBMITTALS

- A. Manual Content: Operations and maintenance manual content is specified in individual Specification Sections to be reviewed at the time of Section submittals. Submit reviewed manual content formatted and organized as required by this Section.
  - 1. Architect and Commissioning Authority will comment on whether content of operations and maintenance submittals are acceptable.
  - 2. Where applicable, clarify and update reviewed manual content to correspond to revisions and field conditions.
- B. Format: Submit operations and maintenance manuals in the following format:

- 1. PDF electronic file. Assemble each manual into a composite electronically indexed file. Submit on digital media acceptable to Architect, plus one paper copy.
  - a. Name each indexed document file in composite electronic index with applicable item name. Include a complete electronically linked operation and maintenance directory.
  - b. Enable inserted reviewer comments on draft submittals.
- C. Initial Manual Submittal: Submit draft copy of each manual at least 30 days before commencing demonstration and training. Architect and Project Manager will comment on whether general scope and content of manual are acceptable.
- D. Final Manual Submittal: Submit each manual in final form prior to requesting inspection for Substantial Completion and at least 30 days before commencing demonstration and training. Architect and Project Manager will return copy with comments.
  - 1. Correct or revise each manual to comply with Architect's and Commissioning Authority's comments. Submit copies of each corrected manual within 30 days of receipt of Architect's and Project Manager's comments and prior to commencing demonstration and training.

# PART 2 - PRODUCTS

#### 2.1 OPERATION AND MAINTENANCE DOCUMENTATION DIRECTORY

- A. Directory: Prepare a single, comprehensive directory of emergency, operation, and maintenance data and materials, listing items and their location to facilitate ready access to desired information. Include a section in the directory for each of the following:
  - 1. List of documents.
  - 2. List of systems.
  - 3. List of equipment.
  - 4. Table of contents.
- B. List of Systems and Subsystems: List systems alphabetically. Include references to operation and maintenance manuals that contain information about each system.
- C. List of Equipment: List equipment for each system, organized alphabetically by system. For pieces of equipment not part of system, list alphabetically in separate list.
- D. Tables of Contents: Include a table of contents for each emergency, operation, and maintenance manual.
- E. Identification: In the documentation directory and in each operation and maintenance manual, identify each system, subsystem, and piece of equipment with same designation used in the Contract Documents. If no designation exists, assign a designation according to ASHRAE Guideline 4, "Preparation of Operating and Maintenance Documentation for Building Systems."

#### 2.2 REQUIREMENTS FOR EMERGENCY, OPERATION, AND MAINTENANCE MANUALS

- A. Organization: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain the following materials, in the order listed:
  - 1. Title page.
  - 2. Table of contents.
  - 3. Manual contents.
- B. Title Page: Include the following information:
  - 1. Subject matter included in manual.
  - 2. Name and address of Project.
  - 3. Name and address of Owner.
  - 4. Date of submittal.
  - 5. Name and contact information for Contractor.
  - 6. Name and contact information for Architect.
  - 7. Name and contact information for Commissioning Authority.
  - 8. Names and contact information for major consultants to the Architect that designed the systems contained in the manuals.
  - 9. Cross-reference to related systems in other operation and maintenance manuals.
- C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.
  - 1. If operation or maintenance documentation requires more than one volume to accommodate data, include comprehensive table of contents for all volumes in each volume of the set.
- D. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder.
- E. Manuals, Electronic Files: Submit manuals in the form of a multiple file composite electronic PDF file for each manual type required, plus one paper copy.
  - 1. Electronic Files: Use electronic files prepared by manufacturer where available. Where scanning of paper documents is required, configure scanned file for minimum readable file size.
  - 2. File Names and Bookmarks: Enable bookmarking of individual documents based on file names. Name document files to correspond to system, subsystem, and equipment names used in manual directory and table of contents. Group documents for each system and subsystem into individual composite bookmarked files, then create composite manual, so that resulting bookmarks reflect the system, subsystem, and equipment names in a readily navigated file tree. Configure electronic manual to display bookmark panel on opening file.

#### 2.3 EMERGENCY MANUALS

- A. Content: Organize manual into a separate section for each of the following:
  - 1. Type of emergency.
  - 2. Emergency instructions.
  - 3. Emergency procedures.
- B. Type of Emergency: Where applicable for each type of emergency indicated below, include instructions and procedures for each system, subsystem, piece of equipment, and component:
  - 1. Fire.
  - 2. Flood.
  - 3. Gas leak.
  - 4. Water leak.
  - 5. Power failure.
  - 6. Water outage.
  - 7. System, subsystem, or equipment failure.
  - 8. Chemical release or spill.
- C. Emergency Instructions: Describe and explain warnings, trouble indications, error messages, and similar codes and signals. Include responsibilities of Owner's operating personnel for notification of Installer, supplier, and manufacturer to maintain warranties.
- D. Emergency Procedures: Include the following, as applicable:
  - 1. Instructions on stopping.
  - 2. Shutdown instructions for each type of emergency.
  - 3. Operating instructions for conditions outside normal operating limits.
  - 4. Required sequences for electric or electronic systems.
  - 5. Special operating instructions and procedures.

#### 2.4 OPERATION MANUALS

- A. Content: In addition to requirements in this Section, include operation data required in individual Specification Sections and the following information:
  - 1. System, subsystem, and equipment descriptions. Use designations for systems and equipment indicated on Contract Documents.
  - 2. Performance and design criteria if Contractor has delegated design responsibility.
  - 3. Operating standards.
  - 4. Operating procedures.
  - 5. Operating logs.
  - 6. Wiring diagrams.
  - 7. Control diagrams.
  - 8. Piped system diagrams.
  - 9. Precautions against improper use.
  - 10. License requirements including inspection and renewal dates.

- B. Descriptions: Include the following:
  - 1. Product name and model number. Use designations for products indicated on Contract Documents.
  - 2. Manufacturer's name.
  - 3. Equipment identification with serial number of each component.
  - 4. Equipment function.
  - 5. Operating characteristics.
  - 6. Limiting conditions.
  - 7. Performance curves.
  - 8. Engineering data and tests.
  - 9. Complete nomenclature and number of replacement parts.
- C. Operating Procedures: Include the following, as applicable:
  - 1. Startup procedures.
  - 2. Equipment or system break-in procedures.
  - 3. Routine and normal operating instructions.
  - 4. Regulation and control procedures.
  - 5. Instructions on stopping.
  - 6. Normal shutdown instructions.
  - 7. Seasonal and weekend operating instructions.
  - 8. Required sequences for electric or electronic systems.
  - 9. Special operating instructions and procedures.
- D. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.
- E. Piped Systems: Diagram piping as installed, and identify color-coding where required for identification.

