# Richardson Park Elementary School

## Red Clay Consolidated School District

## EDiS Company, Inc.

## ABHA Architects

**Bid Package "A"**
**Volume I**
**February 9, 2015**

Division 0 - Procurement and Contract Requirements

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SECTION 000115 LIST OF DRAWINGS

| DRWG NO. | DRAWING NAME | BID PACKS | ISSUE DATE | LATEST REV. DATE |
|---|---|---|---|---|
| G-001 | Cover Sheet | A | N/A | |
| A-101 | Basement Plan | A | N/A | |
| A-102 | First Floor Plan | A | N/A | |
| A-103 | Second Floor Plan | A | N/A | |
| A-104 | Roof Plan | A | N/A | |
| A-401 | Auditorium – Existing Floor Plan | A | N/A | |
| A-402 | Auditorium – New Seating Layout | A | N/A | |
| A-610 | Door Schedule & Details | A | N/A | |
| A-611 | Window Schedule & Details | A | N/A | |
| MD-100 | Basement Plan Demolition - Mechanical | A | N/A | |
| MD-110 | First Floor Plan Demolition - Mechanical | A | N/A | |
| MD-111 | First Floor Plan Demolition - Mechanical | A | N/A | |
| MD-112 | First Floor Plan Demolition - Mechanical | A | N/A | |
| MD-120 | Second Floor Plan Demolition - Mechanical | A | N/A | |
| MD-121 | Second Floor Plan Demolition - Mechanical | A | N/A | |
| MD-130 | Partial Roof Plan Demolition - Mechanical | A | N/A | |
| M-100 | Basement Plan - Mechanical | A | N/A | |
| M-110 | Partial First Floor Plan - Mechanical | A | N/A | |
| M-111 | Partial First Floor Plan - Mechanical | A | N/A | |
| M-120 | Partial Second Floor Plan - Mechanical | A | N/A | |
| M-121 | Partial Second Floor Plan - Mechanical | A | N/A | |
| M-130 | Partial Roof Plan - Mechanical | A | N/A | |
| M-500 | Details & Schedules - Mechanical | A | N/A | |
| P-100 | Basement Plan - Plumbing | A | N/A | |
| P-101 | Partial Basement Plan - Plumbing | A | N/A | |
| P-110 | Partial First Floor Plan - Plumbing | A | N/A | |
| P-111 | Partial First Floor Plan - Plumbing | A | N/A | |
| P-112 | Partial First Floor Plan - Plumbing | A | N/A | |
| P-120 | Partial Second Floor Plan - Plumbing | A | N/A | |
| P-121 | Partial Second Floor Plan - Plumbing | A | N/A | |
| | | | | |

END OF SECTION

SECTION 001113 ADVERTISEMENT FOR BID

Receipt of Bids

Public notice is hereby given that sealed bids for the following prime contract will be received for the construction of Richardson Park Elementary School located at 16 Idella Avenue, Wilmington, DE 19804. Bids will be received at the Red Clay Consolidated School District Office 1798 Limestone Rd, Wilmington, Delaware 19804 until 2:00 p.m. local time on March 13, 2013, at which time they will be publicly opened and read aloud. ***Bidder bears the risk of late delivery. Any bids received after the stated time will be returned unopened.*** The time and location of the bid opening may be extended with a minimum of 2 calendar days notice to the Bidders.

Contract: A-01 GLASS & GLAZING
Contract: A-02 MECHANICAL & CONTROLS

Bidding Document

Documents may be viewed and downloaded at EDiS' FTP site. Bidders requesting the log on information may obtain user name and password permission by contacting Jackie McKee with EDiS Company at jmckee@ediscompany.com or 302-421-2962. Each contractor will be required to provide the following information prior to receiving the log on information: company name, contact name, email address, phone number, fax number and postal mailing address.

It is the responsibility of each bidder to review and coordinate all Project Documents. This includes plans, specifications and addendums. Documents may also be examined at the office of the Construction Manager, EDIS Company, 110 S. Poplar Street, Suite 400, Wilmington, Delaware 19801; the Architect, ABHA Architects, 1621 North Lincoln Street, Wilmington, DE 19806; and the office of Delaware Contractors Association, 527 Christiana Stanton Road, Newark, Delaware 19713.

Bid Security

A bid security in the amount of 10% of the bid including all alternates, plus a consent of surety must accompany each bid. Bid Security shall specify the Owner as the obligee. Owner: Red Clay Consolidated School District, 1502 Spruce Avenue, Wilmington, Delaware 19805.

Pre-Bid Meeting

A pre-bid meeting will be held at **Richardson Park Elementary School located at 16 Idella Avenue, Wilmington, DE 19804**., on **February 26, 2015 at 3:30 PM local time**. A site visit will be conducted immediately following the pre-bid meeting. Attendance is highly suggested but not mandatory.

Questions

Please contact EDiS Company, Mark Grunza at mgrunza@ediscompany.com or 302-421-2956 with questions.

Conformance to the Delaware Architectural Accessibility Act and the standards of the

Architectural Accessibility Board is required on the Project.

Prevailing Wage Rates, as described by Delaware Law, must be adhered to where applicable.

The Red Clay Consolidated School District reserves the right to waive irregularities and to reject any and all bids.

END OF SECTION

SECTION 002113 - INSTRUCTIONS TO BIDDERS

1. DEFINITIONS

1.1 Bidding Documents include the Contract Documents, Invitation to Bid, Instructions to Bidders, the Proposal Forms, Contract, General Conditions of the Contract, Supplementary Conditions, Specifications, Plans, and any Addenda issued prior to receipt of bids.

1.2 All definitions set forth in the General Conditions and the other Contract Documents are applicable to the Bidding Documents.

1.3 "Addenda" are written or graphic instruments issued by the Architect/Engineer prior to the receipt of bids which modify or interpret the Bidding Documents, by additions, deletions, clarifications or corrections. Addenda become part of the contract documents upon execution of the agreement.

1.4 The term Work is defined in 1.1.3 of the General Conditions.

1.5 A "Unit of Work" includes all Work covered by the one or more Sections of the specifications listed under that particular Unit of Work in Section 011100 - SUMMARY OF WORK. A Unit of Work is the smallest portion of the Project for which a separate Bid will be accepted by the Construction Manager. The word "Unit" means "Unit of Work" whenever the context clearly implies "Unit of Work".

1.6 A "Bid" is a complete and properly signed proposal to do one or more Units of Work for the sum stipulated therein.

1.7 A "Bidder" is one who submits a Bid to the Bidding Agency for the Unit or Units of Work indicated therein.

1.8 A substantial amount of specification language constitutes definitions for terms found in other Contract Documents, including drawings, which must be recognized as diagrammatic in nature and not completely descriptive of requirements indicated thereon. Certain terms used in Contract Documents are defined generally in this article. Definitions and explanations to this section are not necessarily either complete or exclusive, but are general for the work to the extent not stated more explicitly in another provision of Contract Documents.

1.9 General Requirements (or Conditions) apply to entire work of Contract and, where so indicated, to other elements which are included in the project.

1.10 The term "indicated" is a cross reference to details, notes or schedules on the Drawings, to other similar means of recording requirements in the Contract

Documents. Where terms such as "shown", "noted", "schedule" and "specified" are used in lieu of "indicate," it is for purpose of helping to locate cross reference and no limitation of location is intended, except as specifically noted.

1.11 Where not otherwise explained, terms such as "directed", "requested", "authorized", "selected", "approved", "required", "accepted" and "permitted" mean "directed by Construction Manager or Architect", "requested by Construction Manager or Architect", etc.

1.12 Where used in conjunction with Construction Manager's or Architect's response to submittals, requests, applications, inquiries, reports and claims by Contractor, the meaning of the term "approved" will be held to limitations of Construction Manager's and Architect's responsibilities and duties as specified in General and Supplementary Conditions. In no case will "approval" by Construction Manager or Architect be interpreted as a release of Contractor from responsibilities to fulfill requirements of the Contract Documents.

1.13 The "Project Site" is the space available to Contractor for performance of the Work, either exclusively or in conjunction with others performing other work as part of the Project. The extent of project site is shown on the Drawings and may or may not be identical with description of the land upon which project is to be built. The Contractor shall visit the site to verify contract or construction limits.

1.14 Except as otherwise defined in greater detail, term "furnish" is used to mean supply and deliver to project site, ready for unloading, unpacking, assembly, installation, etc., as applicable in each instance.

1.15 Except as otherwise defined in greater detail, term "install" is used to describe operations at project site including unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning and similar operations as applicable in each instance.

1.16 Except as otherwise defined in greater detail, term "provide" means furnish and install, complete and ready for intended use, as applicable in each instance.

1.17 An "Installer" is the entity, person or firm, engaged by the Contractor or his subcontractor or sub-subcontractor for the performance of a particular unit of work at the project site, including installation, erection, application and similar required operation. It is a general requirement that such installers be expert in operations they are engaged to perform.

1.18 The duties and obligations of the Contract apply to this Contractor (as defined herein) regardless of similar or identical duties or obligations of other Prime Contractors related to the Project. Therefore, even though other Prime Contractors

may have similar, identical or overlapping duties and obligations, each and every duty and obligation set forth in this Contract is enforceable against this Contractor.

2. BIDDER'S REPRESENTATION

2.1 Each Bidder in submitting its bid represents that:

1. It has read and understands the Bidding Documents and its Bid is made in accordance therewith.

2. Contractor has visited the site; familiarized himself with the local conditions under which the work is to be performed; compared the site with drawings and specifications; satisfied himself of the conditions of delivery, handling and storage of materials and all other matters that may be incidental to the Work before submitting his Bid.

3. Its Bid is based upon the materials and equipment described within the Bidding Documents without exceptions.

2.2 EVIDENCE OF REPRESENTATION

1. Submission of a Bid will be considered as evidence of the bidder's representation. No allowance will subsequently be made to the successful contractor by reason of any error omission on his part, due to his neglect in complying with the requirements of this article.

3. BIDDING DOCUMENTS

3.1 ISSUANCE

1. The drawings and specifications of preceding bid packages may not be issued with the drawings and specifications of this bid package but are included by reference in the Table of Contents. Contractors bidding on work in this bid package are responsible for knowing what work has preceded this bid package and how it affects its work. In order to assist contractors in this effort, the contract documents from preceding or simultaneous bid packages will be available for review at the Construction Manager's FTP site; bids.ediscompany.com. Bidders requesting the log on information may obtain user name and password permission by contacting Jackie McKee with EDiS Company at **jmckee@ediscompany.com**. Bidding documents will be made available to qualified bidders only. Contractors are advised that no change orders will be allowed that are based on ignorance of work assigned in preceding or simultaneous bid packages.

2. Bidding Documents will not be issued to subcontractors or other individuals or organizations who will not be contracting directly with the Owner.

3. The complete set of Bidding Documents shall be used in preparing bids; neither the Owner, the Architect nor the Construction Manager assume any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

4. The Owner, Architect, and the Construction Manager, in making copies of Bidding Documents available on the above terms, do so only for the purpose of obtaining bids on the Work and do not confer a license or grant for any other use.

3.2 INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS

1. Bidders shall examine the Bidding Documents carefully and shall promptly notify the Construction Manager of any ambiguity, inconsistency or error which they may discover. No request for adjustment of Contract Time or Sum shall be permitted with regard to any purported ambiguity, inconsistency or error not promptly noticed to the Construction Manager.

2. Bidders requiring clarification or interpretation of the Bidding Documents shall make a written request to the Construction Manager to reach him at least seven days prior to the date of receipt of bids.

3. Any interpretation, correction or change of the Bidding Documents will be made by Addendum. Interpretations, corrections, or changes of the Bidding Documents made in any other manner will not be binding, and Bidders shall not rely upon such interpretations, corrections, and changes.

3.3 SUBSTITUTIONS

1. Refer to Specification Section 016200 - MATERIAL AND EQUIPMENT.

2. Substitution requests must be made at least seven (7) days prior to the receipt of bids.

3.4 ADDENDA

1. Addenda will be emailed to each person or firm recorded by the Construction Manager as having received a complete set of the Bidding Documents, and will be available for inspection on the EDiS FTP site and wherever the Bidding Documents are kept available for that purpose.

2. Addenda issued during the time of bidding shall be listed on Bid form in the space provided. Failure of a Bidder to receive any Addendum shall not release the Bidder from any obligations under his Bid, provided said addendum was sent by e-mail to the address furnished by the bidder for transmittal of mail.
3. No Addenda will be issued later than three (3) days prior to the date for receipt of Bids, except an Addendum withdrawing the request for Bids or one which extends the time or changes the location for the opening of Bids.

4. BIDDING PROCEDURE

4.1 FORM AND STYLE OF BIDS

1. Bids shall be submitted in triplicate upon the proposal form included in these specifications, or upon an exact copy of it.

2. The Bidder shall complete all blank spaces on the Bid form.

3. Where indicated on the Bid form, sums shall be expressed in both words and figures. In case of discrepancy between the two, the written amount shall govern.

4. Any interlineation, alteration or erasure of an entry made in a blank space of the form must be initialed by the signer of the Bid. However, no interlineation, alteration or erasure shall be made in the wording printed on the bid form unless the Bidder is instructed by the Bidding Documents to do so. The Bidders shall add no stipulations or qualifications on the Bid form or accompanying the bid form unless permitted by or instructed by the Bidding Documents to do so.

5. All requested quantities, unit prices and alternates shall be included as part of the bid.

6. All signatures shall be in long hand.

7. The Bidder shall include on the Bid Form, within the Base Bid total costs associated with providing both the Labor and Material Payment and Performance Bonds.

8. The Bidder shall affix his seal to the bid form, if organized as a corporation.

4.2 SUBMISSION OF BIDS

1. Bids shall be deposited at the designated location prior to the time and date for receipt of Bids indicated in the Invitation to Bid, or any extension thereof made

by Addendum. The time and location of the bid opening may be extended with a minimum of two (2) calendar days notice to the Bidders. Bids received after the time and date for receipt of Bids will be marked "LATE BID" and returned.

2. The Bid Proposal (3 copies) shall be enclosed in a sealed envelope. The envelope shall be addressed to the Owner, and shall be identified with the Project name, the Bidder's name and address and the Unit of Work included in the Bid.

3. If the Bidder submits his Bid by mail, he shall enclose the above described sealed envelope in a separate mailing envelope with the notation "BID ENCLOSED' on the face thereof.

4. Bids shall include a fully executed Bid Bond, Power of Attorney, Non-collusion Statement, Consent of Surety and Subcontractor listing.

4.3 MODIFICATION OR WITHDRAWAL OF BID

1. A Bidder may modify his Bid in writing at any time prior to the time scheduled for receiving Bids, provided such written modification is received by the Construction Manager prior to said time.

2. Unless specifically authorized, faxed bids will not be considered.

3. No Bidder shall modify, withdraw or cancel his Bid or any part thereof for NINETY (90) days after the time designed for the receipt of Bids, in the Invitation to Bid. Any further extension of the time will be by mutual consent of the Owner and the Contractor.

4. A Bid may be withdrawn up until the time scheduled for receiving the Bids. Such withdrawal shall be in writing.

5. CONSIDERATIONS OF BIDS

5.1 OPENING OF BIDS

1. Bid shall be publicly opened and read aloud.

5.2 REJECTION OF BIDS

1. The Owner, in its sole discretion, shall have the right to reject any or all bids for any reason or for no reason whatsoever.

5.3 ACCEPTANCE OF BIDS

1. The Owner, in its sole discretion, shall have the right to waive any informality or irregularity in any Bid received.

2. The Owner shall have the right to accept Alternates in any order or combination.

6. SUBCONTRACT INFORMATION

6.1 SUBMISSION OF SUBCONTRACTOR LIST

1. Should the Contractor fail to utilize any or all of the Subcontractors in the Contractor's Bid statement in the performance of the Work on the public bidding, the Contractor shall be penalized in the amount of (project specific amount *). The Agency may determine to deduct payment of the penalty from the Contractor or have the amount paid directly to the Agency. Any penalty amount assessed against the Contractor may be remitted or refunded, in whole or in part, by the Agency awarding the Contract, only if it is established to the satisfaction of the Agency that the Subcontractor in question has defaulted or is no longer engaged in such business. No claim for the remission or refund of any penalty shall be granted unless an application is filed within one year after the liability of the successful Bidder accrues. All penalty amounts assessed and not refunded or remitted to the Contractor shall be reverted to the State.

* one (1) percent of the contract amount not to exceed $10,000.

2. Upon request of the Construction Manager, the Bidder shall within seven (7) days of the request submit a list of the other subcontractors or other persons or organizations (including those who are to furnish materials or equipment fabricated to a special design) if any, proposed for the various portions of the Work not included in the subcontractors list submitted with the bid.

3. The Bidder will be required to establish to the satisfaction of the Construction Manager the capability and experience of all proposed subcontractors to furnish and perform the work described in the sections of the specifications pertaining to such proposed subcontractor's respective trades.

4. Subcontractors and other persons and organizations proposed by the Bidder and accepted by the Owner must be used on the work for which they were proposed and accepted, and shall not be changed except with the written approval of the Construction Manager.

7. EQUALITY OF EMPLOYMENT OPPORTUNITY ON PUBLIC WORKS

During the performance of this Contract, the Contractor agrees as follows:

7.1 The Contractor will not discriminate against any employee or applicant for employment because of race, creed, color, sex or national origin. The Contractor will take affirmative action to ensure the applicants are employed, and that employees are treated during employment, without regard to their race, creed, color, sex or national origin. Such action shall include, but not be limited to, the following: Employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training including apprenticeship. The Contractor agrees to post in conspicuous places available to employees and applicants for employment notices to be provided by the contracting agency setting forth this nondiscrimination clause.

7.2 The Contractor will, in all solicitants or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, creed, color sex, or national origin.

7.3 The term "Contract for public works" means construction, reconstruction, demolition, alteration and repair work and maintenance work paid for, in whole or in part, with public funds.

7.4 The Secretary of the Department of Labor shall be responsible for the administration of this section and shall adopt such rules and regulations and issue such orders as he deems necessary to achieve the purpose thereof, provided that no requirement established herby shall be in conflict with subchapter 6904 of this title.

8. PREVAILING WAGE REQUIREMENT

8.1 Wage Provisions: In accordance with Delaware Code, Title 29, Section 6960, renovation projects whose total cost shall exceed $15,000 and $100,000 for new construction, the minimum wage rates for various classes of laborers and mechanics shall be as determined by the Department of Labor, Division of Industrial Affairs of the State of Delaware.

8.2 The prevailing wage shall be the wage paid to a majority of employees performing similar work as reported in the Department's annual prevailing wage survey or in the absence of a majority, the average paid to all employees reported.

8.3 The Contractor shall pay all mechanics and labors employed directly upon the site of work, unconditionally and not less often than once a week and without

subsequent deduction or rebate on any account the full amounts accrued at time of payment, computed at wage rates not less than those stated in the specifications, regardless of any contractual relationship which may be alleged to exist between the employer and such laborers and mechanics.

8.4 The scale of the wages to be paid shall be posted by the employer in a prominent and easily accessible place at the site of the work.

8.5 Every contract based upon these specifications shall contain a stipulation that certified sworn payroll reports be maintained by every Contractor and Subcontractor performing work upon the site of construction. The Contractor and Subcontractor shall keep and maintain the sworn payroll information for a period of 2 years from the last day of the work week covered by the payroll. A certified copy of these payroll reports shall be made available: 1) Effective June 30, 2007, all Contractors performing work on public work projects are required to furnish sworn payroll records on a weekly basis to the Department of Labor. Specifically, 29 Del. C. § 6960(c) states that "(e)very contract… shall contain a stipulation that sworn payroll information, as required by the Department of Labor, be furnished weekly." Further, that "(t)he Department of Labor shall keep and maintain the sworn payroll information for a period of 6 months from the last day of the work week covered by the payroll." Lastly, the failure to submit payroll reports shall be subject to a civil penalty of not less than $1,000 nor more than $5,000 for each violation. 29 Del. C. § 6960(e). Sworn payroll information shall consist of a fully completed and notarized report on a form provided upon request by the Department of Labor. *See* Delaware Prevailing Wage Regulations VII A.2(c)"; 2) upon request by the public or for copies thereof. However, a request by the public must be made through the Department of Labor. The requesting party shall, prior to being provided the records, reimburse the costs of preparation by the Department of Labor in accordance with the Department's copying fee policy. The public shall not be given access to the records at the principal office of the Contractor or Subcontractor; and 3) the certified payroll records shall be on a form provided by the Department of Labor or shall contain the same information as the form provided by the Department and shall be provided within 10 days from receipt of notice requesting the records from the Department of Labor.

## 9. PERFORMANCE AND PAYMENT BONDS

9.1 The Contractor shall be required to furnish bonds covering the faithful performance of the contract and the payment of all obligations arising thereunder with such sureties secured through the Bidder's usual sources as may be agreeable to the parties. The Owner shall be noted as the obligee. Owner = Red Clay Consolidated School District.

9.2 The performance and payment bonds shall each be in an amount equal to 100% of the Contract Sum as adjusted from time to time. The Owner shall be noted as the

obligee. Owner = Red Clay Consolidated School District.

9.3 TIME OF DELIVERY AND FORM OF BONDS

1. The Bidder shall deliver the required bonds within seven (7) days from receipt of request from the Construction Manager.

2. The performance and payment bonds shall be written in the form found in Section 00600 Bonds.

3. The required bonds shall be by an authorized agent of the bonding company and shall be accompanied by a certified and current copy of the bonding agent's Power of Attorney, indicating the monetary limit of such power. The bonding company shall be licensed to operate in the state which the work is to be performed.

10. EXECUTION OF AGREEMENT

10.1 The Agreement will be written on a contract form, stipulated by the Owner, a copy of which is included in the Specifications.

10.2 The Bidder shall, within seven (7) days following its presentation, execute the Agreement and return it to the Construction Manager.

10.3 The Bidder agrees to commence work within seven (7) days of 1) execution of the Agreement, or 2) receipt of a Letter of Intent to execute the Agreement, or other authorization to proceed, if furnished at an earlier date.

10.4 If the successful Bidder fails to execute the required Contract and Bond, as aforesaid, within twenty (20) days after the date of official Notice of the Award of the Contract, their Bid guaranty shall immediately be taken and become the property of the State for the benefit of the Agency as liquidated damages, and not as a forfeiture or as a penalty. Award will then be made to the next lowest qualified Bidder of the Work or readvertised, as the Agency may decide.

11. GENERAL COMMENTS

11.1 JOINT VENTURE AGREEMENTS

In the event of a mandatory pre-bid meeting, representatives of both Joint Ventures must attend the pre-bid meeting and must be an officer and co-joint venture of the corporations involved.

Each Joint Venture shall be qualified and capable to complete the project with their

own forces.

Included with the bid submission, and as a requirement to bid, a copy of the executed Joint Venture Agreement shall be submitted and signed by all Joint Ventures involved.

All required bid bonds, performance bonds, material and labor payment bonds must be executed by both Joint Ventures and be placed in both of their names.

All required insurance certificates shall name both Joint Ventures.

Both Joint Ventures shall sign the bid form and shall submit a valid Delaware Business License Number with their bid or shall state that the process of application for a Delaware Business License has been initiated.

Both Joint Ventures shall include their Federal E. I. Number with the bid.

Due to exceptional circumstances and for good cause shown, one or more of these provisions may be waived at the discretion of the Owner.

11.2 LICENSE APPLICATION REQUIRED TO BID

A business license application must be initiated prior to or in conjunction with the submission of a bid on competitively bid contracts exceeding $50,000; or in the case of a subcontractor, prior to the submission of a bid by the general contractor. The license application procedure may be initiated by visiting or calling the Division of Revenue.

11.3 BONDING REQUIREMENTS FOR NON-RESIDENT CONTRACTORS

All non-resident contractors are reminded that they must supply a surety or cash bond to the Division of Revenue equal to six percent (6%) of the total of all contracts exceeding $20,000 for construction within this state. For Division of Revenue purposes, cash bonds and bank letters of credit issued by financial institutions will be accepted on all contracts.

11.4 CONTRACT AWARD TO NON-RESIDENT CONTRACTORS

Every architect, or professional engineer or contractor or construction manager engaging in the practice of such profession shall furnish the Department of Finance within 10 days after entering into any contract with a contractor or subcontractor not a resident of this State, a statement of the total value of such contract or contracts together with the names and addresses of the contracting parties.

11.5 STATE LICENSE AND TAX REQUIREMENTS

The Contractor and Subcontractor shall be licensed to do business in the State of Delaware and shall pay al fees and taxes due under State laws. In conformance with Section 2503, Chapter 25, Title 30, Delaware Code, "the Contractor shall furnish the State Tax Department within ten (10) days after award of the Contract, a statement of the total values of each contract and subcontract, together with the names and addresses of the contracting parties. All Contractors are required to submit a copy of their New Castle County business license to the Construction Manager.

11.6 RIGHT TO AUDIT RECORDS

The Owner (contracting agency) shall have the right to audit the books and records of a Contractor or any Subcontractor under any Contract or Subcontract to the extent that the books and records relate to the performance of the Contract or Subcontract.

Said books and records shall be maintained by the Contractor for a period of three (3) years from the date of final payment under the Prime Contract and by the Subcontractor for a period of three (3) years from the date of final payment under the Subcontract.

11.7 PREQUALIFICATION

Not Applicable

11.8 LIQUIDATED DAMAGES

Contractors shall be held liable for liquidated damages if work is not completed prior to the completion date of each phase. Details regarding liquidated damages can be found in Specification Section 011100-6.33.

11.9 PREFERENCE FOR DELAWARE LABOR

In the construction of all public works for the State or any political subdivision thereof or by firms contracting with the State or any political subdivision thereof, preference in employment of laborers, workers or mechanics shall be given to bona fide legal citizens of the State who have established citizenship by residence of at least 90 days in the State. Each public works contract for the construction of public works for the State or any political subdivision thereof shall contain a stipulation that any persons, company or corporation who violates this section shall pay a penalty to the Secretary of Finance equal to the amount of compensation paid to any person in violation of this section.

END OF SECTION

SECTION 003132 – GEOTECHNICAL DATA

1. GENERAL

1.1 Owner's Disclaimer

A. Site Information: Data on subsurface conditions are made available in the Bidding Documents as a convenience to Bidders and the Contractor. They are not intended as representations or warrants of continuity of such conditions between soil borings. It shall be expressly understood that the Owner will not be responsible for interpretations or conclusions drawn there from by the Contractor. Additional test borings and other exploratory operations may be made by the Contractor at no additional cost to the Owner, provided such operations are acceptable to the Architect and Construction Manager.

1.2 SOIL BORING DATA

A. Boring logs and location plans are not applicable.

1.3 UTILITY LOCATION DATA

***Contract : A-01 – GLASS & GLAZING***

BID FORM

For Bids Due: _____ To: _____

_____

_____

Name of Bidder: _____

Bidder Address: _____

_____

Contact Name: _____ E-Mail Address: _____

Delaware Business License No.:_____ Taxpayer ID No.: _____

(Other License Nos.): _____

**(A copy of Bidder's Delaware Business License must be attached to this form.)**

Phone No.: ( ) _____ - _____ Fax No.: ( ) _____ - _____

The undersigned, representing that he has read and understands the Bidding Documents and that this bid is made in accordance therewith, that he has visited the site and has familiarized himself with the local conditions under which the Work is to be performed, and that his bid is based upon the materials, systems and equipment described in the Bidding Documents without exception, hereby proposes and agrees to provide all labor, materials, plant, equipment, supplies, transport and other facilities required to execute the work described by the aforesaid documents for the lump sum itemized below:

$_____ ($_____ )

ALTERNATES

Alternate prices conform to applicable project specification section. Refer to specifications for a complete description of the following Alternates. An "ADD" or "DEDUCT" amount is indicated by the crossed out part that does not apply.

1. Base Bid shall be completed during normal work hours, which for this project are from 7:00 p.m. to 3:30 p.m. Alternate #1 is for additional cost to be completed during 2nd shift. The Second Shift work will be scheduled from 2:30 pm to 11:00 pm.

Add/Deduct _____($_____)

UNIT PRICES: NONE

Unit Prices _____($_____)

NOTE: The difference in price between Add and Deduct in the above Unit Prices should not exceed ten percent (10%).

I/We acknowledge Addendums numbered _____ and the price(s) submitted include any cost/schedule impact they may have.

This bid shall remain valid and cannot be withdrawn for sixty (90) days (Project Manager's Note: Verify and coordinate with Section 00100 Instruction to Bidders.) from the date of opening of bids, and the undersigned shall abide by the Bid Security forfeiture provisions. Bid Security is attached to this Bid (if required).

The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.

This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

I am / We are an Individual / a Partnership / a Corporation

By _____ Trading as _____
(Individual's / General Partner's / Corporate Name)

_____
(State of Corporation)

Business Address:_____
_____
_____
_____

Witness: _____ By: _____
( Authorized Signature )

(SEAL)

_____
( Title )

Date: _____

ATTACHMENTS

Sub-Contractor List
Non-Collusion Statement
Bid Bond
Consent of Surety
(Others as Required by Project Manuals)

## SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b Delaware Code, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor must be listed for each category where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the Owner, **it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.**

| Subcontractor Category | Subcontractor | Address (City & State) | **Subcontractors tax payer ID # or Delaware Business license #** |
|---|---|---|---|
| 1. Window Supplier | | | |
| 2. Demolition | | | |
| 3. Caulker | | | |

NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date _____.

All the terms and conditions of Contract: _____ have been thoroughly examined and are understood.

NAME OF BIDDER: _____

AUTHORIZED REPRESENTATIVE (TYPED): _____

AUTHORIZED REPRESENTATIVE (SIGNATURE): _____

TITLE: _____

ADDRESS OF BIDDER: _____

_____

_____

PHONE NUMBER: _____

Sworn to and Subscribed before me this _____ day of _____ 20_____.

My Commission expires _____. NOTARY PUBLIC _____.

THIS PAGE MUST BE SIGNED AND NOTARIZED FOR YOUR BID TO BE CONSIDERED.

**BID BOND**

TO ACCOMPANY PROPOSAL
(Not necessary if security is used)

KNOW ALL MEN BY THESE PRESENTS That: _____of _____in the County of _____ and State of _____ as Principal, and _____of _____in the County of _____ _____ and State of _____ as Surety, legally authorized to do business in the State of Delaware ('State"), are held and firmly unto the _____ in the sum of _____ _____ Dollars (S_____), or percent not to exceed _____ _____ Dollars (S_____) of amount of bid on Contract No. _____ to be paid to the _____ for the use and benefit of the _____ for which payment well and truly to be made, we do bind ourselves, our and each of our heirs, executors, administrators. and successors, jointly and severally for and in the whole firmly by these presents.

NOW THE CONDITION OF THIS OBLIGATION IS SUCH That if the above bounden Principal who has submitted to the _____ a certain proposal to enter into this contract for the furnishing of certain material and/or services within the State, shall be awarded this Contract, and if said Principal shall well and truly enter into and execute this Contract as may be required by the terms of this Contract and approved by _____ this Contract to be entered into within twenty days after the date of official notice of the award thereof in accordance with the terms of said proposal, then this obligation shall be void or else to be and remain in full force and virtue.

Sealed with _____seal and dated this____day of _____in the year of our Lord two thousand and _____(20__).

SEALED, AND DELIVERED IN THE PRESENCE OF

_____
Name of Bidder (Organization)

Corporate Seal

By:_____
Authorized Signature

Attest _____

_____
Title

_____
Name of Surety

Witness_____

_____

_____
Title

CONSENT OF SURETY

DATE_____

To: _____

Gentlemen:

We, the _____

_____
(Surety Company's Address)

_____

a Surety Company authorized to do business in the State of Delaware hereby agrees that if

_____
(Contractor)

_____
(Address)

_____

is awarded the Contract No. _____

We will write the required Performance and/or Labor and Material Bond required by Paragraph 9 of the Instructions to Bidders.

_____
(Surety Company)

By _____
(Attorney-in-Fact)

***Contract : A-01* – Mechanical & Controls**

BID FORM

For Bids Due: _____ To: _____

_____

_____

Name of Bidder: _____

Bidder Address: _____

_____

Contact Name: _____ E-Mail Address: _____

Delaware Business License No.:_____ Taxpayer ID No.: _____

(Other License Nos.): _____

**(A copy of Bidder's Delaware Business License must be attached to this form.)**

Phone No.: ( ) _____ - _____ Fax No.: ( ) _____ - _____

The undersigned, representing that he has read and understands the Bidding Documents and that this bid is made in accordance therewith, that he has visited the site and has familiarized himself with the local conditions under which the Work is to be performed, and that his bid is based upon the materials, systems and equipment described in the Bidding Documents without exception, hereby proposes and agrees to provide all labor, materials, plant, equipment, supplies, transport and other facilities required to execute the work described by the aforesaid documents for the lump sum itemized below:

$_____ ($_____ )

ALTERNATES

Alternate prices conform to applicable project specification section. Refer to specifications for a complete description of the following Alternates. An "ADD" or "DEDUCT" amount is indicated by the crossed out part that does not apply.

1. Base Bid shall be completed during normal work hours, which for this project are from 7:00 p.m. to 3:30 p.m. Alternate #1 is for additional cost to be completed during 2nd shift. The Second Shift work will be scheduled from 2:30 pm to 11:00 pm.

Add/Deduct _____($_____)

UNIT PRICES: NONE

Unit Prices _____($_____)

NOTE: The difference in price between Add and Deduct in the above Unit Prices should not exceed ten percent (10%).

I/We acknowledge Addendums numbered _____ and the price(s) submitted include any cost/schedule impact they may have.

This bid shall remain valid and cannot be withdrawn for sixty (90) days (Project Manager's Note: Verify and coordinate with Section 00100 Instruction to Bidders.) from the date of opening of bids, and the undersigned shall abide by the Bid Security forfeiture provisions. Bid Security is attached to this Bid (if required).

The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.

This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

I am / We are an Individual / a Partnership / a Corporation

By _____ Trading as _____
(Individual's / General Partner's / Corporate Name)

_____
(State of Corporation)

Business Address:_____
_____
_____
_____

Witness: _____ By: _____
( Authorized Signature )

(SEAL)

_____
( Title )

Date: _____

ATTACHMENTS

Sub-Contractor List
Non-Collusion Statement
Bid Bond
Consent of Surety
(Others as Required by Project Manuals)

## SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b Delaware Code, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor must be listed for each category where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the Owner, **it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.**

| Subcontractor Category | Subcontractor | Address (City & State) | **Subcontractors tax payer ID # or Delaware Business license #** |
|---|---|---|---|
| 1. Mechanical Unit Supplier | _____ | _____ | _____ |
| 2. Demolition Contractor | _____ | _____ | _____ |
| 3. Controls Contractor | _____ | _____ | _____ |
| 4. Plumbing Contractor | _____ | _____ | _____ |

NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date _____.

All the terms and conditions of Contract: _____ have been thoroughly examined and are understood.

NAME OF BIDDER: _____

AUTHORIZED REPRESENTATIVE (TYPED): _____

AUTHORIZED REPRESENTATIVE (SIGNATURE): _____

TITLE: _____

ADDRESS OF BIDDER: _____

_____

_____

PHONE NUMBER: _____

Sworn to and Subscribed before me this _____ day of _____ 20_____.

My Commission expires _____. NOTARY PUBLIC _____.

THIS PAGE MUST BE SIGNED AND NOTARIZED FOR YOUR BID TO BE CONSIDERED.

**BID BOND**

TO ACCOMPANY PROPOSAL
(Not necessary if security is used)

KNOW ALL MEN BY THESE PRESENTS That: _____of _____in the County of _____ and State of _____ as Principal, and _____of _____in the County of _____ _____ and State of _____ as Surety, legally authorized to do business in the State of Delaware ('State"), are held and firmly unto the _____ in the sum of _____ _____ Dollars (S_____), or percent not to exceed _____ _____ Dollars (S_____) of amount of bid on Contract No. _____ to be paid to the _____ for the use and benefit of the _____ for which payment well and truly to be made, we do bind ourselves, our and each of our heirs, executors, administrators. and successors, jointly and severally for and in the whole firmly by these presents.

NOW THE CONDITION OF THIS OBLIGATION IS SUCH That if the above bounden Principal who has submitted to the _____ a certain proposal to enter into this contract for the furnishing of certain material and/or services within the State, shall be awarded this Contract, and if said Principal shall well and truly enter into and execute this Contract as may be required by the terms of this Contract and approved by _____ this Contract to be entered into within twenty days after the date of official notice of the award thereof in accordance with the terms of said proposal, then this obligation shall be void or else to be and remain in full force and virtue.

Sealed with _____seal and dated this____day of _____in the year of our Lord two thousand and _____(20__).

SEALED, AND DELIVERED IN THE PRESENCE OF

_____
Name of Bidder (Organization)

Corporate Seal

By:_____
Authorized Signature

Attest _____

_____
Title

_____
Name of Surety

Witness_____

_____

_____
Title

CONSENT OF SURETY

DATE_____

To: _____

Gentlemen:

We, the _____

_____
(Surety Company's Address)

_____

a Surety Company authorized to do business in the State of Delaware hereby agrees that if

_____
(Contractor)

_____
(Address)

_____

is awarded the Contract No. _____

We will write the required Performance and/or Labor and Material Bond required by Paragraph 9 of the Instructions to Bidders.

_____
(Surety Company)

By _____
(Attorney-in-Fact)

SECTION 005200 - AGREEMENT

1. SUMMARY

1.1. The Agreement Form for this Project is either the American Institute of Architects [Standard Form of Agreement between Owner and Contractor, Construction Manager as Advisor, AIA Document A132 - 2009 Edition]

1.2 A copy of AIA Document [A132 – 2009 Edition] is bound into this Project Manual following this page.

1.2.1 Under Article 5.1.4.5 add the following:

"Upon completion of the work under the Contract, the Owner may release 60% of the amount then retained. The balance of the amount retained will be held until:

A. All reports required of the Contract are received;
B. All Subcontractors in trades listed on the Bid Form are paid by the Contractor, unless the amount owed to the Subcontractor is disputed, in which case the Owner may withhold 150% of the amount withheld by the Contractor in its dispute with the Subcontractor; and
C. Final payment is authorized by the Owner."

END OF SECTION

# AIA® Document A132™ – 2009

## *Standard Form of Agreement Between Owner and Contractor,* *Construction Manager as Adviser Edition*

**AGREEMENT** made as of the day of in the year
*(In words, indicate day, month and year.)*

**BETWEEN** the Owner:
*(Name, legal status, address and other information)*

Red Clay Consolidated School District
1798 Limestone Road
Wilmington, Delaware 19804

and the Contractor:
*(Name, legal status, address and other information)*

for the following Project:
*(Name, location and detailed description)*

Richardson Park Elementary School
16 Idella Avenue
Wilmington, DE 19804

The Construction Manager:
*(Name, legal status, address and other information)*

EDiS Company
110 S. Poplar Street, Suite 400
Wilmington, Delaware 19801

The Architect:
*(Name, legal status, address and other information)*

ABHA Architects
1621 N. Lincoln Street
Wilmington, DE 19806

The Owner and Contractor agree as follows.

**ADDITIONS AND DELETIONS:**
The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

This document is intended to be used in conjunction with AIA Documents A232™–2009, General Conditions of the Contract for Construction, Construction Manager as Adviser Edition; B132™–2009, Standard Form of Agreement Between Owner and Architect, Construction Manager as Adviser Edition; and C132™–2009, Standard Form of Agreement Between Owner and Construction Manager as Adviser.

AIA Document A232™–2009 is adopted in this document by reference. Do not use with other general conditions unless this document is modified.

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TABLE OF ARTICLES

1 THE CONTRACT DOCUMENTS

2 THE WORK OF THIS CONTRACT

3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

4 CONTRACT SUM

5 PAYMENTS

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7 TERMINATION OR SUSPENSION

8 MISCELLANEOUS PROVISIONS

9 ENUMERATION OF CONTRACT DOCUMENTS

10 INSURANCE AND BONDS

EXHIBIT A DETERMINATION OF THE COST OF THE WORK

## ARTICLE 1 THE CONTRACT DOCUMENTS

The Contract Documents consist of this Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement and Modifications issued after execution of this Agreement, all of which form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. An enumeration of the Contract Documents, other than Modifications, appears in Article 9.

## ARTICLE 2 THE WORK OF THIS CONTRACT

The Contractor shall fully execute the Work described in the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others.

## ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ 3.1 The date of commencement of the Work shall be the date of this Agreement unless a different date is stated below or provision is made for the date to be fixed in a notice to proceed issued by the Owner.
*(Insert the date of commencement, if it differs from the date of this Agreement or, if applicable, state that the date will be fixed in a notice to proceed.)*

If, prior to the commencement of the Work, the Owner requires time to file mortgages, mechanics' liens and other security interests, the Owner's time requirement shall be as follows:

§ 3.2 The Contract Time shall be measured from the date of commencement.

§ 3.3 The Contractor shall achieve Substantial Completion of the entire Work not later than ( ) days from the date of commencement, or as follows:
*(Insert number of calendar days. Alternatively, a calendar date may be used when coordinated with the date of commencement. If appropriate, insert requirements for earlier Substantial Completion of certain portions of the Work.)*

Init.
/

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User Notes:



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| Portion of the Work | Substantial Completion Date |
|---|---|

, subject to adjustments of this Contract Time as provided in the Contract Documents.
*(Insert provisions, if any, for liquidated damages relating to failure to achieve Substantial Completion on time or for bonus payments for early completion of the Work.)*

## ARTICLE 4 CONTRACT SUM

**§ 4.1** The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor's performance of the Contract. The Contract Sum shall be one of the following:
*(Check the appropriate box.)*

[ ] Stipulated Sum, in accordance with Section 4.2 below

[ ] Cost of the Work plus the Contractor's Fee without a Guaranteed Maximum Price, in accordance with Section 4.3 below

[ ] Cost of the Work plus the Contractor's Fee with a Guaranteed Maximum Price, in accordance with Section 4.4 below

*(Based on the selection above, complete Section 4.2, 4.3 or 4.4 below. Based on the selection above, also complete either Section 5.1.4, 5.1.5 or 5.1.6 below.)*

### § 4.2 Stipulated Sum

**§ 4.2.1** The Stipulated Sum shall be ($ ), subject to additions and deletions as provided in the Contract Documents.

**§ 4.2.2** The Stipulated Sum is based on the following alternates, if any, which are described in the Contract Documents and are hereby accepted by the Owner:
*(State the numbers or other identification of accepted alternates. If the bidding or proposal documents permit the Owner to accept other alternates subsequent to the execution of this Agreement, attach a schedule of such other alternates showing the amount for each and the date when that amount expires.)*

**§ 4.2.3** Unit prices, if any:
*(Identify and state the unit price, and state the quantity limitations, if any, to which the unit price will be applicable.)*

| Item | Units and Limitations | Price per Unit ($0.00) |
|---|---|---|

**§ 4.2.4** Allowances included in the Stipulated Sum, if any:
*(Identify allowance and state exclusions, if any, from the allowance price.)*

| Item | Allowance |
|---|---|

### § 4.3 Cost of the Work Plus Contractor's Fee without a Guaranteed Maximum Price

**§ 4.3.1** The Contract Sum is the Cost of the Work as defined in Exhibit A, Determination of the Cost of the Work, plus the Contractor's Fee.

**§ 4.3.2** The Contractor's Fee:

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(1248093770)

*(State a lump sum, percentage of Cost of the Work or other provision for determining the Contractor's Fee.)*

§ **4.3.3** The method of adjustment of the Contractor's Fee for changes in the Work:

§ **4.3.4** Limitations, if any, on a Subcontractor's overhead and profit for increases in the cost of its portion of the Work:

§ **4.3.5** Rental rates for Contractor-owned equipment shall not exceed percent ( %) of the standard rate paid at the place of the Project.

§ **4.3.6** Unit prices, if any:
*(Identify and state the unit price; state quantity limitations, if any, to which the unit price will be applicable.)*

| Item | Units and Limitations | Price per Unit ($0.00) |
|---|---|---|

§ **4.3.7** The Contractor shall prepare and submit to the Construction Manager for the Owner, in writing, a Control Estimate within 14 days of executing this Agreement. The Control Estimate shall include the items in Section A.1 of Exhibit A, Determination of the Cost of the Work.

**§ 4.4 Cost of the Work Plus Contractor's Fee with a Guaranteed Maximum Price**
§ **4.4.1** The Contract Sum is the Cost of the Work as defined in Exhibit A, Determination of the Cost of the Work, plus the Contractor's Fee.

§ **4.4.2** The Contractor's Fee:
*(State a lump sum, percentage of Cost of the Work or other provision for determining the Contractor's Fee.)*

§ **4.4.3** The method of adjustment of the Contractor's Fee for changes in the Work:

§ **4.4.4** Limitations, if any, on a Subcontractor's overhead and profit for increases in the cost of its portion of the Work:

§ **4.4.5** Rental rates for Contractor-owned equipment shall not exceed percent ( %) of the standard rate paid at the place of the Project.

§ **4.4.6** Unit Prices, if any:
*(Identify and state the unit price, and state the quantity limitations, if any, to which the unit price will be applicable.)*

| Item | Units and Limitations | Price per Unit ($0.00) |
|---|---|---|

**§ 4.4.7 Guaranteed Maximum Price**
§ **4.4.7.1** The sum of the Cost of the Work and the Contractor's Fee is guaranteed by the Contractor not to exceed ($ ), subject to additions and deductions by changes in the Work as provided in the Contract Documents. Such maximum sum is referred to in the Contract Documents as the Guaranteed Maximum Price. Costs which would


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**User Notes:** (1248093770)

cause the Guaranteed Maximum Price to be exceeded shall be paid by the Contractor without reimbursement by the Owner.
*(Insert specific provisions if the Contractor is to participate in any savings.)*

§ **4.4.7.2** The Guaranteed Maximum Price is based on the following alternates, if any, which are described in the Contract Documents and are hereby accepted by the Owner:

§ **4.4.7.3** Allowances included in the Guaranteed Maximum Price, if any:
*(Identify and state the amounts of any allowances, and state whether they include labor, materials, or both.)*

| Item | Allowance |
|---|---|

§ **4.4.7.4** Assumptions, if any, on which the Guaranteed Maximum Price is based:

## ARTICLE 5 PAYMENTS

### § 5.1 Progress Payments

§ **5.1.1** Based upon Applications for Payment submitted to the Construction Manager by the Contractor, and upon certification of the Project Application and Project Certificate for Payment or Application for Payment and Certificate for Payment by the Construction Manager and Architect and issuance by the Architect, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

§ **5.1.2** The period covered by each Application for Payment shall be one calendar month ending on the last day of the month, or as follows:

§ **5.1.3** Provided that an Application for Payment is received by the Construction Manager not later than the day of a month, the Owner shall make payment of the certified amount in the Application for Payment to the Contractor not later than the day of the month. If an Application for Payment is received by the Construction Manager after the application date fixed above, payment shall be made by the Owner not later than ( ) days after the Construction Manager receives the Application for Payment.
*(Federal, state or local laws may require payment within a certain period of time.)*

### § 5.1.4 Progress Payments Where the Contract Sum is Based on a Stipulated Sum

§ **5.1.4.1** Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of the Work and be prepared in such form and supported by such data to substantiate its accuracy as the Construction Manager and Architect may require. This schedule, unless objected to by the Construction Manager or Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ **5.1.4.2** Applications for Payment shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment.

§ **5.1.4.3** Subject to the provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

.1 Take that portion of the Contract Sum properly allocable to completed Work as determined by multiplying the percentage completion of each portion of the Work by the share of the total Contract Sum allocated to that portion of the Work in the schedule of values, less retainage of percent (

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(1248093770)

%). Pending final determination of cost to the Owner of changes in the Work, amounts not in dispute may be included as provided in Section 7.3.9 of the General Conditions;

.2 Add that portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction (or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing), less retainage of percent ( %);

.3 Subtract the aggregate of previous payments made by the Owner; and

.4 Subtract amounts, if any, for which the Construction Manager or Architect has withheld or nullified a Certificate for Payment as provided in Section 9.5 of the General Conditions.

**§ 5.1.4.4** The progress payment amount determined in accordance with Section 5.1.4.3 shall be further modified under the following circumstances:

.1 Add, upon Substantial Completion of the Work, a sum sufficient to increase the total payments to percent ( %) of the Contract Sum, less such amounts as the Construction Manager recommends and the Architect determines for incomplete Work and unsettled claims; and

.2 Add, if final completion of the Work is thereafter materially delayed through no fault of the Contractor, any additional amounts payable in accordance with Section 9.10.3 of the General Conditions.

**§ 5.1.4.5** Reduction or limitation of retainage, if any, shall be as follows:
*(If it is intended, prior to Substantial Completion of the entire Work, to reduce or limit the retainage resulting from the percentages inserted in Sections 5.1.4.3.1 and 5.1.4.3.2 above, and this is not explained elsewhere in the Contract Documents, insert here provisions for such reduction or limitation.)*

**§ 5.1.5 Progress Payments Where the Contract Sum is Based on the Cost of the Work without a Guaranteed Maximum Price**

**§ 5.1.5.1** With each Application for Payment, the Contractor shall submit the cost control information required in Exhibit A, Determination of the Cost of the Work, along with payrolls, petty cash accounts, receipted invoices or invoices with check vouchers attached and any other evidence required by the Owner, Construction Manager or Architect to demonstrate that cash disbursements already made by the Contractor on account of the Cost of the Work equal or exceed (1) progress payments already received by the Contractor; less (2) that portion of those payments attributable to the Contractor's Fee; plus (3) payrolls for the period covered by the present Application for Payment.

**§ 5.1.5.2** Applications for Payment shall show the Cost of the Work actually incurred by the Contractor through the end of the period covered by the Application for Payment and for which the Contractor has made or intends to make actual payment prior to the next Application for Payment.

**§ 5.1.5.3** Subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

.1 Take the Cost of the Work as described in Exhibit A, Determination of the Cost of the Work;

.2 Add the Contractor's Fee, less retainage of percent ( %). The Contractor's Fee shall be computed upon the Cost of the Work described in that Section at the rate stated in that Section; or if the Contractor's Fee is stated as a fixed sum, an amount which bears the same ratio to that fixed-sum Fee as the Cost of the Work bears to a reasonable estimate of the probable Cost of the Work upon its completion;

.3 Subtract retainage of percent ( %) from that portion of the Work that the Contractor self-performs;

.4 Subtract the aggregate of previous payments made by the Owner;

.5 Subtract the shortfall, if any, indicated by the Contractor in the documentation required by Article 5 or resulting from errors subsequently discovered by the Owner's auditors in such documentation; and

.6 Subtract amounts, if any, for which the Construction Manager or Architect has withheld or withdrawn a Certificate for Payment as provided in Section 9.5 of AIA Document A232™–2009, General Conditions of the Contract for Construction, Construction Manager as Adviser Edition.


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§ **5.1.5.4** The Owner, Construction Manager and Contractor shall agree upon (1) a mutually acceptable procedure for review and approval of payments to Subcontractors and (2) the percentage of retainage held on Subcontracts, and the Contractor shall execute subcontracts in accordance with those agreements.

§ **5.1.5.5** In taking action on the Contractor's Applications for Payment, the Construction Manager and Architect shall be entitled to rely on the accuracy and completeness of the information furnished by the Contractor and shall not be deemed to represent that the Construction Manager and Architect have made a detailed examination, audit or arithmetic verification of the documentation submitted in accordance with Article 5 or other supporting data; that the Construction Manager and Architect have made exhaustive or continuous on-site inspections; or that the Construction Manager and Architect have made examinations to ascertain how or for what purposes the Contractor has used amounts previously paid on account of the Contract. Such examinations, audits and verifications, if required by the Owner, will be performed by the Owner's auditors acting in the sole interest of the Owner.

§ **5.1.5.6** Except with the Owner's prior approval, the Contractor shall not make advance payments to suppliers for materials or equipment which have not been delivered and stored at the site.

**§ 5.1.6 Progress Payments Where the Contract Sum is Based on the Cost of the Work with a Guaranteed Maximum Price**

§ **5.1.6.1** With each Application for Payment, the Contractor shall submit payrolls, petty cash accounts, receipted invoices or invoices with check vouchers attached, and any other evidence required by the Owner or Architect to demonstrate that cash disbursements already made by the Contractor on account of the Cost of the Work equal or exceed (1) progress payments already received by the Contractor; less (2) that portion of those payments attributable to the Contractor's Fee; plus (3) payrolls for the period covered by the present Application for Payment.

§ **5.1.6.2** Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of the Work and be prepared in such form and supported by such data to substantiate its accuracy as the Construction Manager and Architect may require. This schedule, unless objected to by the Construction Manager or Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ **5.1.6.3** Applications for Payment shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment. The percentage of completion shall be the lesser of (1) the percentage of that portion of the Work which has actually been completed; or (2) the percentage obtained by dividing (a) the expense that has actually been incurred by the Contractor on account of that portion of the Work for which the Contractor has made or intends to make actual payment prior to the next Application for Payment by (b) the share of the Guaranteed Maximum Price allocated to that portion of the Work in the schedule of values.

