
NEW SECURITY VESTIBULES AT PRINCETON HIGH SCHOOL

PRINCETON PUBLIC SCHOOLS
PRINCETON - MERCER COUNTY - NEW JERSEY



FVHD PROJECT #5499A1

December 1, 2023

SPECIFICATIONS

for

NEW SECURITY VESTIBULES AT PRINCETON HIGH SCHOOL

located at 151 Moore Street, Princeton, NJ 08540

for the

PRINCETON PUBLIC SCHOOLS

Princeton, Mercer County, New Jersey

FVHD PROJECT NO. 5499A1

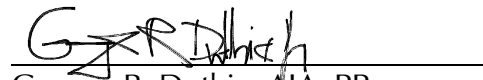
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NOTICE TO BIDDERS
Princeton Public Schools
Mercer County, New Jersey

NOTICE IS HEREBY GIVEN that the Princeton Board of Education (“Owner”) will receive bids for **New Security Vestibules at Princeton High School**, together with all work incidental thereto, in accordance with the requirements of the drawings and specifications prepared by Fraytak Veisz Hopkins Duthie, P.C. (FVHD), Architects-Planners, www.fvhdp.com, **FVHD Project #5499A1**.

Bids will be received for: Single Overall Contract (DPMC: C008 or C009 with C047)

Bid Documents for the proposed Work are on file at the office of the Architect, Fraytak Veisz Hopkins Duthie, P.C., 1515 Lower Ferry Road, Trenton, NJ 08618, tel. 609.883.7101. To obtain Bid Documents, complete the Bidder Registration form which can be downloaded from <https://fvhdpc.com/bids/bidlisting> and email to info@fvhdpc.com, **Ref: FVHD-5499A1**. No fee electronically, \$25.00 DVD, \$200.00 hard copy. Check or money order payable to Fraytak Veisz Hopkins Duthie, P.C. If Contractor requests shipping, a direct shipping account number (FedEx or UPS) and preferred shipping speed must be provided and for paper sets, a separate fee of \$25.00 per set. All fees are non-refundable.

Prebid Meeting is scheduled for **Tuesday, January 23, 2024, 2:00 PM**. Contractors to check in at Main Office, Princeton High School, 151 Moore Street, Princeton, NJ 08540. Attendance at the prebid meeting optional but encouraged.

All requests for information (RFI) must be submitted in writing by **February 2, 2024**, and sent to info@fvhdpc.com, or fax to 609-883-2694 or via common carrier to the Architect. All correspondence must include the Architect Project Name and Project Number referenced. The Architect is not responsible for misdirected or misrouted correspondence.

Sealed Bids are due **Thursday, February 15, 2024, 2:00 PM**, to the Princeton Board of Education, Administration Building, 25 Valley Road, 2nd Floor, Princeton, NJ 08540 and will be publicly opened and read immediately thereafter. Any Bid received after that time shall be rejected.

Bid Proposal shall be submitted in duplicate (one original and one copy) in a sealed envelope, addressed to the Owner, bearing the name and address of the bidder, and clearly marked “**BID**” with the contract title and/or bid number on the outside of the envelope and must be accompanied by a Certified Check, Cashier's Check or Bid Bond drawn to the order of the Owner in the amount of ten percent (10%) of the amount of the bid, but in no case in excess of \$20,000; and must be delivered to the above place on or before the hour named. The Board of Education and the Architect assume no responsibility for bids mailed or misdirected in delivery.

If the bid exceeds \$20,000 bidder must be pre-qualified by the New Jersey Division of Property Management and Construction (DPMC), prior to the date that bids are received. Any bid submitted under the terms of New Jersey statutes not including a copy of a valid and active Pre-qualification/Classification Certificate shall be rejected as being non-responsive to bid requirements.

Pursuant to N.J.S.A. 18A:18A-25, each proposal shall be accompanied by a Proposition of Surety from a Surety Company stating it will provide each bidder with separate Performance and Payment Bonds, each in the amount of 100% of the contract sum. Also, Surety agrees to furnish bidder with a Maintenance Bond in required form. The Proposition of Surety shall be executed by an approved surety company authorized to do business in the State of New Jersey and in accordance with N.J.S.A. 2A:44-143, and 2A:44-144 and with the three highest rating categories of rating companies nationally recognized.

This project is subject to the New Jersey State Prevailing Wage Act, N.J.S.A. 34:11-56.27 et seq. All bidders must comply with N.J.S.A. 10:5-31 et seq., N.J.A.C. 17:27 et seq. and N.J.S.A. 10:2-1. An Initial Project Workforce Report will be required from the successful bidder (Form AA-201).

Pursuant to "The Public Works Contractor Registration Act", N.J.S.A. 34:11-56.48 et seq., bidders and their subcontractors are required to be registered with the New Jersey Department of Labor and Workforce Development and to possess a current certificate by said Department indicating compliance with the Act prior to the time and date that bids are received.

Per N.J.S.A. 52:32-44(b) all contractors and subcontractors must provide a Business Registration Certificate prior to contract award and other document requirements in the bid request.

No bid may be withdrawn for a period of sixty (60) days after the date set for the opening thereof. The right is reserved to reject all bids pursuant to N.J.S.A. 18A:18A-22 and to waive minor informalities in the bidding in accordance with applicable law.

Princeton Board of Education
Matthew Bouldin, Business Administrator/Board Secretary

BIDDING INFORMATION

SECTION 00100 - INSTRUCTIONS TO BIDDERS

1. INVITATION TO BID

- A. All Bidders are required to prepare bids in accordance with all plans and specifications (Bid Documents) prepared by Fraytak Veisz Hopkins Duthie, P.C.
- B. **DISCLAIMER:** Bidders should only rely on original digital and paper versions of the bidding contract documents obtained directly from the Architect's office. Fraytak Veisz Hopkins Duthie, PC (FVHD) Architects-Planners is not responsible for any unauthorized copies made of the digital or paper bidding contract documents obtained from sources other than the Architect's office. All information provided by Fraytak Veisz Hopkins Duthie, PC (FVHD) Architects-Planners is intellectual property and is protected under copyright laws. It is not to be used for any purpose other than for the indicated project. Any other use or manipulation of the information is strictly prohibited.
- C. Bids for Contracts, as listed in the Advertisement for Bids or Invitation to Bid as hereinafter described, will be received for the performance of the Project. The bids shall cover all costs of any nature, incident to and growing out of the work. In explanation but not in limitation thereof, these costs shall include the cost of all work, labor, materials, equipment, transportation and cost of all else necessary to perform and complete the Project in the manner and within the time required, all incidental expenses in connection therewith, all costs on account of loss by damage or destruction of the Project caused by the Contractor, or Contractor's Agent, to the extent that the cost of such loss is not recovered from insurance carried by the Owner and the Contractor, and any additional expenses for unforeseen difficulties encountered, for settlement of damages and for replacement of defective work and materials.
- D. Before submitting a Bid, the Bidder shall become familiar with the Drawings, Specifications and other documents that will form the Contract, shall investigate the site of the Project and make such examination thereof as may be necessary to determine the character and amount of work involved. The Bidder shall also determine that they can secure the necessary labor and equipment and that the materials proposed to use will comply with the requirements specified therefore and can be obtained by the bidder in the quantities and at the time required.
1. **Site visit(s) can be arranged upon request by contacting the architect: (gduthie@fvhdpc.com / dschittone@fvhdpc.com / info@fvhdpc.com).**
- E. The Owner reserves the right to accept or reject all bids including Alternate Bids, if any, pursuant to applicable law under any Contract for a period up to sixty (60) days after receipt of bids.

2. ETHICS IN PURCHASING

A. School District Responsibility

1. Recommendation of Purchases

- a. It is the desire of the Board of Education to have all Board employees and officials practice exemplary ethical behavior in the procurement of goods, materials, supplies, and services.
- b. School district officials and employees who recommend purchases shall not extend any favoritism to any vendor. Each recommended purchase should be based upon quality of the items, service, price, delivery, and other applicable factors in full compliance with N.J.S.A. 18A:18A-26-33 et seq.
- c. Solicitation/Receipt of Gifts - Prohibited:
 - 1) School district officials and employees are prohibited from soliciting and receiving funds, gifts, materials, goods, services, favors, and any other items of value from vendors doing business with the Board of Education or anyone proposing to do business with the Board of Education.

2. Vendor Responsibility:

- a. Offer of Gifts, Gratuities – Prohibited
 - 1) Any vendor doing business or proposing to do business with the Board of Education, shall neither pay, offer to pay, either directly or indirectly, any fee, commission, or compensation, nor offer any gift, gratuity, or other thing of value of any kind to any official or employee of the Board of Education or to any member of the official's or employee's immediate family.
- b. Vendor Influence – Prohibited:
 - 1) No vendor shall cause to influence or attempt to cause to influence, any official or employee of the Board of Education, in any manner which might tend to impair the objectivity or independence of judgment of said official or employee.

3. Vendor Certification:

- a. Vendors or potential vendors will be asked to certify that no official or employee of the Board of Education or immediate family members are directly or indirectly interested in this request or have any interest in any portions of profits thereof. The vendor participating in this request must be an independent vendor and not an official or employee of the Board of Education.

3. OBLIGATION OF BIDDER

- A. At the time of the opening of bids each Bidder will be presumed to have inspected the site and to have read and to be thoroughly familiar with the Drawings and other Contract Documents, including all Addenda and Bulletins. The failure or omission

of any Bidder to receive or examine any form, instrument or document or to visit the site and acquaint himself/herself with conditions there existing, shall not relieve any Bidder from obligation with respect to his/her bid.

- B. Any and all discrepancies between the drawings and specifications or between trades shall be brought to the attention of the Architect prior to the Contractor(s) bid submission.

4. CHALLENGES TO BID SPECIFICATIONS (N.J.S.A. 18A:18A-15)

- A. Any prospective bidder who wishes to challenge a bid specification shall file such challenges in writing with the School Business Administrator/Board Secretary no less than three (3) business days prior to the opening of bids. Challenges filed after that date shall be considered void and having no impact on the Board of Education or the award of a contract.

5. NOTICE OF CLASSIFICATION OF BIDDERS (CONTRACTORS AND SUBCONTRACTORS)

- A. Pursuant to N.J.S.A. 18A:18A-26 et seq., as amended, and N.J.A.C. 17:19-2.1 through N.J.A.C. 17:19-2.7, Bidders on any Contract on public work for a Board of Education in the State of New Jersey in which the entire cost of the Contract exceeds \$20,000.00, must have a classification from the Division of Property Management and Construction (DPMC), as to character and amount of public work on which they may submit bids. Bidder must submit, a "Notice of Classification" setting forth the type of work and the amount of work for which the bidder has been qualified, that there has been no material adverse change in their qualification information, the total amount of uncompleted work on contracts at the time and the date of the bid due date. **Any bidder who does not possess a valid and active "Notice of Classification" shall be ineligible to bid on this project, and any bid submitted by such bidder shall be rejected as non-responsive.** (Forms for this purpose are available from the Director of the Division of Property Management and Construction - DPMC, Trenton, New Jersey 08625.)

- 1. Each classified bidder's aggregate rating shall be calculated in accordance with formula prescribed by N.J.A.C. 17:19-2.8.
 - a. Calculations shall be based on Bidder's base bid amount at time of bid or total amount of base bid and accepted Alternate Bids at time of Award.

- B. In accordance with N.J.S.A. 34:11-56.48 et seq. and N.J.S.A. 18A:7G-37, each bidder must be properly registered with the New Jersey Department of Labor and Workforce Development at the time of the bid. The Contractor shall enter into subcontracts only with subcontractors who are registered pursuant to N.J.S.A. 34:11-56.48 et seq.

- 1. No Contractor/Subcontractor will be permitted to bid on or engage in any contract for public work, as defined in the "New Jersey Prevailing Wage Act,"

N.J.S.A. 34:11-56.26 et seq., unless that Contractor/ Subcontractor is registered with the New Jersey Department of Labor and Workforce Development at the time of the bid.

- C. The Owner may make such additional investigations as it deems necessary to determine the ability of the Bidder to perform the work, and the Bidder shall furnish to the Owner all such information and data for this purpose as the Owner may request. The Owner reserves the right to reject any bid if the evidence submitted by, or investigation of, such Bidder fails to satisfy the Owner that they are properly qualified to carry out the obligations of the Contract and to complete the work contemplated therein.

6. TOTAL AMOUNT OF UNCOMPLETED CONTRACTS

- A. Uncompleted Contracts (For Contracts Exceeding \$20,000) (N.J.A.C. 17:19-2.13(a))
 - 1. The Board requires that each bidder (and their Subcontractors) submit with his/her bid, a certified Total Amount of Uncompleted Contracts form as prescribed by the cited regulation. (Form DPMC 701). Failure to submit this document will lead to having the bid being rejected as non-responsive.

7. CHANGES TO BID DOCUMENTS, INTERPRETATIONS AND ADDENDA

- A. Changes to the Bid Documents may be required to be issued via Addenda. FVHD will issue notice of the publication of all Addenda to prospective bidders, who have obtained bid documents from FVHD. **All bidders are to check the FVHD website www.fvhdpc.com and download addenda if any are issued for the project.**
 - 1. All Addenda issued become a part of the Bid Documents and will be part of the Contract Documents as though originally incorporated into the Project Manual.
 - 2. A notification of Addenda changes to the bid documents will be faxed to all bidders who have received bid documents from FVHD Architects. Bidders will be responsible to download the applicable Addendum(s) from the Architects website at www.fvhdpc.com/bids/bidlisting.aspx.
 - 3. Bidders must acknowledge receipt of all Addenda on the Bid Form or the bid may be deemed non-responsive by the Owner's Attorney.
- B. Pre-bid Request for Information: No oral interpretations will be made to any Bidder as to the meaning of the drawings and specifications. **All requests for information (RFI's) must be submitted in writing by February 2, 2024 and sent by faxing to 609-883-2694; by emailing info@fvhdpc.com; or sent via common carrier to the Architect. All correspondence must include the Architect's Project Name and Project Number. The Architect is not responsible for misdirected or misrouted correspondence.**

Fraytak Veisz Hopkins Duthie, P.C.

Architects / Planners

1515 Lower Ferry Rd., Trenton, NJ 08618

Electronic Facsimile (609) 883-2694

FVHD Project No. 5499A1

1. Every interpretation made to a Bidder will be in the form of an Addendum. During the bidding period, the Architect may furnish Addenda for additions to or alterations of the drawings and specifications, which shall be included in the work covered by the Bid Form(s).
2. Addenda, when issued, will be made available no later than seven (7) business days prior to the date for receiving bids, Saturday, Sunday or holidays excepted, to all persons who have obtained Bid Documents from the Architect.
3. Addenda will also be available for examination at the Architect's office.
4. It shall be the responsibility of the Bidder to ascertain that they have received and examined all Addenda and Bulletins issued, prior to submitting their bid. Failure of the Bidder to download and examine all Addenda shall not relieve the Bidder from any of the requirements of the Bid Documents.
5. All addenda will be issued in accordance with N.J.S.A. 18A:18A-21(c).

8. PREPARATION OF BIDS

- A. Enclose **two copies (one original and one copy)** of the Bid in a sealed envelope, identified on the outside of the envelope and clearly marked "BID" with the name and address of the bidder, name of the project and contract number in which the bidder is submitting.
- B. Bids shall be submitted on the form of Bid furnished by the Architect, properly filled out and duly executed. Bid forms shall not be altered or added to in any way. Lump Sum Bid or Base Bid prices shall be filled in, in ink or typewritten, in both words and figures. In case of discrepancy, the amount described in words shall govern.
 1. **Bids containing any conditions, omissions, unexplained erasure or alteration, items not called for in the Bid Form, attachment of additive information not required by the Specifications, or irregularities of any kind may be rejected by the Owner.**
 2. **Any changes, white-outs, strike-outs, etc. on the Bid Form must be initialed in ink by the person responsible for signing the Bid Form.**

- C. When the Bid is made by an individual, his/her post office address shall be stated and he/she shall sign the Bid. When made by a firm or partnership, its name and post office address shall be stated and the Bid shall be signed by one or more of the partners. When made by a corporation, its name and principal post office address shall be stated, and the Bid shall be signed by an authorized official of the corporation.
- D. Alternate Bids and Unit Prices for the various portions of work or Contracts shall be as stated in other Sections of the Specifications.
1. Attention is called particularly to the requirements for filling in all Alternate Bids called for on the Bid Form, as the Owner reserves the right to award a Contract based upon the possible inclusion of one or more such Alternate Bids.
 2. The amounts of the Alternate Bids shall include any and all modifications to related, adjacent or surrounding work made necessary by use of such Alternate Bids.
 3. The Alternate Bids must be stated as additions to or deductions from the Base Bid, unless otherwise noted.
 4. **The term "No Bid" shall not be used with respect to Alternate Bids and Unit Prices requested on the Bid Forms. The Bidder who does not desire to make a change from the Base Bid under a particular Alternate Bid shall so indicate by using the words "No Change."**
 5. Bidders must bid on every alternate bid. Additions to, or deductions from, the base bid shall be indicated in the appropriate blanks on the Bid form with additions to or deductions from the base bid filled in as appropriate. If a particular alternate bid does not result in an addition to or deduction from the base bid, the words "No Change" or N/C" shall be written in the blank for "No Change" on the Bid form, and the words "No Change" shall be written in the blank provided for the purpose of stating the numeric amount in words. Failure to bid on every alternate bid shall render the bid nonresponsive and cause the bid to be rejected.

9. BID GUARANTEE

- A. The Bid, when submitted, shall be accompanied by a Bid Guarantee in the form of a Certified Check, Cashier's Check or acceptable Bid Bond made payable unconditionally to the Owner, in the sum of ten percent (10%) of the Bid, but in no case in excess of \$20,000.00 and as per Bid Bond Form included:
1. Bid Bond Form: Bid Bond shall be as per bid form included and shall include an effective and current Power of Attorney authorizing the Attorney-in Fact to bind the surety, on Bid Date and Time, for the full amount of the Bond.

2. Bid shall be accompanied by a Proposition of Surety in accordance with paragraph 1.10.
- B. Pursuant to N.J.S.A. 18A:18A-36, all Bid Guarantees, except those of the three apparent lowest responsible bidders, will be returned, if requested, after ten days from opening of bids, Sundays and holidays excepted. Within 3 days after the awarding of the contract and the approval of the Contractor's performance bond and payment bond, the bid security of the remaining unsuccessful bidders will be returned, Sundays and holidays excepted.
 - C. The Bid Guarantee shall be forfeited if successful Bidder fails to execute the Agreement between Owner and Contractor identified in paragraph 12 hereof and furnish the Performance-Payment Bond within ten (10) days after notification of award of Contract to him/her (Sundays and holidays excepted).
 1. Any failure by the successful bidder to perform its obligations regarding the time, manner, and substance of compliance with Bidding Documents in relation to the Award of a Contract, shall constitute an Event of Default, entitling the Owner to:
 - a. Demand, from said guarantor, immediate payment of the entire Bid Bond amount, as liquidated damages, not as a penalty, for the delay acknowledged and agreed that the Owner will sustain in connection with said Default; and addition thereto,
 - b. Recovery of any and all other Losses incurred by the Owner, to which the Owner shall, to the fullest extent permitted by Applicable Law, be entitled to recover, including with limitation Special Damages.

10. CONTRACT BONDS

- A. Prior to start of guarantee period and before the final payment is made, the Contractor shall provide the Owner with a Maintenance Bond in the amount of ten percent (10%) of Final Contract Amount, to insure the replacement or repair of defective materials or workmanship during the two-year guarantee period. Pursuant to N.J.S.A. 18A:18A-25, Bids shall be accompanied by a Proposition of Surety in form as bound in these documents, assuring that satisfactory arrangements have been made between the surety and the Bidder by which surety agrees to furnish within ten (10) days after notification of award, Sundays and holidays excepted, of contract to him/her, furnish and deliver a Performance Bond and Payment Bond; each in the amount of 100% of the amount bid. Also surety agrees to furnish Bidder with a Maintenance Bond in form as bound herein.
 1. The Proposition of Surety shall be executed by an approved surety company authorized to do business in the State of New Jersey and in accordance N.J.S.A. 2A:44-143.
 2. If, at any time after execution and approval of a Contract and Performance-Payment Bond required by Contract Documents, such Bond shall

cease to be adequate security for the Owner, the Contractor shall, within five (5) days after notice to do so, furnish a new or additional Bond, in form, sum and signed by such Sureties as shall be satisfactory to the Owner. No further payment shall be deemed due nor shall any further payment be made to the Contractor unless and until such new or additional Bond shall be furnished and approved.

- B. Prior to start of guarantee period and before the final payment is made, the Contractor shall provide the Owner with a Maintenance Bond in the amount of ten percent (10%) of Final Contract Amount, to insure the replacement or repair of defective materials or workmanship during the **two-year** guarantee period.
- C. The cost of all Bonds shall be paid for by the Contractor and shall be included as a part of Contractor's bid price.

11. POWER OF ATTORNEY

- A. Attorneys-in-fact who sign Bid Bonds, Performance-Payment Bonds, Maintenance Bonds and Proposition of Surety forms must accompany each bond or proposition with a certified and effectively dated copy of their power-of-attorney.

12. FORM OF AGREEMENT

- A. The form of agreement shall be AIA Document A132/CMa Standard Form of Agreement between Owner and Contractor, Construction Manager as Advisor, 2009 Edition, and in accordance with AIA Document A232/CMa General Conditions of the Contract, Construction Manager as Advisor, 2009 Edition as amended, and all other documents referenced herein.

13. CERTIFICATE OF AUTHORITY

- A. All bidders are to submit their Sworn Contractor Certification, a current valid "Certificate of Authority" as issued by the New Jersey Department of Treasury. Reference-N.J.S.A. 18A:7G-37.

14. AWARD OF CONTRACT

- A. Award, if made, will be to the lowest responsive and responsible bidder for the Single Overall Building Contract selected to include Alternate Bids, if any, which the Owner chooses to accept, that result(s) in the lowest aggregate total sum pursuant to N.J.S.A. 18A:18A-4.
- B. Award made to a Bidder not a resident of the State of New Jersey is conditioned upon Bidder designating a proper agent in the State of New Jersey on whom service can be made in the event of litigation.

- C. If the successful Bidder is a corporation not organized under the laws of New Jersey, the award of Contract and payment of consideration thereunder shall be conditioned upon the Corporation procuring a "certificate" of authority to transact business in the State of New Jersey pursuant to N.J.S.A. 14A:13-3 and complying with the provisions of N.J.S.A.14A:13-4.
- D. NJ Business Registration Certificate:
1. Pursuant to N.J.S.A. 52:32-44, Princeton Public Schools ("Contracting Agency") is prohibited from entering into a contract with an entity unless the bidder/proposer/contractor, and each subcontractor that is required by law to be named in a bid/proposal/contract has a valid Business Registration Certificate on file with the Division of Revenue and Enterprise Services within the Department of the Treasury.
 2. Prior to contract award or authorization, the contractor shall provide the Contracting Agency with its proof of business registration and that of any named subcontractor(s).
 3. Subcontractors named in a bid or other proposal shall provide proof of business registration to the bidder, who in turn, shall provide it to the Contracting Agency prior to the time a contract, purchase order, or other contracting document is awarded or authorized.
 4. During the course of contract performance:
 - a. the contractor shall not enter into a contract with a subcontractor unless the subcontractor first provides the contractor with a valid proof of business registration.
 - b. the contractor shall maintain and submit to the Contracting Agency a list of subcontractors and their addresses that may be updated from time to time.
 - c. the contractor and any subcontractor providing goods or performing services under the contract, and each of their affiliates, shall collect and remit to the Director of the Division of Taxation in the Department of the Treasury, the use tax due pursuant to the Sales and Use Tax Act, (N.J.S.A. 54:32B-1 et seq.) on all sales of tangible personal property delivered into the State. Any questions in this regard can be directed to the Division of Taxation at (609)292-6400. Form NJ-REG can be filed online at <http://www.state.nj.us/treasury/revenue/busregcert.shtml>.
 5. Before final payment is made under the contract, the contractor shall submit to the Contracting Agency a complete and accurate list of all subcontractors used and their addresses.
 6. Pursuant to N.J.S.A. 54:49-4.1, a business organization that fails to provide a copy of a business registration as required, or that provides false business registration information, shall be liable for a penalty of \$25 for each day of

violation, not to exceed \$50,000, for each proof of business registration not properly provided under a contract with a contracting agency.

7. Emergency Purchases or Contracts
 - a. For purchases of an emergent nature, the contractor shall provide its Business Registration Certificate within two weeks from the date of purchase or execution of the contract or prior to payment for goods or services, whichever is earlier.
- E. The Owner reserves the right to reject all bids, or to waive minor informalities or non-material exceptions in a bid, pursuant to applicable law.
- F. In accordance with requirements of the N.J.S.A. 18A:18A-36(b), execution of the Contract by all parties will be done within 21 days of the notification of the award date, Sundays and holidays excepted, after making the award.
 1. The Bidder to whom the contract is awarded shall be required to execute said Contract within twenty (20) calendar days of the Notice of Award.
- G. Upon award of the Contract, the Contractor shall execute and return to the Owner the "Contractor Certification and Consent Upon Award of Contract," attached to the Contract as an Exhibit.
- H. The award of the contract is subject to availability and appropriation of sufficient funds.

15. BID PROTESTS AND CONTRACTOR'S RESPONSIBILITY

- A. Vendors or contractors may contact the Purchasing Agent in writing, when they feel it necessary to challenge a procurement specification item or to protest an award of contract. All challenges and protests will be reviewed by the Purchasing Agent, the District Administrator of the contract and the Board Attorney. All determinations shall be made in writing to the vendor or contractor. The Purchasing Agent pursuant to N.J.S.A. 18A:18A-2 (b) is the School Business Administrator.
- B. A protest filed shall:
 1. Include the name, street address, electronic mail address, and telephone and facsimile numbers of the protester;
 2. Be signed by the protester or its representative;
 3. Identify the bid or solicitation number and date of bid or solicitation;
 4. Include a detailed statement of the legal and factual grounds of protest including copies of relevant documents;

5. Set forth all information establishing that the protester is an interested party for the purpose of filing a protest;
6. Set forth all information establishing the timeliness of the protest; and
7. Provide any or all information pertaining to the bid protest.

16. BIDDING DOCUMENTS

- A. The Bidding Documents consist of but not limited to the following:
 1. Instructions To Bidders in accordance with this Section,
 2. General Conditions, AIA Document A232, and as supplemented in the Supplementary General Conditions; Section 00800,
 3. Bid Form including attachments as per Bidder's Checklist,
 4. Erratum, Addenda , if issued,
 5. Specifications: As outlined in the "Index" included in the Project Manual,
 6. Drawings: As per List of Drawings indicated on Project Title Sheet and in accordance with Section 00850,
 7. Agreement Between Owner & Contractor, AIA Document A132 and as amended by the Project Specifications.
- B. Note: The above list is not intended to establish order of precedence.

17. TIME OF COMPLETION AND LIQUIDATED DAMAGES

- A. Refer to Section 01800, "Time of Completion and Liquidated Damages".

18. LISTING OF STOCKHOLDERS, PARTNERS OR MEMBERS (N.J.S.A. 52:25-24.2)

- A. Statement of Ownership
 1. No business organization, regardless of form of ownership, shall be awarded any contract for the performance of any work or the furnishing of any goods and services, unless, prior to the receipt of the bid or accompanying the bid of said business organization, bidders shall submit a statement setting forth the names and addresses of all persons and entities that own ten (10%) percent or more of its stock or interest of any type at all levels of ownership.
 2. The included Statement of Ownership shall be completed and attached to the bid proposal. This requirement applies to all forms of business organizations,

including, but not limited to, corporations and partnerships, publicly-owned corporations, limited partnerships, limited liability corporations, limited liability partnerships, sole proprietorship, and Subchapter S corporations. Failure to submit a disclosure document shall result in rejection of the bid as it cannot be remedied after bids have been opened.

3. Not-for-profit entities should fill in their name, check the not-for-profit box, and certify the form. No other information is required.

19. NON-COLLUSION AFFIDAVIT

- A. The bidder shall submit the Non-Collusion Affidavit, on form as bound herein, must be submitted with the bid. Failure to submit this document will lead to having the bid being rejected as non-responsive.

20. FALSE MATERIAL REPRESENTATION / TRUTH IN CONTRACTING

- A. A person commits a crime if the person knowingly makes a material representation that is false in connection with the negotiation, award or performance of a government contract. If the contract amount is for \$25,000.00 or above, the offender is guilty of a crime of the second degree. If the contract amount exceeds \$2,500.00, but is less than \$25,000.00, the offender is guilty of a crime of the third degree. If the contract amount is for \$2,500.00 or less, the offender is guilty of a crime of the fourth degree. Bidder should be aware of the following statutes that represent "Truth in Contracting" laws:
 1. N.J.S.A. 2C:21-34, governs false claims and representations by bidders. It is a serious crime for the bidder to knowingly submit a false claim and/or knowingly make material misrepresentation.
 2. N.J.S.A. 2C:27-11 provides that a bidder commits a crime if said person, directly or indirectly, confers or agrees to confer any benefit not allowed by law to a public servant.
 3. Bidder should consult the statutes such as N.J.S.A. 18A:7G-39 or legal counsel for further information.

21. EQUIVALENT PRODUCTS

- A. The use of manufacturers' band names, catalogue numbers and similar proprietary identifying data in the Contract Documents are not intended to eliminate from consideration products that are equivalent in quality, appearance and function to those specified.

22. CONTRACT

- A. As indicated in the Advertisement for Bids, it is intended to receive sealed bids and

to award and administrate contract for the work required by the Contract Documents as follows:

Single Overall Contract

- B. The Bidder shall be a firm classified by the State of New Jersey - Division of Property Management and Construction for the following classification:

Prime General Contractor

C008 - General Construction

OR

C009 - General Construction/Alterations and Additions

and have subcontractor(s) for the following classification(s) of work:

Subcontractor(s):

C047 - Electrical

- C. Pursuant to N.J.S.A. 18A:18A-26, the Bidder shall be in possession of the required DPMC Classification for the specified work.
1. In the case of a Combined Single Overall Bid, if the contractor possess the DPMC Classification in one category, but not in all of the required categories, the Contractor must list the Prime Subcontractor(s) bidding the scope of work for the other categories. The Subcontractor(s) must possess the DPMC Classification(s) in that category.

END OF SECTION 00100

BID PROPOSAL FORM

SINGLE OVERALL CONTRACT

DPMC Classifications: C008 or C009 Prime Contractor
with C047 Subcontractor

Princeton Public Schools
25 Valley Road
Princeton, NJ 08540

1. The undersigned, having familiarized himself / herself with the local conditions affecting the cost of the work, the drawings, the specifications and other Contract Documents, as in the Advertisement for Bids thereto, for the **New Security Vestibules at Princeton High School (FVHD#5499A1)**, 151 Moore Street, Princeton, NJ 08540, together with all work incidental thereto, in accordance with the requirements of the drawings and specifications prepared by Fraytak Veisz Hopkins Duthie, P.C., Architects/Planners, Trenton, New Jersey, hereby proposes to furnish all labor, materials and equipment required for all Work and as follows:

SINGLE OVERALL CONTRACT - BASE BID: All Work at the above referenced school, including applicable Allowances - Section 01020, in accordance with the requirements of Contract Documents, for the sum of:

TOTAL BASE BID INCLUDING ALLOWANCE: \$ _____
(Numerical)

(If written amount differs from the numerical figure, only the written amount will be accepted as the correct bid.)

2. **Alternate Proposal(s) - Section 01030** shall be quoted as additions to, deductions from or No Change (NC) to the Base Bid and shall be in accordance with the specifications for Alternate Bid Work. If written amount differs from the numerical figure, only the written amount will be accepted as the correct bid.

Alternate Bid No. 1: Security Glazing **ADD \$** _____
(Numerical)

(Written)

THE REMAINDER OF THIS PAGE WAS LEFT INTENTIONALLY BLANK

Submitted by: _____
(Firm Name)

3. Bidder hereby acknowledges receipt of the following Addenda:

No Addenda Issued

Addendum No. __,	issued _____	received _____ (initial)
Addendum No. __,	issued _____	received _____ (initial)
Addendum No. __,	issued _____	received _____ (initial)
Addendum No. __,	issued _____	received _____ (initial)

4. In submitting this bid, it is understood that the right is reserved by the Board of Education to accept or to reject any or all bids, and it is agreed that this bid may not be withdrawn for a period of sixty (60) days from the date set of the opening thereof.

5. Bid Security in the sum of _____ (\$ _____) in the form of _____ (Certified Check, Cashier's Check, or Bid Bond) is submitted herewith in accordance with the requirements of the specifications.

6. The undersigned is an individual ()
a partnership ()
a corporation () under the laws of the State of _____,

having principal office in the _____ of _____, County of _____, and State of _____.

Respectfully Submitted,

(Company Name, if Bidder is a company)

BIDDER'S SIGNATURE

(Company Officer, if Bidder is a Corporation or LLC)

(Seal, if Corporation)

Printed or Typed Name Title of Officer (if the Bidder is a Company)

Address

City, State, Zip Code

Dated

Phone & Fax

Email Address

NOTE: SEE BIDDERS CHECKLIST

Submitted by: _____
(Firm Name)

BIDDER'S CHECKLIST

The following checklist must be signed and submitted with the bid package to the owner as part of the bid documents. Failure to submit documents marked (*) mandatory may be cause for rejection of the bid. Items that are not marked (*) mandatory are encouraged to submit with bid but must be provided prior to the contract award.

	<u>ITEM</u>	✓
	Reviewed the Contract Documents (Including the Permits Obtained by the Board), Work Site, Locality, and All Local Conditions and Laws and Regulations That in Any Manner May Affect Cost, Progress, Performance or Furnishing of Work	
	Reviewed General Bond Requirements	
	Reviewed Agreement (Owner/contractor)	
(*)	Bidder's Proposal	
(*)	Bid Bond, Certified Check, Cashier's Check or Any Combination Thereof in an Amount of Ten Percent (10%) of the Total Amount of Bid, Not to Exceed \$20,000 (Twenty Thousand Dollars) with Power of Attorney	
(*)	Consent of Surety for 100% of the Contract Amount with Power of Attorney to Provide Performance Bond and Labor and Material Payment Bond	
(*)	Subcontractor Identification Statement	
(*)	Statement of Ownership Disclosure Certification	
(*)	Non Collusion Affidavit	
(*)	Equipment Certification	
(*)	Sworn Contractor Certification; Qualifications and Credentials (Contractor and Subcontractors)	
(*)	Division of Property Management & Construction (DPMC) Form 701 - Total Amount of Uncompleted Contracts, N.J.S.A. 34:11-56.48 et Seq. - All Contractor(s) and Subcontractor(s)	
(*)	Division of Property Management & Construction (DPMC) Current Notice of Classification - All Contractor(s) and Subcontractor(s)	
	Public Works Contractors Registration Act Certificate (N.J.S.A. 34:11-56.48) All Contractor(s) and Named Subcontractor(s) Encouraged to Submit with Bid but Required Prior to Contract Award	
	Business Registration Certificate - All Contractor(s) and Subcontractor(s) Encouraged to Submit with Bid but Required Prior to Contract Award	
	Federal and State Non-debarment Certifications - All Contractor(s) and Subcontractor(s) Encouraged to Submit with Bid but Required Prior to Contract Award	

BIDDER'S CHECKLIST

	Certification of non Debarment for Federal Government Projects Shall Be Submitted Prior to Award of Contract - All Contractors Encouraged to Submit with Bid but Required Prior to Contract Award	
	Disclosure of Activities in Iran (Contractor and Subcontractors) Encouraged to Submit with Bid but Required Prior to Contract Award	
	Trade License - All Contractor(s) and Subcontractor(s) Encouraged to Submit with Bid but Required Prior to Contract Award	
	Compliance with New Jersey Prevailing Wage Act Encouraged to Submit with Bid but Required Prior to Contract Award	
	Lowest Responsible Bidder by 10% or More Certification of Prevailing Wage Rates and Acknowledgment of Penalties Form Encouraged to Submit with Bid but Required Prior to Contract Award	
	Certification of Insurance Statement Encouraged to Submit with Bid but Required Prior to Contract Award	
	Political Contribution Disclosure Form Encouraged to Submit with Bid but Required Prior to Contract Award	
	Stockholder Disclosure Certification	
	Certification of No Material Change of Circumstances - All Contractor(s) and Subcontractor(s) Encouraged to Submit with Bid but Required Prior to Contract Award	
	Status of Present Contracts	
	Performance Record Certification	
	Contractors shall participate in an "apprenticeship training program" and shall submit evidence of same and/or a description of the contractor's apprenticeship training program prior to the award of the contract.	

By signing below, I acknowledge having read and fully understand all the requirements of each of the documents referenced herein.

BIDDER (Signature)

Dated: _____

BIDDER (Print Name)

BID BOND

THE UNDERSIGNED BIDDER and "**Surety**", a corporation duly authorized to transact business in the State of New Jersey, are held and firmly bound unto _____ (the "**OWNER**") for the full and just sum of:

_____ Dollars (\$ _____),
(10% of the Bid Price not to exceed \$20,000.00: words) **(figures)**

The payment of which sum the **BIDDER** has submitted a Bid to perform certain Work described in Bidding Documents entitled:

TITLE: _____

CONTRACT NO.: _____

The **Surety** hereby agrees to pay the full face value of this Bond to the **OWNER**, as Liquidated Damages, and not as a penalty, unless this Bond is void.

This Bond shall only be void if the **BIDDER** well, truly and faithfully performs all requirements contained in the Bidding/Contract Documents incident to an Award of the Contract including, but not limited to, proper execution and submission of the Contract Forms and all other required documentation.

On this _____ day of _____ 20____, the **BIDDER** and **Surety** hereby bind themselves herein:

FOR THE BIDDER:

FOR THE SURETY:

(Name of **BIDDER**)

(Name of **Surety**)

By: _____
(Print Name-**BIDDER's** Authorized Representative)

By: _____
(Print Name of Attorney-in-Fact)

By: _____
(Signature-**BIDDER's** Authorized Representative)

By: _____
(Signature of Attorney-in-Fact)

IMPORTANT – ATTACH AND SUBMIT WITH THE BID:

- **A POWER OF ATTORNEY FOR THE ATTORNEY-IN-FACT WHICH IS CURRENTLY DATED AND VALID FOR THE ENTIRE AMOUNT OF THE BOND**

FORM OF CONSENT OF SURETY

PERFORMANCE BOND, PAYMENT BOND and MAINTENANCE BOND

For and in consideration of the sum of one dollar (\$1.00) lawful money of the United States, the receipt is hereby acknowledged, paid to the undersigned surety, and for other valuable consideration, the undersigned surety, authorized to transact business in the State of _____, certifies and agrees that if the Contract entitled: _____

CONTRACT _____,
(NUMBER) (TITLE)

is awarded to: _____
(BIDDER'S NAME)

the undersigned hereby warrants that it is in all respects qualified to provide the required Bonds as set forth in the Contract Documents, and that it will provide and execute the **Performance Bond** in the full amount of awarded contract in the event that said contractor is awarded a contract for the above project, the **Payment Bond**, and the **Maintenance Bond** in the form and as otherwise required by the Contract Documents.

(Print Name of Surety)

(Print Name of Attorney-in-Fact)

(Signature of Attorney-in-Fact)

ATTACH AND SUBMIT WITH THE BID: A POWER OF ATTORNEY FOR THE ATTORNEY -IN-FACT WHICH IS CURRENTLY DATED AND VALID FOR THE TOTAL AMOUNT OF ALL BONDS.

Consent of Surety must be signed by an authorized agent or representative of a surety company and not by the individual or company representative submitting the bid.

NOTE: IF SUBCONTRACTORS ARE LISTED ON BID FORM, N.J.S.A. 18A:18A-18 REQUIRES THAT EVIDENCE OF PERFORMANCE SECURITY AS TO SUBCONTRACTORS BE SUBMITTED WITH THE BID, EITHER BE THE BIDDER ON ITS OWN BEHALF AND ON BEHALF OF ALL LISTED SUBCONTRACTORS, OR BY EACH SUBCONTRACTOR, OR ANY COMBINATION THEREOF, PROVIDED THAT THE PERFORMANCE SECURITY IN TOTAL EQUALS, BUT DOES NOT EXCEED, THE TOTAL AMOUNT OF THE BID.

SUBCONTRACTOR IDENTIFICATION STATEMENT

The following information is to be provided in the case of all subcontractors who will furnish labor of the various trades governed by N.J.S.A. 18A:18A-18 (b) (General Construction, Steel, Plumbing, HVAC, Electric) and all DPMC Specialty Trades, where applicable.

TRADE	Contractor's Name/Address/Telephone	NJ License No.

If work of the types designated by the above referenced law will be performed by the Bidder, the Bidder shall state below and shall enclose copies of licenses covering each trade.

TRADE	N.J. License No.

BIDDER _____

STATEMENT OF OWNERSHIP DISCLOSURE

N.J.S.A. 52:25-24.2 (P.L. 1977, c.33, as amended by P.L. 2016, c.43)

This statement shall be completed, certified to, and included with all bid and proposal submissions. Failure to submit the required information is cause for automatic rejection of the bid or proposal.

Name of Organization: _____

Organization Address: _____

City, State, ZIP: _____

Part I Check the box that represents the type of business organization:

- Sole Proprietorship
- Non-Profit Corporation (skip Parts II and III, execute certification in Part IV)
- For-Profit Corporation (any type) Limited Liability Company (LLC)
- Partnership Limited Partnership Limited Liability Partnership (LLP)
- Other (be specific): _____

Part II Check the appropriate box

- The list below contains the names and addresses of all stockholders in the corporation who own 10 percent or more of its stock, of any class, or of all individual partners in the partnership who own a 10 percent or greater interest therein, or of all members in the limited liability company who own a 10 percent or greater interest therein, as the case may be. **(COMPLETE THE LIST BELOW IN THIS SECTION)**
- OR**
- No one stockholder in the corporation owns 10 percent or more of its stock, of any class, or no individual partner in the partnership owns a 10 percent or greater interest therein, or no member in the limited liability company owns a 10 percent or greater interest therein, as the case may be. **(SKIP TO PART IV)**

(Please attach additional sheets if more space is needed):

Name of Individual or Business Entity	Address (for Individuals) or Business Address

Part III DISCLOSURE OF 10% OR GREATER OWNERSHIP IN THE STOCKHOLDERS, PARTNERS OR LLC MEMBERS LISTED IN PART II

If a bidder has a direct or indirect parent entity which is publicly traded, and any person holds a 10 percent or greater beneficial interest in the publicly traded parent entity as of the last annual federal Security and Exchange Commission (SEC) or foreign equivalent filing, ownership disclosure can be met by providing links to the website(s) containing the last annual filing(s) with the federal Securities and Exchange Commission (or foreign equivalent) that contain the name and address of each person holding a 10% or greater beneficial interest in the publicly traded parent entity, along with the relevant page numbers of the filing(s) that contain the information on each such person. **Attach additional sheets if more space is needed.**

Website (URL) containing the last annual SEC (or foreign equivalent) filing	Page #'s

Please list the names and addresses of each stockholder, partner or member owning a 10 percent or greater interest in any corresponding corporation, partnership and/or limited liability company (LLC) listed in Part II **other than for any publicly traded parent entities referenced above.** The disclosure shall be continued until names and addresses of every non-corporate stockholder, and individual partner, and member exceeding the 10 percent ownership criteria established pursuant to N.J.S.A. 52:25-24.2 has been listed. **Attach additional sheets if more space is needed.**

Stockholder/Partner/Member and Corresponding Entity Listed in Part II	Address (for Individuals) or Business Address

Part IV Certification

I, being duly sworn upon my oath, hereby represent that the foregoing information and any attachments thereto to the best of my knowledge are true and complete. I acknowledge: that I am authorized to execute this certification on behalf of the bidder/proposer; that the _____ (**Owner**) is relying on the information contained herein and that I am under a continuing obligation from the date of this certification through the completion of any contracts with the **Owner** to notify the **Owner** in writing of any changes to the information contained herein; that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, and if I do so, I am subject to criminal prosecution under the law and that it will constitute a material breach of my agreement(s) with the, permitting the **Owner** to declare any contract(s) resulting from this certification void and unenforceable.

Full Name (Print):		Title:	
Signature:		Date:	

This statement shall be completed, certified to, and included with all bid and proposal submissions. Failure to submit the required information is cause for automatic rejection of the bid or proposal.

NON-COLLUSION AFFIDAVIT

STATE OF NEW JERSEY/ _____
(Specify, if Other)

COUNTY OF _____

I, _____, of the (City, Town, Borough) of _____ State of _____, of full age, being duly sworn according to law on my oath depose and say that:

I am _____ of the firm of _____, the Bidder making the Proposal for the above named Projects, and that I executed the said Proposal with full authority to do so; that said Bidder has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free, competitive bidding in connection with the above named Project; and that all statements contained in said Proposal and in this affidavit are true and correct, and made with full knowledge, and the State of New Jersey relies upon the truth of the statements contained in this affidavit in awarding the contract for the said Project.

I further warrant that no person or selling agency has been employed or retained to solicit or secure such contract upon an agreement or understanding for a commission, percentage, brokerage or contingent fee, except bona fide employees or bona fide established commercial or selling agencies maintained by _____. (Name of Contractor)

By: _____
(Signature of Authorized Representative)

Subscribed and sworn to before me
this _____ day of _____, 20__.

(Seal) Notary Public of New Jersey/
Specify Other State
My Commission Expires _____, 20__.

THIS FORM MUST BE COMPLETED, SIGNED, NOTARIZED, AND SUBMITTED WITH BID

EQUIPMENT CERTIFICATION

Title of Bid: _____

Bid No. _____

Bid Date: _____
(Weekday, Month 00, 20__)

In accordance with N.J.S.A. 18A:18A-23, I hereby certify that

A) _____ (Name of Company) owns all the necessary equipment as required by the specifications and to complete the specified public work project.

or

B) _____ (Name of Company) leases or controls all the necessary equipment as required by the specifications and to complete the specified public work project.

PLEASE NOTE: If your company is not the actual owner of the equipment, **you shall submit with the bid**

1. A certificate stating the source from which the equipment will be obtained and
2. Obtain and submit with the bid a certificate from the owner and person in control of the equipment, definitely granting to the bidder the control of the equipment required during such time it may be necessary for the completion of that portion of the contract for which said equipment will be necessary.

Name of Company _____

Authorized Agent _____ Title _____

Authorized Signature _____

Sworn Contractor Certification; Qualifications and Credentials

Pursuant to N.J.S.A. 18A:7G-37, a pre-qualified contractor seeking to bid school facilities projects, and any subcontractors, that are required to be named under N.J.S.A. 18A:7G-1 et seq. shall, as a condition of bidding, submit this Sworn Contractor Certification regarding qualifications and credentials.

I, _____, the principal owner or officer of the company certify that the forging statements are true and our firm has the following qualifications and credentials:

1. A current, valid certificate of registration issued pursuant to "The Public Works Contractor Registration Act," N.J.S.A. 34:11-56:48 et seq. A copy of which is submitted with its bid;
2. A current, valid Certificate of Authority to perform work in New Jersey issued by the Department of Treasury, a copy of which shall be attached to the certification form and is submitted with its bid;
3. A current valid contractor trade license required under applicable New Jersey Law for any specialty trade or specialty area in which the firm seeks to perform work, a copy of which is submitted with its bid;
4. During the term of the school facilities project, I as principal owner or officer of the company or corporation, as contractor, will have in place a suitable quality control and quality assurance program and an appropriate safety and health plan.
5. Certify that, at the time of bidding, the amount of the bid proposal and value of all of its outstanding incomplete contracts does not exceed the firm's existing aggregate rating limit.

Name of Company _____

Name of Owner or Officer _____

Signature of Owner or Officer _____

Notarized before me this _____ day of _____, _____
Month Year

NOTARY PUBLIC SIGNATURE

Print Name of Notary Public

My commission expires _____, _____
Month Day Year

-SEAL-

To be completed, signed, notarized and returned with bid.

FEDERAL AND STATE NON-DEBARMENT CERTIFICATIONS

I, _____ of the city of _____, in the County of _____ and the State of _____, of full age, certify that the entity listed on the form and/or any person or company employed by this entity, are not presently on the following:

- New Jersey Department of Treasury – Consolidated Debarment Report
- New Jersey Department of Labor – Prevailing Wage Debarment List
- Federal Debarred Vendor List – System for Award Management (SAM.gov)

Company Name: _____

Authorized Agent: _____

Signature: _____

Date: _____

SECTION 004541 – CERTIFICATION OF NON-DEPARTMENT FOR
 FEDERAL GOVERNMENT CONTRACTS
 N.J.S.A. 52:32-44.1 (P.L. 2019, c.406)

Public Works Contracts

Project No. _____ Title of Bid _____

This certification shall be completed, certified to, and submitted to the contracting unit **prior to contract award**, except for emergency contracts where submission is required prior to payment.