# 2.5 PRODUCT MAINTENANCE MANUALS

- A. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.
- B. Source Information: List each product included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.
- C. Product Information: Include the following, as applicable:
  - 1. Product name and model number.
  - 2. Manufacturer's name.
  - 3. Color, pattern, and texture.
  - 4. Material and chemical composition.
  - 5. Reordering information for specially manufactured products.

- D. Maintenance Procedures: Include manufacturer's written recommendations and the following:
  - 1. Inspection procedures.
  - 2. Types of cleaning agents to be used and methods of cleaning.
  - 3. List of cleaning agents and methods of cleaning detrimental to product.
  - 4. Schedule for routine cleaning and maintenance.
  - 5. Repair instructions.
- E. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.
- F. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
  - 1. Include procedures to follow and required notifications for warranty claims.

#### 2.6 SYSTEMS AND EQUIPMENT MAINTENANCE MANUALS

- A. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranty and bond information, as described below.
- B. Source Information: List each system, subsystem, and piece of equipment included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.
- C. Manufacturers' Maintenance Documentation: Manufacturers' maintenance documentation including the following information for each component part or piece of equipment:
  - 1. Standard maintenance instructions and bulletins.
  - 2. Drawings, diagrams, and instructions required for maintenance, including disassembly and component removal, replacement, and assembly.
  - 3. Identification and nomenclature of parts and components.
  - 4. List of items recommended to be stocked as spare parts.
- D. Maintenance Procedures: Include the following information and items that detail essential maintenance procedures:
  - 1. Test and inspection instructions.
  - 2. Troubleshooting guide.
  - 3. Precautions against improper maintenance.
  - 4. Disassembly; component removal, repair, and replacement; and reassembly instructions.
  - 5. Aligning, adjusting, and checking instructions.
  - 6. Demonstration and training video recording, if available.

- E. Maintenance and Service Schedules: Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.
  - 1. Scheduled Maintenance and Service: Tabulate actions for daily, weekly, monthly, quarterly, semiannual, and annual frequencies.
  - 2. Maintenance and Service Record: Include manufacturers' forms for recording maintenance.
- F. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.
- G. Maintenance Service Contracts: Include copies of maintenance agreements with name and telephone number of service agent.
- H. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
  - 1. Include procedures to follow and required notifications for warranty claims.

# PART 3 - EXECUTION

#### 3.1 MANUAL PREPARATION

- A. Operation and Maintenance Documentation Directory: Prepare a separate manual that provides an organized reference to emergency, operation, and maintenance manuals.
- B. Emergency Manual: Assemble a complete set of emergency information indicating procedures for use by emergency personnel and by Owner's operating personnel for types of emergencies indicated.
- C. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.
- D. Operation and Maintenance Manuals: Assemble a complete set of operation and maintenance data indicating operation and maintenance of each system, subsystem, and piece of equipment not part of a system.
  - 1. Engage a factory-authorized service representative to assemble and prepare information for each system, subsystem, and piece of equipment not part of a system.
  - 2. Prepare a separate manual for each system and subsystem, in the form of an instructional manual for use by Owner's operating personnel.
- E. Manufacturers' Data: Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.

- 1. Prepare supplementary text if manufacturers' standard printed data are not available and where the information is necessary for proper operation and maintenance of equipment or systems.
- F. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in record Drawings to ensure correct illustration of completed installation.
  - 1. Do not use original project record documents as part of operation and maintenance manuals.
  - 2. Comply with requirements of newly prepared record Drawings in Section 017839 "Project Record Documents."
- G. Comply with Section 017700 "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

# END OF SECTION 017823

#### SECTION 081113 - HOLLOW METAL DOORS AND FRAMES

### 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. Exterior standard steel doors and frames.
  - 2. Glazing for doors and relites.
- B. Related Requirements:
  - 1. Section 087100 "Door Hardware" for door hardware for hollow-metal doors.

#### 1.3 DEFINITIONS

A. Minimum Thickness: Minimum thickness of base metal without coatings according to NAAMM-HMMA 803 or ANSI/SDI A250.8.

#### 1.4 COORDINATION

- A. Coordinate anchorage installation for hollow-metal frames. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors. Deliver such items to Project site in time for installation.
- B. Coordinate requirements for installation of door hardware, electrified door hardware, and access control and security systems.

#### 1.5 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

#### 1.6 ACTION SUBMITTALS

- A. Product Data: For each type of product.
  - 1. Include construction details, material descriptions, core descriptions, and finishes.
- B. Shop Drawings: Include the following:

- 1. Elevations of each door type.
- 2. Details of doors, including vertical- and horizontal-edge details and metal thicknesses.
- 3. Frame details for each frame type, including dimensioned profiles and metal thicknesses.
- 4. Locations of reinforcement and preparations for hardware.
- 5. Details of each different wall opening condition.
- 6. Details of anchorages, joints, field splices, and connections.
- 7. Details of accessories.
- 8. Details of moldings, removable stops, and glazing.
- C. Samples for Initial Selection: For hollow-metal doors and frames with factory-applied color finishes.
- D. Product Schedule: For hollow-metal doors and frames, prepared by or under the supervision of supplier, using same reference numbers for details and openings as those on Drawings. Coordinate with final door hardware schedule.

#### 1.7 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For door inspector.
  - 1. Egress Door Inspector: Submit documentation of compliance with NFPA 101, Section 7.2.1.15.4.
- B. Field quality control reports.

#### 1.8 CLOSEOUT SUBMITTALS

A. Record Documents: For fire-rated doors, list of door numbers and applicable room name and number to which door accesses.

#### 1.9 QUALITY ASSURANCE

- A. Egress Door Inspector Qualifications: Inspector for field quality control inspections of egress door assemblies shall meet the qualifications set forth in NFPA 101, Section 7.2.1.15.4 and the following:
  - 1. Door and Hardware Institute Fire and Egress Door Assembly Inspector (FDAI) certification.

#### 1.10 DELIVERY, STORAGE, AND HANDLING

- A. Deliver hollow-metal doors and frames palletized, packaged, or crated to provide protection during transit and Project-site storage. Do not use non-vented plastic.
  - 1. Provide additional protection to prevent damage to factory-finished units.
- B. Deliver welded frames (if supplied) with two removable spreader bars across bottom of frames, tack welded to jambs and mullions.