§ **5.1.6.4** Subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

.1 Take that portion of the Guaranteed Maximum Price properly allocable to completed Work as determined by multiplying the percentage of completion of each portion of the Work by the share of the Guaranteed Maximum Price allocated to that portion of the Work in the schedule of values. Pending final determination of cost to the Owner of changes in the Work, amounts not in dispute shall be included as provided in Section 7.3.10 of AIA Document A232–2009;

.2 Add that portion of the Guaranteed Maximum Price properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work, or if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing;

.3 Add the Contractor's Fee, less retainage of percent ( %). The Contractor's Fee shall be computed upon the Cost of the Work at the rate stated in Section 4.4.2 or, if the Contractor's Fee is stated as a fixed sum in that Section, shall be an amount that bears the same ratio to that fixed-sum fee as the Cost of the Work bears to a reasonable estimate of the probable Cost of the Work upon its completion;

.4 Subtract retainage of percent ( %) from that portion of the Work that the Contractor self-performs;

.5 Subtract the aggregate of previous payments made by the Owner;


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.6 Subtract the shortfall, if any, indicated by the Contractor in the documentation required by Section 5.1.6.1 to substantiate prior Applications for Payment, or resulting from errors subsequently discovered by the Owner's auditors in such documentation; and

.7 Subtract amounts, if any, for which the Construction Manager or Architect have withheld or nullified a Certificate for Payment as provided in Section 9.5 of AIA Document A232–2009.

**§ 5.1.6.5** The Owner and the Contractor shall agree upon a (1) mutually acceptable procedure for review and approval of payments to Subcontractors and (2) the percentage of retainage held on Subcontracts, and the Contractor shall execute subcontracts in accordance with those agreements.

**§ 5.1.6.6** In taking action on the Contractor's Applications for Payment, the Construction Manager and Architect shall be entitled to rely on the accuracy and completeness of the information furnished by the Contractor and shall not be deemed to represent that the Construction Manager or Architect have made a detailed examination, audit or arithmetic verification of the documentation submitted in accordance with Section 5.1.6.1 or other supporting data; that the Construction Manager or Architect have made exhaustive or continuous on-site inspections; or that the Construction Manager or Architect have made examinations to ascertain how or for what purposes the Contractor has used amounts previously paid on account of the Contract. Such examinations, audits and verifications, if required by the Owner, will be performed by the Owner's auditors acting in the sole interest of the Owner.

**§ 5.1.6.7** Except with the Owner's prior approval, the Contractor shall not make advance payments to suppliers for materials or equipment which have not been delivered and stored at the site.

### § 5.2 Final Payment

**§ 5.2.1** Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when

.1 the Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Section 12.2 of AIA Document A232–2009, and to satisfy other requirements, if any, which extend beyond final payment;

.2 the Contractor has submitted a final accounting for the Cost of the Work, pursuant to Exhibit A, Determination of the Cost of the Work when payment is on the basis of the Cost of the Work, with or without a Guaranteed Maximum payment; and

.3 a final Certificate for Payment or Project Certificate for Payment has been issued by the Architect; such final payment shall be made by the Owner not more than 30 days after the issuance of the final Certificate for Payment or Project Certificate for Payment, or as follows:

## ARTICLE 6 DISPUTE RESOLUTION

### § 6.1 Initial Decision Maker

The Architect will serve as Initial Decision Maker pursuant to Section 15.2 of AIA Document A232–2009, unless the parties appoint below another individual, not a party to this Agreement, to serve as Initial Decision Maker.
*(If the parties mutually agree, insert the name, address and other contact information of the Initial Decision Maker, if other than the Architect.)*

### § 6.2 Binding Dispute Resolution

For any Claim subject to, but not resolved by, mediation pursuant to Section 15.3 of AIA Document A232–2009, the method of binding dispute resolution shall be as follows:
*(Check the appropriate box. If the Owner and Contractor do not select a method of binding dispute resolution below, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, Claims will be resolved by litigation in a court of competent jurisdiction.)*

[ ] Arbitration pursuant to Section 15.4 of AIA Document A232–2009.

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[ ] Litigation in a court of competent jurisdiction.

[ ] Other: *(Specify)*

## ARTICLE 7 TERMINATION OR SUSPENSION

**§ 7.1 Where the Contract Sum is a Stipulated Sum**

**§ 7.1.1** The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A232–2009.

**§ 7.1.2** The Work may be suspended by the Owner as provided in Article 14 of AIA Document A232–2009.

**§ 7.2**
**Where the Contract Sum is Based on the Cost of the Work with or without a Guaranteed Maximum Price**

**§ 7.2.1** Subject to the provisions of Section 7.2.2 below, the Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A232–2009.

**§ 7.2.2** The Contract may be terminated by the Owner for cause as provided in Article 14 of AIA Document A232–2009; however, the Owner shall then only pay the Contractor an amount calculated as follows:

.1 Take the Cost of the Work incurred by the Contractor to the date of termination;

.2 Add the Contractor's Fee computed upon the Cost of the Work to the date of termination at the rate stated in Sections 4.3.2 or 4.4.2, as applicable, or, if the Contractor's Fee is stated as a fixed sum, an amount that bears the same ratio to that fixed-sum Fee as the Cost of the Work at the time of termination bears to a reasonable estimate of the probable Cost of the Work upon its completion; and

.3 Subtract the aggregate of previous payments made by the Owner.

**§ 7.2.3** If the Owner terminates the Contract for cause when the Contract Sum is based on the Cost of the Work with a Guaranteed Maximum Price, and as provided in Article 14 of AIA Document A232–2009, the amount, if any, to be paid to the Contractor under Section 14.2.4 of AIA Document A232–2009 shall not cause the Guaranteed Maximum Price to be exceeded, nor shall it exceed the amount calculated in Section 7.2.2.

**§ 7.2.4** The Owner shall also pay the Contractor fair compensation, either by purchase or rental at the election of the Owner, for any equipment owned by the Contractor that the Owner elects to retain and that is not otherwise included in the Cost of the Work under Section 7.2.1. To the extent that the Owner elects to take legal assignment of subcontracts and purchase orders (including rental agreements), the Contractor shall, as a condition of receiving the payments referred to in this Article 7, execute and deliver all such papers and take all such steps, including the legal assignment of such subcontracts and other contractual rights of the Contractor, as the Owner may require for the purpose of fully vesting in the Owner the rights and benefits of the Contractor under such subcontracts or purchase orders.

**§ 7.2.5** The Work may be suspended by the Owner as provided in Article 14 of AIA Document A232–2009; in such case, the Contract Sum and Contract Time shall be increased as provided in Section 14.3.2 of AIA Document A232–2009, except that the term 'profit' shall be understood to mean the Contractor's Fee as described in Sections 4.3.2 and 4.4.2 of this Agreement.

## ARTICLE 8 MISCELLANEOUS PROVISIONS

**§ 8.1** Where reference is made in this Agreement to a provision of AIA Document A232–2009 or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

**§ 8.2** Payments due and unpaid under the Contract shall bear interest from the date payment is due at the rate stated below, or in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.
*(Insert rate of interest agreed upon, if any.)*


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§ **8.3** The Owner's representative:
*(Name, address and other information)*

§ **8.4** The Contractor's representative:
*(Name, address and other information)*

§ **8.5** Neither the Owner's nor the Contractor's representative shall be changed without ten days written notice to the other party.

§ **8.6** Other provisions:

## ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

§ **9.1** The Contract Documents, except for Modifications issued after execution of this Agreement, are enumerated in the sections below.

§ **9.1.1** The Agreement is this executed AIA Document A132–2009, Standard Form of Agreement Between Owner and Contractor, Construction Manager as Adviser Edition.

§ **9.1.2** The General Conditions are AIA Document A232–2009, General Conditions of the Contract for Construction, Construction Manager as Adviser Edition.

§ **9.1.3** The Supplementary and other Conditions of the Contract:

| Document | Title | Date | Pages |
|---|---|---|---|

§ **9.1.4** The Specifications:
*(Either list the Specifications here or refer to an exhibit attached to this Agreement.)*

| Section | Title | Date | Pages |
|---|---|---|---|

§ **9.1.5** The Drawings:
*(Either list the Drawings here or refer to an exhibit attached to this Agreement.)*

| Number | Title | Date |
|---|---|---|


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§ **9.1.6** The Addenda, if any:

| Number | Date | Pages |
|---|---|---|

Portions of Addenda relating to bidding requirements are not part of the Contract Documents unless the bidding requirements are also enumerated in this Article 9.

§ **9.1.7** Additional documents, if any, forming part of the Contract Documents are:

.1 AIA Document A132™–2009, Exhibit A, Determination of the Cost of the Work, if applicable.

.2 AIA Document E201™–2007, Digital Data Protocol Exhibit, if completed, or the following:

.3 AIA Document E202™–2008, Building Information Modeling Protocol Exhibit, if completed, or the following:

.4 Other documents, if any, listed below:
*(List here any additional documents which are intended to form part of the Contract Documents. AIA Document A232–2009 provides that bidding requirements such as advertisement or invitation to bid, Instructions to Bidders, sample forms and the Contractor's bid are not part of the Contract Documents unless enumerated in this Agreement. They should be listed here only if intended to be part of the Contract Documents.)*

**ARTICLE 10 INSURANCE AND BONDS**

The Contractor shall purchase and maintain insurance and provide bonds as set forth in Article 11 of AIA Document A232–2009.
*(State bonding requirements, if any, and limits of liability for insurance required in Article 11 of AIA Document A232–2009.)*

| Type of Insurance or Bond | Limit of Liability or Bond Amount ($0.00) |
|---|---|

This Agreement is entered into as of the day and year first written above.

Red Clay Consolidated School District

| | |
|---|---|
| **OWNER** *(Signature)* | **CONTRACTOR** *(Signature)* |
| *(Printed name and title)* | *(Printed name and title)* |

Init.
/
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SECTION 006113 – PERFORMANCE AND PAYMENT BONDS

1. PERFORMANCE AND PAYMENT BONDS

1.1 Bonds must be in the following form:

1. Form of Performance Bond (attached).
2. Form of Payment Bond (attached).

**SECTION 00 61 13 - FORM OF PAYMENT BOND**

Bond Number:

KNOW ALL PERSONS BY THESE PRESENTS, that we, _____, as principal ("Principal"), and _____, a _____ corporation, legally authorized to do business in the State of Delaware, as surety ("Surety"), are held and firmly bound unto the State of Delaware, Red Clay Consolidated School District ("Owner"), in the amount of _____ ($_____), to be paid to Owner, for which payment well and truly to be made, we do bind ourselves, our and each and every of our heirs, executors, administrations, successors and assigns, jointly and severally, for and in the whole firmly by these presents.

Sealed with our seals and dated this _____ day of_____, 20_____.

NOW THE CONDITION OF THIS OBLIGATION IS SUCH, that if Principal, who has been awarded by Owner that certain contract known as Contract No. _____dated the _____ day of _____, 20__ (the "Contract"), which Contract is incorporated herein by reference, shall well and truly pay all and every person furnishing materials or performing labor or service in and about the performance of the work under the Contract, all and every sums of money due him. her, them or any of them, for all such materials, labor and service for which Principal is liable, shall make good and reimburse Owner sufficient funds to pay such costs in the completion of the Contract as Owner may sustain by reason of any failure or default on the part of Principal, and shall also indemnity and save harmless Owner from all costs, damages and expenses arising out of or by reason of the performance of the Contract and for as long as provided by the Contract; then this obligation shall be void, otherwise to be and remain in full force and effect.

Surety, for value received, for itself and its successors and assigns, hereby stipulates and agrees that the obligation of Surety and its bond shall be in no way impaired or affected by any extension of time, modification, omission, addition or change in or to the Contract or the work to be performed thereunder, or by any payment thereunder before the time required therein, or by any waiver of any provisions thereof, or by any assignment, subletting or other transfer thereof or of any work to be performed or any monies due or to become due thereunder; and Surety hereby waives notice of any and all such extensions, modifications, omissions, additions, changes, payments, waivers, things done and omitted to be done by and in relation to assignees, subcontractors, and other transferees shall have the same effect as to Surety as though done or omitted to be done by or in relation to Principal.

Surety hereby stipulates and agrees that no modifications, omission or additions in or to the terms of the Contract shall in any way whatsoever affect the obligation of Surety and its bond. Any proceeding, legal or equitable, under this Bond may be brought in any court of competent jurisdiction in the State of Delaware. Notices to Surety or Contractor may be mailed or delivered

to them at their respective addresses shown below.
IN WITNESS WHEREOF, Principal and Surety have hereunto set their hand and seals, and such of them as are corporations have caused their corporate seal to be hereto affixed and these presents to be signed by their duly authorized officers, the day and year first above written.

PRINCIPAL

Name: _____

Witness or Attest: Address: _____

By:_____(SEAL)
Name:
Name:
Title:
(Corporate Seal)

SURETY

Name: _____

Witness or Attest: Address: _____

By: _____(SEAL)
Name:
Name:
Title:
(Corporate Seal)

**SECTION 00 61 13 - FORM OF PERFORMANCE BOND**

Bond Number: _____

KNOW ALL PERSONS BY THESE PRESENTS, that we, _____, as principal ("Principal"), and _____, a _____ corporation, legally authorized to do business in the State of Delaware, as surety ("Surety"), are held and firmly bound unto the State of Delaware, Red Clay Consolidated School District ("Owner"), in the amount of_____ ($_____) to be paid to Owner, for which payment well and truly to be made, we do bind ourselves, our and each and every of our heirs, executors, administrations, successors and assigns. jointly and severally, for and in the whole, firmly by these presents.

Sealed with our seals and dated this _____ day of _____, 20_____.

NOW THE CONDITION OF THIS OBLICATION IS SUCH, that if Principal, who has been awarded by Owner that certain contract known as Contract No. _____ dated the _____ day of _____, 20 (the "Contract"), which Contract is incorporated herein by reference, shall well and truly provide and furnish all materials, appliances and tools and perform all the work required under and pursuant to the terms and conditions of the Contract and the Contract Documents (as defined in the Contract) or any changes or modifications thereto made as therein provided, shall make good and reimburse Owner sufficient funds to pay the costs of completing the Contract that Owner may sustain by reason of any failure or default on the part of Principal, and shall also indemnify and save harmless Owner from all costs, damages and expenses arising out of or by reason of the performance of the Contract and for as long as provided by the Contract; then this obligation shall be void, otherwise to be and remain in full force and effect.

Surety, for value received, hereby stipulates and agrees, if requested to do so by Owner, to fully perform and complete the work to be performed under the Contract pursuant to the terms, conditions and covenants thereof, if for any cause Principal fails or neglects to so fully perform and complete such work

Surety, for value received, for itself and its successors and assigns, hereby stipulates and agrees that the obligation of Surety and its bond shall be in no way impaired or affected by any extension of time, modification, omission, addition or change in or to the Contract or the work to be performed thereunder, or by any payment thereunder before the time required therein, or by any waiver of any provisions thereof, or by any assignment, subleting or other transfer thereof or of any work to be performed or any monies due or to become due thereunder; and Surety hereby waives notice of any and all such extensions, modifications, omissions, additions, changes, payments, waivers, assignments, subcontracts and transfers and hereby expressly stipulates and agrees that any and all things done and omitted to be done by and in relation to assignees, subcontractors, and other transferees shall have the same effect as to Surety as though done or

omitted to be done by or in relation to Principal.
Surety hereby stipulates and agrees that no modifications, omissions or additions in or to the terms of the Contract shall in any way whatsoever affect the obligation of Surety and its bond.

Any proceeding, legal or equitable, under this Bond may be brought in any court of competent jurisdiction in the State of Delaware. Notices to Surety or Contractor may be mailed or delivered to them at their respective addresses shown below.

IN WITNESS WHEREOF, Principal and Surety have hereunto set their hand and seals, and such of them as are corporations have caused their corporate seal to be hereto affixed and these presents to be signed by their duly authorized officers, the day and year first above written.

PRINCIPAL

Name: _____

Witness or Attest: Address: _____

By:_____(SEAL)
Name:
Name:
Title:
(Corporate Seal)

SURETY

Name: _____

Witness or Attest: Address: _____

By: _____(SEAL)
Name:
Name:
Title:
(Corporate Seal)

END OF SECTION

**SECTION 00 61 13 - FORM OF PAYMENT BOND**

Bond Number:

KNOW ALL PERSONS BY THESE PRESENTS, that we, _____, as principal ("Principal"), and _____, a _____ corporation, legally authorized to do business in the State of Delaware, as surety ("Surety"), are held and firmly bound unto the State of Delaware, Red Clay Consolidated School District ("Owner"), in the amount of _____ ($_____), to be paid to Owner, for which payment well and truly to be made, we do bind ourselves, our and each and every of our heirs, executors, administrations, successors and assigns, jointly and severally, for and in the whole firmly by these presents.

Sealed with our seals and dated this _____ day of_____, 20_____.

NOW THE CONDITION OF THIS OBLIGATION IS SUCH, that if Principal, who has been awarded by Owner that certain contract known as Contract No. _____dated the _____ day of _____, 20__ (the "Contract"), which Contract is incorporated herein by reference, shall well and truly pay all and every person furnishing materials or performing labor or service in and about the performance of the work under the Contract, all and every sums of money due him. her, them or any of them, for all such materials, labor and service for which Principal is liable, shall make good and reimburse Owner sufficient funds to pay such costs in the completion of the Contract as Owner may sustain by reason of any failure or default on the part of Principal, and shall also indemnity and save harmless Owner from all costs, damages and expenses arising out of or by reason of the performance of the Contract and for as long as provided by the Contract; then this obligation shall be void, otherwise to be and remain in full force and effect.

Surety, for value received, for itself and its successors and assigns, hereby stipulates and agrees that the obligation of Surety and its bond shall be in no way impaired or affected by any extension of time, modification, omission, addition or change in or to the Contract or the work to be performed thereunder, or by any payment thereunder before the time required therein, or by any waiver of any provisions thereof, or by any assignment, subletting or other transfer thereof or of any work to be performed or any monies due or to become due thereunder; and Surety hereby waives notice of any and all such extensions, modifications, omissions, additions, changes, payments, waivers, things done and omitted to be done by and in relation to assignees, subcontractors, and other transferees shall have the same effect as to Surety as though done or omitted to be done by or in relation to Principal.

Surety hereby stipulates and agrees that no modifications, omission or additions in or to the terms of the Contract shall in any way whatsoever affect the obligation of Surety and its bond. Any proceeding, legal or equitable, under this Bond may be brought in any court of competent jurisdiction in the State of Delaware. Notices to Surety or Contractor may be mailed or delivered

to them at their respective addresses shown below.
IN WITNESS WHEREOF, Principal and Surety have hereunto set their hand and seals, and such of them as are corporations have caused their corporate seal to be hereto affixed and these presents to be signed by their duly authorized officers, the day and year first above written.

PRINCIPAL

Name: _____

Witness or Attest: Address: _____

By:_____(SEAL)
Name: Name:
Title:
(Corporate Seal)

SURETY

Name: _____

Witness or Attest: Address: _____

By: _____(SEAL)
Name: Name:
Title:
(Corporate Seal)

**SECTION 00 61 13 - FORM OF PERFORMANCE BOND**

Bond Number: _____

KNOW ALL PERSONS BY THESE PRESENTS, that we, _____, as principal ("Principal"), and _____, a _____ corporation, legally authorized to do business in the State of Delaware, as surety ("Surety"), are held and firmly bound unto the State of Delaware, Red Clay Consolidated School District ("Owner"), in the amount of_____ ($_____) to be paid to Owner, for which payment well and truly to be made, we do bind ourselves, our and each and every of our heirs, executors, administrations, successors and assigns. jointly and severally, for and in the whole, firmly by these presents.

Sealed with our seals and dated this _____ day of _____, 20_____.

NOW THE CONDITION OF THIS OBLICATION IS SUCH, that if Principal, who has been awarded by Owner that certain contract known as Contract No. _____ dated the _____ day of _____, 20 (the "Contract"), which Contract is incorporated herein by reference, shall well and truly provide and furnish all materials, appliances and tools and perform all the work required under and pursuant to the terms and conditions of the Contract and the Contract Documents (as defined in the Contract) or any changes or modifications thereto made as therein provided, shall make good and reimburse Owner sufficient funds to pay the costs of completing the Contract that Owner may sustain by reason of any failure or default on the part of Principal, and shall also indemnify and save harmless Owner from all costs, damages and expenses arising out of or by reason of the performance of the Contract and for as long as provided by the Contract; then this obligation shall be void, otherwise to be and remain in full force and effect.

Surety, for value received, hereby stipulates and agrees, if requested to do so by Owner, to fully perform and complete the work to be performed under the Contract pursuant to the terms, conditions and covenants thereof, if for any cause Principal fails or neglects to so fully perform and complete such work

Surety, for value received, for itself and its successors and assigns, hereby stipulates and agrees that the obligation of Surety and its bond shall be in no way impaired or affected by any extension of time, modification, omission, addition or change in or to the Contract or the work to be performed thereunder, or by any payment thereunder before the time required therein, or by any waiver of any provisions thereof, or by any assignment, subleting or other transfer thereof or of any work to be performed or any monies due or to become due thereunder; and Surety hereby waives notice of any and all such extensions, modifications, omissions, additions, changes, payments, waivers, assignments, subcontracts and transfers and hereby expressly stipulates and agrees that any and all things done and omitted to be done by and in relation to assignees, subcontractors, and other transferees shall have the same effect as to Surety as though done or

omitted to be done by or in relation to Principal.
Surety hereby stipulates and agrees that no modifications, omissions or additions in or to the terms of the Contract shall in any way whatsoever affect the obligation of Surety and its bond.

Any proceeding, legal or equitable, under this Bond may be brought in any court of competent jurisdiction in the State of Delaware. Notices to Surety or Contractor may be mailed or delivered to them at their respective addresses shown below.

IN WITNESS WHEREOF, Principal and Surety have hereunto set their hand and seals, and such of them as are corporations have caused their corporate seal to be hereto affixed and these presents to be signed by their duly authorized officers, the day and year first above written.

PRINCIPAL

Name: _____

Witness or Attest: Address: _____

By:_____(SEAL)
Name:
Name:
Title:
(Corporate Seal)

SURETY

Name: _____

Witness or Attest: Address: _____

By: _____(SEAL)
Name:
Name:
Title:
(Corporate Seal)

END OF SECTION

SECTION 006216 – CERTIFICATE OF INSURANCE

In conjunction with Insurance Requirements AIA General Conditions, Article 11, the Contractor shall be bound by the following limits of liability insurance (for Contracts under this Bid Pac). The Contractor shall use the standard "ACCORD" for titled "Certificate of Insurance" in submitting his liability insurance limits. The required limits to be inserted in accordance with the sample "ACCORD" form in this section:

GENERAL NOTES

1. Other Insurance

   1.1 Contractor shall carry any necessary insurance required to cover Owned and Rental equipment that may be necessary for them to use in the performance of the Work.

2. Contractor shall have the following additional items added to his required "ACCORD" form Certificate of Insurance:

   1. Name and Address of Insured (Contractor).
   2. Description of Operations/Locations -

3. Added Insured – Red Clay Consolidated School District and EDiS Company

4. Certificate Holder – Red Clay Consolidated School District

Contractors shall note that although not a part of AIA Document A232 - 2009 Edition, these additional articles apply as noted to this Project.

A sample certificate is bound into the Project Manual immediately following this Document.

END OF SECTION

# ACORD™ CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YY) XX/XX/XX

PRODUCER

PRODUCER INSURANCE AGENCY
PO BOX
PRODUCER STREET ADDRESS
PRODUCER CITY, ST PROD ZIP

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

INSURERS AFFORDING COVERAGE

INSURERD

SAMPLE SUBCONTRACTOR CERTIFICATE
(REQUIRED MINIMUM INSURANCE)

INSURER A: XXXXXX
INSURED B XXXXXX
INSURER C: XXXXXX
INSURER D:
INSURER E:

COVERAGES

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

| INSR LTR | TYPE OF INSURANCE | POLICY NUMBER | POLICY EFFECTIVE DATE (MM/DD/YY) | DATE (MM/YY) | LIMITS | |
|---|---|---|---|---|---|---|
| | GENERAL LIABILITY | XXXXXXXXXXXXXXX | XXXXXXXX | XXXXXXXXXXX | EACH OCCURRENCE | $ 1,000,000 |
| | X COMMERCIAL GENERAL LIABILITY | | | | FIRE DAMAGE (Any one fire) | $ 300,000 |
| | CLAIMS MADE X OCCUR | | | | MED EXP (Any one person) | $ 10,000 |
| | | | | | PERSONAL & ADV INJURY | $ 1,000,000 |
| | GENL AGGREGATE LIMIT APPLIES PER: | | | | GENERAL AGGREGATE | $ 2,000,000 |
| | POLICY X PRO-JECT LOC | | | | PRODUCTS - COMP/OP AGG | $ 2,000,000 |
| | AUTOMOBILE LIABILITY | XXXXXXXXXXXXXXXX | XXXXXXXXXXX | XXXXXXXXXXXX | COMBINED SINGLE LIMIT (Ea accident) | $ 1,000,000 |
| | X ANY AUTO | | | | BODILY INJURY (Per person) | $ |
| | ALL OWNED AUTOS | | | | | |
| | SCHEDULED AUTOS | | | | BODILY INJURY (Per accident) | $ |
| | X HIREDAUTOS | | | | | |
| | X NON-OWNED AUTOS | | | | PROPERTY DAMAGE (Per accident) | $ |
| | GARAGE LIABILITY | | | | AUTO ONLY - EA ACCIDENT | $ |
| | ANY AUTO | | | | OTHER THAN: AUTO ONLY: EA ACC | $ |
| | | | | | AGG | $ |
| | EXCESS LIABILITY | XXXXXXXXXXXXXXX | XXXXXXXXXXX | XXXXXXX | EACH OCCURRENCE | $ 5,000,000 |
| | X OCCUR CLAIMS MADE | | | | AGGREGATE | $ 5,000,000 |
| | DEDUCTIBLE | | | | | $ |
| | RETENTION $ | | | | | $ |
| | | | | | | $ |
| | WORKERS COMPENSATION AND EMPLOYERS' LIABILITY | XXXXXXXXXXXXXXX | XXXXXXXXXXX | XXXXXXXXXX | X WC STATU-TORY LIMITS / OTH-ER | $ |
| | | | | | E.L. EACH ACCIDENT | $ 1,000,000 |
| | | | | | E.L. DISEASE - EA EMPLOYEE | $ 1,000,000 |
| | | | | | E.L. DISEASE - POLICY LIMIT | $ 1,000,000 |
| | OTHER | | | | | |

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/EXCLUSIONS ADDED BY ENDORSEMENT/SPECIAL PROVISIONS

**Project: Richardson Park Elementary School Door Renovation** – Red Clay Consolidated School District and EDiS Company shall be named as Additional Insureds under Commercial General Liability, Automobile Liability and Umbrella Liability for both ongoing and completed operations. The endorsements providing the Additional Insured status for ongoing and completed operations must be attached to the Certificate of Insurance.

CERTIFICATE HOLDER X ADDITIONAL INSURED; INSURER LETTER: ——— CANCELLATION

Red Clay Consolidated School District
1502 Spruce Avenue
Wilmington, DE 19805

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE



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SECTION 007200 – GENERAL CONDITIONS

1. SUMMARY

1.1. The General Conditions for this Project are the American Institute of Architects General Conditions of the Contract for Construction, Construction Manager as Advisor Edition, AIA Document A232 - 2009 Edition.

1.2 A copy of AIA Document A232 - 2009 Edition is bound into this Project Manual following this page.

END OF SECTION

STATE OF DELAWARE DIVISION OF FACILITIES MANAGEMENT

Section 007300 SUPPLEMENTARY GENERAL CONDITIONS

# SUPPLEMENTARY GENERAL CONDITIONS A232-2009

The following supplements modify the "General Conditions of the Contract for Construction," AIA Document A232-2009. Where a portion of the General Conditions is modified or deleted by the Supplementary Conditions, the unaltered portions of the General Conditions shall remain in effect.

TABLE OF ARTICLES

1. GENERAL PROVISIONS
2. OWNER
3. CONTRACTOR
4. ADMINISTRATION OF THE CONTRACT
5. SUBCONTRACTORS
6. CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS
7. CHANGES IN THE WORK
8. TIME
9. PAYMENTS AND COMPLETION
10. PROTECTION OF PERSONS AND PROPERTY
11. INSURANCE AND BONDS
12. UNCOVERING AND CORRECTION OF WORK
13. MISCELLANEOUS PROVISIONS
14. TERMINATION OR SUSPENSION OF THE CONTRACT

**ARTICLE 1: GENERAL PROVISIONS**

1.1 BASIC DEFINITIONS

1.1.1 THE CONTRACT DOCUMENTS

Delete the last sentence in its entirety and replace with the following:

"The Contract Documents also include Advertisement for Bid, Instructions to Bidder, all documents which are part of the Bid package, including but not limited to sample forms, the Bid Form, the Contractor's completed Bid and the Award Letter."

1.1.2 THE CONTRACT

Add the following text at the end of subparagraph (5):

"except as set forth in § 3.7.3, §5.3 and § 5.4."

Add the following new Section: 1.10 Terms Used

"The terms "knowledge", "recognize", and "discover", their respective derivatives and similar terms in the Contract Documents, as used in reference to the Contractor, shall be interpreted to mean that which the Contractor knows, recognizes and discovers in exercising the care, skill and diligence required by the Contract Documents. The term "reasonably inferable" and similar terms in the Contract Documents shall be interpreted to mean reasonably inferable by a contractor familiar with the Project and exercising the care, skill, and diligence required of the Contractor by the Contract Documents."

1.2 CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS

Add the following Paragraphs:

1.2.4 In the case of an inconsistency, missing or conflicting information between the Drawings and the Specifications, Contract Documents or between the Contract Documents and applicable standards, codes and ordinances, or within any Contract Document not clarified by addendum, the Contractor shall (i) provide the better quality or greater quantity of Work, or (ii) comply with the more stringent requirements. The Contractor shall submit its proposed work to Architect for review and the work shall be provided in accordance with the Architect's interpretation. The terms and conditions of this Section 1.2.4, however, shall not relieve the Contractor of any of the obligations set forth in the Contract Documents, including Sections 3.2 and 3.7.

1.2.5 The word "PROVIDE" as used in the Contract Documents shall mean "FURNISH AND INSTALL" and shall include, without limitation, all labor, materials, equipment, transportation, services and other items required to complete the Work.

1.2.6 The word "PRODUCT" as used in the Contract Documents means all materials, systems and equipment.

1.5 OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS AND OTHER INSTRUMENTS OF SERVICE

Delete Paragraph 1.5.1 in its entirety and replace with the following:

"All pre-design studies, drawings, specifications and other documents, including those in electronic form, prepared by the Architect under this Agreement are, and shall remain, the property of the Owner whether the Project for which they are made is executed or not. Such documents may be used by the Owner to construct one or more like Projects without the approval of, or additional compensation to, the Architect. The Contractor, Subcontractors, Sub-subcontractors and Material or Equipment Suppliers are authorized to use and reproduce applicable portions of the Drawings, Specifications and other documents prepared by the Architect and the Architect's consultants appropriate to and for use in the execution of their Work under the Contract Documents. They are not to be used by the Contractor or any Subcontractor, Sub-subcontractor or Material and Equipment Supplier on other Projects or for additions to this Project outside the scope of the Work without the specific written consent of the Owner, Architect and Architect's consultants.

The Architect shall not be liable for injury or damage resulting from the re-use of drawings and specifications if the Architect is not involved in the re-use Project. ."

Delete Paragraph 1.5.2 in its entirety.

**ARTICLE 2: OWNER**

2.1 General

2.1.2 Delete Paragraph 2.1.2 in its entirety.

2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

2.2.1 Delete the last sentence in this paragraph.

2.2.3 Add the following sentence:

"The Contractor shall at their expense contact all appropriate agencies or utilities to determine the location of all Utilities and, at their expense, shall bear the costs to accurately identify the location of all underground utilities in the area of their excavation and shall bear all cost for any repairs required, together with being solely responsible for any and all other claims, charges, damages, expenses, fees or liabilities arising out of any acts or omissions in failing to accurately identify said utilities."

2.2.5 Delete Subparagraph 2.2.5 in its entirety and substitute the following:

2.2.5 The Contractor shall be furnished free of charge up to five (5) sets of the Drawings and Project Manuals. Additional sets will be furnished at the cost of reproduction, postage and handling.

2.3 Insert the following words after "repeatedly" in the second line: "or materially".

2.4 Delete the last sentence and substitute the following new sentence:

"If the payments then or thereafter due to the Contractor are not sufficient to cover such amount, at the Owner's option, the excess shall be deducted from any payment thereafter due to the Contractor or shall be paid by the Contractor immediately upon demand of the Owner."

**ARTICLE 3: CONTRACTOR**

3.1.4 Insert the word "observations" after the word "test" in the last line of the sentence.

3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

Delete the third sentence in Paragraph 3.2.4.

3.2.1 Add the following text at the end of the existing subparagraph:

"Prior to execution of the Agreement, the Contractor and each Subcontractor has evaluated and satisfied themselves as to the conditions and limitations under which the Work is to be performed, including, without limitation: (i) the location, condition, layout and nature of the Project site and surrounding areas, (ii) generally prevailing climatic conditions, (iii) anticipated labor supply and costs, (iv) availability and cost of materials, tools and equipment, and (v) other similar issues. The Owner assumes no responsibility or liability for the physical condition or safety of the Project site or any improvements located on the Project site as it relates to the Work. Except as set forth in Section 10.3, the Contractor shall be solely responsible for providing a safe place for the performance of the Work. The Owner shall not be required to make any adjustment in either the Contract Sum or the Contract Time in connection with any failure by the Contractor or any Subcontractor to have complied with the requirements of this Section 3.2.1."

3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

3.3.2 Add the following text at the end of the existing sentence: "and for any damages, losses, costs, and expenses resulting from such acts or omissions."

Add the following Paragraphs:

3.3.2.1 The Contractor shall immediately remove from the Work, whenever requested to do so by the Owner, any person who is considered by the Owner or Architect to be incompetent or disposed to be disorderly, or who for any reason is not satisfactory to the Owner, and that person shall not again be employed on the Work without the consent of the Owner or the Architect.

3.3.4 The Contractor must provide suitable storage facilities at the Site for the proper protection and safe storage of their materials. Consult the Owner and the Architect before storing any materials.

3.3.5 When any room is used as a shop, storeroom, office, etc., by the Contractor or Subcontractor(s) during the construction of the Work, the Contractor making use of these areas will be held responsible for any repairs, patching or cleaning arising from any acts or omissions with such use.

3.4 LABOR AND MATERIALS

Add the Following Paragraphs:

3.4.4 Before starting the Work, each Contractor shall carefully examine all preparatory Work that has been executed to receive their Work. Check carefully, by whatever means are required, to insure that its Work and adjacent, related Work, will finish to proper contours, planes and levels. Promptly notify the General Contractor/Construction Manager of any defects or imperfections in

preparatory Work which will in any way affect satisfactory completion of its Work. Absence of such notification will be construed as an acceptance of preparatory Work and later claims of defects will not be recognized and are expressly waived.

3.4.5 Under no circumstances shall the Contractor's Work proceed prior to preparatory Work proceed prior to preparatory Work having been completely cured, dried and/or otherwise made satisfactory to receive this Work. Responsibility for timely installation of all materials rests solely with the Contractor responsible for that Work, who shall maintain coordination at all times.

3.4.6 The Contractor shall make reasonable efforts to only employ or use labor in connection with the Work capable of working harmoniously with all trades, crafts, and any other individuals associated with the Project. The Contractor shall also use reasonable efforts to minimize the likelihood of any strike, work stoppage, or other labor disturbance.

3.4.7 In case the progress of the Work is affected by any undue delay in furnishing or installing any items, materials or equipment required under the Contract Documents because of such conflict involving any such labor agreement or regulation, the Owner may require that other items, materials or equipment of equal kind and quality be provided pursuant to a Change Order or Construction Change Directive.

3.5 WARRANTY

Add the following Paragraphs:

3.5.1 The Contractor will warrant all materials and workmanship against original defects, except injury from proper and usual wear when used for the purpose intended, for one year after Acceptance by the Owner, and will maintain all items in condition that conforms with the Contract Documents during the period of warranty.

3.5.2 Non-conforming work during the period of warranty will be corrected by the Contractor at its expense upon demand of the Owner, it being required that the Work conforms to the Contract Documents at the expiration of the warranty period.

3.5.3 In addition to the General Warranty there are other warranties required for certain items for different periods of time than the one year as above, and are particularly so stated in that part of the specifications referring to same. The said warranties will commence at the same time as the General Warranty.

3.5.4 If the Contractor fails to remedy any failure, defect or damage within a reasonable time after receipt of notice, the Owner will have the right to replace, repair, or otherwise remedy the failure, defect or damage at the Contractor's expense.

3.5.5 The Contractor agrees to assign to the Owner at the time of final completion of the Work any and all manufacturers' warranties relating to materials and labor used in the Work and further agrees to perform the Work in such manner so as to preserve any and all such manufacturers' warranties.

3.7 PERMITS, FEES, NOTICES AND COMPLIANCE WITH LAWS

3.7.1 Delete the second sentence and substitute the following new sentence:

"The Contractor shall secure, pay for, and, as soon as practicable, furnish the Owner, Construction Manager and Architect with copies and/or certificates of all other permits, fees, licenses and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.

3.7.3 Deleted in its entirety and replace with the following: "If the Contractor, any of its Subcontractors or any Sub-subcontractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor, any of its Subcontractors or any Sub-subcontractor shall assume appropriate responsibility for such Work and shall bear the costs, damages, losses, expenses of every kind, including reasonable attorneys' fees, attributable to correction."

Add the following Paragraph:

3.7.6 No separate inspection performed or failed to be performed by the Owner, Construction Manager or Architect hereunder shall be a waiver of any of the Contractor's obligations hereunder or be construed as an approval or acceptance of the Work or any part thereof.

3.10 CONTRACTOR'S CONSTRUCTION SCHEDULE

Add the following Paragraphs:

3.10.5 The schedule shall indicate the proposed starting and completion dates for the various subdivisions of the Work as well as the totality of the Work. The schedule shall be updated every thirty (30) days and submitted to Architect with Contractor's Applications for Payment. Each schedule shall contain a comparison of actual progress with the estimated progress for such point in time stated in the original schedule. If any schedule submitted sets forth a date for Substantial Completion for the Work or any phase of the Work beyond the Date(s) of Substantial Completion established in the Contract (as the same may be extended as provided in the Contract Document(s), the Contractor shall submit to Owner and Architect for their information and to the Construction Manager for its review and approval, a narrative description of the means and methods which Contractor intends to employ to expedite the progress of the Work to ensure timely completion of the various phases of the Work as well as the totality of the Work. To ensure such timely completion, Contractor shall take all necessary action including, without limitation, (i) working additional shifts or overtime, (ii) supplying additional manpower, equipment and facilities, and (iii) other similar measures (hereinafter referred to collectively as "Corrective Measures"). In that event, Contractor is required to implement Corrective Measures, then Contractor shall not be entitled to an adjustment in the Contract Sum, the Schedule or the Contract Time. The date of final completion shall not be changed without the written consent of the Owner.

3.10.6 The construction schedule shall be in a detailed precedence-style critical path management ("CPM") or primavera-type format satisfactory to the Construction Manager and Architect that shall also (i) provide a graphic representation of all

activities and events that will occur during performance of the Work; (ii) identify each phase of construction and occupancy; and (iii) set forth dates that are critical in ensuring the timely and orderly completion of the Work in accordance with the requirements of the Contract Documents (hereinafter referred to as "Milestone Dates").

3.10.7 In the event the Construction Manager and/or Architect determine that the performance of the Work, as of a Milestone Date, has not progressed or reached the level of completion required by the Contract Documents, the Construction Manager shall have the right to order the Contractor to take corrective measures necessary to expedite the progress of construction, including, without limitation, implementing Corrective Measures. Such Corrective Measures shall continue until the progress of the Work complies with the stage of completion required by the Contract Documents. The Construction Manager's right to require Corrective Measures is solely for the purpose of ensuring the Contractor's compliance with the construction schedule.

3.10.8 The Contractor shall not be entitled to an adjustment in the Contract Sum or Contract Time in connection with Extraordinary Measures required by the Construction Manager under or pursuant to this Section 3.10.

3.10.9 The Construction Manager may exercise the rights furnished the Construction Manager under or pursuant to this Section 3.10 as frequently as the Construction Manager deems necessary to ensure that the Contractor's performance of the Work will comply with any Milestone Date or completion date(s) set forth in the Contract Documents.

3.11 DOCUMENTS AND SAMPLES AT THE SITE

Add the following Paragraphs:

3.11.1 During the course of the Work, the Contractor shall maintain a record set of drawings on which the Contractor shall mark the actual physical location of all piping, valves, equipment, conduit, outlets, access panels, controls, actuators, including all appurtenances that will be concealed once construction is complete, etc., including all invert elevations.

3.11.2 At the completion of the Project, the Contractor shall obtain a set of reproducible drawings from the Architect, and neatly transfer all information outlined in 3.11.1 to provide a complete record of the as-built conditions.

3.11.3 The Contractor shall provide two (2) prints of the as-built conditions, along with the reproducible drawings themselves, to the Owner and one (1) set to the Architect. In addition, attach one complete set to each of the Operating and Maintenance Instructions/Manuals.

3.17 In the second sentence of the paragraph, insert "indemnify and" between "shall" and "hold".

**ARTICLE 4: ARCHITECT AND CONSTRUCTION MANAGER**

4.1 General
4.1.2 Insert "As required by law," at the beginning of the first sentence.

4.2 Administration of the Contract

Delete the first sentence of Paragraph 4.2.10 and replace with the following:

The Architect will review and approve or take other appropriate action upon the Contractor's submittals such as Shop Drawings, Product Data and Samples for the purpose of checking for conformance with the Contract Documents.

Delete the second sentence of Paragraph 4.2.10 and replace with the following:

The Architect's action will be taken with such reasonable promptness as to cause no delay in the Work in the activities of the Owner, Contractor or separate Contractors, while allowing sufficient time in the Owner's professional judgment to permit adequate review.

Add the following to Paragraph 4.2.16:

There will be no full-time project representative provided by the Owner or Architect on this project.

Add to Paragraph 4.2.19 "and in compliance with all applicable codes, regulations and ordinances." to the end of the sentence.

**ARTICLE 5: SUBCONTRACTORS**

5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

Delete Paragraph 5.2.3 in its entirety and replace with the following:

5.2.3 If the Owner, Architect or Construction Manager has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner, Architect or Construction Manager has no reasonable objection, subject to the statutory requirements of 29 Delaware Code § 6962(d)(10)b.3 and 4.

Add the following new Paragraph:

5.2.5 Upon written request, the Contractor shall provide to the Owner and Construction Manager an executed copy of all subcontracts, purchase orders and other agreements relating to the Work.

5.3 SUBCONTRACTOR RELATIONS

Add the following new Paragraphs:

5.3.1 All subcontracts shall be in writing and shall specifically provide that the Owner is an intended third-party beneficiary of such subcontract. Each subcontract shall contain a contingent assignment of the subcontract to the Owner consistent with Section 5.4

5.3.2 The Contractor shall be responsible for any and all Subcontractors working under it and shall carry insurance for all Subcontractors or ensure that they are carrying it themselves so as to relieve the Owner of any and all liability to be covered by insurance.

**ARTICLE 6: CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS**

6.1 OWNER'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS

Delete Paragraph 6.1.3 in its entirety and replace with the following:

"When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Constructor who executes each separate Owner-Contractor Agreement."

6.2 MUTUAL RESPONSIBILITY

6.2.3 In the second sentence, strike the word "shall" and insert the word "may".

**ARTICLE 7: CHANGES IN THE WORK**

(SEE ARTICLE 7: CHANGES IN WORK IN THE GENERAL REQUIREMENTS)

7.1.3 Insert the following sentence at the end of the existing sentence: "Except as permitted in Section 7.3, a change in the Contract Sum or the Contract Time shall be accomplished only by Change Order."

Add the following new Paragraphs:

7.1.4 A field directive or field order shall not be recognized as having any impact upon the Contract Sum or the Contract Time and the Contractor shall have no claim therefor unless it shall, prior to complying with same and in no event later than ten (10) working days from the date such direction or order was given, submit to the Owner, Construction Manager and Architect for the Architect's and Construction Manager's evaluation and Owner's approval of its change proposal.

7.1.5 When submitting any proposal for Changes in the Work, the Contractor shall include and set forth in clear and precise detail breakdowns of labor and materials for all trades involved for the estimated impact on the construction schedule. If request, the Contractor shall furnish spreadsheets of any Subcontractors.

7.2 CHANGE ORDERS

Add the following new Paragraph 7.2.1 – Agreement on any Change Order shall constitute a final settlement of all matters relating to the change in the Work that is the subject of the Change Order, including, but not limited to, all direct and indirect costs associated with such change and any and all adjustments to the Contract Sum and the construction schedule, including the Contract Time.

**ARTICLE 8: TIME**

8.2 PROGRESS AND COMPLETION

Add the following Paragraphs:

8.2.1.1 Refer to Specification Section SUMMARY OF WORK for Contract time requirements.

8.2.4 If the Work falls behind the Progress Schedule as submitted by the Contractor, the Contractor shall employ additional labor and/or equipment necessary to bring the Work into compliance with the Progress Schedule at no additional cost to the Owner.

8.3 DELAYS AND EXTENSION OF TIME

8.3.1 Strike “arbitration” and insert “remedies at law or in equity”.

Add the following Paragraph:

8.3.2.1 The Contractor shall update the status of the suspension, delay, or interruption of the Work with each Application for Payment. (The Contractor shall report the termination of such cause immediately upon the termination thereof.) Failure to comply with this procedure shall constitute a waiver for any claim for adjustment of time or price based upon said cause.

Delete Paragraph 8.3.3 in its entirety and replace with the following:

8.3.3 Except in the case of a suspension of the Work directed by the Owner, an extension of time under the provisions of Paragraph 8.3.1 shall be the Contractor’s sole remedy in the progress of the Work and there shall be no payment or compensation to the Contractor for any expense or damage resulting from the delay.

Add the following Paragraph:

8.3.4 By permitting the Contractor to work after the expired time for completion of the project, the Owner does not waive its rights under the Contract.

8.3.5 The parties agree that Paragraph 8.3.3 of the Supplementary General Conditions does not apply to the Construction Manager in the event of a delay caused by a party other than the Construction Manager.

**ARTICLE 9: PAYMENTS AND COMPLETION**

9.2 SCHEDULE OF VALUES

Add the following Paragraphs:

9.2.1 The Schedule of Values shall be submitted using AIA Document G702, Continuation Sheet to G703.

9.3 APPLICATIONS FOR PAYMENT

Add the following Paragraph:

9.3.1.3 Application for Payment shall be submitted on AIA Document G702 “Application and Certificate for Payment”, supported by AIA Document G703 “Continuation Sheet”. Said Applications shall be fully executed and notarized.

Add the following Paragraphs:

9.3.4 Until Closeout Documents have been received and outstanding items completed the Owner will pay 95% (ninety-five percent) of the amount due the Contractor on account of progress payments.

9.3.5 The Contractor shall provide a current and updated Progress Schedule to the Architect with each Application for Payment. Failure to provide Schedule will be just cause for rejection of Application for Payment.

9.5 DECISIONS TO WITHHOLD CERTIFICATION

Add the following to 9.5.1:

.8 failure to provide a current Progress Schedule;
.9 a lien or attachment is filed;
.10 failure to comply with mandatory requirements for maintaining Record Documents.
.11 reasonable evidence that the Work has not progressed as indicated on the Application for Payment; or
.12 otherwise is responsible for a substantial and material breach of a provision of the Contract Documents.

Add the following Paragraph:

9.5.4 If the Contractor disputes any determination by the Construction Manager or the Architect made in accordance with the foregoing with regard to any Certificate of Payment, the Contractor nevertheless shall expeditiously continue to prosecute the Work.

9.6 PROGRESS PAYMENTS

Delete Paragraph 9.6.1 in its entirety and replace with the following:

9.6.1 After the Architect and the Construction Manager have approved and issued a Certificate for Payment, payment shall be made by the Owner within 30 days after Owner's receipt of the Certificate for Payment.

Add the following Paragraph:

9.6.2.1 Notwithstanding anything in Section 9.6.2 to the contrary, in the event the Construction Manager has reasonable cause to believe a Subcontractor is not being paid by the Contractor, the Construction Manager may elect to make any payment requested by the Contractor on behalf of a Subcontractor of any tier jointly payable to the Contractor and such Subcontractor, provided that in the event the Contractor disputes the sum due to the Subcontractor, Construction Manager shall only pay the sum not disputed by the Contractor, provided that the Contractor provides satisfactory assurance such as a bond to Owner with respect to payment of the disputed sum. The Contractor and such Subcontractor shall be responsible for the allocation and disbursement of funds included as part of any such joint payment. In no event shall any joint payment be construed to create any (i) contract between the Owner and a Subcontractor of any tier, (ii) obligations from the Owner to such Subcontractor, or (iii) rights in such Subcontractor against the Owner.

9.7 FAILURE OF PAYMENT

In first sentence, strike the first reference to "seven" and insert "thirty (30)". Also strike "binding dispute resolution" and insert "remedies at law or in equity" and add the following at the end of the Paragraph: "Notwithstanding the preceding sentence, the Contractor shall not stop the Work during the pendency of a bona fide dispute between the Owner and the Contractor, provided any sums in dispute claimed by the Contractor are placed in escrow and Owner agrees to pay said disputed sum in accordance with the resolution of the dispute.

Add the following Paragraph:

9.7.1 If the Owner is entitled to reimbursement or payment from the Contractor under or pursuant to the Contract Documents, such payment shall be made promptly upon demand by the Owner. Notwithstanding anything contained in the Contract Documents to the contrary, if the Contractor fails to promptly make any payment due the Owner, or if the Owner incurs any costs and expenses to cure any default of the Contractor or to correct defective Work, the Owner shall have an absolute right to offset such amount against the Contract Sum and may, in the Owner's sole discretion, elect either to (i) deduct an amount equal to that which the Owner is entitled from any payment then or thereafter due the Contractor from the Owner, or (ii) issue a written notice to the Contractor reducing the Contract Sum by an amount equal to that which the Owner is entitled.

9.8 SUBSTANTIAL COMPLETION

9.8.5 In the second sentence, strike "shall" and insert "may".

**ARTICLE 10: PROTECTION OF PERSONS AND PROPERTY**

10.1 SAFETY PRECAUTIONS AND PROGRAMS

Add the following Paragraphs:

10.1.1 Each Contractor shall develop a safety program in accordance with the Occupational Safety and Health Act of 1970. A copy of said plan shall be furnished to the Owner, Construction Manager and Architect prior to the commencement of that Contractor's Work.

10.1.2 Each Contractor shall appoint a Safety Representative. Safety Representatives shall be someone who is on site on a full time basis. If deemed necessary by the Owner, Construction Manager or Architect, Contractor Safety meetings will be scheduled. The attendance of all Safety Representatives will be required. Minutes will be recorded of said meetings by the Contractor and will be distributed to all parties as well as posted in all job offices/trailers etc.

10.2 SAFETY OF PERSONS AND PROPERTY

Add the following Paragraph:

10.2.4.1 As required in the Hazardous Chemical Act of June 1984, all vendors supplying any material that may be defined as hazardous must provide Material Safety Data Sheets for those products. Any chemical product should be considered hazardous if it has a caution warning on the label relating to a potential physical or health hazard, if it is known to be present in the work place, and if employees may be exposed under normal conditions or in foreseeable emergency situations. Material Safety Data Sheets shall be provided directly to the Owner, along with the shipping slips that include those products.

10.3 HAZARDOUS MATERIALS

Delete Paragraph 10.3.3 in its entirety.

Delete Paragraphs 10.3.6 in its entirety.

**ARTICLE 11: INSURANCE AND BONDS**

11.1 CONTRACTOR'S LIABILITY INSURANCE

11.1.4 Strike "the Owner" immediately following "(1)" and strike "and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's completed operations."

Add the following Paragraph:

11.1.5 If the Contractor fails to purchase or maintain or require to be purchased or maintained the liability insurance specified in the Contract Documents, the Owner may (but shall not be obligated to) purchase such insurance on the Contractor's behalf and shall be entitled to be repaid for any premiums paid therefor by Contractor in the manner set forth in Section 2.4 and/or as provided in Section 9.7.2, at Owner's election.

11.2 OWNER'S LIABILITY INSURANCE

Delete Paragraph 11.2 in its entirety.

11.3 PROPERTY INSURANCE

Delete Paragraph 11.3 and its subparagraphs in their entirety and replace with the following:

11.3 The Owner will not provide Builder's All Risk Insurance for the Project. The Contractor and all Subcontractors shall provide property coverage for their tools and equipment, as necessary. Any mandatory deductible required by the Contractor's Insurance shall be the responsibility of the Contractor.

11.4 PERFORMANCE BOND AND PAYMENT BOND

11.4.1 Add the following sentence: "The bonds will conform to those forms approved by the Office of Management and Budget."

Add the following new Paragraph:

11.4.3 If any Surety hereunder makes any assignment for the benefit of creditors, or commits any act of bankruptcy, or is declared bankrupt, or files a voluntary petition in bankruptcy, or in the reasonable opinion of the Owner is insolvent, the Contractor shall immediately furnish and maintain another Surety in accordance with the provisions of this Section 11.4 satisfactory to the Owner.