PART I: VENDOR INFORMATION	
Individual or Organization Name	
Address of Individual or Organization	
DUNS Code (if applicable)	
CAGE Code (if applicable)	
Check the box that represents the type of business organization:	

- Sole Proprietorship (skip Parts III and IV)
 Non-Profit Corporation (skip Parts III and IV)
 For-Profit Corporation (any type)
 Limited Liability Company (LLC)
 Partnership
 Limited Partnership
 Limited Liability Partnership (LLP)
 Other (be specific): _____

PART II – CERTIFICATION OF NON-DEBARMENT: Individual or Organization			
I hereby certify that the individual or organization listed above in Part I is not debarred by the federal government from contracting with a federal agency. I further acknowledge: that I am authorized to execute this certification on behalf of the above- named organization; that the _____ (“ OWNER ”) is relying on the information contained herein and that I am under a continuing obligation from the date of this certification through the date of contract award by “ OWNER ” to notify the “ OWNER ” in writing of any changes to the information contained herein; that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, and if I do so, I am subject to criminal prosecution under the law and that it will constitute a material breach of my agreement(s) with the “ OWNER ”, permitting the “ OWNER ” to declare any contract(s) resulting from this certification void and unenforceable.			
Full Name (Print):		Title:	
Signature:		Date:	

PART III – CERTIFICATION OF NON-DEBARMENT: Individual or Entity Owning Greater than 50 Percent of Organization

Section A (Check the Box that applies)

<input type="checkbox"/>	Below is the name and address of the stockholder in the corporation who owns more than 50 percent of its voting stock, or of the partner in the partnership who owns more than 50 percent interest therein, or of the member of the limited liability company owning more than 50 percent interest therein, as the case may be.
Name of Individual or Organization	
Home Address (for Individual) or Business Address	
OR	
<input type="checkbox"/>	No one stockholder in the corporation owns more than 50 percent of its voting stock, or no partner in the partnership owns more than 50 percent interest therein, or no member in the limited liability company owns more than 50 percent interest therein, as the case may be.

Section B (Skip if no Business entity is listed in Section A above)

<input type="checkbox"/>	Below is the name and address of the stockholder in the corporation who owns more than 50 percent of the voting stock of the organization's parent entity, or of the partner in the partnership who owns more than 50 percent interest in the organization's parent entity, or of the member of the limited liability company owning more than 50 percent interest in organization's parent entity, as the case may be.
Stockholder/Partner/Member Owning Greater Than 50 Percent of Parent Entity	
Home Address (for Individual) or Business Address	
OR	
<input type="checkbox"/>	No one stockholder in the parent entity corporation owns more than 50 percent of its voting stock, no partner in the parent entity partnership owns more than 50 percent interest therein, or no member in the parent entity limited liability company owns more than 50 percent interest therein, as the case may be.

Section C – Part III Certification

I hereby certify that no individual or organization that is debarred by the federal government from contracting with a federal agency owns greater than 50 percent of the **Organization listed above in Part I** or, if applicable, owns greater than 50 percent of a parent entity of _____ (***name of organization***). I further acknowledge: that I am authorized to execute this certification on behalf of the above-named organization; that the (“**OWNER**”) is relying on the information contained herein and that I am under a continuing obligation from the date of this certification through the date of contract award “**OWNER**” to notify the “**OWNER**” in writing of any changes to the information contained herein; that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, and if I do so, I am subject to criminal prosecution under the law and that it will constitute a material breach of my agreement(s) with the “**OWNER**”, permitting the “**OWNER**” to declare any contract(s) resulting from this certification void and unenforceable.

Full Name (Print):		Title:	
Signature:		Date:	

Part IV – CERTIFICATION OF Non-Debarment: Contractor – Controlled Entities

Section A

Below is the name and address of the corporation(s) in which the **Organization listed in Part I** owns more than 50 percent of voting stock, or of the partnership(s) in which the **Organization listed in Part I** owns more than 50 percent interest therein, or of the limited liability company or companies in which the **Organization listed above in Part I** owns more than 50 percent interest therein, as the case may be.

Name of Business Entity

Business Address

Add additional sheets if necessary

OR

The **Organization listed above in Part I** does not own greater than 50 percent of the voting stock in any corporation and does not own greater than 50 percent interest in any partnership or any limited liability company.

Section B (skip if no business entities are listed in Section A of Part IV)	
<input type="checkbox"/>	Below are the names and addresses of any entities in which an entity listed in Part III A owns greater than 50 percent of the voting stock (corporation) or owns greater than 50 percent interest (partnership or limited liability company).
Name of Business Entity Controlled by Entity Listed in Section A of Part IV	Business Address
Add additional Sheets if necessary	
OR	
<input type="checkbox"/>	No entity listed in Part III A owns greater than 50 percent of the voting stock in any corporation or owns greater than 50 percent interest in any partnership or limited liability company.

Section C – Part IV Certification of Non-Debarment			
<p>I hereby certify that the Organization listed above in Part I does not own greater than 50 percent of any entity that that is debarred by the federal government from contracting with a federal agency and, if applicable, does not own greater than 50 percent of any entity that in turns owns greater than 50 percent of any entity debarred by the federal government from contracting with a federal agency. I further acknowledge: that I am authorized to execute this certification on behalf of the above-named organization; that the (“OWNER”) is relying on the information contained herein and that I am under a continuing obligation from the date of this certification through the date of contract award by “OWNER” to notify “OWNER” in writing of any changes to the information contained herein; that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, and if I do so, I am subject to criminal prosecution under the law and that it will constitute a material breach of my agreement(s) with the “OWNER”, permitting the “OWNER” to declare any contract(s) resulting from this certification void and unenforceable.</p>			
Full Name (Print):		Title:	
Signature:		Date:	

STATE OF NEW JERSEY -- DIVISION OF PURCHASE AND PROPERTY
DISCLOSURE OF INVESTMENT ACTIVITIES IN IRAN

Quote Number: _____

Bidder/Offeror: _____

PART 1: CERTIFICATION

BIDDERS MUST COMPLETE PART 1 BY CHECKING EITHER BOX.

FAILURE TO CHECK ONE OF THE BOXES WILL RENDER THE PROPOSAL NON-RESPONSIVE.

Pursuant to Public Law 2012, c. 25, any person or entity that submits a bid or proposal or otherwise proposes to enter into or renew a contract must complete the certification below to attest, under penalty of perjury, that neither the person or entity, nor any of its parents, subsidiaries, or affiliates, is identified on the Department of Treasury's Chapter 25 list as a person or entity engaging in investment activities in Iran. The Chapter 25 list is found on the Division's website at <http://www.state.nj.us/treasury/purchase/pdf/Chapter25List.pdf>. Bidders **must** review this list prior to completing the below certification. **Failure to complete the certification will render a bidder's proposal non-responsive.** If the Director finds a person or entity to be in violation of law, s/he shall take action as may be appropriate and provided by law, rule or contract, including but not limited to, imposing sanctions, seeking compliance, recovering damages, declaring the party in default and seeking debarment or suspension of the party

PLEASE CHECK THE APPROPRIATE BOX:

I certify, pursuant to Public Law 2012, c. 25, that neither the bidder listed above nor any of the bidder's parents, subsidiaries, or affiliates is listed on the N.J. Department of the Treasury's list of entities determined to be engaged in prohibited activities in Iran pursuant to P.L. 2012, c. 25 ("Chapter 25 List"). I further certify that I am the person listed above, or I am an officer or representative of the entity listed above and am authorized to make this certification on its behalf. **I will skip Part 2 and sign and complete the Certification below.**

OR

I am unable to certify as above because the bidder and/or one or more of its parents, subsidiaries, or affiliates is listed on the Department's Chapter 25 list. I will provide a detailed, accurate and precise description of the activities in Part 2 below and sign and complete the Certification below. Failure to provide such will result in the proposal being rendered as non-responsive and appropriate penalties, fines and/or sanctions will be assessed as provided by law.

PART 2: PLEASE PROVIDE FURTHER INFORMATION RELATED TO INVESTMENT ACTIVITIES IN IRAN

You must provide a detailed, accurate and precise description of the activities of the bidding person/entity, or one of its parents, subsidiaries or affiliates, engaging in the investment activities in Iran outlined above by completing the boxes below.

EACH BOX WILL PROMPT YOU TO PROVIDE INFORMATION RELATIVE TO THE ABOVE QUESTIONS. PLEASE PROVIDE THOROUGH ANSWERS TO EACH QUESTION. IF YOU NEED TO MAKE ADDITIONAL ENTRIES, CLICK THE "ADD AN ADDITIONAL ACTIVITIES ENTRY" BUTTON.

Name _____	Relationship to Bidder/Offeror _____
Description of Activities _____	

Duration of Engagement _____	Anticipated Cessation Date _____
Bidder/Offeror Contact Name _____	Contact Phone Number _____

Delete

ADD AN ADDITIONAL ACTIVITIES ENTRY

Certification: I, being duly sworn upon my oath, hereby represent that the foregoing information and any attachments thereto to the best of my knowledge are true and complete. I acknowledge: that I am authorized to execute this certification on behalf of the bidder; that the State of New Jersey is relying on the information contained herein and that I am under a continuing obligation from the date of this certification through the completion of any contracts with the State to notify the State in writing of any changes to the information contained herein; that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, and if I do so, I am subject to criminal prosecution under the law and that it will constitute a material breach of my agreement(s) with the State, permitting the State to declare any contract(s) resulting from this certification void and unenforceable.

Full Name (Print): _____

Signature: _____

Do Not Enter PIN as a Signature

Title: _____

Date: _____

Compliance with New Jersey Prevailing Wage Act (N.J.S.A. 34:11-56.25 et seq.)

Every contractor and subcontractor performing services in connection with this project, shall pay all workers a wage rate not less than the published prevailing wage rates, for the locality the work is being performed, as designated by the New Jersey Department of Labor and Workforce Development (NJ DLWD).

Wage rates for the county of the location of the Public Agency (Owner), as published by the State Department of Labor and Workforce Development (DLWD), can be viewed at https://www.nj.gov/labor/wagehour/wagerate/prevailing_wage_determinations.html

The contractor must complete and sign the "Prevailing Wage Certification" form included in the bid package and submit with his bid. This form confirms the contractor's intention to comply with the act. The Owner may terminate the contract if contractor fails to pay workers prevailing wage.

The prevailing wage rates in affect at the time of award, will be included as a part of the construction contract.

PREVAILING WAGES COMPLIANCE CERTIFICATION

It is the determination that this is a public works project that in total will exceed \$2,000.00 (two thousand dollars), therefore prevailing wages rules and regulations apply as promulgated by the New Jersey Prevailing Wage Act and in conformance with N.J.S.A. 34:11-56:25 et seq.

Certification

1. I certify that our company understands that this project requires prevailing wages to be paid in full accordance with the law.

2. I further certify that all subcontractors named in this bid understand that this project requires the subcontractor to pay prevailing wages in full accordance with the law.

Non-compliance Statement

If it is found that any worker, employed by the contractor or any subcontractor covered by said contract, has been paid a rate of wages less than the prevailing wage required to be paid by such contract, the Owner, may begin proceedings to terminate the contractor's or subcontractor's right to proceed with the work, or such part of the work as to which there has been a failure to pay required wages and to prosecute the work to completion or otherwise. The contractor and his sureties shall be liable for any excess costs occasioned thereby to the public body.

NOTIFICATION OF VIOLATIONS – New Jersey Department of Labor and Workforce Development

Has the bidder or any person having an “interest” with the bidder, been notified by the New Jersey Department of Labor and Workforce Development by notice issued pursuant to N.J.S.A. 34:11-56a et seq that he/she has been in violation for failure to pay prevailing wages as required by the New Jersey Prevailing Wage Act within the last five (5) years?

*Yes _____

No _____

*If yes, please attach a signed document explaining any/or all administrative proceedings with the Department within the last five (5) years. Please include any pending administrative proceedings with the Department if any.

Submission of Certified Payroll Records

All certified payroll records are to be submitted to the Owner, Business Administrator, who is coordinating the activities for the project:

Name of Company _____

Authorized Agent _____

Authorized Signature _____

**Lowest Responsible Bidder by 10% or More
Certification of Prevailing Wage Rates and
Acknowledgement of Penalties Form
P.L.2021, c.301**

I, _____ of the bidding organization/firm of _____, located in the Municipality of _____, County of _____, State of _____; and being of full age, do hereby certify and affirm that:

I am a Bidder and/or authorized representative of same submitting a bid for labor/materials/services on the _____ [Project]. I hereby certify that, should _____ [organization/firm] be deemed the lowest responsible bidder for the Project, and should _____ [organization/firm's] bid amount be ten percent (10%) or more lower than the next lowest bid for the contract, that the prevailing wage rates required by the New Jersey Prevailing Wage Act, P.L.1963, c.150 (C.34:11-56.25 et seq.) shall be paid.

Furthermore, I hereby certify and acknowledge, that I understand that if _____ [organization/firm] does not provide this Certification prior to the award of contract, the Project Owner shall award the contract to the next lowest responsible and responsive bid, pursuant to P.L.2021, c.301.

Name of Authorized Agent _____
Signature _____
Title _____
Date _____

CERTIFICATION OF INSURANCE STATEMENT

The Bidder fully understands the Owner's insurance requirements as stated in the Bid Documents (i.e., Supplementary General Conditions, AIA 232 Article 11 Insurance and Bonds, A132 Exhibit A Insurance and Bonds) and agrees to provide all insurance required by these documents at award of contract.

COMPANY NAME

BIDDER (Signature)

BIDDER (Print Name)

Note: Failure to sign this document may result in the rejection of your Proposal.

CERTIFICATION OF NO MATERIAL CHANGE OF CIRCUMSTANCES

Bidder's Name: _____

Address: _____

1. A statement as to the financial ability, adequacy of plant equipment, organization and prior experience of the Bidder, as required by N.J.S.A. 18A:18A-28 has been submitted to the Department of Treasury within the last twelve (12) months preceding the date of opening of bids for this contract.

2. I certify, as required by N.J.S.A. 18A:18A-32, that there has been no material adverse change in the qualification except:

(Name and Title of Signer - Please print or type)

(Signature)

(Date)

C. 271 POLITICAL CONTRIBUTION DISCLOSURE FORM

Public Agency Instructions

This page provides guidance to public agencies entering into contracts with business entities that are required to file Political Contribution Disclosure forms with the agency. **It is not intended to be provided to contractors.** What follows are instructions on the use of form local units can provide to contractors that are required to disclose political contributions pursuant to N.J.S.A. 19:44A-20.26 (P.L. 2005, c. 271, s.2). Additional information on the process is available in Local Finance Notice 2006-1 (http://www.nj.gov/dca/divisions/dlgs/resources/lfns_2006.html). Please refer back to these instructions for the appropriate links, as the Local Finance Notices include links that are no longer operational.

1. The disclosure is required for all contracts in excess of \$17,500 that are **not awarded** pursuant to a “fair and open” process (N.J.S.A. 19:44A-20.7).
2. Due to the potential length of some contractor submissions, the public agency should consider allowing data to be submitted in electronic form (i.e., spreadsheet, pdf file, etc.). Submissions must be kept with the contract documents or in an appropriate computer file and be available for public access. **The form is worded to accept this alternate submission.** The text should be amended if electronic submission will not be allowed.
3. The submission must be **received from the contractor and** on file at least 10 days prior to award of the contract. Resolutions of award should reflect that the disclosure has been received and is on file.
4. The contractor must disclose contributions made to candidate and party committees covering a wide range of public agencies, including all public agencies that have elected officials in the county of the public agency, state legislative positions, and various state entities. The Division of Local Government Services recommends that contractors be provided a list of the affected agencies. This will assist contractors in determining the campaign and political committees of the officials and candidates affected by the disclosure.
 - a. The Division has prepared model disclosure forms for each county. They can be downloaded from the “County PCD Forms” link on the Pay-to-Play web site at <http://www.nj.gov/dca/divisions/dlgs/programs/lpcl.html#12>. They will be updated from time-to-time as necessary.
 - b. A public agency using these forms **should edit them to properly reflect the correct legislative district(s)**. As the forms are county-based, **they list all legislative districts in each county. Districts that do not represent the public agency should be removed from the lists.**
 - c. Some contractors may find it easier to provide a single list that covers all contributions, regardless of the county. These submissions are appropriate and should be accepted.
 - d. The form may be used “as-is”, subject to edits as described herein.
 - e. The “Contractor Instructions” sheet is intended to be provided with the form. It is recommended that the Instructions and the form be printed on the same piece of paper. The form notes that the Instructions are printed on the back of the form; where that is not the case, the text should be edited accordingly.
 - f. The form is a Word document and can be edited to meet local needs, and posted for download on web sites, used as an e-mail attachment, or provided as a printed document.
5. It is recommended that the contractor also complete a “Stockholder Disclosure Certification.” This will assist the local unit in its obligation to ensure that contractor did not make any prohibited contributions to the committees listed on the Business Entity Disclosure Certification in the 12 months prior to the contract. (See Local Finance Notice 2006-7 for additional information on this obligation at http://www.nj.gov/dca/divisions/dlgs/resources/lfns_2006.html) A sample Certification form is part of this package and the instruction to complete it is included in the Contractor Instructions. **NOTE: This section is not applicable to Boards of Education.**

C. 271 POLITICAL CONTRIBUTION DISCLOSURE FORM

Contractor Instructions

Business entities (contractors) receiving contracts from a public agency that are NOT awarded pursuant to a “fair and open” process (defined at N.J.S.A. 19:44A-20.7) are subject to the provisions of P.L. 2005, c. 271, s.2 (N.J.S.A. 19:44A-20.26). This law provides that 10 days prior to the award of such a contract, the contractor shall disclose contributions to:

- any State, county, or municipal committee of a political party
- any legislative leadership committee*
- any continuing political committee (a.k.a., political action committee)
- any candidate committee of a candidate for, or holder of, an elective office:
 - of the public entity awarding the contract
 - of that county in which that public entity is located
 - of another public entity within that county
 - or of a legislative district in which that public entity is located or, when the public entity is a county, of any legislative district which includes all or part of the county

The disclosure must list reportable contributions to any of the committees that exceed \$300 per election cycle that were made during the 12 months prior to award of the contract. See N.J.S.A. 19:44A-8 and 19:44A-16 for more details on reportable contributions.

N.J.S.A. 19:44A-20.26 itemizes the parties from whom contributions must be disclosed when a business entity is not a natural person. This includes the following:

- individuals with an “interest” ownership or control of more than 10% of the profits or assets of a business entity or 10% of the stock in the case of a business entity that is a corporation for profit
- all principals, partners, officers, or directors of the business entity or their spouses
- any subsidiaries directly or indirectly controlled by the business entity
- IRS Code Section 527 New Jersey based organizations, directly or indirectly controlled by the business entity and filing as continuing political committees, (PACs).

When the business entity is a natural person, “a contribution by that person’s spouse or child, residing therewith, shall be deemed to be a contribution by the business entity.” [N.J.S.A. 19:44A-20.26(b)] The contributor must be listed on the disclosure.

Any business entity that fails to comply with the disclosure provisions shall be subject to a fine imposed by ELEC in an amount to be determined by the Commission which may be based upon the amount that the business entity failed to report.

The enclosed list of agencies is provided to assist the contractor in identifying those public agencies whose elected official and/or candidate campaign committees are affected by the disclosure requirement. It is the contractor’s responsibility to identify the specific committees to which contributions may have been made and need to be disclosed. The disclosed information may exceed the minimum requirement.

The enclosed form, a content-consistent facsimile, or an electronic data file containing the required details (along with a signed cover sheet) may be used as the contractor’s submission and is disclosable to the public under the Open Public Records Act.

The contractor must also complete the attached Stockholder Disclosure Certification. This will assist the agency in meeting its obligations under the law. **NOTE: This section does not apply to Board of Education contracts.**

* N.J.S.A. 19:44A-3(s): “The term “legislative leadership committee” means a committee established, authorized to be established, or designated by the President of the Senate, the Minority Leader of the Senate, the Speaker of the General Assembly or the Minority Leader of the General Assembly pursuant to section 16 of P.L.1993, c.65 (C.19:44A-10.1) for the purpose of receiving contributions and making expenditures.”

List of Agencies with Elected Officials Required for Political Contribution Disclosure
N.J.S.A. 19:44A-20.26

County Name:

State: Governor, and Legislative Leadership Committees

Legislative District #s:

State Senator and two members of the General Assembly per district.

County:

Freeholders

County Clerk

Sheriff

{County Executive}

Surrogate

Municipalities (Mayor and members of governing body, regardless of title):

**USERS SHOULD CREATE THEIR OWN FORM, OR DOWNLOAD
FROM [the Pay to Play section](#) OF THE DLGS WEBSITE A
COUNTY-BASED, CUSTOMIZABLE FORM.**

STOCKHOLDER DISCLOSURE CERTIFICATION

Name of Business:

I certify that the list below contains the names and home addresses of all stockholders holding 10% or more of the issued and outstanding stock of the undersigned.

OR

I certify that no one stockholder owns 10% or more of the issued and outstanding stock of the undersigned.

Check the box that represents the type of business organization:

Partnership

Corporation

Sole Proprietorship

Limited Partnership

Limited Liability Corporation

Limited Liability Partnership

Subchapter S Corporation

Sign and notarize the form below, and, if necessary, complete the stockholder list below.

Stockholders:

Name:	Name:
Home Address:	Home Address:
Name:	Name:
Home Address:	Home Address:
Name:	Name:
Home Address:	Home Address:

Subscribed and sworn before me this ___ day of _____, 2 __.	_____
(Notary Public)	(Affiant)
My Commission expires:	_____
	(Print name & title of affiant)
	(Corporate Seal)

STATUS OF PRESENT CONTRACTS

PURSUANT TO N.J.A.C. 17:19-2.13, BIDDER DECLARES THE FOLLOWING WITH RESPECT TO ITS UNCOMPLETED CONTRACTS, ON ALL WORK, FROM WHATEVER SOURCE (PUBLIC AND PRIVATE), BOTH IN NEW JERSEY AND FROM OTHER GOVERNMENTAL JURISDICTIONS.

- **Each classified bidder's aggregate rating shall be calculated in accordance with formula prescribed by N.J.A.C. 17:19-2.8.**
- **Calculations shall be based on Bidder's base bid amount only at time of bid or total amount of base bid and accepted Alternate Bids at time of Award.**

Entity	Project Title	Original Contract Amount	Uncompleted Amount As of Bid Opening Date	Name and Telephone Number of Party To Be Contacted From Entity For Verification

Sworn and Subscribed to before me
 this _____ day of _____, 20__

BIDDER

 Notary Public

 (Print and Signature)

PERFORMANCE RECORD

How many years has your organization been in business as a Contractor under your present business name? _____

How many years experience in construction work has your organization had:

(a) As a Prime contractor? _____ (b) As a subcontractor? _____

What is the construction experience of the principal individuals of your organization?

Individual's Name	Present Position or Office	Years of Constr. Experience	Magnitude and Type of Work	In What Capacity

Have you ever failed to complete any work contracted to you? _____

If so, where and why? _____

Has any officer or partner of your organization ever failed to complete a construction contract handled in its own name?

If so, state name of individual, name of owner, location and type of project and reason for the failure to complete.

PERFORMANCE RECORD (Continued)

List of all contracts completed by you.

Name of Owner	Name & Location of Project/ Type of Work	Prime or Sub- Contractor	Architect or Engineer in Charge for Owner	Contract Price (Omit Cost)	Date Completed	Was* Time Extension Necessary	Were any Penalties Imposed	Were* Liens Claims or Stop Notice Filed

*Explain "Yes" answers.

PERFORMANCE RECORD
CERTIFICATION

Explanation of details in connection with non-completion of contracts, time extensions, penalties imposed, labor troubles experience, liens, termination of contracts, poor performance, debarment, claims and notices filed against contracts.

The information above is true and complete to the best of my knowledge and belief.

(Name of Organization)

(Signature)

(Title)

STATE OF)
)ss.
COUNTY OF)

_____, being duly sworn to law, deposes and says that it is authorized to make this affidavit for, and on behalf of, the individual, partnership or corporation herein first named as the Bidder, that deponent is familiar with the books of the said Bidder and that the foregoing statement is a true and accurate statement taken from the books of said Bidder of such financial condition as of the date herein first named; that the answers to the foregoing interrogatories are true and correct.

Subscribed and sworn to before me

This _____ day of _____, 20__

(Signature)

(Seal) Notary Public of New Jersey/
Specify Other State
My Commission Expires _____, 20__.

Surety Disclosure Statement and Certification
N.J.S. A. 2A:44-143

SAMPLE

SURETY DISCLOSURE STATEMENT AND CERTIFICATION

....., surety(ies) on the attached bond, hereby certifies(y) the following:

(1) The surety meets the applicable capital and surplus requirements of N.J.S.A.17:17-6 or N.J.S.A. 17:17-7 as of the surety's most current annual filing with the New Jersey Department of Insurance.

(2) The capital (where applicable) and surplus, as determined in accordance with the applicable laws of this State, of the surety(ies) participating in the issuance of the attached bond is (are) in the following amount(s) as of the calendar year ended December 31, (most recent calendar year for which capital and surplus amounts are available), which amounts have been certified as indicated by certified public accountants (indicating separately for each surety that surety's capital and surplus amounts, together with the name and address of the firm of certified public accounts that shall have certified those amounts):

.....
.....
.....

(3) (a) With respect to each surety participating in the issuance of the attached bond that has received from the United States Secretary of the Treasury a certificate of authority pursuant to 31 U.S.C. 9305, the underwriting limitation established therein and the date as of which that limitation was effective is as follows (indicating for each such surety that surety's underwriting limitation and the effective date thereof):

.....
.....
.....

(b) With respect to each surety participating in the issuance of the attached bond that has not received such a certificate of authority from the United States Secretary of the Treasury, the underwriting limitation of that surety as established pursuant to N.J.S.A. 17:18-9 as of (date on which such limitation was so established) is as follows (indicating for each such surety that surety's underwriting limitation and the date on which that limitation was established):

.....
.....
.....

(4) The amount of the bond to which this statement and certification is attached is \$.....

(5) If, by virtue of one or more contracts of reinsurance, the amount of the bond indicated under item (4) above exceeds the total underwriting limitation of all sureties on the bond as set forth in items (3)(a) or (3)(b) above, or both, then for each such contract of reinsurance:

(a) The name and address of each such reinsurer under that contract and the amount of that reinsurer's participation in the contract is as follows:.....

.....

.....

.....; and

(b) Each surety that is party to any such contract of reinsurance certifies that each reinsurer listed under item (5)(a) satisfies the credit for reinsurance requirement established under NJSA 17:51B-1 et seq. and any applicable regulations in effect as of the date on which the bond to which this statement and certification is attached shall have been filed with the appropriate public agency.

CERTIFICATE

(to be completed by an authorized certifying agent

for each surety on the bond)

I (name of agent), as (title of agent) for (name of surety), a corporation/mutual insurance company/other (indicating type of business organization) (circle one) domiciled in (state of domicile), DO HEREBY CERTIFY that, to the best of my knowledge, the foregoing statements made by me are true, and ACKNOWLEDGE that, if any of those statements are false, this bond is VOIDABLE.

.....

(Signature of certifying agent)

.....

(Printed name of certifying agent)

.....

(Title of certifying agent)

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned _____ as PRINCIPAL and sureties with underwriting office at _____ to which all communication in regard to this bond should be addressed, a Corporation organized and existing under the laws of the State of _____ and duly authorized to do business in the state of New Jersey, as SURETY, are hereby held and firmly bound unto the _____ (Owner) in the penal sum of _____ Dollars, (\$ _____) for payment of which well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors, and assigns.

SIGNED and SEALED this _____ day of _____ two thousand and _____.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH THAT, WHEREAS, the above named Principal did on the _____ day of _____, 20____, entered into a contract with _____ identified as _____ which said contract, upon execution by the Owner, and the Principal, will be a part of this bond the same as though set forth herein.

Now, if the said Principal shall well and faithfully do and perform each and every, all and singular, the things agreed by it (or them) to be done and performed according to the terms of said contract, and shall pay all lawful claims of beneficiaries as defined by N.J.S.2A:44-143 for labor performed or materials, provisions, provender or other supplies or teams, fuels, oils, implements or machinery furnished, used or consumed in the carrying forward, performing or completing of said contract, we agreeing and assenting that this undertaking shall be for the benefit of any beneficiary as defined in N.J.S.2A:44-143 having a just claim, as well as for the oblige herein; then this obligation shall be void; otherwise the same shall remain in full force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall in no event exceed the penal amount of this obligation as herein stated.

The said Surety hereby stipulated and agrees that no modifications, omissions or additions in or to the terms of the said contract, or in or to the plans or specifications therefore, shall in anyway affect the obligations of said Surety on its bond.

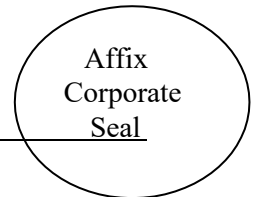
Recovery of any claimant under the bond shall be subject to the conditions and provisions of this article to the same extent as if such conditions and provisions were fully incorporated in the form set forth above.

Principal:

Witness

Print or Type Name

By: _____
Print Name:
Print Title:

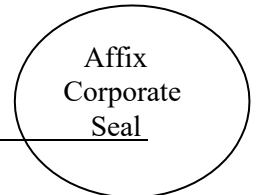


Surety:

Witness

Print or Type Name

By: _____
Print Name:
Print Title:



PAYMENT BOND

Bond No. _____

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned _____ as PRINCIPAL and sureties with underwriting office at _____ to which all communication in regard to this bond should be addressed, a Corporation organized and existing under the laws of the State of _____ and duly authorized to do business in the state of New Jersey, as SURETY, are hereby held and firmly bound unto the _____ in the penal sum of _____, for payment of which well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors, and assigns.

SIGNED and SEALED this _____ day of _____ two thousand and _____.

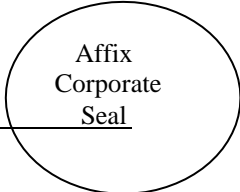
THE CONDITION OF THE ABOVE OBLIGATION IS SUCH THAT, WHEREAS, the above named Principal did on the _____ day of _____, 20____, entered into a contract with _____ identified as _____ which said contract, upon execution by the Owner, and the Principal, will be a part of this bond the same as though set forth herein.

Now, if the said Principal shall pay all lawful claims of beneficiaries as defined by N.J.S.2A:44-143 for labor performed or materials, provisions, provender or other supplies or teams, fuels, oils, implement or machinery furnished, used or consumed in carrying forward, performing or completing of said contract, we agreeing and assenting that this undertaking shall be for the benefit of any beneficiary as defined in N.J.S.2A;44-143 having a just claim, as well as for the party of the first part mentioned in the contract aforesaid; then this obligation shall be void; otherwise the same shall remain in full force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall in no event exceed the penal amount of this obligation as herein stated.

The said Surety hereby stipulated and agrees that no modifications, omissions or additions in or to the terms of the said contract, or in or to the plans or specifications therefore, shall in anyway affect the obligations of said Surety on its bond.

Principal:

By: _____
Print Name:
Print Title:

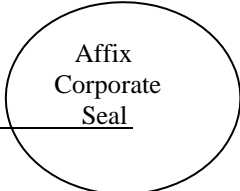


Witness

Print or Type Name

Surety:

By: _____
Print Name:
Print Title:



Witness

Print or Type Name

MAINTENANCE BOND

KNOW ALL MEN BY THESE PRESENTS, That we, the undersigned,

as principal, and _____ a Corporation organized and existing under the laws of the state of _____, and duly authorized to do business in the State of New Jersey, as Surety, are held and firmly bound unto the _____ as Owner, in the penal sum of _____

(10% of the Final Contract Amount)

for payment of which, well and truly to be made, we hereby, jointly, and severally, bind ourselves, our heirs, executors, administrators, successors and assigns.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH, That whereas

the above named principal did on the _____ day of _____, 20____, enter into a Contract with the Owner for _____

(Project Name)

which said Contract is made a part of this bond the same as though set forth herein.

NOW, if the said principal shall remedy without cost to the Owner any defects which may develop during the two (2) year Maintenance Period of the work performed under the said Contract, provided such defects, in the judgment of the Owner are caused by defective or inferior materials or workmanship, then this obligation shall be void, otherwise it shall be and remain in full force and effect. The two (2) year period shall commence on the date established in the Certificate of Substantial Completion.

The said Surety hereby stipulates and agrees that no modifications, deletions or additions in or to the terms of the said Contract or the plans or specifications therefor shall in any way affect its obligations on this bond.

Signed and Sealed this _____ day of _____, 20__.

(Principal) (Seal)

(Witness)

(Title)

(Surety) (Seal)

(Witness)

(Title)

**INSTRUCTIONS FOR COMPLETING THE INITIAL PROJECT
WORKFORCE REPORT – CONSTRUCTION (AA201)**

DO NOT COMPLETE THIS FORM FOR GOODS AND/OR SERVICE CONTRACTS

- 1. Enter the Federal Identification Number assigned to the contractor by the Internal Revenue Service, or if a Federal Employer Identification Number has been applied for but not yet issued, or if your business is such that you have not or will not receive a Federal Identification Number, enter the social security number assigned to the single owner or one partner, in the case of a partnership.**
- 2. Note: The Department of Labor & Workforce Development, Construction EEO Monitoring Program will assign a contractor ID number to your company. This number will be your permanently assigned contractor ID number that must be on all correspondence and reports submitted to this office.**
- 3. Enter the prime contractor’s name, address and zip code number.**
- 4. Check box if Company is Minority Owned or Woman Owned**
- 5. Enter the complete name and address of the Public Agency awarding the contract. Include the contract number, date of award and dollar amount of the contract.**
- 6. Enter the name and address of the project, including the county in which the project is located.**
- 7. Note: A project contract ID number will be assigned to your firm upon receipt of the completed Initial Project Workforce Report (AA201) for this contract. This number must be indicated on all correspondence and reports submitted to this office relating to this contract.**
- 8. Check “Yes” or “No” to indicate whether a Project Labor Agreement (PLA) was established with the labor organization(s) for this project.**
- 9. Under the Projected Total Number of Employees in each trade or craft and at each level of classification, enter the total composite workforce of the prime contractor and all subcontractors projected to work on the project. Under Projected Employees enter total minority and female employees of the prime contractor and all subcontractors projected to work on the project. Minority employees include Black, Hispanic, American Indian and Asian, (J=Journeyworker, AP=Apprentice). Include projected phase-in and completion dates.**
- 10. Print or type the name of the company official or authorized Equal Employment Opportunity (EEO) official include signature and title, phone number and date the report is submitted.**

This report must be submitted to the Public Agency that awards the contract and the Department of Labor & Workforce Development, Construction EEO Compliance Monitoring Program after notification of award, but prior signing the contract.

**THE CONTRACTOR IS TO RETAIN A COPY AND SUBMIT COPY TO THE PUBLIC AGENCY AWARDING
THE CONTRACT AND FORWARD A COPY TO:**

**NEW JERSEY DEPARTMENT OF LABOR & WORKFORCE DEVELOPMENT
CONSTRUCTION EEO COMPLIANCE MONITORING UNIT**

**P.O. BOX 209
TRENTON, NJ 08625-0209**

(609) 292-9550

STATE OF NEW JERSEY

DEPARTMENT OF LABOR & WORKFORCE DEVELOPMENT
CONSTRUCTION EEO COMPLIANCE MONITORING PROGRAM

Assignment

Code

FORM AA-201

Revised 11/11

INITIAL PROJECT WORKFORCE REPORT CONSTRUCTION

For instructions on completing the form, go to: http://www.state.nj.us/treasury/contract_compliance/pdf/aa201ins.pdf

1. FID NUMBER		2. CONTRACTOR ID NUMBER		5. NAME AND ADDRESS OF PUBLIC AGENCY AWARDING CONTRACT						
3. NAME AND ADDRESS OF PRIME CONTRACTOR				Name:						
				Address:						
(Name)				CONTRACT NUMBER		DATE OF AWARD		DOLLAR AMOUNT OF AWARD		
(Street Address)				6. NAME AND ADDRESS OF PROJECT				7. PROJECT NUMBER		
(City) (State) (Zip Code)										Name:
4. IS THIS COMPANY MINORITY OWNED [] OR WOMAN OWNED []				Address:						
				COUNTY						8. IS THIS PROJECT COVERED BY A PROJECT LABOR AGREEMENT (PLA)? YES <input type="checkbox"/>
9. TRADE OR CRAFT	PROJECTED TOTAL EMPLOYEES				PROJECTED MINORITY EMPLOYEES				PROJECTED PHASE - IN DATE	PROJECTED COMPLETION DATE
	MALE		FEMALE		MALE		FEMALE			
	J	AP	J	AP	J	AP	J	AP		
1. ASBESTOS WORKER										
2. BRICKLAYER OR MASON										
3. CARPENTER										
4. ELECTRICIAN										
5. GLAZIER										
6. HVAC MECHANIC										
7. IRONWORKER										
8. OPERATING ENGINEER										
9. PAINTER										
10. PLUMBER										
11. ROOFER										
12. SHEET METAL WORKER										
13. SPRINKLER FITTER										
14. STEAMFITTER										
15. SURVEYOR										
16. TILER										
17. TRUCK DRIVER										
18. LABORER										
19. OTHER										
20. OTHER										

I hereby certify that the foregoing statements made by me are true. I am aware that if any of the foregoing statements are willfully false, I am subject to punishment.

(Signature)

10. (Please Print Your Name)

(Title)

(Area Code)

(Telephone Number)

(Ext.)

(Date)

State Of New Jersey

Department of Labor & Workforce Development
Construction EEO Compliance Monitoring Program

MONTHLY PROJECT WORKFORCE REPORT - CONSTRUCTION

For instructions on completing the form, go to: http://www.state.nj.us/treasury/contract_compliance/pdf/aa202ins.pdf		3. F ID or SS Number			
1. Name and address of Prime Contractor (NAME)		2. Contractor ID Number		4. Reporting Period	
(ADDRESS)		5. Public Agency Awarding Contract		Date of Award	
(CITY) (STATE) (ZIP CODE)		6. Name and Location of Project		County	
				7. Project ID Number	

8. CONTRACTOR NAME (LIST PRIME CONTRACTOR WITH SUBS FOLLOWING)	9. PERCENT OF WORK COMPLETED	10. TRADE OR CRAFT	CLASSIFICATION (SEE REVERSE)	11. NUMBER OF EMPLOYEES						12. TOTAL	13. WORK HOURS		14. % OF WORK HRS		15. CUM. WORK HRS		16. CUM. % OF W/H			
				A.	B.	C.	D.	E.	F.	NO. OF	TOTAL	A.	B.	A.	B.	TOTAL	A.	B.	A.	B.
				TOTAL	BLACK	HISPANIC	AMERICAN INDIAN	ASIAN	FEMALES	MIN. EMP.	WORK HOURS	MIN. W/H	FEMALE W/H	% OF MIN. W/H	% OF FEMALE W/H	WORK HOURS	MIN. HOURS	FEMALE HOURS	% OF MIN. W/H	% OF FEM. W/H
			J																	
			AP																	
			J																	
			AP																	
			J																	
			AP																	
			J																	
			AP																	

17. COMPLETED BY (PRINT OR TYPE)

(NAME) (SIGNATURE) (TITLE)

(AREA CODE) (TELEPHONE NUMBER) (EXT.) (DATE)



AIA® Document A132® – 2019

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)

Princeton Public Schools Board of Education
25 Valley Road, 2nd Floor
Princeton, NJ 08540

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

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

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

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

Fraytak Veisz Hopkins Duthie, P.C.
1515 Lower Ferry Road
Trenton, NJ 08618

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™–2019, General Conditions of the Contract for Construction, Construction Manager as Adviser Edition; B132™–2019, Standard Form of Agreement Between Owner and Architect, Construction Manager as Adviser Edition; and C132™–2019, Standard Form of Agreement Between Owner and Construction Manager as Adviser. AIA Document A232™–2019 is adopted in this document by reference. Do not use with other general conditions unless this document is modified.

TABLE OF ARTICLES

1	THE CONTRACT DOCUMENTS
2	THE WORK OF THIS CONTRACT
3	DATE OF COMMENCEMENT AND DATES OF SUBSTANTIAL COMPLETION
4	CONTRACT SUM
5	PAYMENTS
6	DISPUTE RESOLUTION
7	TERMINATION OR SUSPENSION
8	MISCELLANEOUS PROVISIONS
9	ENUMERATION OF CONTRACT DOCUMENTS

EXHIBIT A INSURANCE AND BONDS

EXHIBIT B 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. In the event of any conflict among the Contract Documents, the Contractor shall notify the Owner and the Architect of same and follow and comply with their interpretation of same.

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 DATES OF SUBSTANTIAL COMPLETION

§ 3.1 The date of commencement of the Work shall be:

(Check one of the following boxes.)

- The date of this Agreement.
- A date set forth in a notice to proceed issued by the Owner.
- Established as follows:
(Insert a date or a means to determine the date of commencement of the Work.)

If a date of commencement of the Work is not selected, then the date of commencement shall be the date of this Agreement.

(Paragraph deleted)

§ 3.3 Substantial Completion of the Project or Portions Thereof

§ 3.3.1 Subject to adjustments of the Contract Time as provided in the Contract Documents, the date of Substantial Completion of the Work of all of the Contractors for the Project will be:

Init.

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User Notes:

(1917338223)

(Insert the date of Substantial Completion of the Work of all Contractors for the Project.)

§ 3.3.2 Subject to adjustments of the Contract Time as provided in the Contract Documents, if portions of the Work of all of the Contractors for the Project are to be completed prior to Substantial Completion of the entire Work of all of the Contractors for the Project, the Contractors shall achieve Substantial Completion of such portions by the following dates:

Portion of Work	Substantial Completion Date
-----------------	-----------------------------

§ 3.4 When the Work of this Contract, or any Portion Thereof, is Substantially Complete

§ 3.4.1 Subject to adjustments of the Contract Time as provided in the Contract Documents, the Contractor shall substantially complete the entire Work of this Contract:

(Check one of the following boxes and complete the necessary information.)

Not later than () calendar days from the Notice to Proceed.

By the following date:

§ 3.4.2 Subject to adjustments of the Contract Time as provided in the Contract Documents, if portions of the Work of this Contract are to be substantially complete prior to when the entire Work of this Contract shall be substantially complete, the Contractor shall substantially complete such portions by the following dates:

Portion of Work	Date to be substantially complete
-----------------	-----------------------------------

§ 3.4.3 If the Contractor fails to substantially complete the Work of this Contract, or portions thereof, as provided in this Section 3.4, liquidated damages, if any, shall be assessed as set forth in Section 4.5.

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, 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.)

§ 4.2 Stipulated Sum

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

§ 4.2.2 Alternates

§ 4.2.2.1 Alternates, if any, included in the Contract Sum: Section 01030 – Alternate Bids

Item	Price
------	-------

§ 4.2.2.2 Subject to the conditions noted below, the following alternates may be accepted by the Owner following execution of this Agreement. Upon acceptance, the Owner shall issue a Modification to this Agreement.

(Insert below each alternate and the conditions that must be met for the Owner to accept the alternate.)

Item	Price	Conditions for Acceptance
------	-------	---------------------------

§ 4.2.3 Allowances, if any, included in the Contract Sum: Section 01020 - Allowances
(Identify each allowance.)

Item	Price
------	-------

§ 4.2.4 Unit prices, if any: Section 01151 – Unit Prices
(Identify the item and state the unit price, and quantity limitations, if any, to which the unit price will be applicable.)

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

(Paragraphs deleted)
(Table deleted)
(Paragraphs deleted)
(Table deleted)
(Paragraphs deleted)
(Table deleted)
(Paragraphs deleted)
(Table deleted)
(Paragraphs deleted)
(Table deleted)
(Paragraphs deleted)

§ 4.5 Liquidated damages, if any:
(Insert terms and conditions for liquidated damages, if any, to be assessed in accordance with Section 3.4.)

Liquidated Damages to be assessed in accordance with the Specification requirements, Section 01800, entitled "Time of Completion and Liquidated Damages." By executing the Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing the Work. TIME IS OF THE ESSENCE. If the Contractor fails to complete his work or fails to complete a portion of his work and therefore not achieve Substantial Completion and/or Final Completion on the respective dates required, s/he shall pay the Owner, as liquidated damages and not as a penalty, (\$2,000) per day, which is agreed upon as a reasonable and proper measure which the Owner will sustain each calendar day by failure of the Contractor to complete work within the stipulated time.

(Paragraphs deleted)

ARTICLE 5 PAYMENTS

§ 5.0 No billings shall be deemed approved and certified by passage of time unless submitted in accordance with the application date as specified in Section 5.1.3 above. Moreover, if the contractor fails to perform in accordance with the provisions of the contract, in a significant way, the remedies of the Prompt Payment Act will not be applied, and failure by the Owner to act within the time allowed by N.J.S.A. 2A:30A-1 *et seq.* shall not constitute an implied approval of the Payment Application.

§ 5.1 Progress Payments

§ 5.1.1 Based upon Applications for Payment submitted to the Construction Manager by the Contractor, and Certificates for Payment issued by the Construction Manager and 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: Each Application for Payment must be accompanied by Certified Payroll Records for the period covered by the Application. The payroll records shall indicate the proper classification of employees and the payment of overtime, if any. These records shall include each Contractor’s subcontractor’s certified payroll. Payment will not be authorized if the required payroll records have not been submitted.

§ 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 amount certified to the Contractor not later than the day of the following month. If an Application for Payment is received by the Construction Manager after the application date fixed above, payment of the amount certified 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.)

§ 5.1.3.1 The Owner will issue timely payments for those duly approved and undisputed to the contractor(s) in accordance with the requirements of the Prompt Payment Act, N.J.S.A. 2A:30A-1 et seq., as described in Section 00860.

§ 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. The schedule of values shall be prepared in such form, and supported by such data to substantiate its accuracy, as the Construction Manager and Architect may require. This schedule of values shall be used as a basis for reviewing the Contractor's Applications for Payment. Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or material supplier, unless such Work has been performed by others whom the Contractor intends to pay.

§ 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, which period shall be a calendar month in accordance with N.J.S.A. 40A:11-16.2. No billings shall be deemed approved and certified by passage of time unless submitted in accordance with the application date as specified in Section 5.1.3 above.

§ 5.1.4.3 In accordance with AIA Document A232™-2019, General Conditions of the Contract for Construction, Construction Manager as Adviser Edition, and subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

§ 5.1.4.3.1 The amount of each progress payment shall first include:

- .1 That portion of the Contract Sum properly allocable to completed Work;
- .2 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; and for which releases of liens have been furnished; and
- .3 That portion of Construction Change Directives that the Architect determines, in the Architect's professional judgment, to be reasonably justified.

§ 5.1.4.3.2 The amount of each progress payment shall then be reduced by:

- .1 The aggregate of any amounts previously paid by the Owner;
- .2 The amount, if any, for Work that remains uncorrected and for which the Architect has previously withheld a Certificate for Payment as provided in Article 9 of AIA Document A232-2019;
- .3 Any amount for which the Contractor does not intend to pay a Subcontractor or material supplier, unless the Work has been performed by others the Contractor intends to pay;
- .4 For Work performed or defects discovered since the last payment application, any amount for which the Architect may withhold payment, or nullify a Certificate of Payment in whole or in part, as provided in Article 9 of AIA Document A232-2019; and
- .5 Retainage withheld pursuant to Section 5.1.7.

(Paragraphs deleted)

§ 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.

§ 5.1.5.7 If final completion of the Work is materially delayed through no fault of the Contractor, then the Owner shall pay the Contractor any additional amounts in accordance with Article 9 of AIA Document A232-2019.

(Paragraphs deleted)

§ 5.1.7 Retainage

§ 5.1.7.1 For each progress payment made prior to when the Work of this Contract is substantially complete, the Owner may withhold the following amount, as retainage, from the payment otherwise due:

.1 Pursuant to N.J.S.A. 18A: 18-40.3, unless indicated otherwise in the Contract Documents, if the Contractor does have a performance bond, 2% of the amount due on each partial payment shall be withheld by the Owner when the outstanding balance of the contract exceeds \$500,000, and 5% of the amount due on each partial payment shall be withheld by the Owner when the outstanding balance of the Contract is \$500,000 or less, until final completion and acceptance of all work covered by the Contract until final completion and acceptance of all work covered by the Contract, including the completion of all corrective or punch list items. 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 of the General Conditions.

.2 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 allocable to that portion of the Work in the schedule of values, less retainage of two percent (2%) when the contract balance is over \$500,000 and five percent (5%) when the contract balance is \$500,000 or less. .3 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 two percent (2% when the Contract balance is over \$500,000 and five percent (5% when the contract balance is \$500,000 or less.

.4 Retainage shall be withheld until the Owner approves the Architect's determination that the work has been satisfactorily completed and no unsettled claims exist. The final acceptance shall not be binding or conclusive upon the Owner should it subsequently discover that the Contractor has supplied inferior material or workmanship or has departed from the terms of his contract. Should such a condition appear the Owner shall have the right, notwithstanding final acceptance and payment, to cause the work to be properly done in accordance with the drawings and specifications at the cost and expense of the Contractor.

(Paragraphs deleted)

§ 5.2 Final Payment

§ 5.2.1 Final Payment Where the Contract Sum is Based on a Stipulated Sum

§ 5.2.1.1 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 Article 12 of AIA Document A232-2019, and to satisfy other requirements, if any, which extend beyond final payment; and
- .2 a final Certificate for Payment or Project Certificate for Payment has been issued by the Architect.

§ 5.2.1.2 The Owner's final payment to the Contractor shall be made no later than 30 days after the issuance of the final Certificate for Payment or Project Certificate for Payment or as follows: The Architect will submit the final Certificate for Payment once the Contractor has satisfactorily addressed all punch-list items and requisite close-out documents, including but not limited to, the Release of Mechanic Lien claims of all sub-contractors, suppliers and other contractor(s).

(Paragraphs deleted)

§ 5.3 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.

0 % zero No interest will be paid.

ARTICLE 6 DISPUTE RESOLUTION

§ 6.1 Initial Decision Maker

The Architect will serve as Initial Decision Maker pursuant to Article 15 of AIA Document A232–2019, 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, the method of binding dispute resolution shall be as follows:

(Check the appropriate box.)