C. Store hollow-metal doors and frames vertically under cover at Project site with head up. Place on minimum 4-inch- (102-mm-) high wood blocking. Provide minimum 1/4-inch (6-mm) space between each stacked door to permit air circulation.

### PART 2 - PRODUCTS

#### 2.1 MANUFACTURERS

- A. Basis of design, Provide the following or approved equal:
  - 1. Doors:
- 1) Amweld International, LLC.
- 2) Ceco Door Products; an Assa Abloy Group company.
- 3) Commercial Door & Hardware Inc.
- 4) Curries Company; an Assa Abloy Group company.
- 5) Republic Doors and Frames.
- 6) Steelcraft; an Ingersoll-Rand company.
- 2. Doors Frames:
  - 1) Baron Steel Assa Abloy Frames Expandable Frames 16ga.

#### 2.2 EXTERIOR STANDARD STEEL DOORS AND FRAMES

- A. Extra-Heavy-Duty Doors and Frames: ANSI/SDI A250.8, Level 3; ANSI/SDI A250.4, Level A.
  - 1. Doors:
    - a. Type: As indicated in the Door and Frame Schedule.
    - b. Thickness: 1-3/4 inches (44.5 mm).
    - c. Face: Metallic-coated steel sheet, minimum thickness of 0.053 inch (1.3 mm), with minimum A60 (ZF180) coating.
    - d. Edge Construction: Seamless. (seam welded filled and ground smooth)
    - e. Edge Bevel: Provide manufacturer's standard beveled or square edges.
    - f. Top Edge Closures: Close top edges of doors with flush closures of same material as face sheets. Seal joints against water penetration.
    - g. Bottom Edges: Close bottom edges of doors where required for attachment of weather stripping with end closures or channels of same material as face sheets. Provide weep-hole openings in bottoms of exterior doors to permit moisture to escape.
    - h. Core: Polyisocyanurate.
      - 1) Thermal-Rated Doors: Provide doors fabricated with thermal-resistance value (R-value) of not less than [2.77 deg F x h x sq. ft./Btu
    - i. Exposed Finish: Prime.
  - 2. Frames:

- a. Materials: Metallic-coated steel sheet, minimum thickness of 0.053 inch (1.3 mm), with minimum A40 (ZF120) coating.
- b. Construction: Knocked down.

Exposed Finish: Prime.

# 2.3 FRAME ANCHORS

- A. Jamb Anchors:
  - 1. Type: Anchors of minimum size and type required by applicable door and frame standard, and suitable for performance level indicated.
- B. Floor Anchors: Provide floor anchors for each jamb and mullion that extends to floor.
- C. Material: ASTM A879/A879M, Commercial Steel (CS), 04Z (12G) coating designation; mill phosphatized.

# 2.4 MATERIALS

- A. Cold-Rolled Steel Sheet: ASTM A1008/A1008M, Commercial Steel (CS), Type B; suitable for exposed applications.
- B. Hot-Rolled Steel Sheet: ASTM A1011/A1011M, Commercial Steel (CS), Type B; free of scale, pitting, or surface defects; pickled and oiled.
- C. Metallic-Coated Steel Sheet: ASTM A653/A653M, Commercial Steel (CS), Type B.
- D. Inserts, Bolts, and Fasteners: Hot-dip galvanized according to ASTM A153/A153M.
- E. Mineral-Fiber Insulation: ASTM C665, Type I (blankets without membrane facing); consisting of fibers manufactured from slag or rock wool; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively; passing ASTM E136 for combustion characteristics.

# 2.5 FABRICATION

- A. Hollow-Metal Frames: Fabricate in one piece except where handling and shipping limitations require multiple sections. Where frames are fabricated in sections, provide alignment plates or angles at each joint, fabricated of metal of same or greater thickness as frames.
  - 1. Provide countersunk, flat- or oval-head exposed screws and bolts for exposed fasteners unless otherwise indicated.
- B. Hardware Preparation: Factory prepare hollow-metal doors and frames to receive templated mortised hardware, and electrical wiring; include cutouts, reinforcement, mortising, drilling, and tapping according to ANSI/SDI A250.6, the Door Hardware Schedule, and templates.
  - 1. Reinforce doors and frames to receive nontemplated, mortised, and surface-mounted door hardware.

- 2. Comply with BHMA A156.115 for preparing hollow-metal doors and frames for hardware.
- C. Glazed Lites: Provide stops and moldings around glazed lites where indicated. Form corners of stops and moldings with mitered hairline joints.
  - 1. Provide stops and moldings flush with face of door, and with beveled stops unless otherwise indicated.
  - 2. Multiple Glazed Lites: Provide fixed and removable stops and moldings so that each glazed lite is capable of being removed independently.
  - 3. Provide fixed frame moldings on outside of exterior and on secure side of interior doors and frames. Provide loose stops and moldings on inside of hollow-metal doors and frames.
  - 4. Coordinate rabbet width between fixed and removable stops with glazing and installation types indicated.
  - 5. Provide stops for installation with countersunk flat- or oval-head machine screws spaced uniformly not more than 9 inches (230 mm) o.c. and not more than 2 inches (51 mm) o.c. from each corner.

#### 2.6 STEEL FINISHES

- A. Prime Finish:
  - 1. Shop Primer: Clean, pretreat, and apply one coat of manufacturer's standard primer. Manufacturer's standard, fast-curing, lead- and chromate-free primer complying with ANSI/SDI A250.10; recommended by primer manufacturer for substrate; compatible with substrate and field-applied coatings despite prolonged exposure.

# 2.7 GLAZING

# A. GLASS PRODUCTS, GENERAL

- 1. Thickness: Where glass thickness is indicated, it is a minimum. Provide glass lites in thicknesses as needed to comply with requirements indicated.
  - a. Minimum Glass Thickness for Exterior Lites: Not less than 6.0 mm.
- 2. Strength: Where float glass is indicated, provide annealed float glass, Kind HS heattreated float glass, or Kind FT heat-treated float glass as needed to comply with "Performance Requirements" Article. Where fully tempered glass is indicated, provide Kind FT heat-treated float glass.
- 3. Windborne-Debris-Impact Resistance: Provide exterior glazing that passes basic protection testing requirements in ASTM E 1996 for Wind Zone 3 when tested according to ASTM E 1886. Test specimens shall be no smaller in width and length than glazing indicated for use on the Project and shall be installed in same manner as glazing indicated for use on the Project.
  - a. Large-Missile Test: For all glazing, regardless of height above grade.