**ARTICLE 12: UNCOVERING AND CORRECTION OF WORK**

12.2.2 AFTER SUBSTANTIAL COMPLETION

12.2.2 Add the following sentence at the end of the existing paragraph:

If prior to the date of Substantial Completion, the Contractor, a subcontractor or anyone for whom either is responsible uses or damages any portion of the Work, including, without limitation, mechanical, electrical, plumbing and other building systems, machinery, equipment or other mechanical device, the Contractor shall cause such item to be restored to "like new" condition at no expense to the Owner.

Add the following Paragraph:

12.2.2.1.1 At any time during the progress of the Work, or in any case where the nature of the defects will be such that it is not expedient to have corrected, the Owner, at its option, will have the right to deduct such sum, or sums, of money from the amount of the Contract as determined by the Architect in consultation with the Construction Manager and adjust the difference in value between the defective work and that required under Contract including any damage to the structure.

12.2.2.2 Strike "one" and insert "two".

12.2.2.3 Strike "one" and insert "two".

12.2.5 In second sentence, strike "one" and insert "two".

**ARTICLE 13: MISCELLANEOUS PROVISIONS**

13.1 GOVERNING LAW

Strike "except that, if the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4."

Insert "except that, if the parties have selected arbitration as the method of dispute resolution, the Delaware Arbitration Act, 10 Del. C. §5701, shall govern Section 15.4."

13.6 INTEREST

Strike "the date payment is due at such rate as the parties may agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located." Insert "30 days of presentment of the authorized Certificate of Payment at the annual rate of 12% or 1% per month.

13.7 TIME LIMITS ON CLAIMS

Strike the last sentence.

Add the following Paragraph:

13.8 CONFLICTS WITH FEDERAL STATUTES OR REGULATIONS

13.8.1 If any provision, specifications or requirement of the Contract Documents conflict or is inconsistent with any statute, law or regulation of the government of the United State of America, the Contractor shall notify the Architect, Construction Manager and Owner immediately upon discovery.

Add the following Paragraph:

13.9 "GENERAL PROVISIONS – All personal pronouns used in this Contract, whether used in the masculine, feminine, or neuter gender, shall include all other genders; and the singular shall include the plural and vice versa. Titles of articles, Sections and Sections are for convenience only and neither limit nor amplify the provisions of this Contract in itself. The use herein of the word "including", when following any general statement, term, or matter, shall not be construed to limit such statement, term, or matter to the specific items or matters set forth immediately following such word or to similar items or matters, whether or not non-limiting language (such words as "without limitation", or "but not limited to", or words of similar import) is used with reference thereto, but rather shall be deemed to refer to all other items or matters that could reasonably fall within the broadest possible scope of such general statement, term or matter.

Wherever possible, each provision of this Agreement shall be interpreted in a manner as to be effective and valid under applicable law. If, however, any provision of this Agreement, or portion thereof, is prohibited by law or found invalid under any law, only such provision or portion thereof shall be ineffective, without in any manner invalidating or affecting the remaining provisions of this Agreement or valid portions of such provision, which are hereby deemed severable.

Each party hereto agrees to do all acts and things and to make, execute and deliver such written instruments, as shall from time to time be reasonably required to carry out the terms and provisions of the Contract Documents.

Any specific requirement in this Contract that the responsibilities or obligations of the Contractor also apply to a Subcontractor is added for emphasis and is also hereby deemed to include a Subcontractor of any tier. The omission of a reference to a Subcontractor in connection with any of the Contractor's responsibilities or obligations shall not be construed to diminish, abrogate, or limit any responsibilities or obligations of a subcontractor of any tier under the Contract Documents or the applicable subcontract.

Contractor makes the following representations:

1. Contractor has familiarized itself with the nature and extent of the Contract Documents, Work, locality, local conditions, and with Federal, State and Local Laws, ordinances, rules and regulations that may in any manner effect costs, progress or performance of the Work.

2. Contractor has made examinations, investigations, tests and studies at the project site, as he deems necessary for the performance of the Work at the Contract Price and within the Contract Time. Contractor has correlated the results of all such observations, examinations, tests, reports and data with the terms and conditions of the other Contract Documents.

3. Contractor has given the Architect written notice of all conflicts, errors or discrepancies that he has discovered in the Contract Documents and the written resolution thereof by the Architect is acceptable to the Contractor."

**ARTICLE 14: TERMINATION OR SUSPENSION OF THE CONTRACT**

Add the following additional Paragraphs to 14.1.1:

.5 disregards the instruction of the Construction Manager or Architect when such instructions are based on the requirements of the Contract Documents.

.6 fails to furnish the Owner and Construction Manager with assurances satisfactory to the Owner and Construction Manager evidencing the Contractor's ability to complete the Work in compliance with the requirements of the Contract Documents.

.7 fails or neglects to progress work in such a manner to reasonably assure completion of the Work within the Contract Time or in accordance with the Construction Schedule.

.8 purposefully engages in a strike or work stoppage, or is in any way responsible for hindering or delaying the work of other trades, or ceases to work due to picketing or labor disputes of any kind.

14.4 TERMINATION BY THE OWNER FOR CONVENIENCE

Delete Paragraph 14.4.3 in its entirety and replace with the following:

14.4.3 In case of such termination for the Owner's convenience, the Contractor shall be entitled to receive payment for Work executed, and cost incurred by reason of such termination along with reasonable overhead.

**ARTICLE 15: CLAIMS AND DISPUTES**

15.1.6 CLAIMS FOR CONSEQUENTIAL DAMAGES

Delete Paragraph 15.1.6 and its subparagraphs in their entirety.

15.2 INITIAL DECISION

Delete Paragraph 15.2.5 in its entirety and replace with the following:

15.2.5 The Architect will approve or reject Claims by written decision, which shall state the reasons therefore and shall notify the parties of any change in the Contract Sum or Contract Time or both. The approval or rejection of a Claim by the Architect shall be subject to mediation and other remedies at law or in equity.

Delete Paragraph 15.2.6 and its subparagraphs in their entirety.

15.3 MEDIATION

15.3.1 Strike "binding dispute resolution" and insert "any or all remedies at law or in equity".

15.3.2 In the first sentence, delete "administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedure in effect on the date of the Agreement,". Also strike "binding dispute resolution" and insert "remedies at law and in equity".

15.4 ARBITRATION

Delete Paragraph 15.4 and its subparagraphs in their entirety.

END OF SUPPLEMENTARY GENERAL CONDITIONS

SECTION 007343 – WAGE RATE REQUIREMENTS

1. SUMMARY

1.1. In accordance with Delaware Code, Title 29, Chapter 69, Section 6912, all laborers and mechanics of the Contractor and all subcontractors employed to perform work directly upon the site of the work shall be paid unconditionally and not less often than once a week and without subsequent deduction or rebate on any account the full amounts accrued at the time of payment computed at wage rates not less than those determined by the Division of Industrial Affairs, Department of Labor, State of Delaware, as the prevailing rates in this area.

1.2 This approved scale of wages must be posted by the Contractor in a prominent and easily accessible place at the site of the work.

1.3 It is further stipulated that there may be withheld from the Contractor such accrued payment as may be considered necessary by the contracting officer to pay laborers and mechanics employed by the Contractor or any subcontractors on the work the difference between the rates of wages required and the rate of wages received by such laborers and mechanics and not refunded to the Contractor, subcontractor or their agents.

1.4 Where wage rates are published in this Manual they are issued by the State Department of Labor on the date indicated and are included for the convenience of Bidders. The Owner, the Architect, and the Construction Manager, accept no responsibility for the accuracy or applicability of any rates included herein. The actual wage rate determinations which will apply to the work will be those in effect on the first day of public advertisement for bids as determined by the State Department of Labor. It will be the responsibility of each bidder to contact the State Department of Labor and to incorporate these rates in his bid.

1.5 "In accordance with Delaware Code, Title 29, Section 6912, as amended July 5, 1994, contractors shall furnish sworn payroll information to the Department of Labor on a weekly basis for each contract which exceeds $15,000 for renovation work and $100,000 for new construction. The construction contract amount is based on a cumulative total of all contracts bid for a specific project. Payroll forms for submission may be obtained from the Department of Labor."

1.5.1 A Payroll Report, available from the Department of Labor is to be used to provide this information.

1.6 A copy of the Prevailing Wages for the project is attached hereto.

END OF SECTION

**STATE OF DELAWARE**
**DEPARTMENT OF LABOR**
**DIVISION OF INDUSTRIAL AFFAIRS**
**225 Corporate Boulevard, Suite 104**
**Newark, Delaware 19702**

**TELEPHONE (302) 761-8200**
**(302) 451-3423**
**Fax (302) 368-6604**

**Via Facsimile and Regular Mail**

January 28, 2015

Mr. Mark Grunza
EDIS Company
110 South Poplar St
Wilmington, DE 19801

Re: Richardson Park Elementary School Door Renovation, New Castle County, DE

Dear Mr. Grunza:

I am responding to your request for a category determination for the Richardson Park Elementary School Door Renovation, which is a state funded construction project located in New Castle County, DE. The work consists of replacing exterior windows and existing HVAC Units as indicated. You estimate the total cost of construction for this project to

Based upon the information you provided the Department of Labor has determined that this project is a Building Construction project.

Delaware's Prevailing Wage Regulations provide that the rates applicable to a project are the rates in effect on the date of publication of the specifications for that project. I have enclosed a certified copy of the March 14, 2014, prevailing wage rates for Building Construction to be included in your bid specification. However, please be advised that, in the event that a contract for a project is not executed within one hundred and twenty (120) days from the earliest date the specifications were published, the rates in effect at the time of the execution of the contract shall be the applicable rates for the project. Please be advised on March 13, 2015, the Department will issue its annual "Prevailing Wage Determination."

If you have any questions or I can provide any additional assistance, please do not hesitate to contact me at (302) 451-3425.

Sincerely,

Salina Crossland

Salina Crossland
Labor Law Enforcement Officer II
Salina.crossland@state.de.us
Enclosure

STATE OF DELAWARE
DEPARTMENT OF LABOR
DIVISION OF INDUSTRIAL AFFAIRS
OFFICE OF LABOR LAW ENFORCEMENT
PHONE: (302) 451-3423

Mailing Address:
225 CORPORATE BOULEVARD
SUITE 104
NEWARK, DE 19702

Located at:
225 CORPORATE BOULEVARD
SUITE 104
NEWARK, DE 19702

PREVAILING WAGES FOR BUILDING CONSTRUCTION EFFECTIVE MARCH 14, 2014

| CLASSIFICATION | NEW CASTLE | KENT | SUSSEX |
|---|---|---|---|
| ASBESTOS WORKERS | 21.87 | 26.94 | 39.20 |
| BOILERMAKERS | 65.47 | 33.22 | 48.83 |
| BRICKLAYERS | 48.08 | 48.08 | 48.08 |
| CARPENTERS | 50.91 | 50.91 | 40.47 |
| CEMENT FINISHERS | 31.52 | 29.11 | 21.20 |
| ELECTRICAL LINE WORKERS | 43.49 | 37.29 | 28.44 |
| ELECTRICIANS | 62.10 | 62.10 | 62.10 |
| ELEVATOR CONSTRUCTORS | 77.78 | 40.93 | 30.55 |
| GLAZIERS | 65.60 | 65.60 | 20.15 |
| INSULATORS | 51.48 | 51.48 | 51.48 |
| IRON WORKERS | 59.62 | 59.62 | 59.62 |
| LABORERS | 39.75 | 39.75 | 39.75 |
| MILLWRIGHTS | 63.53 | 63.53 | 50.10 |
| PAINTERS | 44.94 | 44.94 | 44.94 |
| PILEDRIVERS | 69.32 | 37.64 | 30.45 |
| PLASTERERS | 21.60 | 28.55 | 17.50 |
| PLUMBERS/PIPEFITTERS/STEAMFITTERS | 60.20 | 45.65 | 47.28 |
| POWER EQUIPMENT OPERATORS | 58.31 | 58.31 | 24.13 |
| ROOFERS-COMPOSITION | 22.35 | 19.07 | 17.63 |
| ROOFERS-SHINGLE/SLATE/TILE | 17.59 | 17.50 | 16.45 |
| SHEET METAL WORKERS | 63.24 | 63.24 | 63.24 |
| SOFT FLOOR LAYERS | 47.12 | 47.12 | 47.12 |
| SPRINKLER FITTERS | 52.73 | 52.73 | 52.73 |
| TERRAZZO/MARBLE/TILE FNRS | 52.50 | 52.50 | 45.45 |
| TERRAZZO/MARBLE/TILE STRS | 60.28 | 60.28 | 52.63 |
| TRUCK DRIVERS | 27.90 | 26.64 | 20.03 |

CERTIFIED: 1/28/15

BY: [signature]
ADMINISTRATOR, OFFICE OF LABOR LAW ENFORCEMENT

**NOTE:** THESE RATES ARE PROMULGATED AND ENFORCED PURSUANT TO THE PREVAILING WAGE REGULATIONS ADOPTED BY THE DEPARTMENT OF LABOR ON APRIL 3, 1992.

CLASSIFICATIONS OF WORKERS ARE DETERMINED BY THE DEPARTMENT OF LABOR. FOR ASSISTANCE IN CLASSIFYING WORKERS, OR FOR A COPY OF THE REGULATIONS OR CLASSIFICATIONS, PHONE (302) 451-3423.

NON-REGISTERED APPRENTICES MUST BE PAID THE MECHANIC'S RATE.

**PROJECT:** Richardson Park Elementary School Door Renovation, New Castle County

SECTION 101100 - SUMMARY OF WORK

1. RELATED DOCUMENTS

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

2. CONTRACTS

2.1 The work will be performed under separate prime contracts managed by the Construction Manager.

3. ALTERATIONS & COORDINATION

3.1 Contractor shall be responsible to coordinate their work with the work of others, including, but not limited to, the preparation of general coordination drawings, diagrams and schedules, and control of site utilization, from the beginning of activity, through project close-out and warranty periods.

4. KNOWLEDGE OF CONTRACT REQUIREMENTS

4.1 The Contractor and his Subcontractors, Sub-subcontractors and material men shall consult in detail the Contract Documents for instructions and requirements pertaining to the Work, and at his and their cost, shall provide all labor, materials, equipment and services necessary to furnish, install and complete the work in strict conformance with all provisions thereof.

4.2 The Contractor will be held to have examined the site of the Work prior to submitting his proposal and informed himself, his Subcontractors, Sub-subcontractors and material men of all existing conditions affecting the execution of the Work.

4.3 The Contractor will be held to have examined the Contract Documents and modifications thereto, as they may affect subdivisions of the Work and informed himself, his Subcontractors, Sub-subcontractors and material men of all conditions thereof affecting the execution of the Work.

4.4 The Scope of Work for the Contract is not necessarily limited to the description of each section of the Specifications and the illustrations shown on the Drawings. Include all minor items not expressly indicated in the Contract Documents, or as might be found necessary as a result of field conditions, in order to complete the Work as it is intended, without any gaps between the various subdivisions of work.

4.5 The Contractor will be held to be thoroughly familiar with all conditions affecting labor in the area of the Project including, but not limited to, Unions, incentive pay, procurements,

living, parking and commuting conditions and to have informed his Subcontractors and Sub-subcontractors thereof.

5. CONTRACT DOCUMENTS INFORMATION

5.1 The Contract Documents are prepared in accordance with available information as to existing conditions and locations. If, during construction, conditions are revealed at variance with the Contract Documents, notify the Construction Manager immediately, but no more than three (3) days from the day the variance is first known. Failure to give timely notice shall operate to waive any claim Contractor might otherwise have for an adjustment to Contract Time or Sum as a consequence of such variance.

5.2 The Specifications determine the kinds and methods of installation of the various materials, the Drawings establish the quantities, dimensions and details of materials, the schedules on the Drawings give the location, type and extent of the materials.

5.3 Dimensions given on the Drawings govern scale measurements and large scale drawings govern small scale drawings, except as to anything omitted unless such omission is expressly noted on the large scale drawings.

5.4 The techniques or methods of specifying to record requirements varies throughout text, and may include “prescriptive”, “open generic/descriptive”, “compliance with standards”, “performance”, “proprietary”, or a combination of these. The methods used for specifying one unit of work has no bearing on requirements for another unit of work.

5.5 Whenever a material, article or piece of equipment is referred to in the singular number in the Contract Documents, it shall be the same as referring to it in the plural. As many such materials, articles or pieces of equipment shall be provided as are required to complete the Work.

5.6 Whenever a material, article or piece of equipment is specified by reference to a governmental, trade association of similar standard, it shall comply with the requirements of the latest publication thereof and amendments thereto in effect on the bid date.

5.7 In addition to the requirements of the Contract Documents, Contractor’s work shall also comply with applicable standards of the construction industry and those industry standards are made a part of Contract Documents by reference, as if copied directly into Contract Documents, or as if published copies were bound herein.

5.8 Where compliance with two (2) or more industry standards, contract requirements, or sets of requirements is specified, and overlapping of those different standards or requirements establishes different or conflicting minimums or levels of quality, then the most stringent requirements, which are generally recognized to be also the most costly, is intended and

will be enforced, unless specifically detailed language written into the Contract Documents clearly indicates that a less stringent requirement is to be fulfilled. Refer apparently equal but different requirements, and uncertainties as to which level of quality is more stringent, to Architect for decision before proceeding.

5.9 Reference standards referenced directly in Contract Documents or by governing regulations have precedence over non-reference standards which are recognized in industry for applicability of work.

5.10 Contractor's bid is based on the complete set of Contract Documents including documents not specifically issued as part of the bid pack but referenced in same.

6. SCOPE OF WORK/GENERAL INFORMATION

6.1 A Scope of Work for each contract to be awarded on the project follows in this section. When a Contract has been awarded to a Contractor, the successful Contractor will be listed after the title of the Contract. When no Contract has yet been awarded, no Contractor's name will be listed. Previous Scopes of Work include addendum changes.

6.2 Contractor is responsible for performing the work listed in the Summary of Work for his contract. Contractor is also responsible for knowing the work that has been assigned to preceding contracts. No additional compensation or extension of time will be allowed a Contractor due to his ignorance of the work assigned to his Contract or to other contracts which may affect his work. The Contractor is responsible, however, for all items which are covered in the Specifications and Drawings relating to their Contract if not specifically mentioned in the Summary of Work.

6.3 The Construction Manager will provide on site a source for temporary electric, temporary water and portable sanitation facilities only. It is each Contractor's responsibility to make the necessary connections, including all material for temporary electric and water. Please note that utility charges for office trailers will be the responsibility of the individual Contractors.

6.4 A dumpster will be provided on site for free use by Contractors to dispose of non-hazardous, common, work-related refuse. Clean-up is the responsibility of each Contractor. Clean up shall be performed on a daily basis. Contractors not complying will be advised in writing and back charged for all costs associated with the clean up of their work.

6.5 Contractors are reminded that there are limited storage areas available on site. Off site storage will be the responsibility of each individual Contractor.

6.6 Office trailer permits off site will be the responsibility of each individual Contractor. On site Contractor's field offices, one (1) per Contractor, if required, will be located as

directed by the Construction Manager.

6.7 Contractor will be prepared to discuss and submit a detailed project schedule seven (7) days after receipt of Notice to Proceed and to begin its submittal process. The Project Schedule is an integral part of this contract. Certain construction sequences and priorities must take place in order to meet the target dates. Concentrated work periods will occur and each Contractor is responsible to staff the project as required by the current Construction Schedule or as directed by the Construction Manager. Contractor will cooperate with the Construction Manager in planning and meeting the required sequences of work and Project Schedule as periodically updated by the Construction Manager.

6.8 All bids must include insurance limits in accordance with Article 11 of the Section 007300 SUPPLEMENTARY CONDITIONS.

6.9 Hoisting, scaffolding and material handling is the responsibility of each Contractor, unless otherwise noted.

6.10 Contractor will be responsible for layout of its own work. The Construction Manager will provide benchmark and layout of the building line.

6.11 Contractor will be responsible to keep clean public roadways soiled by construction traffic on a daily basis. If cleaning is not done, the Construction Manager may perform the cleaning on an overtime basis and backcharge the Contractor responsible.

6.12 Contractor Scopes of Work and Schedule are interrelated. Familiarity with each is required.

6.13 The Construction Manager will provide testing services for soil, concrete and steel. Other testing as required by the Contract Documents will be in accordance with the technical specifications and/or the individual scope of work. Refer to Specification Section 004500 - QUALITY CONTROL.

6.14 Safety is the responsibility of each individual Contractor. The project will be governed under the guidelines of OSHA.

6.15 Inter-Contractor shop drawing distribution will be performed by the Construction Manager. Contractor is individually responsible for either coordinating his work with these distributed drawings or notifying the Construction Manager, in writing, of any discrepancies.

6.16 Coordination with other trades will be required. The Contractor will be required to attend periodic coordination meetings with other trades where requirements, conflicts and coordination issues will be discussed and resolved. Attendance when requested will

be mandatory. If inter-Contractor coordination is not satisfactorily performed, the conflicting Contractors shall mutually share the cost to relocate and/or reinstall their work.

6.17 Contractor shall submit a schedule of values to the Construction Manager prior to the submission of their first invoice for approval on AIA G702/CMa, Application for Payment and G703, Continuation Sheet.

6.18 Contractor is expected to review and coordinate its Work with the complete set of Contract Documents, including all items noted as by his trade whether or not shown on that particular set of drawings. Documents are available at the site for review.

6.19 Contractor is responsible for obtaining all necessary permits required for his work, including street permits. Unless otherwise noted, building permit shall be secured by the Construction Manager. Any subcontractor who will be restricting access to street, right of way or adjacent property must notify the Construction Manager 48 hours in advance.

6.20 Contractor's License: Submit a copy of all business licenses required by local and state agencies.

6.21 Contractor shall absorb, without additional compensation, any and all costs of working beyond normal hours to maintain job progress in accordance with the current construction schedule.

6.22 No asbestos or PCB's in or on any material or equipment will be accepted or allowed on this project. All hazardous materials will be treated in accordance with all State and Federal regulations.

6.23 Daily clean up of the work is the responsibility of each individual Contractor which includes broom cleaning of their debris as required. Contractor will be individually back charged by the Construction Manager for clean up not satisfactorily performed by the Contractor.

6.24 In the event asbestos is uncovered, the Contractor shall notify the Construction Manager of the areas requiring removal of asbestos. The Construction Manager shall then coordinate the removal with the Owner.

6.25 This project is to be constructed adjacent to and in existing buildings. Contractor shall exercise all due precautions to minimize noise, air pollution and any other construction hazards which in any way would cause discomfort or danger to the occupants of the existing building in the area.

6.26 Existing mechanical, electrical, plumbing, sprinkler, medical gas, fire alarm, etc. systems will be shut off and locked out by the Owner as required by the Work. Tie-in's and

modifications to those systems will be performed by the specific Contractor associated with the work as indicated in the Contract Documents. Re-energizing and re-start up of all systems should be performed by the Owner.

6.27 The Safety Cable System shall not be altered or removed without a written request submitted to the Project Manager with a copy to the Field Manager. It shall be the responsibility of each and every Contractor that is removing or altering the Safety Cable System to maintain the fall protection safety provided by the safety cable and not leave the area unprotected. Each and every Contractor shall be responsible to re-install the Safety Cable System immediately after work is completed. Each and every Contractor shall be responsible to re-install the Safety Cable System in accordance to OSHA standards.

6.28 Normal work hours for this project are from 7:00 p.m. to 3:30 p.m. Any work to be performed outside of these hours must receive prior approval from the Construction Manager. Requests to work beyond normal work hours shall be submitted at least 48 hours prior.

6.29 Contractor is responsible for having a competent project superintendent/foreman on-site during all work performed under its contract.

6.30 In the event the Contractor has non-English speaking employees or subcontractors on the project, they shall have a superintendent or foreman on site, at all times, who speaks English and can communicate with Contractor's employees. Should the Contractor fail to meet this requirement, at any time, Construction Manager may direct all Work to stop until the proper supervision is on site. The Contractor will be responsible for maintaining the project work schedule and make up at its own expense, any delay to the Schedule resulting from the work stoppage.

6.31 Punch List Procedures: Contractor shall be given a copy of the punch list with his appropriate work identified. Contractor shall have nine (9) calendar work days to complete its punch list work. On the 10th day or as determined by the Construction Manager, the Construction Manager shall employ other contractors, as required, to complete any incomplete punch list work and retain from the appropriate Contractors retainage all costs incurred.

6.32 Contractor shall provide the necessary safety barricades and railings required to complete their work and comply with all OSHA, local code and contract specifications.

6.33 **Liquidated Damages:** Contractors are responsible to provide sufficient manpower and equipment and materials to complete work as shown in the project schedule. Any delays in completing a phase of work due to issues caused by a contractor will be subject to a penalty of $1,000 per calendar day that the work is not completed following the scheduled completion date of that phase of work.

CONTRACT NO. A 01 – GLASS & GLAZING

A. Work included in this contract consists of, but is not necessarily limited to, all labor, materials and equipment for:

- Technical Specification Sections:

| | |
|---|---|
| Division 0 | Bidding and Contract Requirements |
| Division 1 | General Requirements |
| Section 024100 | Demolition |
| Section 061000 | Rough Carpentry |
| Section 062000 | Joint Sealers |
| Section 084313 | Aluminum Framed Storefronts |
| Section 085113 | Aluminum Windows |
| Section 088000 | Glazing |

This contract also includes, but is not necessarily limited to, all labor, materials and equipment for the following:

1. Provide all materials, equipment and labor to complete glass & glazing systems including all flashings, weather stripping, hardware, caulking and associated installation.

2. Provide interior and exterior caulking related to exterior windows.

3. Provide Mock-up/testing as required by the Drawings and Specifications.

4. Provide custom breakmetal trim and infills as indicated.

5. Provide all aluminum flashing.

6. Provide all hoisting/scaffolding related to complete the work of this Contract.

7. Include all necessary design labor and quick-ship costs (if any) to supply windows such that they are ordered and can be delivered to the site for installation during each phase as shown on the construction schedule. Project start estimated to be 6/10/15 and completion 8/15/15.

8. All asbestos containing glazing and window caulk to be removed by abatement contractor in conjunction with the installation schedule. All other demolition relevant to window replacement to be completed by this contractor.

9. The supply and installation of plastic laminate sill and/or headers and blocking is to be by others.

10. Window treatment demolition and installation is by others.

11. Sub sills, end damns, sill extensions, flashings, etc. are to be provided by this contractor.

12. Provide factory glazing as indicated.

13. Provide inspect screens.

14. Provide specified warranties for all specified items such as glass seals, degradation of finishes, fading, flaking etc. including, but not limited to 1 year standard warranty.

15. Provide all materials by specified acceptable manufacturers.

16. Provide weep drainage network and any water entering joints within system as specified.

17. Provide organic coatings.

18. Provide low-e glass.

19. Provide sash locks and limit stops at all windows.

20. Provide shop and touch up for all components.

21. Provide wash down and cleaning of windows at end of installation.

22. Provide thermal isolation components where penetrations or disruptions of building insulation occur and provide shim spaces at perimeter that maintain continuity of thermal barrier.

23. Provide daily fine cleanup of the work is the responsibility of each individual Contractor which includes broom cleaning of their debris as required. Daily Fine clean up on a daily basis shall be defined as those means/methods utilized to perform the daily cleaning tasks without producing dust, noise and stacking of stored materials. All debris must be removed from the building at the end of each work day.

24. Perform all demolition and disposal of all existing window units and associated materials to a dumpster provided by this firm. No construction dumpster will be provided for the removal of any demolished materials.

25. Provide a $5,000 allowance to be used at the discretion of the Construction Manager.

26. Base Bid shall be completed during normal work hours, which for this project are from 7:00 p.m. to 3:30 p.m. Alternate #1 is for additional cost to be completed during 2nd shift. The Second Shift work will be scheduled from 2:30 pm to 11:00 pm.

27. Provide all temporary lighting for installations as needed to complete all work in base bid. If Alternate #1 is accepted, including alternate costs for additional lighting as needed to complete this work.

28. All work commenced during a shift must be completed at the end of each shift. No work can be left incomplete, unfinished or unsafe for student use or interaction. This includes, but is not limited to, completion of installation, removal of all debris, material and equipment in each area and the removal of any unsafe conditions created by the installation each shift. Any additional labor or materials extending beyond normal working hours will be done so at own risk. No additional compensation will be provided for work not completed as scheduled, on a daily basis.

29. Windows types F, G, H & K have been identified having asbestos associated with these openings. A separate asbestos contractor will provide demolition of these windows. This contractor shall coordinate with asbestos removal contractor to ensure all installations are enclosed with replacement windows as soon as the asbestos has been removed.

CONTRACT NO. A 02 – MECHANICAL & CONTROLS

A. Work included in this contract consists of, but is not necessarily limited to, all labor, materials and equipment for:

- Technical Specification Sections:

| | |
|---|---|
| Division 0 | Bidding and Contract Requirements |
| Division 1 | General Requirements |
| Section 024100 | Demolition |
| Section 062000 | Joint Sealers |
| Section 230400 | Heating Generation Equipment |
| Section 230500 | Piping Systems & Accessories – HVAC |
| Section 230725 | Terminal Heating Units |
| Section 230730 | Terminal Heating and Cooling Equipment |
| Section 230760 | Air Handling Equipment |

This contract also includes, but is not necessarily limited to, all labor, materials and equipment for the following:

1. Provide the demolition, purchase of all new units and replacement of all mechanical systems as indicated on the Drawings and in the Specifications.

2. Division 26 of the specifications should be reviewed as it relates to the power wiring and other requirements for HVAC equipment including the coordination of furnishing and installing motor starters as provided in the specifications.

3. This Contractor shall be responsible to designate an individual within his organization, intimately familiar with this project and assigned on site, to act as the System Start-up Coordinator. This individual must be pre-approved by the Construction Manager. This individual's responsibilities shall include, but not be limited to, coordinating the start-up of all mechanical equipment, including the coordination between the Electrical Contractor, the Controls Contractor, and all testing, adjusting and balancing work. This individual shall report on a weekly basis, in written form, to the Construction Manager. These reports shall include a summary of current conditions including manufacturers' start-ups, systems' deficiencies noted to date and the remediation of same, coordination issues between trades, system interfacing and forecasting, as necessary to project the completion of each individual system within the building.

4. Provide all equipment bases and housekeeping pads.

5. Provide permitting.

6. Penetrations through wall, floors, etc. including cutting, patching and fire safing.

7. Coordination with Testing and balancing contractor.

8. Provide daily fine cleanup of the work is the responsibility of each individual Contractor which includes broom cleaning of their debris as required. Daily Fine clean up on a daily basis shall be defined as those means/methods utilized to perform the daily cleaning tasks without producing dust, noise and stacking of stored materials. All debris must be removed from the building at the end of each work day.

9. All guarantees and warranties to begin at the substantial completion of the entire project. Maintain equipment prior to substantial completion.

10. Provide all hoisting, rigging and scaffolding.

11. Provide, coordinate design, supply, and installation of automatic temperature controls. This contractor is responsible for coordination and installation of ATC system as specified under this section.

12. Provide all ductwork, flex duct, grilles and diffusers.

13. Provide adjustments to louvers and vents related to HVAC operations. Provide new louvers where indicated.

14. Coordinate damper size, location and type of damper with architectural drawings.

15. Temporary heat and ventilation installation, maintenance and removal. Refer to Division 1, Specification section 015123 - TEMPORARY HEAT AND VENTILATION, for specific scope.

16. Provide roof curb and include all costs associated with roof patching and any temporary roof enclosure needed to perform this work to ensure no leaks will occur while replacement is underway.

17. Provide access panels as indicated.

18. Provide as- built drawings.

19. Provide balancing (Water and air)with certified balancer.

20. Provide coordination with the owner's ATC Contractor for equipment and materials being provided under their contract. This contractor responsible to accept delivery of this prepurchased equipment at curb side and provide installation.

21. Provide all piping connections from D Mark locations where indicated. All acoustical

ceilings will need to be removed, stored, protected and reinstalled by this contractor on an as needed basis to access the tie-in locations as indicated. Any tiles damaged or found to be unsuitable shall be replaced by this contractor at no additional costs to the project.

22. Provide all necessary design labor and quick-ship costs to supply Unit Ventilators, Roof Top Units, and Finned Tube units for installation in Phase 1 (Summer 2015) areas for installation prior to August 2015 as stated in the project schedule. All other mechanical units, such as boiler and pumps must be ordered and delivered to site for installation in Phase II (Summer 2016).

23. Provide pricing for all alternates as described in Section 012300-Alternates.

24. Provide a $10,000 allowance to be used at the discretion of the Construction Manager.

25. Perform all demolition and disposal of all existing units and associated connections to a dumpster provided by this firm. No construction dumpster will be provided for the removal of any demolished materials.

26. Provide labeling, valve charts or tags as indicated.

27. Provide all patching of walls and floors. Patching is to provide smoke/seal through walls and floors.

28. Provide protection of adjacent floors and finishes during demolition of mechanical and plumbing fixtures, equipment, pipe, etc. Protection shall consist of 20 mill poly layered under Masonite that has been duct taped for access in all areas affected including hallways leading to rooms.

29. Provide complete testing and balancing services for the project.

30. Provide signed and sealed test report by a certified engineer. Report is due prior to New Castle county final inspection.

31. Provide water and air testing and balancing.

32. Domestic plumbing will be issued in Bid Pac "B". No costs associated with domestic piping shall be included in base bid.

33. Provide an allowance to install two (2) 6" valves and four (4) 1 1/2" valves on the piping mains to the classrooms in the event that existing valves do not hold. Any allowance costs not utilized will be returned to owner at end of project if not utilized.

34. Base Bid shall be completed during normal work hours, which for this project are from 7:00 p.m. to 3:30 p.m. Alternate #1 is for additional cost to be completed during 2nd shift.

The Second Shift work will be scheduled from 2:30 pm to 11:00 pm.

35. Provide all temporary lighting for installations as needed to complete all work in base bid. If Alternate #1 is accepted, including alternate costs for additional lighting as needed to complete this work.

36. All work commenced during a shift must be completed at the end of each shift. No work can be left incomplete, unfinished or unsafe for student use or interaction. This includes, but is not limited to, completion of installation, removal of all debris, material and equipment in each area and the removal of any unsafe conditions created by the installation each shift. Any additional labor or materials extending beyond normal working hours will be done so at own risk. No additional compensation will be provided for work not completed as scheduled, on a daily basis.

END OF SECTION

SECTION 012100 - ALLOWANCES

1. RELATED DOCUMENTS

1.1 The general provisions of the Contract, including the Conditions of the Contract (General, Supplementary and other Conditions, if any) and Division 1 as appropriate, apply to the Work specified in this Section.

1.2 Refer to provisions in AIA Document A232 – 2009 EDITION, GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, CONSTRUCTION MANAGER AS ADVISOR EDITION, for requirements in addition to those specified in Division 1.

1.3 Refer to Scope Information Sheets for all contracts bound in the Project Manual under Section 011100 - SUMMARY OF WORK. The Scope Information Sheets describe generally the work included in each contract, but the work is not necessarily limited to that described.

1.4 For work being constructed under separate prime contracts, provisions of this Section apply to each contract being bid.

1.5 Include in the Contract Sum all lump sum and unit cost allowances stated in the Contract Documents.

1.6 Designate in the construction progress schedule the delivery dates for products specified under each allowance.

1.7 Designate in the Schedule of Values the quantities of materials required under each unit cost allowance.

2. ALLOWANCES FOR PRODUCTS

2.1 The amount of each allowance includes:

A. The cost of the product or labor to the Contractor or Subcontractor, less any applicable trade discounts.

B. Delivery to the site.

C. Labor required under the allowance, only when labor in specified to be included in the allowance. If labor is not specified to be included in the allowance, it shall be included in the Contractor's bid and in the resulting Contract Sum.

D. Applicable taxes.

E. Profit and overhead.

2.2 In addition to the amount of each allowance, include in the Contract Sum the Contractor's costs for:

A. Handling at the site; including unloading, uncrating and storage.

B. Protection from the elements and from damage.

C. Labor for installation and finishing, except where labor is specified to be a part of the allowance.

D. Other expenses required to complete the installation.

E. Contractor's and Subcontractor's overhead and profit.

2.3 Refer to Scope Information Sheets under Section 011100 - SUMMARY OF WORK for the amount of each lump sum allowance and for work specified in the specification sections listed below.

A. Contract No A 01 – Glass & Glazing
   a. This contractor to include an allowance of $5,000 to be utilized at the discretion of the Construction Manager

B. Contract No A 02 – Mechanical & Controls
   a. Provide a $10,000 allowance to be used at the discretion of the Construction Manager.
   b. Provide an allowance to install two (2) 6″ valves and four (4) 1 1/2″ valves on the piping mains to the classrooms in the event that existing valves do not hold. Any allowance costs not utilized will be returned to owner at end of project if not utilized.

3. ADJUSTMENT OF COSTS

3.1 Should the net cost be more or less than the specified amount of the allowance, the Contract Sum will be adjusted accordingly by Change Order.

A. For products and labor specified under a unit cost allowance, the unit cost shall apply to the quantities actually used with a nominal allowance for waste, as determined by receipted invoices, or by field measurement.

3.2 At Contract closeout, reflect all approved changes in Contract amounts in the final statement of accounting.

END OF SECTION

SECTION 012200 - UNIT PRICES

1. GENERAL PROVISIONS

1.1 The general provision of the Contract, including the Conditions of the Contract (General, Supplementary and other conditions, if any) and Division 1 as appropriate, apply to the Work specified in this Section.

1.2 Refer to provisions in AIA Document A232 – 2009 EDITION, GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, CONSTRUCTION MANAGER AS ADVISOR EDITION, for requirements in addition to those specified in Division 1.

1.3 For work being constructed under separate prime contract, provisions of this Section apply to each contract being bid.

2. BASE BID

2.1 The Base Bid shall consist of all work shown or specified in the Contract Documents, exclusive of any Additive Unit Prices specified herein.

.2.2 The Base Bid shall include all work in any Subtractive Unit Prices specified herein.

3. UNIT PRICES

3.1 State in the Bid Form the amount to be added to (or subtracted from) the Base Bid per unit of measurement for each Unit Price specified. State this amount to include all overhead and profit. No surcharge in addition to the Unit Price listed will be permitted.

3.2 See Section 002113, INSTRUCTIONS TO BIDDERS for related information.

3.3 For description of Unit Prices requested, refer to the specification. The method of stating the Unit Prices is described in the Bid Form.

3.4 Where both add and deduct unit prices are requested, there shall not be more that a 15% variation between the two.

4. APPLICATION OF UNIT PRICES

4.1 Unit prices stated in the Bid Form will apply from the time the Bid is submitted until Contract completion.

5. MEASUREMENT OF QUANTITIES

5.1 Quantities shall be determined by field measurement by contractor personnel and as verified by the Construction Manager.

5.2 At the Contractor's option, and at his expense, measurement may be made by a registered surveyor.

6. LIST AND DESCRIPTION OF UNIT PRICES

1. N/A

END OF SECTION

SECTION 012300 - ALTERNATES

1. GENERAL PROVISIONS

1.1 The general provisions of the Contract, including the Conditions of the Contract (General, Supplementary and other conditions, if any) and Division 1 as appropriate, apply to the Work specified in this Section.

1.2 Refer to provisions in AIA Document A232 – 2009 Edition, GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, CONSTRUCTION MANAGER AS ADVISOR EDITION, for requirements in addition to those specified in Division 1.

1.3 For work being constructed under separate prime contracts, provisions of this Section apply to each contract being bid.

2. BASE BID

2.1 The Base Bid shall consist of all work shown or specified in the Contract Documents, exclusive of any Additive Alternates specified herein.

2.2 The Base Bid shall include all work in any Subtractive Alternates specified herein.

3. ALTERNATES

3.1 State in the Bid Form the amount to be added to the Base Bid for each Alternate specified.

3.2 See Section 002113 - INSTRUCTIONS TO BIDDERS for related information.

3.3 The description of Alternates contained herein is in summary form. Detailed requirements for materials and execution shall be as specified in other sections and as shown on drawings.

1. ***Alternate No. 1:*** Base Bid shall be completed during normal work hours, which for this project are from 7:00 p.m. to 3:30 p.m. Alternate #1 is for additional cost to be completed during 2nd shift. The Second Shift work will be scheduled from 2:30 pm to 11:00 pm.

END OF SECTION

SECTION 012600 - CHANGE ORDER PROCEDURES

1. GENERAL:

1.1 The general provisions of the Contract, including the Conditions of the Contract (General, Supplementary and other Conditions, if any) and Division 1 as appropriate, apply to the Work specified in this Section.

1.2 Refer to provisions in AIA Document A232 – 2009 EDITION, GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, CONSTRUCTION MANAGER AS ADVISOR EDITION, for requirements in addition to those specified in Division 1.

1.3 The Construction Manager is responsible for processing all change orders. Each request will be assigned a change order request (COR) number. The Change Order Request & Execution Form will be initiated via the web-based project management system (Building Blok) used by the CM.

1.4 It is to be clearly understood that no extra work shall commence without an approved written and executed change order from the Owner.

2. INITIATING A CHANGE ORDER:

2.1 Specific changes initiated by the Owner, Architect, Construction Manager (CM) or Contractor will be processed as follows:

A. The Owner will authorize the Architect to prepare sufficient documents to establish an accurate price. These documents to be forwarded to the Construction Manager and Owner "for pricing only, not authorized for construction." The Construction Manager will develop the estimate (within 2 weeks) showing a breakdown by trades with all trade contractor quotes. The Owner will approve or reject the change request within two (2) weeks. If the Owner elects to proceed with the change, the Construction Manager will prepare formal change orders to the various trade contractors involved in the change and reference in all formal change orders the original change order request number.

B. Field Change: Contractor shall immediately notify the Construction Manager of a change due to field conditions or site conditions. If documents cannot be prepared for pricing due to schedule constraints, the Construction Manager will make every effort in estimating the field change. If the Owner and Construction Manager agree that certain field changes should be handled on a time and material basis, the Construction Manager will closely monitor the Contractor's labor and material affecting this change. At the completion of the work a formal change order will be issued.

C. Contractor Change: If a Contractor initiates a change order for work not included in the Contract, the Construction Manager and Architect will research the validity of

the request, verify quantities and pricing and submit to the Owner for approval on a change order request.

2.2 The additional cost, or credit to the Owner resulting from a change in the Work shall be by mutual agreement of the Owner, Contractor, Construction Manager and the Architect.

3. PROCESSING A CHANGE ORDER:

3.1 The Contractor will fill in the Change Order Request & Execution Form (COREF) with a brief description of the change, any time extension, and cost changes.

3.2 The Contractor will attach to the COREF copies of the written quotations from the trade contractors, Contractors, and suppliers. The Labor Detail Sheet and the Change Order Detail forms must be added as an attachment to the COREF. The Contractor and each sub-tier contractor (as applicable) must fill out the Labor Detail Sheet and Change Order Detail Sheet. Samples of these forms are attached.

3.3 In all cases, this cost or credit shall be based on the "DPE" wages required and the "invoice price" of the materials/equipment needed.

3.4 "DPE" shall be defined to mean "direct personnel expense". Direct payroll expense includes direct salary plus customary fringe benefits (prevailing wage rates) and documented statutory costs such as workman's compensation insurance, FICA, and unemployment insurance.

A. "Fringe Benefit" is any medical, life or disability insurance, paid time off, etc.

B. "Worker's Compensation" is the insurance required for injuries including medical leave, etc.

C. "FICA" is the costs association with Social Security and Medicare insurance.

D. "Unemployment insurance" is the cost associated with the governmental assessment for employee's unemployment benefits.

3.5 "Invoice price" of materials/equipment shall be defined to mean the actual cost of materials and/or equipment that is paid by the Contractor (or Subcontractor) to a material distributor, direct factory vendor, store, material provider, or equipment leasing entity.

3.6 In addition to the above, the Contractor is allowed markup for overhead and profit on additional work performed as outlined in Specification Section 012613, Contractor Compensation.

3.7 Building Blok Procedures: The Contractor will submit all change order requests and supporting documentation via the Building Blok web-based project management system. Each Contractor will be issued a unique login and password. Each contractor must submit the information as follows:

A. Create a new change order, from your "To-Do List" by clicking on the "Create Issue" tab in the upper right corner and select "Change Order Request".
B. The Contractor will enter a brief description of the change in the "Summary" block. A detailed description of the change will be entered in the "Description of Change" block, to include any changes to documents or time extension. The cost of the change will be entered in the "Total Cost Change" block.

C. The Labor Detail Sheet and the Change Order Detail forms must be added as an attachment to the request. The Contractor and each sub-tier contractor (as applicable) must fill out the Labor Detail Sheet and Change Order Detail Sheet. Samples of these forms are included behind this section. In addition to these forms, the Contractor also must attach any material and equipment rental quotations. All of these documents should be scanned and saved as a PDF file. Click on the "Browse" box to upload the file. Be sure to wait until Building Blok tells you the file was "Uploaded Successfully".

D. Once the information is entered on the form and the proper attachments are uploaded, the contractor will click "Save". The Contractor will be prompted to enter their password to approve an electronic signature. Once you save the request you will have an opportunity to check it before submitting it to the CM. After you verify the COREF is correct click "Recommend Approval" to submit the change request to the CM. The Contractor will then be prompted to re-enter the password to approve an electronic signature and complete the submission request. Click on "Home" in the upper left corner to make sure the change order does not appear on your To-Do List.

E. The Change Order Request will then be reviewed by the CM Project Manager and Recommended for Approval, Rejected, or returned to the Contractor for additional information. Once the Construction Manager, Owner, and Architect have approved the request all parties will receive an email from Building Blok notifying them that a fully executed Change Order and Contract Recalculation Form can be downloaded from Building Blok. Hard copies of the executed change order and recalculation form will not be provided by the CM.

It is to be clearly stated that no extra work shall commence without an approval from the **Owner or Construction Manager** or Owner's representative.

END OF SECTION

## CHANGE ORDER REQUEST & EXECUTION FORM

110 South Poplar Street
Suite 400
Wilmington, DE 19801

Tel. 302-421-5700
Fax 302-421-5715

| | |
|---|---|
| DATE: | PROJECT NAME: Richardson Park |
| CONTRACT: | REQUEST NUMBER: |
| CONTRACTOR: | CHANGE ORDER NUMBER: |
| | STATE PO NUMBER: |

The following is a summary of the request submitted by the contractor as described above. All supporting documents have been attached and described herewith. This summary shall contain a total amount of compensation requested by the contractor as well as any request for an extension in contract time. It shall be understood that the amounts described below shall remain valid for a period of sixty days from the date described above unless otherwise stated.

A detailed breakdown of Labor, material, equipment, and subcontract costs must be attached to be considered for review.

1. Summary Description(s):
2. Changes to the Contract Drawings:
3. Changes to the Project Manual:
4. Total Cost Change:
5. Total Time Change:

**REVIEWED**

This request has been reviewed and____approval_____disapproval is recommended by:

Name Title Date

**APPROVED**

This change order request is not approved until executed by all parties bound by a contractual relationship. Upon execution it shall represent a modification to the agreement and is subject to all terms and conditions of the contract documents.

| | |
|---|---|
| Contractor: | Architect: |
| Signed By: | Signed By: |
| Title: | Title: |
| Date: | Date: |
| EDiS Company | Owner: |
| Signed By: | Signed By: |
| Title: | Title: |
| Date: | Date: |

# CHANGE ORDER DETAIL FORM

(Provided by contractor, subcontractor or sub tier contractor)

**DATE SUBMITTED:**

**CONTRACT:**

**CONTRACTOR:**

**PROJECT NAME: Richardson Park Elementary School Door Renovation**

**CHANGE ORDER REQUEST #:**

---

## LABOR SECTION

| TRADESMAN(s): | LABOR HOURS | RATE (per schedule) | SUBTOTAL |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| **Subtotal** | | | |

## MATERIAL SECTION

| MATERIAL: | QUANTITY | UNIT COST | SUBTOTAL |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| **Subtotal** | | | |

## EQUIPMENT SECTION

| EQUIPMENT: | QUANTITY | UNIT COST | SUBTOTAL |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| **Subtotal** | | | |

| | |
|---|---|
| **SUBTOTAL** | |
| **SUBCONTRACTOR/ SUB TIER*** | |
| **OH & PROFIT (7.5% on sub/sub tier only))** | |
| **BOND COST** | |
| **OH & PROFIT (15% on own work)** | |
| **GRAND TOTAL** | |

# LABOR DETAIL FORM

(Provided by contractor, subcontractor, or sub-tier contractor)

**DATE:**

**CONTRACT:**

**CONTRACTOR:**

**PROJECT NAME: Richardson Park Elementary School Door Renovation**

**CHANGE ORDER REQUEST #:**

---

| **CLASSIFICATION:** | | | |
|---|---|---|---|
| Base Wage Rate: | | | |
| Health Insurance | | | |
| Holidays | | | |
| Sick Days | | | |
| Life Insurance | | | |
| Disability Insurance | | | |
| Dental Insurance | | | |
| Company Vehicle | | | |
| 401K | | | |
| Education | | | |
| Other (*specify below* ) | | | |
| | | | |
| | | | |
| **Subtotal** | | | |
| **Posted Prevailing Rate** | | | |
| FICA (Social Security & Medicare) | | | |
| SUTA (State Unemployment) | | | |
| FUTA (Federal Unemployment) | | | |
| General Liability Insurance | | | |
| Worker's Compensation | | | |
| **Total Wage Rate** | | | |

3/2012

SECTION 012613 - CONTRACTOR COMPENSATION

1. GENERAL

1.1 The Contractor agrees to perform any additional Work, for the net cost of materials and labor (including wages paid, payroll taxes, and all insurance) plus the following percentage for all of his overhead and profit, which includes Field Supervision:

The percentages to be added or allowed for any Work change involving both added Work and omitted Work shall be applied only to the net difference in cost.

(a) 15% mark-up (10% overhead and 5% profit) by the Contractor on Work performed by his own forces.

(b) For work done by a Subcontractor, 10% for subcontractor overhead and 5% for subcontractor profit to which the Contractor may add 7.5% for his overhead and profit combined.

(c) Contractor mark-up shall include supervision, home and field overhead, all self-owned small tools and equipment.

1.2 When the Contractor is directed to perform overtime work at the CM (Owner) expense to accelerate contractual work, the cost for same shall only be the actual premium costs incurred by the Contractor.

END OF SECTION

SECTION 012900 - PAYMENT PROCEDURES

1. GENERAL PROVISIONS

1.1 The general provisions of the Contract, including the Conditions of the Contract (General, Supplementary and other conditions, if any) and Division 1 as appropriate, apply to the Work specified in this Section.

1.2 Refer to provisions in AIA Document A232 - 2009 Edition, GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, CONSTRUCTION MANAGER AS ADVISOR EDITION, for requirements in addition to those specified in Division 1.

1.3 For work being constructed under separate prime contracts, provisions of this Section apply to each contract being bid.

2. REQUIREMENTS INCLUDED

2.1 Submit Applications for Payment to Construction Manager in accordance with the schedule and procedures established in the Contract Documents.

3. RELATED REQUIREMENTS

3.1 Owner-Contractor Agreement.

3.2 Conditions of the Contract: Article 9 PAYMENTS AND COMPLETION.

3.3 Section 01 31 13: Project Coordination Meetings

3.4 Section 01 33 00: Submittal Procedures

3.5 Section 01 77 00: Closeout Procedures

4. FORMAT AND DATA REQUIRED

4.1 Submit itemized applications typed on AIA Document G702/CMa, Application and Certificate for Payment, and Continuation Sheet G703, examples of which will be furnished to the Contractor at the Pre-Construction meeting.

4.2 Provide itemized data on Continuation Sheet:

1. Format, schedules, line items and values: Duplicates of those of the schedule of values previously accepted by the Construction Manager.

5. PREPARATION OF APPLICATIONS FOR PROGRESS PAYMENTS

5.1 Form: AIA Document G702/CMa

1. Fill in required information, including that for Change Orders executed prior to date of submittal of application.

2. Fill in summary of dollar values to agree with respective totals indicated on Continuation Sheets.

5.2 Continuation Sheets:

1. Line items of components of Work will be subject to Owner's review and approval under the Provisions of Section 013300 - SUBMITTALS, and the General Conditions. Continuation Sheets shall follow Schedule of Values submitted at the start of the job.

2. Fill in total list of all scheduled components of Work, with item number and scheduled dollar value for each item. Fill in values of work completed in the period.

3. Fill in dollar value in each column for each scheduled line item when work has been performed or products stored; round off values to nearest dollar.

4. List each Change Order executed prior to date of submission, at the end of the Continuation Sheets; list by Change Order Number, and description, as for an original component item of work.

6. PREPARATION OF APPLICATION FOR FINAL PAYMENT

6.1 Fill in Application form as specified in progress payments.

7. SUBMITTAL PROCEDURES

7.1 Complete Invoice:

1. Submit completed Application to the Construction Manager by the date stipulated in the Project Manual.

7.2 Number: Submit 3 copies of each invoice.

END OF SECTION

SECTION 013113 - PROJECT COORDINATION MEETING

1. PROJECT COORDINATION MEETING

1.1 An on-site project coordination meeting will be held on a biweekly basis throughout the project construction period.

2. ATTENDANCE

2.1 Attendance at the project coordination meeting is mandatory of each Contractor or major supplier on the project.

2.2 The representative of the Contractor shall be the Project Manager and field superintendent, unless a substitute representative has been approved by the Construction Manager.

