

## ADDENDUM NO. 2

May 18, 2018

RE: **Bid #018.18.B3, Exterior Door Replacement-Clarksville Elementary School**

FROM: **Purchasing Office  
Howard County Public Schools  
10910 Clarksville Pike  
Ellicott City, MD 21042  
(410) 313-6723  
(410) 313-6789 fax**

TO: **APPROVED PROSPECTIVE BIDDERS**

---

This addendum forms a part of the Contract Documents and modifies the Original Bidding Documents as noted below. Acknowledge receipt of this Addendum in the space provided on the Bid Price Sheet/Form of Proposal. Failure to do so may subject the Bidder to disqualification. **This Addendum consists of twenty-nine (29) pages.**

### **CHANGES TO SPECIFICATIONS:**

**NOTE:** All new and reissued specification sections have been identified in the header as "Addendum 2". Added text has been **bolded**. Removed text has been ~~struck through~~.

1. Section 01010, Summary of Work. The following paragraph has been added to page 3:

#### **1.7 Construction Schedule**

- A. The contractor shall complete the scope of work according to the following construction schedule:

<b>6/8</b>	<b>Bid Award</b>
<b>6/20</b>	<b>Construction Start</b>
<b>6/26</b>	<b>Election Day (No Work)</b>
<b>7/6</b>	<b>Submission of All Submittals to Design Team</b>
<b>6/27 - 8/15</b>	<b>Construction Progress Inspections by Design Team (Frequency &amp; Quantity TBD)</b>
<b>8/16</b>	<b>Substantial Completion Inspection by Design Team</b>
<b>8/26</b>	<b>Construction Completion</b>

2. Section 02070, Selective Demolition. Please add this section to the project manual.  
**See attached (6 pages total).**
3. Section 03300, Cast-In-Place Concrete. This new section has added to the project manual.  
**See attached (5 pages total).**
4. Section 04200, Masonry Repairs. This section has been revised to eliminate unit prices as follows:
  - Page 8, paragraph 3.5 (Removal of Deteriorated Wire Truss Reinforcement), section B now reads as follows:
    - B. ~~Perform work on a Unit Price basis.~~ Include an allowance of 100 lf of mortar joint removal and tuck-pointing.

- Page 8, paragraph 3.7 (Tuck-Pointing of Cracked/Delaminated Mortar Joints without Joint Reinforcement), section B now reads as follows:

B. Perform work on a Unit Price basis. Include an allowance of 100 lf of mortar joint removal and tuck-pointing.

- Page 9, Part 4 (Unit Prices) shall be eliminated.

5. Section 08800, Glazing. This section has been modified in several locations to revise the glass to be provided. Added text has been **bolded**. Removed text has been **struck through**.  
**See attached (10 pages total).**

#### **DRAWING ITEMS:**

**NOTE:** All reissued drawing sheets have been identified in the title block as "Addendum No. 02". All changes in the drawings have been clouded and marked with a revision tag #2

1. Drawing Sheets CS, A0.1, A1.1, and A2.1; **See attached (4 pages total).**  
**NOTE:** Multiple minor annotation changes were made in response to technical review comments from the State of Maryland Department of General Services.

**PRE-BID ATTENDEES LIST:** See attached (2 pages total).

#### **QUESTIONS AND ANSWERS:**

1. **QUESTION:** Is summer school being held in the building during construction? **ANSWER:** No
2. **QUESTION:** Is the Contractor responsible for obtaining the building permit? **ANSWER:** Yes.

**QUESTION:** Specification 0422 Part 4.2 (Page 4200-9) states to provide unit prices for add/deduct quantities of tuck pointing brick masonry on the bid form. The bid form does not provide a space for the unit price. Please advise? **ANSWER:** Unit prices are no longer required. Refer to Changes to Specifications, Item 4 of this addendum.

3. **QUESTION:** Plan A0.1 Detail J11 states to: Provide connection to building access control system and associated devices at doorway. Coordinate with owner. Please provide name and contact information for HCPS security subcontractor for this project. **ANSWER:** Ark Systems, Inc. is the Owner's certified representative for the school's proprietary card access system.
4. **QUESTION:** What is the time deadline? **ANSWER:** Refer to construction schedule under item 2-1 of this addendum.
5. **QUESTION:** If we can't have doors by the deadline, will we be permitted to work second shift after school starts? **ANSWER:** Yes

**END OF ADDENDUM**

## SECTION 02070 -- SELECTIVE DEMOLITION

## PART 1 – GENERAL

## 1.1 GENERAL REQUIREMENTS

- A. Provide a copy of all applicable drawings, including shop drawings, and specifications at the site during all work covered under this Section.

## 1.2 RELATED DOCUMENTS

- A. The Drawings and General Conditions of the Contract for Construction and General Requirements are hereby made a part of this Section.
- B. Refer to other Divisions of these specifications to determine the type and extent of work therein affecting the work of this trade, whether or not such work is specifically mentioned in this Section.

## 1.3 SCOPE OF WORK

- A. Provide all labor, materials, equipment services, and accessories necessary to furnish and install work in this Section, complete and functional as indicated in the Contract Documents and as specified herein.
- B. Disposal of materials removed from the building in preparation for masonry or other trades, is performed under this section. The following paragraphs summarize the general extent of that work, itemized by trade.
- C. This Section includes the following:
  - 1. Pre-demolition Condition Survey
    - a. Prior to the start of demolition work, perform a detailed condition survey of all interior spaces that abut exterior walls. Document existing conditions with digital photographs and annotated hand sketches.
  - 2. Pre-demolition Utility Survey
    - a. Prior to the start of demolition work, retain the services of a utility-location contractor to identify and document the location and extent of all utilities within the exterior masonry walls within the areas of the work.
  - 3. Shoring and Bracing
    - a. Provide all labor, materials, equipment, and supervision necessary to design, provide, install, and maintain shoring necessary to safely support the existing roof structure in areas indicated during the Work and to accomplish the Work. Selective demolition will temporarily weaken the structure. The Contractor is responsible for designing and providing the shoring.

- b. The Contractor shall retain the services of a registered Professional Engineer licensed in the State of Maryland to prepare a design for shoring and a narrative describing the proposed sequencing of shoring, demolition, and construction. Section 1.05 Submittals, below for submittal requirements.

#### 4. Masonry Removals

- a. Remove brick masonry, and associated components, at the locations and for the extents shown on the drawings. Support all masonry to prevent damage throughout the construction.
  - (1) Remove and dispose of brick masonry above beam, hung plates, or loose angle lintels as shown on the drawings.
  - (2) Remove and dispose of flashing cut out at lintels.
  - (3) Remove and dispose of existing cavity insulation where encountered.
  - (4) Remove and dispose of cracked or otherwise damaged brick masonry units where encountered.
- b. Carefully execute the selective removal as shown on Drawings. Remove identified components by saw cutting the perimeter of the portion to be removed in a manner to permit toothing-in upon restoration. Do not damage existing components scheduled to remain.

- D. Provide temporary protection to adjacent property from damage throughout the duration of the Project. The cost of repairs for any damage to adjacent property shall be borne by the contractor.

#### 1.4 COORDINATION AND SEQUENCING WITH RELATED WORK

- A. Examine Contract Documents for requirements that affect work of this Section. Other Specification Sections that directly relate to the work of this Section include the following:
  - 1. Section 04200 –Masonry Repairs
  - 2. Section 05500 – Miscellaneous Metals
  - 3. Section 07620 – Metal Flashing
  - 4. Section 07900 – Joint Sealants
- B. Work in cooperation with other trades by the timely performance of the demolition work, including temporary protection, as required. Coordinate with other trades to minimize disruption to the building occupants, maintain accessibility of building entrances, and prevent leakage to the interior.

#### 1.5 SUBMITTALS

- A. Submit the following items in accordance with Section 01300 – Submittals.

- B. Contractor Qualifications: Contractor performing the work under this section must have a minimum of five years of experience in comparable work and must submit a list, with references, of three buildings on which they worked in the last five years, employing workers skilled in the restoration processes and operations indicated.
  - 1. List building name and address, engineer, general contractor, and appropriate subcontractors with phone numbers and contact person.
- C. Submit documentation of pre-demolition condition survey. Survey shall include plan drawings of the building interior that are affected by the work. Note existing damage to interior finishes and any unusual conditions. Document all interior spaces that abut the work in general and any existing damage in particular, with digital photographs. Submit sample of survey documentation for approval before undertaking survey.
- D. Shoring
  - 1. Provide Engineering calculations and narrative describing the proposed sequencing of shoring, demolition, and construction prepared by and bearing the seal and signature of a registered Professional Engineer in the State of Maryland.
  - 2. The submittals described herein are for information only and not for approval. Review by the Architect is advisory in nature only and does not relieve the Contractor of his responsibility for designing and implementing a safe shoring system.
- E. Provide a detailed description of the demolition process, equipment to be used, and any materials required to complete the work, for approval. Include procedures and detail drawings for protection of exterior building surfaces and landscaping, interior debris barricades, and exterior debris chute nets.

#### 1.6 PROJECT CONDITIONS

- A. Comply with conditions listed in Section 01100 – Special Project Conditions.

#### 1.7 QUALITY ASSURANCE

- A. The work of this Section shall be performed by a contractor with at least five years of successful experience with demolition similar to this project and acceptable to the Owner. The Contractor's superintendent and foreman will have at least five years of experience successfully reconstructing masonry systems on existing buildings. All work shall be performed by trained and authorized personnel.
- B. Conduct a quality control program that includes the following, in part:
  - 1. Inspect conditions and material to ensure conformity with the Contract requirements.
  - 2. Inspect work in progress to ensure that the work complies with established procedures, approved mockups and the Contract requirements.
  - 3. Inspect completed and any corrected work to ensure its compliance with the Contract requirements.
- C. Attend a preconstruction conference with representatives of the Owner, the Contractor, the Architect, the Demolition Foreman, and all other involved trades to discuss the work covered under this Section.