- 4. Thermal and Optical Performance Properties: Provide glass with performance properties specified, as indicated in manufacturer's published test data, based on procedures indicated below:
  - a. For insulating-glass units, properties are based on units of thickness indicated for overall unit and for each lite.
  - b. U-Factors: Center-of-glazing values, according to NFRC 100 and based on LBL's WINDOW 5.2 computer program, expressed as Btu/sq. ft. x h x deg F

#### B. GLASS MATERIALS

- 1. Float Glass Manufacturers:
  - a. Basis-of-Design: PPG Industries, Inc: www.ppgideascapes.com.
- 2. Float Glass: Provide float glass based glazing unless noted otherwise.
  - a. Heat-Strengthened and Fully Tempered Types: ASTM C1048, Kind HS and Kind FT.
  - b. Thicknesses: As indicated; for exterior glazing comply with requirements indicated for wind load design regardless of thickness indicated.

#### C. SCHEDULE

1. Glass Type G1: Double glaze tempered sealed unit, 1" overall thickness. Argon-filled, low-E coating. Typical use in exterior doors. Min. U-value .30.

# PART 3 - EXECUTION

#### 3.1 PREPARATION

- A. Remove welded-in shipping spreaders installed at factory. Restore exposed finish by grinding, filling, and dressing, as required to make repaired area smooth, flush, and invisible on exposed faces. Touch up factory-applied finishes where spreaders are removed.
- B. Drill and tap doors and frames to receive nontemplated, mortised, and surface-mounted door hardware.

# 3.2 INSTALLATION

- A. Install hollow-metal doors and frames plumb, rigid, properly aligned, and securely fastened in place. Comply with approved Shop Drawings and with manufacturer's written instructions.
- B. Hollow-Metal Frames: Comply with ANSI/SDI A250.11 or NAAMM-HMMA 840.
  - 1. Set frames accurately in position; plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is complete, remove temporary braces without damage to completed Work.
    - a. Install frames with removable stops located on secure side of opening.

- 2. Solidly pack mineral-fiber insulation inside frames.
- 3. Installation Tolerances: Adjust hollow-metal frames to the following tolerances:
  - a. Squareness: Plus or minus 1/16 inch (1.6 mm), measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
  - b. Alignment: Plus or minus 1/16 inch (1.6 mm), measured at jambs on a horizontal line parallel to plane of wall.
  - c. Twist: Plus or minus 1/16 inch (1.6 mm), measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.
  - d. Plumbness: Plus or minus 1/16 inch (1.6 mm), measured at jambs at floor.
- C. Hollow-Metal Doors: Fit and adjust hollow-metal doors accurately in frames, within clearances specified below.
  - 1. Non-Fire-Rated Steel Doors: Comply with ANSI/SDI A250.8 or NAAMM-HMMA 841 and NAAMM-HMMA guide specification indicated.
- D. Glazing: Comply with installation requirements in Section 081113 "Glazing" and with hollowmetal manufacturer's written instructions.
- E. Mineral Wool: Install mineral wool insulation in hollow metal jambs and heads.

#### 3.3 FIELD QUALITY CONTROL

- A. Repair or remove and replace installations where inspections indicate that they do not comply with specified requirements.
- B. Reinspect repaired or replaced installations to determine if replaced or repaired door assembly installations comply with specified requirements.

#### 3.4 REPAIR

- A. Prime-Coat Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat and apply touchup of compatible air-drying, rust-inhibitive primer.
- B. Metallic-Coated Surface Touchup: Clean abraded areas and repair with galvanizing repair paint according to manufacturer's written instructions.
- C. Factory-Finish Touchup: Clean abraded areas and repair with same material used for factory finish according to manufacturer's written instructions.
- D. Touchup Painting: Cleaning and touchup painting of abraded areas of paint are specified in painting Sections.

#### END OF SECTION 081113

# **SECTION 087100 – DOOR HARDWARE**

### PART 1 - GENERAL

#### 1.1 SUMMARY:

- A. Section Includes: Finish Hardware for door openings, except as otherwise specified herein.
  - 1. Door hardware for steel (hollow metal) doors.
- B. Related Sections:
  - 1. Division 8, Section 081113 Hollow Metal Doors and Frames.
- C. References: Comply with applicable requirements of the following standards. Where these standards conflict with other specific requirements, the most restrictive shall govern.
  - 1. Builders Hardware Manufacturing Association (BHMA)
  - 2. NFPA 101 Life Safety Code
  - 3. NFPA 80 -Fire Doors and Windows
  - 4. ANSI-A156.xx- Various Performance Standards for Finish Hardware
  - 5. UL10C Positive Pressure Fire Test of Door Assemblies
  - 6. ANSI-A117.1 Accessible and Usable Buildings and Facilities
  - 7. DHI /ANSI A115.IG Installation Guide for Doors and Hardware
  - 8. ICC International Building Code
- D. Intent of Hardware Groups
  - 1. Should items of hardware not definitely specified be required for completion of the Work, furnish such items of type and quality comparable to adjacent hardware and appropriate for service required.
  - 2. Where items of hardware aren't definitely or correctly specified, are required for completion of the Work, a written statement of such omission, error, or other discrepancy to be submitted to Architect, prior to date specified for receipt of bids for clarification by addendum; or, furnish such items in the type and quality established by this specification, and appropriate to the service intended.

#### 1.2 SUBMITTALS:

- A. Comply with Section 013300
- B. Special Submittal Requirements: Combine submittals of this Section with Sections listed below to ensure the "design intent" of the system/assembly is understood and can be reviewed together.
- C. Product Data: Manufacturer's specifications and technical data including the following:
  - 1. Detailed specification of construction and fabrication.
  - 2. Manufacturer's installation instructions.
  - 3. Wiring diagrams for each electric product specified. Coordinate voltage with electrical before submitting.
  - 4. Submit four (4) copies of catalog cuts with hardware schedule.