Arbitration pursuant to Article 15 of AIA Document A232–2019.

Litigation in a court of competent jurisdiction.

Other: *(Specify)*

If the Owner and Contractor do not select a method of binding dispute resolution, 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. If there are any claims or disputes, the Contractor is to submit in accordance with Article 15 as a pre-requisite to such a claim. Notwithstanding the foregoing and anything construed to the contrary, the foregoing shall only be applicable in the event that: (i) the Contractor has produced an updated Schedule prior to the alleged material delay; (ii) there are no components of the project for which the Contractor has delayed; and (iii) the alleged materially delayed component of the project affects the critical path and no other Work can continue to keep the project on schedule.

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 A232–2019.

(Paragraphs deleted)

§ 7.1.2 If the Contract is terminated for the Owner’s convenience in accordance with Article 14 of AIA Document A232–2019, then the Owner shall pay the Contractor a termination fee as follow: No Termination Fee.

(Paragraphs deleted)

ARTICLE 8 MISCELLANEOUS PROVISIONS

§ 8.1 Where reference is made in this Agreement to a provision of AIA Document A232–2019 or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

(Paragraphs deleted)

§ 8.1.1 A condition of this Agreement is that the Contractor will comply with all applicable governmental laws and regulations including, but without limitation, those set forth in Section 00860 of the Specifications, which are hereby incorporated by reference as if set forth herein at length.

§ 8.4 The Contractor’s representative shall not be changed without ten days’ prior notice to the other party.

§ 8.5 Insurance and Bonds

§ 8.5.1 The Contractor shall purchase and maintain insurance as set forth in AIA Document A132™–2019, Standard Form of Agreement Between Owner and Contractor, Construction Manager as Adviser Edition, Exhibit A, Insurance and Bonds, and elsewhere in the Contract Documents.

§ 8.5.2 The Contractor shall provide bonds as set forth in AIA Document A132™–2019, Exhibit A, and elsewhere in the Contract Documents.

(Paragraphs deleted)

§ 8.7 Relationship of the Parties

:

(Paragraphs deleted)

ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

§ 9.1 This Agreement is comprised of the following documents:

- .1 AIA Document A132™–2019, Standard Form of Agreement Between Owner and Contractor, Construction Manager as Adviser Edition
- .2 AIA Document A132™–2019, Exhibit A, Insurance and Bonds Exhibit
- .3 AIA Document A232™–2019, General Conditions of the Contract for Construction, Construction Manager as Adviser Edition

(Paragraphs deleted)

and its revisions.

- .5 Drawings

Number

Title

Date

- .6 Specifications

Section

Title

Date

Pages

Part 1

Contract Conditions and General Requirements

In Full

- .7 Addenda, if any:

Number

Date

Pages

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

- .8 Other Exhibits:

(Paragraphs deleted)

[] Supplementary and other Conditions of the Contract:

Document

Title

Date

Pages

Part 1

Contract Conditions and General Requirements

In Full

(Paragraphs deleted)

- .9 Other documents, if any, listed below:

Init.

(List here any additional documents that are intended to form part of the Contract Documents. AIA Document A232–2019 provides that the advertisement or invitation to bid, Instructions to Bidders, sample forms, the Contractor’s bid or proposal, portions of Addenda relating to bidding or proposal requirements, and other information furnished by the Owner in anticipation of receiving bids or proposals, are not part of the Contract Documents unless enumerated in this Agreement. Any such documents should be listed here only if intended to be part of the Contract Documents.)

Proposal, dated
Exhibit B

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

OWNER *(Signature)*

(Printed name and title)

CONTRACTOR *(Signature)*

(Printed name and title)



AIA® Document A132® – 2019 Exhibit A

Insurance and Bonds

This Insurance and Bonds Exhibit is part of the Agreement, between the Owner and the Contractor, dated the day of in the year
(In words, indicate day, month, and year.)

for the following **PROJECT**:
(Name and location or address)

THE OWNER:
(Name, legal status, and address)

Princeton Public Schools Board of Education
25 Valley Road, Princeton, NJ 08540

THE CONTRACTOR:
(Name, legal status, and address)

TABLE OF ARTICLES

- A.1 GENERAL
- A.2 OWNER'S INSURANCE
- A.3 CONTRACTOR'S INSURANCE AND BONDS
- A.4 SPECIAL TERMS AND CONDITIONS

ARTICLE A.1 GENERAL

The Contractor shall purchase and maintain insurance, and provide bonds, as set forth in this Exhibit. As used in this Exhibit, the term General Conditions refers to AIA Document A232™–2019, General Conditions of the Contract for Construction.

(Paragraphs deleted)
(Table deleted)
(Paragraphs deleted)
(Table deleted)
(Paragraphs deleted)

ARTICLE A.3 CONTRACTOR'S INSURANCE AND BONDS

§ A.3.1 General

§ A.3.1.1 Certificates of Insurance. The Contractor shall provide certificates of insurance acceptable to the Owner evidencing compliance with the requirements in this Article A.3 at the following times: (1) prior to commencement of the Work; (2) upon renewal or replacement of each required policy of insurance; and (3) upon the Owner's written request. An additional certificate evidencing continuation of commercial liability coverage, including coverage for completed operations, shall be submitted with the final

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 Document A232™–2019, General Conditions of the Contract for Construction. Article 11 of A232™–2019 contains additional insurance provisions

Application for Payment and thereafter upon renewal or replacement of such coverage until the expiration of the periods required by Section A.3.2.1 and Section A.3.3.1. The certificates will show the Owner as an additional insured on the Contractor's Commercial General Liability and excess or umbrella liability policy or policies. The coverage maintained by the Contractor shall be written by companies licensed to do business in the State where the project is located and maintaining an AM BEST rating of A- or better with a financial size rating of Class IX or larger. If the Contractor fails to maintain any insurance required hereunder, then, in addition to all other remedies given to the Owner in case of the breach of any conditions or covenants of this Contract, the Owner may (but shall not be obligated to) secure or pay the premium for any such policy or policies and charge the Contractor therefor the cost of such premiums.

§ A.3.1.2 Deductibles and Self-Insured Retentions. The Contractor shall disclose to the Owner any deductible or self-insured retentions applicable to any insurance required to be provided by the Contractor. Such deductibles or self-insured retentions shall be subject to the Owner's approval. The Contractor shall be responsible for all loss not covered because of such deductibles or retentions.

§ A.3.1.3 Additional Insured Obligations. To the fullest extent permitted by law, the Contractor (and all Subcontractors) shall cause the commercial general liability coverage to include (1) the Owner, the Architect and the Architect's consultants, and the Construction Manager and the Construction Manager's consultants, as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions for which loss occurs during completed operations. The additional insured coverage shall be primary and non-contributory to any of the Owner's general liability insurance policies and shall apply to both ongoing and completed operations. To the extent commercially available, the additional insured coverage shall be no less than that provided by Insurance Services Office, Inc. (ISO) forms CG 20 10 07 04, CG 20 37 07 04, and, with respect to the Architect and the Architect's consultants, and the Construction Manager and the Construction Manager's consultants, CG 20 32 07 04. The Products and Completed Operations insurance shall be maintained for five (5) years after final payment or the then current applicable statute of repose. A "per project endorsement" shall be included, so that the general aggregate limit applies solely to the project that is the subject of this contract.

§ A.3.1.4 All insurance shall contain a waiver of subrogation against the Owner.

§ A.3.1.5 Contractor shall, without in any way altering Contractor's liability under the Contract or applicable law, obtain, pay for and maintain insurance for the coverages and amounts of coverage not less than those set forth below in the Schedule of Insurance Coverages and shall provide to Owner certificates issued by insurance companies satisfactory to Owner to evidence such coverage no later than 7 days of the date of the execution of this Contract and prior to any personnel or equipment being brought onto and/or before any work commences at the job site. The coverage afforded under any insurance obtained pursuant to this paragraph shall be primary to any valid and collectible insurance carried separately by any of the indemnities. Such certificates shall provide that there shall be no cancellation, non-renewal or material change of such coverage without thirty (30) days prior written notice to Owner. In the event of any failure by Contractor to comply with the provisions of this Article 11, Owner may, at its option, on notice to Contractor, suspend the Contract for cause until there is full compliance with this Article 11 and/ or terminate the Contract for cause. Alternatively, Owner may purchase such insurance at Contractor's expense, and charge the Contractor therefor the cost of such premiums plus fifteen percent (15%) as an administrative fee to the Owner, provided that Owner shall have no obligation to do so, and if Owner shall do so, Contractor shall not be relieved of or excused from the obligation to obtain and maintain such insurance amounts and coverages. Contractor shall provide to Owner a copy of any and all applicable insurance policies. The Owner shall be named as an additional insured on a primary and non-contributory basis on all Insurance Policies to be provided by the Contractor

§ A.3.2 Contractor's Required Insurance Coverage

§ A.3.2.1 The Contractor shall purchase and maintain the following types and limits of insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Contractor shall maintain the required insurance until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General

(Paragraphs deleted)

Conditions. The Contractor shall either require each of his subcontractors to procure and to maintain during the life of their subcontracts, subcontractor's public liability and property damage, of the type and in the same amounts as specified below; or insure the activities of their subcontractors under their respective policies.

§ A.3.2.2 Commercial General Liability

§ A.3.2.2.1 Commercial General Liability insurance for the Project written on an occurrence form with policy limits of not less than two million dollars (\$ 2,000,000.00) each occurrence, two million dollars (\$ 2,000,000.00) general aggregate, and two million dollars (\$ 2,000,000.00) aggregate for products-completed operations hazard (and independent contractor liability), providing coverage for claims including

- .1 damages because of bodily injury, sickness or disease, including occupational sickness or disease, and death of any person;
- .2 personal injury and advertising injury;
- .3 damages because of physical damage to or destruction of tangible property, including the loss of use of such property;
- .4 bodily injury or property damage arising out of completed operations; and
- .5 the Contractor's indemnity obligations under Section 3.18 of the General Conditions.
- .6 the policy shall name the Owner, Architect, Construction Manager and their Consultants, Agents and Employees as additional insured.

§ A.3.2.2.2 The Contractor's Commercial General Liability policy under this Section A.3.2.2 shall not contain an exclusion or restriction of coverage for the following:

- .1 Claims by one insured against another insured, if the exclusion or restriction is based solely on the fact that the claimant is an insured, and there would otherwise be coverage for the claim.
- .2 Claims for property damage to the Contractor's Work arising out of the products-completed operations hazard where the damaged Work or the Work out of which the damage arises was performed by a Subcontractor.
- .3 Claims for bodily injury other than to employees of the insured.
- .4 Claims for indemnity under Section 3.18 of the General Conditions arising out of injury to employees of the insured.
- .5 Claims or loss excluded under a prior work endorsement or other similar exclusionary language.
- .6 Claims or loss due to physical damage under a prior injury endorsement or similar exclusionary language.
- .7 Claims related to residential, multi-family, or other habitational projects, if the Work is to be performed on such a project.
- .8 Claims related to roofing, if the Work involves roofing.
- .9 Claims related to exterior insulation finish systems (EIFS), synthetic stucco or similar exterior coatings or surfaces, if the Work involves such coatings or surfaces.
- .10 Claims related to earth subsidence or movement, where the Work involves such hazards.
- .11 Claims related to explosion, collapse and underground hazards, where the Work involves such hazards.

§ A.3.2.3 Automobile Liability covering vehicles owned, and non-owned vehicles used, by the Contractor, with policy limits of not less than one million dollars (\$ 1,000,000.00) per accident, for bodily injury, death of any person, and property damage arising out of the ownership, maintenance and use of those motor vehicles along with any other statutorily required automobile coverage.

§ A.3.2.4 The Contractor may achieve the required limits and coverage for Commercial General Liability and Automobile Liability through a combination of primary and excess or umbrella liability insurance, provided such primary and excess or umbrella insurance policies result in the same or greater coverage as the coverages required under Section A.3.2.2 and A.3.2.3, and in no event shall any excess or umbrella liability insurance provide narrower coverage than the primary policy. The excess policy shall not require the exhaustion of the underlying limits only through the actual payment by the underlying insurers.

(Paragraphs deleted)

§ A.3.2.5 Workers' Compensation at statutory limits applicable to the laws of the State of project location and other State or Federal jurisdiction required to protect the employees of the Contractor and any Subcontractor who will be engaged in the performance of this Contract. The certificate must also indicate that no proprietor, partner, executive officer, or member is excluded. This insurance shall include Employers' Liability Protection.

§ A.3.2.6 Employers' Liability with policy limits not less than one million dollars (\$1,000,000) bodily injury, each occurrence, one million dollars (\$1,000,000) disease, each employer, and one million dollars (\$1,000,000) disease,

aggregate limit. Including the employer's liability insurance under the umbrella insurance can satisfy the limit requirements.

§ **A.3.2.7** Jones Act, and the Longshore & Harbor Workers' Compensation Act, as required, if the Work involves hazards arising from work on or near navigable waterways, including vessels and docks

§ **A.3.2.8** If the Contractor is required to furnish professional services as part of the Work, the Contractor shall procure Professional Liability insurance covering performance of the professional services, with policy limits of not less than (\$) per claim and (\$) in the aggregate.

§ **A.3.2.9** If the Work involves the transport, dissemination, use, or release of pollutants, the Contractor shall procure Pollution Liability insurance, with policy limits of not less than (\$) per claim and (\$) in the aggregate.

§ **A.3.2.10** Coverage under Sections A.3.2.8 and A.3.2.9 may be procured through a Combined Professional Liability and Pollution Liability insurance policy, with combined policy limits of not less than (\$) per claim and (\$) in the aggregate.

§ **A.3.2.11** Insurance for maritime liability risks associated with the operation of a vessel, if the Work requires such activities, with policy limits of not less than (\$) per claim and (\$) in the aggregate.

§ **A.3.2.12** Insurance for the use or operation of manned or unmanned aircraft, if the Work requires such activities, with policy limits of not less than (\$) per claim and (\$) in the aggregate.

A.3.2.13 Excess Liability, umbrella insurance form, applying excess of primary to the commercial general liability, commercial automobile liability and employer's liability insurance shall be provided with minimum limits in an amount such that the commercial general liability insurance and excess/umbrella is equal to \$1,000,000 per occurrence, general aggregate, and products/completed operations.

§ **A.3.2.14** The General Liability insurance, General Aggregate and Umbrella Excess Liability limits shall apply and be written exclusively, in total, to this Project only. A per project endorsement for all coverages and limits must be included in each policy.

A.3.2.14.1 Bodily injury and property damage insurance policies shall be so written as to provide coverage for special hazards where such hazards will be incidental to subcontractors' work.

§ **A.3.3 Contractor's Other Insurance Coverage**

§ **A.3.3.1** Insurance selected and described in this Section A.3.3 shall be purchased from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Contractor shall maintain the required insurance until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, unless a different duration is stated below:

(If the Contractor is required to maintain any of the types of insurance selected below for a duration other than the expiration of the period for correction of Work, state the duration.)

§ **A.3.3.2** The Contractor shall purchase and maintain the following types and limits of insurance in accordance with Section A.3.3.1.

(Select the types of insurance the Contractor is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance. Where policy limits are provided, include the policy limit in the appropriate fill point.)

[] § **A.3.3.2.1** If there is only one Contractor performing the Work on the Project, property insurance of the same type and scope satisfying the requirements identified in Section A.2.3, which, if selected in this section A.3.3.2.1, relieves the Owner of the responsibility to purchase and maintain such insurance except insurance required by Section A.2.3.1.3 and Section A.2.3.3. The Contractor shall comply with all obligations of the Owner under Section A.2.3 except to the extent provided below. The Contractor shall disclose to the Owner the amount of any deductible, and the Owner shall be responsible for losses within the deductible. Upon request, the Contractor shall provide the Owner with a copy of the property

insurance policy or policies required. The Owner shall adjust and settle the loss with the insurer and be the trustee of the proceeds of the property insurance in accordance with Article 11 of the General Conditions unless otherwise set forth below:

(Where the Contractor's obligation to provide property insurance differs from the Owner's obligations as described under Section A.2.3, indicate such differences in the space below. Additionally, if a party other than the Owner will be responsible for adjusting and settling a loss with the insurer and acting as the trustee of the proceeds of property insurance in accordance with Article 11 of the General Conditions, indicate the responsible party below.)

- [] **§ A.3.3.2.2 Railroad Protective Liability Insurance**, with policy limits of not less than (\$) per claim and (\$) in the aggregate, for Work within fifty (50) feet of railroad property.
- [] **§ A.3.3.2.3 Asbestos Abatement Liability Insurance**, with policy limits of not less than (\$) per claim and (\$) in the aggregate, for liability arising from the encapsulation, removal, handling, storage, transportation, and disposal of asbestos-containing materials.
- [] **§ A.3.3.2.4 Insurance for physical damage to property while it is in storage and in transit to the construction site on an "all-risks" completed value form.**
- [] **§ A.3.3.2.5 Property insurance on an "all-risks" completed value form, covering property owned by the Contractor and used on the Project, including scaffolding and other equipment.**
- [] **§ A.3.3.2.6 Other Insurance**
(List below any other insurance coverage to be provided by the Contractor and any applicable limits.)

Coverage

Limits

§ A.3.4 Performance Bond and Payment Bond

The Contractor shall provide surety bonds, from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located, as follows:

(Specify type and penal sum of bonds.)

Type	Penal Sum (\$0.00)
Payment Bond	Amount equal to the Contract Sum
Performance Bond	Amount equal to the Contract Sum
Maintenance Bond	Amount equal to the Contract Sum

Payment and Performance Bonds shall be AIA Document A312™, Payment Bond and Performance Bond, or contain provisions identical to AIA Document A312™, current as of the date of this Agreement.

§ A.3.4.1 Contractor shall furnish each of the performance bond and payment bond meeting all statutory requirements of the State of New Jersey in form and substance satisfactory to the Owner and, without limitation, complying with the following specific requirements:

- .1 Except as otherwise required by statute, the form and substance of such bonds shall be satisfactory to the Owner in the Owner's sole judgment;
- .2 The bonds shall be executed by an approved surety company authorized to do business in the State of New Jersey and in accordance with N.J.S.A. 2A:44-143 and 2A:44-144, and with the three highest rating categories of rating companies nationally recognized and listed as per Appendix A, (go to www.nj.gov/dobi/surety.htm), and shall remain in effect for a period of not less than one year following the date of substantial completion or the time required to resolve any items of incomplete or inadequate work and the payment of any disputed amounts, whichever time period is longer;
- .3 The performance bond and the labor and material payment bond shall each be in an amount equal to the Contract Sum;
- .4 The Contractor shall require the attorney-in-fact who executes the required bonds on behalf of the

surety to affix thereto a certified and current copy of his/her power of attorney indicating the monetary limit of such power;

.5 Any bond under this Paragraph 11.6.1 must display the surety's bond number. A rider including the following provisions shall be attached to each bond:

- .1 Surety hereby agrees that it consents to and waives notice of any addition, alteration, omission, change or other modification of the Contract Documents. Any other alterations, change, extension of time or other modification of the Contract Documents or a forbearance on the part of either the Owner or the Contractor to the other shall not release the surety of its obligations hereunder and notice to surety of such matter is hereby waived.
- .2 Surety further agrees that in the event of any default by the Owner in the performance of the Owner's obligations to the Contractor under the Contract, the Contractor or surety shall cause written notice of such default (specifying said default in writing) to be given to the Owner, and the Owner shall have thirty (30) calendar days after receipt of such notice within which to cure such default or such additional reasonable time as may be required if the nature of such default is such that it cannot be cured within thirty (30) calendar days. Such notice of default shall be sent by certified or registered U.S. mail, return receipt requested, first class postage, prepaid to the Owner.

ARTICLE A.4 SPECIAL TERMS AND CONDITIONS

Special terms and conditions that modify this Insurance and Bonds Exhibit, if any, are as follows:

PART 1 - CONTRACT CONDITIONS AND GENERAL REQUIREMENTS

**SECTION 00700 - GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION,
Construction Manager as Adviser Edition, AIA DOCUMENT A232 – 2019**



AIA® Document A232® – 2019

General Conditions of the Contract for Construction, Construction Manager as Adviser Edition

for the following PROJECT:

(Name, and location or address)

THE CONSTRUCTION MANAGER:

(Name, legal status, and address)

THE OWNER:

(Name, legal status, and address)

Princeton Public Schools Board of Education
25 Valley Road, 2nd Floor, Princeton, NJ 08540

THE ARCHITECT:

(Name, legal status, and address)

Fraytak Veisz Hopkins Duthie, P.C. Architects - Planners
1515 Lower Ferry Road, Trenton, NJ 08618

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 A132™–2019, Standard Form of Agreement Between Owner and Contractor, Construction Manager as Adviser Edition; B132™–2019, Standard Form of Agreement Between Owner and Architect, Construction Manager as Adviser Edition; and C132™–2019, Standard Form of Agreement Between Owner and Construction Manager as Adviser.

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ARTICLE 1 GENERAL PROVISIONS

§ 1.1 Basic Definitions

§ 1.1.1 The Contract Documents. The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement, and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive, or (4) a written order for a minor change in the Work issued by the Architect. Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of addenda relating to bidding or proposal requirements.

§ 1.1.2 The Contract. The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect's consultants, (2) between the Owner and the Construction Manager or the Construction Manager's consultants, (3) between the Owner and the Architect or the Architect's consultants, (4) between the Contractor and the Construction Manager or the Construction Manager's consultants, (5) between the Owner and a Subcontractor or Sub-subcontractor (6) between the Construction Manager and the Architect, or (7) between any persons or entities other than the Owner and Contractor. The Construction Manager and Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of their duties.

§1.1.2.1 The Contractor acknowledges and warrants that it has closely examined all of the Contract Documents, that they are suitable and sufficient to enable the Contractor to complete the Work in a timely manner for the Contract Sum, and that they include all Work, whether or not shown or described, which reasonably may be inferred to be required or useful for the competition of the Work in full compliance with all applicable codes, laws, ordinances and regulations and that questions regarding the bid documents and any interpretation(s) regarding same have been asked by the Contractor, in the form and manner required in the instructions to bidders.

§1.1.2.2 In connection therewith, Contractor specifically represents and warrants to Owner that it has, by careful examination, satisfied itself as to: (1) the nature, location, and character of the general area in which the Project is located, including without limitation, its climatic conditions, available labor supply and labor costs, and available equipment supply and equipment costs; and (2) the quality and quantity of materials, supplies, tools, equipment, labor, and professional services necessary to complete the Work in the manner and within the cost and time frame required by the Contract Documents; and (3) the condition of existing and planned structures on the site and the ability, safety and appropriateness of same to receive the Work in the manner required by the Contract Documents.

§ 1.1.3 The Work. The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment, and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

§ 1.1.4 The Project. The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by other Contractors, and by the Owner's own forces and Separate Contractors.

§ 1.1.5 Contractors. Contractors are persons or entities, other than the Contractor or Separate Contractors, who perform Work under contracts with the Owner that are administered by the Architect and Construction Manager.

§ 1.1.6 Separate Contractors. Separate Contractors are persons or entities who perform construction under separate contracts with the Owner not administered by the Architect and Construction Manager.

§ 1.1.7 The Drawings. The Drawings are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules, and diagrams.

§1.1.7.1. Construction Drawings prepared by the Architect are intended to show the scope of work, including but not limited to general arrangement of stairs, equipment, ducts, piping and other elements of the structure, and approximate locations and sizes of equipment. This does not relieve the Contractor from providing all connections and accessories necessary to make structural, mechanical and electrical work complete, ready to operate, in compliance with all applicable codes, laws and other regulations, and acceptable to the Architect. As such, they are not to serve as Shop Drawings.

§1.1.7.2 Locations and arrangements of items are designated by dimensions at less than full scale, unless otherwise noted. Such reductions of scale may vary and will be noted.

§1.1.7.3 Designs, information, reports and other materials and/or data may be performed and/or provided for the project by other than the Architect. Such designs, information, reports and other materials and/or data may include, without limitation, designs, information, reports and other materials and/or data performed and/or provided by the Contractor(s) or by Subcontractors and/or other consultants retained by the Contractor(s) and/or the Owner. Such designs, information, reports and other materials and/or data may include without limitation the locations, quantities, sizes, conditions and scope of specific items of the construction Work required to be provided for the Project. The Contractor shall immediately notify the Construction Manager and Architect in writing upon its discovery or knowledge of any errors, omissions or defects in any designs, information, reports and other materials and/or data prepared or provided by the Contractor or on the Contractor's behalf which are provided to the Architect for the Architect's preparation of its design documentation for the Project. The Contractor shall also be required to immediately notify the Architect in writing in the event that it discovers or becomes aware of any errors, omissions or defects in any designs, information, reports or other materials or data that are provided to the Architect by others for the preparation of the Architect's design documentation. The Contractor shall also be required to immediately notify the Construction Manager and Architect in writing if it discovers or becomes aware of any discrepancies between any design documentation prepared by the Architect and any designs, information, reports or other materials and/or data provided to the Architect by the Contractor(s), the Owner, Subcontractors or Subconsultants retained by the Contractor(s) or Owner, or by others. In such event, the Contractor shall promptly submit a written request for resolution of such discrepancy to the Architect and Owner.

§ 1.1.8 The Specifications. The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services.

§ 1.1.9 Instruments of Service. Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

§ 1.1.10 Initial Decision Maker. The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2. The Initial Decision Maker shall not show partiality to the Owner or Contractor and shall not be liable for results of interpretations or decisions rendered in good faith.

§ 1.2 Correlation and Intent of the Contract Documents

§ 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

§ 1.2.1.1 The invalidity of any provision of the Contract Documents shall not invalidate the Contract or its remaining provisions. If it is determined that any provision of the Contract Documents violates any law, or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and enforceable. In such case the Contract Documents shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing the Contract.

§ 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

§ 1.2.3 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

§1.2.3.1 In the event of a conflict or an inconsistency in or among the Contract Documents, or between the Contract Documents and applicable codes in effect at the time the Contract Sum is bid or negotiated, the Contractor shall, unless directed otherwise in writing by and Addendum or Change Order, provide the greatest quantity, highest quality, highest degree of safety and most stringent material, equipment or Work.

§ 1.3 Capitalization

Terms capitalized in these General Conditions include those that are (1) specifically defined, (2) the titles of numbered articles, or (3) the titles of other documents published by the American Institute of Architects.

§ 1.4 Interpretation

In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

§ 1.5 Ownership and Use of Drawings, Specifications, and Other Instruments of Service

§ 1.5.1 The Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and retain all common law, statutory, and other reserved rights in their Instruments of Service, including copyrights. The Contractor, Subcontractors, sub-subcontractors, and suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as publication in derogation of the Architect's or Architect's consultants' reserved rights.

§ 1.5.2 The Contractor, Subcontractors, Sub-subcontractors, and suppliers are authorized to use and reproduce the Instruments of Service provided to them, subject to any protocols established pursuant to Sections 1.7 and 1.8, solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and suppliers may not use the Instruments of Service on other projects or for additions to the Project outside the scope of the Work without the specific written consent of the Owner, Architect, and the Architect's consultants.

§ 1.6 Notice

§ 1.6.1 Except as otherwise provided in Section 1.6.2, where the Contract Documents require one party to notify or give notice to the other party, such notice shall be provided in writing to the designated representative of the party to whom the notice is addressed and shall be deemed to have been duly served if delivered in person, by mail, by courier, or by electronic transmission if a method for electronic transmission is set forth in the Agreement.

§ 1.6.2 Notice of Claims as provided in Section 15.1.3 shall be provided in writing and shall be deemed to have been duly served only if delivered to the designated representative of the party to whom the notice is addressed by certified or registered mail, or by courier providing proof of delivery.

§ 1.7 Digital Data Use and Transmission

The parties shall agree upon protocols governing the transmission and use of Instruments of Service or any other information or documentation in digital form. The parties will use AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, to establish the protocols for the development, use, transmission, and exchange of digital data. Any information or data obtained or derived from electronic files to create shop drawings or other submissions must be compared with the hard paper Construction Documents issued by the Architect for construction. Use of electronic documents for any reason is at the user's sole risk.

§ 1.8 Building Information Models Use and Reliance

Any use of, or reliance on, all or a portion of a building information model without agreement to protocols governing the use of, and reliance on, the information contained in the model and without having those protocols set forth in AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, and the requisite AIA Document

G202™–2013, Project Building Information Modeling Protocol Form, shall be at the using or relying party's sole risk and without liability to the other party and its contractors or consultants, the authors of, or contributors to, the building information model, and each of their agents and employees.

ARTICLE 2 OWNER

§ 2.1 General

§ 2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner may designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. Except as otherwise provided in Section 4.2.1, the Construction Manager and the Architect do not have such authority. The term "Owner" means the Owner or the Owner's authorized representative.

(Paragraph deleted)

§ 2.2 Evidence of the Owner's Financial Arrangements

(Paragraphs deleted)

§ 2.3 Information and Services Required of the Owner

§ 2.3.1 Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities. Unless otherwise provided under the Contract Documents, the Owner, assisted by the Construction Manager, shall secure and pay for the building permit.

§ 2.3.2 The Owner shall retain an architect lawfully licensed to practice architecture, or an entity lawfully practicing architecture, in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.

§ 2.3.3 The Owner shall retain a construction manager adviser lawfully practicing construction management in the jurisdiction where the Project is located. That person or entity is identified as the Construction Manager in the Agreement and is referred to throughout the Contract Documents as if singular in number.

§ 2.3.4 If the employment of the Construction Manager or Architect terminates, the Owner shall employ a successor construction manager or architect to whom the Contractor has no reasonable objection and whose status under the Contract Documents shall be that of the Construction Manager or Architect, respectively.

§ 2.3.5 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work. The furnishing of these surveys and the legal description of the site shall not relieve the Contractor from its duties under the Contract Documents.

§ 2.3.6 The Owner shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall also furnish any other information or services under the Owner's control and relevant to the Contractor's performance of the Work with reasonable promptness after receiving the Contractor's written request for such information or services.

§ 2.3.7 Unless otherwise provided in the Contract Documents, the Owner shall furnish to the Contractor one copy of the Contract Documents for purposes of making reproductions pursuant to Section 1.5.2.

§ 2.3.8 The Owner shall forward all communications to the Contractor through the Construction Manager. Other communication shall be made as set forth in Section 4.2.6.

§ 2.4 Owner's Right to Stop the Work

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or repeatedly fails to carry out Work in accordance with the Contract Documents, the Owner

may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3.

§ 2.4.1 Notwithstanding the foregoing, the Owner shall have the authority to immediately correct, service, repair, replace or otherwise make operational any component of their facilities, including equipment, if, in the sole discretion of the Owner, the damaged component is a threat to education, safety, or security. The Owner is obligated to notify the Contractor of the issue threatening education, safety or security, and the Owner's intent to remedy immediately with other resources, backcharging the Contractor for the cost of said service. However, there is no obligation to provide the Contractor an opportunity to cure, as required for corrective actions necessary to protect the Owner's interest in education, safety, and security.

§ 2.5 Owner's Right to Carry Out the Work

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and (i) fails within a ten-day period after receipt of notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, or (ii) Owner and Architect reasonably believe that such correction cannot be properly completed within a twenty-day period, the Owner may, without prejudice to other remedies the Owner may have, correct such default or neglect. Such action by the Owner and amounts charged to the Contractor are both subject to review by the Construction Manager and prior approval of the Architect, and the Construction Manager or Architect may, pursuant to Section 9.5.1, withhold or nullify a Certificate for Payment in whole or in part, to the extent reasonably necessary to reimburse the Owner for the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Construction Manager's and Architect's and their respective consultants' additional services made necessary by such default, neglect, or failure. If current and future payments are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner. If the Contractor disagrees with the actions of the Owner as approved by the Architect, or the amounts claimed as costs to the Owner, the Contractor may file a Claim pursuant to Article 15.

ARTICLE 3 CONTRACTOR

§ 3.1 General

§ 3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative.

§ 3.1.2 The Contractor shall perform the Work in accordance with the Contract Documents.

§ 3.1.3 The Contractor shall not be relieved of its obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Construction Manager or Architect in their administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

§ 3.2 Review of Contract Documents and Field Conditions by Contractor

§ 3.2.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed, and correlated personal observations with requirements of the Contract Documents. The Contractor has carefully examined the Plans, Specifications, and the site of the work, and based on their own investigations, the Contractor has satisfied themselves regarding the nature and location of the work, the character, quality, and quantity of the surface and subsurface materials likely to be encountered, the character of equipment and other facilities needed for the performance of the work, the general local conditions, and all other materials that may in any way affect the work or their performance.

§ 3.2.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.3.5, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. The Contractor shall satisfy itself as to the accuracy of all dimensions and locations. In all cases of interconnection of its work with existing or other work, it shall verify at the site, all dimensions relating to such existing or other work. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the

purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Construction Manager and Architect any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information submitted to the Construction Manager in such form as the Construction Manager and Architect may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents. If the Contractor performs any construction activity involving an error, inconsistency, nonconformity, or omission in the Contract Documents – which the Contractor either recognized or reasonably should have recognized – and fails to notify the Architect, the Contractor shall assume complete responsibility for such performance, including the full amount of attributable costs for correction and any damages to Owner, Architect, Owner's Representative, or Separate Contractors arising from that work. The Contractor may not be liable to the Owner for damage resulting from errors, inconsistencies or omissions in the Contract Documents that could not have been discovered by a prudent and experienced Contractor in advance and that are not in the nature described in and intended to be covered in the Contract Documents.

§ 3.2.3 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Construction Manager and Architect any nonconformity discovered by or made known to the Contractor as a request for information submitted to Construction Manager in such form as the Construction Manager and Architect may require. Notwithstanding the foregoing, as an inducement for the Owner to execute the Owner-Contractor Agreement, the Contractor represents and warrants to the Owner (in addition to the other representations and warranties contained in the Contract Documents) that they are familiar with local ordinances and applicable building codes affecting the Work, and these representations and warranties shall survive the execution and delivery of the Owner-Contractor Agreement and the final completion of the Work.

§ 3.2.4 If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall submit Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner, subject to section 15.1.7, as would have been avoided if the Contractor had performed such obligations. If the Contractor performs those obligations of Sections 3.2.2. or 3.2.3, the Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities, unless the Contractor recognized or should have recognized such error, inconsistency, omission or difference and yet knowingly failed to timely report it to the Architect.

§3.2.4.1 The General Contractor shall perform no portion of the Work at any time without Contract Documents or, where required, approved Shop Drawings, Product Data or Samples for such portion of the Work.

§3.2.4.2 Should the General Contractor elect to release work without approvals, same shall be at his/her own risk and expense. Such work, if it is determined by the Architect and Construction Manager to not be in accordance with the requirements of the Contract Documents, shall be removed and replaced without additional cost or extension of time.

§ 3.3 Supervision and Construction Procedures

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences, and procedures, and for coordinating all portions of the Work under the Contract. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences, or procedures, the Contractor shall evaluate the jobsite safety thereof and shall be solely responsible for the jobsite safety of such means, methods, techniques, sequences, or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely notice to the Owner, the Construction Manager, and the Architect, and shall propose alternative means, methods, techniques, sequences, or procedures. The Architect shall evaluate the proposed alternative solely for conformance with the design intent for the completed construction. The Construction Manager shall review the proposed alternative for sequencing, constructability, and coordination impacts on the other Contractors. Unless the Architect or the Construction Manager objects to the Contractor's proposed alternative, the Contractor shall perform the Work using its alternative means, methods, techniques, sequences, or procedures.

§ 3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.

§ 3.3.3 The Contractor shall be responsible for inspection of portions of the Project already performed to determine that such portions are in proper condition to receive subsequent Work.

§ 3.4 Labor and Materials

§ 3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

§ 3.4.2 Except in the case of minor changes in the Work approved by the Architect in accordance with Section 3.12.8 or ordered by the Architect in accordance with Section 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect, in consultation with the Construction Manager, and in accordance with a Change Order or Construction Change Directive.

§ 3.4.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them. The Contractor shall also at all times use best efforts and its judgment as an experienced General Contractor to adopt and implement policies and practices which are designed to avoid work stoppages, slowdowns, disputes or strikes; and shall at all times use best efforts to maintain project-wide labor harmony. The Owner reserves the right to require the Contractor to remove from the Project any of its personnel, or Subcontractor's personnel, for violating Owner's policies, rules or regulations.

§3.4.5 All materials delivered to the premises which are to form a part of the work are to be considered the property of the Owner and must not be removed without the Owner's consent. Materials not incorporated into the work shall become the Contractor's property and must be removed from the Project Site at or prior to Substantial Completion, unless other arrangements are made with the Owner.

§ 3.5 Warranty

§ 3.5.1 The Contractor warrants to the Owner, Construction Manager, and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Construction Manager or Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

§ 3.5.2 All material, equipment, or other special warranties required by the Contract Documents shall be issued in the name of the Owner, or shall be transferable to the Owner, and shall commence in accordance with Section 9.8.4.

§ 3.5.3 The Contractor represents that all manufacturer and supplier warranties shall run directly to or be specifically assignable to the Owner. The Contractor warrants that all portions of the Work that will be covered by a manufacturer's or supplier's warranty shall be performed in such a manner so as to preserve all rights under such warranties. The Contractor hereby assigns to the Owner, effective upon the termination of this Contract, all manufacturer's and supplier's warranties relating to the Work; and the Contractor shall, upon request of Owner, execute any documents reasonably requested by Owner to effectuate such assignment. If the Owner attempts to enforce a claim based upon a manufacturer's or supplier's warranty and such manufacturer or supplier refuses to honor such warranty based in whole or in part on a claim of defective installation by the Contractor, the Contractor shall be responsible for any resulting loss or damages incurred by the Owner as a result of the manufacturer's or supplier's refusal to honor such warranty. The Contractor's obligation under this Subparagraph 3.5.3 shall survive the expiration or earlier termination of the Contract.

§ 3.5.4 The Contractor agrees that all warranties in the Contract Documents survive acceptance of, delivery of and payment for the goods, whether any defect shall be latent or patent. The Contractor agrees to correct, without expense to, and to the satisfaction of the Owner, any defects that may develop in the Work. Any facilities, including buildings and their contents, which have been damaged either directly or indirectly by the Work performed by the Contractor shall be repaired within ten (10) working days after receipt of written notice of the defect from the Owner by the Contractor at no cost to the Owner.

§ 3.6 Taxes

The Contractor shall pay sales, consumer, use and similar taxes for the Work or portions thereof provided by the Contractor that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

§ 3.7 Permits, Fees, Notices, and Compliance with Laws

§ 3.7.1 Unless otherwise provided in the Contract Documents, the Owner, assisted by the Construction Manager, shall secure and pay for the building permit. The Contractor shall secure and pay for 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.

§ 3.7.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work. The Contractor shall arrange for any inspections by governmental authorities needed to obtain any necessary occupancy permits.

§ 3.7.3 If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

§ 3.7.4 Prior to application for final payment, furnish a written certification that the Work is in conformance with applicable laws, ordinances, rules, regulations and lawful orders.

§ 3.7.4 **Concealed or Unknown Conditions.** If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner, Construction Manager, and the Architect before conditions are disturbed and in no event later than 14 days after first observance of the conditions. The Architect and Construction Manager will promptly investigate such conditions and, if the Architect, in consultation with the Construction Manager, determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend that an equitable adjustment be made in the Contract Sum or Contract Time, or both. If the Architect, in consultation with the Construction Manager, determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner, Construction Manager, and Contractor, stating the reasons. If the Owner or Contractor disputes the Architect's determination or recommendation, either party may submit a Claim as provided in Article 15.

§ 3.7.5 If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall notify the Owner, Construction Manager, and Architect. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Article 15.

§ 3.8 Allowances

§ 3.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

§ 3.8.2 Unless otherwise provided in the Contract Documents:

- .1 allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- .2 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit, and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and
- .3 whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.

§ 3.8.3 Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

§ 3.9 Superintendent

§ 3.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work, and until the final completion of all work, including all corrections and punch list items. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor.

§ 3.9.2 The Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect, through the Construction Manager, of the name and qualifications of a proposed superintendent. Within 14 days of receipt of the information, the Construction Manager may notify the Contractor, stating whether the Owner, the Construction Manager, or the Architect (1) has reasonable objection to the proposed superintendent or (2) require additional time for review. Failure of the Construction Manager to provide notice within the 14-day period shall constitute notice of no reasonable objection.

§ 3.9.3 The Contractor shall not employ a proposed superintendent to whom the Owner, Construction Manager, or Architect has made reasonable and timely objection. The Contractor shall not change the superintendent without the Owner's consent, which shall not unreasonably be withheld or delayed.

§ 3.9.4 The Contractor shall immediately remove from the Project, whenever requested by the Owner or Construction Manager, any employee, Project Manager or Superintendent who is considered by the Owner or Construction Manager to be incompetent or disposed to be disorderly, or who, for any reason, is not satisfactory to the Owner and the Project. The replacement shall be at no additional cost, and that person shall not be employed on the Project again without the consent of the Owner or Construction Manager.

§ 3.10 Contractor's Construction and Submittal Schedules

§ 3.10.1 The Contractor, promptly after being awarded the Contract, shall submit for the Owner's and Architect's information, and the Construction Manager's use in developing the Project schedule, a Contractor's construction schedule for the Work. The schedule shall contain detail appropriate for the Project, including (1) the date of commencement of the Work, interim schedule milestone dates, and the date of Substantial Completion; (2) an apportionment of the Work by construction activity; and (3) the time required for completion of each portion of the Work. The schedule shall provide for the orderly progression of the Work to completion and shall not exceed time limits current under the Contract Documents. The schedule shall be revised at appropriate intervals as required by the conditions of the Work and Project. The Contractor shall cooperate with the Construction Manager in scheduling and performing the Contractor's Work to avoid conflict with, and as to cause no delay in, the work or activities of other Contractors, or the construction or operations of the Owner's own forces or Separate Contractors.

§ 3.10.2 The Contractor, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, shall submit a submittal schedule for the Construction Manager's and Architect's approval. The Architect and Construction Manager's approval shall not be unreasonably delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Construction Manager and Architect reasonable time to review submittals. If the Contractor fails to submit a submittal schedule, or fails to

provide submittals in accordance with the approved submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.

§ 3.10.3 The Contractor shall participate with other Contractors, the Construction Manager, and the Owner in reviewing and coordinating all schedules for incorporation into the Project schedule that is prepared by the Construction Manager. The Contractor shall make revisions to the construction schedule and submittal schedule as deemed necessary by the Construction Manager to conform to the Project schedule.

§ 3.10.4 The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner, Construction Manager, and Architect, and incorporated into the approved Project schedule.

§ 3.11 Documents and Samples at the Site

The Contractor shall make available, at the Project site, the Contract Documents, including Change Orders, Construction Change Directives, and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and the approved Shop Drawings, Product Data, Samples, and similar required submittals. These shall be in electronic form or paper copy, available to the Construction Manager, Architect, and Owner, and delivered to the Construction Manager for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

§ 3.12 Shop Drawings, Product Data, and Samples

§ 3.12.1 Shop Drawings are drawings, diagrams, schedules, and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier, or distributor to illustrate some portion of the Work.

§ 3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

§ 3.12.3 Samples are physical examples that illustrate materials, equipment, or workmanship, and establish standards by which the Work will be judged.

§ 3.12.4 Shop Drawings, Product Data, Samples, and similar submittals are not Contract Documents. Their purpose is to demonstrate how the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Architect and Construction Manager is subject to the limitations of Sections 4.2.10 through 4.2.12. Informational submittals upon which the Construction Manager and Architect are not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Construction Manager or Architect without action.

§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve, and submit to the Construction Manager, Shop Drawings, Product Data, Samples, and similar submittals required by the Contract Documents, in accordance with the Project submittal schedule approved by the Construction Manager and Architect or, in the absence of an approved Project submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of other Contractors, Separate Contractors, or the Owner's own forces. The Contractor shall cooperate with the Construction Manager in the coordination of the Contractor's Shop Drawings, Product Data, Samples, and similar submittals with related documents submitted by other Contractors.

§ 3.12.6 By submitting Shop Drawings, Product Data, Samples, and similar submittals, the Contractor represents to the Owner, Construction Manager, and Architect, that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

§ 3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples, or similar submittals, until the respective submittal has been reviewed and approved by the Architect.

§ 3.12.8 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from the requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples, or similar submittals, unless the Contractor has specifically notified the Construction Manager and Architect of such deviation at the time of submittal and (1) the Architect has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples, or similar submittals, by the Architect's approval thereof.

§ 3.12.9 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples, or similar submittals, to revisions other than those requested by the Construction Manager and Architect on previous submittals. In the absence of such notice, the Architect's approval of a resubmission shall not apply to such revisions.

§ 3.12.10 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures. The Contractor shall not be required to provide professional services in violation of applicable law.

§ 3.12.10.1 If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall be entitled to rely upon the adequacy and accuracy of the performance and design criteria provided in the Contract Documents. The Contractor shall cause such services or certifications to be provided by an appropriately licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings, and other submittals prepared by such professional. Shop Drawings, and other submittals related to the Work, designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner, the Architect, and the Construction Manager shall be entitled to rely upon the adequacy and accuracy of the services, certifications, and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor the performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review and approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Construction Manager shall review submittals for sequencing, constructability, and coordination impacts on other Contractors.

§ 3.12.10.2 If the Contract Documents require the Contractor's design professional to certify that the Work has been performed in accordance with the design criteria, the Contractor shall furnish such certifications to the Construction Manager and Architect at the time and in the form specified by the Architect.

§ 3.12.10.3 By approving and submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents that the Contractor has determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and has checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

§ 3.13 Use of Site

§ 3.13.1 The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, lawful orders of public authorities, and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

§ 3.13.2 The Contractor shall coordinate the Contractor's operations with, and secure the approval of, the Construction Manager before using any portion of the site.

§3.13.3 The Contractor shall send proper notices, make all necessary arrangements and perform all other services required in order to protect and maintain all marked, identified or known public utilities such a fire lines and plugs, electric, gas, water lines, sewer pipes, mechanical systems and all other items of this nature, and assume all responsibility and pay all costs for which the Owner may be liable if said services are interrupted by actions of the Contractor or Subcontractors . The Contractor acknowledges that all public utilities or other infrastructure may not be

identified or marked, and Contractor acknowledges that all public utilities or other infrastructure may not be identified or marked and that Contractor has taken all reasonable precautions to identify all known and unknown utilities or other infrastructure.

§ 3.14 Cutting and Patching

§ 3.14.1 The Contractor shall be responsible for cutting, fitting, or patching required to complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting, or patching shall be restored to the condition existing prior to the cutting, fitting, or patching, unless otherwise required by the Contract Documents.

§ 3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner, Separate Contractors, or of other Contractors by cutting, patching, or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter construction by the Owner, Separate Contractors, or by other Contractors except with written consent of the Construction Manager, Owner, and such other Contractors or Separate Contractors. Consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold, from the Separate Contractors, other Contractors, or the Owner, its consent to cutting or otherwise altering the Work.

§ 3.15 Cleaning Up

§ 3.15.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials and rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery, and surplus materials from and about the Project.

§ 3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner, or Construction Manager with the Owner's approval, may do so and the Owner shall be entitled to reimbursement from the Contractor.

§ 3.16 Access to Work

The Contractor shall provide the Owner, Construction Manager, and Architect with access to the Work in preparation and progress wherever located.

§ 3.16.1 The Contractor shall keep only necessary equipment on-site and shall cooperate with the Construction Manager regarding the location of stored material. No Contractor shall unreasonably encumber the Project site (or building) with equipment and stored material, and they shall afford other contractors a reasonable opportunity for the introduction and storage of their materials and the execution of other work.

§ 3.17 Royalties, Patents and Copyrights

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner, Construction Manager, and Architect harmless from loss on account thereof, but shall not be responsible for defense or loss when a particular design, process, or product of a particular manufacturer or manufacturers is required by the Contract Documents, or where the copyright violations are contained in Drawings, Specifications, or other documents prepared by the Owner, Architect, or Construction Manager. However, if an infringement of a copyright or patent is discovered by, or made known to, the Contractor, the Contractor shall be responsible for the loss unless the information is promptly furnished to the Architect through the Construction Manager.

§ 3.18 Indemnification

§ 3.18.1 To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, Construction Manager, Architect, Construction Manager's and Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), to the extent caused by the actual or alleged negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss, or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person described in this Section 3.18.

§ 3.18.2 In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, the indemnification obligation under Section 3.18.1 shall not be limited by a limitation on amount or type of damages, compensation, or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts, or other employee benefit acts.

§3.18.3 The Contractor's indemnity obligations under this Section 3.18 shall also specifically include, without limitation, all fines, penalties, damages, liability, costs, expenses (including, without limitation, reasonable attorneys' fees) and punitive damages (if any) arising out of, or in connection with, and (i) violation of or failure to comply with any law, statute, ordinance, rules, regulations, code or requirement of a public authority that bears upon the performance of the Work by the Contractor, a Subcontractors or any person or entity for whom either is responsible, (ii) means, methods procedures, techniques or sequences of execution or performance of the Work, and (iii) failure to secure and pay for permits, fees, approvals, licenses and inspections as required under the Contract Documents, or any violation of any permit or other approval of a public authority applicable to the Work by the Contractor, Subcontractors or any person or entity for whom either is responsible.

§3.18.4 The Contractor has determined what local ordinances, if any, will accent his work. The Contractor has checked for any County, City, Borough, or Township rules or regulations applicable to the area in which the Project is being constructed and in addition, for any rules or regulations of other organizations having jurisdiction, such as chambers-of-commerce, planning commission, industries, or utility companies who have jurisdiction over property on which the Work will be performed. Any costs of compliance with local controls are included in the prices bid, even if documents of such local controlling agencies are not listed specifically in the Contract Documents.