2.3 Contractor will begin attending the Project Coordination Meetings at least 4 weeks prior to mobilization on site, and will continue until the Contractor has fulfilled the obligations of his Contract.

3. AGENDA

3.1 The Construction Manager will set the agenda for the biweekly Project Coordination Meeting.

3.2 At a minimum, the Contractor shall be prepared to discuss the following:

1. Actual vs. as planned progress for the prior two week period.
2. Planned construction activities for the next four weeks.
3. Contract document clarifications.
4. Coordination items with other contractors.
5. Quality Control.
6. Recently issued change orders.
7. Potential change orders.
8. Submittals and shop drawings.
9. Other items requiring Construction Manager's attention.

END OF SECTION

SECTION 013119 – PRE-INSTALLATION MEETINGS

1. PRE-INSTALLATION MEETINGS

1.1 An on-site pre-installation meeting will be held at least two weeks prior to commencement of installation of work.

2. ATTENDANCE

2.1 Attendance at the pre-installation meeting is mandatory of each Contractor and/or major supplier as required for each specific meeting listed below.

2.2 The following individuals shall attend these meetings:
- Contractors' Project Manager
- Contractors' Field Superintendent
- Contractors' Safety Representative (as needed)
- Key Subcontractors, Suppliers, and Vendors
- EDiS Project Manager
- EDiS Field Manager
- EDiS Safety Director (as needed)
- EDiS MEP Specialist (as needed)
- Owner's Representative (as needed)
- Architect/Engineer (as needed)
- Governmental Agency Representatives (as needed)
- Testing/Inspection Agency Representatives (as needed)
- Utility Company Representatives (as needed)

3. SUBMITTALS

3.1 Each contractor is responsible to have all submittals and mock-ups, as related to the pre-installation meeting scope of work, submitted and approved prior to commencement of the pre-installation meeting.

4. LIST OF REQUIRED MEETINGS

- Building Envelope
  - Curtain Wall/Glazing/Storefronts
- Glass and Glazing – Window Replacement
- MEP Coordination
  - Phasing
  - Mechanical Piping Roughin
  - Insulation
  - Electrical Roughin
  - Automatic Temperature Controls
  - Commissioning
  - Balancing

5. AGENDA

3.1 At a minimum, the Contractor shall be prepared to discuss the items as listed on the agenda template shown on the following page:

**PROJECT: Renovations to the Conrad School of Science**
**PRE-INSTALLATION MEETING : (Insert Phase of Work)**

**A. ATTENDEES:**

| NAME | COMPANY | WORK ITEM | CONTRACT |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

**B. TESTING & INSPECTION REQUIREMENTS** ***(THESE REQUIREMENTS COME FROM THE PROJECT MANUAL)***

**C. REVIEW CONTRACT DRAWINGS AND SPECIFICATIONS**

| Drawing / Spec No. | Comments / Conflicts |
|---|---|
| | |
| | |
| | |
| | |

**D. REVIEW SCOPES OF WORK** ***(SEE SECTION 011100 IN THE PROJECT MANUAL)***

**E. REVIEW RELEVANT RFI'S**

**F. REVIEW SUBMITTALS** ***(SEE THE SUBMITTAL REGISTER)***

**G. REVIEW MATERIALS AND DELIVERIES**

**H. REVIEW SCHEDULE AND SEQUENCE OF WORK**

**I. JOB SITE SAFETY *(SEE THE CONTRACTOR'S SAFETY PROGRAM OR OSHA)***

- Safety Plans must be submitted before the start of work
- Certificates of Insurance need to be submitted before the start of work
- Minimum PPE – Hardhats, steel toe boots, safety glasses
- Lock-out, Tag, Test and Try ALL utilities is critical before the start of demolition
- Signage & HAZCOM Requirements
- Potential Hazards
    - Excavations >4 ft
    - Slips/trips/falls
    - Existing utilities to remain and protected
    - Overhead debris
    - Power tools
    - Heavy equipment

**J. COORDINATION WITH OTHER TRADES**

**K. ACTION ITEMS AND RESPONSIBILITY**

END OF SECTION

SECTION 013125– WEB-BASED PROJECT MANAGEMENT SYSTEM

1. GENERAL PROVISIONS

1.1 The general provisions of the Contract, including the Conditions of the Contract (General, Supplementary and other Conditions, if any) and Division 1 as appropriate, apply to the Work specified in this Section.

1.2 Refer to provisions in AIA Document A232 - 2009 EDITION, GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, for requirements in addition to those specified in Division 1.

1.3 Refer to Scope Information Sheets for all contracts bound in the Project Manual under Section 011100 - SUMMARY OF WORK. The Scope Information Sheets describe generally the work included in each contract, but the work is not necessarily limited to that described.

1.4 All Contractors shall use Internet/Web-based project management software to transmit documents, track, and otherwise manage this project.

1.5 Use of this project management software will not change any contractual responsibilities of the construction team members.

2. DEFINITIONS

2.1 System: A real time web-based software that shares data, translates data, organizes data, facilitates communication, archives actions, and offers scheduling prompts to identified Users.

2.2 Users: Authorized participants of this project furnished with a unique password and authorized to access the system to view/input/export data. Owner, Construction Manager, Architect, and the Contractors are all Users. Other Users may be added as necessary.

2.3 Contacts: Entities identified to automatically receive specific transmissions or entities selected to receive specific information sent by the system through to an e-mail address.

2.4 Signees: Those individuals identified, by the Contractors, authorized to sign change orders and payment applications via electronic signature. This electronic signature is as contractually binding as an original signature on paper.

3. USE OF SYSTEM

3.1 The use of the system is mandatory for the documentation of the transmittal of all non-oral information, even if the actual transmission of the information is by another means.

3.2 The use of the system will be mandatory by the Contractors to send, retrieve, and respond to

data.

3.3 In addition to this web-based project management system, the Contractors will be required to use electronic mail (email) for day-to-day communication and correspondence. Email will be the primary means of transmitting written communication (i.e. meeting minutes, draft pay applications, etc.).

4. QUALITY ASSURANCE

4.1 A three hour training session in the use of the software for this project will be offered by the Construction Manager at a location convenient to the project site. Attendance by one member of each Contractor's organization is mandatory. Additional attendees may enroll based on availability of training space. All attendees must have a working knowledge of computers. Training can not begin until three working days after the receipt of the submittals indicated below.

4.2 Technical assistance will be provided by on-line help, email, or telephone for all Users throughout the life of the project.

5. SUBMITTALS

5.1 Submit to the Construction Manager, within 5 days following the receipt of the letter of intent to award, in an electronic template, the following:

a. Electronic logo of organization (as needed)
b. Names, mailing address and electronic address of its Users and Contacts.
c. Designation the role/responsibility for each User

6. SOFTWARE AND HARDWARE REQUIREMENTS

6.1 Each User shall provide and maintain a computer with high speed internet access and an email address. The computer shall have a high speed internet browser (Internet Explorer 8.0 or higher, Firefox version 3.6.12 or higher, Google Chrome or Safari version 5.0 or higher) and a high speed cable Internet access, high speed DSL or T1 line.

6.2 License(s) to Use System - Each Contractor will be provided unlimited licenses to use the system for this project. Each license will allow secure unlimited usage from the notice to proceed until the original contract completion date.

7. SYSTEM DESCRIPTION

7.1 The web based project management system is a "secure, real-time, interactive, centralized database" specifically established and maintained for the management of this construction project. The product is designed to facilitate communication and improve the time management of its users by facilitating the sharing of information. Information will be available 24/7, from any

computer meeting the specifications listed above. The information is fully protected. The electronic platform allows information to be transmitted across the internet reducing printing and postage costs and the time associated with such activities.

7.2 The system contains a directory of the project participants.

7.3 The system includes templates, with the CM's letterhead, for each document created inside the system. The template allows the use of "pull down" menus to complete significant portions of each document.

7.4 The system allows the templates (and attached documents created outside the system) to be distributed to Users and Contacts.

7.5 The System contains "translation software" to permit the viewing (and marking) of documents created outside the system. The system can view documents created by different software programs and can deliver images of its translation to any computer meeting the criteria listed above.

7.6 The system can be personalized by the Construction Manager to automatically send e-mail notices upon issuance of certain documents if such a practice facilitates the User's business needs.

7.7 The system is the product of ***Building Blok LLC*** (www.buildingblok.com) and will be continuously updated.

7.8 The Construction Manager will administer the Building Blok User accounts for this project.

8. <u>DOCUMENTS CREATED INSIDE THE SYSTEM</u>

8.1 The following documents shall be created on templates inside the system.
   a. Transmittals for submittals processed in the system. The transmittals are automatically created by the system when the submittal is uploaded.
   b. Submittal Register showing all of the submittals required of the contract, assigned to each Contractor.
   c. Submittal Log: The CM will maintain submittal log after it is initialized.
   d. RFI (Requests for Information)
   e. Change Orders
   f. RFP (Requests for Proposal)
   g. ASI (Architect's Supplemental Instructions)
   h. Tasks & Memos as determined by the CM
   i. Payment Applications
   j. Closeout Tracking Log

8.2 The following documents may, at each Users option, be created on the system.
   a. Morning & Afternoon Activity Reports generated by the system

b. E-mails: Contacts that do not have access to the system may be sent information from the system, by the system.
c. Reports of information on the system
d. Project Notices: "Broadcast" messages can be sent to other Users system entry screen.

9. DOCUMENTS CREATED OUTSIDE THE SYSTEM AND DISTRIBUTED BY THE SYSTEM

9.1 The following documents are expected to be created outside the system and distributed through the system. The actual documents may be scanned or electronically attached to the transmittal.

a. Technical Submittals: Shop drawings, product data, testing reports, certifications, installation instructions, operation & maintenance manuals, will be submitted and distributed through the system. The Architect will return all submissions through the system electronically. The Construction Manager will distribute submittals (after Architect's action) electronically. Contractors may download and distribute submittals to their subcontractors and suppliers or elect to print paper copies for distribution, or both.
b. Photographs: Digital photographs and scanned images can be loaded onto the system and shared.
d. Schedule of Values/ Payment Applications: (The "pencil" review of these documents can occur inside the system).
e. Change Orders: (The "pencil" review of these documents can occur inside the system.)
g. Schedules: The schedule document(s) will be available for review on the system.
h. Data created in other software may be uploaded to the system electronically.

10. DOCUMENTS CREATED OUTSIDE THE SYSTEM AND DISTRIBUTED OUTSIDE THE SYSTEM

10.1 The following documents are expected to be created outside the system and distributed outside the system. The actual documents may be scanned or electronically attached to the transmittal.

a. Schedules: The Construction Manager will develop the Master Schedule through Microsoft Project 2003. The schedule will be distributed either through hard copies at meetings or through email.
b. Product samples, color samples, physical samples are still required to be provided per the technical specifications, however, the transmittal documenting the distribution shall be done inside the system and submitted electronically and printed to accompany the actual submission.
c. Meeting minutes will be created using Microsoft Word 2003 and distributed through hard copies at meetings or through email.
d. AIA closeout documents, which require an "original" signature, will created and distributed outside the system.

END OF SECTION

SECTION 013216 - CONSTRUCTION SCHEDULE

1. PRE-BID CONSTRUCTION SCHEDULE

1.1 Time is a critical element of this Project. By entering a bid, the Contractor agrees to adhere to the intermediate Milestone Dates and Dates of Substantial and Final Completion established herein. The Contractor also understands that all work must be performed in an orderly and closely coordinated sequence in order to achieve the specified Milestones and Completion Dates, and the Contractor hereby agrees to perform his work in conformance with the Pre-Bid Construction Schedule established herein, or with the then current and approved Project Construction Schedule as amended from time to time by the Construction Manager.

1.2 The Pre-Bid Construction Schedule includes allowances for time lost due to adverse and abnormal weather conditions, other than floods, hurricanes, tornadoes, lightening and other like acts of God. The Contractor understands and agrees that it shall not be entitled to any extensions of the Contract Time or adjustment to the Contract Sum, except as allowed in the General Conditions of the Contract for Construction. The Contractor further acknowledges that the Work may be required to be performed during the winter season, that conditions during this season may be adverse and abnormal, but that such conditions will not be the basis for an extension of the Contract Time or adjustment to the Contract Sum.

2. SCHEDULING OF THE WORK AFTER AWARD OF CONTRACT

2.1 After award of Contract, or issuance of a Notice to Proceed, the Contractor will meet with the Construction Manager to review the Pre-Bid Construction Schedule, and the overall project plan for construction. Following the above review the Contractor will meet with each subcontractor and supplier to view the detailed plans for performing his Work. Following these meetings and within fourteen (14) days after award of the Contract or issuance of a Notice to Proceed, the Contractor shall prepare and submit for the Construction Manager's approval a Work Schedule providing for the expeditious, timely and practical execution of the Work. The Contractor's Work Schedule shall include activity descriptions and durations for shop drawings, fabrication, delivery and installation. If the Construction Manager so requests, the Contractor shall provide adequate explanation regarding crew sizes, production rates and similar data used to arrive at the durations and sequences.

2.2 The Construction Manager shall review the Contractor's Work Schedule, coordinate it with the separate work by other contractors, the Owner and the Construction Manager, and after coordination, shall incorporate it into the approved Project Construction Schedule. The approved Project Construction Schedule shall be issued to the Contractor and the Contractor shall perform his Work in conformity therewith.

2.3 The Contractor shall submit proposed schedule revisions and obtain the written approval of the Construction Manager therefore before deviating from the Project Construction Schedule.

2.4 The Construction Manager will incorporate approved schedule revisions into the Project Construction Schedule, and shall otherwise update and revise the Project Construction Schedule as the Construction Manager, at his sole discretion, deems necessary.

3. ADHERENCE TO THE SCHEDULE

3.1 The Contractor shall start each part of its Work on the date designated for start in the approved Project Construction Schedule unless advised by the Construction Manager. The Contractor shall carry the Work forward expeditiously with adequate forces, equipment and materials, and shall complete each part of his work on or before the date designated in the approved Project Construction Schedule.

3.2 If the Construction Manager determines that the Contractor is behind schedule, the Construction Manager shall have the right to require that the Contractor take steps, at the Contractor's expense, to accelerate its Work. Such steps shall include increases in manpower, equipment and materials and/or overtime as the Construction Manager may deem necessary. If the Contractor fails to comply with the Construction Manager's instructions relating to improved rate of progress, the Contractor may be held in default under the appropriate provisions of the General Conditions of the Contract.

3.3 Each Contractor shall, if directed by the Construction Manager, provide the Construction Manager a 2-week look ahead of anticipated manpower showing the number of men, classification, and anticipated work.

END OF SECTION

SECTION 013226 - SUBCONTRACTOR DAILY REPORTS

1. SUBCONTRACTOR DAILY REPORTS

1.1 The Subcontractor shall submit a Daily Report to the Construction Manager on the forms provided covering the following subjects:

1. Work in Progress, including areas where work is being performed, nature of the operations in progress, and the manpower assigned.

2. Extra Work (Time and Material) in progress.

3. Materials Received.

4. Trade labor breakdown including identification of all workers on site and the number of hours (or portions thereof) worked by each.

***5. Inspection Checklist (performed daily).***

1.2 The Subcontractor shall submit the Daily Report to the Construction Manager by 9:00 AM on the next workday following the workday covered in the Daily Report.

2. DAILY EXTRA WORK REPORT

2.1 The Subcontractor shall submit on the form provided a Daily Extra Work Report on each day he performs authorized Extra Work on a time and material basis.

2.2 A separate Daily Extra Work Report shall be submitted for each separate authorized Extra Work item done on a time and material basis.

2.3 The Subcontractor shall submit his Daily Extra Work Report as an attachment to his Daily Report by 9:00 AM on the next workday following the workday covered in the Daily Extra Work Report.

3. Sample Daily Report

3.1 A sample daily report follows this section for your reference.

END OF SECTION

EDiS COMPANY

# CONTRACTOR'S DAILY REPORT

Project Name: Richardson Park Elementary School Door Renovation

Date:

Contractor:

Contract No. & Description:

Weather:

Foreman's Name (Print)

| TRADE | *CLASS | MANPOWER COUNT | TOTAL MAN HOURS | TODAY'S DESCRIPTION / LOCATION OF WORK |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | **TOTAL** | | | |

* *INDICATE: F = FOREMAN; J = JOURNEYMAN; A = APPRENTICE*

Work Status/Work Planned:

Construction Equipment:

Qualified Operator(s)

Deliveries or Materials:

Machinery, tools, material, and equipment to be used:

Inspection of work area, machinery, tools, material, or equipment

The use of any machinery, tool, material, or equipment which is not in compliance with any applicable requirement Is prohibited. Such machine, tool, material or equipment shall either be identified as unsafe by tagging or locking The controls to render them inoperable or shall be physically removed from its place of operation.

Please See Other Side

Below is a general checklist of requirements on this project. Contractors will check off items that pertain to their contract and project tasks. Notify EDiS Field Manager of any issues. This checklist is not meant to be all inclusive. Please refer to additional OSHA regulations for compliance.

**House Keeping**

- ☐ Material Storage Area's Orderly
- ☐ Trash Containers Available and Emptied daily
- ☐ Fire Hazards
- ☐ Lighting and ventilation
- ☐ Exits and Stair clear passage
- ☐ Walkways, corridors clear passage
- ☐ Daily debris /trash removal
- ☐ _____

**Personal Protective Equipment**

- ☐ Hard Hats being worn
- ☐ Safety Glasses with side shields being worn
- ☐ Secondary Eye/Face protection
- ☐ Respirators as required
- ☐ Hand protection when needed
- ☐ Ear protection when needed
- ☐ Inspected & Maintained
- ☐ _____

**Fire Prevention**

- ☐ Fire extinguishers inspected
- ☐ Flammable / Combustibles properly store
- ☐ Approved Fuel cans used and labeled
- ☐ Oxygen / Acetylenes stored properly
- ☐ _____

**Electrical**

- ☐ GFI in use
- ☐ Three prong insulated extension cords used
- ☐ Extension cords in good condition
- ☐ Lockout / Tag-out program in use
- ☐ _____

**Excavations**

- ☐ Miss Utility been contacted
- ☐ Properly Barricaded
- ☐ Ladders in use at depths over 4'-0"
- ☐ Ladders every 25'-0" distance
- ☐ Shored, sloped, benched as required
- ☐ Dewatering as needed
- ☐ _____

**Ladders**

- ☐ Good condition
- ☐ Correct pitch
- ☐ Extends 3'-0" above landing
- ☐ Open and secured / tied off
- ☐ _____

**Scaffolds**

- ☐ Certified Scaffold Installer
- ☐ Guardrails, toe boards, and planking secured
- ☐ Appropriate signage
- ☐ Adequate cross bracing
- ☐ Secured to building over 25'-0" in height
- ☐ _____

**Cranes**

- ☐ Rated Load Capacity available in cab
- ☐ Swing Radius barricaded
- ☐ Appropriate certificates / decals / hand signals
- ☐ Daily safety inspection log completed
- ☐ _____

**Fall Protection**

- ☐ Fall protection plan on file
- ☐ Full harness / shock absorbing lanyard used
- ☐ Anchoring points secured
- ☐ Perimeter barricades
- ☐ Open sided floor protection
- ☐ 6'-0" Tie-off utilized
- ☐ _____

**Paperwork**

- ☐ MSDS Information
- ☐ Contractors Safety Program
- ☐ Hazardous Communications Training
- ☐ Hazardous Communications Program
- ☐ Contractor Qualified Representation
- ☐ _____

**Other**

- ☐ _____
- ☐ _____

Foreman / Competent Person:

Print Name_____

SECTION 013300 – SUBMITTAL PROCEDURES

1. GENERAL PROVISIONS

1.1 The general provisions of the Contract, including the Conditions of the Contract (General, Supplementary and other Conditions, if any) and Division 1 as appropriate, apply to the Work specified in this Section.

2. ITEMS TO BE SUBMITTED AT START OF WORK

2.1 Performance/Labor and Material Payment Bond(s): One (1) copy of each bond simultaneously with the signed Agreement. See General Conditions Article 11.4 and Supplementary Conditions.

2.2 Policies or Certificates of Insurance: Two (2) copies simultaneously with the signed Agreement. See General Conditions Article 11 and Supplementary Conditions.

2.3 Contractor's License: Submit a copy of all business licenses required by local and state agencies.

2.4 Contractor's Schedule of Values: Two (2) copies for approval within 21 days after the Agreement is signed. See General Conditions Article 9.2 and provisions in this Section.

2.5 Contractor's Progress Schedule: Two (2) copies for review and reference within 21 days after the Agreement is signed. See General Conditions Article 3.10 and provisions in this Section.

2.6 Submittal Schedule: Two (2) copies for review and reference within 21 days after the Agreement is signed. See provisions in this Section.

2.7 Products List: Two (2) copies for approval within 30 days after the Agreement is signed. See provisions in Section 016200 - MATERIAL AND EQUIPMENT.

3. NON-RESIDENT CONTRACTOR & SUBCONTRACTORS BONDS

3.1 Refer to requirements in Section 011100 - INSTRUCTIONS TO BIDDERS for filing of Surety Bonds with the Division of Revenue.

3.2 If such bonds are required on this project, it will be the responsibility of the Contractor to produce evidence to the Construction Manager that they have been filed, or if not required, to supply a notarized statement that they are not required. This must be done within seven (7) days after award of Contract and in any event before construction starts.

4. RELATED REQUIREMENTS

4.1 See Section 017700 - CONTRACT CLOSE OUT: for submittal requirements for Contract Close out.

5. SUBMITTALS

5.1 All submittals shall be directed to the Construction Manager in the manner directed by the Construction Manager, and paragraph 9 of this section. Contractor shall use the Contractor Submittal Form appended to this section and on Buildingblok.com.

5.2 Prepare a Submittal's Schedule for Shop Drawings, Product Data and Samples. Show:

1. The dates for Contractor's submittals.

2. The dates submittals will be required for Owner-furnished products.

3. The date approved submittals will be required from the Architect.

5.3 Should the Architect or Construction Manager elect to omit any items from the list of items to be reviewed, it shall not relieve the Contractor from compliance with the Contract Documents with regard to that item. In such instance, the Contractor may still elect to have submittals prepared for his own use without review by the Architect or Construction Manager.

6. SHOP DRAWINGS

6.1 Conform to provisions in General Conditions applying to Shop Drawings.

6.2 Present in a clear and thorough manner on Buildingblok.com.

1. Identify details by reference to sheet and details, schedule or room numbers shown on Contract Drawings.

2. Maximum sheet size: 30" x 42".

7. PRODUCT DATA

7.1 Conform to provisions in General Conditions applying to Product Data on Buildingblok.com.

7.2 Preparation:

1. Clearly mark each copy to specifically identify products or models pertinent to project.

2. Show performance characteristics and capacities.

3. Show dimensions and clearances required.

4. Show wiring or piping diagrams and controls.

7.3 Manufacturer's standard schematic drawings and diagrams:

1. Modify drawings and diagrams to delete information which is not applicable to the Work.

2. Supplement standard information to provide information specifically applicable to the Work.

8. SAMPLES

8.1 Conform to provisions in General Conditions applying to Samples and on Buildingblok.com.

8.2 Provide samples of sufficient size and quantity to clearly illustrate:

1. Functional characteristics of the project, with integrally related parts and attachment devices.

2. Full range of color, texture and pattern.

8.3 Field samples and mock-ups; See requirements, if any, in other specification Sections.

9. SUBMITTAL REQUIREMENTS

9.1 Make submittals promptly through the Construction Manager in accordance with published schedule, and in such sequence as to cause no delay in the Work or in the Work of any other contractor on Buildingblok.com.

9.2 Number of submittals required.

1. Shop drawings: Submit eight (8) copies for each submittal. Copies will be marked up with corrections and comments, stamped and returned. Any additional copies required by the Contractor shall be made by him.

2. Product Data: Submit eight (8) copies. Four (4) will be retained by the Architect,

the Construction Manager and the Consultants. Four (4) will be reviewed, marked and stamped by the Architect and returned to the Contractor by the Construction Manager. Any additional copies required by the Contractor shall be made by him from the stamped copy.

3. Samples: Submit four (4) each. Submit all transmittal data and pictures of samples through the Building Blok Management System for tracking purposes. When approved the samples will be returned to the Construction Manager to be retained at the site for reference use.

4. Submit all items on Buildingblok.com.

5. All submissions must allow adequate time for review and for delivery of required systems in order to meet the posted construction schedule.

9.3 Submittals shall contain:

1. The date of submission and the dates of any previous submissions.

2. The Project title and number.

3. Contract identification.

4. The names of the Contractor, Supplier and Manufacturer.

5. Identification of the product, with the specification section number.

6. Field dimensions, clearly identified as such.

7. Relation to adjacent or critical features of the Work or materials.

8. Applicable standards, such as ASTM or Federal Specification numbers.

9. Identification of deviations from Contract Documents.

10. Identification of revisions on resubmittals.

11. An 8 inch x 3 inch blank space for Contractor and Architect's stamps.

12. Contractor's stamp, initialed or signed, certifying review of submittal, verification of products, field measurements and field construction criteria, and coordination of the information within the submittal with requirements of the Work and of Contract Documents. Submittals which have not been stamped with this stamp or its approved equivalent will be returned without

being reviewed.

9.4 Shop Drawing coordination and interface with work of other Contracts and adjacent work is the responsibility of each individual Contractor.

9.5 All submittals shall be accompanied by the contractor's submittal form, a copy of which is part of this section. The contractor's submittal form must be completed in its entirety by the contractor.

10. RESUBMISSION REQUIREMENTS

10.1 Make any corrections or changes in the submittals required by the Architect and resubmit on Buildingblok.com until approved.

10.2 Shop drawings and Product Data:

1. Revise initial drawings or data, and resubmit as specified for the initial submittal.

2. Indicate any changes which have been made other than those requested by the Architect.

10.3 Samples: Submit new samples as required for initial submittal.

11. FINAL DISTRIBUTION OF APPROVED SUBMITTALS

11.1 The Construction Manager will receive and log submittals and forward to Architect after processing and issue on Buildingblok.com.

11.2 The Construction Manager will distribute copies of Shop Drawings and Product Data which carry the Architect's stamp to:

1. Contractor that made submittal.

2. Jobsite File.

3. Record Document File.

4. Other Contractors, as required for coordination.

11.3 The Construction Manager will distribute samples on Buildingblok.com as required.

11.4 The Contractor will distribute copies of Shop Drawings and Product Data which carry the Architect's stamp to:

1. Subcontractors.

2. Suppliers.

3. Fabricators.

12. SCHEDULE OF VALUES

12.1 Use AIA Document G703, Continuation Sheet to G702 shall be issued on Buildingblok.com.

13. PROGRESS SCHEDULE

13.1 Prepare schedules in the form of a horizontal bar chart.

1. Provide separate horizontal bar chart for each trade or operation.

2. Horizontal time scale: Identify the first work day of each week.

3. Scale and spacing: To allow space for notations and future revisions.

4. Minimum sheet size 11 inches by 17 inches.

13.2 Format of listings: The chronological order of the start of each item of work.

13.3 Show the complete sequence of construction by activity.

13.4 Show the dates for the beginning, and completion of, each major element of construction such as:

1. Site clearing.

2. Site utilities.

3. Foundation work.

4. Structural framing.

5. Subcontractor work.

6. Equipment installation.

13.5 Show projected percentage of completion for each item as of the first day of each

month.

13.6 Update Progress Schedule monthly and submit with Application for Payment and Schedule of values.

13.7 Indicate progress of each activity to date of submission.

13.8 Show changes occurring since previous submission of schedule:

1. Major changes in scope.
2. Activities modified since previous submission.
3. Revised projections of progress and completion.
4. Other identifiable changes.

13.9 Provide a narrative report as needed to define:

1. Problem areas, anticipated delays and the impact of the schedule.
2. Corrective action recommended, and its effect.
3. The effect of changes on schedules of other prime contractors.

13.10 Submit one reproducible transparency.

13.11 After review, distribute copies of the schedule to:

1. Jobsite File.
2. Subcontractors.
3. Architect.
4. Owner.

13.12 Instruct recipients to report promptly to the Contractor, in writing, any problems anticipated by the projections shown in the schedules.

END OF SECTION

**EDiS COMPANY** **CONTRACTOR SUBMITTAL FORM**

**Contractor:** **Contract #:**_____

**Project Name:** Richardson Park Elementary School Door Renovation

**To:**

The following submittal (s) for the Architect's Review and Approval:

[ ] Shop Drawings [ ] Product Data [ ] Samples [ ] Samples [ ] Other (Identify)_____

[ ] Design Data [ ] Calculations [ ] Certificates [ ] Coordination Drawings [ ] Reports

[ ] Qualification Statements [ ] Other (Identify)_____

| No. of Copies | Date | Submittal Number | Spec. Section # | Description of Submittal Items | Requested Return Date | EDIS Submittal Number (by EDIS) |
|---|---|---|---|---|---|---|
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**Deviations from Contract Documents requirements are identified as follows:**_____

_____

**Remarks:**_____

We hereby certify that _____(Contractor)_____has reviewed and approved submittals transmitted herewith for compliance and conformance with requirements of the Contract Documents.

**Signed:**_____ **Date:**_____

SECTION 013500 – CONTRACTOR EMPLOYEE BACKGROUND CHECK

1. It is the contractor's responsibility to perform background checks and screen all employees working onsite. The background check must include checking for a previous history of:

   - Sexual Offenses requiring registration under Megan's Law
   - Child Abuse or Neglect Convictions
   - Violent Felony Convictions
   - Any Outstanding Warrants

   Any employee with any of these convictions may not enter the job site or school campus. This background check must be completed and screened by the contractor prior submission. Contractors will be required to submit a letter to the Construction Manager stating that all background checks have been completed and reviewed prior to employees entering the job site. Contractors are responsible for the cost of background checks.

   A sample template of the background check certification is attached following this section.

END OF SECTION

Date

Mr. Mark Grunza
Project Manager
EDiS Company
110 South Poplar Street
Wilmington, DE 19805

RE: Richardson Park Elementary School - Certification of Background Checks

Dear Mr. Grunza:

This letter is to certify that background checks have been completed in accordance with Section 013500 Contractor Employee Background Check. The following individuals are certified as having met the requirements of the specification:

| Name | Last 4 SSN |
|---|---|
| Mr. John Smith | 1234 |

If you require any additional information you may contact INSERT POINT OF CONTACT, PHONE NUMBER AND EMAIL ADDRESS.

Sincerely,

Company

NAME
TITLE

## CONTRACTOR

## COMPETENT / QUALIFIED PERSON DESIGNATION LOG

**Project: Richardson Park Elementary School Door Renovation** **Field Manager:**

| Contract:<br>Contractor: | Applicable to Subcontractor ( yes / no) | | Foreman | Competent Person (if not foreman) |
|---|---|---|---|---|
| **Subpart C-General Provisions** | | | | |
| 1926-20 General Safety | | | | |
| **Subpart D - Health and Environmental Controls** | | | | |
| 1926-53 Ionizing Radiation | | | | |
| 1926-55 Gases, Vapors, Fumes, Dusts, Mists | | | | |
| 1926-57 Ventilation | | | | |
| 1926.59 Hazard Communication | | | | |
| 1926.62 Lead | | | | |
| **Subpart E - Personal Protective Equipment** | | | | |
| 1926.101 Hearing | | | | |
| 1926.103 Respirator Protection | | | | |
| **Subpart H - Materials Handling, Storage** | | | | |
| 1926.251 Rigging Equipment for Material Handling | | | | |
| **Subpart J - Welding and Cutting** | | | | |
| 1926.354 Welding, Cutting and Heating | | | | |
| **Subpart K - Electrical** | | | | |
| 1926.404 Wiring Design and Protection | | | | |
| **Subpart L - Scaffolding** | | | | |
| 1926.451 Scaffolding | | | | |
| **Subpart M - Fall Protection** | | | | |
| 1926.502 Fall Protection Criteria and Practices | | | | |
| 1926.503 Training | | | | |
| **Subpart N - Cranes, Derrick -Redesignated 1926.1501** | | | | |
| **Subpart O - Motor Vehicles and Equipment** | | | | |
| 1926.601 Motor Vehicles | | | | |
| **Subpart P - Excavations** | | | | |
| 1926.651 Specific Excavation Requirements | | | | |
| 1926.652 Requirements to Protective Systems | | | | |
| **Subpart S - Tunnels, Shafts, Caissons** | | | | |
| 1926.800 Tunnels, Shafts, Caissons | | | | |
| 1926.803 Compressed Air | | | | |
| **Subpart T - Demolition** | | | | |
| 1926.850 Preparatory Operations | | | | |
| 1926.852 Chutes | | | | |
| 1926.859 Mechanical Demolition | | | | |
| **Subpart V - Power Transmission and Distribution** | | | | |
| 1926.955 Overhead Lines | | | | |
| | | | | |

| Contract:<br>Contractor: | Applicable to Subcontractor ( yes / no) | | Foreman | Competent Person (if not foreman) |
|---|---|---|---|---|
| **Subpart X - Stairways and Ladders** | | | | |
| 1926.1053 Ladders | | | | |
| 1926.1060 Training Requirements | | | | |
| **Subpart Z - Toxic and Hazardous Substances** | | | | |
| 1926.1101 Asbestos | | | | |
| 1926.1101 thru 1926.1148 Toxic and Hazardous Substances | | | | |

I certify that the listed employees are competent persons, as defined and required by specific OSHA standards. They are capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

Name (print)

Contractor Signature

Date

SECTION 013523 - SAFETY PROGRAM

1. GENERAL

1.1 The Contractor shall be responsible for initiating, maintaining and supervising all safety activities and programs in connection with the Work.

1.2 Contractor shall be responsible for the safety of its personnel.

1.3 Hard hats and safety glasses must be worn by all personnel on the jobsite, except in contractor's administrative office/trailer. All equipment must comply with OSHA standards. All job site personnel shall wear long pants, shirts (no tank tops) and work boots.

2. SAFETY PROGRAM

2.1 Prior to commencing the Work, the Contractor shall submit to the Construction Manager (1) electronic copy and (1) bound copy of its safety program and one (1) copy of MSDS information in a 2" ringed notebook. One paper copy of the safety program and MSDS will be retained by the Construction Manager in the field office.

2.2 The safety program shall outline those hazards peculiar to the Contractor's Work, and the steps to be taken to eliminate or reduce the risk of injury or loss due to those hazards**. The program shall be site specific.** Contractor shall implement and enforce its safety program, which is in accordance with all OSHA, Federal, State and local laws.

2.3 Contractor shall designate a qualified Safety Supervisor to implement their safety program. Unless otherwise approved by the Construction Manager, the Safety Supervisor shall be the Contractor's Field Superintendent/Foremen.

**2.4 Contractor shall furnish the names and qualifications of the competent persons and qualified persons who may be required for their scope of work by the Contractor's safety procedures, and by federal, state and/or local regulations. Examples include competent persons and/or qualified persons for steel erection, excavation, scaffold erection, confined space entry, crane and rigging operations, annual crane inspections, fall protection including horizontal lifeline systems, etc. See the attached Competent/Qualified Person Designation Log.**

**2.5 Contractor shall provide written certification showing that all employees have been trained on the Contractor's Safety Program. The written certification record shall contain the name or other identity of the employee trained, the date(s) of the training and the signature of the person who conducted the training or the signature of the employer. If the employer relies on training conducted by another**

**employer or completed prior to the effective date of this section, the certification record shall include the date the employer determined the prior training was adequate rather than the date of actual training. The employer shall instruct each employee in the recognition and avoidance of unsafe conditions and the regulations applicable to his work environment to control or eliminate any hazards or other exposure to illness or injury. Please forward certification (document) of training for each employee on an EDiS project. The latest training certificate shall be maintained.**

**2.6 Contractor shall provide certification of training on the following programs, as they pertain to your contract and project tasks: Scaffold, Fall Protection, Crane Operator, Signal Person, Crane Maintenance, Steel Erection Fall Protection, Respiratory Protection, Powder-Actuated Tools, and Motor Vehicles. Certification of training must include: Employee's name, date of training, person conducting the training, topics covered, and a statement that the student has successfully completed the course. This list is not meant to be all inclusive; please refer to OSHA regulations for applicable safety requirements.**

**2.7 Contractor Daily Reports with Safety Inspection Checklist will be submitted daily to Field Manager, verifying inspection of work area, machinery, equipment and tools.**

2.8 Prior to starting work on-site, the Contractor shall arrange with the on-site Field Manager to have their employees complete the EDiS Company Zero Accidents Safety Orientation program.

2.9 Contractor shall hold weekly safety toolbox talks with all of its employees every Monday at 12:30 PM. The Contractor shall designate a responsible, capable person to conduct these meetings. Contractor's safety supervisor or superintendent must submit to the Construction Manager weekly toolbox talks attendance sheets and the topics discussed.

3. SUBSTANCE ABUSE POLICY STATEMENT

The Construction Manager is committed to providing a safe work site environment for its employees and Contractors' employees. The Construction Manager does not condone or permit employees and Contractors' employees to use or be under the influence of drugs or alcohol while they are on any of the Construction Manager's work sites. The Policy is as follows:

3.1 It is a violation of the Construction Manager's policy for employees and Contractors' employees to use, possess, sell, trade, or otherwise engage in the use of illegal drugs and alcohol.

3.2 It is a violation for employees and Contractors' employees to report to work while influenced by illegal drugs or alcohol.

3.3. It is a violation for employees and Contractors' employees to use prescription drugs illegally (i.e. to use prescription drugs that have not been legally obtained) and to use prescription drugs in a manner other than the prescribed intentions.

3.4 Employees and Contractors' employees who are taking medication, which is prescribed by their physician, are expected to discuss potential side effects with their prescribing physician, as it relates to the work requirements.

Violations of this policy will require disciplinary action. If any employees or Contractors' employees are observed or suspected of being influenced by drugs or alcohol, they will be instructed to stop work and may be required to leave the work site.

4. EXECUTION

4.1 Contractor shall comply with all applicable federal, state and local laws, regulations and orders relating to occupational safety and health, and related procedures, and shall, to the extent permitted by law, indemnify and hold Construction Manager, Owner and Architect, and their respective directors, officers, or agents and employees, harmless from any and all liability, public or private, penalties, contractual or otherwise, losses, damages, costs, attorney's fees, expenses, causes of action, claims or judgments resulting from a claim filed by anyone in connection with the aforementioned acts, or any rule, regulation or order promulgated thereunder, arising out of the Contractor's Work, this Agreement or any subcontract executed in prosecution of the Work. Contractor further agrees in the event of a claim of violation of any such laws, regulations, orders or procedures arising out of or in any way connected with the performance of this agreement, Construction Manager may immediately take whatever action is deemed necessary by Owner and/or Construction Manager to remedy the claim or violation. Any and all costs or expenses paid or incurred by Owner and/or Construction Manager in taking such action shall be borne by Contractor, and may be deducted from any payments due Contractor.

4.2 The Contractor agrees to (1) take all necessary steps to promote safety and health on the job site; (2) cooperate with Owner and/or Construction Manager and other Contractors in preventing and eliminating safety and health hazards: (3) train, instruct and provide adequate supervision to ensure that its employees are aware of, and comply with, applicable Federal and State safety and health laws, standards, regulations and rules, safe healthful work practices and all applicable safety rules, regulations and work practices and procedures (4) not create any hazards or expose any of its employees, employees of the Owner and/or Construction Manager or employees of Contractors to any hazards; and (5) where the Contractor is aware of the existence of a hazard not within its control, notify the Construction Manager of

the hazard as well as warn exposed persons to avoid the hazard.

4.3 The Contractor's Superintendent or Safety Supervisor shall immediately, verbally report, and promptly thereafter confirm in writing to the Construction Manager any unsafe conditions or practices that are observed, or violations of job safety which are not within the Contractor's control.

4.4 Contractors shall immediately, verbally report, and promptly thereafter confirm in writing, to the Construction Manager any unsafe practices or conditions that are observed which are not under the Contractor's control.

4.5 The Contractor's Superintendent or Safety Supervisor shall insure that adequate first aid supplies are available, and that personnel are qualified to administer first aid/CPR, as required by State and/or Federal regulations.

4.6 Contractor shall promptly notify Construction Manager of any personal injury requiring medical treatment of any of the Contractor's employees at the Project site; or of significant damage to property arising in connection with Contractor's performance, as promptly as possible after the occurrence of such injury or damage. Within twenty-four hours of such occurrence, Contractor shall furnish to Construction Manager a complete written report of such injury or damage.

4.7 Contractor certifies that the forgoing terms shall be made applicable to all Contractors' suppliers, materialmen or anyone furnishing labor and/or materials to the site.

4.8 The Contractor shall continue to educate his job Safety Supervisor or Superintendent of their responsibilities, which shall include:

1. Instructing workers and subcontractors under its supervision in safe work practices and work methods at the time they are given work assignments.

2. Ensuring that its workers and subcontractors have and use the proper protective equipment and suitable tools for the job.

3. Continuously checking to see that no unsafe practices or conditions are allowed to exist on any part of his job.

4. Acquainting its workers and subcontractors with all applicable safety requirements and seeing that they are enforced.

5. Setting a good example for his workers.

6. Making a complete investigation of accidents to determine facts necessary to take corrective action.

7. Promptly completing a "Supervisor's Investigation Form" with his Supervisor's assistance and distributing as required. This form will be provided by the Construction Manager.

8. Holding weekly "tool box" safety meetings with his men to:
   a. Discuss observed unsafe work practices or conditions including a review of current Construction Manager safety report.

   b. Review the accident experience of his crew and discuss correction of accident causes.

   c. Encourage safety suggestions from his men.

9. Seeing that prompt medical treatment is administered to an injured employee.

10. Correcting or reporting immediately to job superintendent any observed unsafe conditions, practices or violations of job security.

11. Making all reports required by these Contract Documents to the Construction Manager in a full and timely fashion.

5. SAFETY MEETINGS

5.1 The Contractor's Project Manager or Superintendent shall attend weekly or biweekly supervisory job meetings. The first topic of these meetings will be job site safety. The weekly safety reports will be reviewed and violations must be corrected immediately. Contractors will be encouraged to participate in the on-going jobsite safety.

6. TOOL BOX SAFETY MEETINGS

6.1 The Contractor shall schedule weekly "tool box" safety sessions to be held by his job safety supervisor or superintendent for all of his employees.

6.2 A member of the Contractor's management staff shall periodically attend "tool box" safety sessions to evaluate their effectiveness and offer any appropriate suggestions for improvement.

7. REPORTS

7.1 Contractors shall report all accidents or injuries on a timely basis in accordance with all applicable regulations.

7.2 Contractors shall promptly complete an accident investigation report of all accidents.

7.3 A record of all "tool box" safety sessions shall be made and submitted to the Construction Manager on forms to be provided.

8. SAFETY REPRESENTATIVE

8.1 The Construction Manager may employ the services of a Safety Representativ*e* on the project.

8.2 The Safety Representative *will* visit the job site on a weekly basis to determine if the work is being performed in a safe manner and in accordance with OSHA, State and Local safety regulations. Safety representative is not responsible for observing and documenting all possible safety violations. The Contractor's Safety Representative or Superintendent shall attend job site safety inspections with the Safety Representative on a weekly basis.

8.3 The Safety Representative will file a written report with the Construction Manager at the end of each inspection listing the safety violations observed during the inspection.

8.4 The Construction Manager will distribute the Safety Representative's report to all Contractors. All safety violations must be corrected immediately.

9. RIGHT TO STOP THE WORK DUE TO SAFETY VIOLATIONS

9.1 The Construction Manager, in its sole discretion, may order the Contractor to stop the work due to safety violations under the following circumstances:

1. If the Construction Manager observes the Contractor is violating safety regulations and the Contractor takes no immediate action to correct the violation.

2. If the Contractor has been notified by the Construction Manager in writing that he is in violation of safety regulations and fails to take action to correct the violation within 24 hours of the notice.

9.2 If the Construction Manager directs the Contractor to stop the work due to safety violation, it will be done in accordance with the General Conditions of the Contract. Contractor shall not be permitted an adjustment of the Contract Time or Sum for the days lost to any suspension of work.

9.3 If the Construction Manager or Safety Representative observes Contractor's employee violating this safety program or OSHA Standards in an habitual manner, or creating a serious life safety violation, the Construction Manager or Safety Representative may

instruct the Contractor's superintendent or foreman to remove the violator from the work site for failure to comply with the safety program and the contract.

10. EMERGENCY PROCEDURES

10.1 The Construction Manager shall establish a central meeting location for the assembly of all Contractors' employees in the event of a major job site emergency.

10.2 Contractor shall assemble all of their personnel and account for all employees. Contractor must immediately report to the Project Superintendent with the status of their employees.

11. FALL PROTECTION PROCEDURES

11.1 Contractor is responsible, in accordance with federal, state, local laws and regulations including OSHA, to provide and enforce their own site specific fall protection program and equipment. The following fall protection procedures shall be enforced by all Contractors as a minimum standard.

All workers on walking/working surfaces with unprotected sides or edges six feet (6′) or higher above the next lower level must be protected from falls by the use of guardrail systems, net systems, fall arrest systems or control access zone programs. It is intended that when fall protection is required, it is required 100% of the time. All contractors are reminded that relevant industry regulations require that contractors comply with the following standards.

1. Workers constructing or working near leading edges must be protected.

2. Workers on the face of formwork or reinforcing steel must be protected at a height of 6 feet (6′) or greater.

3. Scaffolds shall be guarded at 6 feet (6′) above next lower level.

4. Brick layers performing overhand bricklaying and related work six feet (6′) or higher above lower levels must be protected from falls.

5. Roofers must comply with OSHA standards for roof work.

6. The Contractor's controlled access zone plan shall be included in their site-specific safety program and shall be submitted prior to the start of work. Contractors are responsible for assuring programs are OSHA compliant.

7. Guidelines for Residential Construction or any interpretations will not be accepted in lieu of 1926 Standards.

8. Contractors must provide certification per OSHA CFR29 § 1926.503(b) of employee training and retraining on fall protection upon request.

11.2 Contractor shall provide its own fall protection. Fall protection may be provided by guardrail systems, net systems, or personal fall arrest systems. All fall protection systems must comply with OSHA standards.

11.3 Stepladders, exposed to shafts or edges of the building, greater than six feet (6') above the next lower level, must be tied off or otherwise secured. Employee must wear fall protection, i.e. harness/lanyard.

11.4 The Safety Cable System shall not be altered or removed without a written request submitted to the Project Manager with a copy to the Field Manager. It shall be the responsibility of each and every Contractor that is removing or altering the Safety Cable System to maintain the fall protection safety provided by the safety cable and not leave the area unprotected. Each and every Contractor shall be responsible to re-install the Safety Cable System immediately after work is completed. Each and every Contractor shall be responsible to re-install the Safety Cable System in accordance to OSHA standards.

11.5 Fall protection will be enforced for Structural Steel Erectors.

1. As for a Contractor engaged in structural steel erection, the Contractor is specifically advised that structural steel erectors shall comply with all protection requirements for all work at a height of six feet (6') or greater above the next lower level, 100 percent of the time, by any of the following means.

   a. Standard guardrail system.

   b. Personal Fall Arrest System (PFAS) – full body harness with shock absorbing lanyard. Maximum free fall distance permitted, with lanyard and lanyard attachment <u>shall not exceed six feet</u> <u>(6').</u> Anchor point must be capable of supporting five thousand pounds. Perimeter guard cables or alignment cables may not be used for anchor points.

   c. Access to work area shall be provided by ladders. There shall be sufficient number of ladders available to reduce the amount of "beam walking." When it is absolutely necessary to traverse a beam, 100% fall protection must be utilized.

   d. Steel erection Contractors must, at all times, <u>be able to certify in writing that each of his employees has been properly trained in both OSHA fall protection standards and the Contractor's site specific project fall protection procedures.</u>

e. Prior to the erection of the steel, the Contractor shall meet with the Project Manager and Safety Representatives to review and document site specific procedures.

12. AIRBORNE CONTAMINENTS PROCEDURES

12.1. Contractor must provide and use equipment furnished with Exhaust Purifiers / Scrubbers when any equipment produces airborne containments and will be used in an enclosed building.

12.2. The Contractor shall verify air quality by the use of air monitoring equipment and document such verified air quality on the daily report. The monitoring equipment shall, at a minimum, be designed with an auditory alarm and shall provide continuous monitoring of these four gases: Oxygen, Hydrogen Sulfide, Carbon Monoxide and Combustible gases.

12.3 The contractor must provide administrative or engineering controls to protect its workers from exposure to occupational health , environmental or other hazards to be implemented whenever feasible. When such controls are not feasible to achieve full compliance, protective equipment or other protective measures shall be used to keep the exposure of employees to air contaminants within the limits prescribed by local, state, and federal regulations. Any equipment and technical measures used for this purpose must first be approved for each particular use by a competent industrial hygienist or other technically qualified person. Whenever respirators are used, their use shall comply with 1926.103.

END OF SECTION

**Certification of Training Documents to be Submitted with Safety Policy/Program**

Provide a certification of training for employees on your safety program.

In addition, Contractor shall provide certification of training on the following programs, as they pertain to your contract and project tasks. Certification of training must include: Employee's name, date of training, person conducting the training, topics covered, and a statement that the student has successfully completed the course. This list is not meant to be all inclusive: please refer to OSHA regulations for applicable safety requirements.

a. ☐ Scaffold: 1926.454

b. ☐ Fall Protection 1926.503

c. ☐ Crane Operator: 1926.1427

d. ☐ Signal person (this is for any persons connecting material or equipment for lifting): 1926.1428

e. ☐ Crane maintenance: 1926.1429

f. ☐ Steel erection fall protection: 1926.761

g. ☐ Respiratory protection (medical clearance and training records complying with 1910.134

h. ☐ Powder-actuated tools: 1926.302

i. ☐ Motor Vehicles (are those vehicles that operate within an off-highway jobsite, not open to public traffic): 1926.21

SECTION 014500 - QUALITY CONTROL

1. DESCRIPTION

1.1 Quality control services include inspections and tests performed by independent agencies and governing authorities, as well as by the Contractor. Inspection and testing services are intended to determine compliance of the work with requirements specified. Specific quality control requirements are specified in individual specification sections.

2. RESPONSIBILITIES

2.1 Contractor Responsibilities: Except where indicated as being the Owner's responsibility, quality control services are the Contractor's responsibility, including those specified to be performed by an independent agency and not by the Contractor. The Contractor shall employ and pay an independent agency, testing laboratory or other qualified firm to perform quality control services specified.

1. The Owner will engage and pay for services of an independent agency to perform the inspections and tests that are specified as Owner's responsibilities.

2.2 Retest Responsibility: Where results of inspections or test do not indicate compliance with Contract Documents, retests are the Contractor's responsibility.

2.3 Responsibility for Associated Services: The Contractor shall cooperate with independent agencies performing inspections or test. Provide auxiliary services as are reasonable. Auxiliary services include:

1. Provide access to the Work.

2. Assist taking samples.

3. Deliver samples to test laboratory.

2.4 Coordination: The Contractor and independent test agency shall coordinate the sequence of their activities and shall avoid removing and replacing work to accommodate inspections and test. The Contractor is responsible for scheduling time for inspections and tests.

2.5 Qualifications for Service Agencies: Contractor shall engage only inspection and test service agencies which are pre-qualified as complying with "Recommended Requirements for Independent Laboratory Qualification" by the American Council of Independent Laboratories.

2.6 Submittals: Contractor shall submit a certified written report of each test, Inspection or similar service, in duplicate to the Construction Manager. Contractor shall submit additional copies of each report to any governing authority, when the authority so directs.

2.7 Report Data: Written inspection or test reports shall include:

1. Name of testing agency or test laboratory.

2. Dates and locations of samples, tests or inspections.

3. Names of individual present.

4. Complete inspection of test data.

5. Test results.

6. Interpretations.

7. Recommendations.

2.8 Repair and Protection: Upon completion of inspection or testing, Contractor shall repair damaged work and restore substrates and finishes. Contractor shall comply with requirements for "Cutting and Patching."

2.9 The 2000 IBC code the following testing is code required:

1. Structural tests and special inspections must be conducted by an approved agency (an agency or firm regularly engaged in conducting tests or furnishing inspection services, approved by the authority having jurisdiction.) This means that contractors will no longer be allowed to cast their own test cylinders for example.

2. Continuous special inspection (the full-time observation of work by an approved special inspector who is present until completion of the work) is required for any steel welds and connections. Critical elements may include: all slip critical bolted connections, complete and partial groove welds, multi-pass fillet welds and single pass fillet welds greater than 5/16".

3. Continuous special inspection is required during the placement of all concrete and shotcrete for the proper application techniques with a few exceptions.

4. Periodic special inspection (the part-time observation by an approved special inspector) is required for any steel welds and connections. Critical elements may

include: all slip critical bolted connections, complete and partial groove welds, multi-pass fillet welds and single pass fillet welds greater than 5/16".

5. Spray applied fireproofing requires periodic special inspection for the structural member surface conditions, application, thickness, density and bond strength.

6. Based on the classification, occupancy, and design of the structure, the code requires periodic special inspection for placement of masonry units and reinforcing steel and continuous special inspection of grout placement.