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- 5. Provide 9001-Quality Management and 14001-Environmental Management for products listed in Materials Section 2.2
- D. Shop Drawings Hardware Schedule: Submit four (4) complete reproducible copies of detailed hardware schedule in a vertical format.
  - 1. List groups and suffixes in proper sequence.
  - 2. Completely describe door and list architectural door number.
  - 3. Manufacturer, product name, and catalog number.
  - 4. Function, type, and style.
  - 5. Size and finish of each item.
  - 6. Mounting heights.
  - 7. Explanation of abbreviations and symbols used within schedule.
  - 8. Detailed wiring diagrams, specially developed for each opening, indicating all electric hardware, security equipment and access control equipment, and door and frame rough-ins required for specific opening.
- E. Templates: Submit templates and "reviewed Hardware Schedule" to door and frame supplier and others as applicable to enable proper and accurate sizing and locations of cutouts and reinforcing.
  - 1. Templates, wiring diagrams and "reviewed Hardware Schedule" of electrical terms to electrical for coordination and verification of voltages and locations.
- F. Samples: (If requested by the Architect)
  - 1. 1 sample of Lever and Rose/Escutcheon design, (pair).
  - 2. 3 samples of metal finishes.
- G. Contract Closeout Submittals:
  - 1. Comply with Section 017823 Operation and Maintenance Data and Section 017839 Project Record Documents, including specific requirements indicated.
  - 2. Operating and maintenance manuals: Submit 3 sets containing the following.
    - a. Complete information in care, maintenance, and adjustment, and data on repair and replacement parts, and information on preservation of finishes.
    - b. Catalog pages for each product.
    - c. Name, address, and phone number of local representative for each manufacturer.
    - d. Parts list for each product.
  - 3. Copy of final hardware schedule, edited to reflect, "As installed".
  - 4. As installed "Wiring Diagrams" for each piece of hardware connected to power, both low voltage and 110 volts.
  - 5. One set of special tools required for maintenance and adjustment of hardware, including changing of cylinders.

# 1.3 QUALITY ASSURANCE

A. Comply with Division 1.

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- 1. Statement of qualification for distributor and installers.
- 2. Statement of compliance with regulatory requirements and single source responsibility.
- 3. Distributor's Qualifications: Firm with 3 years experience in the distribution of commercial hardware.
  - a. Distributor to employ full time Architectural Hardware Consultants (AHC) for the purpose of scheduling and coordinating hardware and establishing keying schedule.
  - b. Hardware Schedule shall be prepared and signed by an AHC.
- 4. Regulatory Label Requirements: Provide testing agency label or stamp on hardware for labeled openings.
  - a. Provide UL listed hardware for labeled and 20-minute openings in conformance with requirements for class of opening scheduled.
  - b. Underwriters Laboratories requirements have precedence over this specification where conflict exists.
- 5. Single Source Responsibility: Except where specified in hardware schedule, furnish products of only one manufacturer for each type of hardware.
- B. Review Project for extent of finish hardware required to complete the Work. Where there is a conflict between these Specifications and the existing hardware, notify the Architect in writing and furnish hardware in compliance with the Specification unless otherwise directed in writing by the Architect.
- 1.4 DELIVERY, STORAGE, AND HANDLING
  - A. Packing and Shipping: Comply with Division 1.
    - 1. Deliver products in original unopened packaging with legible manufacturer's identification.
    - 2. Package hardware to prevent damage during transit and storage.
    - 3. Mark hardware to correspond with "reviewed hardware schedule".
    - 4. Deliver hardware to door and frame manufacturer upon request.
  - B. Storage and Protection: Comply with manufacturer's recommendations.
- 1.5 PROJECT CONDITIONS:
  - A. Coordinate hardware with other work. Furnish hardware items of proper design for use on doors and frames of the thickness, profile, swing, security and similar requirements indicated, as necessary for the proper installation and function, regardless of omissions or conflicts in the information on the Contract Documents.
  - B. Review Shop Drawings for doors and entrances to confirm that adequate provisions will be made for the proper installation of hardware.

#### 1.6 WARRANTY:

- A. Manufacturer's Warranty:
  - 1. Closers: Ten years
  - 2. Exit Devices: Five Years
  - 3. Locksets & Cylinders: Three years
  - 4. All other Hardware: Two years.

#### 1.7 OWNER'S INSTRUCTION:

A. Instruct Owner's personnel in operation and maintenance of hardware units.

#### 1.8 MAINTENANCE:

- A. Extra Service Materials: Deliver to Owner extra materials from same production run as products installed. Package products with protective covering and identify with descriptive labels. Comply with Division 1 Closeout Submittals Section.
  - 1. Special Tools: Provide special wrenches and tools applicable to each different or special hardware component.
  - 2. Maintenance Tools: Provide maintenance tools and accessories supplied by hardware component manufacturer.
  - 3. Delivery, Storage and Protection: Comply with Owner's requirements for delivery, storage and protection of extra service materials.
- B. Maintenance Service: Submit for Owner's consideration maintenance service agreement for electronic products installed.

# PART 2 - PRODUCTS

#### 1.1 MATERIALS:

- A. Hinges: Shall be Five Knuckle Ball bearing hinges
  - 1. Template screw hole locations
  - 2. Bearings are to be fully hardened.
  - 3. Bearing shell is to be consistent shape with barrel.
  - 4. Minimum of 2 permanently lubricated non-detachable bearings on standard weight hinge and 4 permanently lubricated bearing on heavy weight hinges.
  - 5. Equip with easily seated, non-rising pins.
  - 6. Non Removable Pin screws shall be slotted stainless steel screws.
  - 7. Hinges shall be full polished, front, back and barrel.
  - 8. Hinge pin is to be fully plated.
  - 9. Bearing assembly is to be installed after plating.
  - 10. Sufficient size to allow 180-degree swing of door
  - 11. Furnish five knuckles with flush ball bearings
  - 12. Provide hinge type as listed in schedule.
  - 13. Furnish 3 hinges per leaf to seven foot six inch (7'-6") height. Add one for each additional 30 inches in height or fraction thereof.
  - 14. Tested and approved by BHMA for all applicable ANSI Standards for type, size, function and finish
  - 15. UL10C listed for Fire rated doors.
- B. Geared Continuous Hinges:
  - 1. Tested and approved by BHMA for ANSI A156.26-1996 Grade 1
  - 2. Anti-spinning through fastener