- D. Attend weekly job meetings during the course of the work as required by the Owner or Architect.

#### 1.8 PROTECTION

- A. Protect the existing building and its contents, interior finishes, and all site work during all demolition, removal, and repair operations against all risks associated with this work. Replace damaged components at no charge to the Owner and to the satisfaction of the Architect using mechanics skilled in the appropriate trade including all site work. The premises, including access drives and parking areas, shall be left in a neat, clean, and safe condition at the end of each day's work.
- B. Do not damage existing materials scheduled to remain. Provide adequate protection of the window glass to prevent breakage, scratches, staining, etching, and any other damage during work associated with this Section.
- C. Provide adequate protection of roofing surfaces throughout the work. Where work is performed above or near roofing surfaces, clean the work areas free of all debris including fasteners, scrap metal, and metal shards, on a daily basis. Notify the Owner and Architect immediately if any damage to the roofing system is observed, regardless of the source of the damage.
- D. Schedule and execute all work to avoid exposing the building and its contents to inclement weather. Provide adequate temporary protection at all times to prevent water intrusion and drafts. Do not leave backup walls exposed.

#### 1.9 MATERIALS, HANDLING, AND STORAGE

- A. Dispose of debris daily in a dumpster. Dispose of all debris in a legal manner, off the site, as required by applicable law. Do not throw debris from scaffolding; conduct debris to trucks or approved containers on the ground to minimize dust, and remove from the site. Do not allow debris to accumulate on the construction site. Sprinkle debris with water to control dust during handling, but do not allow water inside the building.
- B. Do not stockpile materials or equipment to overload any building or site component.
- C. Remove all tools, buckets, and materials from work areas and store neatly at a central location daily at the end of work.

#### 1.10 WARRANTY

- A. Guarantee all work under this section in a document stating that if, within two years after the Date of Substantial Completion of the Work, any of the work of this Section is found to be defective or not in accordance with the Contract Documents, the Contractor shall correct it promptly after receipt of a written notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. In addition, it shall state that the Contractor shall bear all costs incurred by the Owner, including reasonable attorney's fees, to enforce compliance with the obligations of this guarantee. The obligation of these Guarantees shall run directly to the Owner, may be enforced by the Owner against the Contractor, shall survive the termination of the Contract, and shall not be limited by conditions other than this contract.

## PART 2 – PRODUCTS

### 2.1 EQUIPMENT

#### A. Demolition Equipment

1. Use concrete saw, chipping hammers, and other demolition equipment and cutting tools appropriate for the work and acceptable to the Architect.

## PART 3 – EXECUTION

### 3.1 EXAMINATION

- A. Verify all site conditions and dimensions by field measurements. Notify the Architect immediately of any inconsistencies between field conditions and those shown in the Contract Drawings.

### 3.2 WORK AT OCCUPIED SPACES

- A. Notify the Owner 48 hrs minimum prior to commencing any demolition work in or around occupied spaces.
- B. Cover, protect, or move all items in occupied spaces where work is required per the Owner's request. Replace or repair all damaged items at no cost to the Owner.

### 3.3 GENERAL DEMOLITION

- A. Do not proceed with demolition of any portions of the building until shop drawings, and field measurements have been submitted and approved by the Architect.
- B. Do not start demolition until the Architect has approved the mockups.
- C. Take care not to damage any building components to be reinstalled at the completion of the work. Provide appropriate protection for materials to be stored and reinstalled.
- D. Complete demolition work in a manner to avoid causing damage to underlying substrates and materials. Repair all damaged substrates and materials at no cost to the Owner.

### 3.4 MASONRY REMOVAL

- A. Provide all necessary shoring or alternate support to all adjoining masonry scheduled to remain to prevent masonry from moving, cracking, or becoming damaged during the work.
- B. Completely remove concrete and brick masonry where shown on the drawings. Do not overcut into masonry scheduled to remain in place. Take care not to damage masonry during demolition.
- C. Sawcut all mortar joints between masonry scheduled to remain and masonry scheduled to be removed before attempting to remove any of the existing masonry. Provide for toothing of masonry between new and existing masonry scheduled to remain as required to maintain coursing. Do not break bond between mortar and masonry scheduled to remain, or crack masonry in areas to remain. Completely repair or rebuild remaining masonry work damaged by the demolition process, at no cost to the Owner.

- D. Remove all mortar from toothed areas (faces and ends) of existing masonry at junctions with new masonry to the extent possible without damaging masonry.

3.5 METAL AND MEMBRANE FLASHING REMOVAL

- A. Remove and dispose of existing metal and membrane flashing, including all underlying materials down to the structural and miscellaneous steel, where specified on the Drawings.
- B. Protect building from water infiltration during and after removal of flashing systems during all work.

END OF SECTION



## SECTION 03300 -- CAST-IN-PLACE CONCRETE

## PART 1 - GENERAL

## 1.1 SUMMARY

- A. This Section includes cast-in-place concrete, including reinforcement, concrete materials, mix design, placement procedures, and finishes.

## 1.2 SUBMITTALS

- A. Product Data: For each manufactured material and product indicated.
- B. Design Mixes: For each concrete mix indicated.
- C. Shop Drawings: Include details of steel reinforcement placement including material, grade, bar schedules, stirrup spacing, bent bar diagrams, arrangement, and supports.
- D. Material certificates.

## 1.3 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products complying with ASTM C 94 requirements for production facilities and equipment.
- B. Comply with ACI 301, "Specification for Structural Concrete," including the following, unless modified by the requirements of the Contract Documents.
  - 1. General requirements, including submittals, quality assurance, acceptance of structure, and protection of in-place concrete.
  - 2. Formwork and form accessories.
  - 3. Steel reinforcement and supports.
  - 4. Concrete mixtures.
  - 5. Handling, placing, and constructing concrete.
  - 6. Lightweight concrete.

## PART 2 - PRODUCTS

## 2.1 MATERIALS

- A. Formwork: Furnish formwork and form accessories according to ACI 301.
- B. Steel Reinforcement:
  - 1. Reinforcing Bars: ASTM A 615/A 615M, Grade 60, deformed.
  - 2. Plain-Steel Wire: ASTM A 82, as drawn.
  - 3. Plain-Steel Welded Wire Fabric: ASTM A 185, fabricated from as-drawn steel wire into flat sheets.

4. Deformed-Steel Welded Wire Fabric: ASTM A 497, flat sheet.

C. Concrete Materials:

1. Portland Cement: ASTM C 150, Type II
2. Normal-Weight Aggregate: ASTM C 33, uniformly graded, not exceeding 1-1/2-inch nominal size.
3. Water: Complying with ASTM C 94.

D. Admixtures:

1. Air-Entraining Admixture: ASTM C 260.
2. Water-Reducing Admixture: ASTM C 494, Type A.
3. Water-Reducing and Accelerating Admixture: ASTM C 494, Type E.
4. Water-Reducing and Retarding Admixture: ASTM C 494, Type D.

## 2.2 CONCRETE MIXES

- A. Comply with ACI 301 requirements for concrete mixtures.

- B. Prepare design mixes, proportioned according to ACI 301, for normal-weight concrete determined by either laboratory trial mix or field test data bases, as follows:

1. Compressive Strength (28 Days): 4500 psi.
2. Slump: 4 inches.
  - a. Slump Limit for Concrete Containing High-Range Water-Reducing Admixture: Not more than 8 inches after adding admixture to plant- or site-verified, 2- to 3-inch slump.

- C. Add air-entraining admixture at manufacturer's prescribed rate to result in concrete at point of placement having an air content of 2.5 to 4.5 percent.

1. Air content of trowel-finished interior concrete floors shall not exceed 3.0 percent.

## 2.3 CONCRETE MIXING

- A. Ready-Mixed Concrete: Comply with ASTM C 94

1. When air temperature is between 85 and 90 deg F, reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F, reduce mixing and delivery time to 60 minutes.

- B. Project-Site Mixing: Measure, batch, and mix concrete materials and concrete according to ASTM C 94. Mix concrete materials in appropriate drum-type batch machine mixer.

1. For mixer capacity of 1 cu. yd. or smaller, continue mixing at least 1-1/2 minutes, but not more than 5 minutes after ingredients are in mixer, before any part of batch is released.
2. For mixer capacity larger than 1 cu. yd., increase mixing time by 15 seconds for each additional 1 cu. yd..

- C. Provide batch ticket for each batch discharged and used in the Work, indicating Project identification name and number, date, mix type, mix time, quantity, and amount of water added. Record approximate location of final deposit in structure.

## PART 3 - EXECUTION

### 3.1 INSTALLATION, GENERAL

- A. Formwork: Design, construct, erect, shore, brace, and maintain formwork according to ACI 301.
- B. Steel Reinforcement: Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.
  - 1. Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete.
- C. Joints: Construct joints true to line with faces perpendicular to surface plane of concrete.
  - 1. Construction Joints: Locate and install so as not to impair strength or appearance of concrete, at locations indicated or as approved by Architect.
  - 2. Isolation Joints: Install joint-filler strips at junctions with slabs-on-grade and vertical surfaces, such as column pedestals, foundation walls, grade beams, and other locations, as indicated.
    - a. Extend joint fillers full width and depth of joint, terminating flush with finished concrete surface, unless otherwise indicated.
- D. Tolerances: Comply with ACI 117, "Specifications for Tolerances for Concrete Construction and Materials."

### 3.2 CONCRETE PLACEMENT

- A. Comply with recommendations in ACI 304R for measuring, mixing, transporting, and placing concrete.
- B. Do not add water to concrete during delivery, at Project site, or during placement.
- C. Consolidate concrete with mechanical vibrating equipment.