ARTICLE 4 ARCHITECT AND CONSTRUCTION MANAGER

§ 4.1 General

§ 4.1.1 The Architect is the person or entity retained by the Owner pursuant to Section 2.3.2 and identified as such in the Agreement.

§ 4.1.2 The Construction Manager is the person or entity retained by the Owner pursuant to Section 2.3.3 and identified as such in the Agreement.

§ 4.1.3 Duties, responsibilities, and limitations of authority of the Construction Manager and Architect as set forth in the Contract Documents shall not be restricted, modified, or extended without written consent of the Owner, Construction Manager, Architect, and Contractor. Consent shall not be unreasonably withheld.

§ 4.2 Administration of the Contract

§ 4.2.1 The Construction Manager and Architect will provide administration of the Contract as described in the Contract Documents and will be the Owner's representatives during construction until the date the Architect issues the final Certificate for Payment. The Construction Manager and Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

§ 4.2.2 The Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. On the basis of the site visits, the Architect will keep the Owner and the Construction Manager reasonably informed about the progress and quality of the portion of the Work completed, and promptly report to the Owner and Construction Manager known deviations from the Contract Documents and defects and deficiencies observed in the Work.

§ 4.2.3 The Construction Manager shall provide one or more representatives who shall be in attendance at the Project site whenever the Work is being performed. The Construction Manager will determine in general if the Work observed is being performed in accordance with the Contract Documents, will keep the Owner and Architect reasonably informed of the progress of the Work, and will promptly report to the Owner and Architect known deviations from the Contract Documents and the most recent Project schedule, and defects and deficiencies observed in the Work.

§ 4.2.4 The Construction Manager will schedule and coordinate the activities of the Contractor and other Contractors in accordance with the latest approved Project schedule to maintain all completion dates. Adherence to provided direction is required.

§ 4.2.5 The Construction Manager, except to the extent required by Section 4.2.4, and Architect will not have control over, charge of, or responsibility for, the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents, and neither will be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. Neither the Construction Manager nor the Architect will have control over or charge of, or be responsible for acts or omissions of, the Contractor, Subcontractors, or their agents or employees, or of any other persons or entities performing portions of the Work. No claims by any Contractor for delay or cost will be entertained if the Owner determines that said Contractor and their Subcontractors have been uncooperative with the Construction Manager.

§ 4.2.6 **Communications.** The Owner shall communicate with the Contractor and the Construction Manager's consultants through the Construction Manager about matters arising out of or relating to the Contract Documents. The Owner and Construction Manager shall include the Architect in all communications that relate to or affect the Architect's services or professional responsibilities. The Owner shall promptly notify the Architect of the substance of any direct communications between the Owner and the Construction Manager otherwise relating to the Project. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and suppliers shall be through the Contractor. Communications by and with other Contractors shall be through the Construction Manager. Communications by and with the Owner's own forces and Separate Contractors shall be through the Owner. The Contract Documents may specify other communication protocols.

§ 4.2.7 The Construction Manager and Architect will review and certify all Applications for Payment by the Contractor, in accordance with the provisions of Article 9.

§ 4.2.8 The Architect and Construction Manager have authority to reject Work that does not conform to the Contract Documents, and will notify each other about the rejection. Whenever the Construction Manager considers it necessary or advisable, the Construction Manager will have authority to require inspection or testing of the Work in accordance with Sections 13.4.2 and 13.4.3, upon written authorization of the Owner, whether or not the Work is fabricated, installed or completed. The foregoing authority of the Construction Manager will be subject to the provisions of Sections 4.2.18 through 4.2.20 inclusive, with respect to interpretations and decisions of the Architect. However, neither the Architect's nor the Construction Manager's authority to act under this Section 4.2.8 nor a decision made by either of them in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect or the Construction Manager to the Contractor, Subcontractors, suppliers, their agents or employees, or other persons performing any of the Work.

§ 4.2.9 Utilizing the submittal schedule provided by the Contractor, the Construction Manager shall prepare, and revise as necessary, a Project submittal schedule incorporating information from other Contractors, the Owner, Owner's consultants, Owner's Separate Contractors and vendors, governmental agencies, and participants in the Project under the management of the Construction Manager. The Project submittal schedule and any revisions shall be submitted to the Architect for approval.

§ 4.2.10 The Construction Manager will receive and promptly review for conformance with the submittal requirements of the Contract Documents, all submittals from the Contractor such as Shop Drawings, Product Data, and Samples. Where there are other Contractors, the Construction Manager will also check and coordinate the information contained within each submittal received from the Contractor and other Contractors, and transmit to the Architect those recommended for approval. By submitting Shop Drawings, Product Data, Samples, and similar submittals, the Construction Manager represents to the Owner and Architect that the Construction Manager has reviewed and recommended them for approval. The Construction Manager's actions will be taken in accordance with the Project submittal schedule approved by the Architect or, in the absence of an approved Project submittal schedule, with reasonable promptness while allowing sufficient time to permit adequate review by the Architect.

§ 4.2.11 The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data, and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be

taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Upon the Architect's completed review, the Architect shall transmit its submittal review to the Construction Manager.

§ 4.2.12 Review of the Contractor's submittals by the Construction Manager and Architect is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Construction Manager and Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5, and 3.12. The Construction Manager and Architect's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences, or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 4.2.13 The Construction Manager will prepare Change Orders and Construction Change Directives.

§ 4.2.14 The Construction Manager and the Architect will take appropriate action on Change Orders or Construction Change Directives in accordance with Article 7, and the Architect will have authority to order minor changes in the Work as provided in Section 7.4. The Architect, in consultation with the Construction Manager, will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

§ 4.2.15 Utilizing the documents provided by the Contractor, the Construction Manager will maintain at the site for the Owner one copy of all Contract Documents, approved Shop Drawings, Product Data, Samples, and similar required submittals, in good order and marked currently to record all changes and selections made during construction. These will be available to the Architect and the Contractor, and will be delivered to the Owner upon completion of the Project.

§ 4.2.16 The Construction Manager will assist the Architect in conducting inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion in conjunction with the Architect pursuant to Section 9.8; and receive and forward to the Owner written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10. The Construction Manager will forward to the Architect a final Application and Certificate for Payment or final Project Application and Project Certificate for Payment upon the Contractor's compliance with the requirements of the Contract Documents.

§ 4.2.17 If the Owner and Architect agree, the Architect will provide one or more Project representatives to assist in carrying out the Architect's responsibilities at the site. The Owner shall notify the Construction Manager of any change in the duties, responsibilities and limitations of authority of the Project representatives.

§ 4.2.18 The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of the Construction Manager, Owner, or Contractor through the Construction Manager. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness.

§ 4.2.19 Interpretations and decisions of the Architect will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Architect will endeavor to secure faithful performance by both Owner and Contractor, will not show partiality to either, and will not be liable for results of interpretations or decisions so rendered in good faith.

§ 4.2.20 The Architect's decisions on matters relating to aesthetic effect will be final.

§ 4.2.21 The Construction Manager will receive and review requests for information from the Contractor, and forward each request for information to the Architect, with the Construction Manager's recommendation. The Architect will review and respond in writing, through the Construction Manager, to requests for information about the Contract Documents. The Construction Manager's recommendation and the Architect's response to each request will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

ARTICLE 5 SUBCONTRACTORS

§ 5.1 Definitions

§ 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include other Contractors or Separate Contractors or the subcontractors of other Contractors or Separate Contractors.

§ 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

§ 5.2 Award of Subcontracts and Other Contracts for Portions of the Work

§ 5.2.1 Unless otherwise stated in the Contract Documents, the Contractor, as soon as practicable after award of the Contract, shall notify the Construction Manager, for review by the Owner, Construction Manager and Architect, of the persons or entities proposed for each principal portion of the Work, including those who are to furnish materials or equipment fabricated to a special design. Within 14 days of receipt of the information, the Construction Manager may notify the Contractor whether the Owner, the Construction Manager or the Architect (1) has reasonable objection to any such proposed person or entity or, (2) requires additional time for review. Failure of the Construction Manager to provide notice within the 14-day period shall constitute notice of no reasonable objection.

§ 5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner, Construction Manager or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

§ 5.2.3 If the Owner, Construction Manager or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner, Construction Manager or Architect has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

§ 5.2.4 The Contractor shall not substitute a Subcontractor, person, or entity for one previously selected if the Owner, Construction Manager or Architect makes reasonable objection to such substitution.

§ 5.3 Subcontractual Relations

By appropriate written agreement, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work, that the Contractor, by these Contract Documents, assumes toward the Owner, Construction Manager and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner, Construction Manager and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies, and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors. The Contractor shall obligate each Subcontractor to comply with the Public Works General Contractor Registration Act of the State of New Jersey.

§ 5.4 Contingent Assignment of Subcontracts

§ 5.4.1 Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that

- .1 assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor; and
- .2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the subcontract.

§ 5.4.2 Upon such assignment, if the Work has been suspended for more than 30 days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.

§ 5.4.3 Upon assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor Contractor or other entity. If the Owner assigns the subcontract to a successor Contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor Contractor's obligations under the subcontract.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 6.1 Owner's Right to Perform Construction with Own Forces and to Award Other Contracts

§ 6.1.1 The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and with Separate Contractors retained under Conditions of the Contract substantially similar to those of this Contract, including those provisions of the Conditions of the Contract related to insurance and waiver of subrogation.

§ 6.1.2 When the Owner performs construction or operations with the Owner's own forces or Separate Contractors, the Owner shall provide for coordination of such forces and Separate Contractors with the Work of the Contractor, who shall cooperate with them.

§ 6.1.3 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces or with Separate Contractors, the Owner or its Separate Contractors shall have the same obligations and rights that the Contractor has under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6, and Articles 10, 11, and 12.

§ 6.2 Mutual Responsibility

§ 6.2.1 The Contractor shall afford the Owner's own forces, Separate Contractors, Construction Manager and other Contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner's own forces, Separate Contractors or other Contractors, the Contractor shall, prior to proceeding with that portion of the Work, promptly notify the Construction Manager and Architect of apparent discrepancies or defects in the construction or operations by the Owner or Separate Contractor or other Contractors that would render it unsuitable for proper execution and results of the Contractor's Work. Failure of the Contractor to notify the Construction Manager and the Architect of apparent discrepancies or defects prior to proceeding with the Work shall constitute an acknowledgment that the Owner's or Separate Contractor's or other Contractors' completed or partially completed construction is fit and proper to receive the Contractor's Work, except as to defects not then reasonably discoverable. If the Contractor incurs cost or damage due to the failure of another Separate Contractor(s) to perform their contract with the Owner, no action can be taken against the Owner. The Owner bears no liability for such damages. Instead, the Contractor may assert its claim for damages against the Separate Contractor responsible as a third-party beneficiary under the Contract between the other Contractor and the Owner.

§ 6.2.3 The Contractor shall reimburse the Owner for costs the Owner incurs, including costs that are payable to a Separate Contractors or to other Contractors, because of the Contractor's delays, improperly timed activities or defective construction. The Owner, in turn, shall be responsible to the Contractor for costs the Contractor incurs because of delays, improperly timed activities, damage to the Work or defective construction by the Owner's own forces.

§ 6.2.4 The Contractor shall promptly remedy damage that the Contractor wrongfully causes to completed or partially completed construction, or to property of the Owner, Separate Contractors, or other Contractors as provided in Section 10.2.5.

§ 6.2.5 The Owner, Separate Contractors, and other Contractors shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

§ 6.3 Owner's Right to Clean Up

If a dispute arises among the Contractor, Separate Contractors, other Contractors, and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and the Construction Manager, with notice to the Architect, will allocate the cost among those responsible.

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 General

§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

§ 7.1.1.1 When submitting its change proposal, the Contractor shall include and set forth in clear and precise detail breakdowns of labor and materials for all trades involved and the estimated impact on the construction schedule, based upon an impact analysis of the current schedule. The Contractor shall furnish spreadsheets from which the breakdowns were prepared, plus spreadsheets, if requested, of any Subcontractor.

§ 7.1.2 A Change Order shall be based upon agreement among the Owner, Construction Manager, Architect and Contractor. A Construction Change Directive requires agreement by the Owner, Construction Manager and Architect and may or may not be agreed to by the Contractor. An order for a minor change in the Work may be issued by the Architect alone.

§ 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents. The Contractor shall proceed promptly with changes in the Work, unless otherwise provided in the Change Order, Construction Change Directive, or order for a minor change in the Work.

§ 7.2 Change Orders

A Change Order is a written instrument prepared by the Construction Manager and signed by the Owner, Construction Manager, Architect, and Contractor, stating their agreement upon all of the following:

- .1 The change in the Work;
- .2 The amount of the adjustment, if any, in the Contract Sum; and
- .3 The extent of the adjustment, if any, in the Contract Time.

§ 7.3 Construction Change Directives

§ 7.3.1 A Construction Change Directive is a written order prepared by the Construction Manager and signed by the Owner, Construction Manager and Architect, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

§ 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

§ 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

- .1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- .2 Unit prices stated in the Contract Documents or subsequently agreed upon;
- .3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or

.4 As provided in Section 7.3.4.

§ 7.3.4 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Construction Manager shall determine the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Construction Manager may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.4 shall be limited to the following:

- .1 Costs of labor, including applicable payroll taxes, fringe benefits required by agreement or custom, workers' compensation insurance, and other employee costs approved by the Construction Manager and Architect;
- .2 Costs of materials, supplies, and equipment, including cost of transportation, whether incorporated or consumed;
- .3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
- .4 Costs of premiums for all bonds and insurance, permit fees, and sales, use, or similar taxes, directly related to the change; and
- .5 Costs of supervision and field office personnel directly attributable to the change.

§ 7.3.5 If the Contractor disagrees with the adjustment in the Contract Time, the Contractor may make a Claim in accordance with applicable provisions of Article 15.

§ 7.3.6 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Construction Manager of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

§ 7.3.7 A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

§ 7.3.8 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Construction Manager and Architect. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

§ 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The Construction Manager and Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Construction Manager and Architect determine to be reasonably justified. The interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.

§ 7.3.10 When the Owner and Contractor agree with a determination made by the Construction Manager and Architect concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and the Construction Manager shall prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

§ 7.3.11 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed so that application of such unit prices to the actual quantities causes substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted. The increased contract unit price shall not apply to quantities scheduled under the contract for delivery before the effective date of the increased contract unit price, unless failure to deliver before that date results from causes reasonably beyond the Contractor's control and without his or her fault or negligence.

§ 7.4 Minor Changes in the Work

The Architect may order minor changes in the Work that are consistent with the intent of the Contract Documents and do not involve an adjustment in the Contract Sum or an extension of the Contract Time. The Architect's order for minor changes shall be in writing. If the Contractor believes that the proposed minor change in the Work will affect the Contract Sum or Contract Time, the Contractor shall notify the Construction Manager and shall not proceed to implement the change in the Work. If the Contractor performs the Work set forth in the Architect's order for a minor change without prior notice to the Construction Manager that such change will affect the Contract Sum or Contract Time, the Contractor waives any adjustment to the Contract Sum or extension of the Contract Time.

ARTICLE 8 TIME

§ 8.1 Definitions

§ 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

§ 8.1.2 The date of commencement of the Work is the date established in the Agreement.

§ 8.1.3 The date of Substantial Completion is the date certified by the Architect in accordance with Section 9.8.

§ 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day of twenty-four (24) hours, beginning at 12:00 midnight, unless otherwise specifically defined. The term "working day" (or "business day") shall mean any calendar day except Saturdays, Sundays and legal holidays at the place of the Project. A time limit ending on a weekend or holiday shall be automatically extended to the succeeding working day.

§ 8.1.5 The Contract Time shall commence as of the date of the Notice to Proceed unless otherwise specified in the Agreement. However, the Work to be performed under this Contract shall not commence until the required insurance has been obtained or approved. The date shall not be postponed by the failure to act by the Contractor or of persons or entities for whom the Contractor is responsible.

§ 8.2 Progress and Completion

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

§ 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, commence the Work prior to the effective date of insurance required to be furnished by the Contractor and Owner. The date of commencement of the Work shall not be changed by the effective date of such insurance.

§ 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time. If the Contractor reasonably anticipates, or reasonably should anticipate the potential impact of a delay on the progress of the Work, or if the Work has not progressed to the extent required to maintain the Project Construction Schedule for reasons unrelated to Contractor's entitlement to any extension of the Contract Time under the Contract Documents, and it is reasonably unlikely that the Work will be Substantially Complete by the required date, then the Construction Manager and/or the Owner shall have the right to order Contractor to increase manpower, work hours, and equipment necessary to maintain the Project Construction Schedule ("Acceleration Measures"), and shall be without additional cost or charge to the Owner.

§ 8.2.4 The Construction Manager, in coordination with the Contractor, will set work hours. The Contractor will be required to work nights, weekends or holidays as necessary to complete the work in accordance with the Schedule. NOTE: Standard work hours for this project may be affected by local Noise Ordinance. The Contractor shall be responsible to adhere to the Noise Ordinance, including night, weekend and holiday work. All utility shut downs, interruptions and work in or adjacent to an existing building will be coordinated through the Construction Manager and may have to be performed during hours when the facility is not in operation. All costs associated with this Article 8.2.4 are the responsibility of the Contractor and shall not be considered additional costs to the Owner.

§ 8.3 Delays and Extensions of Time

§ 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by (1) an intentional act or neglect of the Owner's own forces, Architect, Construction Manager; (2) by material changes ordered in the Work; (3) by labor disputes, fire, unusual delay in deliveries, unavoidable casualties, adverse weather conditions documented

in accordance with Section 15.1.6.2, or other causes beyond the Contractor's reasonable control not due to its fault or negligence, and which could have been prevented or avoided by the affected Party through the exercise of reasonable due diligence; (4) by delay authorized by the Owner pending mediation and binding dispute resolution; or (5) by other causes that the Contractor asserts and the Architect, based on the recommendation of the Construction Manager, determines justify delay, then the Contract Time shall be extended for such reasonable time as the Architect may determine.

§8.3.1.1 Where the cause of delay is due to the weather conditions, extension of time shall be granted only for unusually severe weather, as determined by reference to historical data. The term "historical data" as used in the preceding sentence shall be construed according to this formula: Average rainfall (or snow, or extreme low temperature) for the past five (5) years for the month in question, plus twenty (20) percent. In other words, weather is not deemed to be unusually severe unless it is twenty (20) percent worse than the average for that month over the last five (5) years.

§ 8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Article 15.

§ 8.3.3 No payment or allowance of any kind or extension of time shall be made to the Contractor as compensation for damages on account of hindrance or delay from any cause in the progress of the Work, when the Architect determines the delay to be: (i) avoidable, (ii) caused by the Contractor's negligence or intentional misconduct in whole or in part, (iii) attributed to the Contractor's fault (in whole or in part) for the delay, including but limited to any delay attributable to lack of coordination or cooperation by or between the Contractor and his Subcontractors; or (iv) caused by Owner unless based on a sustainable and valid claim of Owner negligence or intentional act.

§ 8.3.4 The Contractor shall not be entitled to make a claim for delay (regardless of the cause of the delay) unless within two (2) business days after the beginning of such delay or delays, the Contractor files a written request providing notification of the delay (including specific explanation as to the cause) with the Architect, Construction Manager and Owner. In case of a continuing cause of delay, only one request is necessary.

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 Contract Sum

§ 9.1.1 The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

(Paragraph deleted)

§ 9.2 Schedule of Values

Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the Contractor shall submit a schedule of values to the Construction Manager, before the first Application for Payment, allocating the entire Contract Sum to the various portions of the Work. The schedule of values shall be prepared in the form, and supported by the data to substantiate its accuracy, required by the Construction Manager and the Architect. 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. The Construction Manager shall forward to the Architect the Contractor's schedule of values. Any changes to the schedule of values shall be submitted to the Construction Manager and supported by such data to substantiate its accuracy as the Construction Manager and the Architect may require, and unless objected to by the Construction Manager or the Architect, shall be used as a basis for reviewing the Contractor's subsequent Applications for Payment. Each item shall show its total scheduled value, value of previous applications, value of the application, percentage completed, value completed and value yet to be completed.

§ 9.3 Applications for Payment

§ 9.3.1 At least fifteen days before the date established for each progress payment, the Contractor shall submit to the Construction Manager an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2, for completed portions of the Work. The application shall be notarized, if required, and supported by all data substantiating the Contractor's right to payment that the Owner, Construction Manager or Architect require, such as copies of requisitions, and releases of waivers of lien from Subcontractors and suppliers, and shall reflect retainage if provided for in the Contract Documents.

§ 9.3.1.1 As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Construction Manager and Architect, but not yet included in Change Orders.

§ 9.3.1.2 Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or supplier, unless such Work has been performed by others whom the Contractor intends to pay.

§ 9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Where the Contract Documents permit payment for materials stored off the Project site, the Contractor shall procure insurance covering the full value of the material and, in addition to the other requisites of the Contract Documents, shall make any other provisions necessary to ensure and protect Owner's title and right of possession and access to such materials. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the reasonably-incurred costs of applicable insurance, storage, and transportation to the site, for such materials and equipment stored off the site.

§ 9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information, and belief, be free and clear of liens, claims, security interests, or encumbrances, in favor of the Contractor, Subcontractors, suppliers, or other persons or entities that provided labor, materials and equipment relating to the Work.

§ 9.4 Certificates for Payment

§ 9.4.1 Where there is only one Contractor, the Construction Manager will, within seven (7) days after the Construction Manager's receipt of the Contractor's Application for Payment, review the Application, certify the amount the Construction Manager determines is due the Contractor, and forward the Contractor's Application and Certificate for Payment to the Architect. Within seven (7) days after the Architect receives the Contractor's Application for Payment from the Construction Manager, the Architect will either issue to the Owner a Certificate for Payment for such amount as the Architect determines is properly due, or notify the Construction Manager and Owner of the Architect's reasons for withholding certification in whole or in part as provided in Section 9.5.1. The Construction Manager will promptly forward to the Contractor the Architect's notice of withholding certification.

§ 9.4.2 Where there is more than one Contractor performing portions of the Project, the Construction Manager will, within seven (7) days after the Construction Manager receives all of the Contractors' Applications for Payment: (1) review the Applications and certify the amount the Construction Manager determines is due each of the Contractors; (2) prepare a Summary of Contractors' Applications for Payment by combining information from each Contractor's application with information from similar applications for progress payments from the other Contractors; (3) prepare a Project Application and Certificate for Payment; (4) certify the amount the Construction Manager determines is due all Contractors; and (5) forward the Summary of Contractors' Applications for Payment and Project Application and Certificate for Payment to the Architect.

§ 9.4.2.1 Within seven (7) days after the Architect receives the Project Application and Project Certificate for Payment and the Summary of Contractors' Applications for Payment from the Construction Manager, the Architect will either issue to the Owner a Project Certificate for Payment for such amount as the Architect determines is properly due, or notify the Construction Manager and Owner of the Architect's reasons for withholding certification in whole or in part as provided in Section 9.5.1. The Construction Manager will promptly forward the Architect's notice of withholding certification to the Contractors.

§ 9.4.3 The Construction Manager's certification of an Application for Payment or, in the case of more than one Contractor, a Project Application and Certificate for Payment, shall be based upon the Construction Manager's evaluation of the Work and the data in the Application or Applications for Payment. The Construction Manager's certification will constitute a representation that, to the best of the Construction Manager's knowledge, information,

and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and that the Contractor is, or Contractors are, entitled to payment in the amount certified.

§ 9.4.4 The Architect's issuance of a Certificate for Payment or, in the case of more than one Contractor, Project Application and Certificate for Payment, shall be based upon the Architect's evaluation of the Work, the recommendation of the Construction Manager, and data in the Application for Payment or Project Application for Payment. The Architect's certification will constitute a representation that, to the best of the Architect's knowledge, information, and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and that the Contractor is, or Contractors are, entitled to payment in the amount certified. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to the results of subsequent tests and inspections, to the correction of minor deviations from the Contract Documents prior to completion, and to specific qualifications expressed by the Architect and Owner.

§ 9.4.5 The representations made pursuant to Sections 9.4.3 and 9.4.4 are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion, and to specific qualifications expressed by the Construction Manager or Architect.

§ 9.4.6 The issuance of a Certificate for Payment or a Project Certificate for Payment will not be a representation that the Construction Manager or Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work; (2) reviewed construction means, methods, techniques, sequences, or procedures; (3) reviewed copies of requisitions received from Subcontractors and suppliers and other data requested by the Owner to substantiate the Contractor's right to payment; or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 9.5 Decisions to Withhold Certification

§ 9.5.1 The Construction Manager or Architect may withhold a Certificate for Payment or Project Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Construction Manager's or Architect's opinion the representations to the Owner required by Section 9.4.3 and 9.4.4 cannot be made. If the Construction Manager or Architect is unable to certify payment in the amount of the Application, the Construction Manager will notify the Contractor and Owner as provided in Section 9.4.1 and 9.4.2. If the Contractor, Construction Manager and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment or a Project Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Construction Manager or Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment or Project Certificate for Payment previously issued, to such extent as may be necessary in the Construction Manager's or Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from the acts and omissions described in Section 3.3.2 because of

- .1 defective Work not remedied;
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims, unless security acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or suppliers for labor, materials or equipment;
- .4 reasonably avoidable delays or reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or a Separate Contractor or other Contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- .7 repeated failure to carry out the Work in accordance with the Contract Documents.
- .8 failure to maintain the site in a safe and satisfactory manner in accordance with construction practices as determined by the Owner or Architect;
- .9 any labor strike or labor disruption whatsoever which impacts the progress of the Work;
- .10 claims made or likely to be made against the Owner or its property;
- .11 loss caused by the Contractor or its Subcontractors;
- .12 failure of the Contractor to correctly and accurately represent the Work performed in a payment request;
- .13 the Contractor's failure to use funds previously paid to the Contractor to pay Project-related obligations;

- .14 failure to update the Schedule(s);
- .15 failure to maintain Record Drawings;
- .16 deliberate delay in the submission for approval of names of Subcontractors, materialmen, sources of supply, product date, shop drawings and samples; or
- .17 otherwise failure to comply with the requirements of the Contract Documents.

§ 9.5.2 When either party disputes the Architect's decision regarding a Certificate for Payment under Section 9.5.1, in whole or in part, that party may submit a Claim in accordance with Article 15. If the Contractor disputes any determination of the Architect with respect to any Applications for Payment, the Contractor shall nevertheless continue to diligently prosecute the Work. In no event shall the General Contractor stop Work, except pursuant to Paragraph 9.7 hereof.

§ 9.5.3 When the above reasons for withholding certification are removed, certification will be made for amounts previously withheld. The Owner shall not be deemed in default of the Contract by reason of withholding payment while any of the above grounds remain uncured.

§ 9.5.4 If the Architect or Construction Manager withholds certification for payment under Section 9.5.1, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or supplier to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect and the Construction Manager, and both will reflect such payment on the next Certificate for Payment.

§ 9.6 Progress Payments

§ 9.6.1 After the Architect has issued a Certificate for Payment or Project Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Construction Manager and Architect.

§ 9.6.2 The Contractor shall pay each Subcontractor, no later than seven days after receipt of payment from the Owner, the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

§ 9.6.3 The Construction Manager will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Owner, Construction Manager and Architect on account of portions of the Work done by such Subcontractor.

§ 9.6.4 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors and suppliers to ascertain whether they have been properly paid. Neither the Owner, Construction Manager nor Architect shall have an obligation to pay, or to see to the payment of money to, a Subcontractor or supplier, except as may otherwise be required by law.

§ 9.6.5 The Contractor's payments to material and equipment suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

§ 9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

§ 9.6.7 Unless the Contractor provides the Owner with a payment bond in the full penal sum of the Contract Sum, payments received by the Contractor for Work properly performed by Subcontractors or provided by suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, create any fiduciary liability or tort liability on the part of the Contractor for breach of trust, or entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

(Paragraph deleted)

§ 9.7 Failure of Payment

If the Construction Manager and Architect do not issue a Certificate for Payment or a Project Certificate for Payment, through no fault of the Contractor, within fourteen days after the Construction Manager's receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven days after the date established in the Contract Documents, the amount certified by the Construction Manager and Architect or awarded by binding dispute resolution, then the Contractor may, upon seven additional days' notice to the Owner, Construction Manager and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided for in the Contract Documents.

§9.7.1 If the Owner is entitled to reimbursement or payment from the Contractor 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, including costs paid to other Contractors as a result of the Contractor's performance, 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 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

§ 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so the Owner can occupy or utilize the Work for its intended use; provided, however, that as a condition precedent to Substantial Completion, the Contractor shall deliver to the Architect, with a copy to the Owner, all final and unconditional certificates of occupancy and any other permits or approvals necessary for Owner to occupy the entire Project or designate portions thereof.

§9.8.1.1 Substantial Completion shall not be achieved prior to the issuance of the Certificate of Occupancy issued by the state or local authority having jurisdiction.

§ 9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall notify the Construction Manager, and the Contractor and Construction Manager shall jointly prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

.1 No later than (10) ten calendar days prior to date scheduled for Substantial Completion the Construction Manager and/or Owner may add additional items requiring completion or correction.

.2 The Contractor shall immediately proceed with the Work required by the Punchlist and shall complete and correct items on or added thereto by the date scheduled for Substantial Completion.

.3 When the Contractor determines that the Work has reached Substantial Completion, or when the Owner or Construction Manager so determines and directs the Contractor to do so, the Contractor shall request the Construction Manager's final inspection to determine Substantial Completion. The Contractor shall prepare and submit to the Architect and Owner its final Application for Payment submitted in compliance with the requirements of the Contract Documents and shall thoroughly reinspect the Work. Additionally, the Contractor shall prepare and submit to the Architect and Owner a comprehensive final Punchlist of any and all items remaining to be completed or corrected (whether or not included on any previous Punchlists).

§ 9.8.3 Upon receipt of the list, the Architect, assisted by the Construction Manager, will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect, assisted by the Construction Manager, to determine Substantial Completion.

§ 9.8.4 When the Architect, assisted by the Construction Manager, determines that the Work of all of the Contractors, or designated portion thereof, is substantially complete, the Construction Manager will prepare, and the Construction Manager and Architect shall execute, a Certificate of Substantial Completion that shall establish the date of Substantial Completion; establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance; and fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in the Certificate. Upon such acceptance, and consent of surety if any, the Owner shall make payment of retainage applying to the Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

§9.8.6 The Architect's Certificate of Substantial Completion shall be subject to the Owner's final approval.

§ 9.9 Partial Occupancy or Use

§ 9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor and Construction Manager shall jointly prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect after consultation with the Construction Manager.

§ 9.9.2 Immediately prior to such partial occupancy or use, the Owner, Construction Manager, Contractor, and Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

§ 9.9.3 Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

§ 9.10 Final Completion and Final Payment

§ 9.10.1 Upon completion of the Work, the Contractor shall forward to the Construction Manager a notice that the Work is ready for final inspection and acceptance, and shall also forward to the Construction Manager a final Contractor's Application for Payment. Upon receipt, the Construction Manager shall perform an inspection to confirm the completion of Work of the Contractor. The Construction Manager shall make recommendations to the Architect when the Work of all of the Contractors is ready for final inspection, and shall then forward the Contractors' notices and Application for Payment or Project Application for Payment, to the Architect, who will promptly make such inspection. When the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Construction Manager and Architect will promptly issue a final Certificate for Payment or Project Certificate for Payment stating that to the best of their knowledge, information and belief, and on the basis of their on-site visits and inspections, the Work has been completed in accordance with the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Construction Manager's and Architect's final Certificate for Payment or Project Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled. All warranties and guarantees required under or pursuant to the Contract Document shall be assembled and delivered by the Contractor to the Architect as part of the final Application for Payment. The final Certificate for Payment will not be issued by the Architect or Construction Manager until all warranties and guarantees have been received and approved by the Architect and Construction Manager.

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect through the Construction Manager (1) an affidavit that payrolls, bills for materials and equipment, and

other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect, (3) a written statement that the Contractor knows of no reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment (5) documentation of any special warranties, such as manufacturers' warranties or specific Subcontractor warranties, and (6), if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts and releases and waivers of liens, claims, security interests, or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien, claim, security interest, or encumbrance. If a lien, claim, security interest, or encumbrance remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging the lien, claim, security interest, or encumbrance, including all costs and reasonable attorneys' fees.

§ 9.10.3 If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Construction Manager and Architect so confirm, the Owner shall, upon application by the Contractor and certification by the Construction Manager and Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed, corrected, and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of the surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect through the Construction Manager prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

- .1 If more than one inspection for Final Completion is required, the Contractor will be billed and responsible for the professional fees and services of the Architect.
- .2 Following Substantial Completion, in the event the Contractor or its subcontractor fails to complete the list of items of the Work instructed by the Architect to be corrected or completed within fourteen (14) days after the date of receipt of Certificate of Substantial Completion, the Owner may:
 - .1 exercise any available remedies to correct or complete deficient work or retain a third party of correct or complete such work at the cost of the defaulting Contractor; and
 - .2 retain and deduct from any payments or retention otherwise due to the defaulting Contractor fees and expenses for services required to be provided by the Architect more than twenty-one (21) days after the Date of Substantial completion.

§ 9.10.4 The making of final payment shall constitute a waiver of Claims by the Owner except those arising from

- .1 liens, Claims, security interests, or encumbrances arising out of the Contract and unsettled;
- .2 failure of the Work to comply with the requirements of the Contract Documents;
- .3 terms of special warranties required by the Contract Documents; or
- .4 audits performed by the Owner, if permitted by the Contract Documents, after final payment.

§ 9.10.5 Acceptance of final payment by the Contractor, a Subcontractor, or a supplier, shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 Safety Precautions and Programs

The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract. The Contractor shall submit the Contractor's safety program to the Construction Manager for review and coordination with the safety programs of other Contractors. The Construction Manager's responsibilities for review and coordination of safety programs shall not extend to direct control over or charge of the acts or omissions of the Contractors, Subcontractors, agents or employees of the Contractors or Subcontractors, or any other persons performing portions of the Work and not directly employed by the Construction Manager.

§10.1.1 The Contractor's attention is particularly directed to the governing agencies (State, Federal and Municipal, or other requirements) regarding reporting of accidents involving injury, loss of life and property damage.

§10.1.2 The Contractor will serve as the overall Project Safety Coordinator and shall be responsible for all issues of safety and protection. The Contractor, if applicable, shall also designate a safety person at the job site from notice to proceed to Contract completion. The designated safety person shall be responsible for the safety of their work and for their workers, and to make continuous inspections for all safety issues relating to his work. The Owner and their representatives, including but not limited to the Architect, the Construction Manager and the Owner's representative, are not responsible for safety on this project, but will endeavor to promote safety. The Contractor must comply with job Safety Requirements in addition to OSHA and local agency requirements. Failure to comply with safety issues will be ground for withholding of payments.

§ 10.1.3 The Contractor shall also insure that all of its Subcontractors follow its safety program and that this requirement is included in Contractor/Subcontractor Agreements. The Contractor should defend and indemnify Owner, Architect and Construction Manager for any damages or injuries arising for the failure of the Contractor to follow and/or enforce the safety program.

§ 10.2 Safety of Persons and Property

§ 10.2.1 The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury, or loss to

- .1 employees on the Work and other persons who may be affected thereby;
- .2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody, or control of the Contractor, a Subcontractor, or a Sub-subcontractor;
- .3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction; and
- .4 construction or operations by the Owner, Separate Contractors, or other Contractors.
- .5 the general public

§ 10.2.2 The Contractor shall comply with, and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities, bearing on safety of persons or property or their protection from damage, injury, or loss.

§ 10.2.3 The Contractor shall implement, erect, and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards; promulgating safety regulations; and notifying the owners and users of adjacent sites and utilities of the safeguards, consistent with applicable laws, statutes, ordinances, codes, rules and regulations and lawful orders of public authorities, and prevailing industry practice.

§ 10.2.4 When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel. In all cases, the Contractor shall give the Owner reasonable advance notice.

§ 10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2, 10.2.1.3 and 10.2.1.4 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2, 10.2.1.3 and 10.2.1.4. The Contractor may make a Claim for the cost to remedy the damage or loss to the extent such damage or loss is attributable to acts or omissions of the Owner, Construction Manager or Architect or anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

§ 10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner, Construction Manager and Architect.

§ 10.2.7 The Contractor shall not permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

§ 10.2.8 Injury or Damage to Person or Property

If either party suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, notice of the injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

§ 10.3 Hazardous Materials

§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials or substances. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and notify the Owner, Construction Manager and Architect of the condition.

§ 10.3.2 Upon receipt of the Contractor's notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor, Construction Manager and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of the material or substance or who are to perform the task of removal or safe containment of the material or substance. The Contractor, the Construction Manager and the Architect will promptly reply to the Owner in writing stating whether or not any of them has reasonable objection to the persons or entities proposed by the Owner. If the Contractor, Construction Manager or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor, the Construction Manager and the Architect have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable additional costs of shutdown, delay, and start-up.

§ 10.3.3 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Construction Manager, Architect, their consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss, or expense is due to the fault or negligence of the party seeking indemnity.

§ 10.3.4 The Owner shall not be responsible under this Section 10.3 for hazardous materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for hazardous materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances.

§ 10.3.5 The Contractor shall reimburse the Owner for the cost and expense the Owner incurs (1) for remediation of hazardous materials or substances the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence.

§ 10.3.6 If, without negligence on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall reimburse the Contractor for all cost and expense thereby incurred.

§ 10.4 Emergencies

In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury, or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7.

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 Contractor's Insurance and Bonds

§ 11.1.1 The Contractor shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Contractor shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Owner, Construction Manager and Construction Manager's consultants, and the Architect and Architect's consultants, shall be named as additional insureds under the Contractor's commercial general liability policy or as otherwise described in the Contract Documents. The coverage afforded under any insurance obtained pursuant to this paragraph shall be primary and non-contributory. Coverages should be written on an occurrence basis, and shall be maintained without interruption from the date of commencement of the Work until the date of final payment and termination of any coverage required to be maintained after final payment, and, with respect to the Contractor's completed operations coverage, until the expiration of the period for correction. The Contractor shall indemnify, defend and hold harmless all parties or persons described in Section 3.18 from any and all claims for which the required insurance would have provided coverage. This indemnity obligation is in addition to any other indemnity obligation provided in the Contract.

§ 11.1.2 The Contractor shall provide surety bonds of the types, for such penal sums, and subject to such terms and conditions as required by the Contract Documents. The Contractor shall purchase and maintain the required bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

§ 11.1.3 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

§ 11.1.4 **Notice of Cancellation or Expiration of Contractor's Required Insurance.** Within three (3) business days of the date the Contractor becomes aware of an impending or actual cancellation or expiration of any insurance required by the Contract Documents, the Contractor shall provide notice directly to the Owner, and separately to the Construction Manager, of such impending or actual cancellation or expiration. Upon receipt of notice from the Contractor, the Owner shall, unless the lapse in coverage arises from an act or omission of the Owner, have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by the Contractor. The furnishing of notice by the Contractor shall not relieve the Contractor of any contractual obligation to provide any required coverage. The Contractor's failure to obtain or maintain adequate insurance coverage shall be considered a material breach of the contract.

§ 11.2 Owner's Liability Insurance

§ 11.2.1 The Owner shall be responsible for purchasing and maintaining the Owner's usual liability insurance.

(Paragraphs deleted)

§ 11.3 Waivers of Subrogation

§ 11.3.1 The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents, and employees, each of the other; (2) the Construction Manager and Construction Manager's consultants; (3) the Architect and Architect's consultants; (4) other Contractors and any of their subcontractors, sub-subcontractors, agents, and employees; and (5) Separate Contractors, if any, and any of their subcontractors, sub-subcontractors, agents, and employees, for damages caused by fire, or other causes of loss, to the extent those losses are covered by property insurance required by the Agreement or other property insurance applicable to the Project, except such rights as they have to proceeds of such insurance. The Owner or Contractor, as appropriate, shall require similar written waivers in favor of the individuals and entities identified above from the Construction Manager, Construction Manager's consultants, Architect, Architect's consultants, other Contractors, Separate Contractors, subcontractors, and sub-subcontractors. The policies of insurance purchased and maintained by

each person or entity agreeing to waive claims pursuant to this Section 11.3.1 shall not prohibit this waiver of subrogation. This waiver of subrogation shall be effective as to a person or entity (1) even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, (2) even though that person or entity did not pay the insurance premium directly or indirectly, or (3) whether or not the person or entity had an insurable interest in the damaged property.

(Paragraphs deleted)

§ 11.4 Performance Bond and Payment Bond

§ 11.4.1 The Owner shall have the right to require the Contractor to furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder as stipulated in bidding requirements or specifically required in the Contract Documents on the date of execution of the Contract. Bonds shall be obtained from a company lawfully authorized to do business in the location of the site and have an A.M. Best and Company rating of "A-" or better; and the cost of the bonds shall be included in the Contract Sum. The Contractor shall provide a Performance Bond equal to 100 percent of the Contract Sum, a Payment Bond equal to 100 percent of the Contract Sum, and a Two (2) Year Maintenance Bond equal to 100 percent of the Contract Sum. Bonds shall be consistent with the requirements of N.J.S.A. 2A:44-143, and 2A:44-144.

§ 11.4.2 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

§ 11.4.3 The Contractor shall deliver the required bonds to the Owner not later than three (3) days following the date of the Agreement.

§ 11.4.4 The Contractor shall require the attorney who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of the Power of Attorney, indicating the monetary limit of such power.

§ 11.4.5 The Contractor shall provide Owner and Construction Manager with the name, address, phone number and other contact information of the local agent of the Company issuing the Project bonds.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 Uncovering of Work

§ 12.1.1 If a portion of the Work is covered contrary to the Construction Manager's, Architect's, or authority having jurisdiction's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by either, be uncovered for their observation, inspection, testing or approval, and be replaced at the Contractor's expense without change in the Contract Time.

§ 12.1.2 If a portion of the Work has been covered that the Construction Manager or Architect has not specifically requested to observe prior to its being covered, the Construction Manager or Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, costs of uncovering and replacement shall, by appropriate Change Order, be at the Owner's expense. If such Work is not in accordance with the Contract Documents, the costs of uncovering the Work, and the cost of correction, shall be at the Contractor's expense.

§ 12.2 Correction of Work

§ 12.2.1 Before Substantial Completion

The Contractor shall promptly correct Work rejected by the Construction Manager or Architect or failing to conform to the requirements of the Contract Documents, discovered before Substantial Completion, and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Construction Manager's and Architect's services and expenses made necessary thereby, shall be at the Contractor's expense.

§ 12.2.2 After Substantial Completion

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within two year after the date of Substantial Completion of the Work or designated portion thereof, or after the date for commencement of warranties established under Section 9.9.1, or by terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of notice from the Owner to do so, unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the two-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner, Construction Manager or Architect, the Owner may correct it in accordance with Section 2.5. This obligation shall survive the termination of any or all other obligation or obligations under the contract Documents and it is agreed by the Contractor that in the event the Owner is required to bring suit under this provision against the Contractor to enforce this obligation, the Contractor hereby waives any defense of the statutes of limitations.

§ 12.2.2.2 The two-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

§ 12.2.2.3 The two-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.

§ 12.2.3 The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

§ 12.2.4 The Contractor shall bear the cost of correcting destroyed or damaged construction of the Owner, Separate Contractors, or other Contractors, whether completed or partially completed, caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.

§ 12.2.5 Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the two-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

§12.2.6 If the Contractor fails to correct nonconforming Work within a reasonable time, the Owner may correct it in accordance with Section 2.4. If the Contractor does not proceed with correction of such nonconforming Work within a reasonable time fixed by written notice from the Architect issued through the Construction Manager, the Owner may remove it and store the salvaged materials or equipment at the Contractor's expense. If the Contractor does not pay costs of such removal and storage within ten (10) days after written notice, the Owner may, upon ten (10) additional days' written notice, sell such materials and equipment at auction or at private sale, and shall account for the proceeds thereof, after deducting costs and damages that should have been borne by the Contractor, including compensation for the Construction Manager's and Architect's services and expenses made necessary thereby. If such proceeds of sale do not cover costs which the Contractor should have borne, the Contract Sum shall be reduced by the deficiency. If payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the Owner.

§12.2.7 If, in the opinion of the Architect and the Construction Manager, the General Contractor delays Final Completion of the Work beyond a reasonable time after the Date of Substantial Completion of the Project to such extent that the period between the Date of Substantial Completion of the Project and the end of the guarantee period becomes less than eleven (11) months, the start of the guarantee period shall be the date of the final Project Certificate of Payment in lieu of the Date of Substantial Completion of the Project

§ 12.3 Acceptance of Nonconforming Work

If the Owner prefers to accept Work that is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 Governing Law

The Contract shall be governed by the law of the State of New Jersey and any dispute regarding the Contract shall be venued in Superior Court of New Jersey, Essex County.

§ 13.2 Successors and Assigns

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to covenants, agreements, and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

§ 13.2.2 The Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate the assignment.

§ 13.3 Rights and Remedies

§ 13.3.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights, and remedies otherwise imposed or available by law.

§ 13.3.2 No action or failure to act by the Owner, Construction Manager, Architect, or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed upon in writing.

§ 13.4 Tests and Inspections

§ 13.4.1 Tests, inspections, and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules, and regulations or lawful orders of public authorities. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections, and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections, and approvals. The Contractor shall give the Construction Manager and Architect timely notice of when and where tests and inspections are to be made so that the Construction Manager and Architect may be present for such procedures. The Owner shall bear costs of tests, inspections, or approvals that do not become requirements until after bids are received or negotiations concluded. The Owner shall directly arrange and pay for tests, inspections, or approvals where building codes or applicable laws or regulations prohibit the Owner from delegating their cost to the Contractor.

§ 13.4.2 If the Construction Manager, Architect, Owner, or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection, or approval not included under Section 13.4.1, the Construction Manager and Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection, or approval, by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Construction Manager and Architect of when and where tests and inspections are to be made so that the Construction Manager and Architect may be present for such procedures. Such costs, except as provided in Section 13.4.3, shall be at the Owner's expense.

§ 13.4.3 If procedures for testing, inspection, or approval under Sections 13.4.1 and 13.4.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure, including those of repeated procedures and compensation for the Construction Manager's and Architect's services and expenses, shall be at the Contractor's expense.

§ 13.4.4 Required certificates of testing, inspection, or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Construction Manager for transmittal to the Architect.

§ 13.4.5 If the Construction Manager or Architect is to observe tests, inspections, or approvals required by the Contract Documents, the Construction Manager or Architect will do so promptly and, where practicable, at the normal place of testing.

§ 13.4.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

§13.4.6.1 Inspections and Tests required to establish with the Contract Documents and specified to be "by Owner", will be made by an independent testing agency selected and paid for by the Owner. Re-testing required as a result of first test showing non-compliance with the Contract Documents will be performed by the same agency, with costs paid for by the Contractor. Representatives of the testing agency shall have access to the Work at all times. The Contractor shall provide facilities for such access in order that the agency may properly perform its function.

§13.4.6.2 The independent agency employed by the Owner shall prepare the test reports, logs and certificates applicable to the specific inspection and test, and promptly deliver the specified number of copies of same to the designated parties. Other required certificates of inspections, testing or approval shall be secured by the Contractor and delivered by him to the Construction Manager and/or Owner's Representative, in such time as not to delay progress of the Work or final payment thereof.

§ 13.5 Interest

Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at the rate the parties 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. Notwithstanding, any payments withheld for time delays, faulty materials, or workmanship, shall not bear interest for period of delay or non-acceptance.

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 Termination by the Contractor

§ 14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of 30 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, for any of the following reasons:

- .1 Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;
- .2 An act of government, such as a declaration of national emergency, that requires all Work to be stopped;
- .3 Because the Construction Manager has not certified or the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4, or because the Owner has not made payment on an approved and undisputed Certificate for Payment within the time stated in the Contract Documents.

§ 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, repeated suspensions, delays, or interruptions of the entire Work by the Owner as described in Section 14.3, constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.

§ 14.1.3 The Owner shall not be responsible for damages for loss of anticipated profits on work not performed on account of any termination described in Subparagraph 14.1.1 and 14.1.2. If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work properly executed up to the date of the termination in accordance with the Contract Documents.

§ 14.1.4 If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, or their agents or employees, or any other persons performing portions of the Work because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' notice to the

Owner, Construction Manager and Architect, terminate the Contract and recover from the Owner as provided in Section 14.1.3.

§ 14.2 Termination by the Owner for Cause

§ 14.2.1 The Owner may terminate the Contract if the Contractor

- .1 refuses or fails to supply properly skilled workers or proper quality or quantity of materials, or falls in any respect to prosecute the Work with promptness and diligence;
- .2 fails to make payment to Subcontractors or suppliers in accordance with the respective agreements between the Contractor and the Subcontractors or suppliers;
- .3 disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
- .4 disregards the instructions of the Owner, when such instructions are based on the requirement of the Contract Documents;
- .5 is adjudged a bankrupt or insolvent, or makes a general assignment for the benefit of the Contractor's creditors, or a trustee or receiver is appointed for Contractor or any of its property, or files a petition to take advantage of any debtor's act, or to reorganize under bankruptcy or similar laws;
- .6 fails to furnish the Owner with assurances satisfactory to the Owner evidencing the Contractor's ability to complete the Work in compliance with the requirements of the Contract Documents
- .7 Breaches any warranty made by the Contractor under or pursuant to the Contract Documents; **8** otherwise does not comply with the Contract Documents.