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- 3. UL10C listed for 3 hour Fire rating
- 4. Non-handed
- 5. Lifetime warranty
- 6. Provide Fire Pins for 3-hour fire ratings
- 7. Sufficient size to permit door to swing 180 degrees
- C. Mortise Type Locks and Latches:
  - 1. Tested and approved by BHMA for ANSI A156.13, Series 1000, Operational Grade 1, Extra-Heavy Duty, Security Grade 2 and be UL10C.
  - 2. Furnish UL or recognized independent laboratory certified mechanical operational testing to 4 million cycles minimum.
  - 3. Provide 9001-Quality Management and 14001-Environmental Management.
  - 4. Fit ANSI A115.1 door preparation
  - 5. Functions and design as indicated in the hardware groups
  - 6. Solid, one-piece, 3/4-inch (19mm) throw, anti-friction latchbolt made of self-lubricating stainless steel
  - 7. Deadbolt functions shall have 1 inch (25mm) throw bolt made of hardened stainless steel
  - 8. Latchbolt and Deadbolt are to extend into the case a minimum of 3/8 inch (9.5mm) when fully extended
  - 9. Auxiliary deadlatch to be made of one piece stainless steel, permanently lubricated
  - 10. Provide sufficient curved strike lip to protect door trim
  - 11. Lever handles must be of forged or cast brass, bronze or stainless steel construction and conform to ANSI A117.1. Levers that contain a hollow cavity are not acceptable
  - 12. Lock shall have self-aligning, thru-bolted trim
  - 13. Levers to operate a roller bearing spindle hub mechanism
  - 14. Mortise cylinders of lock shall have a concealed internal setscrew for securing the cylinder to the lockset. The internal setscrew will be accessible only by removing the core, with the control key, from the cylinder body.
  - 15. Spindle to be designed to prevent forced entry from attacking of lever
  - 16. Provide locksets with 7-pin removable and interchangeable core cylinders
  - 17. Each lever to have independent spring mechanism controlling it
  - 18. Core face must be the same finish as the lockset.
- D. Exit Devices:
  - 1. Exit devices to meet or exceed BHMA for ANSI 156.3, Grade 1.
  - 2. Exit devices to be tested and certified by UL or by a recognized independent laboratory for mechanical operational testing to 10 million cycles minimum with inspection confirming Grade 1 Loaded Forces have been maintained.
  - 3. Exit devices chassis to be investment cast steel, zinc dichromate.
  - 4. Exit devices to have stainless steel deadlocking <sup>3</sup>/<sub>4</sub>" through latch bolt.
  - 5. Exit devices to be equipped with sound dampening on touchbar.
  - 6. Non-fire rated exit devices to have cylinder dogging.
  - 7. Non-fire rated exit devices to have <sup>1</sup>/<sub>4</sub>" minimum turn hex key dogging.
  - 8. Touchpad to be "T" style constructed of architectural metal with matching metal end caps.
  - 9. Touchbar assembly on wide style exit devices to have a  $\frac{1}{4}$ " clearance to allow for vision frames.
  - 10. All exposed exit device components to be of architectural metals and "true" architectural finishes.
  - 11. Provide strikes as required by application.
  - 12. Fire exit hardware to conform to UL10C and UBC 7-2. UL tested for Accident Hazard.
  - 13. The strike is to be black powder coated finish.
  - 14. Exit devices to have field reversible handing.
  - 15. Provide heavy duty vandal resistant lever trim with heavy duty investment cast stainless steel components and extra strength shock absorbing overload springs. Lever shall not require resetting. Lever design to match locksets and latchsets.

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- 16. Provide 9001-Quality Management and 14001-Environmental Management.
- 17. Vertical Latch Assemblies to have gravity operation, no springs.
- E. Door Closers shall:
  - 1. Tested and approved by BHMA for ANSI 156.4, Grade 1
  - 2. UL10C certified
  - 3. Provide 9001-Quality Management and 14001-Environmental Management.
  - 4. Closer shall have extra-duty arms and knuckles
  - 5. Conform to ANSI 117.1
  - 6. Maximum 2 7/16 inch case projection with non-ferrous cover
  - 7. Separate adjusting valves for closing and latching speed, and backcheck
  - 8. Provide adapter plates, shim spacers and blade stop spacers as required by frame and door conditions
  - 9. Full rack and pinion type closer with  $1\frac{1}{2}$ " minimum bore
  - 10. Mount closers on non-public side of door, unless otherwise noted in specification
  - 11. Closers shall be non-handed, non-sized and multi-sized.
- F. Kickplates: Provide with four beveled edges ANSI J102, 10 inches high by width less 2 inches on single doors and 1 inch on pairs of doors. Furnish oval-head countersunk screws to match finish.
- G. Seals: All seals shall be finished to match adjacent frame color. Seals shall be furnished as listed in schedule. Material shall be UL listed for labeled openings.
- H. Weatherstripping: Provide at head and jambs only those units where resilient or flexible seal strip is easily replaceable. Where bar-type weatherstrip is used with parallel arm mounted closers install weatherstrip first.
  - 1. Weatherstrip shall be resilient seal of (Neoprene, Polyurethane, Vinyl, Pile, Nylon Brush, Silicone)
  - 2. UL10C Positive Pressure rated seal set when required.
- I. Door Bottoms/Sweeps: Surface mounted or concealed door bottom where listed in the hardware sets.
  - 1. Door seal shall be resilient seal of (Neoprene, Polyurethane, Nylon Brush, Silicone)
  - 2. UL10C Positive Pressure rated seal set when required.
- J. Thresholds: Thresholds shall be aluminum beveled type with maximum height of <sup>1</sup>/<sub>2</sub>" for conformance with ADA requirements. Furnish as specified and per details. Provide fasteners and screws suitable for floor conditions.
- 1.2 FINISH:
  - A. Designations used in Schedule of Finish Hardware 3.05, and elsewhere to indicate hardware finishes are those listed in ANSI/BHMA A156.18 including coordination with traditional U.S. finishes shown by certain manufacturers for their products
  - B. Powder coat door closers to match other hardware, unless otherwise noted.
  - C. Aluminum items shall be finished to match predominant adjacent material. Seals to coordinate with frame color.

#### 1.3 KEYS AND KEYING:

A. No construction cores required. Owner will reuse existing cores to fit supplier's removable and interchangeable core system: Best 7-pin.

# **PART 3 - EXECUTION**

#### 1.1 EXAMINATION

- A. Verification of conditions: Examine doors, frames, related items and conditions under which Work is to be performed and identify conditions detrimental to proper and or timely completion.
  - 1. Do not proceed until unsatisfactory conditions have been corrected.

#### 1.2 HARDWARE LOCATIONS:

- A. Mount hardware units at heights indicated in the following publications except as specifically indicated or required to comply with the governing regulations.
  - 1. Recommended Locations for Builder's Hardware for Standard Steel Doors and Frames, by the Door and Hardware Institute (DHI).
  - 2. Recommended locations for Architectural Hardware for flush wood doors (DHI).
  - 3. WDMA Industry Standard I.S.-1A-04, Industry Standard for Architectural wood flush doors.