END OF SECTION

SECTION 015113 - TEMPORARY ELECTRICITY

1. GENERAL

1.1 RELATED WORK SPECIFIED ELSEWHERE

1. Electrical Basic Materials and Methods, Division 16 or 26.

1.2 DESCRIPTION OF SYSTEM

1. Power Source

1. Suppliers:

2. The Electrical Contractor shall provide 277/480 volt, three phase, 60 cycle power service to the site, utilizing existing service.

3. The Electrical Contractor shall make all arrangements for bringing the power supply to all locations on the site to provide for the power supply in 1.2.1.2, above.

4. The source will be adequate to service temporary electrical needs of the proposed construction.

2. Electrical Service

1. Electrical Contractor will be responsible to pay for all costs associated with providing electrical service from the power source to their respective site office, temporary storage facilities or temporary construction buildings as appropriate.

2. Prior to issuance of the Notice to Proceed for the electrical contract, the Construction Manager will be responsible for providing temporary electrical service as provided in 1.2.2.3, below. After issuance of the Notice to Proceed for the electrical contract, the Electrical Contractor shall become responsible for maintaining all electrical power supply and service facilities installed by the Construction Manager. The Electrical Contractor shall also, from that date forward, be responsible for providing and maintaining temporary electrical service to the site as provided in 1.2.2.3, below.

3. The Construction Manager or Electrical Contractor, as provided in 1.2.2.2 above, shall install temporary electric service for items below, throughout the construction period, such that power can be secured at any desired point with no more than a 60 foot extension:

1. Power Centers for miscellaneous tools and equipment used in the construction work shall be provided with a minimum of four 20-amp, 120 volt grounding type outlets. Each outlet shall be provided with ground fault detecting circuit breaker protection.

2. Adequate lighting for safe working conditions shall be provided and maintained on a 24 hour per day basis throughout the building, tunnels, and stairways per OSHA requirements. Each lamp must be rated at least 100 watts. Voltage of each socket must be at least 110 volts.

3. Power for testing and checking equipment must be supplied.

3. Capacity

1. All electrical power supply and service lines installed shall be of adequate capacity for construction use by all trades during the construction period at the locations necessary.

2. The Electrical Contractor shall notify the Power Company if unusually heavy loads, such as welding units, are anticipated.

4. Power Costs

1. The Construction Manager will pay all costs of temporary electrical power used during construction.

2. The Owner will pay all costs of power used in the permanent wiring.

1.3 REQUIREMENTS AND REGULATORY AGENCIES

1. The Electrical Contractor will obtain permits as required by local governmental authorities.

2. The temporary electrical service shall comply with National Electrical Code, 1990 Edition and applicable local codes and utility regulations.

1.4 USE OF PERMANENT SYSTEM

1. The Electrical Contractor shall regulate any part of the permanent electrical system which is used for construction purposes to prevent interference with safety and orderly progress of the Work.

2. Contractors shall leave permanent electrical services in a condition as good as

new and clean.

2. PRODUCTS

2.1 MATERIALS

1. General

1. The materials may be new or used, but must be adequate in capacity for the purposes intended and must not create unsafe conditions or violate the requirements of applicable codes.

2. Conductors

1. Use wire, cable, or busses of appropriate type, sized in accordance with the National Electrical Code for the applied loads.

2. Use only UL labeled wire and devices.

2.2 EQUIPMENT

1. Provide appropriate enclosure for the environment in which used in compliance with NEMA standards.

3. EXECUTION

3.1 GENERAL

1. Install all work with a neat and orderly appearance.

2. Make structurally sound throughout.

3. Maintain to give continuous service and to provide safe working conditions.

4. Modify temporary power and light installation as job progress requires.

3.2 INSTALLATION

1. Locate so that interference with storage areas, traffic areas and work under other Contracts is avoided.

3.3 REMOVAL

1. Remove all temporary equipment and materials completely upon completion of construction.

2. Repair all damage caused by the installation and restore to satisfactory condition.

END OF SECTION

SECTION 015123 - TEMPORARY HEATING, COOLING AND VENTILATING

1. GENERAL

1.1 RELATED REQUIREMENTS SPECIFIED ELSEWHERE

1. Temporary Electric: Section 015113

2. Temporary Facilities: Section 015200

3. Heating Requirements for Cold Weather Installation and Protection of Materials: Respective specification section for each item of work.

1.2 DEFINITIONS

1. Temporary Enclosures: Sufficient preliminary enclosures of an area of structure, or of an entire building, to prevent entrance or infiltration of rain water, wind or other elements and which will prevent undue heat loss from within enclosed area.

2. Permanent Enclosure: Stage of construction at which all moisture and weather protection elements of construction have been installed in accordance with Contract Documents, either for a portion of structure, or for an entire building.

1.3 DESCRIPTION OF SYSTEM

1. Prior to the building or portion of building being permanently enclosed, the contractor shall provide temporary heat and ventilation and weather protection necessary for its work, as described below. After permanent enclosure, the Construction Manager will arrange for and coordinate temporary heat and ventilation in enclosed areas, required to:

1. Facilitate progress of Work.

2. Protect Work and products against dampness and cold.

3. Prevent moisture condensation on surfaces.

4. Provide suitable ambient temperatures and humidity levels for installation and curing of materials.

5. Provide adequate ventilation to meet health regulations for safe working environment.

2. Temperatures Required

    1. Generally, 24 hours a day: Minimum of 40 degrees F.

    2. 24 hours a day during placing, setting and curing of cementitious materials: As required by specification section for each product.

    3. 24 hours a day, seven days prior to, and during, placing of interior finishes: woodwork, resilient floors, painting and finishing: As required by specification section for each product.

    4. 24 hours a day after application of finishes, and until Substantial Completion: Minimum of 50 degrees F.

3. Ventilation Required:

    1. Contractors shall prevent hazardous accumulations of dusts, fumes, mists, vapors or gases in areas occupied during construction.

        1. Provide local exhaust ventilation to prevent harmful dispersal of hazardous substances into atmosphere of occupied areas.

        2. Dispose of exhaust materials in manner that will not result in harmful dispersal of hazardous substances into atmosphere of occupied areas.

        3. Continuously ventilate storage spaces containing hazardous or volatile materials.

        4. Contractor must provide and use equipment which is furnished with Exhaust Purifiers / Scrubbers or is electrically power-driven when any such equipment produces airborne containments and will be used in an enclosed building.

        5. The contractor shall verify air quality by the use of air monitoring equipment and document the verified air quality on the daily report. The monitoring equipment shall, at a minimum, be designed with an auditory alarm and shall provide continuous monitoring of these four gases: Oxygen, Hydrogen Sulfide, Carbon Monoxide and Combustible gases.

4. Contractors shall provide adequate ventilation for:

    1. Curing installed materials.

2. Dispersal of humidity.

3. Temporary sanitary facilities.

5. Duration of Operations:

1. For Personnel:

1. At all times personnel occupy an area subject to hazardous accumulations of harmful elements.

2. Continue operation of ventilation and exhaust system for time after cessation of work process to assure removal of harmful elements.

2. For curing installed materials: As required by specification section for respective materials.

3. For humidity dispersal: Continuously ventilate to provide suitable ambient conditions for work.

4. The Contractor shall maintain supervision and operation of temporary heating and ventilating equipment in order to:

1. Enforce conformance with applicable codes and standards.

2. Enforce safe practices.

3. Prevent abuse of services.

1.4 COSTS OF INSTALLATION AND OPERATION

1. The Contractor shall be responsible for all installation and operating costs for any heat and ventilation as required in this section until the permanent HVAC system is in operation.

2. After the permanent HVAC system is operational, the Owner will pay the costs of fuel for temporary heat and ventilation. The Contractor will pay the costs for maintaining the system until final acceptance by the Owner.

3. The Contractor shall be responsible for all installation and operating costs for any heat required to supplement that which is to be supplied by the Construction Manager in 1.3, above.

1.5 REQUIREMENTS OF REGULATORY AGENCIES

1. The Construction Manager will obtain and pay for permits as required by governing authorities for those activities required by this Section.

2. Contractor shall comply with Federal, State and local codes, and utility company regulations.

2. PRODUCTS

2.1 MATERIALS

1. General

1. Materials may be new or used, but must be adequate for purposes intended and must not create unsafe conditions nor violate requirements of applicable codes.

2.2 EQUIPMENT

1. Standard products, meeting code requirements.

2. Provide required facilities, including piping, wiring and controls.

3. Portable Heater: Standard Units, meeting code requirements.

1. Safety Controls against explosion, overheating, and carbon monoxide build up.

2. Vent direct-fired units to outside.

3. Provide adequate combustion air.

4. Oil-Fired heaters will not be allowed.

3. EXECUTION

3.1 GENERAL

1. Comply with applicable sections of Division 15 - Mechanical.

2. Install work in neat and orderly manner.

3. Make structurally, mechanically and electrically sound throughout.

4. Maintain to give safe, continuous service at required times and to provide safe working conditions.

5. Modify and extend system as work progress requires.

3.2 INSTALLATION

1. Locate units to provide equitable distribution of heat and air movements.

2. Locate to avoid interference with, or hazards to:

    1. Work or movement of personnel.

    2. Traffic areas.

    3. Materials handling.

    4. Storage areas.

    5. Work of other Contractors.

    6. Finishes.

3.3 OPERATION OF PERMANENT EQUIPMENT

1. The Construction Manager will coordinate with Contractor.

2. The Contractor will place permanent HVAC system in operation only upon written authorization by the Construction Manager.

3. Before operating the permanent HVAC equipment, the Contractor shall confirm to the Construction Manager that:

    1. Inspection has been made by proper authorities.

    2. Systems, equipment piping, strainers, filters and associated operating items are sufficiently complete, cleaned, and ready for operation.

    3. Controls and safety devices are complete and tested, or adequate temporary controls are provided.

    4. Before operating the permanent HVAC equipment, the Contractor shall install temporary filters:

1. For air handling units.

2. For permanent ducts.

3.4 REMOVAL

1. The Contractor shall completely remove temporary materials and equipment when no longer required, or on completion of construction.

2. The Contractor shall clean and repair damage caused by temporary installation, and restore equipment to specified or original condition.

3. The Contractor shall remove temporary filters and install new filters, or clean permanent filters, in the permanent HVAC system prior to final acceptance by the Owner.

END OF SECTION

SECTION 015200 - CONSTRUCTION FACILITIES & TEMPORARY CONTROLS

1. GENERAL

1.1 DESCRIPTION

1. Construction Manager and Contractors shall provide all temporary facilities throughout the construction period unless otherwise indicated in the Contract Documents.

2. Construction Manager and Contractors shall pay all costs for providing, maintaining and removing of all temporary facilities unless otherwise indicated in the Contract Documents.

1.2 RELATED WORK SPECIFIED ELSEWHERE

1. Temporary Electric: Section 015113.

2. FACILITIES

2.1 TEMPORARY SANITATION FACILITIES

1. Construction Manager will provide and maintain sanitary facilities for all personnel on the project.

2. The number of sanitary facilities required shall be based on the total number or workers employed on the site and shall be in accordance with the provisions of the applicable code.

3. Construction Manager will maintain sanitary facilities in a sanitary and clean condition at all times.

2.2 TEMPORARY WATER

1. Drinking Water: Contractor shall provide potable water for drinking purposes for all his personnel on the site. He shall furnish disposable drinking cups at water stations. Each water station shall be equipped with a suitable trash container for disposal of the drinking cups.

2. Construction Water: Construction Manager will provide and maintain tap locations for construction water of sufficiently pure and potable quality to avoid deleterious effect on any materials used. Location of construction water tap locations will be determined by the Construction Manager depending on the stage of construction of the incoming water service. Contractor shall provide

and maintain all hoses, piping and valves as required for obtaining construction water from taps provided by the Construction Manager.

2.3 TEMPORARY TELEPHONES

1. Construction Manager will NOT provide any telephones or fax machines for Contractor's personnel. Each Contractor is responsible for its own phones and fax machines.

2.4 FIELD OFFICE

1. During the period of the Work and until final acceptance of the project, the Construction Manager will provide a area for the Construction Manager's Field Project Manager(s) and Superintendent(s). Contractor shall make provisions for its own field office, subject to approval by the Construction Manager.

2.5 FIRE PROTECTION

1. Carpentry & General Work will provide and maintain portable fire extinguishers on each floor level and building area. There is to be no less than 1 fire extinguisher per 3,000 square feet. The Number to conform to applicable codes.

2. All contractors shall provide additional fire extinguishers as required by OSHA regulations for its work as required.

3. All fire extinguishers shall be 10lb, Multi-Purpose (ABC) dry chemical, UL labeled, with a rating of 3a:40bc.

2.6 ACCESS ROADS AND PARKING AREAS

1. The Construction Manager will NOT provide or maintain access roads on the site.

2. Neither the Construction Manager nor the Owner will provide parking for Contractor's personnel on or about the project site. All parking provisions required for Contractors will be solely the responsibility of the Contractors or their personnel.

2.7 STORAGE AREAS

1. The Construction Manager will assign storage areas on the site. Storage areas are extremely limited and will be assigned in a manner which will best facilitate the work. All storage trailers, must be provided by contractors and all costs for

installation, rental, and removal are to be included in base bid. No trailers can be stored on site without prior approval from Construction Manager.

2. Contractor shall provide all other storage space required for its work at off-site locations.

3. All combustible or flammable materials must be safely stored in a secured area in strict accordance with regulations, codes and laws enforced by local, State or Federal agencies, whichsoever is the most stringent.

2.8 FIRST AID STATION

1. The Contractor's Superintendent or Safety Supervisor shall insure that adequate first aid supplies are available, and that personnel are qualified to administer first aid/CPR, as required by State and/or Federal regulations.

2.9 SECURITY

1. The Construction Manager will NOT provide security measures at the site: All contractors must secure all materials and equipment daily, as there will be no security throughout the project.

2. All other safety and security measures shall be the responsibility of each Contractor. These measures shall include but are not limited to the provision of secured storage for tools, construction equipment, and materials and equipment scheduled for installation in the building.

2.10 BENCH MARKS AND BASELINE

1. The Construction Manager will lay out and establish and maintain bench marks and baselines.

2. The Contractor shall lay out his own work and shall be responsible for the accuracy of same.

3. Contractor shall check grades, lines, levels and dimensions as shown on the drawings and shall promptly report errors or inconsistencies in same to the Construction Manager before Work proceeds.

4. The Contractor is responsible for damaging or altering the bench marks and baselines established by the Construction Manager and shall bear the costs of replacing same.

2.11 FIELD OFFICE AND STORAGE TRAILERS

1. Contractor shall provide and maintain its own field office and storage trailers as required.

2. Contractor shall provide temporary heat and power for its field office and storage trailer.

3. Contractor's field offices and storage trailers shall be located as directed by the Construction Manager.

2.12 PROJECT SIGN

1. The Construction Manager will provide a Project Sign naming the major participants, as determined by the Owner.

2.13 TRASH DISPOSAL

1. Each Contractor shall be responsible for daily clean up and depositing its common trash in the dumpsters provided by the Construction Manager.

2. The Construction Manager will not provide a trash chute. All contractors utilizing a chute must include all costs in base bid and coordinate locations with Construction Manager.

3. The Construction Manager will provide dumpsters only after demolition is complete, and will arrange for disposal of common, non-hazardous, work-related trash deposited in these dumpsters. However, all demolition and removal of materials being demolished are to be provided by the contractor(s) performing this work.

2.14 HOISTING

1. Contractors shall provide its own materials hoists and cranes. No personnel hoist will be provided.

2.15 SCAFFOLDING AND WORKING PLATFORMS

1. No scaffolding shall be provided by the Construction Manager. Each Contractor shall provide all scaffolding required to perform its Work.

2.16 SAFETY BARRICADES AND RAILINGS

1. The Structural Contractor shall provide barricades **and protective barriers** around elevator, stair, shaft and cut openings in floors and roofs, and edges of

floors and roofs. The methods and materials used in barricading shall be in accordance with OSHA and local code regulations. Barricades and protective barriers will be installed immediately after the installation of the floor slab on any level or part of a level on the Building. Until a level has been fully barricaded, the Structural Contractor will be responsible for maintenance of the barricades. When a warning barricade is used to prohibit employees from entering a restricted work area. The "warning barricade" shall meet the requirements of CFR 1926.502 (f)(2). The supported rope, wire, or chain shall be flagged at not more than 6-foot (1.8 m) intervals with high-visibility material and maintain between 34 and 39 inches above the walking/working surface; Warning signs and tags shall be used in accordance with Subpart G of CFR OSHA Construction Industry Regulations.

2. After the barricades and protective barriers are no longer needed, the Structural Contractor will remove the barricades from the site. The Construction Manager will determine the location and scheduling of barriers to be removed.

3. Contractor shall provide for its own barricades at all other trenches, excavations, and locations not specifically identified in Paragraph 1 above.

4. Contractors who remove barricades shall be responsible for replacing them. If, after proper notification, in writing, from the Construction Manager the responsible Contractor does not correct his deficiencies in safety barricade placement, the Construction Manager reserves the right to undertake this work and backcharge the responsible Contractor(s).

5. During the execution of his work, Contractor will provide daily maintenance of, and upon completion of same, restore all barricades in a manner acceptable to prevailing safety standards enforced by local, State or Federal ordinance, whichsoever is most stringent. The intent is to leave no floor penetration or perimeter opening in an unsafe condition.

6. The Construction Manager shall arrange for temporary ladders required for access to each of the floor levels after the completion of floor slab work, and until the final stairs are ready for use.

2.17 PUMPING AND DRAINAGE

1. All contractors shall provide its own pumping and drainage.

2. When an area is released by one Contractor to another, the Contractor releasing an area shall be responsible for leaving it in a drained condition. The incoming Contractor shall assume responsibility for drainage on the day that he is scheduled to start work in the area. If the incoming Contractor is late in starting

work, he shall assume responsibility for pumping and drainage arising as a result.

2.18 TEMPORARY BUILDING ENCLOSURES

1. The Construction Manager will equip all temporary exterior doors of the building with self-closing hardware and padlocks.

2. All other temporary enclosures and protection shall be provided by the Contractor requiring the protection.

3. Temporary enclosures required due to late delivery of materials or untimely installation of work shall be the responsibility of the Contractor responsible for the delay.

2.19 TEMPORARY POWER AND LIGHTING

1. Each Contractor shall provide all extension cords and outlets as required for obtaining electric power from power centers provided by the Electrical Contractor. Refer to Section 015113 - TEMPORARY ELECTRIC.

2. Each Contractor shall provide its own additional temporary lighting of sufficient lighting levels to properly install his work.

2.20 TEMPORARY HEAT

1. Each Contractor shall provide temporary heat as required for its operations. Once a building has reached the "Permanent Enclosure" stage, temporary heat will be provided as specified in Section 015123 - TEMPORARY HEAT AND VENTILATION.

2. Equipment and methods of temporary heating shall be reported to the Construction Manager.

2.21 PROTECTION OF ADJACENT MATERIALS

1. Each Contractor shall protect adjacent materials and finishes from damage as a result of its work.

2.22 CLEAN UP

1. Contractor shall arrange for clean up and removal of debris resulting from its operations, and shall dispose of debris in accordance with the provisions of

Paragraph 2.13 above. Clean up shall be on a continual basis (DAILY) to ensure that building, grounds and public properties are maintained free from accumulations of waste materials and trash.

2. The Contractor will limit use of and ensure that all materials, including waste, that are combustible or flammable will be removed from the building continually, as work progresses, **and at a minimum** at the end of each work day. All trash which is potentially edible or may attract rodents or insects will be disposed of in metal containers and removed by the end of the work day.

3. At completion of its Work, each Contractor shall remove waste materials, rubbish, tools, equipment, and clean up all exposed surfaces in preparation for final cleaning.

4. If, after notification in writing from the Construction Manager, the Contractor does not correct its deficiencies in housekeeping within twenty four (24) hours, the Construction Manager reserves the right to undertake the Work and to backcharge the Contractor.

5. Final clean up prior to Owner occupancy shall be arranged for by the Construction Manager.

2.23 DUST PROTECTION

1. Contractor shall erect and maintain dust proof protection whenever its operations will produce dust and dirt that might filter through the building into occupied or finished areas. Contractor shall be responsible for all cleaning required due to its failure to provide adequate dust protection.

2.24 PROTECTION OF EXISTING CONSTRUCTION

1. Each Contractor shall be responsible for all damage that it may cause to materials and equipment stored or installed by other Contractors.

2.25 OTHER

1. Each Contractor shall provide any other Temporary Facilities and services that it requires and which are not specifically identified above.

3. PERMITS

3.1 The Construction Manager will obtain the Building Permit. All other permits are to be obtained and paid for by the Contractor requiring them.

## 4. EXECUTION

### 4.1 GENERAL

1. Contractor shall install all temporary facilities in accordance with applicable codes.

2. Contractor shall maintain temporary facilities for which it is responsible throughout the construction period.

3. Contractor shall remove all temporary facilities for which it is responsible when they are no longer required or when the Construction Manager directs the removal of same.

4. Contractor shall repair all damage to the Project Site caused by the installation of its temporary facilities.

END OF SECTION

SECTION 016200 - MATERIAL AND EQUIPMENT

1. GENERAL CONDITIONS

1.1 The general provisions of the Contract, including the Conditions of the Contract (General, Supplementary and other Conditions, if any) and Division 1 as appropriate apply to the Work specified in this Section.

1.2 Where work is to be executed under Separate Prime Contracts, the provisions of this Section apply to each Contract.

2. REQUIREMENTS INCLUDED

2.1 All materials and equipment incorporated into the Work shall:

1. be new;

2. conform to applicable specifications and standards; and

3. comply with size, make, type and quality specified, or as specifically approved in writing by the Architect.

2.2 Manufactured and Fabricated Products shall conform to the following requirements:

1. Designed, fabricated and assembled in accord with the best engineering and shop practices.

2. Manufactured like parts of duplicate units to standard sizes and gauges, to be interchangeable.

3. Two or more items of the same kind shall be identical, by the same manufacturer.

4. Products shall be suitable for service conditions.

5. Equipment capacities, sizes and dimensions shown or specified shall be adhered to unless variations are specifically approved in writing.

2.3 Contractor shall not use materials or equipment for any purpose other than that for which it is designated or is specified.

2.4 Materials removed form existing structures shall not be reused in the completed work unless specifically indicated or specified.

2.5 For materials and equipment specifically indicated or specified to be reused in the

Work:

1. Contractor shall use special care on removal, handling storage and reinstallation, to assure proper function in the completed Work.

2. Arrange for transportation, storage and handling of products which require off-site storage, restoration or renovation. Pay all costs for such work.

3. MANUFACTURER'S INSTRUCTIONS

3.1 When Contract Documents require that installation of work shall comply with manufacturer's printed instructions, Contractor shall obtain and distribute copies of such instructions to parties involved in the installation, including two copies to Construction Manager.

1. Maintain one set of complete instructions at the job site during installation and until completion.

3.2 Contractor shall handle, install, connect, clean, condition and adjust products in strict accord with such instructions and in conformity with specified requirements.

1. Should job conditions or specified requirements conflict with manufacturer's instructions, Contractor shall consult with Construction Manager for further instructions.

2. Contractor shall perform work in accord with manufacturer's instructions. Contractor shall not omit any preparatory step or installation procedure unless specifically modified or exempted by Contract Documents.

4. TRANSPORTATION AND HANDLING

4.1 Contractor shall arrange deliveries of Products in accord with construction schedules, coordinate to avoid conflict with work and conditions at the site.

1. Deliver Products in undamaged condition, in manufacturer's original containers or packaging, with identifying labels intact and legible.

2. Contractor shall immediately on delivery, inspect shipments to assure compliance with requirements of Contract Documents and approved submittals, and that Products are properly protected and undamaged.

4.2 Contractor shall provide equipment and personnel to handle Products by methods to prevent soiling or damage to Products or packaging.

5. STORAGE AND PROTECTION

5.1 Contractor shall store Products in accord with manufacturer's instructions, with seals and labels intact and legible.

1. Contractor shall store Products subject to damage by the elements in weathertight enclosures.

2. Contractor shall maintain temperature and humidity within the ranges required by manufacture's instructions.

5.2 Exterior Storage

1. Contractor shall store fabricated Products above the ground, on blocking or skids, to prevent soiling or staining. Cover Products which are subject to deterioration with impervious sheet coverings; provide adequate ventilation to avoid condensation.

2. Contractor shall store loose granular materials in a well-drained area on soiled surfaces to prevent mixing with foreign matter.

5.3 Contractor shall arrange storage in a manner to provide easy access for inspection. Contractor shall make periodic inspections of stored Products to assure that Products are maintained under specified conditions, and free from damage or deterioration.

5.4 Contractor shall store flammable materials so as to prevent contact with flames and fire. Conform with manufacturer's recommendations and local laws. Pay particular attention to storage of:

1. Roof insulation.

2. Roofing materials, including solvents.

3. Paint materials.

4. Cleaning and other solvents.

5. Fuels.

5.5 Protection after Installation:

1. Contractor shall provide substantial coverings as necessary to protect installed Products from damage from traffic and subsequent construction operations. Remove when no longer needed.

6. SUBSTITUTIONS AND PRODUCT OPTIONS

6.1 Product List.

1. Within 10 days after Contract Date, Contractor shall submit to Construction Manager a complete list of major products proposed to be used, with the name of the manufacturer and the installing Contractor.

6.2 Contractor's Options.

1. For Products specified only by reference standard, Contractor shall select any Product meeting that standard.

2. For Products specified by naming several Products or manufacturers, Contractor shall select any one of the Products or manufacturers named which complies with the specifications.

3. For Products specified by naming one or more Products or manufacturers and "or equal", Bidders must, during the bidding period, submit a request for substitutions for any Product or manufacturer not specifically named. See provisions in Paragraph 1.6.3.

4. For Products specified by naming only one Product and manufacturer, there is no option; and Contractor shall provide the precise Product specified.

6.3 Substitutions.

1. Until a date no later than seven (7) days before the date Bids are due, Architect will consider written requests from bidders for substitution of Products. **The contractor will submit any substitution requests to the Construction Manager for transmittal to the Architect. The** architect will review requests and will notify Bidders in an Addendum if the requested substitution is acceptable.

2. Should the Bidder desire a substitution, it shall submit a separate request for each Product, supported with complete data, with drawings and samples as appropriate, including:

   1. Comparison of the qualities of the proposed substitution with that specified.

   2. Changes required in other elements of the Work because of the substitution.

   3. Effect on the construction schedule.

4. Cost data comparing the proposed substitution with the Product specified.

5. Any required license fees or royalties.

6. Availability of maintenance service, and source of replacement materials.

3. Architect, in its sole discretion, shall be the judge of the acceptability of the proposed substitution.

4. A request for a substitution constitutes a representation that Bidder:

1. has investigated the proposed Product and determined that it is equal to or superior in all respects to that specified;

2. will provide the same warranties or bonds for the substitution as for the Product specified;

3. will coordinate the installation of an accepted substitution into the Work, and make such other changes as may be required to make the Work complete in all respects; and

4. waives all claims for additional costs, under his responsibility, which may subsequently become apparent.

6.4 Architect will review requests for substitutions with reasonable promptness, and notify Bidders, in writing, through the Construction Manager, of the decision to accept or reject the requested substitution. Any decision to accept a substitution must be confirmed in an Addendum issued during the bidding period in order to be valid. Oral approvals will not be binding.

END OF SECTION

SECTION 017123 - FIELD ENGINEERING

1. GENERAL PROVISIONS

1.1 The general provisions of the Contract, including the Conditions of the Contract, (General, Supplementary and other Conditions, if any) and Division 1 as appropriate, apply to the Work specified in this Section.

1.2 The provisions of the section apply to all contracts.

2. SURVEY

2.1 The Owner has not had a site survey prepared.

3. CONSTRUCTION MANAGER

3.1 The Construction Manager will establish a bench mark and base line from which structures and grades shall be laid out by Contractors as designated in this section. The total extent of this layout is shown on the site drawings. One bench elevation shall be provided.

END OF SECTION

SECTION 017329 - CUTTING AND PATCHING

1. GENERAL

1.1 Definition: "Cutting and Patching" includes cutting into existing construction to provide for the installation or performance of other work and subsequent fitting and patching required to restore surfaces to their original condition.

1.2 Refer to Other Sections of these specifications for specific cutting and patching requirements and limitations applicable to individual units of work.

1.3 Structural Work: Do not cut and patch structural work in a manner resulting in a reduction of load carrying capacity or load deflection ratio. Submit proposal and request and obtain Architect's/Engineer's approval before proceeding with cut and patch of structural work.

1.4 Operational/Safety Limitations: Do not cut and patch operational elements and safety components in a manner resulting in decreased performance, shortened useful life, or increased maintenance. Submit proposals and requests and obtain Architect's/Engineer's approval before proceeding with cut and patches of structural work.

1.5 Visual/Quality Limitations: Do not cut and patch work exposed to view (exterior and interior) in manner resulting in noticeable reduction of aesthetic qualities and similar qualities, as judged by Architect/Engineer.

1. Engage the original Installer/Fabricator, or (if not available) an acceptable equivalent entity, to cut and patch the following categories of exposed work but not limited to
2. Exterior wall materials, ie., curtain wall
3. Finish floor materials, ie., substrate, carpet, ceramic tile
4. Walls
5. Ceilings

1.6 Limitation on Approvals: Architect's/Engineer's approval to proceed with cutting and patching does not waive right to later acquire removal/replacement of work found to be cut and patched in an unsatisfactory manner, as judged by Architect/Engineer.

2. MATERIALS

2.1 General: Use materials for cutting and patching that are identical to existing materials. If identical materials are not available, or cannot be used, use materials that match existing adjacent surfaces to the fullest extent possible with regard to visual

effect. Use materials for cutting and patching that will result in equal or better performance characteristics.

3. EXECUTION

3.1 Inspection: Before cutting, examine surfaces to be cut and patched and conditions under which the work is to be performed. If unsafe or otherwise unsatisfactory conditions are encountered, take corrective action before proceeding with the work.

3.2 Temporary Support: To prevent failure provide temporary support of work to be cut.

3.3 Protection: Protect other work during cutting and patching to prevent damage. Provide protection from adverse weather conditions for that part of the project that may be exposed during cutting and patching operations.

1. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.

2. Take precautions not to cut existing pipe, conduit or duct serving the building but scheduled to be relocated until provisions have been made to bypass them.

3.4 Cutting: Cut the work using methods that are least likely to damage work to be retained or adjoining work. Where possible review proposed procedures with the original installer; comply with original installer's recommendations.

1. Where cutting is required use hand or small power tools designed for sawing or grinding, not hammering and chopping. Cut through concrete and masonry using a cutting machine such as a carborundum saw or core drill. Cut holes and slots neatly to size required with minimum disturbance of adjacent work. To avoid marring existing finished surfaces, cut and drill from the exposed or finished side into concealed surfaces. Temporarily cover openings when not in use.

3.5 Patching: Patch with seams which are durable and as invisible as possible. Comply with specified tolerances for the work.

1. Restore exposed finishes of patched areas and where necessary extend finish restoration into retained adjoining work in a manner which will eliminate evidence of patching and finishing.

END OF SECTION

SECTION 017700 – CONTRACT CLOSEOUT

1. DESCRIPTION OF REQUIREMENTS

1.1 Provisions of this section apply to the procedural requirements for the actual close out of the Work, not to the administrative matters such as final payment or the change over of insurance. Close out requirements relate to both substantial and final completion of the Work; they also apply to individual portions of completed work as well as the Total work. Specific requirements contained in other sections have precedence over the general requirements contained in this section.

2. PROCEDURES AT SUBSTANTIAL COMPLETION

2.1 Prerequisites: Contractor shall comply with the General Conditions and complete the following before requesting inspection of the Work, or a designated portion of the Work, for certification of substantial completion:

1. submit executed warranties, workmanship bonds, maintenance agreements, inspection certificates, releases of liens, tax certification and similar required documentation for specific units of work, and documents needed to enable Owner's unrestricted occupancy and use;

2. submit record documentation, maintenance manuals, tools, spare parts, keys and similar operational items;

3. complete instructions of Owner's operating personnel, and start up of systems; and

4. complete final cleaning and remove temporary facilities and tools.

2.2 Inspection Procedures: Upon receipt of Contractor's request, Architect/Engineer will either proceed with inspection or advise Construction Manger of prerequisites not fulfilled. Following initial inspection, Architect/Engineer will either prepare certificate of substantial completion, or advise Construction Manager of work which must be performed prior to issuance of certificate. The Architect/Engineer will repeat the inspection when requested and assure that the work has been substantially completed. Results of the completed inspection will form the initial "punch list" for final acceptance.

2.3 Punch List Procedures: Each Contractor shall be given a copy of the punch list with its appropriate work identified. Each Contractor shall be given 9 (nine) calendar work days to complete their punch list work. On the 10th day or as determined by the Construction Manager the Construction Manager shall employ other Contractors, as required, to complete any incomplete punch list work and retain from the appropriate

Contractors retainage all costs incurred.

3. PROCEDURES AT FINAL ACCEPTANCE

3.1 Reinspection Procedure: The Architect/Engineer will reinspect the Work upon receipt of the Contractor's notice that, except for those items whose completion has been delayed due to circumstances that are acceptable to the Architect/Engineer, the Work has been completed, including punch list items from earlier inspections. Upon completion of reinspection, the Architect/Engineer will either recommend final acceptance and final payment, or will advise the Contractor of work not completed or obligations not fulfilled as required for final acceptance. If necessary, this procedure will be repeated.

4. RECORD DOCUMENTATION

4.1 Record Drawings: Contractor shall maintain a complete set of either blue or black line prints of the contract documents and shop drawings for record mark up purposes throughout the Contract Time. Contractor shall mark up these drawings during the course of the Work to show both changes and the actual installation, in sufficient detail to form a complete record for Owner's purposes giving particular attention to work that will be concealed and difficult to measure and record at a later date, and Work which may require servicing or replacement during the life of the project. Require the entities marking prints to sign and date each mark up. Bind prints into manageable sets, with durable paper cover, appropriately labeled.

4.2 Maintenance Manual: Contractor shall provide 3-ring vinyl covered binders containing required maintenance manuals, properly identified and indexed and including operating and maintenance instructions extended to cover emergencies, spare parts, warranties, inspection procedures, diagrams, safety, security, and similar appropriate data for each system of equipment item.

4.3 State Tax Certification: Contractor shall provide recent Delaware State Tax Certification form as issued by State of Delaware, Department of Finance, Division of Revenue, Carvel State Office Building, 820 N. French Street, Wilmington, Delaware 19801.

5. GENERAL CLOSE OUT REQUIREMENTS

5.1 Operator Instruction: Contractor shall require each Installer of systems requiring continued operation and maintenance by Owner's operating personnel, to provide on location instruction to Owner's personnel, sufficient to ensure safe, secure, efficient, non-failing utilization and operation of systems. Contractor shall provide instructions for the following categories of work:

1. Mechanical/electrical/electronic systems (not limited to work of Division 15 and 16).
2. Roofing, flashing, joint sealers.
3. Window installations.

6. FINAL CLEANING

6.1 At the time of project close out Contractor shall clean or reclean the Work to the condition expected from a normal, commercial building cleaning and maintenance program. Complete the following cleaning operations before requesting the Architect/Engineer's inspection for certification of substantial completion:

1. Remove non-permanent protections and labels.

2. Polish glass.

3. Clean exposed finishes.

4. Touch up minor finish damage.

5. Clean or replace mechanical systems filters.

6. Remove debris.

7. Broom clean unoccupied spaces.

8. Sanitize plumbing and food service facilities.

9. Clean light fixtures and replace burned out lamps.

10. Sweep and wash paved areas.

11. Police yards and grounds.

END OF SECTION

**PROJECT MANUAL**

**FOR**

# RICHARDSON PARK ELEMENTARY SCHOOL RENOVATIONS


**RED CLAY CONSOLIDATED SCHOOL DISTRICT** — **OWNER**
1502 SPRUCE AVENUE
WILMINGTON, DELAWARE 19805

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**ABHA PROJECT NUMBER: 1425**

**DATE: JANUARY 13, 2015**


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# SECTION 02 4100
# DEMOLITION

## PART 1 GENERAL

1.01 SECTION INCLUDES

A. Refer to Scope Information Sheets for this contract bound in the Project Manual under Section 01 1000, Summary of Work. The Scope Information Sheets describe generally the work included in each contract, but the work is not necessarily limited to that described.

B. Selective demolition of building elements for alteration purposes.

1.02 RELATED REQUIREMENTS

A. Section 01 1000 - Summary: Limitations on Contractor's use of site and premises.

B. Section 01 5000 - Temporary Facilities and Controls: Site fences, security, protective barriers, and waste removal.

C. Section 01 6000 - Product Requirements: Handling and storage of items removed for salvage and relocation.

D. Section 01 7000 - Execution and Closeout Requirements: Project conditions; protection of bench marks, survey control points, and existing construction to remain; reinstallation of removed products; temporary bracing and shoring.

1.03 REFERENCE STANDARDS

A. 29 CFR 1926 - U.S. Occupational Safety and Health Standards; current edition.

B. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations; 2013.

## PART 2 PRODUCTS -- NOT USED

## PART 3 EXECUTION

3.01 SCOPE

A. Remove portions of existing building as shown and noted on the Drawings.

B. Remove other items indicated, for salvage, relocation, and recycling.

3.02 GENERAL PROCEDURES AND PROJECT CONDITIONS

A. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
   1. Obtain required permits.
   2. Comply with applicable requirements of NFPA 241.
   3. Use of explosives is not permitted.
   4. Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable structures.
   5. Provide, erect, and maintain temporary barriers and security devices.
   6. Use physical barriers to prevent access to areas that could be hazardous to workers or the public.
   7. Conduct operations to minimize effects on and interference with adjacent structures and occupants.
   8. Do not close or obstruct roadways or sidewalks without permit.
   9. Conduct operations to minimize obstruction of public and private entrances and exits; do not obstruct required exits at any time; protect persons using entrances and exits from removal operations.

B. Do not begin removal until receipt of notification to proceed from Owner.

C. Do not begin removal until built elements to be salvaged or relocated have been removed.

D. Protect existing structures and other elements that are not to be removed.
   1. Provide bracing and shoring.
   2. Prevent movement or settlement of adjacent structures.
   3. Stop work immediately if adjacent structures appear to be in danger.

E. Minimize production of dust due to demolition operations; do not use water if that will result in ice, flooding, sedimentation of public waterways or storm sewers, or other pollution.

F. If hazardous materials are discovered during removal operations, stop work and notify Architect and Owner; hazardous materials include regulated asbestos containing materials, lead, PCB's, and mercury.

3.03 EXISTING UTILITIES

A. Coordinate work with utility companies; notify before starting work and comply with their requirements; obtain required permits.

B. Protect existing utilities to remain from damage.

C. Do not disrupt public utilities without permit from authority having jurisdiction.

D. Do not close, shut off, or disrupt existing life safety systems that are in use without at least 7 days prior written notification to Owner.

E. Do not close, shut off, or disrupt existing utility branches or take-offs that are in use without at least 3 days prior written notification to Owner.

F. Locate and mark utilities to remain; mark using highly visible tags or flags, with identification of utility type; protect from damage due to subsequent construction, using substantial barricades if necessary.

G. Remove exposed piping, valves, meters, equipment, supports, and foundations of disconnected and abandoned utilities.

3.04 SELECTIVE DEMOLITION FOR ALTERATIONS

A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
   1. Verify that construction and utility arrangements are as shown.
   2. Report discrepancies to Architect before disturbing existing installation.
   3. Beginning of demolition work constitutes acceptance of existing conditions that would be apparent upon examination prior to starting demolition.

B. Separate areas in which demolition is being conducted from other areas that are still occupied.
   1. Provide, erect, and maintain temporary dustproof partitions of construction specified in Section 01 5000 .

C. Remove existing work as indicated and as required to accomplish new work.
   1. Remove rotted wood, corroded metals, and deteriorated masonry and concrete; replace with new construction specified.
   2. Remove items indicated on drawings.

D. Services (Including but not limited to HVAC, Plumbing, Fire Protection, and Electrical): Remove existing systems and equipment as indicated.
   1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components.

2. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
3. Verify that abandoned services serve only abandoned facilities before removal.
4. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification.

E. Protect existing work to remain.
1. Prevent movement of structure; provide shoring and bracing if necessary.
2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
3. Repair adjacent construction and finishes damaged during removal work.
4. Patch as specified for patching new work.

3.05 DEBRIS AND WASTE REMOVAL

A. Remove debris, junk, and trash from site.

B. Leave site in clean condition, ready for subsequent work.

C. Clean up spillage and wind-blown debris from public and private lands.

**END OF SECTION**

# SECTION 06 1000
# ROUGH CARPENTRY

## PART 1 GENERAL

1.01 SECTION INCLUDES

A. Refer to Scope Information Sheets for this contract bound in the Project Manual under Section 01 10 00, Summary of Work. The Scope Information Sheets describe generally the work included in each contract, but the work is not necessarily limited to that described.

B. Fire retardant treated wood materials.

C. Concealed wood blocking, nailers, and supports.

1.02 REFERENCE STANDARDS

A. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2009.

B. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2014.

C. AWPA U1 - Use Category System: User Specification for Treated Wood; American Wood Protection Association; 2012.

D. PS 1 - Structural Plywood; 2009.

E. PS 20 - American Softwood Lumber Standard; National Institute of Standards and Technology, Department of Commerce; 2010.

1.03 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide technical data on wood preservative materials and application instructions.

1.04 DELIVERY, STORAGE, AND HANDLING

A. General: Cover wood products to protect against moisture. Support stacked products to prevent deformation and to allow air circulation.

B. Fire Retardant Treated Wood: Prevent exposure to precipitation during shipping, storage, or installation.

## PART 2 PRODUCTS

2.01 GENERAL REQUIREMENTS

A. Dimension Lumber: Comply with PS 20 and requirements of specified grading agencies.
   1. If no species is specified, provide any species graded by the agency specified; if no grading agency is specified, provide lumber graded by any grading agency meeting the specified requirements.
   2. Grading Agency: Any grading agency whose rules are approved by the Board of Review, American Lumber Standard Committee (www.alsc.org) and who provides grading service for the species and grade specified; provide lumber stamped with grade mark unless otherwise indicated.

B. Lumber fabricated from old growth timber is not permitted.

C. Provide sustainably harvested wood; see Section 01 6000 for requirements.

D. Provide wood harvested within a 500 mile radius of the project site.

2.02 DIMENSION LUMBER FOR CONCEALED APPLICATIONS

A. Sizes: Nominal sizes as indicated on drawings, S4S.

B. Moisture Content: S-dry or MC19.

C. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring:
   1. Lumber: S4S, No. 2 or Standard Grade.
   2. Boards: Standard or No. 3.

2.03 CONSTRUCTION PANELS

A. Other Applications:
   1. Plywood Concealed From View But Located Within Exterior Enclosure: PS 1, C-C Plugged or better, Exterior grade.
   2. Other Locations: PS 1, C-D Plugged or better.

2.04 ACCESSORIES

A. Fasteners and Anchors:
   1. Metal and Finish: Hot-dipped galvanized steel per ASTM A 153/A 153M for high humidity and preservative-treated wood locations, unfinished steel elsewhere.

2.05 FACTORY WOOD TREATMENT

A. Treated Lumber and Plywood: Comply with requirements of AWPA U1 - Use Category System for wood treatments determined by use categories, expected service conditions, and specific applications.
   1. Fire-Retardant Treated Wood: Mark each piece of wood with producer's stamp indicating compliance with specified requirements.

B. Fire Retardant Treatment:
   1. Interior Type A: AWPA U1, Use Category UCFA, Commodity Specification H, low temperature (low hygroscopic) type, chemically treated and pressure impregnated; capable of providing a maximum flame spread rating of 25 when tested in accordance with ASTM E84, with no evidence of significant combustion when test is extended for an additional 20 minutes.

**PART 3 EXECUTION**

3.01 INSTALLATION - GENERAL

A. Select material sizes to minimize waste.

B. Reuse scrap to the greatest extent possible; clearly separate scrap for use on site as accessory components, including: shims, bracing, and blocking.

C. Where treated wood is used on interior, provide temporary ventilation during and immediately after installation sufficient to remove indoor air contaminants.

3.02 BLOCKING, NAILERS, AND SUPPORTS

A. Provide framing and blocking members as indicated or as required to support finishes, fixtures, specialty items, and trim.

B. In walls, provide blocking attached to studs as backing and support for wall-mounted items, unless item can be securely fastened to two or more studs or other method of support is explicitly indicated.

C. Provide the following specific non-structural framing and blocking:
   1. Grab bars.
   2. Towel and bath accessories.

3.03 CLEANING

A. Waste Disposal: Comply with the requirements of Section 01 7419.
   1. Comply with applicable regulations.
   2. Do not burn scrap on project site.

3. Do not burn scraps that have been pressure treated.
4. Do not send materials treated with pentachlorophenol, CCA, or ACA to co-generation facilities or "waste-to-energy" facilities.

B. Do not leave any wood, shavings, sawdust, etc. on the ground or buried in fill.

C. Prevent sawdust and wood shavings from entering the storm drainage system.

**END OF SECTION**

# SECTION 06 2000
# FINISH CARPENTRY

## PART 1 GENERAL

1.01 SECTION INCLUDES

A. Refer to Scope Information Sheets for this contract bound in the Project Manual under Section 01 10 00, Summary of Work. The Scope Information Sheets describe generally the work included in each contract, but the work is not necessarily limited to that described.

B. Hanging doors, installing hardware.

C. Hardware and attachment accessories.

1.02 RELATED REQUIREMENTS

A. Section 06 1000 - Rough Carpentry: Support framing, grounds, and concealed blocking.

1.03 REFERENCE STANDARDS

A. ANSI A135.4 - American National Standard for Basic Hardboard; 2012.

B. ANSI A208.1 - American National Standard for Particleboard; 2009.

C. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2014.

D. HPVA HP-1 - American National Standard for Hardwood and Decorative Plywood; Hardwood Plywood & Veneer Association; 2009.

E. NEMA LD 3 - High-Pressure Decorative Laminates; National Electrical Manufacturers Association; 2005.

1.04 ADMINISTRATIVE REQUIREMENTS

A. Sequence installation to ensure utility connections are achieved in an orderly and expeditious manner.

1.05 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements for submittal procedures.

B. Product Data:
   1. Provide data on fire retardant treatment materials and application instructions.
   2. Provide instructions for attachment hardware and finish hardware.

C. Shop Drawings: Indicate materials, component profiles, fastening methods, jointing details, and accessories.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Protect work from moisture damage.

## PART 2 PRODUCTS

2.01 FINISH CARPENTRY ITEMS

2.02 DOORS AND HARWARE

A. Refer to Section 08 1113 Hollow Metal Doors and Frames for information.

B. Refer to Section 08 1613 Fiberglass Doors for information.

C. Refer to Section 08 7102 Hardware for information.

2.03 WOOD TREATMENT

A. Fire Retardant Treatment (FR-S Type): Chemically treated and pressure impregnated; capable of providing flame spread index of 25, maximum, and smoke developed index of 450, maximum, when tested in accordance with ASTM E84.

**PART 3 EXECUTION**

3.01 INSTALLATION

A. Set and secure materials and components in place, plumb and level.

B. Install doors and frames as scheduled.

C. Install hardware as scheduled.

3.02 TOLERANCES

A. Maximum Variation from True Position: 1/16 inch.

B. Maximum Offset from True Alignment with Abutting Materials: 1/32 inch.

**END OF SECTION**

# SECTION 07 9005
# JOINT SEALERS

## PART 1 GENERAL

1.01 SECTION INCLUDES

A. Refer to Scope Information Sheets for this contract bound in the Project Manual under Section 01 1000, Summary of Work. The Scope Information Sheets describe generally the work included in each contract, but the work is not necessarily limited to that described.

B. Sealants and joint backing.

C. Precompressed foam sealers.

1.02 REFERENCE STANDARDS

A. ASTM C834 - Standard Specification for Latex Sealants; 2010.

B. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2014.

C. ASTM C1193 - Standard Guide for Use of Joint Sealants; 2013.

D. ASTM D1667 - Standard Specification for Flexible Cellular Materials--Poly(Vinyl Chloride) Foam (Closed-Cell); 2005 (Reapproved 2011).

E. SCAQMD 1168 - South Coast Air Quality Management District Rule No.1168; current edition; www.aqmd.gov.

1.03 ADMINISTRATIVE REQUIREMENTS

A. Coordinate the work with other sections referencing this section.

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide data indicating sealant chemical characteristics, performance criteria, substrate preparation, limitations, and color availability.

C. Manufacturer's Installation Instructions: Indicate special procedures, surface preparation, and perimeter conditions requiring special attention.

1.05 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum 5 years experience.

B. Applicator Qualifications: Company specializing in performing the work of this section with minimum three years documented experience and approved by manufacturer.

1.06 FIELD CONDITIONS

A. Maintain temperature and humidity recommended by the sealant manufacturer during and after installation.

1.07 COORDINATION

A. Coordinate the work with all sections referencing this section.

1.08 WARRANTY

A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.

B. Correct defective work within a five year period after Date of Substantial Completion.

C. Warranty: Include coverage for installed sealants and accessories which fail to achieve airtight seal, exhibit loss of adhesion or cohesion, or do not cure.

**PART 2 PRODUCTS**

2.01 SEALANTS

A. Sealants and Primers - General: Provide only products having lower volatile organic compound (VOC) content than required by South Coast Air Quality Management District Rule No.1168.

B. Type 1 - General Purpose Exterior Sealant: Silicone; ASTM C 920, Grade NS, Class 25, Uses M, G, and A; single component.
   1. Color: To be selected by Architect from manufacturer's full range.
   2. Joint Movement Range: +/- 50 percent. (minimum)
   3. Product:
      a. SilPruf NB SCS9000 manufactured by Momentive Performance Materials, Inc (formerly GE Silicones).
      b. 890FTS manufactured by Pecora Corporation.
      c. 890FTS TXTR manufactured by Pecora Corporation.
      d. 795 manufactured by Dow Corning.
   4. Applications: Use for:
      a. Control, expansion, and soft joints in masonry.
      b. Joints between metal frames and other materials.

C. Type 2 - General Purpose Interior Sealant: Acrylic emulsion latex; ASTM C834, Type OP, Grade NF single component, paintable.
   1. Color: Colors as selected.
   2. Applications: Use for:
      a. Interior wall and ceiling control joints.
      b. Joints between door and window frames and wall surfaces.
      c. Other interior joints for which no other type of sealant is indicated.

D. Type 3 - Coal tar extended, fuel resistant polyurethane sealant: Not Used.

E. Type 4 - Fire Resistant Foam Sealant:
   1. Manufacturers:
      a. Dow Corning: Product: 3-6548 RTV Foam.

F. Type 5 - NOT USED

G. Type 6 - Bathtub/Tile Sealant: White silicone; ASTM C920, Uses I, M and A; single component, mildew resistant.
   1. Applications: Use for:
      a. Joints between plumbing fixtures and floor and wall surfaces.
      b. Joints between kitchen and bath countertops and wall surfaces.

2.02 ACCESSORIES

A. Primer: Non-staining type, recommended by sealant manufacturer to suit application.

B. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.

C. Joint Backing: Round foam rod compatible with sealant; ASTM D 1667, closed cell PVC; oversized 30 to 50 percent larger than joint width.

D. Fire Rated Joint Filler: Pre-engineered, patened, flexible, textile fiberglass roll material with a fiberglass matt facing, containing approximately 30 percent by weight unexpanded vermiculite; Ultra Block manufactured by Backer Rod Manufacturing, Inc.

E. Bond Breaker: Pressure sensitive tape recommended by sealant manufacturer to suit application.

**PART 3 EXECUTION**

3.01 EXAMINATION

A. Verify that substrate surfaces and joint openings are ready to receive work.

B. Verify that joint backing and release tapes are compatible with sealant.

3.02 PREPARATION

A. Remove loose materials and foreign matter that could impair adhesion of sealant.

B. Clean and prime joints in accordance with manufacturer's instructions.

C. Perform preparation in accordance with manufacturer's instructions and ASTM C1193.

D. Protect elements surrounding the work of this section from damage or disfigurement.

3.03 INSTALLATION

A. Perform work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.

B. Perform installation in accordance with ASTM C1193.

C. Measure joint dimensions and size joint backers to achieve the following:
   1. Width/depth ratio of 2:1.
      a. Minumim joint depth: 3/16 inch; Maximum joint depth: 1/2 inch, unless otherwise required by manufacturer.
   2. Neck dimension no greater than 1/3 of the joint width.
   3. Surface bond area on each side not less than 75 percent of joint width.

D. Install backer rod using blunt or rounded tool to a uniform (+/- 1/8 inch) depth without puncturing the material.

E. Install bond breaker where joint backing is not used.

F. Install sealant free of air pockets, foreign embedded matter, ridges, and sags.

G. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.