§ 14.2.2 When any of the reasons described in Section 14.2.1 exist, after consultation with the Construction Manager, and upon certification by the Architect that sufficient cause exists to justify such action, the Owner may, without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

- .1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- .2 Accept assignment of subcontracts pursuant to Section 5.4; and
- .3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

§ 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

§ 14.2.4 If the costs of finishing the Work, including compensation for the services of any consultants and the Architect's services and expenses made necessary thereby, and the other costs and expenses identified hereinafter, exceed the unpaid balance of the Contract Sum, the Contractor shall pay the difference to the Owner upon demand. The costs of finishing the Work include, without limitation, all reasonable attorney's fees, additional title costs, insurance, additional interest because of any delay in completing the Work and all other damages as contemplated by this Agreement.

§ 14.3 Suspension by the Owner for Convenience

§ 14.3.1 The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work, in whole or in part for such period of time as the Owner may determine.

§ 14.3.2 The Contract Sum and the Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay, or interruption under Section 14.3.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent:

- .1 that performance is, was, or would have been, so suspended, delayed, or interrupted, by another cause for which the Contractor is responsible; or
- .2 that an equitable adjustment is made or denied under another provision of this Contract.

Notwithstanding, the Contractor is required to continue performing those portions of the work not suspended by the Owner, as refusal to continue the work not suspended constitutes a breach of contract on the part of the Contractor.

§ 14.4 Termination by the Owner for Convenience

§ 14.4.1 The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

§ 14.4.2 Upon receipt of notice from the Owner of such termination for the Owner's convenience, the Contractor shall

- .1 cease operations as directed by the Owner in the notice;
- .2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
- .3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

§ 14.4.3 In case of such termination for the Owner's convenience, the Owner shall pay the Contractor for Work properly executed up to the date of the termination in accordance with the Contract Documents; reasonable costs incurred by reason of the termination as determined by Owner, including costs attributable to termination of Subcontracts. The Contractor shall, as a condition of receiving the payments referred to herein, execute and deliver all such papers, turn over all plans, documents and files of whatsoever nature required by the Owner, and take all such steps, including the legal assignment of its contractual rights, as the Owner may require for the purpose of fully vesting in the Owner the rights and benefits of the Contractor. Any claims or damages presented by subcontractors, suppliers, or other parties under contract with the Contractor, arising from or in connection with the termination for the Owner's convenience, shall be the sole responsibility of the Contractor. The Owner shall not be liable for, and the Contractor shall not be entitled to claim or recover, the following costs or damages associated with the termination: (a) Loss of anticipated profits or consequential damages; (b) Costs related to the Contractor's general overhead or home office expenses; (c) Costs incurred after the effective date of termination; (d) Costs that are not directly attributable to the termination or those lacking proper documentation.

ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 Claims

§ 15.1.1 **Definition.** A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, a change in the Contract Time, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim. This Section 15.1.1 does not require the Owner to file a Claim in order to impose liquidated damages in accordance with the Contract Documents.

§ 15.1.2 Time Limits on Claims

The Owner and Contractor shall commence all Claims and causes of action against the other and arising out of or related to the Contract, whether in contract, tort, breach of warranty or otherwise, in accordance with the requirements of the binding dispute resolution method selected in the Agreement and within the period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all Claims and causes of action not commenced in accordance with this Section 15.1.2.

§ 15.1.3 Notice of Claims

§ 15.1.3.1 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered prior to expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party and to the Initial Decision Maker with a copy sent to the Construction Manager and Architect, if the Architect is not serving as the Initial Decision Maker. Claims by either party under this Section 15.1.3.1 shall be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

§ 15.1.3.2 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party. In such event, no decision by the Initial Decision Maker is required.

§ 15.1.4 Continuing Contract Performance

§ 15.1.4.1 Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

§ 15.1.4.2 The Contract Sum and Contract Time shall be adjusted in accordance with the Initial Decision Maker's decision, subject to the right of either party to proceed in accordance with this Article 15. The Architect will issue Certificates for Payment in accordance with the decision of the Initial Decision Maker.

§ 15.1.5 **Claims for Additional Cost.** If the Contractor wishes to make a Claim for an increase in the Contract Sum, notice as provided in Section 15.1.3 shall be given before proceeding to execute the portion of the Work that is the subject of the Claim. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4. The foregoing written notice shall contain a written statement from the Contractor setting forth in detail the nature and cause of the Claim and an itemized statement of the increase requested to the extent that such costs are reasonably available to the Contractor and accurate. No such written notice shall form the basis of an increase to the Contract Sum unless and until such increase has been authorized by a written Change Order executed and issued according to the terms and conditions set forth herein.

§ 15.1.6 **Claims for Additional Time**

§ 15.1.6.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, notice as provided in Section 15.1.3 shall be given. Said notice shall itemize all claims and shall contain sufficient detail and substantiating data to permit evaluation of same by the Owner and Architect. No such claim shall be valid unless so made. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay only one Claim is necessary.

§ 15.1.6.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated and had an adverse effect on the scheduled construction.

Where the cause of delay is due to the weather conditions, extension of time shall be granted only for unusually severe weather, as determined by reference to historical data. The term "historical data" as used in the preceding sentence shall be construed according to this formula: Average rainfall (or snow, or extreme low temperature) for the past five (5) years for the month in question, plus twenty (20) percent. In other words, weather is not deemed to be unusually severe unless it is twenty (20) percent worse than the average for that month over the last five (5) years. Notwithstanding, weather events may include those days in which the Contractor is unable to proceed with work on the critical path for more than seven (7) continuous normal Work hours in a day.

§ 15.1.7 **Waiver of Claims for Consequential Damages.** The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes

- .1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
- .2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.7 shall be deemed to preclude assessment of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

§ 15.2 **Initial Decision**

§ 15.2.1 Claims, excluding those where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2 or arising under Sections 10.3, 10.4, and 11.5, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation of any Claim. If an initial decision has not been rendered within 30 days after the Claim has been referred to the Initial Decision Maker, the party asserting the Claim may demand mediation and binding dispute resolution without a decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.

§ 15.2.2 The Initial Decision Maker will review Claims and within ten days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim or if the Initial Decision Maker concludes that, in the Initial Decision Maker's sole discretion, it would be inappropriate for the Initial Decision Maker to resolve the Claim.

§ 15.2.3 In evaluating Claims, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision. The Initial Decision Maker may request the Owner to authorize retention of such persons at the Owner's expense.

§ 15.2.4 If the Initial Decision Maker requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of the request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished, or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.

§ 15.2.5 The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties, the Construction Manager, and the Architect, if the Architect is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The initial decision shall be final and binding on the parties but subject to mediation and, if the parties fail to resolve their dispute through mediation, to binding dispute resolution.

§ 15.2.6 Either party may file for mediation of an initial decision at any time, subject to the terms of Section 15.2.6.1.

§ 15.2.6.1 Either party may, within 30 days from the date of receipt of an initial decision, demand in writing that the other party file for mediation. If such a demand is made and the party receiving the demand fails to file for mediation within 30 days of receipt thereof, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with respect to the initial decision.

§ 15.2.7 In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

§ 15.2.8 If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

§ 15.3 Mediation

§ 15.3.1 Claims, disputes, or other matters in controversy arising out of or related to the Contract, except those waived as provided for in Sections 9.10.4, 9.10.5, 15.1.7 and 16.2.6.1, shall be subject to mediation as a condition precedent to binding dispute resolution.

§ 15.3.2 The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. A request for mediation shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section 15.3.2, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.

§ 15.3.3 Either party may, within 30 days from the date that mediation has been concluded without resolution of the dispute or 60 days after mediation has been demanded without resolution of the dispute, demand in writing that the

other party file for binding dispute resolution. If such a demand is made and the party receiving the demand fails to file for binding dispute resolution within 60 days after receipt thereof, then both parties waive their rights to binding dispute resolution proceedings with respect to the initial decision.

§ 15.3.4 The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

| (Paragraphs deleted)



SECTION 00800 - SUPPLEMENTARY GENERAL CONDITIONS

PART 1 - GENERAL

1.1 FUNCTION

- A. The following supplements modify, change, delete from or add to the "General Conditions of the Contract for Construction, Construction Manager as Adviser Edition", AIA Document A232 - 2019 and the Standard Form of Agreement Between Owner and Contractor, Construction Manager as Adviser Edition, AIA Document A132 - 2019. Where any Article of the General Conditions is modified or any Paragraph, Subparagraph or Clause thereof is modified or deleted by these supplements, the unaltered provisions of that Article, Paragraph, Subparagraph or Clause shall remain in effect.
- B. Refer to Sections in Division 1 "General Requirements" for additional modifications, deletions and additions to the "General Conditions of the Contract for Construction".

1.2 GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, CONSTRUCTION MANAGER AS ADVISER EDITION, AIA DOCUMENT A232-2019.

- A. Document is modified in accordance with the following paragraphs and as indicated herein after:

1.3 PARAGRAPH 1.1 - BASIC DEFINITIONS

- A. Paragraph 1.1.1 - "The Contract Documents":

Delete last sentence "Unless specifically enumerated in the Agreement, the Contract Documents do not..... proposal requirements)."

- B. Supplement Paragraph 1.1 "Basic Definitions", as follows:

1.1.11 The Project Manual. The Project Manual is a volume, or volumes, assembled for the Work that includes, or is deemed to incorporate by reference the General Conditions, Supplementary Conditions, the Bidding Requirements and Documents related thereto, the Specifications, and all addenda issued prior to the execution of the Contract."

1.1.12 Final Completion. The date the Contract has been fully performed, all the Work has been completed and a final certificate for Payment approved by the Owner has been issued by the Architect.

1.1.13 Or Approved Equal and Equal To. Shall mean products by manufacturers other than those specified in the Contract Documents in which the Contractor may submit for those specified in the Contract Documents and which may be

incorporated in the Work after review and acceptance by the Architect and acceptance by the Owner.

1.4 PARAGRAPH 1.2 - CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS

- A. Delete Paragraph 1.2.1 in its entirety and substitute with the following:

1.2.1 The Contract Documents include all items necessary for the proper execution and completion of the Work by the Contractor. The Work shall consist of all items specifically included in the Contract Documents as well as all additional items of work which are reasonably inferable from that which is specified in order to complete the Work in accordance with the Contract Documents. The Contract Documents are complementary, and what is required by any one Contract Document shall be as binding as if required by all. Any differences between the requirements of the Drawings and the Specifications or any differences noted within the Drawings themselves or within the Specifications themselves have been referred to the Owner, Architect and Construction Manager by Contractor prior to the submission of bids and have been clarified by an Addendum issued to all bidders.

If any such differences or conflicts were not called to the Owner's and the Architect's attention prior to submission of bids, the Architect shall decide which of the conflicting requirements will govern based upon the most stringent of the requirements, and, subject to the approval of the Owner, the Contractor shall perform the Work at no additional cost and/or time to the Owner in accordance with the Architect's decision. Work not covered in the Contract Documents will not be required unless it is consistent therewith and is reasonably inferable therefrom as being necessary to produce the intended results.

1.5 PRECEDENCE OF LARGE SCALE DETAILS

- A. Supplement Paragraph 1.2 "Correlation and Intent of the Contract Documents", as follows:

1.2.4 The general character of the detail work is shown on the drawings but minor modifications may be made in large scale details. Where the word "similar" occurs on the drawings it shall be used in its general sense and not as meaning identical, and all details shall be worked out in relation to their location and their connection to other parts of the work. Where on any drawings a portion of the work is drawn out and the remainder is indicated in outline, the parts drawn out shall apply also to other like portions of the work. Where detail is indicated by starting only, such detail shall be continued throughout the courses or parts in which it occurs and shall also apply to all other similar parts in the work unless otherwise indicated. In case of differences between small and large scale drawings, the larger scale drawings shall take precedence. Dimensions given shall take precedence over scale measurements. Any discrepancies shall be referred to the Architect for adjustment before any work affected thereby has been performed.

1.2.5 During the course of the work, should any ambiguities or discrepancies be found in the Specifications or on the Drawings; or should there be found any discrepancies between the Drawings and Specifications to which the Contractor has failed to call attention before submitting his / her bid, then the Architect will interpret the intent of the Drawings and Specifications; and the Contractor hereby agrees to abide by the Architect's interpretation and to carry out the work in accordance with the decision of the Architect. It is expressly stipulated that neither the Drawings nor the Specifications shall take precedence over the other, and it is further stipulated that the Architect may interpret or construe the Drawings and Specifications so as to secure in all cases the result most consistent with the needs and requirements of the work.

1.6 PARAGRAPH 2.1 - GENERAL

- A. Delete Paragraph 2.1 in its entirety.

1.7 PARAGRAPH 2.2 - EVIDENCE OF THE OWNER'S FINANCIAL ARRANGEMENTS

- A. Delete Paragraph 2.2.1 in its entirety.

1.8 PARAGRAPH 2.2 - INFORMATION AND SERVICES REQUIRED OF THE OWNER

- A. Delete Paragraphs 2.3.1, 2.3.5 and 2.3.5 in their entirety.
- B. Delete Paragraph 2.3.7 in its entirety and substitute with the following:

2.3.7 The Architect will furnish the Contractor, without charge, the following number of sets of drawings and specifications. Additional copies will be furnished at the Architect's reproduction costs.

Single Overall Contract 3 Sets

1.9 PARAGRAPH 2.4 - OWNER'S RIGHT TO STOP THE WORK

- A. Edit paragraph 2.4 as follows:

Line 1; after "Documents" add:

"or fails or refuses to provide a sufficient amount of properly supervised and coordinated labor, materials, or equipment so as to be able to complete the Work within the Contract Time or fails to remove and discharge (within ten days) any lien filed upon Owner's property by anyone claiming by, through, or under Contractor, or disregard the instructions of Architect, Construction Manager or Owner when based on the requirements of the Contract Documents,".

1.10 PARAGRAPH 2.5 - OWNER'S RIGHT TO CARRY OUT THE WORK

- A. In the 10th line, delete “the Contractor....to the Owner”, and substitute with the following:

"the Contractor, and/or his / her surety shall pay the difference to the Owner."

1.11 PARAGRAPH 3.2 - REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

- A. Delete the second sentence in Paragraph 3.2.2 in its entirety and substitute with the following:

“If any errors, inconsistencies or omissions appear in the drawings, specifications or other Contract Documents, which should reasonably have been discovered and concerning which interpretation had not been obtained from the Architect during the Bidding Period, the Contractor shall within ten days after receiving written ‘Notice of Award’ notify the Architect in writing of such error, inconsistency or omission. In the event the Contractor fails to give such notice, he/she will be held responsible for the results of any such errors, inconsistencies or omissions and the cost of rectifying same. Interpretation of this procedure after the ten-day period will be made by the Architect and his / her decision will be final”.

1.12 LAYOUT OF WORK

- A. Supplement Paragraph 3.3 "Supervision and Construction Procedures", as follows:

3.3.4 Each Contractor shall lay out his / her own work and be responsible for all lines, elevations and measurements of the building, and other work executed by him/her under the Contract. He/She must exercise proper precaution to verify the figures shown on the drawings before laying out the work and will be held responsible for any errors resulting from his / her failure to exercise such precaution.

3.3.5 The Contractor shall coordinate his / her operations with those of all his / her subcontractors.

3.3.6 The Contractor, and including each of his / her subcontractors, shall keep fully informed of the progress and the details of the work of all subcontractors, and shall notify the CM immediately of lack of progress or defective workmanship on the part of any subcontractors.

3.3.7 Failure of any contractor to keep informed of the work progressing on or off the site, and his / her failure to give notice of lack of progress or defective workmanship by others, will be construed by Owner and by the CM as acceptance by the contractor of the status of the work as being satisfactory for proper coordination with the contractor's own work and with the work of all his / her subcontractors.

1.13 WARRANTY

- A. Supplement Paragraph 3.5 "Warranty", as follows:

3.5.1.1 The warranty period for all work of the Contractor shall be **one (1) year** from the date of substantial completion and acceptance by the Owner unless otherwise specified.

1.14 PARAGRAPH 3.7 - PERMITS, FEES, NOTICES, AND COMPLIANCE WITH LAWS

- A. 3.7.3 In line 3, delete "the costs attributable to correction" and replace with "all costs attributable to the correction thereof or related thereto, including all fines and penalties."

1.15 PARAGRAPH 3.9 - SUPERINTENDENT

- A. Supplement Paragraph 3.9 "Superintendent", as follows:

3.9.2.1 Qualifications of superintendent proposed to be used shall be submitted to the Construction Manager and Owner's approval obtained before proceeding with work.

3.9.7 The superintendent shall be assigned to the project on a full-time basis from the inception of construction until the completion of all corrective and punch list work.

1.16 CONTRACTOR'S CONSTRUCTION AND SUBMITTAL SCHEDULES

- A. Supplement Paragraph 3.10 "Contractor's Construction Submittal Schedules", as follows:

3.10.1.1 Within fifteen (15) days after the date of the notice to proceed the Contractor shall submit to the Architect, on forms supplied by the Architect, a bar-graph Progress Schedule upon which shall be indicated the dates for starting and the dates for completion of all contracts and all divisions of the work in a manner which will coincide with Time For Completion and other project milestone dates.

Schedule "CPM" Requirements:

- .1 General Construction Work Contractor shall include in his / her price the cost of the outsourcing CPM scheduling for entire project and all Subcontractors. Utilize "Primavera-Project Planner - version 3.0 Software by Primavera Systems Inc."
- .2 CPM consultant to be approved by Architect and the Construction Manager. Initial GC Schedule to be provided to the/all Subcontractors within 15 days of Notice to Proceed.

- .3 Monthly updates will be required during construction with each payment application.
- .4 Interim Progress Updates will be required for each Job Progress Meeting.
- .5 Comply with all recommendations and instructions of the Construction Manager for preparation of Project Schedule and associated periodic reports.

3.10.1.2 This schedule will be distributed to the Subcontractors. When approved by the Subcontractor(s) and agreed upon by the Architect, this schedule will become one of the Contract Documents, and shall be altered thereafter only in accordance with duly authorized change orders for extensions of time in accordance with Paragraph 8.3, "Delays and Extensions of Time".

1.17 SUBMITTALS

A. Supplement Paragraph 3.12 "Shop Drawings, Product Data and Samples", as follows:

3.12.11 All fabricated work shall require shop drawings.

3.12.12 The Architect may request samples of any or all materials to be used in the work. When requested, samples shall be submitted promptly.

3.12.13 Shop drawings and other data where possible shall be submitted in the form of reproducible transparency. Catalogs and other printed matter shall be submitted in six (6) copies.

- .1 Additional prints for file, distribution and for coordination of the work with other contractors shall be provided as directed or as required.

3.12.14 Submittal Procedures: The Contractor's failure to follow proper procedures for submittals constitutes grounds for withholding of payments until such time as the Contractor is in compliance. Proper submittal procedures include all of those set forth elsewhere in this specification including the following:

- .1 All submittals shall be separate for each Project. Contractor must indicate on each transmittal the reference to the Architect's Project Number.
- .2 Failure to adhere to deadlines for completion of submittals and record/resubmittals.
- .3 Failure to provide submittals in good order as required by the Contract Documents.
- .4 Failure to provide submittals in relationship to the progress of the work.

- .5 Performance of work or part of the work, without complete approved submittals.

3.12.15 Architect's actions for submittals shall be as follows:

- .1 Submittals returned to the Contractor marked "Approved" allow the Contractor to proceed with the work.
- .2 Submittals returned to the Contractor "Approved As Noted"; "Resubmit For Record":
 - .1 The Contractor may proceed with work, however noted items by the Architect (or any affected portion of the submittal), must be corrected and resubmitted to the Architect's office within ten (10) working days of contractor's receipt of the original submittal. Final acceptance of all work is subject to the Contractor's compliance with requirements of the Contract Documents.
- .3 Submittals returned marked "Returned for Corrections" require the Contractor to resubmit corrected or alternate data in accordance with the corrections indicated.
 - .1 The originals of the reproducible transparencies marked "Returned for Corrections" shall be corrected until approval is obtained. The Contractor shall provide such number of prints of transparencies marked "Approved" as required for the expeditious execution of the work.
- .4 Submittals returned marked "No Action Taken":
 - .1 The Contractor may not proceed with the work. The Architect will not review submittals so marked until the Contractor has properly completed the submittal or corrected the reasons stated thereon.
 - .2 Reasons for "No Action Taken" on a submittal include, but are not limited to the Contractor's failure to:
 - .1 Submit an approved sub-contractor or supplier.
 - .2 Indicate job specific product data such as catalog number, size, type or material on each submittal.
 - .3 Submit complete data, test reports or similar information as required by the Contract Documents.
 - .4 Obtain prior approval for substitution.
 - .5 Submit documents in a legible or orderly fashion.
 - .6 Adhere to any submittal requirements set forth in the Contract Document.
 - .7 Submit only submittals which are called for in the Contract Documents, other submittals will not be reviewed by the Architect.

3.12.16 The following submittal schedule will be mandatory; time is from date of the notice to proceed, in consecutive calendar days and also in accordance with requirements of Specification Section 01800.

All Contracts and Trades: 30 days

3.12.17 Request for Substitutions:

- .1 Substitutions may be considered Only within thirty (30) calendar days after the award of contracts. Subsequent requests will be considered Only when, through no fault of the contractor, none of the specified products are available.
- .2 Submission of request for substitution shall constitute a representation by the Contractor that he/she:
 - .1 Has investigated the proposed product and determined that it is equal to or better than the specified product.
 - .2 Will provide the same variety for the proposed product as for the specified product.
 - .3 Will coordinate the installation and make other changes which may be required for the work to be complete in all respects, including:
 - .1 Re-design.
 - .2 Additional components and capacity required by other work affected by the change.
 - .3 Waives all claims for additional costs and time extensions which subsequently may become apparent and which are caused by the change.
 - .4 Will reimburse the Owner for additional costs for evaluation of the substitution request, re-design if required, and re-approval by authorities having jurisdiction if required.
- .3 Substitutions will not be considered when acceptance would require substantial revision of the contract documents.
- .4 Substitutions will not be considered when they are indicated or implied on shop drawings or product data submittals without separate written request.
- .5 Substitution requests will not be considered when submitted directly by subcontractor or supplier.
- .6 When the proposed substitution is not accepted, Contractor(s) must provide the product (or one of the products, as the case may be) specified.
- .7 The Contractor will be notified in writing within a reasonable time, verbal acceptance will not be valid.
- .8 Acceptable substitutions will be added to the contract documents by appropriate modifications.
- .9 Requests for substitution will be reviewed by the Architect upon receipt of all the information requested in the following paragraph. Failure to provide

the required information shall be cause for rejection of substitution request.

.10 Submittal for Substitutions:

- .1 Submit 3 copies of requests for substitutions, fully identified for product, material or method being replaced by substitution, including related specification section and drawing number(s), and fully documented to show compliance with requirements for substitutions. Submit the following:
 - .1 Complete product data, drawings, and descriptions of materials and methods where applicable. Provide manufacturer's name and address, trade name, and model number of product (if applicable), and name of fabricator or supplier (if applicable).
 - .2 Samples where applicable or requested.
 - .3 Detailed comparison of significant qualities (size, weight, durability, performance and similar characteristics, and including visual effect where applicable) for proposed substitution in comparison with original requirements.
 - .4 List, with addresses, of 3 projects where proposed substitution has been used previously and successfully in a similar application.
 - .5 Coordination information, indicating every required change in every other element of the work which is affected by substitution, extended to include work by Owner and separate contractors.
 - .6 A complete statement of effect substitution will have upon schedule of the work, including its effect (if any) on Contract Time (in comparison with compliance with requirements without approval of proposed substitution).
 - .7 Cost information, including a proposal of net change in Contract Sum (if any).
 - .8 Certification by Contractor to the effect that, in his / her opinion and after his/ her thorough evaluation, proposed substitution will result in total work which is equal to or better than the work originally required by contract documents, in every respect of significance except as specifically stated in certification; and that it will perform adequately in application indicated, regardless of equality and exceptions thereto.
 - .9 Include in certification, Contractor's waiver of rights to additional payment and time which may subsequently be necessitated, by failure of substitution to perform adequately and for required work to make corrections thereof.

3.12.18 Approval of Substitutions:

- .1 Pursuant to N.J.S.A. 18A:18A-15(d), requests for substitutions, for a requested approved equal product, will be reviewed for compliance with the specifications based upon the data provided by the Contractor after the award of the project. Approval or rejection will be based on samples, technical data and other items submitted and will be reviewed once and only once for each such request.

- .2 Change Order Form: Submit requests for substitutions which propose a change in either the Contract Sum or Contract Time by procedures required for change order proposals.

1.18 LONG LEAD ITEMS

- A. Supplement Paragraph 3.12 "Shop Drawings, Product Data and Samples", as follows:

3.12.19 In addition to and concurrent with the submission of the "Schedule of Values" as provided under Paragraph 9.2, Contractor shall submit a list of all materials, equipment or components which are anticipated to require more than four weeks delivery, together with scheduled ordering and delivery time table. This will be discussed and reviewed regularly at the job site meetings. Upon request by the Architect, the Contractors shall be prepared to produce evidence of having placed orders for specific materials, equipment and components.

1.19 PARAGRAPH 3.13 - USE OF SITE

- A. Supplement Paragraph 3.13 "Use of Site", as follows:

3.13.7 Only materials and equipment which are to be used directly in the Work shall be brought to and stored on the Project site by the Contractor. After equipment is no longer required for the Work, it shall be promptly removed from the project site. Protection of construction materials and equipment stored at the project site from weather, theft, damage and all other adversity is solely the responsibility of the Contractor.

3.13.8 The Contractor and any entity for whom the Contractor is responsible shall not erect any sign on the project site without the prior written consent of the Owner.

1.20 CLEANING UP

- A. 3.15.1 In line 2, insert "promptly" before "remove." In the last line, add "in addition, the Contractor shall comply with 3.15.4."
- B. 3.15.2 In the last line, add ",and withheld from any remaining payments."
- C. Supplement Paragraph 3.15 "Cleaning Up", as follows:

3.15.3 The Contractor shall frequently clean up all refuse, rubbish, scrap, cartons, materials and debris caused by construction operations to the end that the site of the Work shall at all times present a neat, orderly and workmanlike appearance. This includes, without exception, the debris created by the work of all trades engaged under the Contract. The Contractor shall remove the debris from the site and premises and dispose of it by legal means at its own expense for collecting, loading, hauling and dumping.

3.15.4 The Prime Contractor shall also perform or have performed the following immediately prior to the Architect's inspection for Substantial Completion:

- .1 Removal of all manufacturer's temporary labels from materials, equipment and fixtures.
- .2 Removal of all stains from glass and mirrors; wash, polish, inside and outside.
- .3 Removal of marks, stains, fingerprints, other soil, dust, dirt, from painted, decorated or stained woodwork, plaster or plasterboard, metal, acoustic tile, and equipment surfaces.
- .4 Removal of spots, plant, soil from resilient flooring.
- .5 Removal of temporary floor protections, clean, wax or otherwise treat as directed, polish all finished floors. Final vacuum all carpet.
- .6 Clean all interior finished surfaces, including doors and window frames and hardware required to have a polished finish, of oil, stains, dust, dirt, paint and the like; leave without fingerprints, blemishes.
- .7 Final site clean-up shall extend beyond the Contract Limit Lines as reasonable required to insure the complete removal of all construction debris from the entire site, including staging areas.

1.21 PARAGRAPH 3.16 - ACCESS TO WORK

A. Supplement Paragraph 3.16 "Access to Work", as follows:

3.16.1 The Contractor shall promptly notify the Architect and Construction Manager and Owner of the presence of hazardous conditions at the site, including the start of hazardous operations or the discovery or exposure of hazardous substances.

1.22 PARAGRAPH 3.18 - INDEMNIFICATION

A. Supplement Paragraph 3.18.1, "Indemnification", as follows:

- .1 Contractor, for itself, its successors and assigns, agrees to indemnify and save Owner, the individual members (past, present and future), its successors, assigns, employees, agent, architects, engineers, and the construction manager, harmless from, and against any and all claims, demands, damages, actions or causes of action together with any and all losses, costs or expenses in connection therewith or related thereto, including, but not limited to, attorney fees and costs of suit, for bodily injuries, sickness, disease, death or property damage arising in or in any manner growing out of the work performed, or to be performed under this Contract. Contractor and its successors and assigns agree to indemnify the Owner, its individual members

(past, present and future), its successors, assigns, employees, agents, architects, engineers and/or construction manager against all fines, penalties or losses incurred for, including, but not limited to, attorney fees and costs of suit, or by reason of the violation by Contractor in the performance of this Contract, or any ordinance, regulation, rule of law of any political subdivision or duly constituted public authority. Without limiting the foregoing, the Contractor, at the request of Owner, its individual members (past and present), its successors, assigns, employees, agents, architects, or engineers and construction manager, agrees to defend at the Contractor's expense any suit or proceeding brought against Owner, its individual members (past, present and future), its successors, assigns, employees, agents, architect, engineers and /or construction manager, due to, or arising out of the work performed by the Contractor.

- .1 Contractor acknowledges and agrees that obligations and duties of the Construction Manager under the Construction Manager's agreement with the Owner are solely for the benefit of the Owner, that notwithstanding any action of the Construction Manager in connection with the Project.
- .2 The Construction Manager shall not in any respect be deemed to have assumed any duties or obligations in favor of the Contractor, and that Construction Manager is acting as an agent to the Owner to the extent provided herein.

1.23 RE-DESIGN

- A. Supplement Article 3 "Contractor", as follows:

3.19 RE-DESIGN

If the Contractor makes, or causes to be made, due to approval of substitute equipment or otherwise, any substantial change in the form, type, system and details of construction from those shown on the Drawings, he/she shall pay for all costs arising from such changes. The Contractor shall pay all Architectural and Engineering fees required to check the adequacy of such changes. Any changes or departures from the construction and details shown shall be made only after written approval from the Architect.

1.24 PARAGRAPH 4.2 - ADMINISTRATION OF THE CONTRACT

- A. Supplement Paragraph 4.2.1, as follows:

- .1 The Owner has designated **New Road Construction Management** as Construction Manager, authorized to act in the Owner's behalf to administer, coordinate, and inspect the work of this Project.
 - .1 Any and all correspondence, coordination, questions and instructions will be directed to and issued by the Construction Manager to all project participants.

- B. 4.2.3 In lines 2 and 3, delete "determine in general" and replace with "endeavor to determine".
- C. 4.2.4 In the 1st line, change "Construction Manager" to "Prime Contractor".
- D. 4.2.10 In this Paragraph, change all references "Construction Manager" to read "Architect" and change "Architect" to read "Construction Manager".
- E. 4.2.13 After "Construction Manager" add words "and the Architect".
- F. Supplement Paragraph 4.2 "Administration of the Contract", as follows:

4.2.22 Reference in the technical provisions of the specifications to standard specifications and test methods, including those of the American Society for Testing and Materials, the American Iron and Steel Institute, the American National Standards Institute, the American Society of Mechanical Engineers, the American Society of Heating, Refrigeration and Air Conditioning Engineers, the Factory Mutual System, the National Fire Protection Association, Federal Specifications, and other similar nationally recognized technical societies and agencies shall refer to the editions and revisions current with the date of the Contract Documents.

"Any claim, dispute or other matter in question between the Contractor and the owner referred to the Architect through the Construction Manager, except those relating to the artistic effects as provided in subparagraph 4.2.20 and those which have been waived by the making or acceptance of final payment as provided in subparagraph 9.10, inclusive, may proceed to litigation, but not before the earlier of (1) the date on which the Architect has rendered a written decision, or (2) the tenth day after the parties have presented their evidence to the Architect or have been given a reasonable opportunity to do so, if the Architect has not rendered a written decision by that date. No such claim may proceed to arbitration."

4.2.23 The Architect's decision, after consultation with Owner and Construction Manager with respect to proposed substitutions of material or equipment specified by trade name, shall be final. The Architect reserves the right, after consultation with Owner and Construction Manager, to waive specifications and to accept a proposed substitution which in his / her opinion is superior to the material or product specified, or to limit the specification to the product specified.

4.2.24 Where three or more trade names or manufacturers' names are specified, the Contractor shall furnish one of the brands specified or may submit an equivalent or better product(s) to be reviewed by the Architect / Engineer for consideration. Where only one brand or name is specified, the Contractor may submit other brands for consideration; however, it shall be the Contractor's responsibility to prove equality.

4.2.25 Approval of substitutions shall not relieve the Contractor of responsibility for adequate fulfillment of all the various parts of the work, nor from specified guarantees and maintenance. Modification of adjacent or connecting work required due to any

substitution approval shall be provided as part of the substitution.

4.2.26 Insofar as practicable, except as otherwise specified or shown, the material or product of one manufacturer shall be used throughout the work for each specified purpose.

4.2.27 Manufactured articles, materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in strict accordance with the manufacturer's directions. Should such directions conflict with the Specifications, the Contractor shall request clarification from the Architect before proceeding.

1.25 SUBCONTRACTORS AND MATERIALMEN

A. Delete subparagraph 5.2.3 and substitute with the following:

5.2.3 The names of all subcontractors and material suppliers, in addition to those required to be listed pursuant to N.J.S.A. 18A:18A-18 (if any), shall be submitted for approval not later than thirty (30) calendar days after the date of the notice to proceed. Subcontractors referenced herein, are in addition to those required to be listed, pursuant to N.J.S.A. 18A:18A-18, if any. The list of proposed subcontractors shall include a description of the materials and equipment each proposes to furnish and install in the work. The description shall be in sufficient detail to allow the Architect to determine general conformance to Contract requirements. Approval of the submittals required under this Article shall not relieve the Contractor from conformance to Contract requirements.

B. Supplement subparagraph 5.2.3, as follows:

- .1 Written confirmation of award of each major subcontract shall be submitted to the Architect, in form subject to his / her approval, within seven (7) calendar days after receipt of Architect's approval of proposed subcontractor list as provided under Paragraph 5.2.3 above.

1.26 PARAGRAPH 5.3 - SUBCONTRACTUAL RELATIONS

A. 5.3 At lines 5, 10, 11, and 13, insert "written" before the word "agreement" or "agreements"

B. Supplement Paragraph 5.3, as follows:

5.3.1 The Contractor shall obligate each subcontractor specifically to comply with the New Jersey Plan of Affirmative Action to avoid discriminatory practice in employment.

5.3.2 The Contractor shall obligate each subcontractor to comply with the applicable prevailing wage schedule of the Department of Labor of the State of New Jersey.

5.3.3 The Contractor agrees that all of its contracts with subcontractors shall have provisions requiring that the subcontractors comply with the provisions of the New Jersey Prevailing Wage Act, N.J.S.A. 34:11-56.25 et seq.

1.27 PARAGRAPH 6.1 - OWNER'S RIGHT TO PERFORM CONSTRUCTION WITH OWN FORCES AND TO AWARD OTHER CONTRACTS

- A. Delete subparagraph 6.1.2 in its entirety and substitute with the following:

6.1.2 The Prime Contractor shall provide for the coordination of the work of his / her own forces and of each of his / her separate subcontractors with work of the other contractors, who shall cooperate therewith as provided in Paragraph 6.2.

1.28 PARAGRAPH 6.2 - MUTUAL RESPONSIBILITY

- A. 6.2.4 In line 1, delete "wrongfully."
B. Supplement Paragraph 6.2.4, as follows:

- .1 Should the Contractor cause damage to the work or property of any separate contractor on the project, the Contractor shall, upon due notice, promptly settle with such other contractor by agreement or otherwise resolve the dispute. If such separate contractor sues or institutes an arbitration proceeding against the Owner on account of any damage alleged to have been so sustained, the Contractor shall defend such proceeding at his / her own expense, and if any judgment against the Owner arises therefrom, the Contractor shall pay or satisfy it and shall reimburse the Owner for any attorney's fees and court costs which the Owner has incurred.

1.29 ARTICLE 7 - CHANGES IN THE WORK

- A. Supplement Paragraph 7.1 "General", as follows:

7.1.2 Add to the end of Subparagraph 7.1.2, "Neither this Contract nor the Work to be performed hereunder can be changed by oral agreement. No course of conduct or dealings between the parties, nor express or implied acceptance of alterations or additions to the Work, and no claims that the Owner has been unjustly enriched by any alteration or addition to the Work, whether there is, in fact, any unjust enrichment to the Work, shall be the basis for any alleged implied agreement by the Owner to the change or any increase in any amounts due under the Contract or a change in any time period provided for in the Contract Documents."

7.1.2.1 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 in regard thereto unless it shall, prior to complying with same and in no event no later than 10 business days from the date such direction or order was given, submit to the Owner for the Owner's approval its change proposal.

B. Supplement Paragraph 7.2 "General", as follows:

7.2.2.2 When submitting its change proposal, the Contractor shall include and set forth in clear and precise detail breakdowns of labor and materials for all trades involved and the estimated impact on the construction schedule. The Contractor shall furnish spread sheets from which the breakdowns were prepared, plus spread sheets, if requested, of any subcontractors.

1.30 ALLOWANCE FOR CHANGE ORDER OVERHEAD AND PROFIT

A. Supplement Paragraph 7.2 "Change Orders" as follows:

7.2.4 For any extra work or portion thereof performed by the Prime Contractor, the cost to the Owner shall include the cost of the extra work plus a maximum allowance of fifteen percent (15%) for overhead and profit.

- .1 For any extra work or portion thereof performed by a Subcontractor(s), the cost to the Owner shall include the cost of the extra work to the Subcontractor plus a maximum allowance of ten percent (10%) for overhead and profit, plus the Prime Contractor's overhead and profit not to exceed five percent (5%) of the Subcontractor's cost.

7.2.5 Change Order shall include all costs, including cost of preparation of the change order, all impact and ripple costs associated with modifications or delays to the work, and all costs associated with modifications to other work.

- .1 The Prime Contractor shall furnish all necessary documentation to support the additional cost, including but not limited to the following:
 - .1 Copy of subcontractor's proposal.
 - .2 Complete breakdown for all costs for labor and material.
 - .3 Complete breakdown of related costs.
 - .4 Other information as may be requested by the Architect / Construction Manager.

7.2.6 The overall cost of the Change Order shall be inclusive and once accepted by the Owner it shall be considered full and final.

7.2.7 No additional time will be granted to the Contractor for minor change orders unless each individual change order totals more than \$100,000.

7.2.8 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 in regard thereto unless it shall, prior to complying with same and in no event no later than 10 business days from the date such direction or order was given, submit to the Owner for the Owner's approval its change proposal.

7.2.9 When submitting its change proposal, the Contractor shall include and set forth in clear and precise detail breakdowns of labor and materials for all trades involved and the estimated impact on the construction schedule. The Contractor shall furnish spread sheets from which the breakdowns were prepared, plus spread sheets, if requested, of any subcontractors.

1.31 PARAGRAPH 8.2 - PROGRESS AND COMPLETION

- A. 8.2.2 Delete "knowingly" in line 1.

1.32 TIME OF COMMENCEMENT

- A. Supplement Paragraph 8.2 "Progress and Completion", as follows:

8.2.4 Work shall commence within ten (10) business days from the date of the Notice to Proceed (NTP).

1.33 EXTENSION OF TIME

- A. Supplement Paragraph 8.3 "Delays and Extensions of Time", as follows:

8.3.4 Where the cause of delay is due to weather conditions, extension of time shall be granted only for unusually severe weather, as determined by reference to historical data. The term "historical data" as used in the preceding sentence shall be construed according to this formula: Average rainfall (or snow or low temperature) for the past five (5) years for the month in question, plus 10 percent. In other words, weather is not deemed to be unusually severe unless it is more than 10 percent worse than the average for that month over the last five years.

8.3.5 If the Contractor is delayed in completion of the work by any act or neglect of the Owner, Architect, or of any other Contractor employed by the Owner, or by changes ordered in the work, or by strikes, lockouts, fire, unusual delay by common carriers, unavoidable casualties, or any cause beyond the Contractor's control or by any cause which the Architect / Construction Manager shall decide to justify the delay, then for all such delays and suspensions the Contractor shall be allowed one day additional to the time limitations herein stated for each and every day of such delay so caused in the completion of the work, the same to be ascertained solely by the Architect / Construction Manager, and a similar allowance of extra time will be made for such delays as the Architect / Construction Manager may find to have been caused by the Owner.

- .1 No such extensions of time shall be made for any one or more delays unless within ten (10) business days after the beginning of such delays a written request for additional time shall be filed with the Architect / Construction Manager. In case of a continuing cause of delay, only one request is necessary.

8.3.6 The Contractor agrees that the Owner can deduct from the Contract Price, any wages paid by the Owner to any Inspector or Inspectors necessarily employed by the Owner for any number of days in excess of the number of days allowed in specifications section 01800, for completion of the work.

1.34 PARAGRAPH 9.2 - SCHEDULE OF VALUES

A. Supplement Paragraph 9.2 "Schedule of Values", as follows:

9.2.1 The Schedule of Values shall include bonds and insurance and shall include copies of invoices and / or cancelled checks from bonding and insurance agents for the additional cost of the coverage for the project being billed.

- .1 The Prime Contractor must provide draft copies of the Schedule of Values, within fifteen (15) business days from Notice to Proceed. Submit two (2) copies to the Architect.
 - .1 Schedule of Values shall include costs for work at the School Project referenced with Architect's Project Number.
 - .2 Schedule of Values shall also include each type of work, materials and installation, in accordance with each specification sections, as listed in the Index and / or as shown on drawings.
 - .3 The Prime Contractor shall include separate line items for the following:
 - .1 Bonds,
 - .2 Insurance,
 - .3 Mobilization,
 - .4 General Conditions,
 - .5 Submittals,
 - .6 As-Built drawings, as per Section 01700,
 - .7 Punch list items,
 - .8 CPM Schedule,
 - .9 Closeout Documents,
 - .10 Allowances.

1.35 STORED MATERIALS

A. Supplement Paragraph 9.3.2, as follows:

- .1 To encourage early purchase, Owner will pay for stored materials and equipment. The following procedures must be followed in order to obtain payment.
 - .1 A certificate of insurance naming the Owner as loss beneficiary for the full dollar amount representing the materials stored.
 - .2 A consent of surety in the amount being requisitioned, said surety being the bonding company of the prime contractor.
 - .3 Materials to be stored in warehouse must be inspected by the Construction Manager and Contractor will not receive extra compensation for storage costs.

- .4 Any time and traveling expenses for the Construction Manager to visit and inspect equipment stored will be borne by the contractor making the off-site storage request.
- .5 Payment invoices for materials stored off site shall be so noted.
- .6 After the receipt of the above, the Construction Manager will endorse same and forward to the Owner for their approval.
- .7 Payment invoices not following the above format will be rejected in total.
- .8 There will be no storage space available in existing buildings. Space in new building may be used for storage only if approved in writing by Construction Manager and all contractors having work in the area.
- .9 The contractor will be paid for stored materials no more than the actual or replacement value of the materials. The Contractor will furnish vendors price lists, priced inventories or other documentation to support claims for payment of materials stored on or off site.

1.36 PARAGRAPH 9.3 - APPLICATIONS FOR PAYMENT

- A. Supplement Paragraph 9.3 "Applications for Payment", as follows:

9.3.4 Applications for payment which include billing for bonds and insurance shall enclose copies of invoices or cancelled checks from bonding and insurance agents for the additional cost of the coverage for the project being billed.

1.37 PARAGRAPH 9.5 - DECISIONS TO WITHHOLD CERTIFICATION

- A. 9.5.1.6 In the first line, delete "and" and substitute "or".

- B. 9.5.1.7 Delete "repeated".

- C. Supplement Paragraph 9.5.1, as follows:

- .8 Deliberate delay in the submission for approval of names of subcontractors, materialmen, sources of supply, shop drawings and samples.
- .9 Failure to maintain the site in a safe and satisfactory condition in accordance with good construction practices.
- .10 Failure of mechanical trades or electrical trades subcontractors to comply with mandatory requirements for maintaining record drawings. The Contractor shall be required to check record drawings each month. Written confirmation that the record drawings are up-to-date shall be required by the Architect before approval of the Contractor's monthly payment requisition will be considered.

1.38 PARAGRAPH 9.6 - PROGRESS PAYMENTS

- A. Supplement Paragraph 9.6 "Progress Payments", as follows:

9.6.9 In making progress payments, on Contracts totaling more than \$100,000 dollars there shall be retained two percent (2%) of the approved amount when the outstanding balance of the contract exceeds \$500,000, and five percent (5%) of the amount due on each partial payment when the outstanding balance of the contract is \$500,000 or less, until final completion and acceptance of all work covered by the Contract, including the completion of all corrective or punch list items.

9.6.10 In making progress payments, on Contracts totaling less than \$100,000 dollars there shall be retained ten percent (10%) of the approved amount until seventy-five percent (75%) of the Contract Price has been paid at which time the retainage for that seventy-five percent (75%) will be reduced to five percent (5%) if in the judgment of the Architect the work is progressing satisfactorily, and on progress payments thereafter there shall be retained ten percent (10%) of the approved amounts until final completion and acceptance of all work covered by the Contract, including the completion of all corrective or punch list items. The Contractor will be required to provide a Consent of Surety to Reduction in or Partial Release of Retainage (AIA Document G707A), before reduction in retainage will be considered.

9.6.11 Final payment will be made provided the work has been completed, the contract fully performed and a final certificate for payment has been reviewed and approved by Architect and Construction Manager.

1.39 PARAGRAPH 9.7 - FAILURE OF PAYMENT

- A. In the fourth / fifth lines, delete "or awarded by binding dispute resolution".

1.40 PARAGRAPH 9.8 - SUBSTANTIAL COMPLETION

- A. 9.8.1 Modify as follows:

Add at the end of the Subparagraph: "The Work will not be considered substantially complete until all project systems included in the Work are operational as designed and scheduled, all designated or required inspections, certifications, permits, approvals, licenses and other documents from any governmental authority having jurisdiction thereof necessary for the beneficial use and occupancy Project are received, designated instruction of Owner's personnel has been completed, and all final finished within the Contract are in place. In general, the only remaining Work shall be minor in nature so that the Owner can occupy the building on that date and the completion of the Work by the Contractor would not materially interfere or hamper the Owner's (or those claiming by, through or under the Owner) normal operations. Contractor recognizes that normal operations require the use and occupancy of the Work by students and faculty without interruption and that any punchlist or corrective work shall be done at times when the Work is not so occupied. As a further condition of substantial completion acceptance, the Contractor shall certify that all remaining Work will be completed within thirty (30) consecutive calendar days or as agreed upon following the date of substantial completion.

B. Supplement Paragraph 9.8.2, as follows:

- .1 The Architect's Certificate of Substantial Completion shall be subject to the Owner's final approval.

C. Supplement Paragraph 9.8.3, as follows:

- .1 The Contractor shall complete all items attached to the "Certificate of Substantial Completion" within thirty (30) calendar days of issuance of same. If not completed, the Owner may proceed to carry out the work in accordance with Paragraph 2.4 of the General Conditions. The Owner will suffer financial loss if the project is not substantially complete on the date set forth in the Contract Documents. The Contractor (and the Contractor's Surety) shall be liable for and pay to the Owner the sums hereinafter stipulated and fixed, agreed as liquidated damages for each calendar day of delay until the work is substantially complete.

1.41 PARAGRAPH 9.10 - FINAL COMPLETION AND FINAL PAYMENT

A. 9.10.1 Add the following at the end of the Paragraph:

All warranties and guarantees required pursuant to the Contract Documents shall be assembled and delivered by the Contractor to the Owner as part of the final application for payment. The final Certificate for Payment will not be issued by the Architect until all warranties and guaranties have been received and accepted by the Owner.

B. Supplement Paragraph 9.10.1, as follows:

- .1 The Architect's Certificate of Final Completion shall be subject to the Owner's final approval.

1.42 GENERAL CONTRACTOR AS OWNER'S SAFETY REPRESENTATIVE

A. Supplement Paragraph 10.1 "Safety Precautions and Programs", as follows:

10.1.1 The General Contractor shall provide all necessary temporary enclosures, guard rails, barricades etc. to adequately protect all workmen and public from possible injury.

10.1.2 The General Contractor shall be responsible for the general safeguarding of the Project, for gaining compliance with the safety requirements from all other contractors and parties engaged in operations at the site, and shall act as the Owner's representative with regard to all safety inspections required and shall perform all necessary functions for this purpose. The Contractor shall designate a "Site Safety Officer".

1.43 PARAGRAPH 10.2 - SAFETY OF PERSONS AND PROPERTY

A. Supplement Paragraph 10.2.8, as follows:

- .1 The Contractor shall promptly report in writing to the Owner, Architect and Construction Manager all accidents arising out of or in connection with the Work which caused death, personal injury or property damage, giving full details and statements of any witnesses. In addition, if death, serious personal injury or serious property damage is caused, the accident shall be reported immediately by telephone or messenger to the Owner, Architect and Construction Manager.

B. Supplement Paragraph 10.2 "Safety of Persons and Property", as follows:

10.2.9 Contractor is required to follow and enforce the work rules set forth below. Failure to comply with or enforce any of these rules will be grounds for suspension and / or termination of the Contractor:

- .1 No use of alcoholic beverages prior to or during working hours. Anyone found impaired will be escorted from the Project site.
- .2 No use of illegal drugs or prescription medications which could induce drowsiness or otherwise impair perception or performance. Use of illegal drugs may result in prosecution to the fullest extent of the law. Any warning associated with use of prescription drugs must be complied with, particularly warning against operation of machinery and equipment.
- .3 No horseplay or rough-housing will be allowed.
- .4 No sexual, racial, ethnic harassment, or similar conduct will be tolerated.
- .5 All employees shall use proper sanitation habits, including use of toilet facilities and garbage cans.
- .6 All employees shall dress in clothing appropriate for the work they are to perform. All personnel are to wear hardhats, safety shoes, glasses, gloves, masks or respirators, noise protection devices, and other protective clothing and equipment as required by OSHA standards.
- .7 All equipment is to be properly stored and / or secured at the end of the work day if it is to remain idle for greater than one hour.
- .8 All personnel are to be made aware of the availability of Safety Data Sheets (SDS) for materials used at the Project site. This information is available from the Contractor using the product. The Contractor shall maintain a copy of all SDS forms at the construction site office for all personnel to review.