#### 1.3 INSTALLATION:

- A. Install each hardware item per manufacturer's instructions and recommendations. Do not install surface mounted items until finishes have been completed on the substrate. Set units level, plumb and true to line and location. Adjust and reinforce the attachment substrate as necessary for proper installation and operation.
- B. Install Conforming to ICC/ANSI A117.1 Accessible and Usable Building and Facilities.
  - 1. Adjust door closer sweep periods so that from the open position of 70 degrees, the door will take at least 3 seconds to move to a point 3 inches from the latch, measured to the landing side of the door.
- C. Installed hardware using the manufacturers fasteners provided. Drill and tap all screw holes located in metallic materials. Do not use "Riv-Nuts" or similar products.

#### 1.4 FIELD QUALITY CONTROL AND FINAL ADJUSTMENT

- A. Contractor/Installers, Field Services: After installation is complete, contractor shall inspect the completed door openings on site to verify installation of hardware is complete and properly adjusted, in accordance with both the Contract Documents and final shop drawings.
  - 1. Check and adjust closers to ensure proper operation.
  - 2. Check latchset, lockset, and exit devices are properly installed and adjusted to ensure proper operation.
    - a. Verify levers are free from binding.
    - b. Ensure latchbolts and dead bolts are engaged into strike and hardware is functioning.

City and Borough of Wrangell Primary School Exterior Door Replacement DOOR HARDWARE 087100 - 7/8 3. Report findings, in writing, to architect indicating that all hardware is installed and functioning properly. Include recommendations outlining corrective actions for improperly functioning hardware if required.

# 1.5 SCHEDULE OF FINISH HARDWARE:

A. Finish List

Code	<b>Description</b>
AL	Aluminum
600	Primed for Painting
626	Satin Chromium Plated
630	Satin Stainless Steel
689	Aluminum Painted
US32D	Stainless Steel, Dull

B. Manufacturer List (Basis of Design)

Code	Name
AB	ABH Manufacturing Inc.
BE	Best Access Systems
NA	National Guard
PR	Precision
SH	Stanley Commercial Hardware
ST	Stanley
TR	Trimco

C. Hardware Sets

SET #1 for Doors: 101, 102, 103, 110, 118

<u>Qty</u>	<u>Type</u>	Item Number	<b>Finish</b>	<u>Mfgr</u>
6	Hinges	FBB199 4 1/2 X 4 1/2	NRP	US32D ST
1	Removable Mullion	822	600	PR
1	Exit Device	2103CD X 1703A	630	PR
1	Exit Device	2102CD X 1702A	630	PR
1	Rim Cylinder	12E-72 Less Core	626	BE
1	Mortise Cylinder	1E-74-C4 Less Core	626	BE
2	Closer w/Hold Open	QDC116	689	SH
2	Overhead Stop	1021	US32D	AB
1	Gasketing	127 NA 1 x 72" 2 x 80"	NA	
1	Mullion Seal	5100N-86 86"	NA	
2	Door Sweep	200	NA	NA
1	Threshold	8426 72"	AL	NA