H. Tool joints concave.

3.04 CLEANING

A. Clean adjacent soiled surfaces.

3.05 PROTECTION

A. Protect sealants until cured.

3.06 SCHEDULE

A. Exterior Joints for Which No Other Sealant Type is Indicated: Type 1; colors as selected.

B. Interior Joints for Which No Other Sealant is Indicated: Type 2; color as selected.

C. Penetrations of Fire Rated Construction: Type 1 with Ultra Block joint filler or Type 4.

D. Joints Between Plumbing Fixtures and Walls and Floors, and Between Countertops and Walls: Type 6.

**END OF SECTION**

# SECTION 08 1113
# HOLLOW METAL DOORS AND FRAMES

## PART 1 GENERAL

1.01 SECTION INCLUDES

A. Refer to Scope Information Sheets for this contract bound in the Project Manual under Section 01 10 00, Summary of Work. The Scope Information Sheets describe generally the work included in each contract, but the work is not necessarily limited to that described.

B. Non-fire-rated steel doors and frames.

C. Fire-rated steel doors and frames.

D. Thermally insulated steel doors.

1.02 ALTERNATES

A. Refer to Scope of Information Sheets for description of work under this Section affected by alternates.

1.03 RELATED REQUIREMENTS

A. Section 08 7100 - Door Hardware.

B. Section 08 8000 - Glazing: Glass for doors and borrowed lites.

1.04 REFERENCE STANDARDS

A. ANSI/ICC A117.1 - American National Standard for Accessible and Usable Buildings and Facilities; International Code Council; 2009.

B. ANSI A250.8 - SDI-100 Recommended Specifications for Standard Steel Doors and Frames; 2003 (R2008).

C. ANSI A250.10 - Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames; 1998 (R2011).

D. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2013.

E. ASTM C1363 - Standard Test Method for Thermal Performance of Building Assemblies by Means of a Hot Box Apparatus; 2011.

F. BHMA A156.115 - Hardware Preparation in Steel Doors and Steel Frames; 2006.

G. NAAMM HMMA 840 - Guide Specifications for Installation and Storage of Hollow Metal Doors and Frames; The National Association of Architectural Metal Manufacturers; 2007.

H. NFPA 80 - Standard for Fire Doors and Other Opening Protectives; 2013.

I. UL (BMD) - Building Materials Directory; Underwriters Laboratories Inc.; current edition.

J. UL 10C - Standard for Positive Pressure Fire Tests of Door Assemblies; Current Edition, Including All Revisions.

1.05 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Materials and details of design and construction, hardware locations, reinforcement type and locations, anchorage and fastening methods, and finishes; and one copy of referenced grade standard.

C. Shop Drawings: Details of each opening, showing elevations, glazing, frame profiles, and identifying location of different finishes, if any.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Store in accordance with NAAMM HMMA 840.

B. Protect with resilient packaging; avoid humidity build-up under coverings; prevent corrosion.

**PART 2 PRODUCTS**

2.01 **MANUFACTURERS**

A. Steel Doors and Frames:
   1. Assa Abloy Ceco, Curries, or Fleming: www.assaabloydss.com.
   2. Republic Doors: www.republicdoor.com.
   3. Steelcraft, an Allegion brand: www.allegion.com/us.
   4. Substitutions: See Section 01 6000 - Product Requirements.

2.02 DOORS AND FRAMES

A. Requirements for All Doors and Frames:
   1. Accessibility: Comply with ICC A117.1 and ADA Standards.
   2. Door Top Closures: Flush with top of faces and edges.
   3. Door Edge Profile: Beveled on both edges.
   4. Door Texture: Smooth faces.
   5. Glazed Lights: Non-removable stops on non-secure side; sizes and configurations as indicated on drawings.
   6. Hardware Preparation: In accordance with BHMA A156.115, with reinforcement welded in place, in addition to other requirements specified in door grade standard.
   7. Galvanizing for Units in Wet Areas: Components hot-dipped zinc-iron alloy-coated (galvannealed) in accordance with ASTM A653/A653M, with manufacturer's standard coating thickness
   8. Finish: Factory primed, for field finishing.

B. Combined Requirements: If a particular door and frame unit is indicated to comply with more than one type of requirement, comply with all the specified requirements for each type; for instance, an exterior door that is also indicated as being sound-rated must comply with the requirements specified for exterior doors and for sound-rated doors; where two requirements conflict, comply with the most stringent.

2.03 STEEL DOORS

A. Exterior Doors:
   1. Grade: ANSI A250.8 - SDI-100; Level 3 - Extra Heavy-Duty, Physical Performance Level A, Model 2 - Seamless.
   2. Core: Polystyrene.
   3. Thickness: 1-3/4 inch.
   4. Top Closures for Outswinging Doors: Flush with top of faces and edges.
   5. Galvanizing: Components hot-dipped zinc-iron alloy-coated (galvannealed) in accordance with ASTM A653/A653M, with manufacturer's standard coating thickness.
   6. Insulating Value: U-value of 0.50, when tested in accordance with ASTM C1363.
   7. Weatherstripping: Separate, see Section 08 7100.

B. Interior Doors, Non-Fire-Rated:
   1. Grade: ANSI A250.8 - SDI-100; Level 3 - Extra Heavy-Duty, Physical Performance Level A, Model 2 - Seamless.
   2. Core: Kraftpaper honeycomb.
   3. Thickness: 1-3/4 inch.

C. Interior Doors, Fire-Rated:

1. Grade: ANSI A250.8 - SDI-100; Level 3 - Extra Heavy-Duty, Physical Performance Level A, Model 2 - Seamless.
2. Fire Rating: As indicated on Door and Frame Schedule, tested in accordance with UL 10C ("positive pressure").
   a. Rate of Temperature Rise Across Door Thickness : 250 degrees F.
   b. Provide units listed and labeled by UL (Underwriters Laboratories) - UL (BMD).
   c. Attach fire rating label to each fire rated unit.
3. Core: Mineral board.
4. Thickness: 1-3/4 inch.

2.04 STEEL FRAMES

A. General:
   1. Comply with the requirements of grade specified for corresponding door.
      a. ANSI A250.8 - SDI-100, Level 2 and 3 Door Frames: 14 gage, 0.067 inch, minimum thickness.
   2. Finish: Same as for door.
   3. Provide mortar guard boxes for hardware cut-outs in frames to be installed in masonry or to be grouted.
   4. Frames in Masonry Walls: Size to suit masonry coursing with head member 4 inches high to fill opening without cutting masonry units.
   5. Frames Wider than 48 Inches: Reinforce with steel channel fitted tightly into frame head, flush with top.
   6. Provide kerfed stops for inserted weatherstripping.

B. Exterior Door Frames: Fully welded.
   1. Galvanizing: Components hot-dipped zinc-iron alloy-coated (galvannealed) in accordance with ASTM A653/A653M, with manufacturer's standard coating thickness.
   2. Weatherstripping: Separate, see Section 08 7100.

C. Interior Door Frames, Non-Fire-Rated: Knock-down type

D. Interior Door Frames, Fire-Rated: Knockdown type.
   1. Fire Rating: Same as door, labeled.

2.05 ACCESSORY MATERIALS

A. Glazing: As specified in Section 08 8000, factory installed.

B. Removable Stops: Formed sheet steel, shape as indicated on drawings, butted corners; prepared for countersink style tamper proof screws.

C. Astragals for Double Doors: Specified in Section 08 7100.
   1. Fire-Rated Doors: Steel, shape as required to accomplish fire rating.

D. Grout for Frames: Portland cement grout of maximum 4-inch slump for hand troweling; thinner pumpable grout is prohibited.

E. Silencers: Resilient rubber, fitted into drilled hole; 3 on strike side of single door, 3 on center mullion of pairs, and 2 on head of pairs without center mullions.

F. Temporary Frame Spreaders: Provide for all factory- or shop-assembled frames.

2.06 FINISH MATERIALS

A. Primer: Rust-inhibiting, complying with ANSI A250.10, door manufacturer's standard.

B. Bituminous Coating: Asphalt emulsion or other high-build, water-resistant, resilient coating.

**PART 3 EXECUTION**

3.01 EXAMINATION

A. Verify existing conditions before starting work.

B. Verify that opening sizes and tolerances are acceptable.

3.02 PREPARATION

A. Coat inside of frames to be installed in masonry or to be grouted, with bituminous coating, prior to installation.

3.03 INSTALLATION

A. Install in accordance with the requirements of the specified door grade standard and NAAMM HMMA 840.

B. In addition, install fire rated units in accordance with NFPA 80.

C. Coordinate frame anchor placement with wall construction.

D. Grout frames in masonry construction, using hand trowel methods; brace frames so that pressure of grout before setting will not deform frames.

E. Coordinate installation of hardware.

F. Coordinate installation of glazing.

3.04 TOLERANCES

A. Maximum Diagonal Distortion: 1/16 in measured with straight edge, corner to corner.

3.05 ADJUSTING

A. Adjust for smooth and balanced door movement.

B. Test sound control doors for force to close, latch, and unlatch; adjust as required to comply.

3.06 SCHEDULE

A. Refer to Door and Frame Schedule on the drawings.

B. New frames in existing openings shall be knock-down type.

C. New frames in new openings shall be fully welded type.

**END OF SECTION**

# SECTION 08 1613
# FIBERGLASS DOORS

## PART 1 GENERAL

1.01 SECTION INCLUDES

A. Refer to Scope Information Sheets for this contract bound in the Project Manual under Section 01 1000, Summary of Work. The Scope Information Sheets describe generally the work included in each contract, but the work is not necessarily limited to that described.

B. Fiberglass reinforced plastic (FRP) doors.

C. Frames for fiberglass reinforced plastic doors.

D. Glazing.

E. Accessories.

1.02 ALTERNATE

A. Refer to Scope of Information Sheets for description of work under this Section affected by alternates.

1.03 RELATED REQUIREMENTS

A. Section 08 7100 - Door Hardware: Other door hardware.

B. Section 08 8000 - Glazing.

1.04 REFERENCE STANDARDS

A. ANSI A250.4 - American National Standard Test Procedure and Acceptance Criteria for Physical Endurance for Steel Doors and Hardware Reinforcings; 2011.

B. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2013.

C. ASTM D635 - Standard Test Method for Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position; 2010.

D. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2014.

1.05 ADMINISTRATIVE REQUIREMENTS

A. Coordination: Obtain hardware templates from hardware manufacturer prior to starting fabrication.

1.06 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide manufacturer's standard details, installation instructions, and hardware and anchor recommendations.

C. Shop Drawings: Show layout and profiles; include assembly methods.
   1. Indicate product components, including hardware reinforcement locations and preparations, accessories, finish colors, patterns, and textures.
   2. Indicate wall conditions, door and frame elevations, sections, materials, gages, finishes, location of door hardware by dimension, and details of openings; use same reference numbers indicated on Drawings to identify details and openings.

D. Selection Samples: Submit two complete sets of color chips, illustrating manufacturer's available finishes, colors, and textures.

E. Maintenance Data: Include instructions for repair of minor scratches and damage.

F. Warranty: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer; include detailed terms of warranty.

1.07 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing products of the type specified in this section, with not less than three years of documented experience.

B. Installer Qualifications: Company specializing in installing products of the type specified in this section with not less than three years of documented experience.

1.08 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials in manufacturer’s original, unopened, undamaged containers with identification labels intact.

B. Store materials in original packaging, under cover, protected from exposure to harmful weather conditions and from direct contact with water.
   1. Store at temperature and humidity conditions recommended by manufacturer.
   2. Do not use non-vented plastic or canvas shelters.
   3. Immediately remove wet wrappers.

C. Store in position recommended by manufacturer, elevated minimum 4 inches above grade, with minimum 1/4 inches space between doors.

1.09 WARRANTY

A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.

B. Provide five (5) year manufacturer warranty covering materials and workmanship, including degradation or failure due to chemical contact.

**PART 2 PRODUCTS**

2.01 DOOR AND FRAME ASSEMBLIES

A. Door and Frame Assemblies: Factory-fabricated, prepared and machined for hardware.
   1. Mechanical Durability: Tested to ANSI A250.4 Level A (1,000,000 cycles), minimum; tested with hardware and fasteners intended for use on project.
   2. Screw-Holding Capacity: Tested to 900 psi, minimum.
   3. Surface Burning Characteristics: Flame spread index of 25 or less, smoke developed index of 450 or less, Class A; when tested in accordance with ASTM E84.
   4. Flammability: Self-extinguishing when tested in accordance with ASTM D635.
   5. Clearance Between Door and Frame: 1/8 inch, maximum.
   6. Clearance Between Bottom of Door and Finished Floor: 3/4 inch, maximum; not less than 1/4 inch clearance to threshold.

2.02 COMPONENTS

A. Doors: Through-color gel coating on fiberglass reinforced polyester resin construction with reinforced core.
   1. Thickness: 1-3/4 inches, overall.
   2. Subframe and Reinforcements: Fiberglass pultrusions or polymer foam; no metal or wood.
   3. Waterproof Integrity: All edges, cut-outs, and hardware preparations factory fabricated of fiberglass reinforced plastic; provide cut-outs with joints sealed independently of glazing or louver inserts or trim.
   4. Hardware Preparations: Factory reinforce, machine, and prepare for all hardware including field installed items; provide solid blocking for each hardware item; make field cutting, drilling or tapping unnecessary; obtain manufacturer's templates for hardware preparations.

5. Gel Coating: Ultraviolet stabilized polyester, marine grade NPG-isophthalic, with slightly textured semi-gloss final finish.
6. Gel Coating Thickness: Minimum 15 mils wet, plus/minus 3 mils.

B. Frames: Profiles and dimensions as indicated on drawings; same type and construction used in mechanical durability test for doors.
1. Construction for Fire-Rated Doors: Provide frames bearing labels to match doors; use one of the following:
a. Galvanized steel, hot-dipped coated to G180/Z285 or ASTM A123/A123 M; 18 gage, 0.05 inch minimum thickness; degreased and primed for field painting.
2. Corner Joints: Mitered with concealed corner blocks or angles of same material as frame; fiberglass and aluminum joined with screws; steel and stainless steel spot welded; sealed watertight with silicone sealant.
3. At hardware cut-outs provide continuous backing or mortar guards of same material as frame, sealed watertight.
4. Frame Anchors: Stainless steel, Type 304; provide 3 anchors in each jamb for heights up to 84 inches with one additional anchor for each additional 24 inches in height.

C. Hinge and Hardware Fasteners: Stainless steel, Type 304; wood screws.

2.03 ACCESSORIES

A. Glazing Stops: Pultruded fiberglass unless otherwise indicated or required by fire rating; provided by door manufacturer to fit factory made openings, color and texture to match door; fasteners not penetrating waterproof integrity.
1. Exterior Doors: Provide non-removable stops on outside and continuous compression gasket weatherseal.
2. Glazed Openings: Provide removable stops on one side.
3. Opening Sizes: As indicated on drawings.

B. Glazing: As specified in Section 08 8000.

C. Hardware: As specified in Section 08 7100.

**PART 3 EXECUTION**

3.01 INSTALLATION

A. Install in accordance with manufacturer's instructions; do not penetrate frames with anchors.

B. Set units plumb, level, and true-to-line, without warping or racking doors, and with specified clearances; anchor in place.

C. Separate aluminum and other metal surfaces from sources of corrosion of electrolytic action at points of contact with other materials.

3.02 ADJUSTING

A. Lubricate, test, and adjust doors to operate easily, free from warp, twist or distortion, and to fit watertight for entire perimeter.

B. Adjust hardware for smooth and quiet operation.

C. Adjust doors to fit snugly and close without sticking or binding.

3.03 CLEANING

A. Clean installed products in accordance with manufacturer’s instructions prior to owner’s acceptance.

3.04 PROTECTION

A. Protect installed products from damage during subsequent work.

**END OF SECTION**

# SECTION 08 4313
# ALUMINUM-FRAMED STOREFRONTS

## PART 1 GENERAL

1.01 SECTION INCLUDES

A. Refer to Scope Information Sheets for this contract bound in the Project Manual under Section 01 1000, Summary of Work. The Scope Information Sheets describe generally the work included in each contract, but the work is not necessarily limited to that described.

B. Aluminum-framed storefront, with vision glass and operable window.

C. Perimeter sealant.

1.02 RELATED REQUIREMENTS

A. Section 07 9005 - Joint Sealers: Perimeter sealant and back-up materials.

B. Section 08 8000 - Glazing: Glass and glazing accessories.

1.03 REFERENCE STANDARDS

A. AAMA CW-10 - Care and Handling of Architectural Aluminum From Shop to Site; American Architectural Manufacturers Association; 2012.

B. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes; 2013.

C. ASTM B221M - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes [Metric]; 2013.

1.04 ADMINISTRATIVE REQUIREMENTS

A. Coordinate with installation of other components that comprise the exterior enclosure.

B. Preinstallation Meeting: Conduct a preinstallation meeting one week before starting work of this section; require attendance by all affected installers.

1.05 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide component dimensions, describe components within assembly, anchorage and fasteners, glass and infill, internal drainage details .

C. Shop Drawings: Indicate system dimensions, framed opening requirements and tolerances, affected related Work, expansion and contraction joint location and details, and field welding required.

D. Design Data: Provide framing member structural and physical characteristics, engineering calculations, and dimensional limitations.

E. Manufacturer's Certificate: Certify that the products supplied meet or exceed the specified requirements.

1.06 QUALITY ASSURANCE

A. Manufacturer and Installer Qualifications: Company specializing in manufacturing aluminum glazing systems with minimum three years of documented experience.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Handle products of this section in accordance with AAMA CW-10.

B. Protect finished aluminum surfaces with wrapping. Do not use adhesive papers or sprayed coatings that bond to aluminum when exposed to sunlight or weather.

1.08 FIELD CONDITIONS

A. Do not install sealants when ambient temperature is less than 40 degrees F. Maintain this minimum temperature during and 48 hours after installation.

1.09 WARRANTY

A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.

B. Provide 10 year manufacturer warranty against excessive degradation of exterior finish. Include provision for replacement of units with excessive fading, chalking, or flaking.

**PART 2 PRODUCTS**

2.01 STOREFRONT

A. Aluminum-Framed Storefront: Factory fabricated, factory finished aluminum framing members with infill, and related flashings, anchorage and attachment devices.
   1. Glazing Rabbet: For 1 inch insulated glazing.
   2. Glazing Position: Centered (front to back).
   3. Vertical Mullion Dimensions: 2 x 4.5 inches.
   4. Finish: Superior performing organic coatings.
      a. Touch-up surfaces cut during fabrication so that no natural aluminum is visible in completed assemblies, including joint edges.
   5. Basis of Design: Subject to compliance with requirements, provide Kawneer North America; TRIFAB 451 or comparable product by one of the following:
      a. Other Acceptable Manufacturers:
         1) YKK AP America Inc.
         2) United States Aluminum Corp.

2.02 MATERIALS

A. Extruded Aluminum: ASTM B221 (ASTM B221M).

B. Perimeter Sealant: Type 2 specified in Section 07 9005.

C. Glass: As specified in Section 08 8000.

2.03 FINISHES

2.04 FABRICATION

A. Fabricate components with minimum clearances and shim spacing around perimeter of assembly, yet enabling installation and dynamic movement of perimeter seal.

B. Accurately fit and secure joints and corners. Make joints flush, hairline.

C. Prepare components to receive anchor devices. Fabricate anchors.

D. Coat concealed metal surfaces that will be in contact with cementitious materials or dissimilar metals with bituminous paint.

E. Arrange fasteners and attachments to conceal from view.

F. Reinforce framing members for imposed loads.

G. Finishing: Apply factory finish to all surfaces that will be exposed in completed assemblies.
   1. Touch-up surfaces cut during fabrication so that no natural aluminum is visible in completed assemblies, including joint edges.

**PART 3 EXECUTION**

3.01 INSTALLATION

A. Install wall system in accordance with manufacturer's instructions.

B. Attach to structure to permit sufficient adjustment to accommodate construction tolerances and other irregularities.

C. Provide alignment attachments and shims to permanently fasten system to building structure.

D. Align assembly plumb and level, free of warp or twist. Maintain assembly dimensional tolerances, aligning with adjacent work.

E. Provide thermal isolation where components penetrate or disrupt building insulation.

F. Set thresholds in bed of mastic and secure.

G. Install glass and infill panels in accordance with Section 08 8000, using glazing method required to achieve performance criteria.

H. Install perimeter sealant in accordance with Section 07 9005.

I. Touch-up minor damage to factory applied finish; replace components that cannot be satisfactorily repaired.

3.02 TOLERANCES

A. Maximum Variation from Plumb: 0.06 inches every 3 ft non-cumulative or 1/16 inches per 10 ft, whichever is less.

B. Maximum Misalignment of Two Adjoining Members Abutting in Plane: 1/32 inch.

3.03 FIELD QUALITY CONTROL

A. See Section 01 4000 - Quality Requirements, for independent testing and inspection requirements. Inspection will monitor quality of installation and glazing.

3.04 CLEANING

A. Remove protective material from pre-finished aluminum surfaces.

B. Wash down surfaces with a solution of mild detergent in warm water, applied with soft, clean wiping cloths. Take care to remove dirt from corners. Wipe surfaces clean.

C. Remove excess sealant by method acceptable to sealant manufacturer.

3.05 PROTECTION

A. Protect installed products from damage during subsequent construction.

**END OF SECTION**

# SECTION 08 5113
# ALUMINUM WINDOWS

## PART 1 GENERAL

1.01 SECTION INCLUDES

A. Extruded aluminum windows with operating sash.

B. Factory glazing.

C. Operating hardware.

D. Insect screens.

1.02 REFERENCE STANDARDS

A. AAMA/WDMA/CSA 101/I.S.2/A440 - North American Fenestration Standard/Specification for windows, doors, and skylights; American Architectural Manufacturers Association/Window and Door Manufacturers Association/Canadian Standards Association; 2011.

B. AAMA 1503 - Voluntary Test Method for Thermal Transmittance and Condensation Resistance of Windows, Doors and Glazed Wall Sections; American Architectural Manufacturers Association; 2009.

C. AAMA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels; 2013.

D. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2013.

E. ASTM B209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate; 2010.

F. ASTM B209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate [Metric]; 2010.

G. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes; 2013.

H. ASTM B221M - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes [Metric]; 2013.

I. ASTM E283 - Standard Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen; 2004 (Reapproved 2012).

J. ASTM E331 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference; 2000 (Reapproved 2009).

K. ASTM E1105 - Standard Test Method for Field Determination of Water Penetration of Installed Exterior Windows, Skylights, Doors, and Curtain Walls, by Uniform or Cyclic Static Air Pressure Difference; 2000 (Reapproved 2008)

L. SSPC-Paint 20 - Zinc-Rich Primers (Type I, "Inorganic," and Type II, "Organic"); Society for Protective Coatings; 2002 (Ed. 2004).

1.03 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide component dimensions.

C. Performance Validation: Provide specified performance validation before submitting shop drawings or starting fabrication.

D. Shop Drawings: Indicate opening dimensions, elevations of different types, framed opening tolerances, method for achieving air and vapor barrier seal to adjacent construction, anchorage locations, , and installation requirements.

E. Samples: Submit one sample, 12 x 12 inch in size illustrating typical corner construction, accessories, and finishes.

F. Submit one sample of operating hardware.

G. Certificates: Certify that windows meet or exceed specified requirements.

1.04 QUALITY ASSURANCE

A. Manufacturer and Installer Qualifications: Company specializing in fabrication of commercial aluminum windows of types required, with not fewer than three years of experience.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Protect finished surfaces with wrapping paper or strippable coating during installation. Do not use adhesive papers or sprayed coatings that bond to substrate when exposed to sunlight or weather.

1.06 FIELD CONDITIONS

A. Do not install sealants when ambient temperature is less than 40 degrees F.

B. Maintain this minimum temperature during and 24 hours after installation of sealants.

1.07 WARRANTY

A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.

B. Provide five year manufacturer warranty against failure of glass seal on insulating glass units, including interpane dusting or misting. Include provision for replacement of failed units.

C. Provide twenty year manufacturer warranty against excessive degradation of exterior finish. Include provision for replacement of units with excessive fading, chalking, or flaking.

**PART 2 PRODUCTS**

2.01 MANUFACTURERS

A. Aluminum Window Manufacturers:
   1. YKK AP America Inc; Product YVS400 TU: www.ykkap.com.
   2. TRACO; 840 TL ISOLOCK Single Hung: www.traco.com.
   3. Substitutions: See Section 01 6000 - Product Requirements.

2.02 WINDOWS

A. Aluminum Windows: Extruded aluminum frame and sash, factory fabricated, factory finished, with operating hardware, related flashings, and anchorage and attachment devices.
   1. Frame Depth: 4 inches.
   2. Provide units factory glazed.
   3. Fabrication: Joints and corners flush, hairline, and weatherproof, accurately fitted and secured; prepared to receive anchors; fasteners and attachments concealed from view; reinforced as required for operating hardware and imposed loads.
   4. Perimeter Clearance: Minimize space between framing members and adjacent construction while allowing expected movement.
   5. Movement: Accommodate movement between window and perimeter framing and deflection of lintel, without damage to components or deterioration of seals.

6. System Internal Drainage: Drain to the exterior by means of a weep drainage network any water entering joints, condensation occurring in glazing channel, and migrating moisture occurring within system.
7. Thermal Movement: Design to resist thermal movement caused by 180 degrees F surface temperature without buckling stress on glass, joint seal failure, damaging loads on structural elements, damaging loads on fasteners, reduction in performance or other detrimental effects.
8. Condensation Resistance Factor: 51 minimum.
9. Life Cycle Requirements: No damage to fasteners, hardware parts or other components that would render operable windows in operable and not reduction in air and water infiltration resistance when tested according to AAMA 910.

B. Performance Requirements:
1. Comply with AAMA/WDMA/CSA 101/I.S.2/A440 requirements in accordance with the following:
   a. Performance Class (PC): AW.
2. Performance Validation: Windows shall comply with AAMA/WDMA/CSA 101/I.S.2/A440 performance requirements as indicated by having AAMA, WDMA, or CSA certified label, or an independent test report for indicated products itemizing compliance and acceptable by authorities having jurisdiction.
3. Water Leakage: No uncontrolled leakage on interior face when tested in accordance with ASTM E331 at differential pressure of 12.11 pounds per square foot.
4. Air Leakage: Maximum of 0.1 cu ft/min/sq ft at 6.27 pounds per square foot differential pressure, when tested in accordance with ASTM E283.
5. Condensation Resistance Factor of Frame: 51, minimum, measured in accordance with AAMA 1503.

C. Performance Requirements:
1. Air Infiltration Test Pressure Differential: 6.24 pounds per square inch.
2. Condensation Resistance Factor: Measured in accordance with AAMA 1503.
3. Water Leakage: None, when measured in accordance with ASTM E331 and E 547.
4. Air and Vapor Seal: Maintain continuous air barrier and vapor retarder throughout assembly.
5. System Internal Drainage: Drain to the exterior by means of a weep drainage network any water entering joints, condensation occurring in glazing channel, or migrating moisture occurring within system.

D. Single-Hung Type:
1. Construction: Thermally broken.
2. Provide screens.
3. Glazing: Double; clear; low-e.
4. Exterior Finish: Superior performing organic coatings.
5. Interior Finish: Superior performing organic coatings.

2.03 COMPONENTS

A. Frames: 4 inch wide x 1 1/2 inch deep profile, of.125 inch thick section; thermally broken with interior portion of frame insulated from exterior portion; flush glass stops of snap-on type.

B. Insect Screens: Extruded aluminum frame with mitered and reinforced corners; screen mesh taut and secure to frame; secured to window with adjustable hardware allowing screen removal without use of tools.
1. Hardware: Spring loaded steel pins; four per screen unit.
2. Screen Mesh: Vinyl-coated fiberglass, window manufacturer's standard mesh.

3. Frame Finish: Same as frame and sash.

C. Operable Sash Weatherstripping: Resilient plastic; permanently resilient, profiled to achieve effective weather seal.

D. Fasteners: Stainless steel.

E. Sealant and Backing Materials: As specified in Section 07 9005.

2.04 MATERIALS

A. Extruded Aluminum: ASTM B221 (ASTM B221M), 6063 alloy, T6 temper.

B. Sheet Aluminum: ASTM B209 (ASTM B209M), 5005 alloy, H12 or H14 temper.

C. Concealed Steel Items: Profiled to suit mullion sections; galvanized in accordance with ASTM A123/A123M.

2.05 HARDWARE

A. Sash lock: Integral with sash lift .

B. Limit Stops: Resilient rubber.

2.06 FABRICATION

A. Fabricate components with smallest possible clearances and shim spacing around perimeter of assembly that will enable window installation and dynamic movement of perimeter seal.

B. Accurately fit and secure joints and corners. Make joints flush, hairline, and weatherproof.

C. Prepare components to receive anchor devices.

D. Arrange fasteners and attachments to ensure concealment from view.

E. Prepare components with internal reinforcement for operating hardware.

F. Provide steel internal reinforcement in mullions as required to meet loading requirements.

G. Provide internal drainage of glazing spaces to exterior through weep holes.

2.07 FINISHES

A. Superior Performing Organic Coatings: AAMA 2605 multiple coat, thermally cured polyvinylidene fluoride system; color as scheduled.

B. Finish Color: Match existing adjacent windows to remain, as indicated.

C. Apply 1 coat of bituminous coating to concealed aluminum and steel surfaces in contact with dissimilar materials.

D. Shop and Touch-Up Primer for Steel Components: Zinc oxide, alkyd, linseed oil primer appropriate for use over hand cleaned steel.

E. Touch-Up Primer for Galvanized Steel Surfaces: SSPC-Paint 20, zinc rich.

**PART 3 EXECUTION**

3.01 INSTALLATION

A. Install windows in accordance with manufacturer's instructions.

B. Attach window frame and shims to perimeter opening to accommodate construction tolerances and other irregularities.

C. Align window plumb and level, free of warp or twist. Maintain dimensional tolerances and alignment with adjacent work.

D. Install sill and sill flashings. Turn up ends and edges; seal to adjacent work to form water tight dam..

E. Provide thermal isolation where components penetrate or disrupt building insulation. Pack fibrous insulation in shim spaces at perimeter of assembly to maintain continuity of thermal barrier.

F. Coordinate attachment and seal of perimeter air barrier and vapor retarder materials.

G. Install operating hardware not pre-installed by manufacturer.

H. Install perimeter sealant in accordance with requirements specified in Section 07 9005.

3.02 TOLERANCES

A. Maximum Variation from Level or Plumb: 1/16 inches every 3 ft non-cumulative or 1/8 inches per 10 ft, whichever is less.

3.03 FIELD QUALITY CONTROL

A. Test installed windows for compliance with performance requirements for water penetration, in accordance with ASTM E1105 using uniform pressure and the same pressure difference as specified for laboratory testing.
   1. Test one window of each type, as directed by Architect.
   2. If any window fails, test additional windows at Contractor's expense.

B. Replace windows that have failed field testing and retest until performance is satisfactory.

3.04 ADJUSTING

A. Adjust hardware for smooth operation and secure weathertight closure.

3.05 CLEANING

A. Remove protective material from factory finished aluminum surfaces.

B. Wash surfaces by method recommended and acceptable to sealant and window manufacturer; rinse and wipe surfaces clean.

C. Remove excess sealant by moderate use of mineral spirits or other solvent acceptable to sealant and window manufacturer.

**END OF SECTION**

# SECTION 08 7102
# DOOR HARDWARE

## PART 1 - GENERAL

1.01 SUMMARY

A. Section includes furnishing and installation of door hardware for doors specified in "Hardware Sets" and required by actual conditions. Including screws, bolts, expansion shields, electrified door hardware, and other devices for proper application of hardware.

B. Where items of hardware are not specified and are required for intended service, such omission, error or other discrepancy shall be submitted to Architect fourteen calendar days prior to bid date for clarification by addendum.

C. Products supplied but not installed under this Section:
   1. Hardware for aluminum doors will be furnished under this Section, but installed under Division 08 00 00 Openings
   2. Final replacement of cylinder cores to be installed by Owner.

D. Refer to Division 1 for alternates that may affect work of this Section.

E. Related Divisions:
   1. Division 08 00 00 Openings
   2. Division 26 00 00 Electrical

1.02 REFERENCES

A. American National Standards Institute/Builders Hardware Manufacturers Association (ANSI):
   1. ANSI/BHMA A156.1 Butts & Hinges (2006)
   2. ANSI/BHMA A156.2 Bored & Preassembled Locks & Latches (2003)
   3. ANSI/BHMA A156.3 Exit Devices (2008)
   4. ANSI/BHMA A156.4 Door Controls - Closers (2008)
   5. ANSI/BHMA A156.5 Auxiliary Locks (2010)
   6. ANSI/BHMA A156.6 Architectural Door Trim (2010)
   7. ANSI/BHMA A156.7 Template Hinge Dimensions (2009)
   8. ANSI/BHMA A156.8 Door Controls - Overhead Stops and Holders (2010)
   9. ANSI/BHMA A156.15 Closer Holder Release Devices (2006)
   10. ANSI/BHMA A156.16 Auxiliary Hardware (2008)
   11. ANSI/BHMA A156.18 Materials & Finishes (2006)
   12. ANSI/BHMA A156.21 Thresholds (2009)
   13. ANSI/BHMA A156.22 Door Gasketing Systems (2005)
   14. ANSI/BHMA A156.26 Continuous Hinges (2006)
   15. ANSI/BHMA A156.28 Keying Systems (2007)
   16. ANSI/BHMA A156.29 Exit Locks and Alarms (2007)
   17. ANSI/BHMA A156.30 High Security Cylinders (2003)
   18. ANSI/BHMA A156.115 Hardware Preparation in Steel Doors and Steel Frames (2006)
   19. ANSI/BHMA A156.115W Hardware Preparation in Wood Doors with Wood or Steel Frames (2006)

B. International Code Council/American National Standards Institute (ICC/ANSI)/ADA:
   1. ICC/ANSI A117.1 Standards for Accessible and Usable Buildings and Facilities (2003)
   2. Americans with Disabilities Act Accessibility Guidelines (ADAAG).

C. Underwriters Laboratories, Inc. (UL):
   1. UL 10C Positive Pressure Fire Test of Door Assemblies

2. UL 1784 Air Leakage Test of Door Assemblies
3. UL/ULC Listed

D. Door and Hardware Institute (DHI):
1. DHI Publication - Keying Systems and Nomenclature (1989)
2. DHI Publication - Abbreviations and Symbols
3. DHI Publication - Installation Guide for Doors and Hardware
4. DHI Publication - Sequence and Format of Hardware Schedule (1996)

E. National Fire Protection Agency (NFPA)
1. NFPA 70 National Electrical Code (2008)
2. NFPA 80 Standard for Fire Doors and Other Opening Protective's (2007)
3. NFPA 101 Life Safety Code (2006)
4. NFPA 105 Standard for the Installation of Smoke Door Assemblies (2007)

F. Building Codes
1. IBC International Building Code (2009)
2. Local Building Code

1.03 SUBMITTALS

A. Submit in accordance with Conditions of the Contract and Division 1 Administrative Requirements.

B. Shop Drawings:
1. Hardware schedule shall be organized in vertical format illustrated in DHI Publications Sequence and Formatting for the Hardware Schedule. Include abbreviations and symbols page according to DHI Publications Abbreviations and Symbols. Complete nomenclature of items required for each door opening as indicated.
2. Coordinate the final Door Hardware Schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of hardware.
3. Architectural Hardware Consultant (AHC), as certified by DHI, who shall affix seal attesting to completeness and correctness, shall review hardware schedule prior to submittal.

C. Submit manufacturer's catalog sheet on design, grade and function of items listed in hardware schedule. Identify specific hardware item per sheet, provide index, and cover sheet.

D. Coordination:
1. Distribute door hardware templates to related divisions within fourteen calendar days of approved hardware schedule.

E. Closeout Submittals: Submit to Owner in a three ring binder or CD if requested.
1. Warranties.
2. Maintenance and operating manual.
3. Maintenance service agreement.
4. Record documents.
5. Copy of approved hardware schedule.
6. Copy of approved keying schedule with bitting list.
7. Hardware supplier name, phone number and fax number.

1.04 QUALITY ASSURANCE

A. Hardware supplier shall employ an Architectural Hardware Consultant (AHC) as certified by DHI and a member of the seal program who shall be available at reasonable times during course of work for Project hardware consultation.

B. Door hardware shall conform to ICC/ANSI A117.1.
   1. Handles, Pulls, Latches, Locks and operating devices: Shape that is easy to grasp with one hand and does not require tight grasping, tight pinching, or twisting of the wrist.

C. Fire Rated Door Assemblies: Where fire-rated door assemblies are indicated, provide door hardware rated for use in assemblies complying with NFPA 80 that are listed and labeled by a qualified testing agency, for fire-protection ratings indicated, based on testing at positive pressure according to UL 10C, unless otherwise indicated.

D. Smoke and Draft Control Door Assemblies: Where smoke and draft control door assemblies are required, provide door hardware that meets requirements of assemblies tested according to UL 1784 and installed in compliance with NFPA 105.

E. Door hardware shall be certified to ANSI/BHMA standards as noted, participate and be listed in BHMA Certified Products Directory.

F. Substitution request: Refer to Division 1Substitutions for procedures to submit products meeting the requirements in this Section.

G. Pre-installation Meeting: Comply with requirements in Division 1 Section "Project Meetings."
   1. Convene meeting seven days before installation. Participants required to attend:
      a. Contractor, installer, material supplier, manufacturer representatives.
   2. Include in conference decisions regarding proper installation methods and procedures for receiving and handling hardware.
   3. Review and finalize construction schedule and verify availability of materials, installer's personnel, equipment and facilities needed to make progress and avoid delays.

H. Within fourteen days of receipt of approved door hardware submittals contact Owner with representative from hardware supplier to establish a keying conference. Verify keyway, visual key identification, number of master keys and keys per lock. Provide keying system per Owners instructions.

I. Installer Qualifications: Specialized in performing installation of this Section and shall have five years minimum documented experience.

J. Hardware listed in 3.07- Hardware Schedule is intended to establish a type and grade.

1.05 DELIVERY, STORAGE AND HANDLING

A. Provide a clean, dry and secure room for hardware delivered to Project but not yet installed.

B. Furnish hardware with each unit marked and numbered in accordance with approved finish hardware schedule. Include door and item number for each type of hardware.

C. Pack each item complete with necessary parts and fasteners in manufacturer's original packaging.

D. Deliver permanent keys, cores to Owner via registered mail or overnight package service. Instructions for delivery to Owner shall be established at "Keying Conference."

E. Waste Management and Disposal
   1. Separate waste materials for reuse or recycling in accordance with Division 1.

1.06 WARRANTY

A. General Warranty: Owner may have under provisions of the Contract Documents and shall be an addition and run concurrent with other warranties made by Contractor under requirements of the Contract documents.

B. Special Warranty: Warranties specified in this article shall not deprive Owner of other rights. Contractor, hardware supplier, and hardware installer shall be responsible for servicing hardware and keying related problems.
   1. Ten years for manual door closers.
   2. Five years for mortise, auxiliary and bored locks.
   3. Five years for exit devices.
   4. Two years for electromechanical door hardware.

C. Products judged defective during warranty period shall be replaced or repaired in accordance with manufacturer's warranty at no cost to Owner. There is no warranty against defects due to improper installation, abuse and failure to exercise normal maintenance.

**PART 2 - PRODUCTS**

2.01 HINGES

A. Hinges, continuous hinges shall be of one manufacturer as listed for continuity of design and consideration of warranty.

B. Standards: Products to be certified and listed by the following:
   1. Butts and Hinges: ANSI/BHMA A156.1
   2. Template Hinge Dimensions: ANSI/BHMA A156.7
   3. Self-Closing Hinges: ANSI/BHMA 156.17
   4. Continuous Hinges: ANSI/BHMA A156.26

C. Butt Hinges:
   1. Hinge weight and size unless otherwise indicated in hardware sets:
      a. Doors up to 36" wide and up to 1-3/4" thick provide hinges with a minimum thickness of .134" and a minimum of 4-1/2" in height.
      b. Doors from 36" wide up to 42" wide and up to 1-3/4" thick provide hinges with a minimum thickness of .145" and a minimum of 4-1/2"" in height.
      c. For doors from 42" wide up to 48" wide and up to 1-3/4" thick provide hinges with a minimum thickness of .180" and a minimum of 5" in height.
      d. Doors greater than 1-3/4" thick provide hinges with a minimum thickness of .180" and a minimum of 5" in height.
      e. Width of hinge is to be minimum required to clear surrounding trim.
   2. Base material unless otherwise indicated in hardware sets:
      a. Exterior Doors: 304 Stainless Steel, Brass or Bronze material.
      b. Interior Doors: Steel material.
      c. Fire Rated Doors: Steel or 304 Stainless Steel materials.
      d. Stainless Steel ball bearing hinges shall have stainless steel ball bearings. Steel ball bearings are unacceptable.
   3. Quantity of hinges per door unless otherwise stated in hardware sets:
      a. Doors up to 60"in height provide 2 hinges.
      b. Doors 60" up to 90" in height provide 3 hinges.
      c. Doors 90" up to 120" in height provide 4 hinges.
      d. Doors over 120" in height add 1 additional hinge per each additional 30" in height.
      e. Dutch doors provide 4 hinges.
   4. Hinge design and options unless otherwise indicated in hardware sets:
      a. Hinges are to be of a square corner five-knuckle design, flat button tips and have ball bearings unless otherwise indicated in hardware sets.

b. Out-swinging exterior and out-swinging access controlled doors shall have non-removable pins (NRP) to prevent removal of pin while door is in closed position.
c. When full width of opening is required, use hinges that are designed to swing door completely from opening when door is opened to 95 degrees.
d. Provide mortar boxes for frames that require any electrically modified hinges if not an integral part of frame.
e. When shims are necessary to correct frame or door irregularities, provide metal shims only.

5. Acceptable Manufactures:

| | Standard Weight | Heavy Weight |
|---|---|---|
| a. Hager | BB1279/BB1191 | BB1168/BB1199 |
| b. Bommer | BB5000/BB5002 | BB5004/BB5006 |
| c. McKinney | TA2714/TA2314 | T4A3786/T4A3386 |

2.02 CONTINUOUS HINGES

A. Continuous hinges shall be of one manufacturer as listed for continuity of design and consideration of warranty.

B. Standards: Products to be certified and listed by the following:
1. Continuous Hinges: ANSI/BHMA A156.26 Grade 1

C. Continuous Geared Hinges:
1. Determine model number by door and frame application, door thickness, frequency of use, and fire rating requirements according to manufacturer's recommendations.
a. Length of hinge shall be 1" less door height unless otherwise stated in hardware sets.

D. Material and Design:
1. Base material: Anodized aluminum manufactured from 6063-T6 material, unexposed working metal surfaces shall be coated with TFE dry lubricant
2. Bearings:
a. Vertical loads shall be carried on Lubriloy RL bearings for non Fire Rated doors.
b. Standard weight hinges shall have a minimum spacing between bearings of 5-1/8". Typical door from 80" to 84" in height to have a minimum of 16 bearings.
c. Heavy Weight hinges shall have a minimum spacing between bearings of 2-9/16". Typical door from 80" to 84" in height to have a minimum of 32 bearings.
3. Options:
a. Removable Electric Through-Wire (RETW) shall have appropriate number of wires to transfer power through door frame to door for proper connection of finish hardware. Provide RETW in a form that can be removed for connection, servicing without removing entire hinge from door and frame, and certified to handle an amperage rating of 3.5AMPS/continuous duty with 16.0AMPS/intermittent duty.
b. Hinges shall have Rounded Back Cover Channel (RBCC).
c. When full width of opening is required, use hinges that are designed to swing door completely from opening when door is opened to 95 degrees.
d. Fire rated hinges shall carry UL certification, up to and including 90-minute applications for wood doors and up to 3-hour applications for metal doors.

E. Acceptable Manufactures:

| | Heavy Duty |
|---|---|
| 1. Hager Companies | 780-224HD 780-210HD |
| 2. Bommer | FM120HD |
| 3. Zero | 914A |

2.03 FLUSH BOLTS AND COORDINATORS

A. Flushbolts shall be of one manufacturer as listed for continuity of design and consideration of warranty.

B. Standards: Manufacturer to be listed by the following:
   1. Auxiliary Hardware: ANSI/BHMA A156.16

C. Labeled openings: Provide automatic or constant latching flush bolts per hardware schedule for inactive leaf of pairs of doors. Provide dust proof strikes for bottom bolt.

D. Non-Labeled openings: Provide two flush bolts for inactive leaf of pairs of doors per hardware schedule. Top bolt shall not be more than 78” centerline from floor. Provide dust proof strike for bottom bolt.

E. Acceptable Manufactures:

| | Manual Flush Bolt | Auto Flush Bolt | Dust Proof Strike | |
|---|---|---|---|---|
| 1. | Hager Companies | 282D | 291D/292D/295W/295M | 280X |
| 2. | Rockwood | 555 | | 1942 |
| | 570 | | | |
| 3. | Trimco | 3917 | 3815 | 3911 |

F. Coordinators: Provide for labeled pairs of doors with automatic flush bolts or with vertical rod exit device with a mortise-locking device per hardware schedule. Provide filler piece to extend full width of stop on frame. Provide mounting brackets for closers and special preparation for latches where applicable.

G. Acceptable Manufactures:

| | Coordinator | Bracket | Bracket for stops greater than 2-1/4” | |
|---|---|---|---|---|
| 1. | Hager Companies | 297D | 297M | 297N |
| 2. | Rockwood | 1600 | 1601AB | 1601C |
| 3. | Trimco | 3094 | 3095 | 3096 |

2.04 LOCKS AND LATCHES (GRADE 1 CYLINDRICAL)

A. Locks and latches shall be of one manufacturer as listed for continuity of design and consideration of warranty.

B. Standards: Product to be certified and listed by following:
   1. ANSI/BHMA A156.2 Series 4000 Certified to Grade 1.
   2. ANSI/BHMA A250.13 Certified for a minimum design load of 1150lbf (100psf) for single out swinging doors measuring 36” in width and 84” in height and a minimum design load of 1150lbf (70psf) for out swinging single doors measuring 48” in width and 84” in height.
   3. UL/cUL Labeled and listed for functions up to 3 hours for single doors up to 48” in width and up to 96” in height.
   4. UL10C/UBC 7-2 Positive Pressure Rated.
   5. ICC/ANSI A117.1.

C. Lock and latch function numbers and descriptions of manufactures series as listed in hardware sets.

D. Material and Design:
   1. Lock and Latch chassis to be Zinc dichromate for corrosion resistance.
   2. Keyed functions to be of a freewheeling design to help resists against vandalism.
   3. Non-handed, field reversible.
   4. Thru-bolt mounting with no exposed screws.
   5. Levers shall be Zinc cast and plated to match finish designation in hardware sets.
   6. Roses shall be of solid Brass or Stainless Steel material.

E. Latch and Strike:
   1. Stainless Steel latch bolt with minimum of ½" throw and deadlocking for keyed and exterior functions. Provide ¾" latchbolt for pairs of fire rated doors. Standard backset to be 2-3/4" and faceplate shall be adjustable to accommodate a square edge door or a standard 1/8" beveled edge door.
   2. Strike is to fit a standard ANSI A115 prep measuring 1-1/4" x 4-7/8" with proper lip length to protect surrounding trim.

F. Acceptable Manufactures:
   1. Schlage: ND Series - Everest - no equal

2.05 DEADBOLTS (GRADE 1)

A. Deadbolts shall be of one manufacturer as listed for continuity of design and consideration of warranty.

B. Standards: Manufacturer to be certified by the following:
   1. Auxiliary Locks: ANSI/BHMA A156.5 Grade 1
   2. UL/cUL listed for functions up to 3 hours for "A" label
   3. UL10C/UBC 7-2 Positive Pressure Rated

C. Deadbolt function numbers and descriptions of manufactures series as listed in hardware sets.

D. Material and Design:
   1. Latch bolt 1"throw, material brass with concealed harden steel roller to prevent sawing or cutting.
   2. Freewheeling collar design to help resists against vandalism.
   3. Non-handed, field reversible.

E. Acceptable Manufactures:
   1. Hager Companies: 3830S Series.
   2. Schlage:
   3. Sargent:

2.06 EXIT DEVICES (GRADE 1)

A. Shall be touch pad type, finish to match balance of door hardware. Exit Devices shall be of one manufacturer as listed for continuity of design and consideration of warranty.

B. Standards: Manufacturer to be certified and or listed by the following:
   1. BHMA Certified ANSI A156.3 Grade 1
   2. UL/cUL Listed for up to 3 hours for "A" labeled doors
   3. UL10C/UBC 7-2 Positive Pressure Rated
   4. UL10B Neutral Pressure Rated
   5. UL 305Listed for Panic Hardware

C. Material and Design:
   1. Touch pad shall extend a minimum of one half-door width. Freewheeling lever design shall match design of locks levers. Exit device to mount flush with door.
   2. Latchbolts:
      a. Rim device - ¾" throw, Pullman type with automatic dead-latching, stainless steel
      b. Surface vertical rod device - Top ½" throw, Pullman type with automatic dead-latching, stainless steel. Bottom ½" throw, Pullman type, held retracted during door swing, stainless steel.
   3. Fasteners: Wood screws, machine screws and thru-bolts.

D. Lock and Latch Functions: Function numbers and descriptions of manufacturer's series and lever styles indicated in door hardware sets.

E. Acceptable Manufactures:
   1. Hager Companies: 4500 Series
   2. Von Duprin: 99 Series
   3. Sargent: 80 Series

2.07 CYLINDERS AND KEYING

A. Cylinders shall be of one manufacturer as listed for continuity of design and consideration of warranty.

B. Standards: Manufacturer shall meet the following:
   1. Auxiliary Locks: ANSI/BHMA A156.5
   2. DHI Handbook "Keying systems and nomenclature" (1989)

C. Cylinders:
   1. Schlage Everest cores for interior and Primus for exterior.
   2. Shall be furnished with cams/tailpieces as required for locking device that is being furnished for project.

D. Keying:
   1. Contact Owner with representative from hardware supplier to establish a keying conference. Verify keyway, visual key identification, number of master keys and keys per lock. Provide keying system per Owners instructions.
   2. Copy of Owners approved keying schedule shall be submitted to Owner and Architect with documentation of which keying conference was held and Owners sign-off.
   3. Provide a bitting list to Owner of combinations as established, and expand to twenty five percent for future use or as directed by Owner.
   4. Key into Owner's existing keying system.
   5. Keys to be shipped to Owner's representative, individually tag per keying conference.
   6. Provide visual key control identification on keys.

E. Acceptable manufactures:
   1. Schlage - no equal

2.08 PUSH/PULL PLATES AND BARS

A. Push and pull plates shall be of one manufacturer as listed for continuity of design and consideration of warranty.

B. Standards: Manufacturer to be certified by the following:
   1. Architectural Door Trim: ANSI/BHMA A156.6
   2. Americans with Disabilities Act Accessibility Guidelines (ADAAG).

C. Push plates: .050" thick, square corner and beveled edges with counter sunk screw holes. Width and height as stated in hardware sets.
   1. Acceptable Manufactures:
      a. Hager Companies: 30S
      b. Rockwood
      c. Trimco

D. Pull plates: .050" thick, square corner and beveled edges. Width and height as stated in hardware sets, ¾" diameter pull, with clearance of 2-1/2" from face of door.
   1. Acceptable Manufactures:
      a. Hager Companies: H33
      b. Rockwood
      c. Trimco

E. Push Pull Bar Sets: 1" round bar stock with 2 ½" clearances from face of door. Offset to be 3", 90-degree standard. Center to center size should be door width less 1 stile width.

1. Acceptable Manufacturers:
   a. Hager Companies: H160D
   b. Rockwood
   c. Trimco

F. Back-to-Back pulls for Pocket/Barn Doors: 3" clearance from face of door
   1. Acceptable Manufactures:
      a. Hager Companies: H20L
      b. Rockwood: RM301
      c. Trimco: 1195-3J

2.09 CLOSERS (CAST IRON BODY GRADE 1)

A. Shall be product of one manufacturer. Unless otherwise indicated on hardware schedule, comply with manufacturer's recommendation for size of closer, depending on width of door, frequency of use, atmospheric pressure, ADAAG requirements, and fire rating.

B. Standards: Manufacturer to be certified and or listed by the following:
   1. BHMA Certified ANSI A156.4 Grade 1
   2. ADA Compliant ANSI A117.1
   3. UL/cUL Listed up to 3 hours.
   4. UL10C Positive Pressure Rated
   5. UL10B Neutral Pressure Rated

C. Material and Design:
   1. Provide cast iron non-handed bodies with full plastic covers.
   2. Closers shall have separate staked adjustable valve screws for latch speed, sweep speed, and backcheck.
   3. Provide Tri-Pack arms and brackets for regular arm, top jamb, and parallel arm mounting.
   4. One-piece seamless steel spring tube sealed in hydraulic fluid.
   5. Double heat-treated steel tempered springs.
   6. Precision-machined heat-treated steel piston.
   7. Triple heat-treated steel spindle.
   8. Full rack and pinion operation.

D. Mounting:
   1. Out swing doors shall have surface parallel arm mount closers except where noted on hardware schedule.
   2. In swing doors shall have surface regular arm mount closers except where noted on hardware schedule.
   3. Provide brackets and shoe supports for aluminum doors and frames to mount fifth screw.
   4. Furnish drop plates where top rail conditions on door do not allow for mounting of closer and where backside of closer is exposed through glass.

E. Size closers in compliance with requirements for accessibility (ADDAG). Comply with following maximum opening force requirements.
   1. Interior hinged openings: 5.0 lbs.
   2. Fire rated and exterior openings shall have minimum opening force allowable by authority having jurisdiction.