1.44 LOST OR STOLEN ITEMS

- A. Supplement Article 10 "Protection of Persons and Property", as follows:

10.5 Lost or Stolen Materials

The Contractor shall protect all materials and equipment for which he/she is responsible, which is stored at the Project Site for incorporation in the work, or which has been incorporated into the work. He/She shall replace all such materials and equipment which may be lost, stolen or damaged at his/her expense, whether or not such materials or equipment have been entirely or partially paid for by the Owner.

1.45 INSURANCE

- A. Supplement Paragraph 11.1.1, as follows:

- .1 Certificate of Insurance shall be submitted within ten (10) business days upon notification of award of Contract.

- B. Supplement Paragraph 11.1 "Contractor's Liability Insurance", as follows:

11.1.5 Contractor's liability insurance must be maintained until the final Certificate of Payment is issued pursuant to Paragraph 9.10.1 and Completed Operations Insurance is in effect.

11.1.6 Insurance specified to be provided by the Contractor under Paragraph 11.1 shall be on an occurrence basis, as follows:

- .1 The Contractor shall take out and maintain during the life of this Contract commercial general liability insurance, covering any and all bodily injury, including accidental death, as well as claims for property damage arising out of or in connection with the Work performed hereunder, whether such Work be performed by the Contractor or by any subcontractor or by anyone directly or indirectly employed by either of them.
- .1 The policy shall name the Owner, the Architect, the Construction Manager and their consultants and agents and employees as additional insureds.
- .2 The Contractor shall take out and maintain comprehensive automobile liability insurance, including coverage for all owned, non-owned and hired vehicles, covering bodily injury and property damage.
- .1 The policy shall name the Owner, the Architect, the Construction Manager and their consultants and agents and employees as additional insureds.
- .3 Contractual liability insurance as applicable to the Contractor's obligations under Paragraph 3.18 of the AIA General Conditions and A132 Exhibit A Insurance and Bonds.

- .4 Workers' Compensation Insurance of not less than statutory limits.
- .5 Completed Operations Insurance written to the limits specified for liability insurance in AIA 132 - 2019, Exhibit A, Article A.3 - Contractor's insurance and Bonds. Coverage shall be required from the date of the start of Beneficial Occupancy until one year after the issuance date of Final Certificate for Payment.
- .6 Certificates of insurance must be submitted on the ACORD Form, Certificate of Insurance.
- .7 The Contractor shall either:
 - .1 require each of his/her subcontractors to procure and to maintain during the life of their subcontracts, Subcontractor's Public Liability and Property Damage, of the type and in the same amounts as specified in the preceding paragraph, or
 - .2 insure the activities of their subcontractors under their respective policies.

1.46 PARAGRAPH 11.4 - LOSS OF USE, BUSINESS INTERRUPTION, AND DELAY IN COMPLETION INSURANCE

- A. 11.4 Delete the second sentence in its entirety.

1.47 PARAGRAPH 11.5 - ADJUSTMENT AND SETTLEMENT OF INSURED LOSS

- B. Delete Paragraph 11.5.1 and substitute the following:

11.5.1 Owner as trustee shall, upon the occurrence of an insured loss, give bond for the proper performance of the Owner's duties. The Owner shall deposit in a separate account, any money so received, and shall distribute it in accordance with such agreement as the parties in interest may reach. If after such loss no other special agreement is made, replacement of damaged work shall be covered by an appropriate change order."

- C. Delete Paragraph 11.5.2 and substitute the following:

11.5.2 The Owner, as trustee, shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within five (5) business days after the occurrence of loss to the Owner's exercise of this power.

1.48 PARAGRAPH 12.1 - UNCOVERING OF WORK

- A. 12.1.1 Add "or Contract Sum" at the end of the Paragraph.

1.49 PARAGRAPH 12.2 - CORRECTION OF WORK

- A. 12.2.1 Add the following at the end of the 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 each such item to be restored to "like new condition" at no expense to the Owner.

- B. 12.2.2.1 Add the following to the end of the Paragraph:

"If payments then or thereafter due to the Contractor are not sufficient to cover such amount, the Contractor, or his / her Surety, shall pay the difference to the Owner. The appropriate reduction shall be an amount equal to the entire cost of replacing the work performed with work originally specified and intended."

1.50 PARAGRAPH 12.3 - ACCEPTANCE OF NONCONFORMING WORK

- A. 12.3.1: Add the following sentence to the end of the Paragraph:

"This Subparagraph relates exclusively to the knowing acceptance of nonconforming work by the Owner. It has no applicability to work accepted by the Owner, Architect or Construction Manager without the knowledge that such work fails to conform to the requirements of the Contract Documents."

1.51 PARAGRAPH 13.1 - GOVERNING LAW

- A. In the first line, delete everything after "located".
- B. Supplement Paragraph 13.1 "Governing Law", as follows:

13.1.1 Contractor must comply with codes, ordinances, rules, regulations, orders and other legal requirements of public authorities, utility companies, National Board of Fire Underwriters, and others which bear on performance of Work. Deliver to the Owner certificates and other required legal evidence and proof of compliance with the above.

1.52 PARAGRAPH 13.4 - TESTS AND INSPECTIONS

- A. 13.4.1 Delete the last two (2) sentences in their entirety.
- B. 13.4.2 In lines 5 and 6, add "and Owner" after the word "Architect".
- C. 13.4.3 Add the following at the end of the Paragraph:

The Contractor also agrees that the cost of testing services required for the convenience of the Contractor in his / her scheduling and performance of the Work and the cost of testing services related to remedial operations performed to correct deficiencies in the Work shall be borne by the Contractor.

1.53 PARAGRAPH 14.1 - TERMINATION BY THE CONTRACTOR

- A. Delete Paragraph 14.1.2 in its entirety and substitute the following:

14.1.2 If one of the above reasons exist, the Contractor may, upon fourteen (14) calendar days written notice to the Owner, Construction Manager and Architect, terminate the Contract, unless this reason is cured prior to the expiration of the notice, and recover from the Owner payment of work properly executed in accordance with the Contract Documents (the basis for such payment shall be as provided in the Contract) and for payment for cost directly related to work thereafter performed by Contractor in terminating such work, including reasonable demobilization and cancellation charges provided said work is authorized in advance by Construction Manager, Architect and Owner.

1.54 PARAGRAPH 14.2 - TERMINATION BY THE OWNER FOR CAUSE

- A. Delete Paragraph 14.2 in its entirety and substitute the following:

14.2 TERMINATION OF CONTRACT

14.2.1 Owner May Suspend Work:

- .1 Owner may, at any time and without cause, suspend the Work or any portion thereof for a period of not more than ninety (90) calendar days by notice in writing to Contractor and Architect which shall fix the date on which Work shall be resumed. Contractor shall resume the Work on the date so fixed. Contractor will be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to any suspension if he/she makes a claim therefor as provided in Articles 11 and 12.

14.2.2 Owner May Terminate:

- .1 Upon the occurrence of any one or more of the following events:
- .2 If Contractor is adjudged a bankrupt or insolvent, "subject to the provision of the National Bankruptcy Act and specifically 11 U.S.C., Paragraph 365.
- .3 If Contractor makes a general assignment for the benefit of creditors.
- .4 If a trustee or receiver is appointed for Contractor or for any of Contractor's property.
- .5 If Contractor files a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or similar laws.
- .6 If Contractor repeatedly fails to supply sufficient skilled workmen or suitable materials or equipment.

- .7 If Contractor repeatedly fails to make prompt payments to Subcontractors for labor, materials or equipment.
- .8 If Contractor disregards laws, ordinances, rules regulations or orders of any public body having jurisdiction.
- .9 If Contractor disregards the authority of Architect.
- .10 If Contractor otherwise violates in any substantial way any provisions of the Contract Documents, Owner may after giving Contractor and his / her Surety seven days' written notice, terminate the services of Contractor, exclude Contractor from the site and take possession of the Work and of all Contractor's tools, appliances, construction equipment and machinery at the site and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion), incorporate in the Work all materials and equipment stored at the site or for which Owner has paid Contractor but which are stored elsewhere, and finish the Work as Owner may deem expedient. In such case Contractor shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds the direct and indirect costs of completing the Work, including compensation for additional professional services, such excess shall be paid to Contractor. If such costs exceed such unpaid balance, Contractor shall pay the difference to Owner. Such costs incurred by Owner shall be verified by Architect and incorporated in a Change Order, but in finishing the Work, Owner shall not be required to obtain the lowest figure for the Work performed.
- .11 Where Contractor's services have been so terminated by Owner, the termination shall not affect any rights of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.
- .12 Upon seven days' written notice to Contractor and Architect, Owner may without cause and without prejudice to any other right or remedy, elect to abandon the Work and terminate the Agreement. In such case, Contractor shall be paid for all Work executed and any expense sustained plus reasonable termination expenses.

1.55 PARAGRAPH 15.1 - CLAIMS

- A. Supplement Paragraph 15.1.5 as follows:

After the first sentence, add: "Said notice shall itemize all claims and shall contain sufficient detail and substantiating data to permit evaluation of same by Owner, Architect and Construction Manager. No such claim shall be valid unless so made."

At the end of the Subparagraph, add: "Any change in the Contract Sum resulting from such claim shall be authorized only by Change Order or Construction Change Directive, as the case may be."

1.56 RESOLUTION OF CLAIMS AND DISPUTES

- A. Delete the last sentence in Paragraph 15.2.5.
- B. Delete Paragraph 15.2.6 in its entirety.
- C. Delete Paragraph 15.2.6.1 in its entirety.

1.57 PARAGRAPH 15.3 - MEDIATION

- A. Delete Paragraph 15.3 "Mediation", in its entirety.

1.58 PARAGRAPH 15.4 - ARBITRATION

- A. Delete Paragraph 15.4 "Arbitration" in its entirety and substitute the following:

15.4 - LITIGATION

15.4.1 The Owner and Contractor agree that all claims, disputes and other matters in question between the parties arising out of or relating to the Project or this contract or breaches thereof, shall be heard in a Court of competent jurisdiction venued in the project's County, New Jersey.

END OF SECTION 00800

SECTION 00850 - CONTRACT DRAWINGS

- 1.1 All Drawings listed on drawing No. G000, "Cover Sheet," dated December 1, 2023, unless otherwise revised or amended (via Addenda, Bulletin, etc.), shall form a part of the Contract Documents.

END OF SECTION 00850

SECTION 00860 - LAWS GOVERNING PUBLIC WORK

PART 1 - GENERAL

1.1 GENERAL CONDITIONS

- A. The paragraphs below supplement the General Conditions. Attention is called, but not limited, to the following Laws Governing Public Work.

1.2 STATE SALES AND USE TAX EXEMPTION

- A. Supplement paragraph 3.6 "Taxes" as follows:

3.6.1 As a New Jersey governmental entity, the Board of Education is exempt from the requirements under New Jersey state sales and use tax (N.J.S.A. 54:32B-1 et seq.), and does not pay any sales or use taxes. Bidders should note that they are expected to comply with the provisions of said statute and the rules and regulations promulgated thereto to qualify them for examinations and reference to any and all labor, services, materials and supplies furnished to the Board of Education. Contractors may not use the Board's tax identification number to purchase supplies, materials, service or equipment, for this project.

.1 A contractor may qualify for a New Jersey Sales Tax Exemption on the purchase of materials, supplies and services when these purchases are used exclusively to fulfill the terms and conditions of the contract with the Board of Education. All contractors are referred to New Jersey Division of Taxation-Tax Bulletin S&U-3 and in particular, Contractor's Exempt Purchase Certificate (Form ST-13). Again, contractors are not permitted to use the Board's tax identification number to purchase supplies, materials, services of equipment.

1.3 MUNICIPAL REQUIREMENTS

- A. Supplement paragraph 3.7 "Permits, Fees, Notices and Compliance with Laws" as follows:

3.7.1.1 N.J.S.A. 52:27D-130, provides that local Municipal Construction Enforcing Agency issue required construction permit, perform required inspections during construction, and issue required certificate of occupancy upon completion of Project.

3.7.1.2 N.J.S.A. 52:27D-126C, "No county, municipality, or any agency or instrumentality thereof shall be required to pay any municipal fee or charge in order to secure a construction permit for the erection or alteration of any public building or part thereof from the municipality wherein the building may be located. No erection or alteration of any public building or part thereof by a county, municipality, school board, or any agency or instrumentality thereof shall be subject to any fee, including any surcharge or training fee, imposed by any department or agency of State government pursuant to any law, or rule or regulation, except that nothing

contained in this section shall be interpreted as preventing the imposition of a fee upon a board of education by either the Department of Education for plan review or by a municipality for the review of plans submitted to it pursuant to the provisions of section 12 of P.L.1975, c.217 (C.52:27D-130).

3.7.1.3 N.J.S.A. 40:55D-8(d), A municipality shall exempt a board of education from the payment of any fee related to land use, and site development.

3.7.1.4 N.J.S.A. § 52:27d-126e (amended effective July 21, 2017) - Waiving of Construction Permit, Enforcing Agency Fees for Certain Construction Projects To Benefit Disabled Persons.

1. a. Notwithstanding the provisions of the "State Uniform Construction Code Act," P.L. 1975, c.217 (C.52:27D-1 19 et seq.), or any rules, regulations or standards adopted pursuant thereto, to the contrary, the governing body of any municipality which has appointed an enforcing agency pursuant to the provisions of section 8 of P.L.1975, c.217 (C.52:27D-126) may, by ordinance, provide that no person shall be charged a construction permit surcharge fee or enforcing agency fee for any construction, reconstruction, alteration or improvement designed and undertaken solely to promote accessibility by disabled persons to an existing public or private structure or any of the facilities contained therein.

The ordinance may further provide that a disabled person, or a parent or sibling of a disabled person, shall not be required to pay any municipal fee or charge in order to secure a construction permit for any construction, reconstruction, alteration or improvement which promotes accessibility to his own living unit.

For the purposes of this subsection, "disabled person" means a person who has the total and permanent inability to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment, including blindness, and shall include, but not be limited to, any resident of this State who is disabled pursuant to the federal Social Security Act (42 U.S.C.416), or the federal Railroad Retirement Act of 1974 (45 U.S.C.231 et seq.), or is rated as having a 60% disability or higher pursuant to any federal law administered by the United States Veterans' Act. For purposes of this paragraph "blindness" means central visual acuity of 20/200 or less in the better eye with the use of a correcting lens. An eye which is accompanied by a limitation in the fields of vision such that the widest diameter of the visual field subtends an angle no greater than 20 degrees shall be considered as having a central visual acuity of 20/200 or less.

b. (1) Notwithstanding the provisions of the "State Uniform Construction Code Act," P.L. 1975, c.217 (C.52:27D-119 et seq.) or any rules, regulations or standards adopted pursuant thereto to the contrary, the governing body of any municipality which has appointed an enforcing agency pursuant to the provisions of section 8 of P.L. 1975, c.217 (C.52:27D-126) shall not charge a

person who has a service-connected disability declared by the United States Department of Veterans Affairs, or its successor, to be a total or 100% permanent disability that would entitle them to a property tax exemption under section 1 of P.L.1948, c.259 (C.54:4-3.30) or a spouse, parent sibling, or guardian of the disabled veteran, a construction permit surcharge fee or enforcing agency fee for any construction, reconstruction, alteration, or improvement designed and undertaken solely to promote accessibility by the disabled veteran to his own living unit.

(2) A municipality that has granted an exemption from a construction permit surcharge fee or enforcing agency fee pursuant to paragraph (1) of this subsection may apply to the Department of Community Affairs, in accordance with rules and regulations promulgated by the Commissioner of Community Affairs for this purpose, for reimbursement of those exempt fees.

- B. Utility Connection Fees: Contractors shall pay utility connection fees and shall be reimbursed by Owner upon presentation of receipt for same.
- C. Certificates of Occupancy: Contractors shall be responsible for obtaining of all Certificates of Occupancy.

1.4 TIME INCLUDING COMPLETION

- A. Supplement Article 8 "Time" as follows:

8.1.7 The term "completed" in N.J.S.A. 18A:18A-19 shall mean substantial completion as defined in this Article 8.

8.1.8 The term "Working Days" as used to compute the time of completion shall mean Mondays through Fridays, exclusive of the twelve major yearly holidays, as listed on the official State of New Jersey website, <https://www.state.nj.us/nj/about/facts/holidays/>

- B. Supplement Article 8.3 "Delays and Extension of Time" as follows:

8.3.4 The Contractor agrees that the Owner can deduct from the Contract Price, any wages paid by the Owner to any Inspector or Inspectors necessarily employed by the Owner for any number of days in excess of the number of days allowed in the specifications for completion of the work.

1.5 NONDISCRIMINATION AND MISCELLANEOUS LABOR PROVISIONS

- A. Attention is called to the following which supplement paragraph 13.1 "Antidiscrimination Provisions" as follows:

13.1.3 N.J.S.A. 10:2-1, Antidiscrimination provisions. Every contract for or on behalf

of the State or any county or municipality or other political subdivision of the State, or any agency of or authority created by any of the foregoing, for the construction, alteration or repair of any public building or public work or for the acquisition of materials, equipment, supplies or services shall contain provisions by which the contractor agrees that:

- a. In the hiring of persons for the performance of work under this contract or any subcontract hereunder, or for the procurement, manufacture, assembling or furnishing of any such materials, equipment, supplies or services to be acquired under this contract, no contractor, nor any person acting on behalf of such contractor or subcontractor, shall, by reason of race, creed, color, national origin, ancestry, marital status, gender identity or expression, affectional or sexual orientation or sex, discriminate against any person who is qualified and available to perform the work to which the employment relates;
- b. No contractor, subcontractor, nor any person on his behalf shall, in any manner, discriminate against or intimidate any employee engaged in the performance of work under this contract or any subcontract hereunder, or engaged in the procurement, manufacture, assembling or furnishing of any such materials, equipment, supplies or services to be acquired under such contract, on account of race, creed, color, national origin, ancestry, marital status, gender identity or expression, affectional or sexual orientation or sex;
- c. There may be deducted from the amount payable to the contractor by the contracting public agency, under this contract, a penalty of \$50.00 for each person for each calendar day during which such person is discriminated against or intimidated in violation of the provisions of the contract; and
- d. This contract may be canceled or terminated by the contracting public agency, and all money due or to become due hereunder may be forfeited, for any violation of this section of the contract occurring after notice to the contractor from the contracting public agency of any prior violation of this section of the contract.

No provision in this section shall be construed to prevent a board of education from designating that a contract, subcontract or other means of procurement of goods, services, equipment or construction shall be awarded to a small business enterprise, minority business enterprise or a women's business enterprise pursuant to P.L.1985, c.490 (C.18A:18A-51 et seq.).

During the performance of this contract, the contractor agrees to Mandatory Equal Employment Opportunity Language, as shown Exhibit B.

13.1.3 N.J.S.A. 34:11-56.25 et seq., in accordance with which each Contractor and subcontractor is required to do the following:

- .1 Pay to all workmen engaged in the performance of services directly upon the work not less than the prevailing rate of wages. In the event that it is found that any workman employed by the contractor or any subcontractor has been paid a rate of wage less than the prevailing wage required to be paid by such

contract, the Owner may terminate the contractor's right to proceed with the work or such part of the work as to which there has been a failure to pay required wages and to prosecute the work to completion or otherwise.

- .1 Prime Contractor shall post the New Jersey Department of Labor and Workforce Development - Prevailing Wage Rate Determination in accordance with N.J.S.A. 34:11-56.25 et seq., which establish and enforce a prevailing wage level for workers engaged in the project, based on the effective date where the contract(s) is/are to be awarded. This document is to be posted in a prominent and easily accessible place at the site of the work and at such a place or places as are used to pay workers their wages. The prevailing wage rates shall be incorporated into the bid specification manual as a reference and part of the contract. A copy of the project's prevailing wage rates, as applicable to this Project, are on file at the Architect's office.
- .2 Before final payment, furnish Owner with an Affidavit stating that all workmen have been paid in accordance with the New Jersey Prevailing Wage Act.
- .3 Keep an accurate record showing the name, craft or trade and actual hourly rate of wages paid to each workman employed by him in connection with his work. Preserve records for 2 years from date of payment.
- .4 Upon request, the Contractor and each subcontractor shall file written statements certifying to the amounts then due and owing to any and all workmen for wages due on account of the work. The statement shall set forth the names of the persons whose wages are unpaid and the amount due to each. These statements shall be verified by the oaths of the Contractor or subcontractor, as the case may be.

1.6 AMERICANS WITH DISABILITIES ACT; FACILITIES FOR PERSONS WITH DISABILITIES

- A. The contractor must comply with all provisions of Title II of the Americans with Disabilities Act (ADA), P.L. 101-336, in accordance with 42 U.S.C. S121.01 et seq. The Board of Education further recognizes that all specifications for the construction, remodeling or renovation of any public building shall provide facilities for persons with disabilities. Reference: N.J.S.A. 18A:18A-17.
- B. It is further recommended that bidders are required to read the Americans with Disabilities language form that is included in these specifications. The form shall be signed to show agreement with the provisions of Title II of the Act and the provisions are to be made a part of the contract. The signed form shall be submitted with the bid proposal. The contractor is obligated to comply with the Act and to hold the owner harmless.

1.7 AMERICAN GOODS AND PRODUCTS

- A. Supplement Paragraph 13.1 "Governing Law" as follows:

13.1.5 N.J.S.A. 18A:18A-20 et seq., American goods and products to be used where possible. Each board of education shall provide as a condition of the Contract that only manufactured and farm products of the United States, where ever available, be used in the work.

1.8 PAYMENTS TO LISTED SUBCONTRACTORS UNDER SINGLE OVERALL CONTRACT

- A. Supplement Paragraph 13.1 "Governing Law" as follows:

13.1.6 N.J.S.A. 18A:18A-18, providing that under a single overall contract, all payment required to be made for work and materials supplied by the various subcontractors shall, upon certification by the Prime Contractor of the amount due to the subcontractor(s), be paid directly to the subcontractor(s).

1.9 POLITICAL CONTRIBUTION DISCLOSURE FORM

- A. In accordance with N.J.S.A. 19:44A-20.1(3) "pay to play," Contracts exceeding \$17,500.00 are not to be entered into with business entities unless certain disclosures are made about political contributions.

1. In accordance with N.J.S.A. 19:44A-20.26 Contractor shall be required to disclose political contributions made, if any, ten (10) days before entering into Contract in accordance with C.271 form. All bidders must complete this form and submit with Bid Proposal Forms.

- B. In accordance with N.J.A.C. 6A:23A-6.3, No district board of education shall vote upon or award any contract in the amount of \$17,500 or greater to any business entity that has made a contribution reportable by the recipient under P.L. 1973, c. 83 (N.J.S.A. 19:44A-1 et seq.), to a member of the district board of education during the preceding one-year period.

1. Contributions reportable by the recipient under P.L. 1973, c. 83 (N.J.S.A. 19:44A-1 et seq.), to any member of the district board of education from any business entity doing business with the school district shall be prohibited during the term of a contract.

2. The disclosure requirement set forth in section 2 of P.L. 2005, c. 271 (N.J.S.A. 19:44A-20.26) also shall apply when the contract is required by law to be publicly advertised for bids.

1.10 DISCLOSURE OF CONTRIBUTIONS TO NEW JERSEY ELECTION LAW ENFORCEMENT COMMISSION (ELEC)

- A. N.J.S.A. 19:44A-20.27 establishes a new disclosure requirement for business entities. It requires that, when a business entity has received in any calendar year \$50,000 or more in public contracts with public entities, it must file an annual report with the Election Law Enforcement Commission (ELEC). The report shall disclose any contribution of money or any other thing of value, including an in-kind contribution, or pledge to make a contribution of any kind:
 - 1. To a candidate for or the holder of any public office having ultimate responsibility for the awarding of public contracts, or,
 - 2. To a political party committee, legislative leadership committee, political committee or continuing political committee.
- B. The report will include all reportable contributions made by the business entity during the 12 months prior to the reporting deadline. ELEC will be promulgating a form and procedures for filing commencing in January 2007. ELEC can also impose fines for failure to comply with this requirement.
- C. While the local unit has no role in this process, it is recommended that all bid or proposal specifications and contracts should include language notifying business entities of their potential obligation under the law. Such language could read as follows:
 - 1. Starting in January 2007, all business entities are advised of their responsibility to file an annual disclosure statement of political contributions with the New Jersey Election Law Enforcement Commission (ELEC) pursuant to N.J.S.A. 19:44A-20.27 if they receive contracts in excess of \$50,000 from public entities in a calendar year. Business entities are responsible for determining if filing is necessary. Additional information on this requirement is available from ELEC at 888-313-3532 or at www.elec.state.nj.us."

1.11 PROMPT PAYMENT ACT

- A. The Owner will issue timely payments to Contractors in accordance with the requirements of the Prompt Payment Act, N.J.S.A. 2A:30A-1, et seq. The bidders are hereby notified that the Owner as a public entity requires all payments to be approved at scheduled public board meetings. The vote on authorization for payments will be made at the first public meeting of the Board following the Board's receipt of the architect's authorization for payment and paid during the subsequent payment cycle.

1.12 NEW JERSEY DEPARTMENT OF TREASURY

A. Disclosure of Investment Activities in Iran

1. Pursuant to Public Law 2012, c.25 (N.J.S.A. 52:32-55, et. seq.), any person or entity (“bidder”) that submits a bid or proposal or otherwise enters into or renews a contract with a board of education is required to disclose if it is engaged in investment activities in Iran. In order to comply with the provisions of P.L. 2012, c. 25, all bidders are required to complete a certification that attests that neither the bidder, nor any of its parents, subsidiaries and/or affiliates is listed on the list developed by the New Jersey Department of Treasury’s List of Persons or Entities Engaging in Prohibited Investment Activities in Iran, pursuant to section 3 of P.L.2012, c. 25 (N.J.S.A. 52:32-57). The Department of Treasury List is available at <http://www.state.nj.us/treasury/purchase/pdf/Chapter25List.pdf>. A copy of the list is attached for informational purposes. All bidders are advised to refer to the most current version of the list to ensure compliance with P.L. 2012, c. 25.
2. If the bidder is unable to certify compliance with the law, the bidder shall provide a detailed and precise description of such investment activities as described in N.J.S.A. 52:32-56(f).
3. If the board determines that a person or entity submits a false certification concerning its engagement in investment activities in Iran under section 4 of P.L.2012, c.25 (C.52:32-58), the board shall report to the New Jersey Attorney General the name of that person or entity. The Attorney General shall determine whether to bring a civil action against the person or entity to collect the penalty prescribed in paragraph (1) of subsection a. of section 5 of P.L.2012, c.25 (C.52:32-59).

B. C.18A:18A-49.4 Civil action brought on behalf of Board of Education.

1. 8.a. A Board of Education as defined in and subject to the provisions of the “Public School Contracts Law, “P.L. 1977, c.114 (N.J.S. 18A:18A-1 et seq.), shall implement and comply with the provisions of P.L.2012, c.25 (C.52:32-55 et al.), except that the Board shall rely on the list developed by the State Department of the Treasury pursuant to section 3 of P.L.2012, c25 (C.52:32-57).
2. 8.b. If the Board determines that a person or entity has submitted a false certification concerning its engagement in investment activities in Iran under section 4 of P.L.2012, c.25 (C.52:32-58), the Board shall report to the New Jersey Attorney General the name of that person or entity, and the Attorney General shall determine whether to bring a civil action against the person to collect the penalty prescribed in paragraph (1) of subsection a. of section 5 of P.L.2012, c.25 (C.52:32-59). The Board may also report to the Board’s attorney

the name of that person, together with its information as to false certification, and the Board's attorney may determine to bring such civil action against the person to collect such penalty.

1.13 EQUAL EMPLOYMENT OPPORTUNITIES AND AFFIRMATIVE ACTION

- A. Bidders are required to comply with the requirements of N.J.S.A. 10:5-31 et seq. and N.J.A.C. 17:27 et seq.
- B. Initial Project Workforce Report - Construction (AA201)
 - 1. In accordance with the requirements of the New Jersey Department of Labor & Workforce Development Construction EEO Compliance Monitoring Unit, the Initial Project Workforce Report-Construction(AA201) document, must be submitted to the Public Agency that awards the contract and the Department of Labor & Workforce Development Construction EEO Compliance Monitoring Program after notification of award, but prior to signing the contract.
https://www.nj.gov/treasury/contract_compliance/

1.14 OFFICE OF THE STATE COMPTROLLER

- A. N.J.A.C. 17:44-2.2: Authority to Audit or Review Contract Records
 - 1. Relevant records of private vendors or other persons entering into contracts with covered entities are subject to audit or review by the Office of the State Comptroller (OSC) pursuant to N.J.S.A. 52:15C-14(d).
 - a. (The contract partner) shall maintain all documentation related to products, transactions or services under this contract for a period of **five (5) years** from the date of final payment. Such records shall be made available to the New Jersey Office of the State Comptroller upon request.
- B. Contractor/Vendor Requirements-Office of the New Jersey State Comptroller
 - 1. Contractors/vendors doing business with the board of education are reminded of the following legal requirements pertaining to the Office of the New Jersey State Comptroller:
 - a. Access to Relevant Documents and Information - N.J.S.A. 52:15C-14 (d)
 - 1) Private vendors or other persons contracting with or receiving funds from a unit in the Executive branch of State government, including an entity exercising executive branch authority, independent State authority, public institution of higher education, or unit of local government or board of education shall upon request by the State Comptroller provide the State Comptroller with prompt access to all relevant documents and information as a condition of the contract and receipt of public monies. The State Comptroller shall not disclose any document or information to which access is provided that is

confidential or proprietary. If the State Comptroller finds that any person receiving funds from a unit in the Executive branch of State government, including an entity exercising executive branch authority, independent State authority, public institution of higher education, or unit of local government or board of education refuses to provide information upon the request of the State Comptroller, or otherwise impedes or fails to cooperate with any audit or performance review, the State Comptroller may recommend to the contracting unit that the person be subject to termination of their contract, or temporarily or permanently debarred from contracting with the contracting unit.

- b. Maintenance of Contract Records - N.J.A.C. 17:44-2.2
 - 1) Relevant records of private vendors or other persons entering into contracts with covered entities are subject to audit or review by OSC pursuant to N.J.S.A. 52:15C-14(d).
 - 2) The contractor/vendor to whom a contract has been awarded, shall maintain all documentation related to products, transactions or services under this contract for a period of five years from the date of final payment. Such records shall be made available to the New Jersey Office of the State Comptroller upon request.

1.15 ANTI-BULLYING BILL OF RIGHTS ACT (P.L. 2010.C.122)

A. N.J.S.A. 18A:37-16 provides:

1. A member of a board of education, school employee, student or volunteer shall not engage in reprisal, retaliation or false accusation against a victim, witness or one with reliable information about an act of harassment, intimidation or bullying.
2. A member of a board of education, school employee, contracted service provider, student or volunteer who has witnessed, or has reliable information that a student has been subject to, harassment, intimidation or bullying shall report the incident to the appropriate school official designated by the school district's policy, or to any school administrator or safe schools resource officer, who shall immediately initiate the school district's procedures concerning school bullying.
3. A member of a board of education or a school employee who promptly reports an incident of harassment, intimidation or bullying, to the appropriate school official designated by the school district's policy, or to any school administrator or safe schools resource officer, and who makes this report in compliance with the procedures in the district's policy, is immune from a cause of action for damages arising from any failure to remedy the reported incident.

4. A school administrator who receives a report of harassment, intimidation, or bullying from a district employee, and fails to initiate or conduct an investigation, or who should have known of an incident of harassment, intimidation, or bullying and fails to take sufficient action to minimize or eliminate the harassment, intimidation, or bullying, may be subject to disciplinary action.

1.16 CONTROLLING SILICA EXPOSURES IN CONSTRUCTION

A. Occupational Safety and Health Administration (OSHA) - U.S. Department of Labor: OSHA 3362-05, 2009

1. The Controlling Silica Exposures in Construction advisory document is not a standard or regulation, and it creates no new legal obligations. The document is advisory in nature, informational in content, and is intended to assist employers in providing a safe and healthful workplace. The Occupational Safety and Health Act requires employers to comply with safety and health standards promulgated by OSHA or by a state with an OSHA approved state plan. In addition, pursuant to Section 5(a)(1), the General Duty Clause of the Act, employers must provide their employees with a workplace free from recognized hazards likely to cause death or serious physical harm. Employers can be cited for violating the General Duty Clause if there is a recognized hazard and they do not take reasonable steps to prevent or abate the hazard. However, failure to implement any specific recommendations contained within this document is not, in itself, a violation of the General Duty Clause. Citations can only be based on standards, regulations, and the General Duty Clause.
 - a. This guidance document addresses the control of employee exposures to respirable dust containing crystalline silica, which is known to cause silicosis, a serious lung disease, as well as increase the risk of lung cancer and other systemic diseases.
 - b. This document provides information on the effectiveness of various engineering control approaches for several kinds of construction operations and equipment, and contains recommendations for work practices and respiratory protection, as appropriate.
 - c. OSHA encourages employers to conduct periodic exposure monitoring to confirm that engineering and work practice controls are effective and that appropriate respiratory protection is being used where necessary.
2. The above referenced advisory document can be found at: https://www.osha.gov/dsg/topics/silicacrystalline/construction_info_silica.html

1.17 CERTIFICATION OF NON-DEBARMENT FOR FEDERAL GOVERNMENT CONTRACTS

1. Pursuant to N.J.S.A. 52:32-44.1, any natural person, company, firm, association, corporation, or other entity prohibited, or "debarred," from contracting with the

federal government agencies, shall also be prohibited from contracting for public work in the state of New Jersey. This prohibition also extends to any affiliate organization(s) held by or subject to the control of an entity of that prohibited person or entity.

2. Prior to awarding a contract for public work, a local units must obtain written certification from the contracting person or entity through the form (Certification of Non-Debarment for Federal Government Contracts, N.J.S.A. 52:32-44.1 (P.L. 2019, c406), attesting to their non-debarment from contracting with federal government agencies.

1.18 CONTRACTOR EMPLOYEES PROCEDURE FOR CRIMINAL HISTORY RECORD CHECKS

1. The Office of Student Protection (OSP) suggests the following recommendation when educational facilities submit contractor employees (i.e., masons, building and roofing companies) for short-term and long-term projects. The school official, acting as a liaison to the construction contractor, must share with other school district administrators the names of the company's employees who will be submitting to a criminal record check. This process will assure that employees of the contractor who have not obtained their approval for employment and are disqualified or ineligible for school employment will be identified as a contractor service provider employee and not continue to be employed at school facilities and have direct contact with the student population.
2. To ensure compliance with the requirements of N.J.S.A. 18A:6-7.2, the Chief School Administrator shall direct the school official acting as a liaison to the construction company to obtain a list of individuals who will be employed by the contractor for the school facility project that will be undergoing a criminal history record check. The liaison shall then provide a copy of this list to the Superintendent's Office and Human Resource Director, as these offices will receive any adverse action correspondence from the OSP related to the criminal history record check process.
3. Upon receipt of disqualification or ineligibility correspondence, the Superintendent's Office or Human Resource personnel shall review the contracted company list in order to determine if the subject of that letter is either a school employee or an employee of any contract service provider and take the appropriate action.
4. As with any school employee, **no employee of a contract service provider** shall commence work at a school facility without having first obtained an approval for employment from the Office of Student Protection.

5. Approvals for employment for these type contracted employees shall be maintained with the liaison and copies forwarded to the Superintendent's Office.

1.19 LABOR-REGISTERED APPRENTICESHIP PROGRAM

1. As of May 1, 2019, P.L. 2019, c.21 requires contractors that directly employ craftworkers to participate in a United States Department of Labor-registered apprenticeship program as a condition of initial or renewed PWCR registration. Contracting units are not responsible for verifying contractor participation in a registered apprenticeship program.
2. A contractor working on a Public Works Project who directly employs craft workers, must certify to the NJDOL that they participate in a registered Apprenticeship Program for each craft they employ as defined in N.J.S.A. 34:11-56 and CFR , et al.
3. Registered apprenticeship program" means an apprenticeship program which is registered with and approved by the USDOL, which provides each trainee with combined classroom and on-the-job training in an occupation recognized as an apprenticeable occupation, and which meets the program standards of enrollment and graduation under 29 C.F.R. §29.6.

1.20 NEW JERSEY PREVAILING WAGE ACT - BILL A4869

1. An Act concerning certain contracts for public work and amending and supplementing P.L.1963, c.150.

Be It Enacted by the Senate and General Assembly of the State of New Jersey:

- a. C.34:11-56.27a Lowest bidder of public work contract, proof of prevailing wage rates payment; rules, regulations.

- 1) a. If a person makes the lowest bid for a contract with a public body for public work subject to the provisions of the "New Jersey Prevailing Wage Act," P.L.1963, c.150 (C.34:11-56.25 et seq.) and that bid is ten percent or more lower than the next lowest bid for the contract, the person making the lowest bid shall certify to the public body that the prevailing wage rates required by that act shall be paid. If the bidder does not provide the certification prior to award of the contract, the public body shall award the contract to the next lowest responsible and responsive bidder. This certification shall be required only when a public body is engaging in competitive bidding for public work.

- b. The Commissioner of Labor and Workforce Development, in consultation with the Division of Local Government Services in the

Department of Community Affairs, shall promulgate rules and regulations concerning the standardization of the certification necessary to effectuate the provisions of this section.

2) Section 3 of P.L.1963, c.150 (C.34:11-56.27) is amended to read as follows: C.34:11-56.27 Prevailing wage rate required in contract.

3) a. Every contract in excess of the prevailing wage contract threshold amount for any public work to which any public body is a party or for public work to be done on property or premises owned by a public body or leased or to be leased by a public body shall contain a provision stating the prevailing wage rate which can be paid (as shall be designated by the commissioner) to the workers employed in the performance of the contract and the contract shall contain a stipulation that such workers shall be paid not less than such prevailing wage rate. Such contract shall also contain a provision that in the event it is found that any worker, employed by the contractor or any subcontractor covered by said contract, has been paid a rate of wages less than the prevailing wage required to be paid by such contract, the public body, the lessee to whom the public body is leasing a property or premises or the lessor from whom the public body is leasing or will be leasing a property or premises may terminate the contractor's or subcontractor's right to proceed with the work, or such part of the work as to which there has been a failure to pay required wages and to prosecute the work to completion or otherwise. The contractor and his sureties shall be liable for any excess costs occasioned thereby to the public body, any lessee to whom the public body is leasing a property or premises or any lessor from whom the public body is leasing or will be leasing a property or premises.

b. The Commissioner of Labor and Workforce Development, in consultation with the Division of Local Government Services, shall promulgate rules and regulations concerning the standardization of the contractual language necessary to effectuate the provisions of this section.

4) This act shall take effect 180 days from the date of enactment, except that the Commissioner of Labor and Workforce Development make take any anticipatory action in advance thereof as may be necessary for the implementation of this act.

Approved November 8, 2021.

END OF SECTION 00860

EXHIBIT B
MANDATORY EQUAL EMPLOYMENT OPPORTUNITY LANGUAGE
N.J.S.A. 10:5-31 et seq. (P.L.1975, c.127)
N.J.A.C. 17:27-1.1 et seq.
CONSTRUCTION CONTRACTS

During the performance of this contract, the contractor agrees as follows:

The contractor or subcontractor, where applicable, will not discriminate against any employee or applicant for employment because of age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex. Except with respect to affection or sexual orientation and gender identity or expression, the contractor will ensure that equal employment opportunity is afforded to such applicants in recruitment and employment, and that employees are treated during employment, without regard to their age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex. Such equal employment opportunity 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 Public Agency Compliance Officer setting forth provisions of this nondiscrimination clause.

The contractor or subcontractor, where applicable will, in all solicitations 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 age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex.

The contractor or subcontractor will send to each labor union, with which it has a collective bargaining agreement, a notice, to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under this act and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

The contractor or subcontractor, where applicable, agrees to comply with any regulations promulgated by the Treasurer, pursuant to N.J.S.A. 10:5-31 et seq., as amended and supplemented from time to time and the Americans with Disabilities Act.

When hiring or scheduling workers in each construction trade, the contractor or subcontractor agrees to make good faith efforts to employ minority and women workers in each construction trade consistent with the targeted employment goal prescribed by N.J.A.C. 17:27-7.2; provided, however, that the Dept. of LWD, Construction EEO Monitoring Program, may, in its discretion, exempt a contractor or subcontractor from compliance with the good faith procedures prescribed by the following provisions, A, B, and C, as long as the Dept. of LWD, construction EEO Monitoring Program is satisfied that the contractor or subcontractor is employing workers provided by a union which provides evidence, in accordance with standards prescribed by the Dept. of LWD, Construction EEO Monitoring Program, that its percentage of active "card carrying" members who are minority and women workers is equal to or greater than the targeted employment goal established in accordance with N.J.A.C 17:27-7.2. The contractor or subcontractor agrees that a good faith effort shall include compliance with the following procedures:

- (A) If the contractor or subcontractor has a referral agreement or arrangement with a union for a construction trade, the contractor or subcontractor shall, within three business days of the contract award, seek assurances from the union that it will cooperate with the contractor or subcontractor as it fulfills its affirmative action obligations under this contract and in accordance with the rules promulgated by the Treasurer pursuant to N.J.S.A. 10:5-31 et seq., as supplemented and amended from time to time and the American with Disabilities Act. If the contractor or subcontractor is unable to obtain said assurances from the construction trade union at least five business days prior to the commencement of construction work, the contractor or subcontractor agrees to afford equal employment opportunities minority and women workers directly, consistent with this chapter. If the contractor's or subcontractor's prior experience with a construction trade union, regardless of whether the union has provided said assurances, indicates a significant possibility that the trade union will not refer sufficient minority and women workers consistent with affording equal employment opportunities as specified in this chapter, the contractor or subcontractor agrees to be prepared to provide such opportunities to minority and women workers directly, consistent with this chapter, by complying with the hiring or scheduling procedures prescribed under (B) below; and the contractor or subcontractor further agrees to take said action immediately if it determines that the union is not referring minority and women workers consistent with the equal employment opportunity goals set forth in this chapter.

EXHIBIT B (Continued)

- (B) If good faith efforts to meet targeted employment goals have not or cannot be met for each construction trade by adhering to the procedures of (A) above, or if the contractor does not have a referral agreement or arrangement with a union for a construction trade, the contractor or subcontractor agrees to take the following actions:
- 1) To notify the public agency compliance officer, the Dept. of LWD, Construction EEO Monitoring Program, and minority and women referral organizations listed by the Division pursuant to N.J.A.C. 17:27-5.3, of its workforce needs, and request referral of minority and women workers;
 - 2) To notify any minority and women workers who have been listed with it as awaiting available vacancies;
 - 3) Prior to commencement of work, to request that the local construction trade union refer minority and women workers to fill job openings, provided the contractor or subcontractor has a referral agreement or arrangement with a union for the construction trade;
 - 4) To leave standing requests for additional referral to minority and women workers with the local construction trade union, provided the contractor or subcontractor has a referral agreement or arrangement with a union for the construction trade, the State Training and Employment Service and other approved referral sources in the area;
 - 5) If it is necessary to lay off some of the workers in a given trade on the construction site, layoffs shall be conducted in compliance with the equal employment opportunity and nondiscrimination standards set forth in this regulation, as well as with applicable Federal and State court decisions;
 - 6) To adhere to the following procedure when minority and women workers apply or are referred to the contractor or subcontractor:
 - i. The contractor or subcontractor shall interview the referred minority or women worker.
 - ii. If said individuals have never previously received any document or certification signifying a level of qualification lower than that required in order to perform the work of the construction trade, the contractor or subcontractor shall in good faith determine the qualifications of such individuals. The contractor or subcontractor shall hire or schedule those individuals who satisfy appropriate qualification standards in conformity with the equal employment opportunity and non-discrimination principles set forth in this chapter. However, a contractor or subcontractor shall determine that the individual at least possesses the requisite skills, and experience recognized by a union, apprentice program or a referral agency, provided the referral agency is acceptable to the Dept. of LWD, Construction EEO Monitoring Program. If necessary, the contractor or subcontractor shall hire or schedule minority and women workers who qualify as trainees pursuant to these rules. All of the requirements, however, are limited by the provisions of (C) below.
 - iii. The name of any interested women or minority individual shall be maintained on a waiting list, and shall be considered for employment as described in (i) above, whenever vacancies occur. At the request of the Dept. of LWD, Construction EEO Monitoring Program, the contractor or subcontractor shall provide evidence of its good faith efforts to employ women and minorities from the list to fill vacancies.
 - iv. If, for any reason, said contractor or subcontractor determines that a minority individual or a woman is not qualified or if the individual qualifies as an advanced trainee or apprentice, the contractor or subcontractor shall inform the individual in writing of the reasons for the determination, maintain a copy of the determination in its files, and send a copy to the public agency compliance officer and to the Dept. of LWD, Construction EEO Monitoring Program.
 - 7) To keep a complete and accurate record of all requests made for the referral of workers in any trade covered by the contract, on forms made available by the Dept. of LWD, Construction EEO Monitoring Program upon request.
- (C) The contractor or subcontractor agrees that nothing contained in (B) above shall preclude the contractor or subcontractor from complying with the union hiring hall or apprenticeship policies in any applicable collective bargaining agreement or union hiring hall arrangement, and, where required by custom or agreement, it shall send journeymen and trainees to the union for referral, or to the apprenticeship program for admission, pursuant to such agreement or arrangement. However, where the practices of a union or apprenticeship program will result in the exclusion of minorities and women or the failure to refer minorities and women consistent with the targeted county employment goal, the contractor or subcontractor shall consider for employment persons referred pursuant to (B) above without regard to such agreement or arrangement; provided further, however, that the contractor or subcontractor shall not be required to employ women and minority advanced trainees and trainees in numbers which

EXHIBIT B (Continued)

result in the employment of advanced trainees and trainees as a percentage of the total workforce for the construction trade, which percentage significantly exceeds the apprentice to journey worker ratio specified in the applicable collective bargaining agreement, or in the absence of a collective bargaining agreement, exceeds the ration established by practice in the area for said construction trade. Also, the contractor or subcontractor agrees that, in implementing the procedures of (B) above, it shall, where applicable, employ minority and women workers residing within the geographical jurisdiction of the union.

After notification of award, but prior to signing a construction contract, the contractor shall submit to the public agency compliance officer and the Dept. of LWD, Construction EEO Monitoring Program an initial project workforce report (Form AA-201) electronically provided to the public agency by the Dept. of LWD, Construction EEO Monitoring Program, through its website, for distribution to and completion by the contractor, in accordance with N.J.A.C. 17:27-7. The contractor also agrees to submit a copy of the Monthly Project Workforce Report once a month thereafter for the duration of this contract to the Dept. of LWD, Construction EEO Monitoring Program, and to the public agency compliance officer.

The contractor agrees to cooperate with the public agency in the payment of budgeted funds, as is necessary, for on-the-job and/or off-the-job programs for outreach and training of minorities and women.

- (D) The contractor and its subcontractors shall furnish such reports or other documents to the Dept. of LWD, Construction EEO Monitoring Program as may be requested by the Dept. of LWD, Construction EEO Monitoring Program from time to time in order to carry out the purposes of these regulations, and public agencies shall furnish such information as may be requested by the Dept. of LWD, Construction EEO Monitoring Program for conducting a compliance investigation pursuant to N.J.A.C. 17:27-1.1 et seq.

(Revised: January, 2016)

Reviewed By: _____

Title: _____

Company: _____

Date: _____

Signature: _____

SECTION 00870 - MISCELLANEOUS REQUIREMENTS

PART 1 - GENERAL

1.1 JOB SITE MEETINGS

- A. Regularly scheduled job meetings shall be held at a location and time convenient to the Owner's representatives, the Architect and the Contractor. The Contractor shall attend such meetings, or be represented by a person in authority who can speak for and/or make decisions for the Contractor.
- B. Attendance by the contractor is mandatory, whether the meetings are weekly, bi-weekly or at whatever interval is determined by the Architect.
 - 1. Unless given prior approval by the Architect / Construction Manager, the Prime Contractor will be fined \$250.00 for each regularly scheduled meeting for which he/she is not presented by a person in authority who can speak for and/or make decisions for the Contractor. Fine amounts shall be withheld and deducted from the Contract Sum.

1.2 STRUCTURAL SAFETY STANDARDS AND CODES

- A. The standards, codes and design data referred to in the New Jersey "State Uniform Construction Code", apply to the work of the Contract, where applicable.
- B. Contractors shall comply with all applicable requirements of the Uniform Fire Safety Act N.J.S.A. 52:27D-192 et seq.

1.3 OWNER'S RIGHT TO OCCUPY

- A. The Owner reserves the right to occupy any portion of the Project which is ready for occupancy prior to completion and acceptance of the Project, after Local Municipal Construction Enforcing Agency approval.
- B. The occupancy of any portion of the Project does not constitute an acceptance of any work nor does it waive the Owner's right to liquidated damages or constitute an acceptance of any work as the Project will be accepted as a whole and not in units. Prior to such occupancy, however, the Architect, a representative of the Owner, and the Contractor shall fully inspect the portions of the Project to be occupied, preparing a complete list of omissions of materials, faulty workmanship, or any items to be repaired, torn out or replaced. The Owner will assume responsibility for damage to premises so occupied of any items not on this list when such damage is due to greater than normal wear and tear, but does not assume responsibility for improper or defective workmanship or materials.