### 3.3 FINISHING FORMED SURFACES

- A. Rough-Formed Finish: As-cast concrete texture imparted by form-facing material with tie holes and defective areas repaired and patched, and fins and other projections exceeding 1/4 inch in height rubbed down or chipped off.
  - 1. Apply to concrete surfaces not exposed to public view.
- B. Smooth-Formed Finish: As-cast concrete texture imparted by form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Repair and patch tie holes and defective areas. Completely remove fins and other projections.

1. Apply to concrete surfaces exposed to public view or to be covered with a coating or covering material applied directly to concrete, such as waterproofing, dampproofing, veneer plaster, or painting.
  2. Do not apply rubbed finish to smooth-formed finish.
  3. Apply smooth-rubbed finish to entire surface (if required to rectify concrete pour defects in exposed surfaces), defined in ACI 301, to smooth-formed finished concrete.
- C. Related Unformed Surfaces: At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces, unless otherwise indicated.

### 3.4 FINISHING UNFORMED SURFACES

- A. General: Comply with ACI 302.1R for screeding, restraightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.
- B. Screed surfaces with a straightedge and strike off. Begin initial floating using bull floats or darbies to form a uniform and open-textured surface plane before excess moisture or bleedwater appears on the surface.
1. Do not further disturb surfaces before starting finishing operations.
- C. Float Finish: Apply float finish to surfaces indicated, to sidewalks, to surfaces to receive trowel finish, and to floor and slab surfaces to be covered with fluid-applied or sheet waterproofing, built-up or membrane roofing, or sand-bed terrazzo.
- D. Trowel Finish: Apply a hard trowel finish to surfaces indicated and to floor and slab surfaces exposed to view or to be covered with resilient flooring, carpet, ceramic or quarry tile set over a cleavage membrane, paint, or another thin film-finish coating system.
- E. Broom Finish: Apply a broom finish to exterior concrete platforms, steps, ramps, and elsewhere as indicated.
1. Immediately after float finishing, slightly roughen trafficked surface by brooming with fiber-bristle broom perpendicular to main traffic route. Coordinate required final finish with Architect before application.

### 3.5 CONCRETE PROTECTION AND CURING

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection, and follow recommendations in ACI 305R for hot-weather protection during curing.
- B. Evaporation Retarder: Apply evaporation retarder to concrete surfaces if hot, dry, or windy conditions occur before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.
- C. Begin curing after finishing concrete, but not before free water has disappeared from concrete surface.
- D. Cure formed and unformed concrete for at least seven days as follows:

1. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches, and sealed by waterproof tape or adhesive. Immediately repair any holes or tears during curing period using cover material and waterproof tape.
2. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.

### 3.6 FIELD QUALITY CONTROL

- A. Testing Agency: The Contractor will engage a qualified independent testing and inspecting agency to sample materials, perform tests, and submit test reports during concrete placement. Tests will be performed according to ACI 301.
  1. Testing Frequency: One composite sample for each day's pour of each concrete mix exceeding 5 cu. yd., but less than 25 cu. yd., plus one set for each additional 50 cu. yd. or fraction thereof.
  2. Testing Frequency: At least one composite sample for each 100 cu. yd. or fraction thereof of each concrete mix placed each day.

END OF SECTION

## SECTION 08800 -- GLAZING

## PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

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

## 1.2 SUMMARY

- A. This Section includes glazing for the following products and applications. General glazing requirements are contained in the other Sections listed below while specific glazing requirements are specified by reference in this Section:

- 1. Windows and Doors, Division 8 Section "Steel Doors & Frames".

## 1.3 DEFINITIONS

- A. Manufacturer: A firm that produces primary glass or fabricated glass as defined in referenced glazing publications.
- B. Interspace: Space between lites of an insulating-glass unit that contains dehydrated air or a specified gas.
- C. Deterioration of Insulating Glass: Failure of the hermetic seal under normal use that is attributed to the manufacturing process and not to causes other than glass breakage and practices for maintaining and cleaning insulating glass contrary to manufacturer's written instructions. Evidence of failure is the obstruction of vision by dust, moisture, or film on interior surfaces of glass.

## 1.4 PERFORMANCE REQUIREMENTS

- A. General: Provide glazing systems capable of withstanding normal thermal movement and wind and impact loads (where applicable) without failure, including loss or glass breakage attributable to the following: defective manufacture, fabrication, and installation; failure of sealants or gaskets to remain watertight and airtight; deterioration of glazing materials; or other defects in construction.
- B. Thermal Movements: Provide glazing that allows for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures acting on glass framing members and glazing components. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
  - 1. Temperature Change (Range): 120 deg F, ambient; 180 deg F, material surfaces.

## 1.5 SUBMITTALS

- A. Product Data: For each glass product and glazing material indicated.
- B. Glazing Schedule: Use same designations indicated on Drawings for glazed openings in preparing a schedule listing glass types and thicknesses for each size opening and location.
- C. Product Certificates: Signed by manufacturers of glass and glazing products certifying that products furnished comply with requirements.
- D. Qualification Data: For firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.
- E. Preconstruction Adhesion and Compatibility Test Report: From glazing sealant manufacturer indicating glazing sealants were tested for adhesion to glass and glazing channel substrates and for compatibility with glass and other glazing materials.
- F. Product Test Reports: From a qualified testing agency indicating the following products comply with requirements, based on comprehensive testing of current products:
  - 1. Insulating glass.
- G. Warranties: Special warranties specified in this Section.

## 1.6 QUALITY ASSURANCE

- A. Installer Qualifications: An experienced installer who has completed glazing similar in material, design, and extent to that indicated for Project and whose work has resulted in construction with a record of successful in-service performance.
- B. Source Limitations for Clear Glass: Obtain clear float glass from one primary-glass manufacturer.
- C. Source Limitations for Insulating Glass: Obtain insulating-glass units from one manufacturer using the same type of glass and other components for each type of unit indicated.
- D. Source Limitations for Glazing Accessories: Obtain glazing accessories from one source for each product and installation method indicated.
- E. Glass Product Testing: Obtain glass test results for product test reports in "Submittals" Article from a qualified testing agency based on testing glass products.
  - 1. Glass Testing Agency Qualifications: An independent testing agency with the experience and capability to conduct the testing indicated, as documented according to ASTM E 548.
- F. Elastomeric Glazing Sealant Product Testing: Obtain sealant test results for product test

reports in "Submittals" Article from a qualified testing agency based on testing current sealant formulations within a 36-month period.

1. Sealant Testing Agency Qualifications: An independent testing agency qualified according to ASTM C 1021 to conduct the testing indicated, as documented according to ASTM E 548.
  2. Test elastomeric glazing sealants for compliance with requirements specified by reference to ASTM C 920, and where applicable, to other standard test methods.
- G. Safety Glass: Category II materials complying with testing requirements in 16 CFR 1201 and ANSI Z97.1.
1. Subject to compliance with requirements, permanently mark safety glass with certification label of Safety Glazing Certification Council or another certification agency acceptable to authorities having jurisdiction.
- H. Glazing Publications: Comply with published recommendations of glass product manufacturers and organizations below, unless more stringent requirements are indicated. Refer to these publications for glazing terms not otherwise defined in this Section or in referenced standards.
1. GANA Publications: GANA's "Glazing Manual" and "Laminated Glass Design Guide."
  2. SIGMA Publications: SIGMA TM-3000, "Vertical Glazing Guidelines."
- I. Insulating-Glass Certification Program: Permanently marked either on spacers or on at least one component lite of units with appropriate certification label of the following inspecting and testing agency:
1. Insulating Glass Certification Council.
- 1.7 DELIVERY, STORAGE, AND HANDLING
- A. Protect glazing materials according to manufacturer's written instructions and as needed to prevent damage to glass and glazing materials from condensation, temperature changes, direct exposure to sun, or other causes.
- B. For insulating-glass units that will be exposed to substantial altitude changes, comply with insulating-glass manufacturer's written recommendations for venting and sealing to avoid hermetic seal ruptures.
- 1.8 PROJECT CONDITIONS
- A. Environmental Limitations: Do not proceed with glazing when ambient and substrate temperature conditions are outside limits permitted by glazing material manufacturers and when glazing channel substrates are wet from rain, frost, condensation, or other causes.
1. Do not install liquid glazing sealants when ambient and substrate temperature conditions are outside limits permitted by glazing sealant manufacturer or below 40 deg F.



## 1.9 WARRANTY

- A. General Warranty: Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.
- B. Manufacturer's Special Warranty on Insulating Glass: Written warranty, made out to Owner and signed by insulating-glass manufacturer agreeing to furnish replacements for insulating-glass units that deteriorate as defined in "Definitions" Article, f.o.b. the nearest shipping point to Project site, within specified warranty period indicated below.
  - 1. Warranty Period: 10 years from date of Substantial Completion.

## PART 2 - PRODUCTS

### 2.1 PRODUCTS AND MANUFACTURERS

- A. Primary Float Glass: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following.
  - 1. AFG Industries, Inc.
  - 2. Ford Glass Division
  - 3. Guardian Industries
  - 4. Pilkington Libby-Owens-Ford
  - 5. PPG Industries
- B. Insulating Glass Units: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following.
  - 1. AFG Industries,
  - 2. Cardinal IG.
  - 3. Environmental Glass Products
  - 4. Ford Glass Division
  - 5. Guardian Industries Corp.
  - 6. Hordis Brothers, Inc.
  - 7. PPG Industries
  - 8. Viracon, Inc.

### 2.2 PRIMARY FLOAT GLASS

- A. Float Glass: ASTM C 1036, Type I (transparent glass, flat), Quality q3 (glazing select).