F. Fasteners: Provide self-reaming and self-tapping wood and machine screws and sex nuts and bolts for each closer.

G. Acceptable manufactures:
   1. Hager Companies: 5100 Series

2. LCN: 4040 Series
3. Sargent: 281 Series

2.10 PROTECTIVE TRIM

A. Size of protection plate: Single doors, size two inches less door width (LDW) on push side of door, and one inch less on pull side of door. For pairs of doors, size one inch less door width (LDW) on push side of door, and ½ inch on pull side of door.
   1. Kickplates 10” high or sized to door bottom rail height
   2. Mop Plates 4” high.

B. Standards: Manufacturer shall meet requirements for:
   1. Architectural Door Trim: ANSI/BHMA A156.6
   2. UL

C. Material and Design:
   1. 0.050” gage stainless steel
   2. Corners shall be square. Polishing lines or dominant direction of surface pattern shall run across the door width of plate.
   3. Bevel top, bottom and sides uniformly leaving no sharp edges. Edges shall be de-burred.
   4. Countersink holes for screws. Screws holes shall be spaced equidistant eight inches CTC, along a centerline not over ½ inch in from edge around plate. End screws shall be a maximum of 0.53 inch from corners.

D. UL label stamp required on protection plates when top of plate is more than 16 inches above bottom of door on fire rated openings. Verify door manufactures UL listing for maximum height and width of protection plate to be used.

E. Acceptable Manufactures:
   1. Hager Companies: 194S
   2. Rockwood
   3. Burns

2.11 STOPS AND HOLDERS

A. Wall Stops: Provide door stops wherever necessary to prevent door or hardware from striking an adjacent partition or obstruction. Provide wall stops when possible. Door stops and holders mounted in concrete floor or masonry walls shall have stainless steel machine screws and lead expansion shields.

B. Standards: Manufacturer shall meet requirements for:
   1. Auxiliary Hardware: ANSI/BHMA A156.16

C. Acceptable Manufactures:

| | Convex | Concave | Floor | |
|---|---|---|---|---|
| 1. | Hager Companies | 232W | 236W | 242F |
| 2. | Rockwood | | | |
| 3. | Burns | | | |

D. Overhead Stops and Holders: Provide overhead stop and holders for doors that open against equipment, casework sidelights and other objects that would make wall stops/holders and floor stops/holders inappropriate. Provide sex bolt attachments for mineral core wood door applications.

E. Standards: Manufacturer shall be certified by the following:
   1. Overhead Stops and Holders: ANSI/BHMA A156.8 Grade 1

F. Acceptable Manufactures:

| Heavy Duty Surface | Heavy Duty Concealed |
|---|---|

| | | | |
|---|---|---|---|
| 1. | Hager Companies | 7000-S | 7000-C |
| 2. | Rixson | 9 Series | 6 Series |
| 3. | Glynn Johnson | 90 Series | 100 Series |

2.12 DOOR GASKETING AND WEATHERSTRIP

A. Provide continuous weatherstrip gasketing on exterior doors and provide smoke, light, or sound gasketing where indicated on hardware schedule. Provide non-corrosive fasteners for exterior applications.
   1. Perimeter gasketing: Apply to head and jamb, forming seal between door and frame.
   2. Meeting stile gasketing: Fasten to meeting stiles, forming seal when doors are in closed position.
   3. Door bottoms: Apply to bottom of door, forming seal with threshold or floor when door is in closed position.
   4. Sound Gasketing: Cutting or notching for stop mounted hardware not permitted.
   5. Drip Guard: Apply to exterior face of frame header. Lip length to extend 4” beyond width of door.

B. Standards: Manufacturer shall meet requirements for:
   1. Door Gasketing and Edge Seal Systems: ANSI/BHMA A156.22

C. Smoke-Labeled Gasketing: Comply with NFPA 105 listed, labeled, and acceptable to authorities having jurisdiction, for smoke control indicated.
   1. Provide smoke labeled gasketing on 20 minute rated doors and on smoke rated doors.

D. Fire-Rated Gasketing: Comply with NFPA 80 listed, labeled, and acceptable to Authorities Having Jurisdiction, for fire ratings indicated.

2.13 THRESHOLDS

A. Set thresholds for exterior and acoustical openings in full bed of sealant with lead expansion shields and stainless steel machine screws complying with requirements specified in Division 7 Section “Joint Sealants”. Notched in field to fit frame by hardware installer. Refer to Drawings for special details.

B. Standards: Manufacturer to be certified by the following:
   1. Thresholds: ANSI/BHMA A156.21
   2. Americans with Disabilities Act Accessibility Guidelines (ADAAG).

C. Acceptable Manufactures:
   1. Hager Companies: 412S and 413S
   2. Zero
   3. Reese

2.14 SILENCERS

A. Where smoke, light, or weather seal are not required, provide three silencers per single door frame, two per double door frame and four per Dutch door frame.

B. Standards: Manufacturer shall meet requirements for:
   1. Auxiliary Hardware: ANSI/BHMA A156.16

C. Acceptable Manufactures:

| | | Hollow Metal Frame | Wood Frame |
|---|---|---|---|
| 1. | Hager Companies: | 307D | 308D |
| 2. | Rockwood: | | |
| 3. | Trimco: | | |

2.15 FINISHES

A. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if within range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within range of approved Samples.

B. Comply with base material and finish requirements indicated by ANSI/BHMA A156.18 designations in hardware schedule.

**PART 3 - EXECUTION**

3.01 EXAMINATION

A. Examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, labeled fire-rated door assembly construction, wall and floor construction, and other conditions affecting performance.

B. Examine roughing-in for electrical power systems to verify actual locations of wiring connections before electrified door hardware installation.

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

3.02 INSTALLATION

A. Install hardware per manufacturer's instructions and in compliance with:
   1. NFPA 80.
   2. NFPA 105.
   3. ICC/ANSI A117.1.
   4. ANSI/BHMA A156.115 Hardware Preparation in Steel Doors and Steel Frames
   5. ANSI/BHMA A156.115W Hardware Preparation in Wood Doors with Wood or Steel Frames
   6. DHI Publication - Installation Guide for Doors and Hardware
   7. UL10C/UBC7-2
   8. Local building code.
   9. Approved shop drawings.
   10. Approved finish hardware schedule.

B. Do not install surface mounted items until finishes have been completed on substrates involved. Set unit level, plumb and true to line location. Adjust and reinforce attachment substrate as necessary for proper installation and operation.

3.03 FIELD QUALITY CONTROL

A. Material supplier to schedule final walk through to inspect hardware installation ten business days before final acceptance of Owner. Material supplier shall provide a written report detailing discrepancies of each opening to General Contractor within seven calendar days of walk through.

3.04 ADJUSTMENT, CLEANING AND DEMONSTRATING

A. Adjustment: Adjust and check each opening to ensure proper operation of each item of finish hardware. Replace items that cannot be adjusted to operate freely and smoothly or as intended for application at no cost to Owner.

B. Cleaning: Clean adjacent surfaces soiled by hardware installation. Clean finished hardware per manufacturer's instructions after final adjustments has been made. Replace items that cannot be cleaned to manufacturer's level of finish quality at no cost to Owner.

C. Demonstration: Conduct a training class for building maintenance personnel demonstrating the adjustment, operation of mechanical and electrical hardware. Special tools for finished hardware to be turned over and explained usage at this meeting.

3.05 PROTECTION

A. Leave manufacturer's protective film intact and provide proper protection for all other finish hardware items that do not have protective material from the manufacture until Owner accepts Project as complete.

3.06 HARDWARE SETS

A. Guide: Door hardware items have been placed in sets which are intended to be a guide of design, grade, quality, function, operation, performance, exposure, and like characteristics of door hardware, and may not be complete. Provide door hardware required to make each set complete and operational.

B. Hardware schedule does not reflect handing, backset, method of fastening and like characteristics of door hardware and door operation.

C. Review door hardware sets with door types, frames, sizes and details on drawings. Verify suitability and adaptability of items specified in relation to details and surrounding conditions.

3.07 HARDWARE SCHEDULE

**HEADING 1**

Door #204

Each opening to receive:

| QTY | | TYPE | DESCRIPTION | FINISH |
|---|---|---|---|---|
| 2 | ea. | Continuous Hinge | 780-224HD | Clear |
| 2 | ea. | SVR Exit Device | 4501 SVR F LBR w/fire bolt | US32D |
| 2 | ea. | Trim | 45CE | US26D |
| 2 | ea. | Mortise Cylinder | Schlage to existing system | US26D |
| 2 | ea. | Closer | 5100 HDCS | ALM |
| 2 | ea. | Kick Plate | 194S 10" x 1 1/2" LDW | US32D |
| 2 | ea. | Mop Plate | 194S 4" x 1"LDW | US32D |
| 1 | ea. | Gasket | 721 x head and jambs | Charcoal |

Fill existing hinge preparations as required.

**HEADING 2**

Door #226, 229

Each opening to receive:

| QTY | | TYPE | DESCRIPTION | FINISH |
|---|---|---|---|---|
| 6 | ea. | Hinges | BB1168 4.5" x 4.5" | US26D |
| 1 | ea. | Push Plate | 30S 4" x 16" | US32D |
| 1 | ea. | Pull Plate | H33E 4" x 16" | US32D |
| 1 | ea. | Classroom Deadbolt | 3833S less cylinder | US26D |
| 1 | ea. | Mortise Cylinder | Schlage to existing system | US26D |
| 1 | ea. | Closer | 5100 MLT | ALM |
| 1 | ea. | Kick Plate | 194S 10" x 2" LDW | US32D |
| 1 | ea. | Mop Plate | 194S 4" x 1" LDW | US32D |
| 1 | ea. | Gasket | 721 x head and jambs | Charcoal |

**HEADING 3**

Door #223A, 223C

Each opening to receive:

| QTY | | TYPE | DESCRIPTION | FINISH |
|---|---|---|---|---|
| 2 | ea. | Continuous Hinge | 780-224HD UL-STUD | Clear |
| 2 | ea. | SVR Exit Device | 4501 SVR F LBR w/fire bolt | US32D |
| 2 | ea. | Trim | 45CE | US26D |
| 2 | ea. | Mortise Cylinder | Schlage to existing system | US26D |
| 2 | ea. | Closer | 5100 HDCS | ALM |
| 2 | ea. | Kick Plate | 194S 10” x 1 1/2” LDW | US32D |
| 2 | ea. | Mop Plate | 194S 4” x 1”LDW | US32D |
| 1 | ea. | Gasket | 721 x head and jambs | Charcoal |
| 1 | set | Astragal Seal | 872S x (2) door height | CLR |
| 2 | ea. | Auto Door Bottom | 743S | MIL |
| 1 | ea. | Threshold | 413S x ¼” x 5” | MIL |

Fill existing hinge preparations as required.

**HEADING 4**

Door #223B, 223D, 236B, 237B, 240B, 242B

Each opening to receive:

| QTY | | TYPE | DESCRIPTION | FINISH |
|---|---|---|---|---|
| 6 | ea. | Hinges | BB1168 4.5” x 4.5” | US26D |
| 2 | ea. | Push Plate | 30S 4” x 16” | US32D |
| 2 | ea. | Pull Plate | H33E 4” x 16” | US32D |
| 2 | ea. | Closer | 5100 HDHOCS | ALM |
| 2 | ea. | Kick Plate | 194S 10” x 1 1/2” LDW | US32D |
| 2 | ea. | Mop Plate | 194S 4” x 1”LDW | US32D |
| 1 | ea. | Gasket | 721 x head and jambs | Charcoal |
| 1 | set | Astragal Seal | 872S x (2) door height | CLR |
| 2 | ea. | Auto Door Bottom | 743S | MIL |
| 1 | ea. | Threshold | 413S x ¼” x 5” | MIL |

**HEADING 5**

Door #227A

Each opening to receive:

| QTY | | TYPE | DESCRIPTION | FINISH |
|---|---|---|---|---|
| 3 | ea. | Hinges | BB1168 4.5” x 4.5” | US26D |
| 1 | ea. | Privacy Lock | ND40 | US26D |
| 2 | ea. | Kick Plate | 194S 10” x 2” LDW | US32D |
| 2 | ea. | Mop Plate | 194S 4” x 1”LDW | US32D |
| 1 | ea. | Wall Bumper | 236W | US32D |
| 1 | ea. | Gasket | 721 x head and jambs | Charcoal |

**HEADING 6**

Door #231A

Each opening to receive:

| QTY | | TYPE | DESCRIPTION | FINISH |
|---|---|---|---|---|
| 2 | ea. | Continuous Hinge | 780-224HD | Clear |
| 2 | set | Automatic Flush Bolt | 296W | US26D |
| 1 | ea. | Coordinator | 297D | Black |
| 2 | ea. | Mounting Brackets | 297M/N | Black |
| 1 | ea. | Classroom Lock | ND75 Everest | US26D |
| 2 | ea. | Closer | 5100 HDCS | ALM |
| 2 | ea. | Kick Plate | 194S 10” x 1 1/2” LDW | US32D |
| 2 | ea. | Mop Plate | 194S 4” x 1”LDW | US32D |
| 1 | ea. | Gasket | 721 x head and jambs | Charcoal |
| 1 | set | Astragal Seal | 872S x (2) door height | CLR |
| 2 | ea. | Door Bottom | 750S N | CLR |
| 1 | ea. | Threshold | 412S x ½” x 5” | MIL |

Fill existing hinge preparations as required.

**HEADING 7**

Door #221, 222, 232

Each opening to receive:

| QTY | | TYPE | DESCRIPTION | FINISH |
|---|---|---|---|---|
| 3 | ea. | Hinges | BB1168 4.5” x 4.5” | US26D |
| 1 | ea. | Classroom Lock | ND75 Everest | US26D |
| 1 | ea. | Kick Plate | 194S 10” x 2” LDW | US32D |
| 1 | ea. | Closer | 5100 HDCS | ALM |
| 1 | ea. | Gasket | 721 x head and jambs | Charcoal |

**HEADING 8**

Door #228, 244, 246, 248

Each opening to receive:

| QTY | | TYPE | DESCRIPTION | FINISH |
|---|---|---|---|---|
| 3 | ea. | Hinges | BB1168 4.5” x 4.5” | US26D |
| 1 | ea. | Classroom Lock | ND75 Everest | US26D |
| 2 | ea. | Kick Plate | 194S 10” x 1 1/2” LDW | US32D |
| 2 | ea. | Mop Plate | 194S 4” x 1”LDW | US32D |
| 1 | ea. | Closer | 5100 HDCS | ALM |
| 1 | ea. | Closer | 5100 HD (#228) | ALM |
| 1 | ea. | Wall Bumper | 236W (#228) | US32D |
| 1 | ea. | Gasket | 721 x head and jambs | Charcoal |

**HEADING 9**

Door #233

Each opening to receive:

| QTY | | TYPE | DESCRIPTION | FINISH |
|---|---|---|---|---|
| 2 | ea. | Continuous Hinge | 780-210HD | Clear |
| 2 | ea. | Surface Bolt | 275D | US26D |
| 1 | ea. | Storeroom Lock | ND80 Everest | US26D |
| 1 | ea. | Closer | 5100 HDHOCS (active leaf) | ALM |
| 1 | ea. | O.H. Holder | 7017 SRF | US32D |
| 2 | ea. | Kick Plate | 194S 10” x 1 1/2” LDW | US32D |
| 1 | ea. | Gasket | 721 x head and jambs | Charcoal |
| 1 | set | Astragal Seal | 872S x (2) door height | CLR |
| 2 | ea. | Door Bottom | 750S N | CLR |
| 1 | ea. | Threshold | 412S x ½” x 5” | MIL |

Fill existing hinge preparations as required.

**HEADING 10**

Door #235A, 236A

Each opening to receive:

| QTY | | TYPE | DESCRIPTION | FINISH |
|---|---|---|---|---|
| 2 | ea. | Continuous Hinge | 780-210HD UL-STUD (235A) | Clear |
| 6 | ea. | Hinges | BB1168 4.5” x 4.5” NRP (236A) | US 26D |
| 2 | ea. | SVR Exit Device | 4501 SVR F LBR w/fire bolt | US32D |
| 2 | ea. | Trim | 45CE | US26D |
| 2 | ea. | Mortise Cylinder | Schlage to existing system | US26D |
| 2 | ea. | Closer | 5100 HDCS | ALM |
| 2 | ea. | Kick Plate | 194S 10” x 1 1/2” LDW | US32D |
| 2 | ea. | Mop Plate | 194S 4” x 1”LDW | US32D |
| 1 | ea. | Gasket | 721 x head and jambs | Charcoal |
| 1 | ea. | Astragal Seal | 872S x (2) door height | CLR |
| 2 | ea. | Door Bottom | 750S N | CLR |
| 1 | ea. | Threshold | 448S x ¼” x 10” | MIL |
| 1 | ea. | Threshold Stop | 484S x ¼” | MIL |

Fill existing hinge preparations as required.

**HEADING 11**

Door #235B, 235D, 235E

Each opening to receive:

| QTY | | TYPE | DESCRIPTION | FINISH |
|---|---|---|---|---|
| 3 | ea. | Hinges | BB1168 4.5” x 4.5” | US26D |
| 1 | ea. | Classroom Lock | ND75 Everest | US26D |

| | | | | |
|---|---|---|---|---|
| 2 | ea. | Kick Plate | 194S 10” x 1 1/2” LDW | US32D |
| 1 | ea. | Closer | 5100 HDCS | ALM |
| 1 | ea. | Gasket | 721 x head and jambs | Charcoal |
| 1 | ea. | Auto Door Bottom | 740S | CLR |
| 1 | ea. | Threshold | 448S x ¼” x 10” | MIL |

**HEADING 12**

Door #237A

Each opening to receive:

| QTY | | TYPE | DESCRIPTION | FINISH |
|---|---|---|---|---|
| 2 | ea. | Continuous Hinge | 780-210HD | Clear |
| 2 | ea. | SVR Exit Device | 4501 SVR (EXIT ONLY) | US32D |
| 2 | ea. | Closer | 5100 HDCS | ALM |
| 2 | ea. | Kick Plate | 194S 10” x 1 1/2” LDW | US32D |
| 1 | ea. | Gasket | 721 x head and jambs | Charcoal |
| 1 | set | Astragal Seal | 872S x (2) door height | CLR |
| 2 | ea. | Door Bottom | 750S N | CLR |
| 1 | ea. | Threshold | 452S x ½” x 10” | MIL |
| 1 | ea. | Threshold Stop | 484S x ¼” | MIL |
| 1 | ea. | Drip Cap | 810S (door width + 4”) | MIL |

**HEADING 13**

Not Used

**HEADING 14**

Door #239, 241A, 241B, 243

Each opening to receive:

| QTY | | TYPE | DESCRIPTION | FINISH |
|---|---|---|---|---|
| 6 | ea. | Hinges | BB1168 4.5” x 4.5” | US26D |
| 2 | ea. | Flush Bolt | 282D | US26D |
| 1 | ea. | Storeroom Lock | ND80 Everest | US26D |
| 2 | ea. | Kick Plate | 194S 10” x 1 1/2” LDW | US32D |
| 2 | ea. | Mop Plate | 194S 4” x 1”LDW | US32D |
| 1 | ea. | Wall Stop | 236W (active side) | US32D |
| 1 | ea. | O.H. Stop | 7016 CON | US32D |
| 1 | ea. | Gasket | 721 x head and jambs | Charcoal |
| 1 | set | Astragal Seal | 872S x (2) door height | CLR |
| 2 | ea. | Auto Door Bottom | 743S | MIL |
| 1 | ea. | Threshold | 413S x ¼” x 5” | MIL |

Make #’s 239 and 241B LH active, and #’s 241A and 243 RH active.

**HEADING 15**

Door #240A, 242A

Each opening to receive:

| QTY | | TYPE | DESCRIPTION | FINISH |
|---|---|---|---|---|
| 6 | ea. | Hinges | BB1168 4.5” x 4.5” NRP | US26D |
| 2 | ea. | SVR Exit Device | 4501 SVR F LBR w/fire bolt | US32D |
| 2 | ea. | Trim | 45CE | US26D |
| 2 | ea. | Mortise Cylinder | Schlage to existing system | US26D |
| 2 | ea. | Closer | 5100 HDCS | ALM |
| 2 | ea. | Kick Plate | 194S 10” x 1 1/2” LDW | US32D |
| 2 | ea. | Mop Plate | 194S 4” x 1”LDW | US32D |
| 1 | ea. | Gasket | 721 x head and jambs | Charcoal |
| 1 | set | Astragal Seal | 872S x (2) door height | CLR |
| 2 | ea. | Door Bottom | 750S N | CLR |
| 1 | ea. | Threshold | 412S x ½” x 5” | MIL |

**HEADING 16**

Door #245

Each opening to receive:

| QTY | | TYPE | DESCRIPTION | FINISH |
|---|---|---|---|---|
| 3 | ea. | Hinges | BB1168 4.5” x 4.5” | US26D |
| 1 | ea. | Push Plate | 30S 4” x 16” | US32D |
| 1 | ea. | Flush Pull | 15P | US32D |
| 1 | ea. | Single Cyl. Deadbolt | 3830S less cylinder | US26D |
| 1 | ea. | Mortise Cylinder | Schlage to existing system | US26D |
| 1 | ea. | Closer | 5100 MLT | ALM |
| 1 | ea. | Kick Plate | 194S 10” x 2” LDW | US32D |
| 1 | ea. | Mop Plate | 194S 4” x 1” LDW | US32D |

**HEADING 17**

Door #247 (Unequal pair)

Each opening to receive:

| QTY | | TYPE | DESCRIPTION | FINISH |
|---|---|---|---|---|
| 6 | ea. | | BB1168 4.5” x 4.5” | US26D |
| 2 | ea. | | 296W | US26D |
| 1 | ea. | | ND70 Everest | US26D |
| 2 | ea. | | 5100 HDCS | ALM |
| 1 | ea. | | 297D | PC |
| 2 | ea. | | 297M/N | PC |
| 2 | ea. | | 194S 10” x 1 1/2” LDW | US32D |
| 2 | ea. | | 194S 4” x 1”LDW | US32D |
| 1 | ea. | | 721 x head and jambs | Charcoal |
| 1 | set | | 872S x (2) door height | CLR |

| | | | |
|---|---|---|---|
| 2 | ea. | 743S | MIL |
| 1 | ea. | 413S x ¼” x 5” | MIL |

**HEADING 18**

Door #230A

Each opening to receive:

| QTY | | TYPE | DESCRIPTION | FINISH |
|---|---|---|---|---|
| 1 | ea. | Continuous Hinge | 780-224HD RETW | Clear |
| 1 | ea. | Continuous Hinge | 780-224HD | Clear |
| 1 | ea. | Exit Device | 4501 RIM ELRX | US32D |
| 1 | ea. | Exit Device | 4501 RIM | US32D |
| 2 | ea. | Trim | 45CE | US26D |
| 1 | ea. | Keyed Rem. Mullion | 4900 KR | USP |
| 2 | ea. | Mortise Cylinder | Schlage to existing system | US26D |
| 1 | ea. | Rim Cylinder | Schlage to existing system | US26D |
| 2 | ea. | Closer | 5100 HDCS | ALM |
| 2 | ea. | Kick Plate | 194S 10” x 1 1/2” LDW | US32D |
| 2 | ea. | Mop Plate | 194S 4” x 1”LDW | US32D |
| 1 | ea. | Gasket | 721 x head and jambs | Charcoal |
| 1 | set | Astragal Seal | 872S x (2) door height | CLR |
| 2 | ea. | Door Bottom | 750S N | CLR |
| 1 | ea. | Threshold | 412S x ½” x 5” | MIL |
| 1 | ea. | Power Supply | 2902 | - |

Fill existing hinge preparations as required. Connect electric latch retraction to existing card reader system.

Description of Operation:

Door exit device lever trim locked or un-locked by key. When locked, access by card reader to activate electric latch retraction. Free egress at all times.

**HEADING 19**

Door #230B

Each opening to receive:

| QTY | | TYPE | DESCRIPTION | FINISH |
|---|---|---|---|---|
| 2 | ea. | Continuous Hinge | 780-224HD | Clear |
| 2 | ea. | Dummy Exit Device | 4501D | US32D |
| 2 | ea. | Dummy Trim | 45DT | US26D |
| 2 | ea. | Closer | 5100 HDCS | ALM |
| 2 | ea. | Kick Plate | 194S 10” x 1 1/2” LDW | US32D |
| 2 | ea. | Mop Plate | 194S 4” x 1”LDW | US32D |
| 1 | ea. | Gasket | 721 x head and jambs | Charcoal |
| 1 | set | Astragal Seal | 872S x (2) door height | CLR |
| 2 | ea. | Door Bottom | 750S N | CLR |
| 1 | ea. | Threshold | 412S x ½” x 5” | MIL |

Fill existing hinge preparations as required.

**HEADING 20**

Door #354

Each opening to receive:

| QTY | | TYPE | DESCTIPTION | FINISH |
|---|---|---|---|---|
| 3 | ea. | Hinges | BB1199 4.5” x 4.5” NRP | US32D |
| 1 | ea. | Exit Device | 4501 RIM Fire | US32D |
| 1 | ea. | Exit Device Trim | 45NL | US26D |
| 1 | ea. | Rim Cylinder | Schlage to existing system | US26D |
| 2 | ea. | Kick Plate | 194S 10” x 1 1/2” LDW | US32D |
| 1 | ea. | Closer | 5100 HDCS | ALM |
| 1 | ea. | Gasket | 721 x head and jambs | Charcoal |
| 1 | ea. | Auto Door Bottom | 740S | CLR |
| 1 | ea. | Threshold | 412S x ½” x 5” | MIL |
| 1 | ea. | Drip Cap | 810S (door width + 4”) | MIL |

**HEADING 21**

Door #354A, 354B

Each opening to receive:

| QTY | | TYPE | DESCRIPTION | FINISH |
|---|---|---|---|---|
| 3 | ea. | Hinges | BB1168 4.5” x 4.5” | US26D |
| 1 | ea. | Exit Device | 4501 RIM Fire | US32D |
| 1 | ea. | Exit Device Trim | 45BE | US26D |
| 2 | ea. | Kick Plate | 194S 10” x 1 1/2” LDW | US32D |
| 1 | ea. | Closer | 5100 HDCS | ALM |
| 1 | ea. | Gasket | 721 x head and jambs | Charcoal |
| 1 | ea. | Auto Door Bottom | 740S | CLR |
| 1 | ea. | Threshold | 412S x ½” x 5” | MIL |

**END OF SECTION**

# SECTION 08 8000
# GLAZING

## PART 1 GENERAL

1.01 SECTION INCLUDES

A. Refer to Scope Information Sheets for this contract bound in the Project Manual under Section 01 10 00, Summary of Work. The Scope Information Sheets describe generally the work included in each contract, but the work is not necessarily limited to that described.

B. Glass.

C. Glazing compounds and accessories.

1.02 REFERENCE STANDARDS

A. ASTM C864 - Standard Specification for Dense Elastomeric Compression Seal Gaskets, Setting Blocks, and Spacers; 2005 (Reapproved 2011).

B. ASTM C1048 - Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass; 2012.

1.03 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data on Glass Types: Provide structural, physical and environmental characteristics, size limitations, special handling or installation requirements.

1.04 FIELD CONDITIONS

A. Do not install glazing when ambient temperature is less than 50 degrees F.

B. Maintain minimum ambient temperature before, during and 24 hours after installation of glazing compounds.

## PART 2 PRODUCTS

2.01 INSULATING GLASS UNITS

A. Type IG-1 - Sealed Insulating Glass Units: Vision glass, double glazed.
   1. Application: All exterior glazing unless otherwise indicated.
   2. Outboard Lite: Annealed float glass, 1/4 inch thick, minimum.
      a. Tint: Clear.
      b. Coating: Low-E (passive type), on #2 surface.
   3. Inboard Lite: Heat-strengthened float glass, 1/4 inch thick, minimum.
      a. Tint: Clear.
   4. Total Thickness: 1 inch.
   5. Glazing Method: Gasket glazing.

2.02 GLAZING UNITS

A. Type A - Single Vision Glazing:
   1. Type: Fully tempered float glass.
   2. Tint: Clear.
   3. Thickness: 1/4 inch.

2.03 GLASS MATERIALS

A. Float Glass Manufacturers:
   1. AGC Flat Glass North America, Inc: www.na.agc-flatglass.com.
   2. Guardian Industries Corp: www.sunguardglass.com.
   3. Pilkington North America Inc: www.pilkington.com/na.
   4. PPG Industries, Inc: www.ppgideascapes.com.

5. Substitutions: Refer to Section 01 6000 - Product Requirements.

B. Glass Type 1: Float Glass: All glazing is to be float glass unless otherwise indicated.
1. Fully Tempered Types: ASTM C1048.
2. Thickness: 1/4 inch.

C. Glass Type 2: Fire-Protection-Rated Glazing:
1. IBC Fire Protection Rating: D-H-45 or OH-45 or W-60, minimum.
2. Provide products listed by Underwriters Laboratories or Intertek Warnock Hersey.
3. Products:
a. SCHOTT North America Inc; Pyran Platinum L (laminated) Fire Rated Ceramic Glass.
b. Vetrotech Saint-Gobain North America; .

2.04 GLAZING ACCESSORIES

A. Setting Blocks: Neoprene, 80 to 90 Shore A durometer hardness; ASTM C864 Option II. Length of 0.1 inch for each square foot of glazing or minimum 4 inch x width of glazing rabbet space minus 1/16 inch x height to suit glazing method and pane weight and area.

B. Glazing Tape: Preformed butyl compound ; 10 to 15 Shore A durometer hardness; coiled on release paper; black color.
1. Manufacturers:
a. Pecora Corporation: www.pecora.com.
b. Tremco Global Sealants: www.tremcosealants.com.
c. Substitutions: Refer to Section 01 6000 - Product Requirements.

C. Glazing Gaskets: Resilient silicone extruded shape to suit glazing channel retaining slot; ASTM C864 Option II; black color.

**PART 3 EXECUTION**

3.01 EXAMINATION

A. Verify that openings for glazing are correctly sized and within tolerance.

B. Verify that surfaces of glazing channels or recesses are clean, free of obstructions that may impede moisture movement, weeps are clear, and ready to receive glazing.

3.02 PREPARATION

A. Clean contact surfaces with solvent and wipe dry.

B. Install sealants in accordance with manufacturer's instructions.

3.03 GLAZING METHODS

3.04 INSTALLATION - EXTERIOR/INTERIOR DRY METHOD (GASKET GLAZING)

A. Place setting blocks at 1/4 points with edge block no more than 6 inch from corners.

B. Rest glazing on setting blocks and push against fixed stop with sufficient pressure on gasket to attain full contact.

C. Install removable stops without displacing glazing gasket; exert pressure for full continuous contact.

3.05 INSTALLATION - INTERIOR DRY METHOD (TAPE AND TAPE)

A. Cut glazing tape to length and set against permanent stops, projecting 1/16 inch above sight line.

B. Place setting blocks at 1/4 points with edge block no more than 6 inch from corners.

C. Rest glazing on setting blocks and push against tape for full contact at perimeter of pane or unit.

D. Place glazing tape on free perimeter of glazing in same manner described above.

E. Install removable stop without displacement of tape. Exert pressure on tape for full continuous contact.

F. Knife trim protruding tape.

3.06 CLEANING

A. Remove glazing materials from finish surfaces.

B. Remove labels after Work is complete.

C. Clean glass and adjacent surfaces.

**END OF SECTION**

# SECTION 09 2116
# GYPSUM BOARD ASSEMBLIES

## PART 1 GENERAL

1.01 SECTION INCLUDES

A. Refer to Scope Information Sheets for this contract bound in the Project Manual under Section 01 1000, Summary of Work. The Scope Information Sheets describe generally the work included in each contract, but the work is not necessarily limited to that described.

B. Performance criteria for gypsum board assemblies.

C. Metal stud wall framing.

D. Metal channel ceiling panel framing.

E. Gypsum wallboard.

F. Joint treatment and accessories.

1.02 RELATED REQUIREMENTS

A. Section 09 51 00 - Acoustical Ceilings: Acoustically Reflective Ceiling Panels

1.03 REFERENCE STANDARDS

A. ASTM C475/C475M - Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board; 2012.

B. ASTM C645 - Standard Specification for Nonstructural Steel Framing Members; 2013.

C. ASTM C754 - Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products; 2011.

D. ASTM C840 - Standard Specification for Application and Finishing of Gypsum Board; 2013.

E. ASTM C954 - Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs From 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in Thickness; 2011.

F. ASTM C1002 - Standard Specification for Steel Self-Piercing Tapping Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs; 2007 (Reapproved 2013).

G. ASTM C1047 - Standard Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base; 2010a.

H. ASTM C1396/C1396M - Standard Specification for Gypsum Board; 2014.

I. ASTM C1629/C1629M - Standard Classification for Abuse-Resistant Nondecorated Interior Gypsum Panel Products and Fiber-Reinforced Cement Panels; 2014.

J. ASTM D3273 - Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber; 2012.

K. GA-216 - Application and Finishing of Gypsum Board; Gypsum Association; 2013.

L. UL (FRD) - Fire Resistance Directory; Underwriters Laboratories Inc.; current edition.

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide data on metal framing, gypsum board, accessories, and joint finishing system.

C. Product Data: Provide manufacturer's data on partition head to structure connectors, showing compliance with requirements.

D. Test Reports: For all stud framing products that do not comply with ASTM C645 or C754, provide independent laboratory reports showing maximum stud heights at required spacings and deflections.

1.05 QUALITY ASSURANCE

A. Installer Qualifications: Company specializing in performing gypsum board application and finishing.

B. Copies of Documents at Site: Maintain at the project site a copy of each referenced document that prescribes execution requirements.

**PART 2 PRODUCTS**

2.01 GYPSUM BOARD ASSEMBLIES

A. Provide completed assemblies complying with ASTM C840 and GA-216.
   1. See PART 3 for finishing requirements.

B. Fire Rated Assemblies: Provide completed assemblies with the following characteristics:
   1. UL Assembly Numbers: Provide construction equivalent to that listed for the particular assembly in the current UL Fire Resistance Directory. Refer to Drawings for UL Assembly Reference Numbers.

2.02 METAL FRAMING MATERIALS

A. Manufacturers - Metal Framing, Connectors, and Accessories:
   1. Clarkwestern Dietrich Building Systems LLC: www.clarkdietrich.com.
   2. Marino: www.marinoware.com.
   3. Phillips Manufacturing Company: www.phillipsmfg.com.

B. Non-Loadbearing Framing System Components: ASTM C645; galvanized sheet steel, of size and properties necessary to comply with ASTM C754 for the spacing indicated, with maximum deflection of wall framing of L/360 at 7.5 psf.
   1. Exception: The minimum metal thickness and section properties requirements of ASTM C 645 are waived provided steel of 40 ksi minimum yield strength is used, the metal is continuously dimpled, the effective thickness is at least twice the base metal thickness, and maximum stud heights are determined by testing in accordance with ASTM E 72 using assemblies specified by ASTM C 754.
   2. Studs: "C" shaped with flat or formed webs 20 gage minimum.
   3. Runners: U shaped, sized to match studs.
   4. Ceiling Channels: C shaped.
   5. Furring: Hat-shaped sections, minimum depth of 7/8 inch.

C. Ceiling Hangers: Type and size as specified in ASTM C754 for spacing required.

D. Partition Head To Structure Connections: Provide track fastened to structure with legs of sufficient length to accommodate deflection, for friction fit of studs cut short and braced with continuous bridging both sides.

2.03 BOARD MATERIALS

A. Manufacturers - Gypsum-Based Board:
   1. CertainTeed Corporation: www.certainteed.com.
   2. Georgia-Pacific Gypsum: www.gpgypsum.com.
   3. Lafarge North America Inc: www.lafargenorthamerica.com.
   4. National Gypsum Company: www.nationalgypsum.com.
   5. USG Corporation: www.usg.com.
   6. Substitutions: See Section 01 6000 - Product Requirements.

B. Gypsum Wallboard: Paper-faced gypsum panels as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.
   1. Application: Use for vertical surfaces and ceilings, unless otherwise indicated.
   2. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
      a. Mold-resistant board is required at all locations.
   3. At Assemblies Indicated with Fire-Rating: Use type required by indicated tested assembly; if no tested assembly is indicated, use Type X board, UL or WH listed.
   4. Thickness:
      a. Vertical Surfaces: 5/8 inch.
      b. Ceilings: 5/8 inch.
      c. Multi-Layer Assemblies: Thicknesses as indicated on drawings.

C. Impact-Rated Wallboard: Tested to Level 3 soft-body and hard-body impact in accordance with ASTM C 1629.
   1. Application: High-traffic areas indicated.
   2. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
   3. Paper-Faced Type: Gypsum wallboard as defined in ASTM C1396/C1396M.
   4. Type: Fire-resistance rated Type X, UL or WH listed.
   5. Thickness: 5/8 inch
   6. Edges: Tapered.
   7. Products:
      a. National Gypsum Company; Gold Bond Hi-Impact Brand XP Wallboard.
      b. Temple-Inland Inc; ComfortGuard IR Impact Resistant.
      c. Substitutions: See Section 01 6000 - Product Requirements.

2.04 ACCESSORIES

A. Finishing Accessories: ASTM C1047, galvanized steel, rolled zinc, or rigid plastic, unless otherwise indicated.
   1. Types: As detailed or required for finished appearance.
   2. Special Shapes: In addition to conventional cornerbead and control joints, provide L-bead at exposed panel edges.

B. Joint Materials: ASTM C475 and as recommended by gypsum board manufacturer for project conditions.
   1. Tape: 2 inch wide, coated glass fiber tape for joints and cornersin wet areas.
   2. Tape: 2 inch wide, creased paper tape for joints and corners, except as otherwise indicated.
   3. Chemical hardening type compound.

C. High Build Drywall Surfacer: Vinyl acrylic latex-based coating for spray application, designed to take the place of skim coating and separate paint primer in achieving Level 5 finish.

D. Screws for Attachment to Steel Members Less Than 0.03 inch In Thickness, to Wood Members, and to Gypsum Board: ASTM C1002; self-piercing tapping type; cadmium-plated for exterior locations.

E. Screws for Attachment to Steel Members From 0.033 to 0.112 inch in Thickness: ASTM C954; steel drill screws for application of gypsum board to loadbearing steel studs.

**PART 3 EXECUTION**

3.01 EXAMINATION

A. Verify that project conditions are appropriate for work of this section to commence.

3.02 FRAMING INSTALLATION

A. Metal Framing: Install in accordance with ASTM C754 and manufacturer's instructions.

B. Suspended Ceilings and Soffits: Space framing and furring members as indicated.
   1. Level ceiling system to a tolerance of 1/1200.
   2. Laterally brace entire suspension system.
   3. Install bracing as required at exterior locations to resist wind uplift.

C. Studs: Space studs as indicated.
   1. Extend partition framing to structure in typical conditions, 6 inches above ceiling at perimeter wall conditions and as indicated.
   2. Partitions Terminating at Structure: Attach extended leg top runner to structure, maintain clearance between top of studs and structure, and brace both flanges of studs with continuous bridging.

D. Openings: Reinforce openings as required for weight of doors or operable panels, using not less than double studs at jambs.

3.03 **BOARD INSTALLATION**

A. Comply with ASTM C 840, GA-216, and manufacturer's instructions. Install to minimize butt end joints, especially in highly visible locations.

B. Fire-Rated Construction: Install gypsum board in strict compliance with requirements of assembly listing.

3.04 INSTALLATION OF TRIM AND ACCESSORIES

A. Control Joints: Place control joints consistent with lines of building spaces and as indicated.

B. Corner Beads: Install at external corners, using longest practical lengths.

C. Edge Trim: Install at locations where gypsum board abuts dissimilar materials and as indicated.

3.05 JOINT TREATMENT

A. Finish gypsum board in accordance with levels defined in ASTM C840, as follows:
   1. Level 5: Walls and ceilings to receive paint finish or wall coverings, unless otherwise indicated.
   2. Level 1: Fire rated wall areas above finished ceilings, whether or not accessible in the completed construction.

B. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.
   1. Feather coats of joint compound so that camber is maximum 1/32 inch.

C. Where Level 5 finish is indicated, spray apply high build drywall surfacer over entire surface after joints have been properly treated; achieve a flat and tool mark-free finish.

**END OF SECTION**

# SECTION 09 2300
# GYPSUM PLASTERING

## PART 1 GENERAL

1.01 SECTION INCLUDES

A. Refer to Scope Information Sheets for this contract bound in the Project Manual under Section 01 1000, Summary of Work. The Scope Information Sheets describe generally the work included in each contract, but the work is not necessarily limited to that described.

B. Gypsum plaster over gypsum lath, metal lath, concrete, and other solid surfaces.

1.02 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittals procedures.

B. Product Data: Provide data on plaster materials, characteristics, and limitations of products specified.

1.03 QUALITY ASSURANCE

A. Installer Qualifications: Company specializing in performing the work of this section with minimum 5 years documented experience.

1.04 FIELD CONDITIONS

A. Do not apply plaster when substrate or ambient air temperature is under 50 degrees F or over 80 degrees F.

B. Maintain minimum ambient temperature of 50 degrees F during and after installation of plaster.

## PART 2 PRODUCTS

2.01 PLASTER MATERIALS

A. Ready-Mixed Gypsum Plaster: ASTM C28/C28M; mill-mixed type, requiring only the addition of water.

B. Bonding Agent: ASTM C631; type recommended for bonding plaster to concrete and concrete block surfaces.

2.02 METAL LATH

A. Diamond Mesh Metal Lath: ASTM C847, galvanized; self-furring.

2.03 PLASTER MIXES

A. Over Other Solid Bases: Two-coat application, ready-mixed plaster, mixed and proportioned in accordance with ASTM C842 and manufacturer's instructions.

B. Over Metal Lath: Three-coat application, ready-mixed plaster, mixed and proportioned in accordance with ASTM C842 and manufacturer's instructions.

C. Ready-Mixed Plaster Materials: Mix in accordance with manufacturer's instructions.

## PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that existing conditions are satisfactory before starting work.

B. Concrete: Verify surfaces are flat, honeycomb is filled flush, and surface is ready to receive work of this section. Verify no bituminous, water repellent, or form release agents exist on concrete surface that are detrimental to plaster or plaster bond.

C. Grounds and Blocking: Verify items within walls for other sections of work have been installed.

D. Gypsum Lath and Accessories: Verify substrate is flat and surface is ready to receive work of this section. Verify joint and surface perimeter accessories are in place.

E. Metal Lath and Accessories: Verify lath is flat, secured to substrate, and joint and surface perimeter accessories are in place.

3.02 PREPARATION

A. Dampen masonry surfaces to reduce excessive suction.

B. Clean concrete surfaces of foreign matter. Thoroughly dampen surfaces before using acid solutions, solvent, or detergents to perform cleaning. Wash surface with clean water.

C. Roughen smooth concrete surfaces and smooth faced masonry.

D. Apply bonding agent in accordance with manufacturer's instructions.

3.03 INSTALLATION - GYPSUM LATH AND ACCESSORIES

A. Install gypsum lath in accordance with ASTM C841.

B. Install gypsum lath perpendicular to framing members, with lath face exposed. Stagger end joint of alternate courses. Butt joints tight. Maximum gap allowed: 1/8 inch.

C. Place corner reinforcement diagonally over gypsum lath and across corner immediately above and below openings. Secure to gypsum lath only.

D. Continuously reinforce internal angles with corner mesh, return 3 inches from corner to form the angle reinforcement; fasten at perimeter edges only.

E. Place corner bead at external wall corners; fasten at outer edges of lath only.

F. Place strip mesh diagonally at corners of lathed openings. Secure rigidly in place.

G. Place 4 inch wide strips of strip mesh centered over junctions of dissimilar backing materials. Secure rigidly in place.

H. Place casing beads at terminations of plaster finish. Butt and align ends. Secure rigidly in place.

3.04 PLASTERING

A. Apply gypsum plaster in accordance with ASTM C842 and manufacturer's instructions.

B. Thickness of Plaster including Finish Coat:
   1. Match existing adjacent plaster thickness.
   2. Over gypsum lath: 1/2 inch.
   3. Finish coat applied direct to concrete: 3/16 inch, maximum.

C. Finish Texture: Float to a consistent finish.
   1. Match adjacent plaster finish.

3.05 TOLERANCES

A. Maximum Variation from True Flatness: 1/8 inch in 10 feet.

**END OF SECTION**

# SECTION 09 3000
# TILING

## PART 1 GENERAL

1.01 SECTION INCLUDES

A. Refer to Scope Information Sheets for this contract bound in the Project Manual under Section 01 10 00, Summary of Work. The Scope Information Sheets describe generally the work included in each contract, but the work is not necessarily limited to that described.

B. Tile for floor applications.

C. Tile for wall applications.

D. Solid surface thresholds.

E. Trim.

1.02 RELATED REQUIREMENTS

A. Section 07 9005 - Joint Sealers.

B. Section 09 05 61 - Common Work Results for Flooring Preparation

C. Section 09 2116 - Gypsum Board Assemblies: Installation of tile backer board.

1.03 REFERENCE STANDARDS

A. ANSI A108/A118/A136.1 - American National Standard Specifications for the Installation of Ceramic Tile - Version; 2013.1.

B. ANSI A108.1A - American National Standard Specifications for Installation of Ceramic Tile in the Wet-Set Method, with Portland Cement Mortar; 2013.1.

C. ANSI A108.1B - American National Standard Specifications for Installation of Ceramic Tile on a Cured Portland Cement Mortar Setting Bed with Dry-Set or Latex-Portland Cement Mortar; 2013.1.

D. ANSI A108.1C - Specifications for Contractors Option: Installation of Ceramic Tile in the Wet-Set Method with Portland Cement Mortar or Installation of Ceramic Tile on a Cured Portland Cement Mortar Bed with Dry-Set or Latex-Portland Cement Mortar; 2013.1.

E. ANSI A108.4 - American National Standard Specifications for Installation of Ceramic Tile with Organic Adhesives or Water Cleanable Tile-Setting Epoxy Adhesive; 2013.1.

F. ANSI A108.5 - American National Standard Specifications for Installation of Ceramic Tile with Dry-Set Portland Cement Mortar or Latex-Portland Cement Mortar; 2013.1.

G. ANSI A108.6 - American National Standard Specifications for Installation of Ceramic Tile with Chemical Resistant, Water Cleanable Tile-Setting and -Grouting Epoxy; 2013.1.

H. ANSI A108.8 - American National Standard Specifications for Installation of Ceramic Tile with Chemical Resistant Furan Resin Mortar and Grout; 2013.1.

I. ANSI A108.9 - American National Standard Specifications for Installation of Ceramic Tile with Modified Epoxy Emulsion Mortar/Grout; 2013.1.

J. ANSI A108.10 - American National Standard Specifications for Installation of Grout in Tilework; 2013.1.

K. ANSI A108.11 - American National Standard Specifications for Interior Installation of Cementitious Backer Units; 2013.1.

L. ANSI A108.12 - American National Standard Specifications for Installation of Ceramic Tile with EGP (Exterior Glue Plywood) Latex-Portland Cement Mortar; 2013.1.

M. ANSI A108.13 - American National Standard Specifications for Installation of Load Bearing, Bonded, Waterproof Membranes for Thin-Set Ceramic Tile and Dimension Stone; 2013.1.

N. ANSI A118.4 - American National Standard Specifications for Modified Dry-Set Cement Mortar; 2013.1.

O. ANSI A118.7 - American National Standard Specifications for High Performance Cement Grouts for Tile Installation; 2013.1.

P. ANSI A137.1 - American National Standard Specifications for Ceramic Tile - Version; 2013.1.

Q. TCNA (HB) - Handbook for Ceramic, Glass, and Stone Tile Installation - Version; 2013.1.

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide manufacturers' data sheets on tile, mortar, grout, and accessories. Include instructions for using grouts and adhesives.

C. Shop Drawings: Indicate tile layout, patterns, color arrangement, perimeter conditions, junctions with dissimilar materials, control and expansion joints, thresholds, and setting details.

D. Samples: Mount tile and apply grout on two plywood panels, minimum 24 x24 inches in size illustrating pattern, color variations, and grout joint size variations.

E. Maintenance Data: Include recommended cleaning methods, cleaning materials, stain removal methods, and polishes and waxes.

F. LEED Submittal: Documentation of recycled content and location of manufacture.

1.05 QUALITY ASSURANCE

A. Maintain one copy of and ANSI A108/A118/A136.1 and TCNA (HB) on site.

B. Installer Qualifications: Company specializing in performing tile installation, with minimum of 5 years of documented experience.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Protect adhesives from freezing or overheating in accordance with manufacturer's instructions.

1.07 FIELD CONDITIONS

A. Do not install solvent-based products in an unventilated environment.

B. Maintain ambient and substrate temperature of 50 degrees F during installation of mortar materials.

**PART 2 PRODUCTS**

2.01 TILE

A. Manufacturers: All products by the same manufacturer.
   1. Dal-Tile Corporation: www.daltile.com.
   2. Substitutions: See Section 01 6000 - Product Requirements.

B. Paver and Wall Tile : ANSI A137.1, and as follows:
   1. Continental Slate manufactured by Daltile or approved equivalent product.
   2. Size and Shape: 18 x 18 inch for floor installation.
   3. Thickness: 5/16 inch
   4. Face: Plain.
   5. Surface Finish: Unglazed.

6. Floor Pattern: As shown.
7. Color(s): As scheduled.
8. Trim Units: Matching bullnose and cove base shapes in sizes coordinated with field tile.

2.02 TRIM AND ACCESSORIES

A. Trim: Porcelian, style and dimensions to match field tile, for setting using tile mortar or adhesive.
   1. Applications: Use in the following locations:
      a. Open edges of wall tile: Bullnose
      b. Wall corners, inside: Jointed.
      c. Floor to wall joints: Cove base.
   2. Manufacturer: Same as field tile.

B. Thresholds: Solid surface material, color as scheduled, honed finish; 4 inches wide by full width of wall or frame opening; 3/4 inch thick; profile as detailed with radiused corners on top side; without holes, cracks, or open seams
   1. Material: So;lid surface: Grade B or C.
   2. Applications: Provide at the following locations:
      a. At doorways where tile terminates.
      b. At open edges of floor tile where adjacent finish is a different height.

2.03 SETTING MATERIALS

A. Latex-Portland Cement Mortar Bond Coat: ANSI A118.4.
   1. Application(s): Use this type of bond coat where indicated and where no other type of bond coat is indicated.
   2. Products:
      a. Custom Building Products; MegaLite: www.custombuildingproducts.com.
      b. LATICRETE International, Inc; LATICRETE 254 Platinum: www.laticrete.com.
      c. Merkrete, by Parex USA, Inc; Merkrete 720 Marble Pro: www.merkrete.com.
      d. ProSpec, an Oldcastle brand; Permalastic System: www.prospec.com.
      e. Substitutions: See Section 01 6000 - Product Requirements.

2.04 MORTAR MATERIALS

A. Mortar Bond Coat Materials for Thin-Set Installations:
   1. Latex-Portland Cement type: ANSI A118.4.

2.05 GROUTS

A. Polymer Modified Grout: ANSI A118.7 polymer modified cement grout.
   1. Applications: Use this type of grout where indicated and where no other type of grout is indicated.
   2. Use sanded grout for joints 1/8 inch wide and larger; use unsanded grout for joints less than 1/8 inch wide.
   3. Color(s): As selected by Architect from manufacturer's full line.

B. Grout Sealant: Manufacturer's standard product for sealing grout joints that does not change color or appearance of grout.
   1. Products:
      a. Bonsal, W. R., Company; Grout Sealer.
      b. Bostik; CeramaSeal Grout Sealer.
      c. C-Cure; Penetrating Sealer 978.
      d. MAPEI Corporation; KER 003, Silicone Spray Sealer for Cementitious Tile Grout.

e. Summitville Tiles, Inc.; SL-15, Invisible Seal Penetrating Grout and Tile Sealer.
f. TEC Specialty Products Inc.; TA-256 Penetrating Silicone Grout Sealer."

2.06 MEDIUM-BED MATERIALS

A. Cementitious self-leveling underlayment:
1. Polymer-modified, self-leveling Portland cement-based underlayment.
2. Product: Ardex TL 1000 manufactured by ARDEX Americas, 400 Ardex Park Drive, Aliquippa, Pennsylvania 15001
3. Primer: Ardex P51.
4. Cementitious bond coat: ANSI A118.6 or better.
5. Concrete Floor Slab Crack Isolation Membrane: Material complying with ANSI A118.12; not intended as waterproofing.
a. Thickness: 20 mils, maximum.
b. Crack Resistance: No failure at 1/16 inch gap, minimum.
c. Providing compliance with performance requirements and manufacturer's installation requirements, the following trowel applied crack prevention membrane is approved:
1) RedGard Waterproofing and Crack Prevention Membrane manufactured by Custom Building Products.
2) LATICRETE International, Inc; LATICRETE Blue 92 Anti-Fracture Membrane: www.laticrete.com.
3) Merkrete, by Parex USA, Inc.; Merkrete Fracture Guard 5000: www.merkrete.com.

**PART 3 EXECUTION**

3.01 EXAMINATION

A. Verify that sub-floor surfaces are smooth and flat within the tolerances specified for that type of work and are ready to receive tile.

B. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive tile.

C. Verify that sub-floor surfaces are dust-free and free of substances that could impair bonding of setting materials to sub-floor surfaces.

D. Verify that concrete sub-floor surfaces are ready for tile installation by testing for moisture emission rate and alkalinity; obtain instructions if test results are not within limits recommended by tile manufacturer and setting materials manufacturer.

E. Verify that required floor-mounted utilities are in correct location.

3.02 PREPARATION

A. Protect surrounding work from damage.

B. Vacuum clean surfaces and damp clean.

C. Seal substrate surface cracks with filler.

3.03 INSTALLATION - GENERAL

A. Install tile, thresholds, and stair treads and grout in accordance with applicable requirements of ANSI A108.1A thru A108.13, manufacturer's instructions, and TCNA (HB) recommendations.

B. Lay tile to pattern indicated. Do not interrupt tile pattern through openings.

C. Cut and fit tile to penetrations through tile, leaving sealant joint space. Form corners and bases neatly. Align floor joints.

D. Place tile joints uniform in width, subject to variance in tolerance allowed in tile size. Make grout joints without voids, cracks, excess mortar or excess grout, or too little grout.

E. Form internal angles square and external angles bullnosed.

F. Install non-ceramic trim in accordance with manufacturer's instructions.

G. Sound tile after setting. Replace hollow sounding units.

H. Keep expansion joints free of adhesive or grout. Apply sealant to joints.

I. Prior to grouting, allow installation to completely cure; minimum of 48 hours.

J. Grout tile joints.

K. Apply sealant to junction of tile and dissimilar materials and junction of dissimilar planes.

3.04 INSTALLATION - FLOORS - THIN-SET METHODS

A. Over interior concrete substrates, install in accordance with The Tile Council of North America Handbook Method F205A, Above-ground Concrete with cementitious Self-leveling underlayment and Ceramic Tile grout, unless otherwise indicated.

1. Use uncoupling membrane under all tile unless other underlayment is indicated.

3.05 INSTALLATION - WALL TILE

A. Over cementitious backer units on studs, install in accordance with TCNA (HB) Method W244, using membrane at toilet rooms.

B. Over interior concrete and masonry install in accordance with TCNA (HB) Method W202, thin-set with dry-set or latex-Portland cement bond coat.

3.06 GROUTING

A. Follow grout manufacturer's recommendations as to grouting procedures and precautions.

B. Remove all grout haze, observing both tile and grout manufacturer's recommendations as to use of acid and chemical cleaners.

C. Rinse tile work thoroughly with clean water before and after chemical cleaners.

D. Polish surface of tile work with soft cloth.

3.07 PROTECTION, CLEANING AND GROUT SEALING

A. Do not permit traffic over finished floor surface for 4 days after installation.

B. Apply to clean, completed tile walls and floors a protective coat of neutral cleaner solution, 1 part cleaner to 1 part water.

C. Cover tile floors with heavy-duty, non-staining construction paper, masked in place.

D. Prior to final acceptance of tile work, remove paper and rinse protective coat of neutral cleaner from all the surfaces.

E. Clean tile and grout surfaces.

F. Apply grout sealant according to manufacturer's directions.

**END OF SECTION**

# SECTION 09 5100
# ACOUSTICAL CEILINGS

## PART 1 GENERAL

1.01 SECTION INCLUDES

A. Refer to Scope Information Sheets for this contract bound in the Project Manual under Section 01 10 00, Summary of Work. The Scope Information Sheets describe generally the work included in each contract, but the work is not necessarily limited to that described.

B. Suspended metal grid ceiling system.

C. Acoustical units.

1.02 REFERENCE STANDARDS

A. ASTM C635/C635M - Standard Specification for the Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings; 2013a.

B. ASTM C636/C636M - Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels; 2013.

C. ASTM E580/E580M - Standard Practice for Installation of Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels in Areas Subject to Earthquake Ground Motions; 2014.

D. ASTM E1264 - Standard Classification for Acoustical Ceiling Products; 2008e1.

1.03 ADMINISTRATIVE REQUIREMENTS

A. Sequence work to ensure acoustical ceilings are not installed until building is enclosed, sufficient heat is provided, dust generating activities have terminated, and overhead work is completed, tested, and approved.

B. Do not install acoustical units until after interior wet work is dry.

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Shop Drawings: Indicate grid layout and related dimensioning, junctions with other ceiling finishes, and mechanical and electrical items installed in the ceiling.

C. Product Data: Provide data on suspension system components and acoustical units.

D. Samples: Submit two samples 6 x 6 inch in size illustrating material and finish of acoustical units.

E. Samples: Submit two samples each, 6 inches long, of suspension system main runner, cross runner, and perimeter molding.

F. Manufacturer's Installation Instructions: Indicate special procedures and perimeter conditions requiring special attention.

1.05 FIELD CONDITIONS

A. Maintain uniform temperature of minimum 60 degrees F, and maximum humidity of 40 percent prior to, during, and after acoustical unit installation.

## PART 2 PRODUCTS

2.01 ACOUSTICAL UNITS

A. Manufacturers:
   1. Armstrong World Industries, Inc: www.armstrong.com.
   2. CertainTeed Corporation: www.certainteed.com.
   3. USG: www.usg.com.
   4. Substitutions: See Section 01 6000 - Product Requirements.

B. Acoustical Panels Type ACP-1: Painted mineral fiber, ASTM E1264, Type IV with the following characteristics:
   1. Size: 24 x 24 inches.
   2. Thickness: 3/4 inches.
   3. Composition: Wet felted.
   4. NRC Range: 0.70 as specified in ASTM E1264.
   5. Ceiling Attenuation Class (CAC): ____, determined in accordance with ASTM E1264.
   6. Edge: Square.
   7. Surface Color: White.
   8. Surface Pattern: Non-directional fissured.
   9. Products:
   10. Suspension System: Exposed grid Type 1 (White).

2.02 SUSPENSION SYSTEM(S)

A. Manufacturers:
   1. Armstrong World Industries, Inc: www.armstrong.com.
   2. USG: www.usg.com.
   3. Substitutions: See Section 01 6000 - Product Requirements.

B. Suspension Systems - General: Complying with ASTM C635/C635M; die cut and interlocking components, with stabilizer bars, clips, splices, perimeter moldings, and hold down clips as required.

C. Exposed Steel Suspension System Type 2: Formed G90 hot-dipped galvanized steel, commercial quality cold rolled; intermediate-duty.
   1. Profile: Tee; 15/16 inch wide face.
   2. Construction: Double web.
   3. Finish: White painted.
   4. Product: Prelude Plus XL by Armstrong.

2.03 ACCESSORIES

A. Support Channels and Hangers: Galvanized steel; size and type to suit application, seismic requirements, and ceiling system flatness requirement specified.

B. Perimeter Moldings: Same material and finish as grid.
   1. At Exposed Grid: Provide L-shaped molding for mounting at same elevation as face of grid.

C. Acoustical Sealant For Perimeter Moldings: Specified in Section 07 9005.

D. Touch-up Paint: Type and color to match acoustical and grid units.

**PART 3 EXECUTION**

3.01 INSTALLATION - SUSPENSION SYSTEM

A. Install suspension system in accordance with ASTM C636/C636M, ASTM E580/E580M, and manufacturer's instructions and as supplemented in this section.

B. Rigidly secure system, including integral mechanical and electrical components, for maximum deflection of 1:360.

C. Install after major above-ceiling work is complete. Coordinate the location of hangers with other work.

D. Hang suspension system independent of walls, columns, ducts, pipes and conduit. Where carrying members are spliced, avoid visible displacement of face plane of adjacent members.

E. Where ducts or other equipment prevent the regular spacing of hangers, reinforce the nearest affected hangers and related carrying channels to span the extra distance.

F. Do not support components on main runners or cross runners if weight causes total dead load to exceed deflection capability.

G. Support fixture loads using supplementary hangers located within 6 inches of each corner, or support components independently.

H. Do not eccentrically load system or induce rotation of runners.

I. Perimeter Molding: Install at intersection of ceiling and vertical surfaces and at junctions with other interruptions.
   1. Use longest practical lengths.
   2. Overlap and rivet corners.

3.02 INSTALLATION - ACOUSTICAL UNITS

A. Install acoustical units in accordance with manufacturer's instructions.

B. Fit acoustical units in place, free from damaged edges or other defects detrimental to appearance and function.

C. Fit border trim neatly against abutting surfaces.

D. Install units after above-ceiling work is complete.

E. Install acoustical units level, in uniform plane, and free from twist, warp, and dents.

F. Cutting Acoustical Units:
   1. Make field cut edges of same profile as factory edges.

G. Where round obstructions occur, provide preformed closures to match perimeter molding.

3.03 TOLERANCES

A. Maximum Variation from Flat and Level Surface: 1/8 inch in 10 feet.

B. Maximum Variation from Plumb of Grid Members Caused by Eccentric Loads: 2 degrees.

**END OF SECTION**

# SECTION 09 6500
# RESILIENT FLOORING

## PART 1 GENERAL

1.01 SECTION INCLUDES

A. Refer to Scope Information Sheets for this contract bound in the Project Manual under Section 01 1000, Summary of Work. The Scope Information Sheets describe generally the work included in each contract, but the work is not necessarily limited to that described.

B. Resilient tile flooring.

C. Resilient base.

D. Installation accessories.

1.02 RELATED REQUIREMENTS

A. Section 09 0561 - Common Work Results for Flooring Preparation: Independent agency testing of concrete slabs, cleaning, and preparation.

1.03 REFERENCE STANDARDS

A. ASTM E648 - Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source; 2014c.

B. ASTM F710 - Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring; 2011.

C. ASTM F1066 - Standard Specification for Vinyl Composition Floor Tile; 2004 (Reapproved 2010)e1.

D. ASTM F1861 - Standard Specification for Resilient Wall Base; 2008 (Reapproved 2012)e1.

E. BAAQMD 8-51 - Bay Area Air Quality Management District Regulation 8, Rule 51, Adhesive and Sealant Products; www.baaqmd.gov; 2002.

F. RFCI (RWP) - Recommended Work Practices for Removal of Resilient Floor Coverings; Resilient Floor Covering Institute; October 2011.

G. SCAQMD 1168 - South Coast Air Quality Management District Rule No.1168; current edition; www.aqmd.gov.

H. SCS (CPD) - SCS Certified Products; Scientific Certification Systems; current listings at www.scscertified.com.

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide data on specified products, describing physical and performance characteristics; including sizes, patterns and colors available; and installation instructions.

C. Selection Samples: Submit manufacturer's complete set of color samples for Architect's initial selection.

D. Verification Samples: Submit two samples, 12 x 12 inch in size illustrating color and pattern for each resilient flooring product specified.

E. Certification: Prior to installation of flooring, submit written certification by flooring manufacturer and adhesive manufacturer that condition of sub-floor is acceptable.

1.05 FIELD CONDITIONS

A. Maintain temperature in storage area between 55 degrees F and 90 degrees F.

B. Store materials for not less than 48 hours prior to installation in area of installation at a temperature of 70 degrees F to achieve temperature stability. Thereafter, maintain conditions above 55 degrees F.

**PART 2 PRODUCTS**

2.01 TILE FLOORING

A. Vinyl Composition Tile: Homogeneous, with color extending throughout thickness, and:
   1. Minimum Requirements: Comply with ASTM F1066, of Class corresponding to type specified.
   2. Critical Radiant Flux (CRF): Minimum 0.45 watt per square centimeter, when tested in accordance with ASTM E 648.
   3. Size: 12 x 12 inch.
   4. VOC Content: Certified as Low Emission by one of the following :
      a. SCS Floorscore; www.scscertified.com.
   5. Thickness: 0.125 inch.
   6. Pattern: Mottled.
   7. Manufacturers:
      a. Armstrong World Industries, Inc; Product Standard Excelon: www.armstrong.com.
      b. Substitutions: See Section 01 6000 - Product Requirements.

2.02 RESILIENT BASE

A. Resilient Base: ASTM F1861, Type TS rubber, vulcanized thermoset; top set Style B, Cove, and as follows:
   1. Critical Radiant Flux (CRF): Minimum 0.45 watt per square centimeter, when tested in accordance with ASTM E 648.
   2. Height: 4 inch.
   3. Thickness: 0.125 inch thick.
   4. Finish: Satin.
   5. Length: Roll.
   6. Color: Color as selected from manufacturer's standards.
   7. Manufacturers:
      a. Johnsonite, a Tarkett Company: www.johnsonite.com.
      b. Substitutions: See Section 01 6000 - Product Requirements.

2.03 ACCESSORIES

A. Subfloor Filler: White premix latex; type recommended by adhesive material manufacturer.

B. Primers, Adhesives, and Seaming Materials: Waterproof; types recommended by flooring manufacturer.
   1. Provide only products having lower volatile organic compound (VOC) content than required by the more stringent of the South Coast Air Quality Management District Rule No.1168 and the Bay Area Air Quality Management District Regulation 8, Rule 51.

C. Moldings, Transition and Edge Strips: manufactured by Johnsonite, Inc.

**PART 3 EXECUTION**

3.01 EXAMINATION

A. Verify that surfaces are flat to tolerances acceptable to flooring manufacturer, free of cracks that might telegraph through flooring, clean, dry, and free of curing compounds, surface hardeners, and other chemicals that might interfere with bonding of flooring to substrate.

B. Cementitious Sub-floor Surfaces: Verify that substrates are dry enough and ready for resilient flooring installation by testing for moisture and pH.
   1. Test in accordance with Section 09 0561.
   2. Obtain instructions if test results are not within limits recommended by resilient flooring manufacturer and adhesive materials manufacturer.

3.02 PREPARATION

A. Remove existing resilient flooring and flooring adhesives; follow the recommendations of RFCI Recommended Work Practices for Removal of Resilient Floor Coverings.

B. Prepare floor substrates as recommended by flooring and adhesive manufacturers.

C. Remove sub-floor ridges and bumps. Fill minor low spots, cracks, joints, holes, and other defects with sub-floor filler to achieve smooth, flat, hard surface.

D. Prohibit traffic until filler is cured.

E. Apply primer as required to prevent "bleed-through" or interference with adhesion by substances that cannot be removed.

3.03 INSTALLATION

A. Starting installation constitutes acceptance of sub-floor conditions.

B. Install in accordance with manufacturer's instructions.

C. Spread only enough adhesive to permit installation of materials before initial set.

D. Fit joints tightly.

E. Set flooring in place, press with heavy roller to attain full adhesion.

F. Where type of floor finish, pattern, or color are different on opposite sides of door, terminate flooring under centerline of door.

G. Install edge strips at unprotected or exposed edges, where flooring terminates, and where indicated.

H. Scribe flooring to walls, columns, cabinets, floor outlets, and other appurtenances to produce tight joints.

3.04 TILE FLOORING

A. Mix tile from container to ensure shade variations are consistent when tile is placed, unless manufacturer's instructions say otherwise.

B. Lay flooring with joints and seams parallel to building lines to produce symmetrical tile pattern.

C. Install tile to monolithic pattern. Allow minimum 1/2 full size tile width at room or area perimeter.

3.05 RESILIENT BASE

A. Fit joints tightly and make vertical. Maintain minimum dimension of 18 inches between joints.

B. Miter internal corners. At external corners, 'V' cut back of base strip to 2/3 of its thickness and fold.

C. Install base on solid backing. Bond tightly to wall and floor surfaces.

D. Scribe and fit to door frames and other interruptions.

3.06 CLEANING

A. Remove excess adhesive from floor, base, and wall surfaces without damage.

B. Clean in accordance with manufacturer's instructions.

3.07 PROTECTION

A. Prohibit traffic on resilient flooring for 48 hours after installation.

**END OF SECTION**

# SECTION 09 9001
# PAINTS AND COATINGS

## PART 1 GENERAL

1.01 SECTION INCLUDES

A. Surface preparation.

B. Field application of paints.

C. Surfaces to be finished are indicated in this section and on the Drawings.

1.02 RELATED REQUIREMENTS

A. Section 01 6116 - Volatile Organic Compound (VOC) Content Restrictions.

B. Section 05 5000 - Metal Fabrications: Shop-primed items.

1.03 REFERENCE STANDARDS

A. 40 CFR 59, Subpart D - National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency; current edition.

B. MPI (APL) - Master Painters Institute Approved Products List; Master Painters and Decorators Association; current edition, www.paintinfo.com.

C. MPI (APSM) - Master Painters Institute Architectural Painting Specification Manual; Master Painters and Decorators Association; 2004.

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide complete list of all products to be used, with the following information for each:

1. Manufacturer's name, product name and/or catalog number, and general product category (e.g. "alkyd enamel").
2. MPI product number (e.g. MPI #47).
3. Cross-reference to specified paint system(s) product is to be used in; include description of each system (copy of relevant MPI Manual page is acceptable).

C. Certification: By manufacturer that all paints and coatings comply with VOC limits specified.

D. Samples: Submit one paper "drop" samples, 8-1/2 by 11 inches in size, illustrating colors selected for each finishing product specified.

1. Where sheen is specified, submit samples in only that sheen.

1.05 QUALITY ASSURANCE

A. Applicator Qualifications: Company specializing in performing the work of this section with minimum 5 years experience.

B. Material Safety Data Sheets: At project site maintain file of MSDS sheets for each product used; become familiar with and follow manufacturer's stated application and safety requirements.

1.06 MOCK-UP

A. See Section 01 4000 - Quality Requirements, for general requirements for mock-up.

B. Provide wall panel, 8 feet long by 10 feet wide, illustrating coating color, texture, and finish.

C. Locate where directed.

D. Mock-up may remain as part of the Work.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.

B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.

C. Paint Materials: Store at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and as required by manufacturer's instructions.

1.08 FIELD CONDITIONS

A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.

B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.

C. Do not apply exterior coatings during rain or snow, or when relative humidity is outside the humidity ranges required by the paint product manufacturer.

D. Minimum Application Temperatures for Latex Paints: 45 degrees F for interiors; 50 degrees F for exterior; unless required otherwise by manufacturer's instructions.

E. Provide lighting level of 80 ft candles measured mid-height at substrate surface.

1.09 EXTRA MATERIALS

A. See Section 01 6000 - Product Requirements, for additional provisions.

B. Supply 1 gallon of each color; store where directed.

C. Label each container with color in addition to the manufacturer's label.

**PART 2 PRODUCTS**

2.01 MANUFACTURERS

A. Provide all paint and coating products from the same manufacturer to the greatest extent possible.

B. In the event that a single manufacturer cannot provide all specified products, minor exceptions will be permitted provided approval by Architect is obtained using the specified procedures for substitutions.

C. Paints: Acceptable manufacturers are limited to the following:
   1. Benjamin Moore & Co: www.benjaminmoore.com.
   2. Sherwin-Williams: www.sherwin-williams.com.
   3. Glidden Professional: www.gliddenprofessional.com.

D. Substitutions: See Section 01 6000 - Product Requirements.

2.02 MATERIALS - GENERAL

A. Volatile Organic Compound (VOC) Content:
   1. Provide coatings that comply with the most stringent requirements specified in the following:
      a. 40 CFR 59, Subpart D--National Volatile Organic Compound Emission Standards for Architectural Coatings.
      b. Ozone Transport Commission (OTC) Model Rule, Architectural, Industrial, and Maintenance Coatings; www.otcair.org; specifically:
         1) Opaque, Flat: 50 g/L, maximum.
         2) Opaque, Nonflat: 150 g/L, maximum.
         3) Opaque, High Gloss: 250 g/L, maximum.

4) Varnishes: 350 g/L, maximum.
c. Architectural coatings VOC limits of State in which the project is located.
2. Determination of VOC Content: Testing and calculation in accordance with 40 CFR 59, Subpart D (EPA Method 24), exclusive of colorants added to a tint base and water added at project site; or other method acceptable to authorities having jurisdiction.

B. Paints and Coatings: Provide products listed in Master Painters Institute Approved Product List, current edition available at www.paintinfo.com, for specified MPI Categories, except as otherwise indicated.
1. Provide ready mixed paints and coatings .
2. Provide materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.

2.03 PAINT SYSTEMS

A. Provide Premium Grade systems (2 top coats) as defined in MPI Architectural Painting Specification Manual, except as otherwise indicated.

B. Provide colors as directed by Architect.
1. Allow for minimum of five colors for each system, unless otherwise indicated, without additional cost to Owner.
2. Extend colors to surface edges; colors may change at any edge as directed by Architect.

2.04 EXTERIOR PAINT SYSTEMS

A. SYSTEM E-1:
1. Substrate: Structural Steel and Metal Fabrications:
2. Applications include but are not limited to miscellaneous metal boxes and covers.
3. Manufacturers and products:
a. Sherwin Williams:
1) 1st Coat: S-W Pro Industrial Pro-Cryl Universal Primer, B66-310 Series
2) 2nd Coat: S-W A-100 Exterior Latex Gloss, A8 Series
3) 3rd Coat: S-W A-100 Exterior Latex Gloss, A8 Series
b. Benjamin Moore:
1) 1st Coat: Moore PO6 Super Spec HP Alkyd Metal Primer
2) 2nd Coat: 096 MoorGlo Acrylic Semi-Gloss House Paint
3) 3rd Coat: 096 MoorGlo Acrylic Semi-Gloss House Paint
c. Glidden Professional:
1) 1st Coat: Devoe Coatings DEVFLEX Direct-to-Metal 4020 primer
2) 2nd Coat: Glidden Professional Fortis 450 6407 topcoat
3) 3rd Coat: Glidden Professional Fortis 450 6407 topcoat

B. SYSTEM E-2:
1. Substrate: Galvanized Metal, Not Chromate Passivated:
2. Applications include but are not limited to doors and frames, lintels and bollards.
3. Manufacturers and Products:
a. Sherwin Williams:
1) 1st Coat:S-W Pro Industrial Pro-Cryl® Primer, B66-310 Series
2) 2nd Coat:S-W DTM Acrylic Coating, Semi-Gloss, B66-200 Series
3) 3rd Coat:S-W DTM Acrylic Coating, Semi-Gloss, B66-200 Series
b. Benjamin Moore:
1) 1st Coat: Moore P04 Super Spec HP Acrylic Metal Primer
2) 2nd Coat:Moore N096 MoorGlo Acrylic Semi-Gloss House Paint

3) 3rd Coat:Moore N096 MoorGlo Acrylic Semi-Gloss House Paint
c. Glidden Professional:
1) 1st Coat: Devoe Coatings DEVFLEX Direct-to-Metal 4020 primer
2) 2nd Coat: Glidden Professional Fortis 450 6407 topcoat
3) 3rd Coat: Glidden Professional Fortis 450 6407 topcoat

2.05 INTERIOR PAINT SYSTEMS

A. SYSTEM I-1:
1. Substrate: Concrete Masonry Units
2. Manufacturers and Products:
a. Sherwin Williams:
1) 1st Coat:S-W PrepRite® Block Filler, B25W25
2) 2nd Coat:S-W ProMar® 200 Latex Flat
3) 3rd Coat:S-W ProMar® 200 Latex Flat
b. Benjamin Moore:
1) 1st Coat:Moore 160 Super Spec Latex Block Filler
2) 2nd Coat:333 Regal AquaGlo Acrylic Flat Enamel
3) 3rd Coat:333 Regal AquaGlo Acrylic Flat Enamel
c. Glidden Professional:
1) 1st Coat:Glidden Professional Block Filler 3010 primer
2) 2nd Coat:Glidden Professional Diamond 450 Flat
3) 3rd Coat:Glidden Professional Diamond 450 Flat

B. SYSTEM I-2
1. Substrate: Concrete Masonry Units (Epoxy paint, Semi-gloss finish)
2. Manufacturers and Products:
a. Sherwin Williams:
1) 1st Coat:S-W Heavy Duty Block Filler, B42W46
2) 2nd Coat:S-W Pro Industrial HB/ Waterbased Epoxy, B71W111/B71W100 Series
3) 3rd Coat:S-W Pro Industrial HB/ Waterbased Epoxy, B71W111/B71W100 Series
b. Benjamin Moore:
1) 1st Coat: Super Spec HP Waterborne Epoxy Block Filler P31
2) 2nd Coat:Super Spec HP Acrylic Epoxy Coating P43
3) 3rd Coat:Super Spec HP Acrylic Epoxy Coating P43
c. Glidden Professional:
1) 1st Coat:Tru-Glaze 4015 Block Filler
2) 2nd Coat:Tru-Glaze WB 4426 Water-Based Epoxy
3) 3rd Coat:Tru-Glaze WB 4426 Water-Based Epoxy

C. SYSTEM I-3
1. Substrate: Structural Steel and Metal Fabrications:
2. FInish: Semi-Gloss.
3. Manufacturers and Products:
a. Sherwin Williams:
1) 1st Coat:S-W Pro Industrial Pro-Cryl® Primer, B66-310 Series
2) 2nd Coat: S-W ProMar® 200 Latex Flat
3) 3rd Coat:S-W ProMar® 200 Latex Flat
b. Benjamin Moore:
1) 1st Coat: Moore P04 Super Spec HP Acrylic Metal Primer
2) 2nd Coat:N333 Regal AquaGlo Acrylic Flat Enamel

3) 3rd Coat: N333 Regal AquaGlo Acrylic Flat Enamel

c. Glidden Professional:

1) 1st Coat: Devoe Coatings DEVFLEX Direct-to-Metal 4020 primer
2) 2nd Coat:Glidden Professional Diamond 450 Flat
3) 3rd Coat:Glidden Professional Diamond 450 Flat

D. SYSTEM I-4

1. Substrate: Hollow metal door frames:
2. Finish: Gloss.
3. Manufacturers and Products:

a. Sherwin Williams:

1) 1st Coat: DTM Acrylic Primer/Finish, B66W1
2) 2nd Coat:DTM Acrylic Gloss Coating, B66W100
3) 3rd Coat: DTM Acrylic Gloss Coating, B66W100

b. Benjamin Moore:

1) 1st Coat: Moorcraft Super Spec DTM Alkyd Satin, Z163
2) 2nd Coat:Moorcraft Super Spec Urethane Gloss Enamel, Z22
3) 3rd Coat: Moorcraft Super Spec Urethane Gloss Enamel, Z22

c. Glidden Professional:

1) 1st Coat: DEVGUARD 4360 Low VOC Universal Primer
2) 2nd Coat:DEVGUARD 4309 Rust Preventative Gloss Enamel
3) 3rd Coat: DEVGUARD 4309 Rust Preventative Gloss Enamel

E. SYSTEM I-5

1. Substrate: Galvanized Metal, Not Chromate Passivated:
2. Applications include but are not limited to doors, frames, railings, and exposed ductwork.
3. Manufacturers and Products:

a. Sherwin WIlliams:

1) 1st Coat:S-W Pro Industrial Pro-Cryl® Primer, B66-310 Series
2) 2nd Coat:S-W ProMar® 200 Latex Flat
3) 3rd Coat:S-W ProMar® 200 Latex Flat

b. Benjamin Moore:

1) 1st Coat: Moore P04 Super Spec HP Acrylic Metal Primer
2) 2nd Coat:N333 Regal AquaGlo Acrylic Flat Enamel
3) 3rd Coat:N333 Regal AquaGlo Acrylic Flat Enamel

c. Glidden Professional:

1) 1st Coat: Devoe Coatings DEVFLEX Direct-to-Metal 4020 primer
2) 2nd Coat:Glidden Professional Diamond 450 Flat
3) 3rd Coat:Glidden Professional Diamond 450 Flat

F. SYSTEM I-7 - NOT USED

G. SYSTEM I-8 - NOT USED

H. SYSTEM I-9

1. Substrate: Gypsum Board (Satin Finish):
2. Applications include but are not limited to walls, ceilings, soffits, and bulkheads.
3. Manufacturers and Products:

a. Sherwin Williams:

1) 1st Coat:S-W PrepRite 200 Int. Latex Primer, B28 Series
2) 2nd Coat:S-W ProMar® 200 Latex Eggshell, B20Series
3) 3rd Coat:S-W ProMar® 200 Latex Semi-Gloss, B31Series

b. Benjamin Moore:
   1) 1st Coat: Moore P04 Super Spec HP Acrylic Metal Primer
   2) 2nd Coat:N319 Regal Acrylic Latex Eggshell Finish Enamel
   3) 3rd Coat:N319 Regal Acrylic Latex Eggshell Finish Enamel
c. Glidden Professional:
   1) 1st Coat: Glidden Professional High Hide 1000 primer
   2) 2nd Coat:Glidden Professional Diamond 450 7300 topcoat
   3) 3rd Coat:Glidden Professional Diamond 450 7300 topcoat

I. SYSTEM I-11
   1. Substrate: Concrete Floor (Sealed):
   2. Manufacturers and Products:
      a. W. R. Meadows:
         1) 1st Coat:CS-309/30 Concrete Curing and Sealing Compound

**PART 3 EXECUTION**

3.01 SCOPE -- SURFACES TO BE FINISHED

A. Paint all exposed surfaces except where indicated not to be painted or to remain natural; the term "exposed" includes areas visible through permanent and built-in fixtures when they are in place.

B. Paint the surfaces described in PART 2, indicated on the Drawings, and as follows:
   1. If a surface, material, or item is not specifically mentioned, paint in the same manner as similar surfaces, materials, or items, regardless of whether colors are indicated or not.
   2. Paint surfaces behind movable equipment and furnishings the same as similar exposed surfaces.
   3. Paint surfaces to be concealed behind permanently installed fixtures, equipment, and furnishings, using primer only, prior to installation of the permanent item.
   4. Paint back sides of access panels and removable and hinged covers to match exposed surfaces.
   5. Finish top, bottom, and side edges of exterior doors the same as exposed faces.
   6. Paint all insulated and exposed pipes, conduit, boxes, insulated and exposed ducts, hangers, brackets, collars and supports, mechanical equipment, and electrical equipment occurring in finished areas to match background surfaces, unless otherwise indicated.
   7. Paint shop-primed mechanical and electrical items occurring in finished areas.
   8. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.
   9. Paint interior surfaces of air ducts and convector and baseboard heating cabinets with flat, nonspecular black paint where visible through registers, grilles, or louvers.
   10. Paint dampers exposed behind louvers, grilles, to match face panels.
   11. Paint both sides and edges of plywood backboards for electrical and telephone equipment before installing equipment.

C. Do Not Paint or Finish the Following Items:
   1. Items fully factory-finished unless specifically noted; factory-primed items are not considered factory-finished.
   2. Items indicated to receive other finish.
   3. Items indicated to remain naturally finished.
   4. Fire rating labels, equipment serial number and capacity labels, and operating parts of equipment.
   5. Anodized aluminum.

6. Polished and brushed stainless steel items.
7. Brick, precast concrete, integrally colored plaster.
8. Polished and brushed stainless steel, anodized aluminum, bronze, terne, and lead.
9. Acoustical materials.
10. Concealed piping, ductwork, and conduit.

3.02 EXAMINATION

A. Verify that surfaces are ready to receive Work as instructed by the product manufacturer.

B. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.

C. Test shop-applied primer for compatibility with subsequent cover materials; report incompatible primer conditions and submit recommended changes for Architect's approval.

D. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:
   1. Plaster and Gypsum Board: 12 percent.
   2. Masonry, Concrete, and Concrete Unit Masonry: 12 percent.
   3. Exterior Wood: 15 percent, measured in accordance with ASTM D4442.

E. Measure the ph factor of concrete, masonry, and mortar before starting any finishing process, using the method specified in MPI Architectural Painting Manual.
   1. Report results in writing to Architect before starting work.
   2. If results of test indicates need for remedial action, provide written description of remedial action. If a different primer or paint systems is required, state the total cost of the change. Do not proceed with remedial action or change without receiving written authorization from Architect.

3.03 PREPARATION

A. Prepare surfaces as specified in MPI Architectural Painting Specification Manual and as follows for the applicable surface and coating; if multiple preparation treatments are specified, use as many as necessary for best results; where the Manual references external standards for preparation (e.g. SSPC standards), prepare as specified in those standards; comply with coating manufacturer's specific preparation methods or treatments, if any.

B. Coordinate painting work with cleaning and preparation work so that dust and other contaminants do not fall on newly painted, wet surfaces.

C. Surface Appurtenances: Prior to preparing surfaces or finishing, remove electrical plates, hardware, light fixtures, light fixture trim, escutcheons, machined surfaces, fittings, and similar items already installed that are not to be painted.
   1. If removal is impractical or impossible because of the size or weight of the item, provide surface-applied protection before preparation and finishing.
   2. After completing painting in each space or area, reinstall items removed using workers skilled in the trades involved.

D. Surfaces: Correct defects and clean surfaces which affect work of this section.

E. Marks: Seal with shellac those which may bleed through surface finishes.

F. Impervious Surfaces: Remove mildew by scrubbing with solution of tetra-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.

G. Concrete, Cement Plaster and Unit Masonry Surfaces to be Painted: Remove dirt, loose mortar, scale, salt or alkali powder, and other foreign matter. Remove oil and grease with a solution of tri-sodium phosphate; rinse well and allow to dry. Remove stains caused by weathering of corroding metals with a solution of sodium metasilicate after thoroughly wetting with water. Allow to dry.

H. Gypsum Board Surfaces to be Painted: Fill minor defects with filler compound. Spot prime defects after repair.

I. Galvanized Surfaces to be Painted: Remove surface contamination and oils and wash with solvent. Apply coat of etching primer.

J. Uncoated Steel and Iron Surfaces to be Painted: Remove grease, mill scale, weld splatter, dirt, and rust. Where heavy coatings of scale are evident, remove by hand wire brushing or sandblasting; clean by washing with solvent. Apply a treatment of phosphoric acid solution, ensuring weld joints, bolts, and nuts are similarly cleaned. Prime paint entire surface; spot prime after repairs.

K. Shop-Primed Steel Surfaces to be Finish Painted: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces. Re-prime entire shop-primed item.

L. Interior Wood Items to Receive Transparent Finish: Sand wood to obtain a uniform appearance before immediately starting work. Wipe off dust and grit prior to sealing, seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after sealer has dried; sand lightly between coats. Prime concealed surfaces with gloss varnish reduced 25 percent with thinner.

M. Metal Doors to be Painted: Prime metal door top and bottom edge surfaces.

3.04 APPLICATION

A. Apply products in accordance with manufacturer's instructions and as specified or recommended by MPI Manual, using the preparation, products, sheens, textures, and colors as indicated.
   1. Remove, refinish, or repaint work not complying with requirements.

B. Do not apply finishes over dirt, rust, scale, grease, moisture, scuffed surfaces, or other conditions detrimental to formation of a durable coating film; do not apply finishes to surfaces that are not dry.

C. Use applicators and methods best suited for substrate and type of material being applied and according to manufacturer's instructions.

D. Minimum Coating Thickness: Apply paint materials no thinner than manufacturer's recommended spreading rate; provide total dry film thickness of entire system as recommended by manufacturer.
   1. Number of coats and film thickness required are the same regardless of application method.
   2. If undercoats, stains, or other conditions show through final coat of paint, apply additional coats until paint film is of uniform finish, color, and appearance.
   3. Give special attention to ensure edges, corners, crevices, welds, and exposed fasteners receive dry film thickness equivalent to that of flat surfaces.

E. Apply finish to completely cover surfaces with uniform appearance without brush marks, runs, sags, laps, ropiness, holidays, spotting, cloudiness, or other surface imperfections.
   1. Before applying finish coats, apply a prime coat of material recommended by manufacturer, unless the surface has been prime coated by others; where evidence of suction spots or unsealed areas in first coat appear, recoat primed and sealed surfaces to ensure finish coat with no burn through or other defects due to insufficient sealing.
   2. Apply first coat to surface that has been cleaned, pretreated, or otherwise prepared as soon as practical after preparation and before subsequent surface deterioration.
   3. Do not apply succeeding coats until the previous coat has cured as recommended by manufacturer.

4. Do not recoat until paint has dried to where it feels firm, does not deform or feel sticky under moderate thumb pressure, and application of another coat will not cause the undercoat to lift or lose adhesion.
5. If manufacturer's instructions recommend sanding to produce a smooth, even surface, sand between coats.
6. Before applying next coat vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.
7. Pigmented (Opaque) Finishes: Provide smooth, opaque surface of uniform finish, color, appearance, and coverage.

3.05 FIELD QUALITY CONTROL

A. See Section 01 4000 - Quality Requirements, for general requirements for field inspection.

B. Owner will provide field inspection.

3.06 CLEANING AND PROTECTION

A. Collect waste material which may constitute a fire hazard, place in closed metal containers, and remove daily from site.

B. At the end of each workday, remove empty cans, rags, rubbish, and other discarded paint materials from site.

C. Protect other work, whether being painted or not, against damage by painting. Correct damage by cleaning, repairing or replacing, and repainting as approved by Architect.

D. Provide "Wet Paint" signs to protect newly painted finishes. Remove temporary protective wrappings provided by others to protect their work after completing painting operations.

E. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces. Comply with procedures specified in MPI Manual.

**END OF SECTION**

# SECTION 10 2800
# TOILET ACCESSORIES

## PART 1 GENERAL

1.01 SECTION INCLUDES

A. Refer to Scope Information Sheets for this contract bound in the Project Manual under Section 01 10 00, Summary of Work. The Scope Information Sheets describe generally the work included in each contract, but the work is not necessarily limited to that described.

B. Accessories for toilet rooms.

C. Grab bars.

1.02 RELATED REQUIREMENTS

A. Section 10 2113.19 - Solid Composite Toilet Compartments.

1.03 REFERENCE STANDARDS

A. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2013.

B. ASTM A269/A269M - Standard Specification for Seamless and Welded Austenitic Stainless Steel Tubing for General Service; 2014e1.

C. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2013.

D. ASTM A666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar; 2010.

E. ASTM C1036 - Standard Specification for Flat Glass; 2011e1.

F. ASTM C1503 - Standard Specification for Silvered Flat Glass Mirror; 2008 (Reapproved 2013).

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide data on accessories describing size, finish, details of function, attachment methods.

C. Manufacturer's Installation Instructions: Indicate special procedures and conditions requiring special attention.

## PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Products listed are made by Bobrick and Bradley Corporation.

B. Other Acceptable Manufacturers:
   1. A & J Washroom Accessories Inc: www.ajwashroom.com.
   2. American Specialties, Inc: www.americanspecialties.com.
   3. Substitutions: Section 01 6000 - Product Requirements.

C. All items of each type to be made by the same manufacturer.

2.02 MATERIALS

A. Accessories - General: Shop assembled, free of dents and scratches and packaged complete with anchors and fittings, steel anchor plates, adapters, and anchor components for installation.
   1. Grind welded joints smooth.
   2. Fabricate units made of metal sheet of seamless sheets, with flat surfaces.

B. Stainless Steel Sheet: ASTM A666, Type 304.

C. Stainless Steel Tubing: ASTM A269/A269M, Type 304 or 316.

D. Galvanized Sheet Steel: Hot-dipped galvanized steel sheet, ASTM A653/A653M, with G90/Z275 coating.

E. Mirror Glass: Float glass, ASTM C1036 Type I, Class 1, Quality Q2, with silvering, protective and physical characteristics complying with ASTM C1503.

F. Adhesive: Two component epoxy type, waterproof.

G. Fasteners, Screws, and Bolts: Hot dip galvanized, tamper-proof, security type.

H. Expansion Shields: Fiber, lead, or rubber as recommended by accessory manufacturer for component and substrate.

2.03 FINISHES

A. Stainless Steel: No. 4 satin brushed finish, unless otherwise noted.

B. Baked Enamel: Pretreat to clean condition, apply one coat primer and minimum two coats epoxy baked enamel.

C. Galvanizing for Items Other than Sheet: Comply with ASTM A123/A123M; galvanize ferrous metal and fastening devices.

2.04 TOILET ROOM ACCESSORIES

A. Toilet Paper Dispenser: Jumbo Roll Dispenser
   1. Product: San-Jamar Model No. R4000TBK.

B. Not Used

C. Paper Towel Dispenser: Folded paper type, Black Pearl ABS cover, surface-mounted, .
   1. Product: T1490TBK manufactured by San-Jamar.

D. Not Used

E. Waste Receptacle:
   1. Product: Floor Type, Model # 3546 manufactured by Rubbermaid.

F. Soap Dispenser: Soap dispenser, wall-mounted, surface, with black ABS cover .
   1. Product: #S890TBK manufactured by San-Jamar.

G. Mirrors: Stainless steel framed, 6 mm thick laminated glass mirror.
   1. Series B- 290 manufactured by Bobrick.
   2. Size: 18 x 30 inches and 24 x 60 inches, as shown.
   3. Frame: 0.05 inch angle shapes, with mitered and welded and ground corners, and tamperproof hanging system; No.4 finish.
   4. Backing: Full-mirror sized, minimum 0.03 inch galvanized steel sheet and nonabsorptive filler material.

H. Grab Bars: Stainless steel, 1-1/2 inches outside diameter, minimum 0.05 inch wall thickness, nonslip grasping surface finish, concealed flange mounting; 1-1/2 inches clearance between wall and inside of grab bar.
   1. Length and configuration: As indicated on drawings.
   2. Product: B-6806 Series manufactured by Bobrick.

I. Not Used

J. Sanitary Napkin Disposal Unit: Stainless steel, surface-mounted, self-closing door, locking bottom panel with full-length stainless steel piano-type hinge, removable receptacle.
   1. Product: B-254 manufactured by Bobrick.

**PART 3 EXECUTION**

3.01 EXAMINATION

A. Verify existing conditions before starting work.

B. Verify exact location of accessories for installation.

C. Verify that field measurements are as indicated on drawings.

3.02 PREPARATION

A. Deliver inserts and rough-in frames to site for timely installation.

B. Provide templates and rough-in measurements as required.

3.03 INSTALLATION

A. Install accessories in accordance with manufacturers' instructions in locations indicated on the drawings.

B. Install plumb and level, securely and rigidly anchored to substrate.

C. Mounting Heights: As required by accessibility regulations, unless otherwise indicated.

D. Mounting Heights and Locations: As required by accessibility regulations and as indicated on drawings

**END OF SECTION**

# SECTION 12 6116
# FIXED AUDIENCE SEATING

## PART 1 GENERAL

1.01 RELATED DOCUMENTS

A. Refer to Scope Information Sheets for this contract bound in the Project Manual under Section 01 10 00, Summary of Work. The scope Information Sheets describe generally the work included in each contract, but the work is not necessarily limited to that described.

B. Provide all material, labor, equipment and services and perform all operations necessary or required for the work of the section, in accordance with Drawings and Specifications, and including fabrication and installation of fixed audience seating.

1.02 SUMMARY

A. Deliver and install fixed padded and upholstered chairs as specified, floor mounted, with self-lifting seat which rises to a uniform full safety fold position.

1.03 COORDINATION

A. Do not deliver or install seating until space is free of lifts and/or scaffolding used by other trades which may interfere with installation and/or damage seating.

B. Coordinate concrete requirements needed for proper installation.

1.04 ACTION SUBMITTALS

A. Product data for each chair model specified to include construction details, material descriptions and finish options

B. Seating layout (shop drawings) developed from the contract drawings which show aisle widths, chair spacing for each row, row-lettering and chair-numbering scheme, chair dimensions and back pitch. Layout drawings to also include locations for accessories, electrical devices, accessibility provisions and attachments to other work.

C. Samples for verification & finish selection to include:
   1. Finish selections to be made from manufacturer's standard color and fabric guides.

D. Maintenance instructions and inspection guidelines furnished for each chair model specified.

E. Manufacturer's standard warranty.

1.05 INFORMATIONAL SUBMITTALS

A. Welding certificates.

1.06 QUALITY ASSURANCE

A. Source Limitations:
   1. Obtain each type of fixed seating required, including accessories and mounting components, from a single manufacturer.
   2. Obtain fabric of a single dye lot for each color and pattern of fabric required except when yardage requirement exceeds maximum dye lot. Multiple dye lots shall be color matched for quality assurance.

B. Fire Performance Characteristics of Upholstered Seating:
   1. Fabric shall be Class 1 according to DOC CS 191 and 16 CFR 1610.61, tested according to California Technical Bulletin 117.
   2. Padding shall comply with California Technical Bulletin 117.

1.07 PROJECT CONDITIONS

A. Environmental Limitations:

1. Do not deliver or install seating until spaces are enclosed and weather tight, wet work in spaces is complete and dry, work above ceilings is complete, and temporary or permanent HVAC system is operating and maintaining ambient temperature and humidity at occupancy levels during the remainder of the construction period.

B. Field Measurements:
1. Take field measurements to verify or supplement dimensions indicated on contract drawings prior to manufacturing.

1.08 WARRANTY

A. Provide a manufacturer's warranty covering the material and workmanship for the specified warranty period from date of final acceptance.

B. Warranty Periods:
1. Structural Components: five years.
2. Operating Mechanisms: five years.
3. Plastic, Wood and Painted Components: five years.
4. Upholstery Fabric: one year.
5. Electrical components: one year.

**PART 2 PRODUCTS**

2.01 MATERIALS AND FINISHES

A. Steel shall meet requirements for ASTM A 36/A 36M plates, shapes, and bars; ASTM A 513 mechanical tubing; ASTM A 1008/A 1008M cold-rolled sheet; and ASTM A 1011 hot-rolled sheet and strip.

B. All exposed metal parts shall be powder coated. The powder coat finish shall be applied by electrostatic means to a thickness of 2 - 5 mils. Manufacturer's standard color range shall be used.

C. Exposed plywood shall meet requirements for HPVA HP-1, Face Grade A, hardwood veneer core with color-matched hardwood-veneer faces, made with adhesive containing no urea formaldehyde.
1. Hardwood lumber and veneer faces shall be maple selected to be free of visible defects. Exposed wood shall be sanded smooth and stained to color selected with low-VOC water-based stain and top coat to provide with a high quality finish. Color to be chosen from manufacturer's standard offering.

D. Plastic Laminate shall meet requirements NEMA LD 3, Grade VGS for vertical surfaces and Grade HGS. Color and pattern to be chosen from manufacturer's standard offering.

E. Fabric: Shall meet Class 1 flammability requirements of the U.S. Department of Commerce Commercial Standard 191-53 per Bulletin #117 (California Code).

F. Upholstery padding shall be molded or slab polyurethane foam.

G. Molded Plastics:
1. Structural components shall be mar and dent resistant high density glass-filled polypropylene with UV stabilizers
2. Decorative components shall be mar and dent resistant high density polyethylene (HDPE) with UV stabilizers.
3. Plastic components shall be chosen from manufacturer's standard offering.

2.02 MANUFACTURERS

A. Manufacturers:
1. Approved Manufacturer shall furnish list of at least 5 similar school projects with chairs installed for a minimum of 5 years.

2. Manufacturer shall have been in business for a minimum of 15 years with at least 10 years of experience in manufacturing auditorium type seating similar to specifications.

2.03 FIXED AUDITORIUM SEATING

A. Basis-of-Design: Seating Concepts LLC; Product: BW-220, Contour.
   1. Subject to compliance with requirements, the following are approved.
      a. Irwin Seating Company No. 90.12.10.4 Citation.

B. Chair Mounting Minimum Standards
   1. Center standards: Pedestal design with a 1” x 3” rectangular 16 gauge steel tube attached by concealed weld to a 3-1/4” x 8” 14 gauge deep formed steel foot with four holes for attachment of the standard to a concrete floor with lead shielded expansion bolts.
   2. Seat pan attachment: ¼” steel bracket integrated into the standard at mid point.
   3. Anchor for seat pan to standard: 5/16” hexagon fusion nut and hexagon bolt of 5/16” x ¾” through a threaded insert on the steel seat bracket.
   4. Back attachment: 14 gauge sheet metal lug support.
   5. Armrest attachment: 16 gauge plate welded to the top of the column.
   6. Aisle standards: Oval, fabricated same as the center standards with 20 gauge steel frame welded to the column to accept a end panel.
   7. End Panel: laminated plastic, upholstery or with the finish to be selected by architect.
   8. End panels to be furnished as shown on seating plan.

C. End Aisle Panels:
   1. Oval design.
   2. LED asile light.

D. Armrests:
   1. Armrests: solid hardwood, stained to a finish, all as specified fastened with four lag screws of cold-rolled galvanized steel 1/8” x 19/32".
   2. The armrest for the center standards shall be substantially similar in size to the aisle standard armrests.

E. Chair Backs
   1. Chair back padding: cold molded polyurethane foam of 2” thickness at the top increasing to 3” at the bottom of the back.
   2. The foam shall be cemented to 5 ply 7/16” plywood base with four ¼” threaded inserts for the attachment of two die formed metal supports (back wings), 14 gauge, with four cold-rolled galvanized flat head steel screws ¼” by ¾”.
   3. All attachment screws shall be fully concealed.
   4. Back wings shall have provision for 16 degree, 20 degree or 24 degree pitch.
   5. Overall height of the chair from floor to top of the back is a minimum 34” as measured in the 20 degree back pitch.

F. Seats:
   1. Seat cushion: Arch-spring type.
   2. Frame: One piece reinforced injection molded polypropylene.
   3. Serpentine springs: normalized 10 gauge steel epoxy painted, covered by a chafing barrier inter-liner
   4. Seat cushion: Cold molded to the contour of the springs to provide raised outer edge
   5. foam density: 3.4 +/- 0.2
   6. Seat frame hinge: 14 gauge 7/8” diameter cold rolled steel hinge rod.
   7. Flanges for attachment to the standards: 7 gauge steel.

8. Stops: stamped-died from 9 gauge steel and are filled with high impact resistance neoprene rubber.
9. High resistant nylon bushings are used at the pivot points to prevent metal to metal contact.
10. The specified fabric: panel side construction and manufactured as a slip cover with a draw string application.
11. The slip cover fits over the entire assembly in order to allow ease in replacement.
12. Self lifting mechanism: counter balance system integrated within the seat frame and which utilizes a weight inserted into the interior of the seat frame which allows the seat pan to return to a 90 degree vertical position by means of gravity or spring.
13. Stops: two ½" square tube stops, two counter-stops and two 1" cold rolled steel bushings, all reinforced.
14. Enclose seat frame and return mechanism with injection molded polypropylene cover with a decorative embossment and attaches to the frame without screws or other fasteners but which can be removed with the use of a specially supplied tool.
15. The rear of the seat pan shall be vented to allow the foam to breathe.

G. Chair width shall vary to accommodate row lengths.

H. Back height and pitch shall be fixed as shown on seating layout drawings.

I. Fabric
   1. Basis-of-Design: Guilford of Maine

J. Accessories
   1. Number and letter plates (Manufacturer Standard Rectangular Size: 11/16" X 1 5/8", Brass or Silver)
   2. Swing away ADA aisle standard
   3. Aisle lights (concealed or external mounted, incandescent or LED)
   4. Perforated seat pan

K. Accessible Seating:
   1. Shall be designated on the seating layout drawings and designed to allow an individual to transfer from a wheelchair to the theatre chair.
   2. The aisle standard shall be equipped with an armrest capable of lifting to a position parallel with the support column, opening sideways access to the seat.
   3. Aisle standards so equipped shall be provided with a label, displaying an easily recognizable "handicapped" symbol.
   4. Decorative requirements of aisle standards are waived for the handicapped access standards.

L. Extra Materials:
   1. Furnish extra materials from the same production run that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
   2. Provide 10 yards of additional fabric ( 5 yards of each color).
   3. Replacement Seat and Back Covers: A quantity of cut and sewn seat and back upholstery covers shall be provided. Covers shall be pro-rated according to sizes & colors of chairs in the seating layout. Quantity of covers to be provided shall be sufficient to re-upholster 5% of the chairs.

M. Fabrication:
   1. Manufacture fabric-covered cushions with molded padding beneath fabric and with fabric covering free of welts, creases, stretch lines, and wrinkles. For each upholstered component, install pile and pattern run in a consistent direction.
   2. Fabricate floor attachment plates to conform to floor slope.

## PART 3 EXECUTION

### 3.01 EXAMINATION

A. Prior to layout and installation examine floors, risers, and other adjacent work and conditions, with Installer present, for compliance with requirements and other conditions affecting performance of the work including, but not limited to, plumb of riser faces and concrete conditions.

B. Examine locations of electrical connections.

C. Examine locations of HVAC supply ducts.

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

### 3.02 INSTALLATION

A. Install seating in locations indicated and fastened securely to substrates according to manufacturer's written installation instructions.

B. Use installation methods and fasteners that produce fixed audience seating assemblies with individual chairs capable of supporting an evenly distributed 600-lb static load applied 3” from front edge of the seat without failure or other conditions that might impair the chair's usefulness.

C. Install seating with chair end standards aligned from first to last row and with backs and seats varied in width and spacing to optimize sightlines.

D. Install chairs in curved rows at a smooth radius.

E. Install seating so moving components operate smoothly and quietly.

### 3.03 ADJUSTING

A. Adjust chair backs so that they are properly aligned with each other.

B. Adjust self-rising seat mechanisms so seats in each row are aligned when in upright position.

C. Verify that all components and devices are operating properly.

D. Repair minor abrasions and imperfections in finishes with coating that matches factory-applied finish.

E. Replace upholstery fabric damaged during installation.

### 3.04 CLEANING

A. All debris caused by this work shall be removed from the auditorium and other work areas, and the areas left clean and free of debris. Cardboard from cartons shall be broken down into manageable piles and stacked neatly in the designated trash collection area on site.

**END OF SECTION**