# END OF SECTION 087100

# WRANGELL PUBLIC SCHOOLS **PRIMARY SCHOOL**

# **EXTERIOR DOOR REPLACEMENT** WRANGELL, ALASKA

	ARCHIT JENSEN YORBA 522 WEST 10TH JUNEAU, ALAS (907) 586- FAX (844) 35	ECT A WALL H STREET KA 99801 1070 50-5352	INC							<ul> <li>GENERAL NOTES:</li> <li>1. REMOVE AND REINSTALL OR REPLACE EXISTING 1X T&amp;G CEDAR SIDIN</li> <li>2. ADJUST EXISTING ROUGH OPENINGS AS REQUIRED TO FIT HOLLOW M</li> <li>3. PAINT EXISTING WOOD SIDING DISTURBED BY DOOR REPLACEMENT T</li> <li>4. ELECTRICAL NOT INCLUDED IN CONTRACT, COORDINATE WITH OWNEI</li> <li>5. BASE BID, DOORS 101, 102, 103, 110, 118</li> <li>6. ALTERNATE BID, DOORS 108, 109, 114, 115, 120, 121, 130, 132, 133</li> </ul>
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L AC ACM ACM ACD ACD ACD ACD ACD ACD ACD ACD ACD ACD	ANGLE ASPHALT CONCRETE ASBESTOS CONTAINING MATERIAL ACOUSTICAL CEILING PANEL ADJUSTABLE ABOVE FINISH FLOOR ARI INFILTRATION BARRIER ALUMINUM APPROXIMATE ARCHITECTURAL ASBESTOS BOARD BUILDING BLOCKING BEAM BOTTOM CABINET CATCH BASIN CEMENT CORVER GUARD CAST IRON CEILING COLUMN CONCRETE CONTIENUAD CONCRETE CONTIENUAD CONCRETE CONTIENUAD COUBLE DEPARTMENT DIMENSION DISPENSER DOWN DOOR DOWN DOOR DOWN DOOR DOWN DOOR DAWER EACH EXTERION & TINISH SYSTEM EXPANSION JOINT ELEVATION ELECTRICAL	ELEV EMER ENCL EPDM EPS EQ EQP EX EX FA FD FDR FLR FOF FIC FIN FLR FOF FOF FOF FOF FOF FOF FOF FOF FURR GALV GB GWB GVP HM HDWD HMR HT HW DININI IN IN JT	ELEVATOR EMERGENCY ENCLOSURE ETHYLENE PROPYLENE DIANE MONOMER EQUAL EQUIPMENT EXISTING EXISTING FICE ALARM FLOOR DRAIN FOOR DRAIN FOONDATION FOONDATION FIRE ENDE CABINET FINISH FLOOR FLASHING FLOOR FLASHING FLOOR FACE OF FINISH FACE OF CONCRETE/CURB FACE OF FOND (GLASS) FIBER REINFORCED PLASTIC FIRE HOSE CABINET FIRE HOSE TO FLASSING FLOOR FACE OF STUD (GLASS) FIBER REINFORCED PLASTIC FIRE RETARDANT FOOT OR FEET FOOTING FURRING GALVANIZED GRAD BAR GLASS GYPSUM WALL BOARD GYPSUM HOSE BIBB HARDWOOD HOLLOW METAL HOUR HEIGHT HOT WATER INSIDE DUMETER INSIDE DUMETER	LAB LAM LAV LB LT MIR MAX MDO MECH MEMB MFR MH MIN MISC MTD MIC NO OR MTL MUL NIC NO OR MTL MUL NIC NO OR MTL NO OR MTL NO OR PLAM PLAS PC PF PR PWD R RAD REFR REFR REFR REFR REFR	LABORATORY LAMINATE LAVATORY POUND LIGHT MIRROR MAXIMUM MEDIUM DENSITY OVERLAID MECHANICAL MEMBRANE MANUFACTURER MANIFACTURER MANIFACTURER MANIFACTURER MISCELLANEOUS MOUNTED METAL MULLION NOT IN CONTRACT NUMBER NOMINAL NOT IN CONTRACT NUMBER NOMINAL NOT TO SCALE OVERALL OVERALL OVERALL OVERALL OVERALL OVERALL OVERTER OWNER FURNISHED OWNER FURNISHED OWNER FURNISHED OWNER FURNISHED OWNER FURNISHED OWNER FURNISHED OWNER FURNISHED OWNER FURNISHED OWNER FURNISHED OWNER FURNISHED OVERFLOW DRAIN OFFICE OPENING OPPOSITE ORENTED STRAND BOARD PLATE PLASTER PRE-CAST PRE-FINISHED PAIR ROOF DRAIN ROOF DRAIN REFERENCE REFINISER RADIUS ROOF DRAIN REFERENCE REFINISEC	REQ RESIL RH RL RM SASU SCD SCHED SFR SFRM SHR SHR SHR SHR SIM SND SNR SPEC SQ SQFT SQYD SS STA STC STD STD STD STD STD STD STD STD STD STD	REQUIRED RESILIENT ROBE HOOK RAIN LEADER ROOM RUBBER SELF ADHERING SHEET UNDERLAYMENT SEAT COVER DISPENSER SCHEDULE SQUARE FOOT SPRAYED FIRE-RESISTIVE MATERIAL SHOWER SHEATHING SIMILAR SHATHING SIMILAR SHATHING SIMILAR SANITARY NAPKIN DISPENSER SANITARY NAPKIN DISPENSER SANITARY NAPKIN DISPENSER SANITARY NAPKIN RECEPTACLE SPECIFICATIONS SOUARE FOOT SQUARE FOOT SQUARE FOOT SQUARE FOOT SQUARE FOOT SQUARE FOOT SQUARE FOOT SQUARE STELL STATION SOUND TRANSMISSION CLASS STANDARD STEEL STATAD SOUND TRANSMISSION CLASS STANDARD STEEL STORAGE STRUCTURAL SUSPENDED SQUARE YARD TOWEL BAR TOP OF CURB TELEPHONE TEMPORARY TONGLE & GROOVE TOP OF CONCRETE TOP OF DECK TOP OF DECK TOP OF IBERGLASS GRATE TOLET PAPER DISPENSER TREAD PRESSURE TREATED TOP OF WALL TYPICAL	UON UR VERT VEST VR WC WD WR WSCT WT WWF	UNLESS OTHERWISE NOTED URINAL VERTICAL VESTIBULE VAPOR RETARDER VENT THROUGH ROOF WATHER BARRIER WOOD WATERPROOF WASTE RECEPTACLE WAINSCOT WEIGHT WELDED WIRE FABRIC	DETAIL CONS REFERENCE AXXX SHEET NUMBER DOOR TYPE XX DOOR TYPE NUMBER DOOR TYPE XX CONS REV SYM REVISION NOTE NUMBER KEY NOTE DEMO NOTE NUMBER T DEMO KEY SYM X DEMO NOTE NUMBER T THESE ABOUT BE RELL ACCUR NCORF SITE VE NOTIFY



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DOOR SCHEDULE														
OPENING			DOOR			FRAME	-		GLASS	DETAILS			HW	REMARKS
No.	Туре	Size	Mat	Fin	Ga	Mat	Fin	Ga		Head	Jamb	Sill		
101	В	6'-0"Wx6'-8"H	НМ	PT	16	НM	PT	16	G1	3/A802 - 6/A802	3/A802 - 6/A802	1/A803		SIM
102	В	6'-0"Wx6'-8"H	НМ	PT	16	НM	PT	16	G1	3/A801 - 6/A801	3/A801 - 6/A801	1/A803		
103	A	6'-0"Wx6'-8"H	НМ	PT	16	HM	PT	16	G1	1/A802 - 4/A802	2/A801 - 5/A801	1/A803		
108	D	3'-0"Wx6'-8"H	НМ	PT	16	HM	PT	16		1/A801 - 4/A801	1/A801 - 4/A801	1/A803		
109	D	3'-0"Wx6'-8"H	НМ	PT	16	HM	PT	16		1/A801 - 4/A801	1/A801 - 4/A801	1/A803		
110	С	6'-0"Wx6'-8"H	НМ	PT	16	HM	PT	16	G1	1/A801 - 4/A801	1/A801 - 4/A801	1/A803		
114	D	3'-0"Wx6'-8"H	НМ	PT	16	HM	PT	16		1/A801 - 4/A801	1/A801 - 4/A801	1/A803		
115	D	3'-0"Wx6'-8"H	НМ	PT	16	HM	PT	16		1/A801 - 4/A801	1/A801 - 4/A801	1/A803		
118	С	6'-0"Wx6'-8"H	НМ	PT	16	HM	PT	16	G1	1/A801 - 4/A801	2/A802 - 5/A802	1/A803		SIM
120	D	3'-0"Wx6'-8"H	НМ	PT	16	НМ	PT	16		1/A801 - 4/A801	1/A801 - 4/A801	1/A803		
121	D	3'-0"Wx6'-8"H	НМ	PT	16	НМ	PT	16		1/A801 - 4/A801	1/A801 - 4/A801	1/A803		
130	D	3'-0"Wx6'-8"H	НМ	PT	16	НМ	PT	16		1/A801 - 4/A801	1/A801 - 4/A801	1/A803		
132	D	3'-0"Wx6'-8"H	НМ	PT	16	НM	PT	16		1/A801 - 4/A801	1/A801 - 4/A801	1/A803		
133	D	3'-0"Wx6'-8"H	НМ	РТ	16	НМ	PT	16		1/A801 - 4/A801	1/A801 - 4/A801	1/A803		

SHEET TITLE DOOR SCHEDULE

DATE: March 2020 FILE: 20010

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