### 2.3 TEMPERED FLOAT GLASS

**A. Fully Tempered Float Glass: ASTM C 1048, Kind FT (fully tempered), Type I, Class 1 (clear), Quality-Q3.**

- 1. Fabrication Process: By horizontal (roller-hearth) process with roll-wave distortion parallel to bottom edge of glass as installed unless otherwise indicated.**

~~B. Thickness: 1/4"~~

~~C. Provide Kind FT (fully tempered) prime glass of color and type shown which has been heat treated to strengthen glass in bending to not less than 4.5 times annealed strength.~~

~~D. Color: Clear.~~

### **2.3.5 LAMINATED GLASS**

**A. Laminated Glass: ASTM C1172. Use materials that have a proven record of no tendency to bubble, discolor, or lose physical and mechanical properties after fabrication and installation.**

- 1. Construction: Laminate glass with polyvinyl butyral interlayer to comply with interlayer manufacturer's written instructions.**
- 2. Interlayer Thickness: Provide thickness not less than that indicated and as needed to comply with requirements.**
- 3. Interlayer Color: Clear.**

### **2.4 INSULATING GLASS**

**A. Insulating-Glass Units: Preassembled units consisting of sealed lites of glass separated by a dehydrated interspace, and complying with ~~ASTM E 774~~ **ASTM E 2190** for Class CBA units and with requirements specified in this Article.**

- 1. Provide Kind FT (fully tempered) float glass in place at both lites of insulating glass units with a combination of fully tempered float and laminated glass in Exterior Hollow Metal Doors, Exterior Hollow Metal Frames at Transom Panels and Side Lites where shown as 1" Insulated Glass. ~~Provide Kind FT (fully tempered) in place at both lites of Exterior Hollow Metal Doors where shown as 3/4" Insulated Glass.~~**

**B. Overall Unit Thickness and Thickness of Each Lite: Dimensions indicated hereafter and the overall thicknesses of units are measured perpendicularly from outer surfaces of glass lites at unit's edge.**

- ~~1. Exterior Hollow Metal Glazing: Unit dimension – 1"; 1/4" lite, 1/2" airspace, 1/4" lite.~~
- 2. At all insulating glass units provide low-E coating on the exterior surface of the interior pane of glass.**
- ~~3. U Value: 0.38.~~
- ~~4. Max Solar Heat Gain Coefficient (SHGC): 0.40~~
- ~~4. Max shading coefficient: 0.55.~~
- ~~5. Doors: Unit dimension – 3/4"; 1/4" lite, 1/4" airspace, 1/4" lite.~~

1. **Low-E-coated, clear insulating laminated glass. Basis of Design Product: Vitro Architectural Glazing; Solarban 60**
2. **Overall Unit Thickness: 1 inch**
3. **Minimum Thickness of Outdoor Lite: 6mm**
4. **Outdoor Lite: Fully tempered float glass**
5. **Interspace Content: Air**
6. **Indoor Lite: Clear laminated glass with two plies of fully tempered float glass.**
  - a. **Minimum Thickness of Each Glass Ply: 3mm**
  - b. **Interlayer Thickness: 0.045 inch**
7. **Low-E Coating: Pyrolytic or sputtered second surface (Indoor face of Outside Lite)**
8. **Winter Nighttime U-Factor: 0.29 maximum**
9. **Visible Light Transmittance: 70% minimum**
10. **Solar Heat Gain Coefficient: 0.39 maximum**
11. **Safety Glazing Required.**

C. Sealing System: Dual seal, with primary and secondary sealants as follows:

1. Manufacturer's standard sealants.

D. Spacer Specifications: Manufacturer's standard spacer material and construction complying with the following requirements:

1. Aluminum with clear-anodized finish.
2. Desiccant: Molecular sieve or silica gel, or blend of both.
3. Corner Construction: Manufacturer's standard corner construction.

## 2.5 ELASTOMERIC GLAZING SEALANTS

A. General: Provide products of type indicated, complying with the following requirements:

1. **Compatibility:** Select glazing sealants that are compatible with one another and with other materials they will contact, including glass products, seals of insulating-glass units, and glazing channel substrates, under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.
2. **Suitability:** Comply with sealant and glass manufacturers' written instructions for selecting glazing sealants suitable for applications indicated and for conditions existing at time of installation.
3. **Colors of Exposed Glazing Sealants:** As selected by Architect from manufacturer's full range for this characteristic.

B. Elastomeric Glazing Sealant Standard: Comply with ASTM C 920 and other requirements indicated for each liquid-applied, chemically curing sealant in the Glazing Sealant Schedule at the end of Part 3, including those referencing ASTM C 920 classifications for type, grade, class, and uses.

1. Medium modulus neutral-curing silicone glazing sealant, type S, grade NS, class 25..

## 2.6 GLAZING TAPES

- A. Back-Bedding Mastic Glazing Tape: Preformed, butyl-based elastomeric tape with a solids content of 100 percent; nonstaining and nonmigrating in contact with nonporous surfaces; with or without spacer rod as recommended in writing by tape and glass manufacturers for application indicated; packaged on rolls with a release paper backing; and complying with ASTM C 1281 and AAMA 800 for products indicated below:
  - 1. AAMA 806.3 tape, for glazing applications in which tape is subject to continuous pressure.

## 2.7 MISCELLANEOUS GLAZING MATERIALS

- A. General: Provide products of material, size, and shape complying with referenced glazing standard, requirements of manufacturers of glass and other glazing materials for application indicated, and with a proven record of compatibility with surfaces contacted in installation.
- B. Cleaners, Primers, and Sealers: Types recommended by sealant or gasket manufacturer.
- C. Setting Blocks: Elastomeric material with a Shore A durometer hardness of 85, plus or minus 5.
- D. Spacers: Elastomeric blocks or continuous extrusions with a Shore A durometer hardness required by glass manufacturer to maintain glass lites in place for installation indicated.
- E. Edge Blocks: Elastomeric material of hardness needed to limit glass lateral movement (side walking).
- F. Perimeter Insulation for Fire-Resistive Glazing: Identical to product used in test assembly to obtain fire-resistance rating.

## 2.8 FABRICATION OF GLASS AND OTHER GLAZING PRODUCTS

- A. Fabricate glass and other glazing products in sizes required to glaze openings indicated for Project, with edge and face clearances, edge and surface conditions, and bite complying with written instructions of product manufacturer and referenced glazing standard, to comply with system performance requirements.
- B. Grind smooth and polish exposed glass edges.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine framing glazing, with Installer present, for compliance with the following:
  - 1. Manufacturing and installation tolerances, including those for size, squareness, and

- offsets at corners.
  - 2. Presence and functioning of weep system.
  - 3. Minimum required face or edge clearances.
  - 4. Effective sealing between joints of glass-framing members.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Clean glazing channels and other framing members receiving glass immediately before glazing. Remove coatings not firmly bonded to substrates.

### 3.3 GLAZING, GENERAL

- A. Comply with combined written instructions of manufacturers of glass, sealants, gaskets, and other glazing materials, unless more stringent requirements are indicated, including those in referenced glazing publications.
- B. Glazing channel dimensions, as indicated on Drawings, provide necessary bite on glass, minimum edge and face clearances, and adequate sealant thicknesses, with reasonable tolerances. Adjust as required by Project conditions during installation.
- C. Protect glass edges from damage during handling and installation. Remove damaged glass from Project site and legally dispose of off Project site. Damaged glass is glass with edge damage or other imperfections that, when installed, could weaken glass and impair performance and appearance.
- D. Apply primers to joint surfaces where required for adhesion of sealants, as determined by preconstruction sealant-substrate testing.
- E. Install setting blocks in sill rabbets, sized and located to comply with referenced glazing publications, unless otherwise required by glass manufacturer. Set blocks in thin course of compatible sealant suitable for heel bead.
- F. Do not exceed edge pressures stipulated by glass manufacturers for installing glass lites.
- G. Provide spacers for glass lites where the length plus width is larger than 50 inches as follows:
- 1. Locate spacers directly opposite each other on both inside and outside faces of glass. Install correct size and spacing to preserve required face clearances, unless gaskets and glazing tapes are used that have demonstrated ability to maintain required face clearances and to comply with system performance requirements.
  - 2. Provide 1/8-inch minimum bite of spacers on glass and use thickness equal to sealant width. With glazing tape, use thickness slightly less than final compressed thickness of tape.
- H. Provide edge blocking where indicated or needed to prevent glass lites from moving sideways in glazing channel, as recommended in writing by glass manufacturer and according to

requirements in referenced glazing publications.

- I. Set glass lites in each series with uniform pattern, draw, bow, and similar characteristics.

### 3.4 TAPE GLAZING

- A. Position tapes on fixed stops so that, when compressed by glass, their exposed edges are flush with or protrude slightly above sightline of stops.
- B. Install tapes continuously, but not necessarily in one continuous length. Do not stretch tapes to make them fit opening.
- C. Where framing joints are vertical, cover these joints by applying tapes to heads and sills first and then to jambs. Where framing joints are horizontal, cover these joints by applying tapes to jambs and then to heads and sills.
- D. Place joints in tapes at corners of opening with adjoining lengths butted together, not lapped. Seal joints in tapes with compatible sealant approved by tape manufacturer.
- E. Do not remove release paper from tape until just before each glazing unit is installed.
- F. Apply heel bead of elastomeric sealant.
- G. Center glass lites in openings on setting blocks and press firmly against tape by inserting dense compression gaskets formed and installed to lock in place against faces of removable stops. Start gasket applications at corners and work toward centers of openings.
- H. Apply cap bead of elastomeric sealant over exposed edge of tape.

### 3.5 SEALANT GLAZING (WET)

- A. Install continuous spacers, or spacers combined with cylindrical sealant backing, between glass lites and glazing stops to maintain glass face clearances and to prevent sealant from extruding into glass channel and blocking weep systems until sealants cure. Secure spacers or spacers and backings in place and in position to control depth of installed sealant relative to edge clearance for optimum sealant performance.
- B. Force sealants into glazing channels to eliminate voids and to ensure complete wetting or bond of sealant to glass and channel surfaces.
- C. Tool exposed surfaces of sealants to provide a substantial wash away from glass.