1.4 OWNER'S GENERAL REQUIREMENTS

- A. The Owner requires that the Contractor demonstrate a safety and health program/plan, which includes, but is not limited to first aid, fire protection, housekeeping, illumination, sanitation, personal protective equipment, medical, exit, emergency action plans and all other issues required by government agencies having jurisdiction over the work of this project.

- B. The following Owner's General Requirements shall be enforced during construction and until final completion of the work:
1. No deliveries of construction materials or equipment is to take place during the arrival and departure of students from the school. Verify and coordinate arrival and departure time with the Principal.
 2. All construction materials and equipment shall be stored behind the construction fence.
 3. No smoking on any of the School's Property.
 4. All workmen must wear shirts at all time.
 5. Use of profanity will not be tolerated.
 6. The Prime Contractor shall provide identification cards for his / her subcontractors, employees, etc.
 7. All Contractors shall comply with the requirements of all local ordinances.

1.5 ENVIRONMENTAL PROTECTION

- A. Conform to New Jersey Department of Environmental Protection regulations NJAC 7:27, sub-chapters 5 and 7.
- B. Conform to New Jersey Statute N.J.S.A. 26.2C-9.2 which requires that no person shall construct, install, alter or operate any equipment capable of causing the emission of air contaminants into the open air or control apparatus which prevents or controls the emission of air contaminants until an application has been filed with and approved by the Department of Environmental Protection.

1.6 RELATIONSHIP OF ARCHITECT AND CONSTRUCTION MANAGER

- A. Where reference is made to "Architect" in these specifications it will in some cases be interpreted as meaning "Construction Manager". Spheres of influence are defined in general as follows:

Architect

Interpretation of Contract Documents.

Decisions relative to artistic effect.

Review and approval of shop drawings, product data, samples.

Review, recommendation and preparation of change orders.

Receipt of record drawings, operating and maintenance manuals.

Assistance with start-up, adjusting, operating and maintenance.

Review and recommendation of bid breakdown.

Review and approval of applications for progress payments.

Preparation of Punch Lists.

Close-out of contracts and determination of final completion.

Exclusions: Construction means, methods, techniques, sequences or procedures, safety precautions, acts or omissions of contractors, subcontractors, or any other persons.

Construction Manager

Project meetings.

Monitoring of Contractors' work.

Review and approval of bid breakdown (Schedule of Values).

Review and forwarding of applications for progress payments.

Review and recommendations regarding proposed changes.

Administration of Progress Schedule and construction time schedules.

Assist in Preparation of Punch Lists.

Assist in Close-out of contracts and determination of final completion.

Exclusions: Construction means, methods, techniques, sequences or procedures, safety precautions, acts or omissions of contractors, subcontractors, or any other persons.

1.7 CONTRACT COORDINATION

- A. The Contractor for General Construction shall install the access doors, sleeves and inserts furnished to him/her, in the manner, and in the locations designated by the Contractor furnishing sleeves and inserts.
- B. The Contractor for General Construction shall provide chases, recesses, and unsleeved openings in new construction work as required to accommodate the work of other contractors, provided contractors requiring the chases, recesses, and other openings furnish the necessary information regarding size and location in the construction promptly, and in accordance with the established construction schedule, so that the chases, recesses, and other openings can be built-in by the Contractor for General Construction as the General Construction Work progresses.
- C. The Contractor for General Construction shall set anchor bolts and other accessories furnished to him/her, in the manner, and in the locations directed by the Contractor furnishing the anchor bolts and other accessories.

1.8 CERTIFIED PAYROLLS

- A. Pursuant to N.J.A.C. 12:60-5.1(c)(1)(i), the Contractor shall furnish to the Owner certified payroll records each payroll period within 10 days of the payment of wages, indicating name, craft, social security number and actual hourly rate of wages paid to each workman employed on the project. A certified payroll record is defined as "a payroll record which is attested to by the employer, or a corporate officer of such company, or an authorized agent of the employer."

END OF SECTION 00870

FVHD-5499A1

1:00870-3

SECTION 01010 - SUMMARY OF WORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The work of this Section applies to all Construction Contract Documents including drawings, Division 1 - Miscellaneous Requirements Sections, and Specifications Sections included in Part-2 through Part-6.

1.2 SUMMARY

- A. Section Includes:
 - 1. Project description.
 - 2. Contract scope description.
 - 3. Contractor's use of the premises.
 - 4. Preconstruction meeting.
 - 5. Security procedures.

1.3 PROJECT DESCRIPTION

- A. The project consists of the new Security Vestibules at Princeton High School for the Princeton Public Schools, Board of Education, Mercer County, New Jersey.
- B. Contract Documents prepared by Fraytak Veisz Hopkins Duthie, P.C. Architects / Planners, (Project Number: FVHD-5499A1).

1.4 CONTRACT SCOPE DESCRIPTION

- A. The work consists of but is not limited to the following:
 - 1. Create new secure vestibules at the Princeton High School Tower Entry and the PAC entry and all associated work, as indicated on the drawings.
 - a. New aluminum framed storefront systems / doors.
 - b. Miscellaneous structural steel framing.
 - c. Aluminum framed transoms windows.
 - d. Architectural Ground face CMU and Preface Glazed Concrete Block Units.
 - e. Limited room signage.
 - e. Rubber base.
 - 2. All other indicated work.
- B. Alternate Bids:
 - 1. Alternate Bid No. 1: Security Glazing

C. Single Overall Contract: This contract includes:

1. All work in accordance with drawings, Parts 2, and 6 Specification Sections and in accordance with Contract Documents.
2. General Construction Work includes:
 - a. Work that is primarily architectural in nature plus work traditionally recognized as general construction in accordance with drawings and as listed as a part of Part 2 specification sections, unless otherwise indicated below:
 - 1) Also includes both administrative and coordination responsibilities.
 - a) General Construction Contractor is responsible for all coordination between his/her work and work of all other Prime Subcontractors.
 - 2) Provide and install the Miscellaneous Structural Steel framing.
 - 3) Aluminum Storefront framing / door system.
3. Electrical Work includes:
 - a. The work necessary for electrical power distribution, lighting, and the connections to equipment tied into such systems, including all work in accordance with drawings and Part-6 specification sections.
 - 1) **Work shall include power distribution and wiring for all indicated electrically operated equipment and fixtures, whether shown or not on drawings.**
 - 2) Work shall include demolition and removals, as indicated or required, to allow for new construction.
 - 3) Work shall include reinstallation, cutting, patching, finishing and repair work associate with Electrical work, as indicated or required.

1.5 CONTRACTOR'S USE OF THE PREMISES

- A. The space available to the Contractor for the performance of the work, either exclusively or in conjunction with others performing other construction as part of the project, is shown on the drawings.
 1. Other areas are off limits to all construction personnel.
- B. The following building facilities may not be used by construction personnel:
 1. Toilet facilities.
 2. Food service facilities, including dining areas.
- C. The Owner will partially occupy the building during the construction period.
 1. The Owner will endeavor to cooperate with the Contractor's operations when the Contractor has notified the Owner in advance of need for changes in operations in order to accommodate construction operations.

2. Conduct the work so as to cause the least interference with the Owner's operations.
- D. Coordinate with Local Authorities as to which routes are capable of handling heavy truck traffic.
- E. Signs: Provide signs adequate to direct visitors.
1. Do not install, or allow to be installed, signs other than specified sign(s) and signs identifying the principal entities involved in the project.
- F. All deliveries by the Contractor shall be coordinated with the Owner's Representative/ Construction Manager, prior to the delivery date.

1.6 PRECONSTRUCTION MEETING

- A. A preconstruction meeting will be held at a time and place designated by the Architect/ Construction Manager for the purpose of identifying responsibilities of the Owner's / Architect's / Construction Manager's personnel and explanation of administrative procedures.
- B. The Contractor shall also use this meeting for the following minimum agenda:
1. Construction schedule.
 2. Use of areas of the site.
 3. Delivery and storage.
 4. Safety.
 5. Security.
 6. Cleaning up.
 7. Subcontractor procedures relating to:
 - a. Submittals.
 - b. Change orders.
 - c. Applications for payment.
 - d. Record documents.
- C. Attendees shall include:
1. The Owner / Owner's Representative.
 2. The Architect, and any Consultants.
 3. Construction Manager.
 4. The Prime Contractor and his/her superintendent.
 5. Major Subcontractors, suppliers, and fabricators.
 6. Others interested in the work.

1.7 SECURITY PROCEDURES

- A. Limit access to the site and building to persons involved in the work.

- B. Provide secure storage for materials for which the Owner has made payment and which are stored on-site.
- C. Secure completed work as required to prevent loss.
- D. The Contractor, and their employees, will be required to be registered with the Owner's Representative / School's Main Office.
 - 1. The Contractor's personnel and Subcontractors will be required to wear identification badges at all times on the site.

END OF SECTION 01010

SECTION 01020 - ALLOWANCES

PART 1 - GENERAL

1.1 DESCRIPTION OF REQUIREMENTS

- A. Definitions and Explanations: Certain requirements of the work related to each allowance are shown and specified in the contract documents. The allowance has been established in lieu of additional requirements for that work, and further requirements thereof (if any) will be issued by change order.
- B. The type of allowance scheduled herein for the work includes the following:
1. Lump sum allowance(s).
- C. Selection and Purchase: At the earliest feasible date after the award of the Contract, advise the Architect of the scheduled date when the final selection and purchase of each product or system described by each Allowance must be accomplished in order to avoid delays in the performance of the work. Obtain and submit proposals for the work of each Allowance, as required by the Architect for use in making the final selections; include whatever recommendations for selection may be relevant to the proper performance of the work. Purchase products and systems as specifically selected (in writing) by the Architect.
1. Submit proposals and recommendations, for the purchase of the products or systems of Allowances, in the form specified for change orders.
- D. Change Order Data: Where applicable, include in each change order proposal both the quantity of the products being purchased and the unit cost, along with the total amount of the purchase to be made. Where requested, furnish survey-of-requirements data to substantiate the quantity. Indicate applicable taxes, delivery charges, and amounts of applicable trade discounts.
- E. Lump-Sum Allowances: The amounts herein specified are the net amounts available for purchase of the materials specified, including taxes (if any), and each change order amount shall be based thereon. **All other costs associated with the performance of the work under the Allowance, including but not limited to insurance, storage, handling, overhead, profit, etc., are not a part of the allowance, and shall be included in the lump sum bid / or base bid Contract amount.**
1. In the event the actual purchase amount of materials, plus taxes (if any) exceeds the specified allowance, the Owner will pay the excess; should the actual purchase amount, plus taxes (if any) be less than the specified Allowance, the Contractor shall credit the Owner with the difference.
 2. The actual purchase amount, plus taxes (if any) shall be substantiated by certified bills of sale to be submitted with the change order.

- F. Change Order Mark-Up: Except as otherwise indicated, comply with the provisions of the General Conditions and the Supplementary General Conditions.
- G. Excess Materials: Submit invoices or delivery slips to indicate the actual quantities of materials delivered to the site for use in fulfillment of each allowance. Where economically feasible, and so requested by the Architect, return unused materials to the manufacturer/supplier for credit to the Owner, after the installation has been completed and accepted. Where not economically feasible to return for credit, and so requested by the Architect, prepare unused materials for the Owner's storage, and delivery to the Owner's storage space as directed. Otherwise, disposal of excess materials is the Contractor's responsibility.

1.2 SCHEDULE OF ALLOWANCES

- A. General: The following allowance amount is included in the Contract Sum, for the corresponding unit of work, as described.
 - 1. Construction Work
 - a. A sum of **\$12,000.00** for work not specifically shown on the drawings, the work shall be performed as directed in the field.

END OF SECTION 01020

SECTION 01030 - ALTERNATE BIDS

PART 1 - GENERAL

1.1 PROCEDURE FOR ALTERNATE BIDS

- A. Each Bidder shall submit on the Proposal Form, all Alternate Bids applicable to the work under his/her bid. Alternate Bids shall state the difference in price as "additions to" or "deductions from" the Base Bid, unless otherwise noted, for the substitution, omission, or addition of the following materials, items or construction from that shown and specified.
- B. The Alternate Bids, when accepted, become part of the Contract.
- C. Each Bidder shall carefully check the Drawings and Specifications to determine the extent of each Alternate Bid required.
- D. Alternate Bids shall include all overhead and profit applicable thereto.
- E. Alternate Bids shall reflect the increase or decrease in cost of all work of every name and nature which may be affected thereby and no subsequent claims for extras by reason of the Contractor's failure to observe this requirement will be considered.
- F. The description herein for each Alternate Bid is recognized to be incomplete and abbreviated, but implies that each change must be complete for the scope of work affected. Refer to applicable specification sections and to applicable drawings, for specific requirements of the work, regardless of whether references are so noted in description of each Alternate Bid. Coordinate related work and modify surrounding work as required to properly integrate with the work of each Alternate Bid. It is recognized that descriptions of Alternate Bids are primarily scope definitions, and do not necessarily detail full range of materials and processes needed to complete the work as required.
- G. Except as otherwise described or approved, materials and workmanship of the Alternate Bids shall conform to the requirements specified under the various sections of the Specifications for similar items of work.
- H. Where methods of construction, materials, finishes or details of installation required by the various Alternate Bids differ from the requirements shown on the drawings or specified for corresponding items, the alternate construction, materials, etc. will be subject to approval by the Architect.
- I. The Contractor shall submit shop drawings and samples for the work under each accepted Alternate Bid for approval in conformance with requirements specified for submittals in both Part 1, AIA Document A232 and Section 00800 - Supplementary General Conditions.

- J. The following Alternate Bids shall apply to single overall bids, and must be included in the Bidder's Proposal(s).

1.2 ALTERNATE BIDS - GENERAL CONSTRUCTION WORK

A. Alternate Bid No. 1: Security Glazing

State the amount to be added to the base bid to provide and install:

1. Security glazing in lieu of security window film (SWF) on tempered plate glass (TPG) at designated locations, as shown on various drawings and as indicated in various specification sections.
2. Insulated security glazing in lieu of security window film (SWF) tempered plate glass (TPG) at designated locations, as shown on various drawings and as indicated in various specification sections.

END OF SECTION 01030

SECTION 01040 - COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The work of this Section applies to all Construction Contract Documents including drawings, Division 1 - Miscellaneous Requirements Sections, and Specifications Sections.

1.2 REQUIREMENTS INCLUDED

- A. Coordination of submittals.
- B. Coordination meetings.
- C. Coordination drawings.
- D. Coordination of project closeout.
- E. Administrative/supervisory personnel.
- F. Coordination of trade(s).
- G. Coordination of space.
- H. Coordination of field measurements and field conditions.

1.3 GENERAL REQUIREMENTS

- A. Contractor shall coordinate his/her activities with the activities of other subcontractors and work performed by others.
- B. If necessary, inform each party involved, in writing, of procedures required for coordination; include requirements for giving notice, submitting reports, and attending meetings.
 - 1. Inform the Architect when coordination of his/her work is required.

1.4 COORDINATION OF SUBMITTALS

- A. Coordinate and correlate the submittals on each work item and on interrelated work items to ensure their timeliness, completeness, consistency, compatibility and compliance with the Contract Documents.
- B. Prepare and submit special coordination drawings where close and careful coordination of information is required for proper fabrication or installation of

materials, products or equipment by separate entities. Coordination drawings may also be required where limited space availability necessitates close and careful coordination for efficient and proper installation of different components.

1. Show interrelationships of components shown on separate shop drawings.
 2. Indicate required installation sequences.
- C. Coordinate any request for substitution to ensure compatibility of its space requirements, its operating characteristics and elements and its effects on other work. Prior to proposing a substitution for any item, verify that its size, configuration, supports and connections will coordinate with all other work and that it will fit within the allotted space while allowing for proper operating, maintenance and circulation space.
1. Comply with requirements for requests for submittal of substitution indicated in AIA A201 and Section 00800.

1.5 COORDINATION MEETINGS

- A. The General Construction Work Contractor shall hold additional coordination meetings and conferences with subcontractors and others involved in the Work as needed to ensure coordination of work.
1. Notify the Architect of such coordination meetings.
- B. Regular project site meetings shall be in accordance with Sections 00870 and 01200.

1.6 COORDINATION OF TRADES

- A. Coordinate construction activities included under various sections of these Specifications to ensure efficient and orderly installation of each part of the Work and to prevent interferences among parts of the Work. Coordinate work items and construction operations included under different sections of the Specifications that are dependent upon one another for proper installation, connection and operation.
1. Where installation of one part of the Work is interrelated with installation of other components, schedule construction activities in the sequence required to obtain the best results.
 2. Where availability of space is limited, coordinate installation of different components to prevent interferences and to ensure proper accessibility for required maintenance, service and repair.
 3. Make adequate provisions to accommodate items scheduled for later installation.

- B. Where necessary, prepare memoranda outlining special procedures required for coordination. Include such items as required notices, reports and attendance at meetings. Distribute these coordination memoranda to all parties involved in the work being coordinated.
 - 1. Prepare similar memoranda for the Owner and other Contractor(s) where coordination with construction or operations by them is required.
 - 2. Provide copies of such coordination memoranda to the Architect.
- C. Coordinate the scheduling and timing of required administrative activities with other construction activities to avoid conflicts and ensure orderly progress of the Work. Administrative activities include:
 - 1. Preparation and updating of schedules.
 - 2. Preparation and processing of submittals.
 - 3. Preparation and processing of requests for information.
 - 4. Project meetings.
 - 5. Testing and inspection activities.
 - 6. Project close-out activities.

1.7 COORDINATION OF SPACE

- A. Coordinate use of available space and sequence of installation for work which is indicated diagrammatically or schematically on the drawings. Prevent physical interference of components. Utilize space efficiently to ensure proper installations (including installation of other work) and accessibility for maintenance, service and repairs.
 - 1. Detailed drawings of proposed departures from spatial arrangements or locations indicated in the Contract Documents, due to field conditions or other causes, shall be submitted to the Architect for review. No such departures shall be made without prior review by the Architect.
 - 2. Where required for coordination, the Architect will have the authority to order, as changes in the Work, changes in locations and sizes. Such changes shall be made without adjustment to the Contract Sum or Contract Time.
- B. Field verify measurements of existing items and work which precedes each sequence. Ensure proper fit and location.
- C. In finished areas, conceal pipes, ducts and wiring in the construction.

- D. Coordinate locations of fixtures and outlets with finish elements.

1.8 COORDINATION OF FIELD MEASUREMENTS AND FIELD CONDITIONS

- A. Prior to ordering materials or equipment or performing work, the Contractor and/or Subcontractors shall verify Contract Document and submittal dimensions and weights affecting their work and other contractor's work associated with field measurements and field conditions at the project site and shall be responsible for their accuracy and correctness.
- B. Differences discovered from dimensions or weights indicated in the Contract Documents or submittals shall be submitted in writing to the Architect for review, before proceeding with the work.
- C. Commencing work implies acceptance of surfaces, areas, preceding work and other field conditions, and verification of dimensions, by the Contractor.
- D. No Change Order will be issued in cases where discrepancies in dimensions are discovered after work has been commenced or where the Contractor has failed to properly investigate and take into account field measurements and existing field conditions.

1.9 COORDINATION DRAWINGS

- A. General Requirements: Prepare coordination drawings where limited space available may cause conflicts in the locations of installed products, and where required to coordinate installation of products.
 - 1. All work on the coordination drawings shall be performed by a competent draftsmen and shall be clear and fully legible. The Architect shall be the judge of the legibility of the composite drawings.

1.10 COORDINATION OF PROJECT CLOSEOUT

- A. Coordinate completion and clean-up work and administrative activities in preparation for Substantial Completion and occupancy of the Work or of designated portions of the Work.
- B. After Owner occupancy, coordinate access for completion or correction of the work not in conformance with the Contract Documents to minimize disruption of Owner's activities.
- C. Assemble and coordinate closeout submittals specified in Section 01700.

1.11 REQUIRED ADMINISTRATIVE/SUPERVISORY PERSONNEL

- A. General: In addition to the other administrative and supervisory personnel required for the performance of the Work, the Prime Contractor shall provide specific coordinating personnel as specified herein.
- B. Project Manager / Superintendent: A full time on site Project Manager, with a recommended minimum of eight (8) years experience, including project management experience on a similar type of projects.
 - 1. The Contractor for General Construction Work shall provide a full-time staff member or members, (Project Manager/Superintendent), experienced in coordination of work on projects of this type and scale, including administration and supervision.

1.12 COORDINATION OF TRADE(S)

- A. Coordinate work with other trade(s) to eliminate any possible interference before any work is installed.

1.13 COORDINATION OF SPACE, FIELD MEASUREMENTS AND FIELD CONDITIONS

- A. Inspection of Conditions: Require the Installer of each major component to inspect both substrate and conditions under which his/her work is to be performed. Do not proceed until unsatisfactory conditions have been corrected in an acceptable manner.
- B. Recheck measurements and dimensions, before starting each installation.
 - 1. Submit to the Architect for review any change in dimensions shown on the Contract Documents or submittals affecting physical size, shape or location of any part of the work, whether due to field conditions or other causes.
- C. Manufacturer's Instructions: Comply with manufacturer's installation instructions and recommendations, to the extent that those instructions and recommendations are more explicit or stringent than requirements contained in Contract Documents.
- D. Provide attachment and connection devices and methods necessary for securing work. Secure work true to line and level. Allow for expansion and building movement.
- E. Provide all appropriate structural supports, hangers and associated assemblies which include but are not limited to materials, finishes, equipment, and fixtures. This work shall be in conformance with requirements of the Contract Documents whether or not indicated by a reference in specification or as may be in detail shown on drawings and schedules.
- F. Visual Effects: Provide uniform joint widths in exposed work. Arrange joints in exposed work to obtain the best visual effect. Refer questionable choices to the Architect for final decision.

- G. Install each component during weather conditions and construction status that will ensure best possible results. Isolate each part of completed construction from incompatible material as necessary to prevent deterioration.
- H. Coordinate temporary enclosures with required inspections and tests, to minimize necessity of uncovering completed construction for that purpose.
- I. Where mounting heights are not indicated:
 - 1. Install individual components at standard mounting heights recognized within the industry for the particular application indicated. Refer questionable mounting height decisions to the Architect for final decision.

END OF SECTION 01040

SECTION 01050 - ALTERATIONS, CUTTING, PATCHING AND REFINISHING WORK

PART 1 - PRODUCTS

1.1 RELATED DOCUMENTS

- A. The work of this Section applies to all Construction Contract Documents including drawings, Division 1 - Miscellaneous Requirements Sections, and Specifications Sections.

1.2 DESCRIPTION

- A. Work included: Alterations, removals and demolition required for this work include, but are not necessarily limited to:
 - 1. Alterations, cutting, patching, removal and preparation work to be done as noted on drawings, as required, to complete construction.
 - 2. Patching and refinishing of existing surfaces damaged or left unfinished as a result of this work, etc.
 - 3. Asbestos.
 - a. The Contractor shall review and familiarize themselves with the Owners Asbestos Hazard Emergency Response Act (AHERA) report prior to the commencement of any demolition activity. Also, the Contractor will be provided with an inventory of all ACM (Asbestos Containing Materials) in the buildings where they are working, and will be required to sign a form (provided by the Owner) that they are in receipt of the inventory.
 - b. Contractor is herein cautioned that asbestos may be within concealed spaces where work will be taking place. The Contractor shall immediately notify the Owner if any concerns or conditions arise in regards to potential asbestos containing building materials (ACBM's) in order that the owner may verify same and take appropriate action. The Contractor shall not proceed with the work until the material has been abated and air sampling clearance levels have been achieved as set forth by the Owner's Environmental Consultant.
 - c. The Contractor shall employ personnel who are trained in accordance with OSHA workplace standards as they pertain to asbestos.
 - d. **The Architect / Engineer has no authority or professional involvement relative to the hazardous material/asbestos removal or disposal phase for this project and are not available for questions and/or direction in this regard. The hazardous material/ asbestos reference is included as a convenience for the Owner, and the Architect accepts no responsibility nor liability for the accuracy of information, bidders conclusions, methods to be used, nor for any aspect of approvals required by the Contractor in undertaking and completing this project insofar as hazardous material/asbestos is concerned. The Contractor shall direct**

any/all questions and concerns to the Owners Hazardous Material Abatement Consultant.

- e. Worker and Community Right to Know Act Requirements
 - 1) It is required that the Contractor and/or Subcontractors comply with all of the requirements of HAZCOM 2012 and New Jersey Right To Know (RTK) program. General Contractor is responsible for ensuring that containers of substances belonging to the Contractor and/or Subcontractors that are stored at the Owner's facility are properly RTK labeled. Refer to N.J.A.C. 8:59-5.10.
 - 2) Surveys of hazardous substances stored at the Owner's facility by the Contractor and/or Subcontractor are to be provided to the Owner of the facility. Refer to N.J.A.C. 8:59-2.2(h).
 - 3) Material Safety Data Sheets (MSDS) and/or Safety Data Sheets (SDS) from manufacturers must be provided to the Owner for all products present at, purchased for, and brought on site by Contractors and/or Subcontractors to the Owner's facility. Refer to N.J.A.C. 8:59-2.2(1).
 - 4) Contractor and/or all Subcontractors must submit, prior to starting any work, a copy of their approved Hazard Communication Plan - 29 CFR 1910.1200.

- 4. This project shall be subject to the requirements of the EPA "Renovation, Repair and Painting" rule including the following:
 - a. The Contractor must be lead safe trained and certified. The Contractor will be required to submit a copy of their EPA certificate prior to the start of the work.
 - b. The Contractor shall provide the Owner with a copy of the EPA's Lead Hazard Management information pamphlet "Renovate Right-Important Lead hazard Information for Families, Child Care Providers and Schools" prior to the start of any renovation work. The Contractor shall have the Owner sign a pre-renovation disclosure form confirming receipt of the pamphlet.
 - c. The Contractor shall at all times employ lead safe practices as identified in the rules.

- 5. This project shall be subject to the requirements of the EPA rules on diesel exhaust and off-site particulate dust, including the following:
 - a. Diesel exhaust contributes the highest cancer risk of all air toxics in New Jersey and is a major source of NOx within the state. Therefore, per NJ DEP recommendations, construction projects involving non-road diesel construction equipment operating in a small geographic area over an extended period of time shall implement the following measures to minimize the impact of diesel exhaust:
 - 1) All on-road vehicles and non-road construction equipment operating at, or visiting, the construction site shall comply with the three minute idling limit, pursuant to N.J.A.C. 7:27-14 and N.J.A.C. 7:27-15. Contractor shall purchase "No Idling" signs to post at the site to remind subcontractors to comply with the idling limits. Signs are

available for purchase from the Bureau of Mobile Sources at 609/292-7953 or <http://www.stophesoot.org/sts-no-idle-sign.htm>.

- 2) All non-road diesel construction equipment greater than 100 horsepower used on the project for more than ten days shall have engines that meet the USEPA Tier 4 non-road emission standards, or the best available emission control technology that is technologically feasible for that application and is verified by the USEPA or the CARB as a diesel emission control strategy for reducing particulate matter and/or NOx emissions.
 - 3) All on-road diesel vehicles used to haul materials or traveling to and from the construction site shall use designated truck routes that are designed to minimize impacts on residential areas and sensitive receptors such as hospitals, schools, daycare facilities, senior citizen housing, and convalescent facilities.
 - b. Contractor will be liable for the effects of off-site particulate dust and/or odors during construction and shall take steps to minimize the impact of air pollution from these activities.
6. **Hot Work Permit:**
- a. A Hot Work Permit is required for any operation involving “open flame” or “producing heat and/or sparks”.
 - 1) This work includes, but is not limited to, welding, brazing, cutting, grinding, soldering, thawing pipe, torch-applied roofing, or chemical welding.
 - b. Before initiating hot work, ensure precautions are in place as required by NFPA 51B and ANSI Z49.1.
 - c. Make sure an appropriate fire extinguisher is readily available.

B. Related Sections:

1. Section 00870 - Miscellaneous Requirements.
2. Section 01010 - Summary of the Work.
3. Section 01020 - Allowances.
4. Section 01040 - Coordination.
5. Section 02070 - Selective Demolition.
6. **Division 2 through 16 Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.**

1.3 SUBMITTALS

- A. Cutting and Patching Proposal: Submit a proposal describing procedures at least 10 days before the time cutting and patching will be performed, requesting approval to proceed. Include the following information:

1. Location and Extent of Work: Submit key plan indicating room location where work to take place. Describe cutting and patching, indicate methods and show how they will be performed.
2. Changes to Existing Construction: Describe anticipated results. Include changes to structural elements and operating components as well as changes in building's appearance and other significant visual elements.
3. Products: List products to be used and firms or entities that will perform the Work. Provide samples and field mock-up as indicated or requested by the Architect.
 - a. Samples and field mock-up shall match existing surfaces and colors.
 - b. Obtain Architect's approval prior to proceeding with work.
4. Schedule and Dates: Provide work schedule, indicate when cutting and patching will be performed.
5. Utilities: List utilities that cutting and patching procedures will disturb or affect. List utilities that will be relocated and those that will be temporarily out of service. Indicate how long service will be disrupted.
6. Structural Elements: Where cutting and patching involve adding reinforcement to structural elements, obtain approval of cutting and patching proposal before cutting and patching. Approval does not waive right to later require removal and replacement of unsatisfactory work.

1.4 QUALITY ASSURANCE

- A. Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio.
- B. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety. Coordinate cutting of operating elements with other plumbing, HVAC, electrical or other trades.
- C. Miscellaneous Building Elements: Do not cut and patch any building elements or related components in a manner that could change their operation, load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety.
- D. Visual Requirements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in Architect's opinion,

reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

1. Engage experienced installers or fabricators for all work.
- E. Cutting and Patching Conference: Before proceeding, meet at Project site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.
- F. Mock-Ups: Provide mock-ups for Architect approval for each proposed patching method. Do not proceed with patching work until obtaining of approvals from the Architect.

1.5 WARRANTY

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during cutting and patching operations, by methods and with materials so as not to void existing warranties. Confirm existing warranties with Owner prior to starting of work.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Comply with requirements specified in other Sections of these Specifications.
- B. Existing Materials: Use materials identical to existing materials. For exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible.
1. If identical materials are unavailable or cannot be used, use materials that, when installed, will match the visual and functional performance of existing materials.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine surfaces to be cut and patched and conditions under which cutting and patching are to be performed.
1. Compatibility: Before patching, verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
 2. Proceed with installation only after unsafe or unsatisfactory conditions have been corrected.

B. Inspection:

1. Prior to start of any work the General Construction Work Contractor shall verify all existing work area conditions; building lines, lengths, corners and all other dimensions.
 - a. Copies of all surveys performed by the General Contractor shall be submitted to the Architect in two copies and shall include layout drawings and data sheets.
2. The General Construction Work Contractor shall submit information and survey to Subcontractor(s), and the Architect for all required coordination of new construction work.
3. Prior to work of this section, verify information and survey submitted by the General Construction Work Contractor, carefully inspect the existing conditions and verify that materials and surfaces to be altered or removed are the same as noted on the drawings.

C. Discrepancies:

1. In the event of discrepancy of existing conditions, surfaces, etc., immediately notify the Architect.
2. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.

3.2 PREPARATION

- A. Temporary Support: Provide temporary support of Work to be cut.
- B. Protection: Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- C. Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
- D. Existing Services: Where existing services are required to be removed, relocated, or abandoned, bypass such services before cutting to avoid interruption of services to occupied areas.

3.3 PERFORMANCE

- A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.

1. The Contractor shall provide cutting, patching, relocations, and or re-installations of existing construction to provide for installation of other components or performance of other construction associated with his/her work, and subsequently patch and finish as required to restore surfaces to their original condition. Work shall be performed whether or not shown on drawings.
2. The General Construction Work Contractor shall provide all required and necessary work including all required cutting, and preparation work to allow for installation of miscellaneous structural steel, supports, etc. The General Construction Work Contractor shall subsequently patch as required to restore and prepare surfaces to receive new finishes.
3. All repairing, patching, piecing out, filling in, restoring and refinishing shall be neatly done by craftsmen skilled in their respective trades and completed in proper manner to leave same in condition satisfactory to the Architect.
4. All new work shall be installed plumb, level, true, and shall be shimmed as required to cover any irregularities in substrates.

B. Cutting:

1. Before cutting is started in any location the Contractor shall carefully investigate conditions as to human and structural safety, existing piping, wiring and items concealed, and wherever same interfere with the work they shall be properly relocated, rerouted or removed as the case may be, at no increase to contract price.
2. Cut existing construction by sawing, drilling, breaking, chipping, grinding, and similar operations, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
3. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
4. Existing Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
5. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
6. Do not disturb any structural work, plumbing, steam, gas, or electric work without approval of Architect.

7. Proceed with patching after construction operations requiring cutting are complete.
 - a. Remove, cut, alter, replace, patch and repair existing work as necessary to install new work.
 8. Existing work disturbed or removed as a result of performing required new work, shall be patched, repaired, reinstalled or replaced with new work, and refinished and left in as good condition as existing before commencing work.
- C. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections of these Specifications.
1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.
 2. Field Mock-up: Prepare field mock-up of proposed restoration method, as requested or required by the Architect. Obtain Architect's approval prior proceeding with actual work.
 3. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate or minimize evidence of patching and refinishing.
 4. Ceilings: Cut, remove, patch, repair, install new including hanging assemblies and finish ceilings as necessary to provide an even-plane surface of uniform appearance.
 5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition.

3.4 CLEAN-UP

- A. Areas where demolition is in progress within or adjacent to Owner occupied areas shall be broom cleaned at the end of each working day.
- B. Do not burn materials or debris on premises.
- C. Do not allow demolished materials to accumulate inside or outside of existing building.
- D. Remove from the site all rubbish and debris resulting from work of this section.
- E. If the Contractor fails to clean-up their debris within 24 hours, the Owner has the right to clean-up the debris left by the Contractor. All associated clean-up costs, incurred by the Owner, will be back-charged to the Contractor.

3.5 PROTECTION

- A. Contractor shall provide all other necessary temporary enclosures, guardrails, barricades, etc. to adequately protect all workers and public from possible injury. Provide all necessary temporary partitions, enclosures, coverings of approved materials and construction for the exclusion of weather and for confining dust and debris.
- B. Contractor shall be responsible for the protection of the existing building, facilities and improvements within the areas where work is being done. Any disturbance or damage to the work, the existing building, and improvements, equipment or any impairments of facilities resulting from his/her work, shall be promptly restored, repaired, or replaced by the responsible Contractor at no extra cost to the Owner.
- C. Adequate protection of persons and property shall be provided at all times, including Saturdays, Sundays and holidays, and during time work is being performed and after working hours. Protection shall include barricade fencing, traffic control, dust partitions, weather protection and other means as required.
- D. Preserve and protect all existing vegetation such as trees, shrubs, and grass on or adjacent to the site and along access to the site. Be responsible for all unauthorized cutting or damaging of trees and shrubs, including damage due to careless operation of equipment, stock-piling of materials or tracking of grass areas by equipment.

3.6 SALVAGE

- A. Partial Removal: Items of salvable value to Contractor may be removed from structure as work progresses. Salvage items must be transported from site as they are removed.
 - 1. Storage or sale of removed items on site will not be permitted.
- B. Items designated on drawings or in specifications to remain the property of the Owner, or to be reused, shall be removed, and securely stored with care to prevent damage. Repair or replace such items damaged in removal.
- C. Before transporting non-designated, removed items from the site, contact Architect for decision as to what items if any are to remain the property of the Owner. Items retained by the Owner will be transported by him/her to his/her storage area.

3.7 STANDARDS

- A. All demolition work shall be performed in accordance with the applicable rules and regulations and the Codes and Ordinances of local, State and Federal authorities, and in accordance with the requirements of public utility corporations.
- B. Work shall satisfy requirements of the Occupational Safety and Health Act of 1970 with amendments.

- C. Work not affected by more stringent requirements of regulatory agencies shall satisfy the provisions of ANSI-A10.6-2006 (R2016) - American National Standard Safety Requirements for Demolition.
- D. Confine the movement and storage of vehicles, equipment and materials to such routes and locations as may be designated by the Owner and Architect.
- E. The building and grounds will be maintained in a clean and orderly manner so as to conform with all local fire safety regulations and in accordance with the latest editions of the Safety Code of the National and State Board of Fire Underwriters.

3.8 INGRESS, EGRESS AND CIRCULATION

- A. The Prime Contractor shall be responsible for performing his/her construction activities in such manner to maintain ingress and egress for visitors and occupants of Owner-occupied areas and to continuously maintain all required emergency exits from and circulation between existing facilities. Passageways for emergency exits shall be kept continuously free from debris, construction equipment, tools, stockpiles or materials, and other hazards to speedy evacuation. The Contractor shall provide all necessary temporary work as prudence and good practice may dictate and in accordance with Applicable Law and Authorities having jurisdiction to obtain and maintain all such ingress, egress and circulation requirements. The Prime Contractor shall be responsible for providing coordination of this temporary work between Subcontractor(s), as directed by the Architect. All temporary work shall be removed when no longer required.

3.9 NON-INTERFERENCE WITH OWNER'S OPERATIONS

- A. Work under this Contract will be performed when the existing buildings are occupied. Coordinate with Owner's schedule and operation, obtain Owner's approval prior to proceeding with work.
- B. Contractor shall acquaint himself/herself with the general character of the Owner's operations prior to commencing work and shall schedule his/her work to avoid interference therewith. The sequence of alteration operations shall be in accordance with a schedule of contract operations approved by the Owner and Architect.
- C. The Contractor shall not start work until the schedule has been approved in writing by the Architect and the Owner. The Contractor shall not perform work in occupied areas without giving the Owner 72 hours written notice of his/her intention to work in occupied areas.
- D. The Contractor shall expedite placing orders and submission of shop drawings for equipment required to complete work under this Contract to ensure delivery of all equipment with adequate time allowed to complete the installations to conform to the project completion date.

END OF SECTION 01050

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SECTION 01200 - PROJECT MEETINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements for project meetings including but not limited to:
 - 1. Pre-Construction Conference
 - 2. Pre-Installation Conferences
 - 3. Coordination Meetings
 - 4. Progress Meetings
- B. Construction Schedule requirements is specified in another Division-1 Section - 01380.

1.3 PRE-CONSTRUCTION CONFERENCE

- A. The Architect will schedule a pre-construction conference and organizational meeting at the Project site or other convenient location no later than 15 days after execution of the Agreement and prior to commencement of construction activities. Conduct the meeting to review responsibilities and personnel assignments.
- B. Attendees: The Owner, Architect, Construction Manager and their consultants, the Prime Contractor and their superintendents, major subcontractors, manufacturers, suppliers and other concerned parties shall each be represented at the conference by persons familiar with and authorized to conclude matters relating to the work.
- C. Agenda: Discuss items of significance that could effect progress including such topics as:
 - 1. Tentative construction schedule
 - 2. Critical work sequencing
 - 3. Designation of responsible personnel
 - 4. Procedures for processing field decisions and Change Orders
 - 5. Procedures for processing Applications for Payment
 - 6. Distribution of Contract Documents
 - 7. Submittal of Shop Drawings, Product Data, and Samples
 - 8. Preparation of record documents
 - 9. Use of the premises

10. Office, Work, and storage areas
11. Equipment deliveries and priorities
12. Safety Procedures
13. First Aid
14. Security
15. Housekeeping
16. Working hours

1.4 PRE-INSTALLATION CONFERENCES

- A. The Prime Contractor to conduct a pre-installation conference at the site before each construction activity that requires coordination with other construction. The installer and representative of manufacturers and fabricators involved in or affected by the installation, and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise the Architect and Construction Manager of scheduled meeting dates.
 1. Review the progress of other construction activities and preparations for the particular activity under consideration at each pre-installation conference, including requirements for:
 - a. Contract Documents
 - b. Options
 - c. Related change orders
 - d. Purchases
 - e. Deliveries
 - f. Shop Drawings, product data and quality control samples
 - g. Possible conflicts
 - h. Compatibility problems
 - i. Time schedules
 - j. Weather limitations
 - k. Manufacturer's recommendations
 - l. Compatibility of materials
 - m. Acceptability of substrates
 - n. Temporary facilities
 - o. Space and access limitations
 - p. Governing regulations
 - q. Safety
 - r. Inspection and testing requirements
 - s. Required performance results
 - t. Recording requirements
 - u. Protection
 2. Record significant discussions and agreements and disagreements of each conference along with the approved schedule. Distribute the record of the meeting to everyone concerned, promptly, including the Owner, the Architect and the Construction Manager.

3. Do not proceed if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of work and reconvene the conference at the earliest feasible date.

1.5 COORDINATION MEETINGS

- A. The Prime Contractor for General Construction will conduct project coordination meetings at regularly scheduled times convenient for all parties involved. Project coordination meetings are in addition to specific meetings held for other purposes, such as regular progress meetings and special pre-installation meetings.
- B. Request representation at each meeting by every party currently involved in coordination or planning for the construction activities involved.
- C. Record meeting results and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from each meeting.

1.6 PROGRESS MEETINGS

- A. Regular Progress Meetings: The Construction Manager will schedule and conduct regular progress meetings as follows:
 1. Weekly meetings with the Prime Contractor and Subcontractors
 2. Bi-weekly meeting with the Owner, Architect, Contractor and Subcontractors.
- B. Special Meetings will be conducted as required by the progress of the work
- C. Location of the meetings: Meetings shall be conducted at the field office of the Owner's Representative.
- D. Attendance: Attendance at Construction Meetings shall be as follows:
 1. The Owner shall be in attendance at bi-weekly meetings and at any special meetings as appropriate to the agenda.
 2. The Construction Manager, Architect and his professional consultants as needed at bi-weekly meetings and at any special meetings an appropriate to the agenda.
 3. The Contractor at all construction meetings.
 4. Subcontractors as appropriate to the agenda.
 5. Suppliers as appropriate to the agenda.
 6. The Owner's Representative at all construction meetings.

- E. Agenda: Review and correct or approve minutes of the previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to the current status of the project.
- F. Contractor's Construction Schedule:
 - 1. Review the present and future needs of each entity present, including such items as:
 - a. Interface requirements
 - b. Time
 - c. Sequences
 - d. Deliveries
 - e. Off-site fabrication problems
 - f. Access
 - g. Site utilization
 - h. Temporary facilities and services
 - i. Hours of work
 - j. Hazards and risks
 - k. Housekeeping
 - l. Quality and work standards
 - m. Change orders
 - n. Documentation of information for payment requests
- G. Reporting: No later than 3 days after each progress meeting date, distribute copies of minutes of the meeting to each party present and to other parties who should have been present. Include a brief summary, in narrative form, of progress since the previous meeting and report.
- H. Schedule Updating: Revise the construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue the revised schedule concurrently with the report of each meeting.
- I. Attendance by the Prime (Sub) Contractors is mandatory, whether the meetings are weekly, bi-weekly or at whatever interval is determined by the Architect and the Construction Manager.
 - 1. Unless given prior approval by the Construction Manager not to attend meetings, Contractor will be fined \$250.00 for each regularly scheduled meeting for which he/she is not represented by a person in authority who can speak for and/or make decisions for the Contractor.
 - 2. Fine amounts shall be withheld and deducted from the Contract Sum.

END OF SECTION 01200

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SECTION 01380 - CPM SCHEDULE

PART 1 - GENERAL

1.1 SUMMARY

- A. The General Contractor shall prepare and submit a construction schedule based upon input from the Prime Subcontractors as set forth in Section 00800.
- B. The schedule shall include line items for the following information broken down by trade:
 - 1. Contractual milestone dates as set forth in Section 01800.
 - 2. Critical and long-lead item delivery dates
 - 3. Owner activities including move-in/occupancy time
 - 4. Critical inspections or testing
 - 5. Other critical activities appropriate to project
 - 6. Separate activity lines for new building areas and renovation areas
 - 7. Punch list and final completion period
- C. The Construction Schedule shall be completed within thirty (30) days of the notice to proceed. The General Contractor shall distribute copies to the Owner, Architect, Construction Manager and Contractor(s). The General Contractor shall provide a sign-off block for signature by all contractors indicating their acceptance of the schedule. All Contractors shall sign off on the schedule at the job meeting closest to the date of distribution. Failure to submit a monthly schedule update will be grounds for the withholding of payments
- D. Schedule updates shall be provided at least monthly but more often if requested by the Owner or Architect. The monthly update shall be distributed by the General Contractor to all Contractors for purposes of providing input. Each monthly update shall include a progress bar for each activity. The monthly update shall be submitted to the Architect, Construction Manager and Owner each month prior to the requisition cut-off date. Failure to submit a monthly schedule update will be grounds for the withholding of payments.
- E. The project will be scheduled and monitored using a construction schedule; Critical Path method (CPM) techniques. The Contractor for General Construction Work will prepare all schedules and all periodic updates based upon information furnished by the Prime Subcontractors and observations of the work in progress. Revisions of the schedule to reflect changes in the Contractors' plan of performance or modifications of the contract documents will be prepared by the Contractor for General Construction Work.
- F. This section describes the CPM Progress Schedule requirements. The Prime Contractor shall provide all necessary information in connection with their work to

enable the Contractor for General Construction Work to comply with these requirements. Further, each Prime Subcontractor shall provide such information in a timely manner to permit the Contractor for General Construction Work to comply with the time requirements stated herein.

- G. Monthly update conferences will be held with all concerned. At these update conferences, the attendees will review actual progress, planned progress, planned progress for the next period, change orders, job issues, and any schedule changes since the previous update. Attendance is mandatory. Contractor current estimate payments are contingent upon attendance and the provision of satisfactory CPM base schedule and update information. The monthly update conference may be scheduled more frequently when required, at the direction of the Contractor for General Construction.
- H. The Contractor for General Construction Work shall prepare, based upon information obtained from the Contractors, and maintain a detailed Progress Schedule as described below. The schedule shall reflect the Contractor's working schedule and be used to plan, organize and execute the work, record and report actual performance and progress, and show how the Contractor plans to complete all remaining work. The schedule shall be in the form of an activity oriented network diagram (Critical Path Method) I-J format. The principles and definition of the terms used herein shall be as set forth in the Associated General Contractors of America (AGC) publication "The Use of CPM in Construction", Copyright 1976. In the event of discrepancies, this section shall govern the development and utilization of the Progress Schedule.
- I. The completed schedule shall be distributed to all Prime Subcontractors. When the schedule is approved by the Prime Contractor and each Prime Subcontractor, the Owner, Architect, Construction Manager or their agents will review the schedule for conformance with the contract requirements, and it shall become one of the Contract Documents.
 - 1. This schedule may be revised to show changes in the Contractors' method of their agreement that the Progress Schedule represents their intentions and interpretations of the requirements of the contract.

1.2 PRE-BID SCHEDULE

- A. The Pre-bid Schedule outlined in Section 01800 indicates a general sequence of activities leading towards the completion of the contract work within the milestones noted.
- B. The sequence of operations, and the time estimated for activities on the Pre-bid Schedule are shown for information only and are not to be considered binding. Means, Methods, and Procedures are at the discretion of the Prime Contractor and each Prime Subcontractor. Specific interfaces between Contractors will be planned

in the Progress Schedule process described below. However, the contract completion date and any milestone dates for substantial completion are binding. The actual date when written Notice to Proceed is issued will be used in the CPM Logic Diagrams to calculate the milestone dates for those dates contingent on the Notice to Proceed date, and will be used to prepare the Official Construction Schedule, using the Contractor's proposed sequence of work and duration of activities.

1.3 PRELIMINARY SCHEDULE

- A. Within (10) working days of Notice to Proceed (NTP), the Prime Contractor and each Prime Subcontractor shall participate in an initial scheduling conference. Attendance is mandatory for all Contractors. Each Contractor will submit as a minimum, a detailed ninety (90) day work plan in arrow/activity format for approval together with a generalized project schedule network, in summary form, meeting the contractual milestone dates. During this meeting the schedule will be developed from input furnished by each Contractor. Until the formal schedule has been developed and is approved by the Architect and Construction Manager, the ninety (90) day work plan will serve as the official construction schedule after the review and coordination with each Prime Subcontractor.
- B. Where such coordinated work is required, Contractor No. 1, (or Single Overall Contract), shall schedule reasonable durations and provide proper advance notice for the work of other Prime Subcontractors to the extent that normal time work is accommodated without the need for overtime or shift work.
- C. The Contractor for General Construction shall develop a 90-day Schedule within ten (10) working days after the initial scheduling conference, utilizing input from Prime Subcontractors. This schedule will be in arrow network form, with each node calendar date based on "early start, early finish" of each work activity. The 90-day Schedule will contain work activities over the first ninety (90) days, estimated duration for each work activity will be fifteen (15) work days or will show the key procurement items which will occur during the first ninety (90) days of the project in addition to the field work.

1.4 DETAILED SCHEDULE

- A. Within thirty (30) calendar days of Notice to Proceed (NTP), the Prime Contractor and all Prime Subcontractors shall participate in a detailed scheduling conference. Attendance is mandatory. Each Prime Subcontractor shall submit network based coordinated CPM Schedule information to the Contractor for General Construction for review. Each Prime Subcontractor shall work with the Contractor for General Construction Work to prepare the CPM network in a sketch format and, unless otherwise approved by the Owner's Representative, shall meet each consecutive day for eight (8) hours minimum until a useable, logical CPM schedule network, responsive to the project requirements, has been developed as determined by the Owner's Representative. Non-critical path activities shall be scheduled to reflect the

float status shown on the Preliminary Construction Schedule unless otherwise approved by the Construction Manager and the Architect.