### 3.6 PROTECTION AND CLEANING

- A. Protect exterior glass from damage immediately after installation by attaching crossed streamers to framing held away from glass. Do not apply markers to glass surface. Remove nonpermanent labels, and clean surfaces.

- B. Protect glass from contact with contaminating substances resulting from construction operations, including weld splatter. If, despite such protection, contaminating substances do come into contact with glass, remove them immediately as recommended by glass manufacturer.
- C. Examine glass surfaces adjacent to or below exterior concrete and other masonry surfaces at frequent intervals during construction, but not less than once a month, for build-up of dirt, scum, alkaline deposits, or stains; remove as recommended by glass manufacturer.
- D. Remove and replace glass that is broken, chipped, cracked, abraded, or damaged in any way, including natural causes, accidents, and vandalism, during construction period.
- E. Wash glass on both exposed surfaces in each area of Project not more than four days before date scheduled for inspections that establish date of Substantial Completion. Wash glass as recommended by glass manufacturer.

END OF SECTION





1234567891011121314151617181920

ABBREVIATIONS

AFF

ABOVE FINISH FLOOR

AC

ACOUSTIC(AL)

ACB

ACOUSTICAL BAFFLE

ACT

ACOUSTICAL TILE

AC DR

ACCESS DOOR

AC PNL

ACOUSTICAL PANEL

AC WP

ACOUSTICAL WALL PANEL

ADH

ADHESIVE

ADJ

ADJUSTABLE

AFS

ABOVE FLOOR SLAB

AC

AIRCONDITIONING

AHU

AIR HANDLING UNIT

ALUM

ALUMINUM

ALT

ALTERNATE

ANCH

ANCHOR

&

AND

APPROX

APPROXIMATE

ARCH

ARCHITECT(URAL)

ASP

ASPHALT

@

AT

AVG

AVERAGE

BC

BOTTOM CURB

BM

BEAM

BRG

BEARING

BP

BEARING PLATE

BET

BETWEEN

BFFM

BEVELED FRAME FLOOR MAT

BIT

BITUMINOUS

BLKG

BLOCKING

BD

BOARD

BOT

BOTTOM

BW

BOTH WAYS

BRKT

BRACKET

BRK

BRICK

BUR

BUILT-UP ROOFING

BLDG

BUILDING

BLKHD

BULKHEAD

CAB

CABINET

CPT

CARPET

CI

CAST IRON

CLKG

CAULKING

CLG

CEILING

CEM

CEMENT

C

CENTER LINE

CER

CERAMIC

CT

CERAMIC TILE

CBD

CHALKBOARD

CR

CHANNEL

CR

CLASSROOM

CL

CLEANOUT

CL

CLOSET, CENTER LINE

COL

COLUMN

COMB

COMBINATION

COMP

COMPACT(ED)

CONC

CONCRETE

CMU

CONCRETE MASONRY UNITS

CONST

CONSTRUCTION

CONT

CONTINUOUS

CLL

CONTRACT LIMIT LINE

CJ

CONTROL JOINT

COP

COPPER

CG

CORNER GUARD

CORR

CORRIDOR

CTR

COUNTER

CUST

CUSTOM

CSK

COUNTERSINK

CVG

CLEAR VERTICAL GRAIN

DP

DAMPPOOFING

DEPT

DEPARTMENT

DET

DETAIL

DIAG

DIAGONAL(LY)

DIA

DIAMETER

DM

DIMENSION

DISP

DISPENSER

DR

DOOR

DBL

DOUBLE

DH

DOUBLE HUNG

DN

DOWN

DS

DOWNSPOUT

DWG

DRAWING

DF

DRINKING FOUNTAIN

EA

EACH

EE

EACH END

ELEC

ELECTRICAL

EWC

ELECTRIC WATER COOLER

EL

ELEVATION

ELEV

ELEVATOR

EN

ENAMEL

ENCL

ENCLOSURE

ENT

ENTRANCE

EQ

EQUAL

EQUIP

EQUIPMENT

EXIST

EXISTING

EXP

EXPANDED/EXPANSION/

EXPOSED

EJ

EXPANSION JOINT

EXT

EXTERIOR

EXTN

EXTENSION

EXTR

EXTRUDED

F

FAHRENHEIT

FCU

FAN COIL UNIT

FIN

FINISH

FFE

FINISH FLOOR ELEVATION

FA

FIRE ALARM

FE

FIRE EXTINGUISHER

FEC

FIRE EXTINGUISHER CABINET

FER

FIRE EXTINGUISHER RECESS

FHC

FIRE HOSE CABINET

FP

FIREPROOF(ING)

FLG

FLASHING

FL

FLOOR

FD

FLOOR DRAIN

FLUOR

FLUORESCENT

FP PNL

FOLDING PANEL PARTITION

FT

FOOT OR FEET

FTG

FOOTING

FDN

FOUNDATION

FS

FULL SIZE

FURR

FURRING

GALV

GALVANIZED

GI

GALVANIZED IRON

GA

GAUGE

GEN

GENERAL

GL

GLASS/GLAZING

GB

GRAB BAR

GR

GRADE

GYP

GYPSPUM

GWB

GYPSPUM WALLBOARD

HC

HANDICAPPED, HOLLOW CORE

HDR

HANDRAIL

HDW

HARDWARE

HDWD

HARDWOOD

HHT

HEIGHT

HTG

HEATING, VENTILATING,

HVC

COOLING

HP

HIGH POINT, HIGH PRESSURE

HC

HOLLOW CORE

HM

HOLLOW METAL

HOR

HORIZONTAL

HB

HOSE BIBB

HR

HOUR

HU

HEATING (AND/OR AC) UNIT

INC

INCOMPLETE

INCL

INCLUDE

ID

INSIDE DIAMETER

INSUL

INSULATION

IRMA

INSULATED ROOF MEMBRANE

ASSEMBLY

INT

INTERIOR

JT

JOINT

JST

JOIST

JOW

JAMB OVERALL HEIGHT

JAMB OVERALL WIDTH

K/O

KNOCK OUT

LAM

LAMINATE(D)

LAV

LAVATORY

LF

LINEAR FOOT (FEET)

LT WT

LIGHT WEIGHT

LP

LOW POINT, LOW PRESSURE

LVR

LOUVER

L

LOCKER

MACH

MACHINE

MFGR

MANUFACTURER

MB

MARKER BOARD

MAS

MASONRY

MO

MASONRY OPENING

MAT

MATERIAL

MAX

MAXIMUM

MECH

MECHANICAL

MEMB

MEMBRANE

MTL

METAL

MTL

METAL TOILET PARTITION

MEZZ

MEZZANINE

MIN

MINIMUM

MR

MIRROR

MISC

MISCELLANEOUS

MB

MOISTURE BARRIER

MTD

MOUNTED

MULL

MULLION

NF

NATURAL FINISH

N

NORTH

NTD

NOTED

NIC

NOT IN CONTRACT

NTS

NOT TO SCALE

NO

NUMBER

NOM

NOMINAL

OFF

OFFICE

OC

ON CENTER

OPG

OPENING

OPP

OPPOSITE

OH

OPPOSITE HAND

OD

OUTSIDE DIAMETER

OA

OVERALL

PT

PAINT

PTD

PAINTED

PR

PAIR

PNL

PANEL

PTDP

PAPER TOWEL DISPENSER

PTR

PAPER TOWEL RECEPTACLE

PB

PARTIAL BOARD

PTN

PARTITION

PVG

PAVING

PERF

PERFORATE(D)

PSF

PER SQUARE FOOT

PSI

PER SQUARE INCH

PLAS

PLASTER

PLAM

PLASTIC LAMINATE

PL

PLATE

POL

POLISHED

PLYWD

PLYWOOD

PS

PROJECTION SCREEN

PVA

POLYVINYL ACETATE

PVC

POLYVINYL CHLORIDE

PE

PORCELAIN ENAMEL

PF

POROUS FILL

PC

PRECAST

PS

PROJECTION SCREEN

QT

QUARRY TILE

RAD

RADIUS

R

RISER

RP

RADIANT HEAT PANEL

RL

RAIN LEADER

RFM

RECESSED FLOOR MAT

RFL

REFLECT(ED)(IVE)(OR)

REG

REGISTER

REINF

REINFORCE(MENT)(ING)

RH

RELATIVE HUMIDITY

REQD

REQUIRED

RES

RESILIENT

RT

RESILIENT TILE

RET

RETURN

RA

RETURN AIR

RF

ROOF

RFG

ROOFING

RD

ROOF DRAIN

RM

ROOM

RO

ROUGH OPENING

RND

ROUND

RBR

RUBBER

RT

RUBBER TILE

SND

SANITARY NAPKIN DISPENSER

SNR

SANITARY NAPKIN RECEPTACLE

SCHED

SCHEDULE

SEAT

SEATING

SEC

SECTION

SH

SHEET

SM

SHEET METAL

SHLV

SHELVING

SHR

SHOWER

SIM

SIMILAR

SL

SLATE

SD

SOAP DISPENSER, STORM DRAIN

SC

SOLID CORE

S

SOUTH

SAB

SOUND ATTENUATION BLANKET

SP

SPANDREL

SPEC

SPECIFICATION(S)

SF CMU

SPLIT FACE CMU

SO

SQUARE

SS

STAINLESS STEEL

STD

STANDARD

STFT

STOREFRONT

STL

STEEL

ST

STORAGE

STR

STRUCTURAL

SGT

STRUCTURAL GLAZED TILE

SUBFL

SUBFLOOR

SUSP

SUSPENDED

SYM

SYMMETRICAL

SYS

SYSTEM

TEL

TELEPHONE

TV

TELEVISION

TEMP

TEMPERED

TO

TERRA COTTA or TOP CURB

TER

TERRAZZO

THK

THICK(NESS)

THR

THRESHOLD

TP

TOILET PAPER DISPENSER

T&G

TONGUE & GROOVE

TF

TOP OF FOOTING

TS

TOP OF STEEL

TW

TOP OF WALL

TWB

TOWEL BAR

T

TREAD

TYP

TYPICAL

UL

UNDERWRITER'S LABS/

UNF

UNFINISHED

UN

UNLESS OTHERWISE NOTED

UR

URINAL

US

URINAL SCREEN

UV

UNIT VENTILATOR

UTS

UTILITY SHELF

VB

VINYL BASE

VERT

VERTICALLY

VEST

VESTIBULE

VCT

VINYL COMPOSITION TILE

VVC

VINYL WALL COVERING

WSCOT

WAINSCOT

WH

WALL HYDRANT

WC

WATER CLOSET/WATER COOLER

WP

WATERPROOF

WT

WEIGHT

WWF

WELDED WIRE FABRIC

W

WEST/WIDEWIDTH

W

WITH

W/O

WITHOUT

WD

WOOD

WP

WORKING POINT

WB

WHITE BOARD

LAM

LAMINATE(D)

LAV

LAVATORY

LF

LINEAR FOOT (FEET)

LT WT

LIGHT WEIGHT

LP

LOW POINT, LOW PRESSURE

LVR

LOUVER

L

LOCKER

MACH

MACHINE

MFGR

MANUFACTURER

MB

MARKER BOARD

MAS

MASONRY

MO

MASONRY OPENING

MAT

MATERIAL

MAX

MAXIMUM

MECH

MECHANICAL

MEMB

MEMBRANE

MTL

METAL

MTL

METAL TOILET PARTITION

MEZZ

MEZZANINE

MIN

MINIMUM

MR

MIRROR

MISC

MISCELLANEOUS

MB

MOISTURE BARRIER

MTD

MOUNTED

MULL

MULLION

NF

NATURAL FINISH

N

NORTH

NTD

NOTED

NIC

NOT IN CONTRACT

NTS

NOT TO SCALE

NO

NUMBER

NOM

NOMINAL

OFF

OFFICE

OC

ON CENTER

OPG

OPENING

OPP

OPPOSITE

OH

OPPOSITE HAND

OD

OUTSIDE DIAMETER

OA

OVERALL

PT

PAINT

PTD

PAINTED

PR

PAIR

PNL

PANEL

PTDP

PAPER TOWEL DISPENSER

PTR

PAPER TOWEL RECEPTACLE

PB

PARTIAL BOARD

PTN

PARTITION

PVG

PAVING

PERF

PERFORATE(D)

PSF

PER SQUARE FOOT

PSI

PER SQUARE INCH

PLAS

PLASTER

PLAM

PLASTIC LAMINATE

PL

PLATE

POL

POLISHED

PLYWD

PLYWOOD

PS

PROJECTION SCREEN

PVA

POLYVINYL ACETATE

PVC

POLYVINYL CHLORIDE

PE

PORCELAIN ENAMEL

PF

POROUS FILL

PC

PRECAST

PS

PROJECTION SCREEN

QT

QUARRY TILE

RAD

RADIUS

R

RISER

RP

RADIANT HEAT PANEL

RL

RAIN LEADER

RFM

RECESSED FLOOR MAT

RFL

REFLECT(ED)(IVE)(OR)

REG

REGISTER

REINF

REINFORCE(MENT)(ING)

RH

RELATIVE HUMIDITY

REQD

REQUIRED

RES

RESILIENT

RT

RESILIENT TILE

RET

RETURN

RA

RETURN AIR

RF

ROOF

RFG

ROOFING

RD

ROOF DRAIN

RM

ROOM

RO

ROUGH OPENING

RND

ROUND

RBR

RUBBER

RT

RUBBER TILE

SND

SANITARY NAPKIN DISPENSER

SNR

SANITARY NAPKIN RECEPTACLE

SCHED

SCHEDULE

SEAT

SEATING

SEC

SECTION

SH

SHEET

SM

SHEET METAL

SHLV

SHELVING

SHR

SHOWER

SIM

SIMILAR

SL

SLATE

SD

SOAP DISPENSER, STORM DRAIN

SC

SOLID CORE

S

SOUTH

SAB

SOUND ATTENUATION BLANKET

SP

SPANDREL

SPEC

SPECIFICATION(S)

SF CMU

SPLIT FACE CMU

SO

SQUARE

SS

STAINLESS STEEL

STD

STANDARD

STFT

STOREFRONT

STL

STEEL

ST

STORAGE

STR

STRUCTURAL

SGT

STRUCTURAL GLAZED TILE

SUBFL

SUBFLOOR

SUSP

SUSPENDED

SYM

SYMMETRICAL

SYS

SYSTEM

TEL

TELEPHONE

TV

TELEVISION

TEMP

TEMPERED

TO

TERRA COTTA or TOP CURB

TER

TERRAZZO

THK

THICK(NESS)

THR

THRESHOLD

TP

TOILET PAPER DISPENSER

T&G

TONGUE & GROOVE

TF

TOP OF FOOTING

TS

TOP OF STEEL

TW

TOP OF WALL

TWB

TOWEL BAR

T

TREAD

TYP

TYPICAL

UL

UNDERWRITER'S LABS/

UNF

UNFINISHED

UN

UNLESS OTHERWISE NOTED

UR

URINAL

US

URINAL SCREEN

UV

UNIT VENTILATOR

UTS

UTILITY SHELF

VB

VINYL BASE

VERT

VERTICALLY

VEST

VESTIBULE

VCT

VINYL COMPOSITION TILE

VVC

VINYL WALL COVERING

WSCOT

WAINSCOT

WH

WALL HYDRANT

WC

WATER CLOSET/WATER COOLER

WP

WATERPROOF

WT

WEIGHT

WWF

WELDED WIRE FABRIC

W

WEST/WIDEWIDTH

W

WITH

W/O

WITHOUT

WD

WOOD

WP

WORKING POINT

WB

WHITE BOARD

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

1

2

3

4

5

6

7

8

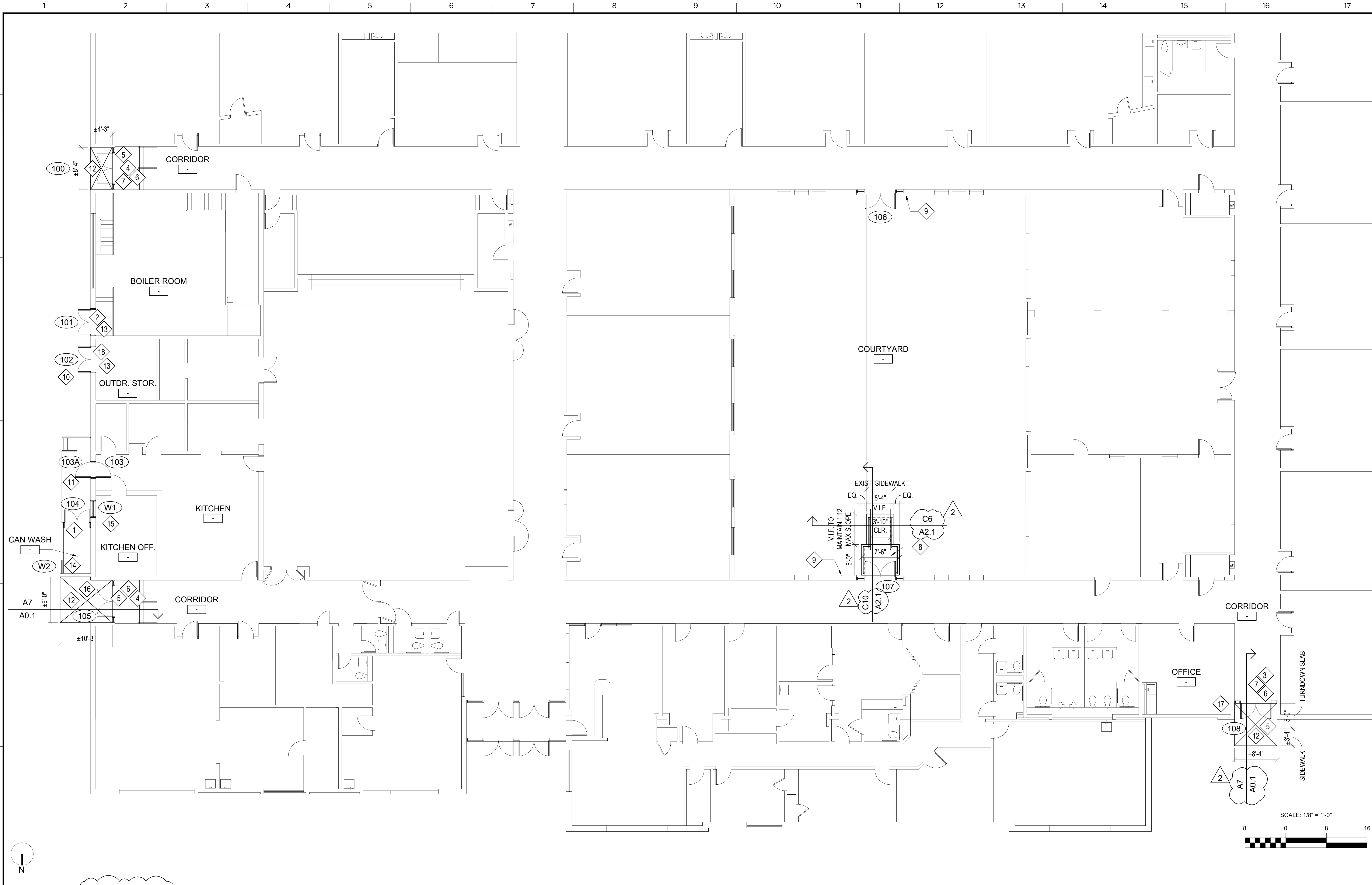
9

10

11

<





**D1 PART GROUND LEVEL FLOOR PLAN - NEW WORK**

1/8"=1'-0" A1.1

**GENERAL NOTES:**

1. AT ALL DOORS AND FRAMES BEING REMOVED, CONTACT HCPSS (OWNER) PRIOR TO REMOVAL FOR TESTING AND/OR ABATEMENT AND REMOVAL OF OPAQUE PANELS WITHIN EXISTING HOLLOW METAL FRAMES. CONTRACTOR SHALL PROCEED WITH DOOR AND FRAME REMOVAL AFTER AUTHORIZATION, AND AT THE DIRECTION OF HCPSS.
2. AT ALL DOORS AND FRAMES BEING REMOVED, SALVAGE THE EXISTING HARDWARE AND NOTIFY THE OWNER WHEN HARDWARE HAS BEEN SET ASIDE. THE OWNER WILL REVIEW AND RETAIN ANY HARDWARE DESIRED. THE REMAINING HARDWARE WILL BE DISPOSED OF BY THE CONTRACTOR.
3. AT EXISTING CARD READERS, REUSE CARD READERS, REPAIR/REPLACE COMPONENTS OR ACCESSORIES AS REQUIRED. RE-FEED CARD READER WIRING INSIDE NEW DOOR FRAME IN FLEXIBLE CONDUIT AND REMOUNT ON NEW FRAME. COORDINATE WITH OWNER FOR EXACT INSTALLATION LOCATION.
4. MOUNT NEW POWER SUPPLIES FOR ELECTRIC DOOR HARDWARE ABOVE THE CEILING WITHIN 15 FEET OF THE DOOR. PROVIDE POWER FROM CLOSEST 120V CIRCUIT AVAILABLE (NON-SWITCHING). LABEL CIRCUIT AND JUNCTION BOX, AND ENSURE POWER SUPPLIES ARE NOT OVERLOADING EXISTING 120V CIRCUIT. ALL NEW WIRING FOR NEW ELECTRIC HARDWARE SHALL BE ROUTED THROUGH NEW FRAMES IN FLEXIBLE CONDUIT. NO SURFACE WIRING TO BE USED.
5. AT ALL NEW THRESHOLD INSTALLATIONS, GRIND OR PATCH WITH NON-SHRINK GROUT SO THAT INSIDE CONCRETE SLAB AND EXTERIOR CONCRETE SLAB ARE FLUSH. REPAIR AND/OR REPLACE DAMAGED FLOOR TILE AS REQUIRED FOR THE FLOOR FINISH TO BE LEVEL AND CONSISTENT UP TO THE NEW THRESHOLD.
6. AT ALL WORK SHALL BE SCHEDULED SUCH THAT ALL DOORS AND/OR FRAMES WHICH ARE REMOVED ON A GIVEN DAY, ARE BE REPLACED WITH NEW DOORS AND/OR FRAME ON THE SAME DAY. THE FUNCTIONALITY OF THE DOORS WITHIN THE SCHOOL AND ALL EXIT PATHS SHALL BE CONSTANTLY MAINTAINED.
7. AT ALL SILL, PATCH AND/OR REPAIR THE FLOOR FINISHES WHICH ARE DISTURBED DURING THIS WORK AS REQUIRED TO PROVIDE CONTINUOUS FLOOR FINISHES WHICH ARE INDISTINGUISHABLE FROM ADJACENT MATCHING FLOOR FINISHES.

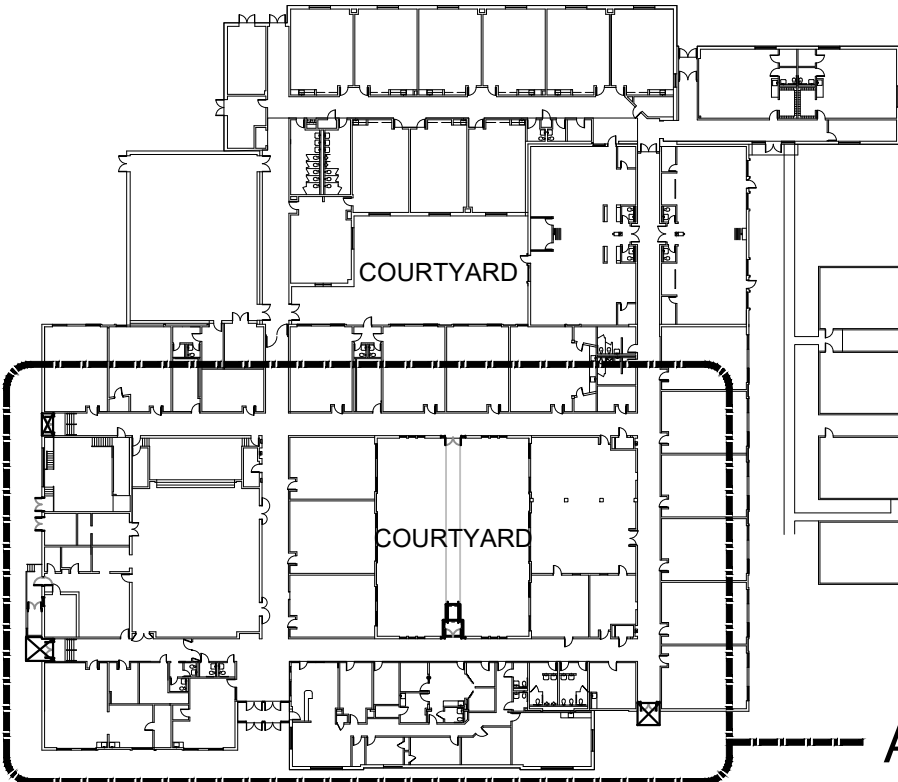
**DRAWING NOTES:**

1. REMOVE THE EXISTING DOORS AND FRAME TO THE MASONRY OPENING. SALVAGE HARDWARE FOR OWNER REVIEW.
2. CAREFULLY SALVAGE & CLEAN THE EXISTING INTERIOR MOTORIZED DAMPERS AND STORE FOR DURATION OF DEMOLITION. REMOVE THE EXISTING LOUVER, DOORS, AND FRAMES TO THE MASONRY OPENING. INSTALL NEW LOUVER INTO THE NEW FRAME AND RECONNECT THE SALVAGED MOTORIZED DAMPERS.
3. REMOVE THE EXISTING DOORS, FRAME, & GLAZING TO MASONRY. REMOVE AND TURN OVER TO THE OWNER THE EXISTING AUTOMATIC DOOR OPERATOR, ASSOCIATED PUSH BUTTONS, AND EXISTING MAGNETIC LOCKS. PROTECT ADJACENT CERAMIC TILE WAINSCOTING, RESILIENT TILE FLOORING, AND EXIT SIGNAGE DURING DEMOLITION & MODIFY SURFACES AS REQUIRED FOR INSTALLATION OF NEW DOORS AND FRAMES. PATCH DAMAGED OR MODIFIED SURFACES WITH MATCHING MATERIALS & FINISHES IF REQUIRED AFTER INSTALLATION.
4. REMOVE THE EXISTING DOOR, FRAME, & GLAZING TO MASONRY. SALVAGE HARDWARE FOR OWNER REVIEW. CAREFULLY SALVAGE THE EXISTING CARD READER AND WIRING, AND PROTECT FOR THE DURATION OF DEMOLITION. PROTECT ADJACENT CERAMIC TILE WAINSCOTING, ENTRANCE CARPET TILE, AND EXIT SIGNAGE DURING DEMOLITION & MODIFY SURFACES AS REQUIRED FOR INSTALLATION OF NEW DOORS AND FRAMES. PATCH DAMAGED OR MODIFIED SURFACES WITH MATCHING MATERIALS & FINISHES IF REQUIRED AFTER INSTALLATION.
5. REINSTALL THE SALVAGED CARD READER AT THE NEW DOOR AND FRAME. RECONNECT THE CARD READER AND INSTALL NEW ACCESSORIES WITHIN CONNECTIONS TO NEW ELECTRIC HARDWARE AS REQUIRED TO REESTABLISH FULL CARD READER FUNCTIONALITY WITH NEW HARDWARE.
6. CAREFULLY REMOVE THE EXISTING FRAME TO AVOID DAMAGE TO THE EXIST. ADJACENT CEILING. AT ACOUSTICAL CEILINGS, CAREFULLY REMOVE & SALVAGE PORTIONS OF GRID & TILES TO PREVENT DAMAGE. STORE FOR DURATION OF DEMOLITION, AND CAREFULLY REINSTALL AFTER DOOR & FRAME INSTALLATION TO BE INDISTINGUISHABLE FROM ORIGINAL INSTALLATION. AT GYPSUM PLASTER BULKHEADS, CAREFULLY CUT & PATCH SURFACES AS NECESSARY FOR DOOR AND FRAME REPLACEMENT IN A MANNER THAT PATCHES ARE INDISTINGUISHABLE FROM ITS ORIGINAL CONDITION AFTER CONSTRUCTION.
7. TEMPORARILY DISCONNECT AND REMOVE THE PORTION OF THE EXISTING PAIR OF 1" COPPER CONDENSATE LINES ADJACENT TO THE EXISTING DOOR FRAME AS REQUIRED FOR NEW DOOR AND FRAME INSTALLATION. TEMPORARILY RE-ROUTE THE LINE TO MAINTAIN FUNCTIONALITY OF THE LINE. PROCEED WITH THE DOOR AND FRAME REPLACEMENT AT THE OPENING AS DESCRIBED. FIELD COPE THE NEW FRAME AS REQUIRED TO ALLOW THE COPPER LINE TO PASS THROUGH THE FRAME, AND REINSTALL THE LINE TO BE INDISTINGUISHABLE FROM THE ORIGINAL CONDITION. SEAL THE FRAME PENETRATION.
8. NEW CONCRETE LANDING AND RAMP; NEW PAINTED METAL RAILINGS. SEE A2.1 AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
9. ABOVE HOLLOW METAL OPENING. REPAIR BRICK MASONRY THAT HAS BEEN DAMAGED. LOCATE CONCEALED CONDUIT IN THE CAVITY PRIOR TO STARTING REPAIR WORK. CONDUCT MASONRY REMOVAL AND REPLACEMENT WITHOUT DAMAGING UTILITIES. LOCALLY REMOVE CRACKED EXISTING BRICK MASONRY OVER LENGTH OF EXISTING LINTEL. SALVAGE UNDAMAGED UNITS, AND DISPOSE OF DAMAGED UNITS. NOTIFY ARCHITECT TO EXAMINE LINTEL FOR CORROSION DAMAGE. CLEAN AND COAT EXISTING OR REPLACE AS DIRECTED, PLACE NEW FLASHING OVER LINTEL PER DETAILS ON A2.1. REPLACE WITH SALVAGED AND NEW MATCHING REPLACEMENT BRICK TOOTHED INTO THE SURROUNDING EXISTING BRICK.

10. SALVAGE EXISTING SPRINKLER SIGNAGE INSTALLED ON EXTERIOR FACE OF DOOR. INSTALL ON EXTERIOR FACE OF NORTH DOOR LEAF ON NEW DOOR PAIR.
11. REMOVE THE EXISTING DOOR, FRAME, & GLAZING TO MASONRY. SALVAGE HARDWARE FOR OWNER REVIEW. PROTECT ADJACENT CERAMIC TILE WAINSCOTING AND QUARRY TILE WALL BASE & FLOORING DURING DEMOLITION. MODIFY SURFACES AS REQUIRED FOR INSTALLATION OF NEW DOORS AND FRAMES. PATCH DAMAGED OR MODIFIED SURFACES WITH MATCHING MATERIALS & FINISHES IF REQUIRED AFTER INSTALLATION.
12. CAREFULLY REMOVE THE EXISTING CONCRETE SLAB TO NEAREST JOINT SPECIFIED BY THE DIMENSION IN THE PLAN. PREPARE SURROUNDING CONSTRUCTION AND SUBGRADE AS REQUIRED TO RECEIVE NEW TURN-DOWN CONCRETE SLAB. SEE DETAIL ON A0.1 FOR ADDITIONAL INFORMATION.
13. SALVAGE EXISTING DOOR CONTACT SECURITY DEVICES ON DOORS AND FRAMES. SALVAGE EXISTING WIRING CONNECTIONS TO DEVICES. REINSTALL DEVICES ON DOORS AND FRAMES AS NECESSARY FOR PROPER FUNCTION. REINSTALL CONNECTIONS TO DEVICES FULLY CONCEALED WITHIN NEW FRAMES AND DOORS.
14. REMOVE EXISTING FRAME AND SCREENING TO MASONRY. PREPARE OPENING AS REQUIRED FOR INSTALLATION OF NEW FRAME. PATCH DAMAGED OR MODIFIED SURFACES WITH MATCHING MATERIALS & FINISHES IF REQUIRED AFTER INSTALLATION.
15. REMOVE EXISTING WINDOW. PREPARE OPENING INCLUDING TRIMMING CERAMIC TILE SURROUND AT INTERIOR FACES OF OPENING FOR INSTALLATION OF NEW ALUMINUM HORIZONTAL SLIDING WINDOW. SEE WINDOW TYPES AND FRAME DETAILS ON A2.1 FOR ADDITIONAL INFORMATION. PATCH DAMAGED OR MODIFIED SURFACES WITH MATCHING MATERIALS & FINISHES IF REQUIRED AFTER INSTALLATION.
16. RECONNECT THE EXISTING VIDEO DOOR BUZZER ADJACENT TO REPLACED DOOR AND FRAME. INSTALL NEW ACCESSORIES WITHIN CONNECTIONS TO NEW ELECTRIC HARDWARE AS REQUIRED TO REESTABLISH FULL FUNCTIONALITY WITH NEW HARDWARE.
17. REINSTALL SALVAGED CARD READER ON WALL ADJACENT TO REPLACED DOOR AND FRAME. EXTEND CONNECTIONS FROM SOURCE DOWN IN NORTHWEST CORNER OF ADJACENT OFFICE IN SURFACE MOUNTED CONDUIT. MATCH TYPE, SIZE, AND COLOR OF CONDUIT PREVIOUSLY INSTALL IN THE ROOM. CAREFULLY PENETRATE AND WEATHER SEAL EXTERIOR WALL FOR CONNECTION TO SALVAGED CARD READER. TOUCH-UP INTERIOR WALL FINISH AS REQUIRED AFTER INSTALLATION.
18. REMOVE EXISTING EXHAUST FAN, LOUVER, DOORS, AND FRAME TO MASONRY. INSTALL NEW LOUVER INTO THE NEW FRAME. INSTALL NEW EXHAUST FAN, AND RECONNECT NEW FAN TO POWER SUPPLY AND THERMOSTAT IN THE ROOM.

NOTE: FULL SIZE DRAWINGS ARE PRINTED ON 30"x42" SHEET (ARCH E1)

**KEY PLAN**



KEY PLAN  
SCALE: NONE

NO	REVISION / SUBMISSION	DATE
	95% CD SUBMISSION	9/18/2017
	100% CD SUBMISSION	10/19/2017
Δ	ADDENDUM 2	05/17/2018

P. 1982  
**SM+P**  
ARCHITECTS

SCHAMU MACHOWSKI + PATTERSON ARCHITECTS, INC.  
1100 CATHEDRAL STREET, BALTIMORE, MD 21201  
TEL 410-685-3582 WWW.SMP-ARCHITECTS.COM

**CONSULTANTS**

Professional Certification: "I certify that these documents were prepared or approved by me, and that I am a duly licensed architect under the laws of the State of Maryland. License No. 3715R, expiration date: 05.02.2020."

**PROJECT**

**CLARKSVILLE ELEMENTARY SCHOOL**  
EXTERIOR DOOR REPLACEMENT

**DRAWING TITLE**

**PARTIAL FLOOR PLAN  
NEW WORK**

**SEAL**

**DRAWN**

PROJECT # 11001.02

**CHECKED**

DRAWING #

**REVIEWED**

REM

**DATE**

MAY 17, 2018

**SCALE**

AS NOTED

**A1.1**





THE HOWARD COUNTY PUBLIC SCHOOL SYSTEM

PRE-BID MEETING SIGN-IN SHEET

BID: 018.18.B3-EXTENDED DOOR REPLACEMENT - CES  
DATE: 5/11/2018  
TIME: 1:00 PM

Name: Anthony Ingram  
Firm: A.L. Ingram Const  
Address: 3904 Tevis Circle  
Phone: 410-808-4214  
Fax: 410-975-8479  
Email: ating2@verizon.net

Name: ARIEL RODRIGUEZ  
Firm: Colossal Contractors  
Address: 4601 Sandy Spring Rd  
Phone: 301-4769060  
Fax: 301-4769064  
Email: mya@colossalcontractors.com

Name: JOHN DINATALE  
Firm: BRAWNER BUILDERS  
Phone: 410-666-2800  
Fax: 410-409-8086  
Email: JOHNDINATALE@BRAWNERBUILDERS.COM

Name: Robert Kewen  
Firm: Most, Inc  
Phone: 410 536-4712  
Fax: 410 668-4973  
Email: rob@mostincorporated.com

Name: RAJ ALAM  
Firm: BRAWNER BUILDERS  
Phone: 410-913-1774  
Fax:  
Email: RAJALAM@BRAWNERBUILDERS.COM

Name: PIPPA DUGGAN  
Firm: PLANO- COUNDM  
Phone: 410- 837 2570  
Fax:  
Email: pduggan@plano-coundm.com

Name: MIGUEL PACHECO  
Firm: MASTOS CONSTRUCTION  
Phone: 202 398-5500  
Fax:  
Email: miguel.pacheco@master.com

Name: ZACHARY SECOR  
Firm: SMP ARCHITECTS  
Phone: 410-685-3582  
Fax:  
Email: zsecor@smp-architects.com

Name: Bob Sax  
Firm: Overhead Door Co. Baltimore  
Phone: 410-365-4180  
Fax:  
Email: bsax@ohdohalt.com

Name: JOE VESLANY  
Firm: HCPSS  
Phone: 410-313-6723  
Fax: 410-313-6729  
Email: JVESLANY@HCPSS.ORG

THE HOWARD COUNTY PUBLIC SCHOOL SYSTEM

PRE-BID MEETING SIGN-IN SHEET

BID: 018.18.B3 - EXTERIOR DOOR REPLACEMENT - CES  
DATE: 5/11/2018  
TIME: 1:00 PM

Name: Phil Salzman  
Firm: AMI  
Address: Forest Hill  
Phone: 301 525-4548  
Fax: \_\_\_\_\_  
Email: \_\_\_\_\_

Name: \_\_\_\_\_  
Firm: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Fax: \_\_\_\_\_  
Email: \_\_\_\_\_

Name: \_\_\_\_\_  
Firm: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Fax: \_\_\_\_\_  
Email: \_\_\_\_\_

Name: \_\_\_\_\_  
Firm: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Fax: \_\_\_\_\_  
Email: \_\_\_\_\_

Name: \_\_\_\_\_  
Firm: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Fax: \_\_\_\_\_  
Email: \_\_\_\_\_

Name: \_\_\_\_\_  
Firm: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Fax: \_\_\_\_\_  
Email: \_\_\_\_\_

Name: \_\_\_\_\_  
Firm: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Fax: \_\_\_\_\_  
Email: \_\_\_\_\_

Name: \_\_\_\_\_  
Firm: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Fax: \_\_\_\_\_  
Email: \_\_\_\_\_

Name: \_\_\_\_\_  
Firm: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Fax: \_\_\_\_\_  
Email: \_\_\_\_\_

Name: \_\_\_\_\_  
Firm: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Fax: \_\_\_\_\_  
Email: \_\_\_\_\_