- B. Based upon CPM Schedule information submitted, the Contractor for General Construction will draft and computerize the schedule and issue it for review and comment. In the event the milestone dates indicated by the Progress Schedule exceed the contractual dates, each Contractor shall review and revise the logic and time estimates and resubmit to the Contractor for General Construction for review within one (1) week of notification. This procedure shall be followed for all schedule revisions. After changes in the logic and/or time estimated have been agreed upon, another computerized schedule will be generated and referred to the Contractor.
- C. The Detailed Network Diagram shall provide sufficient detail and clarity of form and technique so that the Contractor can plan, schedule and control his/her work properly and the Construction Manager can readily monitor and follow the progress for all portions of work. The Detailed Network Diagram shall comply with the various limits imposed by the Scope of Work and by any contractually specified intermediate milestone dates and completion dates included in the contract. The degree of detail shall be to the satisfaction of the Construction Manager, but the following factors shall have a bearing on the required depth of activity detail:
 - 1. The structural breakdown of the project.
 - 2. The type of work to be performed and the labor trades involved.
 - 3. All purchase, manufacture and delivery activities for all major materials and equipment.
 - 4. Deliveries of Owner furnished equipment.
 - 5. Submittal and approval of shop drawings and material samples.
 - 6. Plans for all key trades and subcontract work.
 - 7. Assignment or responsibility for performing all activities.
 - 8. Access and availability to work areas.
 - 9. Identification of interfaces and dependencies with preceding, concurrent and follow-on contractors.
 - 10. Testing of systems.
 - 11. Planning for phased or total takeover by Owner.
- D. The Progress Schedule will not include every item of work necessary to complete the project. However, each Contractor shall accept responsibility to schedule and complete all items of work within the contractual limits.
- E. The durations as outlined in the Progress Schedule shall be analyzed in detail to determine activity time durations in units of whole working days. Activities shown will have maximum duration of twenty (20) working days, except in the case of the non-construction activities such as procurement of materials and delivery of equipment. All durations shall be the result of definitive manpower and resource planning by the Prime (Sub)Contractors.

1.5 AUTOMATED DATA PROCESSING (ADP)

- A. The mathematical analysis of the Detailed Network Diagram shall be made by computer and a tabulation for each activity shall include as a minimum, the following:
 - 1. Preceding and following event numbers.
 - 2. Activity description.
 - 3. Durations in work days for each activity.
 - 4. Earliest start date (by calendar date).
 - 5. Earliest finish date (by calendar date).
 - 6. Latest start date (by calendar date).
 - 7. Latest finish date (by calendar date).

1.6 SUMMARY SCHEDULE

- A. The Contractor for General Construction shall also prepare and submit on the Initial and all updated schedules, a time-scaled Summary Schedule on a single sheet showing the total project in approximately fifty to one hundred (50) - (100) activities. This schedule will accurately summarize the Detailed Schedule. Each activity will indicate and I and J note that corresponds to the Detailed Schedule. The Summary Schedule shall be updated monthly showing the original as-planned schedule denoted and the current update information denoted.

1.7 COMPLETION REQUIREMENT

- A. The Preliminary Schedule will be completed within thirty (30) calendar days of the Notice to Proceed.
- B. The Progress Schedule (logic diagrams and computer computations) and the Summary Schedule shall be prepared for review within sixty (60) calendar days after Notice to Proceed. The Prime (Sub)Contractor(s) shall review the schedule and note any corrections required as a condition of approval within ten (10) days of the receipt of the schedule. The Contractor for General Construction will prepare a final Progress Schedule for approval of the Prime Contractors within twelve (12) calendar days following receipt of the Prime Subcontractor's comments.
- C. When the Progress Schedule is completed and is within contractual limits, each Prime (Sub)Contractor shall certify in writing on the face of the computer printout and submit it to the Architect and Construction Manger for approval no later than seventy-five (75) calendar days after Notice to Proceed, unless otherwise approved by the Architect and Construction Manager.
- D. The Contractor for General Construction will furnish the Prime Subcontractor two (2) copies of Computer Printouts (computations).

- E. If the Contractor fails to submit the required monthly update material as indicated in this section within ten (10) calendar days, or revisions thereof within the requested time, the Architect may withhold approval of progress payment estimates until such time as the Contractor submits the required information.
- F. Notwithstanding the implementation of the CPM, it shall be the sole responsibility of the Prime (Sub)Contractors to complete the Work within the time of completion and milestone required by the Contract.

1.8 UPDATINGS

- A. The first update shall take place thirty (30) calendar days after the Notice to Proceed with subsequent updates performed monthly at the job site for the duration of the contract.
- B. The Preliminary Schedule will be updated until the Progress Schedule is reviewed and approved by the Contractors.
- C. All update information contained on the 90-day Schedule will be incorporated into the Progress Schedule once the Progress Schedule is accepted.
- D. Each Prime Subcontractor is required to attend and participate in update meetings with the Contractor for General Construction Work and present data prepared in advance, updated as of the end of the updating period, a complete and accurate report of updated procurement items, and construction progress. Each Prime Contractor shall show how it will make up the time list due to non-excused Contractor delays. The following will also be presented and made part of the CPM update:
 - 1. Actual start dates.
 - 2. Actual completion dates.
 - 3. revised logic and changes in activity durations.
- E. Should the projected completion time for any significant work activity as determined by the latest CPM printout of the Progress Schedule indicate more than a critical ten (10) day delay to the project, the Contractor shall submit a revised plan to the Contractor for General Construction, within five (5) calendar days, to recover all lost time and maintain the project schedule. This revised plan is to include a re-sequencing of work activities and/or revisions to the performance time for the affected activities so that remaining milestone completion dates are met.
- F. Each Prime (Sub)Contractor shall be responsible to coordinate its work with the work of other Prime (Sub)Contractors. Each Prime (Sub)Contractor shall not delay and/or interfere with the work of others. Each Prime (Sub)Contractor shall pay all costs for damages and/or delays to other Contractors caused by lack of coordination and/or interference with their work which could not be reasonably avoided.

1.9 CHANGE ORDERS, DELAYS AND EXTENSIONS OF TIME

- A. Extensions of time will only be considered for justifiable delays that are on the critical path and impact milestone dates by exceeding the amount of positive float shown on the approved CPM Schedule. A justifiable delay is delay due to a cause that the Architect, in his/her discretion, determines is unforeseeable, beyond the Contractor's control, and not due to any fault, negligence, act, or omission on the part of the Contractor. Positive float is the number of calendar days an activity can be delayed without causing a delay to the critical path or milestone completion dates. The Contractor shall plan construction activities to start on "early start dates" to maintain positive float and shall be responsible for any delays which could have been avoided by starting work on the "early start dates" by lack of continuous effort, and/or by inadequate planning, and coordination of the work. Such delays will not be the basis of an extension of time to any milestone date or additional costs.

- B. When change orders or delays are experienced, the Contractor shall submit to the Architect, a written Time Impact Analysis illustrating the influence of each change or delay on the current Progress Schedule completion date. Each Time Impact Analysis shall include a network analysis demonstrating how the Contractor proposed to incorporate the change order or delay into the Progress Schedule. Additionally, the analysis shall demonstrate the time impact based on the date the change is given to the Contractor, the status of construction at that point in time, and the event time computation of all effected activities. The event times used in the analysis shall be those included in the latest updated copy of the Progress Schedule, closest to the time of delay or as adjusted by mutual agreement. Each time Impact Analysis shall be submitted within seven (7) calendar days after a delay occurs or notice of direction for a change is given to the Contractor. In cases where the Contractor does not submit a time Impact Analysis for a specific change order of delay within the specified period of time, then it is mutually agreed that the particular change order or delay has no time impact on the Contract completion date and no time extension is required. Approval or rejection of each Time Impact Analysis by the Construction Manager and the Architect shall be made within fourteen (14) calendar days after receipt of each Time Impact Analysis unless subsequent meetings and negotiations are necessary.

END OF SECTION 01380

SECTION 01400 - MATERIAL TESTING / QUALITY CONTROL SERVICES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for material testing and quality control services.
 - 1. **Testing and inspecting services are required to verify compliance with requirements specified or indicated and are the responsibility of the Contractor. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.**
- B. Specific quality-control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
 - 1. Quality Control Services is the responsibility of the Contractor.
 - 2. Specified tests, inspections, and related actions do not limit Contractor's quality-control procedures that facilitate compliance with the Contract Document requirements.
 - 3. Requirements for Contractor to provide quality-control services required by Architect, and the Owner or authorities having jurisdiction are not limited by provisions of this Section.
- C. Related Sections include the following:
 - 1. Division 1 Section "Construction Progress Documentation" for developing a schedule of required tests and inspections in AIA Document A201 and Section 01200.
 - 2. Division 1 Section "Cutting and Patching" for repair and restoration of construction disturbed by testing and inspecting activities.
 - 3. Division 2 through 16 Sections for specific test and inspection requirements.

1.3 DEFINITIONS

- A. Quality Control Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and ensure that proposed construction complies with requirements.
- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that completed construction complies with requirements. Services do not include contract enforcement activities performed by Architect
- C. Mockups: Full-size, physical example assemblies to illustrate finishes and materials. Mockups are used to verify selections made under Sample submittals, to demonstrate aesthetic effects and, where indicated, qualities of materials and execution, and to review construction, coordination, testing, or operation; they are not Samples.
 - 1. Mockups establish the standard by which the Work will be judged.
- D. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.

1.4 DELEGATED DESIGN

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
 - 1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.

1.5 REGULATORY REQUIREMENTS

- A. Copies of Regulations: Obtain copies of referenced regulations which also available in Local Public Libraries.

1.6 SUBMITTALS

- A. Qualification Data: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
- B. Delegated-Design Submittal: When requirement is indicated in specific technical section and/or when requested by the Architect, in addition to Shop Drawings, Product Data, and other required submittals, submit a statement, signed and sealed

by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional, indicating that the products and systems are in compliance with performance and design criteria indicated. Include list of codes, loads, and other factors used in performing these services.

C. Schedule of Tests and Inspections: Prepare in tabular form and include the following:

1. Specification Section number and title.
2. Description of test and inspection.
3. Identification of applicable standards.
4. Identification of test and inspection methods.
5. Number of tests and inspections required.
6. Time schedule or time span for tests and inspections.
7. Entity responsible for performing tests and inspections.
8. Requirements for obtaining samples.
9. Unique characteristics of each quality-control service.

D. Reports: Prepare and submit certified written reports that include the following:

1. Date of issue.
2. Project title and number.
3. Name, address, and telephone number of testing agency.
4. Dates and locations of samples and tests or inspections.
5. Names of individuals making tests and inspections.
6. Description of the Work and test and inspection method.
7. Identification of product and Specification Section.
8. Complete test or inspection data.
9. Test and inspection results and an interpretation of test results.
10. Ambient conditions at time of sample taking and testing and inspecting.
11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
12. Name and signature of laboratory inspector.
13. Recommendations on retesting and reinspecting.

E. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.7 QUALITY ASSURANCE

A. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

- B. **Factory-Authorized Service Representative Qualifications:** An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- C. **Installer Qualifications:** A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- D. **Manufacturer Qualifications:** A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance.
- E. **Professional Engineer Qualifications:** A professional engineer who is legally qualified to practice in the jurisdiction where the Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar to those indicated for this Project in material, design, and extent.
- F. **Specialists:** Certain sections of the Specifications require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.
 - 1. Requirement for specialists shall not supersede building codes and similar regulations governing the Work, nor interfere with local trade-union jurisdictional settlements and similar conventions.
- G. **Testing Agency Qualifications:** An agency with the experience and capability to conduct testing and inspecting indicated, as documented by ASTM E 548, and that specializes in types of tests and inspections to be performed.
 - 1. **Preconstruction Testing:** Testing agency shall perform preconstruction testing for compliance with specified requirements for performance and test methods.
 - 2. **Contractor responsibilities include the following:**
 - a. Provide test specimens and assemblies representative of proposed materials and construction. Provide sizes and configurations of assemblies to adequately demonstrate capability of product to comply with performance requirements.
 - b. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
 - c. Fabricate and install test assemblies using installers who will perform the same tasks for Project.

- d. When testing is complete, remove assemblies; do not reuse materials on Project.
 3. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Architect and the Owner with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.
- H. Mockups: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:
1. Build mockups in location and of size indicated or, if not indicated, as directed by Architect .
 2. Notify Architect seven (7) days in advance of dates and times when mockups will be constructed.
 3. Demonstrate the proposed range of aesthetic effects and workmanship.
 4. Obtain Architect's approval of mockups before starting work, fabrication, or construction.
 5. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
 6. Demolish and remove mockups when directed, unless otherwise indicated.

1.8 QUALITY CONTROL

- A. Contractor Responsibilities: Unless otherwise indicated, provide quality-control services specified and required by authorities having jurisdiction.
1. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
 2. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
 3. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
 4. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.

- a. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- B. **Manufacturer's Field Services:** Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing.
- C. **Retesting/Reinspecting:** Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that revised or replaced Work that failed to comply with requirements established by the Contract Documents.
 1. **Testing Agency Responsibilities:** Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
 - a. Notify Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
 - b. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
 - c. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
 - d. Do not release, revoke, alter, or increase requirements of the Contract Documents or approve or accept any portion of the Work.
 - e. Do not perform any duties of Contractor.
 2. **Associated Services:** Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
 - a. Access to the Work.
 - b. Incidental labor and facilities necessary to facilitate tests and inspections.
 - c. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
 - d. Facilities for storage and field-curing of test samples.
 - e. Delivery of samples to testing agencies.
 - f. Preliminary design mix proposed for use for material mixes that require control by testing agency.
 - g. Security and protection for samples and for testing and inspecting equipment at Project site.
 3. **Coordination:** Coordinate sequence of activities to accommodate required quality-assurance and quality-control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
 - a. Schedule times for tests, inspections, obtaining samples, and similar activities.

4. Schedule of Tests and Inspections: Prepare a schedule of tests, inspections, and similar quality-control services required by the Contract Documents. Submit schedule within 30 days of date established for commencement of the Work.
 - a. Distribution: Distribute schedule to Owner, Architect, testing agencies, and each party involved in performance of portions of the Work where tests and inspections are required.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
 1. Provide materials and comply with installation requirements specified in other Sections of these Specifications. Restore patched areas and extend restoration into adjoining areas in a manner that eliminates evidence of patching.
 2. Comply with the Contract Document requirements for Division 1 Section "Cutting and Patching."
 3. Protect construction exposed by or for quality-control service activities.
 4. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 01400

SECTION 01410 - REFERENCES AND INDUSTRY STANDARDS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The work of this Section applies to all Construction Contract Documents including drawings, Division 1 - Miscellaneous Requirements Sections, and Specifications Sections included in Part-2 through Part-6.

1.2 DEFINITIONS

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. "Approved:" The term "approved," when used to convey Architect's action on Contractor's submittals, applications, and requests, is limited to Architect's duties and responsibilities.
- C. "Directed:" Terms such as "directed," "requested," "authorized," "selected," "approved," "required," and "permitted" mean directed by Architect, requested by Architect, and similar phrases.
- D. "Indicated:" The term "indicated" refers to graphic representations, notes, or schedules on Drawings or to other paragraphs or schedules in Specifications and similar requirements in the Contract Documents. Terms such as "shown," "noted," "scheduled," and "specified" are used to help the user locate the reference.
- E. "Regulations:" The term "regulations" includes laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, as well as rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. "Furnish:" The term "furnish" means to supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. "Install:" The term "install" describes operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- H. "Provide:" The term "provide" means to furnish and install, complete and ready for the intended use.
- I. "Installer:" An installer is the Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.

- J. The term "experienced," when used with an entity, means having successfully completed a minimum of five previous projects similar in size and scope to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction, subject to verification by and approval of the Architect.
 - 1. Using a term such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to tradespeople of the corresponding generic name.
- K. "Project site(s)" is the space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

1.3 INDUSTRY STANDARDS

- A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
- B. Publication Dates: Comply with standards in effect as of date of the Contract Documents, unless otherwise indicated.
- C. Conflicting Requirements: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Architect for a decision before proceeding.
 - 1. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.
- D. Copies of Standards: Each entity engaged in construction on Project must be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
 - 1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source and make them available on request.

- E. Abbreviations and Acronyms for Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities indicated in Gale Research's "Encyclopedia of Associations" or in Columbia Books' "National Trade & Professional Associations of the U.S." .

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01410

SECTION 01505 - TEMPORARY FACILITIES

1.1 RESPONSIBILITIES OF CONTRACTOR

A. Contractor is responsible for the following temporary facilities and services:

1. Installation, operation, maintenance and removal of each temporary facility usually considered as its own normal construction activity.
2. Plug in electric cords, extensions cords, supplementary plug in task lighting and special lighting necessary exclusively for his/her own activities.
3. His/Her own storage and fabrication sheds.
4. All hoisting requirements for his/her work.
5. Collection and disposal of debris, hazardous, unsanitary or other harmful waste material from their operations, on a daily basis to trash receptacles, hoppers, containers, dumpsters, etc. furnished by the Contractor.
 - a. **Refer to Section 01050 - Alterations, Cutting, Patching and Refinishing Work which identifies the responsible Contractor for the collection and disposal of debris and Section 01524 - Construction Waste Management for additional information.**
6. Six foot (6'-0") high site enclosure fence, including maintenance and any gates needed. Provide fence relocations as needed during construction.
7. The secure lockup of his/her own tools, materials and equipment.
8. Construction aids and miscellaneous services and facilities necessary exclusively for his/her own construction activities.
9. Temporary storage provisions for work, including offsite provisions, if required.
10. Containerized bottled drinking water units for his/her personnel.
11. Fire protection provisions related to work including fire extinguishers.
12. All personnel safety equipment and provisions for his/her personnel.
13. Environmental protections.
14. Dust and fume control
15. Other temporary facilities and services stated as their responsibility elsewhere in the Project Documents.

16. Temporary toilets in sufficient quantity to suit project needs and including disposable supplies.

1.2 COMPRESSED AIR

- A. Contractor shall furnish his/her own equipment and energy source to provide compressed air required for the completion of work under his/her contract.

1.3 REMOVAL AND RESTORATION OF TEMPORARY FACILITIES

- A. At the completion of the work prior to final payment, Contractor shall remove temporary facilities and work which he/she has been responsible. Refer to Section 01700 for additional requirements.

1.4 UTILITY CONSUMPTION

- A. The Owner shall be responsible and pay all utility costs for electric and water consumption during the construction period.

END OF SECTION 01505

SECTION 01524 - CONSTRUCTION WASTE MANAGEMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for the following:
 - 1. Salvaging nonhazardous demolition and construction waste.
 - 2. Recycling nonhazardous demolition and construction waste.
 - 3. Disposing of nonhazardous demolition and construction waste.
- B. Related Sections include the following:
 - 1. All of Division 1 and attached specifications and drawings that make a part of this contract.

1.3 DEFINITIONS

- A. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.
- B. Demolition Waste: Building and site improvement materials resulting from demolition or selective demolition operations.
- C. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.
- D. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.
- E. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.

1.4 SUBMITTALS

- A. Waste Management Plan: Submit 4 copies of plan within 30 days of date established for the Notice to Proceed.

- B. Records of Donations: Indicate receipt and acceptance of salvageable waste donated to individuals and organizations. Indicate whether organization is tax exempt.
- C. Records of Sales: Indicate receipt and acceptance of salvageable waste sold to individuals and organizations. Indicate whether organization is tax exempt.
- D. Recycling and Processing Facility Records: Indicate receipt and acceptance of recyclable waste by recycling and processing facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.
- E. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.

1.5 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with hauling and disposal regulations of authorities having jurisdiction.
- B. Waste Management Conference: Conduct conference at Project site to comply with requirements in Division 1. Review methods and procedures related to waste management including, but not limited to, the following:
 - 1. Review and discuss waste management plan.
 - 2. Review requirements for documenting quantities of each type of waste and its disposition.
 - 3. Review and finalize procedures for materials separation and verify availability of containers and bins needed to avoid delays.
 - 4. Review procedures for periodic waste collection and transportation to recycling and disposal facilities.
 - 5. Review waste management requirements for each trade.

1.6 WASTE MANAGEMENT PLAN

- A. General: Develop plan consisting of waste identification, and waste reduction work plan. Indicate quantities by weight or volume, but use same units of measure throughout waste management plan.
- B. Waste Identification: Indicate anticipated types and quantities of demolition, site-clearing, and construction waste generated by the Work. Include estimated quantities and assumptions for estimates.

- C. Waste Reduction Work Plan: List each type of waste and whether it will be salvaged, recycled, or disposed of in landfill or incinerator. Include points of waste generation, total quantity of each type of waste, quantity for each means of recovery, and handling and transportation procedures.
1. Salvaged Materials for Sale: For materials that will be sold to individuals and organizations, include list of their names, addresses, and telephone numbers.
 2. Salvaged Materials for Donation: For materials that will be donated to individuals and organizations, include list of their names, addresses, and telephone numbers.
 3. Recycled Materials: Include list of local receivers and processors and type of recycled materials each will accept. Include names, addresses, and telephone numbers.
 4. Disposed Materials: Indicate how and where materials will be disposed of. Include name, address, and telephone number of each landfill and incinerator facility.
 5. Handling and Transportation Procedures: Include method that will be used for separating recyclable waste including sizes of containers, container labeling, and designated location on Project site where materials separation will be located.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 PLAN IMPLEMENTATION

- A. General: Implement waste management plan as approved by Owner / Architect. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.
1. Comply with Division 1 Section "Temporary Facilities" for operation, termination, and removal requirements.
- B. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work occurring at Project site.
1. Distribute waste management plan to entities when they first begin work on-site. Review plan procedures and locations established for salvage, recycling, and disposal.
- C. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

1. Designate and label specific areas on Project site necessary for separating materials that are to be salvaged, recycled, reused, donated, and sold.
2. Comply with Division 1 Section "Temporary Facilities and Controls" for controlling dust and dirt, environmental protection, and noise control.

3.2 SALVAGING DEMOLITION WASTE

- A. Salvaged Items for Sale and Donation: Not permitted on Project site.

3.3 RECYCLING DEMOLITION AND CONSTRUCTION WASTE, GENERAL

- A. General: Recycle beverage containers used by on-site workers.
- B. Recycling Incentives: Revenues, savings, rebates, tax credits, and other incentives received for recycling waste materials shall accrue to Contractor.
- C. Procedures: Separate recyclable waste from other waste materials, trash, and debris. Separate recyclable waste by type at Project site to the maximum extent practical.
 1. Provide appropriately marked containers or bins for controlling recyclable waste until they are removed from Project site. Include list of acceptable and unacceptable materials at each container and bin.
 - a. Inspect containers and bins for contamination and remove contaminated materials if found.
 2. Stockpile processed materials on-site without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
 3. Stockpile materials away from construction area.
 4. Store components off the ground and protect from the weather.
 5. Remove recyclable waste off Owner's property and transport to recycling receiving or processor.

3.4 RECYCLING CONSTRUCTION WASTE

- A. Packaging:
 1. Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in a dry location.
 2. Polystyrene Packaging: Separate and bag materials.

3. Pallets: As much as possible, require deliveries using pallets to remove pallets from Project site. For pallets that remain on-site, break down pallets into component wood pieces and comply with requirements for recycling wood.
4. Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.

B. Wood Materials:

1. Clean Cut-Offs of Lumber: Grind or chip into small pieces.

3.5 DISPOSAL OF WASTE

- A. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.
1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- B. Burning: Do not burn waste materials on-site.
- C. Burying: Do not bury waste materials on-site.
- D. Disposal: Transport waste materials off Owner's property and legally dispose of them.
- E. Washing waste materials into sewers or drains is not permitted.

END OF SECTION 01524

SECTION 01600 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The work of this Section applies to all Construction Contract Documents including drawings, Division 1 - Miscellaneous Requirements Sections, and Specifications sections included in Part-2 through Part-6.

1.2 SUMMARY

- A. Section Includes:
 - 1. General product requirements, including:
 - a. General specification requirements for all products.
 - b. General requirements and procedures for maintenance materials and tools.
 - 2. General requirements for product documentation, including:
 - a. Requirements and procedures for schedule of products.
 - b. General requirements for operation and maintenance data.
 - 3. General procedures for products including:
 - a. Procedures for transportation and handling.
 - b. Procedures for delivery and receiving.
 - c. Procedures for storage.

PART 2 - PRODUCTS

2.1 GENERAL

- A. Components required to be supplied in quantity within a specification section shall be identical, interchangeable, and made by the same manufacturer.
- B. Do not use products removed from existing construction.

2.2 MAINTENANCE MATERIALS AND TOOLS

- A. Maintenance Materials: Parts and materials for repair and maintenance; specific items required are specified in product sections.
 - 1. Provide products and tools which are identical to those used in the work; if necessary to obtain identical items, order at the same time as products to be installed or tools to be used in the work.
- B. Package appropriately and label to show type and quantity of contents.

- C. Deliver, handle, and store in the same manner as products to be installed.
- D. Do not turn over to the owner until date of substantial completion, unless otherwise approved by the owner.
- E. Deliver to the owner; unload.
- F. Obtain receipt prior to final payment.

PART 3 - EXECUTION

3.1 PRODUCTS

- A. It is the contractor's responsibility to select products which comply with the contract documents and which are compatible with one another, with existing work, and with products selected by other contractors.
 - 1. Verify that electrical characteristics of products are compatible with electrical systems; notify architect of all discrepancies.
 - 2. Where visual matching to an established physical sample is required, the Architect's decision will be final.
- B. Do not use any substitute products which have not been approved in accordance with the requirements of the contract documents.
- C. Where the specification is silent on whether substitutions will be considered, substitutions will be considered only when submitted in accordance with AIA A232 and Section 00800.
- D. Products Specified by Reference Standard: Use any product meeting the specification. Provisions of reference standards shall not modify the responsibilities of the Owner or Architect as defined in the contract documents.
- E. Products Specified by Performance Requirements: Use any product meeting the specification.
- F. Products Specified to Match a Physical Sample: Use any product that matches; obtain the Architect's approval.
- G. Products Specified by Listing a Brand Name Product(s) made by listed Manufacturer(s) as the "Basis of Design":
 - 1. Pursuant to N.J.S. 18A:18A-15(d) indicated basis of design brand name product(s) or equivalent made by one of the manufacturers listed will be acceptable and as determined by the Architect.

- H. Products Specified by Listing Brand Name Product(s) Accompanied by Language Indicating that Substitutions Are Allowed: Provide a product meeting the specification; submit substitution request for any brand-name product, that is not listed, in accordance with section 00800.
- I. Products Specified by Listing Manufacturer(s): Provide a product meeting the specification and made by one of the manufacturers listed or an approved equal. Approval of substitutions will be in accordance with AIA A232 and Section 00800.

3.2 SCHEDULE OF PRODUCTS

- A. Prepare a complete schedule of products used, including the following for each product:
 - 1. Manufacturer's name.
 - 2. Brand or trade name.
 - 3. Model number, if applicable.
 - 4. Reference standard, if more than one is applicable.
 - 5. Arrange products in the schedule by specification sections; indicate paragraph where specified.
- B. Prepare and submit a preliminary schedule within 15 working days after award of contract; resubmit when revised; submit final schedule prior to final payment. See additional requirements and milestone dates in section 01800.
- C. Schedule of products shall not be used to obtain approval of substitute products; make separate request for substitution.

3.3 OPERATION AND MAINTENANCE DATA

- A. Provide operation and maintenance data as specified in individual product sections.
 - 1. Provide data sufficient for operation and maintenance by owner without further assistance from the manufacturer.
 - 2. Provide completed data in time for use during owner instruction.
- B. Data Required For Products - General:
 - 1. Name of manufacturer and product.
 - 2. Name, address, and telephone number of subcontractor or supplier.

3. Local source of replacements.
 4. Local source of replaceable parts and supplies.
- C. Product Data: Where product data is specified for inclusion in operation and maintenance data, provide manufacturer's data sheets marked to indicate specific product and product options actually installed; delete inapplicable data.
 - D. Project Record Documents: Provide an additional copy of applicable record documents for inclusion with the operation and maintenance data.
 - E. Coordination Drawings: When coordination drawings are prepared, include a copy with the operating and maintenance data.
 - F. Custom Manufactured Products: Provide all information needed for reordering.
 - G. Finish Materials: Manufacturer's product data, color/texture designations, and manufacturer's instructions for care, cleaning, and maintenance.
 - H. Products Exposed to Weather and Products for Moisture Protection: Manufacturer's product data, recommended inspection schedule and procedures, maintenance and repair procedures, and maintenance materials required.
 - I. Equipment: Provide at least the following information:
 1. Product data giving equipment and function description, with normal operating characteristics and limiting conditions.
 2. Starting, operating, and troubleshooting procedures.
 3. Cleaning and maintenance requirements and procedures.
 4. External finish maintenance requirements.
 5. List of maintenance materials required.
 6. List of special tools required.
 7. Parts list: List all replaceable parts, with ordering data.
 8. Recommended quantity of spare parts to be maintained in storage.
 - J. Systems: Provide overall function description, with diagrams, prepared especially for this project.

- K. Form of Data: Prepare data in the form of an instructional manual.
1. Arrange contents logically, using section numbers and sequence of sections indicated on the table of contents of this project manual.
 2. When multiple volumes are used, arrange by related subjects; identify contents in cover title.
 3. Assemble into 3-ring binders with maximum 2-inch ring size.
 - a. Hardback, cleanable plastic covers.
 - b. Identify each book with title "Operation and Maintenance Instructions" and project name.
 - c. Page size 8-1/2 by 11 inches, maximum.
 - d. Prepare special typewritten data on minimum 20-pound paper.
 - e. Provide tabbed divider for each product and system.
 - f. Drawings: Bind in with other data; provide reinforced binding edge; fold larger drawings to size of pages.
 - 1) Do not use pockets or loose drawings.
 4. Provide table of contents for each volume listing:
 - a. Name of the project.
 - b. Name, address, telephone number, and contact name of:
 - 1) Architect.
 - 2) Contractor.
 - c. Index of products and systems included in volume.

3.4 TRANSPORTATION AND HANDLING

- A. Require supplier to package finished products in a manner which will protect from damage during shipping, handling, and storage.
- B. Transport products by methods which avoid damage.
- C. Deliver in dry, undamaged condition in manufacturer's unopened packaging.
- D. Provide equipment and personnel adequate to handle products by methods which prevent damage.
- E. Provide additional protection during handling where necessary to prevent damage to products and packaging.
- F. Lift large and heavy components at designated lift points only.

3.5 DELIVERY AND RECEIVING

- A. Arrange deliveries of products to allow time for inspection prior to installation.

- B. Coordinate delivery to avoid conflict with the work and to take into account both the conditions at the site and the availability of personnel, handling equipment, and storage space.
- C. Clearly mark partial deliveries to identify contents, to permit easy accumulation of entire delivery, and to facilitate assembly.
- D. Promptly inspect shipments and remedy damage, incorrect quantity, incompleteness, improper or illegible labeling, and noncompliance with requirements of contract documents and approved submittals.

3.6 STORAGE

- A. No indoor storage areas are available on site.
- B. General Storage Procedures:
 - 1. Store products immediately on delivery.
 - 2. Store products in accordance with manufacturer's instructions, with seals and labels intact and legible.
 - 3. Store in a manner to prevent damage to the stored products and to the work.
 - 4. Store moisture-sensitive products in weathertight enclosures.
 - 5. Store indoors if necessary to keep temperature and humidity within ranges required by manufacturer.
 - 6. Store unpacked and loose products on shelves, in bins, or in neat groups of like items.
 - 7. Arrange storage to provide access for inspection and inventory.
 - 8. Periodically inspect and remedy damage and noncompliance with required conditions.
- C. Loose Granular Materials: Store on solid surfaces in well-drained area; prevent mixing with foreign materials.
- D. Exterior Storage:
 - 1. Cover products subject to weather damage with impervious sheet covering; provide ventilation to avoid condensation.

2. Provide surface drainage to prevent runoff or ponded water from damaging stored products.
3. Prevent damage and contamination from refuse and chemically injurious materials and liquids.
4. Store fabricated products on substantial platforms, blocking, or skids above the ground, sloped to drain.

END OF SECTION 01600

SECTION 01700 - PROJECT CLOSEOUT DOCUMENTS AND PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The work of this Section applies to all Construction Contract Documents including drawings, Specifications, Division 1 - Miscellaneous Requirements Sections, and Specification Sections included in Part-2 through Part-6.

1.2 SUMMARY

- A. Section Includes:

1. Maintenance of Project Record Documents,
2. Record drawings, including As-Built drawings,
3. Record project manual (specifications),
4. Operation and Maintenance Manuals,
5. Warranties,
6. Extra Materials,
7. Submittals required prior to requesting for determining dates of substantial and final completion, and also prior to release of final payment(s),
8. Transmittal of Closeout Project Documents to the Owner,
9. Instructions of Owner's personnel,
10. Final Cleaning.

- B. GENERAL REQUIREMENTS

1. All submittals shall indicate reference to the appropriate Architect's Project Number.

- C. As-Built Drawings:

1. Full-size paper set.
2. Two (2) CD-Roms.

1.3 MAINTENANCE OF PROJECT RECORD DOCUMENTS

- A. Do not use record documents of any type for construction purposes.
- B. Maintain record documents in a secure location at the site while providing for access by the Contractor and the Architect during normal working hours; store in a fire-resistive room or container outside of normal working hours.
- C. Record information as soon as possible after it is obtained.
- D. Assign a person or persons responsible for maintaining record documents.
- E. Record the following types of information on all applicable record documents:
 - 1. Dimensional changes.
 - 2. New and revised details.
 - 3. Actual equipment locations.
 - 4. Locations of utilities concealed in construction.
 - 5. Particulars on concealed products which will not be easy to identify later.
 - 6. Changes made by modifications to the contract; note identification numbers if applicable.
 - 7. New information which may be useful to the Owner, but which was not shown in either the contract documents or submittals.

1.4 RECORD AND AS-BUILT DRAWINGS

- A. During the progress of the installation, the Contractor shall keep a careful record of all changes and variations in the arrangement of his/her work from the layout shown on the Contract Drawings in order that the Owner may be provided with a complete set of all plans (As-Builts) showing the work as actually installed.
 - 1. The Contractor shall maintain complete two (2) sets of opaque prints of the contract drawings, marked to show changes which occur due to his/her work.
 - 2. Where the actual work differs from that shown on the drawings, mark this set to show the actual work.
 - 3. Mark location of concealed items before they are covered by other work.
 - 4. Mark either record contract drawings or shop drawings, whichever are best suited to show the change.

5. Where changes are marked on record shop drawings, mark cross-reference on the applicable contract drawing.
 6. When the Contractor is required by a provision of a modification to prepare a new drawing, rather than to revise existing drawings, obtain instructions from the Architect as to the drawing scale and information required.
 7. Keep drawings in labeled, bound sets.
 - a. Mark with red pencil.
 - b. Mark work of separate contracts with different colors of pencils.
 8. Incorporate new drawings into existing sets, as they are issued.
 9. Where record drawings are also required as part of operation and maintenance data submittals, make copies from the original record drawing set.
 10. As-Built Drawing Format to be submitted to the Architect:
 - a. One (1) complete, legible full-size paper (hard copy) As-Built drawing set with the following information on each page:
 - 1) Note: "As-Built" drawing,
 - 2) Contractor's Firm name,
 - 3) Date.
 - b. Two (2) copies, pdf format CD-Rom, scanned As-Built drawings of the hard copy furnished to the Owner (indicated above) shall be furnished to the Owner and the Architect and as directed by the Architect.
- B. Record drawings shall be provided for **all work** including but not limited to the following:
1. General Construction Work

1.5 PROJECT SPECIFICATION MANUAL

- A. The Contractor shall maintain a complete copy of the project specification manual, marked to show changes which occur due to his/her work.
- B. Where the actual work differs from that shown in the project manual, mark the record copy to show the actual work.
 1. Include a copy of each addendum and modification to the contract.
 2. In addition to the types of information required on all record documents, record the following types of information:
 - a. Product options taken, when the specification allows more than one.
 - b. Product substitutions.
 - c. Proprietary name and model number of actual products furnished, for each product, material, and item of equipment specified.

- d. Name of the supplier and installer, for each product for which neither a product data submittal nor a maintenance data submittal was specified.

1.6 OPERATION AND MAINTENANCE MANUALS

- A. Assemble a complete set of operation and maintenance data indicating the operation and maintenance of each system, subsystem, and piece of equipment not part of a system. Include operation and maintenance data required in individual Specification Sections and as follows:
 - 1. Operation Data:
 - a. Emergency instructions and procedures.
 - b. System, subsystem, and equipment descriptions, including operating standards.
 - c. Operating procedures.
 - d. Description of controls.
 - 2. Maintenance Data:
 - a. Manufacturer's information, including list of spare parts.
 - b. Name, address, and telephone number of Installer or supplier.
 - c. Maintenance procedures.
 - d. Maintenance and service schedules for preventive and routine maintenance.
 - e. Maintenance record forms.
 - f. Sources of spare parts and maintenance materials.
 - g. Copies of maintenance service agreements.
 - h. Copies of warranties and bonds.
- B. Organize operation and maintenance manuals into suitable sets of manageable size. Bind and index data in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, with pocket inside the covers to receive folded oversized sheets. Identify each binder on front and spine with the printed title "OPERATION AND MAINTENANCE MANUAL," Project name, and subject matter of contents.
- C. Operation and Maintenance Manuals must be submitted to the Architect. Approval must be obtained before issuing Final Certificate of Payment.

1.7 WARRANTIES

- A. Submittal Time: Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.
- B. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.

1. Bind warranties and bonds in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
 2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
 3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
 4. Warranty manual must be submitted to the Architect for review. Architect's approval must be obtained before issuing final payment.
- C. Provide additional copies of each warranty to include in operation and maintenance manuals.

1.8 SUBMITTAL REQUIREMENTS - SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete in request.
1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
 2. Advise Owner of pending insurance changeover requirements.
 3. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 4. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 5. Prepare and submit Project Record Documents, operation and maintenance manuals, Final Completion construction photographs and digital images on CD Rom, damage or settlement surveys, and similar final record information.
 6. Deliver tools, spare parts, extra materials, and similar items to location designated by Owner. Label with manufacturer's name and model number where applicable.
 7. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.

8. Complete startup testing of systems.
 9. Submit test/adjust/balance records.
 10. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
 11. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
 13. Complete final cleaning requirements, including touch-up painting.
 14. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- B. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.
1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
 2. Results of completed inspection will form the basis of requirements for Final Completion.

1.9 SUBMITTAL REQUIREMENTS - FINAL COMPLETION

- A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:
1. Submit a final Application for Payment according to the requirements of the Contract Documents.
 2. Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance and signed by the Contractor.
 3. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
 4. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems. Provide statement signed by Owner's representatives stating that they have received the required training.

- B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
 - 1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected. The cost of additional inspections required by the Architect or his/her consultants due to Contractor's failure to complete the punch list will be paid by the Contractor and will be deducted from the Contractor's final payment.
- C. The Contractor is required to obtain all final releases from governmental and regulatory agencies having jurisdiction over the project with the assistance from the Architect and Owner (if required).

1.10 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Preparation: Submit three copies of list to the Architect. Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
 - 1. Organize list of spaces in sequential order, as applicable.
 - 2. Organize items applying to each space by major element, including categories for individual walls, floors and building systems.
 - 3. Include the following information at the top of each page:
 - a. Project name.
 - b. Date.
 - c. Name of Architect.
 - d. Name of Contractor.
 - e. Page number.

1.11 PROJECT RECORD DOCUMENTS

- A. General: Do not use Project Record Documents for construction purposes. Protect Project Record Documents from deterioration and loss. Provide access to Project Record Documents for Architect's reference during normal working hours.
- B. Record Drawings: Maintain and submit one set of blue - or black-line white prints of Contract Drawings and Shop Drawings.
 - 1. Mark Record Prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data,

whether individual or entity is Installer, subcontractor, or similar entity, to prepare the marked-up Record Prints.

- a. Give particular attention to information on concealed elements that cannot be readily identified and recorded later.
 - b. Accurately record information in an understandable drawing technique.
 - c. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.
 - d. Mark Contract Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions, completely and accurately. Where Shop Drawings are marked, show cross-reference on Contract Drawings.
2. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at the same location.
 3. Mark important additional information that was either shown schematically or omitted from original Drawings.
 4. Note Construction Change Directive numbers, Change Order numbers, alternate numbers, and similar identification where applicable.
 5. Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location. Organize into manageable sets; bind each set with durable paper cover sheets. Include identification on cover sheets.
- C. Record Specifications: Submit one copy of Project's Specifications, including addenda and contract modifications. Mark copy to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.
1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
 3. Note related Change Orders, Record Drawings and Product Data, where applicable.
- D. Record Product Data: Submit one copy of each Product Data submittal. Mark one set to indicate the actual product installation where installation varies substantially from that indicated in Product Data.
1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.

2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
 3. Note related Change Orders, Record Drawings, and Record Specifications, where applicable.
- E. Miscellaneous Record Submittals: Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.

1.12 DEMONSTRATION AND TRAINING

- A. Instruction: Instruct Owner's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system.
1. Provide instructors experienced in operation and maintenance procedures.
 2. Provide instruction at mutually agreed-on times.
 3. Schedule training with Owner, through Architect, with at least seven calendar days advance notice.
 4. Coordinate instructors, including providing notification of dates, times, length of instruction, and course content.
- B. Program Structure: Develop an instruction program that includes individual training modules for each system and equipment not part of a system, as required by individual Specification Sections. For each training module, develop a learning objective and teaching outline. Include instruction for the following:
1. System design and operational philosophy.
 2. Review of documentation.
 3. Operation.
 4. Adjustments.
 5. Troubleshooting.
 6. Maintenance.
 7. Repair.

1.13 FINAL CLEANING

- A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
1. Refer to other Division 1 - specification sections for additional cleaning as required and where applicable.

- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:
 - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
 - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
 - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - e. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
 - f. Remove debris and surface dust from limited access spaces.
 - g. Clean transparent materials, including glass in doors. Remove glazing compounds and other noticeable, vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Polish glass, taking care not to scratch surfaces.
 - h. Remove labels that are not permanent.
 - i. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
(1) Do not paint over "UL" and similar labels.
 - j. Replace parts subject to unusual operating conditions.
 - k. Leave Project clean and ready for occupancy.
 - l. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

1.14 TRANSMITTAL TO OWNER

- A. Collect, organize, label, and package ready for reference.
1. Provide cardboard file boxes for submittals.
 2. Provide cardboard drawing tubes with end caps for transparencies.
 3. Bind print sets with durable paper covers.

4. Label each document (and each sheet of drawings) with "PROJECT RECORD DOCUMENTS - This document has been prepared using information furnished by _____" [insert the contractor's name], and the date of preparation.

B. Submit to the Architect for transmittal to the Owner, unless otherwise indicated.

1.15 REMOVE TEMPORARY FACILITIES

A. At the completion of the work prior to final payment, remove all temporary facilities entirely from the site, including, but not limited to, the following:

1. Trailers, temporary toilets, temporary enclosures, dust barriers and other temporary protection devices.

1.16 SUBMITTALS REQUIRED PRIOR TO FINAL PAYMENT

A. Contractor must satisfy all requirements of Sections 01700 and 01900 prior to submitting for Final Payment.

B. A closeout checklist will be provided to the Contractor when he/she is substantially complete. The Contractor is instructed to mark each submittal with the corresponding item number on the checklist. All warranties must have the Owner Name, Project Name, Architect Project Number and Warranty Periods. If all documents are not received in this format, the submittal will be rejected and the Contractor will be instructed to pick these documents up at the Architect's office for correction.

C. Submittals required prior to final payment shall be in accordance with "Checklist" include, but are not limited to, the following items:

1. Completed Operations Insurance Certificate - ACORD Form.
2. Affidavit of Payment of Debts and Claims - AIA Document G706.
3. Affidavit of Release of Liens - AIA Document G706A.
4. Consent of Surety Company to Final Payment - AIA Document G707.
5. Certification of Wages in accordance with New Jersey Prevailing Wage Act, N.J.S.A. 34:11-56.25 et seq.
6. 10% one year Maintenance Bond on the form provided in this specification.
7. Manufacturers' product warranties, Special written guarantees and warranties, maintenance warranty, etc. in accordance with Section 01900, various specification sections and the table of contents of the Project Manual. This is

in addition to the one-year guarantee covered by the Maintenance Bond and in addition to the Contractor's one-year guarantee.

- a. Guarantee shall be signed and sealed by Officer of the Contracting Firm and shall be notarized.
8. Project Record Drawings, (As-Built Drawings), Record Specifications, Record Product Data, and Miscellaneous Record Submittals.
 - a. Note: As-Built Drawings shall be submitted to the Architect.
 9. Operation and Maintenance Manuals and Instructions.
 - a. Note: Operation and Maintenance Manuals shall be submitted to the Architect.
 10. Certificate of Occupancy / Copies of all Building Department inspection approvals.
 11. In accordance with requirements of N.J.S.A. 52:32-44. Contractor must submit accurate list of all subcontractors and suppliers. Contractor must provide a certification that all proofs of business registration for all subcontractors and suppliers are maintained on his/her file.
 12. All approvals and final releases from governmental and regulatory agencies have jurisdiction including, but not limited to: NJDCA, Local Construction Department, NJDEP, etc., as required.

END OF SECTION 01700

CLOSEOUT CHECKLIST

Owner		
Title		
Project #		Contract:
Contractor		
Substantial Completion Date:		Updated:
Refer to Specification Sections 01700 and 01900 for closeout requirements.		
Item No.	Documents & Warranties Required For Closeout	Status
1	Completed Operations Insurance Certificate - ACORD Form	
2	Completed Operation Insurance Statement (Sample Enclosed)	
3	AIA Document G704 Certificate of Substantial Completion	
4	AIA Document G706 Affidavit of Payment of Debts & Claims	
5	AIA Document G706A Affidavit of Release of Liens	
6	AIA Document G707 Consent of Surety to Final Payment	
7	Certification that all wages have been paid - NJ Prevailing Wage Act, N.J.S.A. 34:11-56.25	
8	10% two-year Maintenance Bond - must be on form provided in spec book - sample attached	
9	Record Project Manual indicating changes or company letter stating no changes.	
10	Two Year Contractor's Guarantee Covered by Maintenance Bond - Sample Attached	
11	Operation Instructions & Maintenance Manuals (2 each in 3-ring binder)	
12	Record Drawings. Indicate As-Built drawings with company name, address and date (1 Paper Set & 2 CD's)	
13	Final Payment Requisition & Board Voucher/Invoice (3) Contractor will not be closed out until all paperwork is submitted	
14	Certificate of Approval/Acceptance	
15	Confirmation that FVHD has received "hard copies" (not electronic) of all shop drawing submittals.	
16	Copies of all outstanding certified payroll reports or letter on Contractor's letterhead stating all outstanding certified payroll sheet and manning reports have been sent to the Owner.	
17	Letter on Contractor's letterhead stating date of substantial completion and requesting punch list review to Architect & Engineer	
18	Final Punch list signed and dated indicating completion of all work	
19	Submit accurate list of all subcontractors and suppliers and provide a certification that all proofs of business registration for all subcontractors and suppliers are maintained on his/her file.	
20	Balancing & Testing Reports (HVAC)	
21	Fire Alarm Certification (ELECTRICAL)	
22	Warranties - Refer to Specification Section 01900 for required warranties for each trade	

SECTION 01800 - TIME OF COMPLETION AND LIQUIDATED DAMAGES

PART 1 - GENERAL

1.1 SUMMARY

- A. This section describes the requirements for completion of interim milestone events and final completion of all work required by the contract documents.
- B. Related Sections:
 - 1. Items of Work attached to the "Certificate of Substantial Completion" and establishing "Final Completion Time" as per Section 00800.
- C. This section also establishes the relation of liquidated damages for failure to complete the interim milestone events or final completion requirements within the time requirements stated herein.
- D. **The building (or part of the building) will be occupied at all times. The Contractor shall maintain heat, electric, fire safety systems and emergency egress paths, control dust and water infiltration at all times.**

1.2 TIME FOR COMPLETION

- A. It is understood that the Contractor has a responsibility to complete its work in sequence with the work of the other Contractor(s) and to allow the other Contractor(s) access to the work site so that they may complete their work within the times established.
- B. Completion of the Contract Work by the Contractor shall be time of the essence.
- C. The Contractor shall work overtime, additional shifts, weekends or holidays to complete the work on time with no additional cost to the Owner.
 - 1. Scarce resources will be no excuse for not completing the work on time.
 - 2. **Work may take place during regular shift and second shift (7:00 AM - 10:00 PM) after June 24, 2024 until August 30, 2024; however, the Contractor is required to review and coordinate all work activities with the Architect and School Facilities Director prior to commencing with the work.**
 - a. **Contractor to review permitted work hours to comply with the local "Noise Ordinance".**
 - 3. **Contractor is required to include the cost of any premium time, second shift and weekend work which may be required in their bid to complete the work within the indicated milestone dates.**

- D. Substantial and final completion of the Work shall include but is not limited to final inspection and acceptance by the Local Building Officials.

1.3 BUILDING ENCLOSURE

- A. The building shall be considered "enclosed" when the temporary or permanent doors are hung with either permanent or temporary weather-tight enclosures; any impervious transparent material is acceptable.

1.4 SEQUENCE OF CONSTRUCTION

- A. In order to allow the Prime Contractor and Subcontractor(s) to understand the requirements of the Project, the following general sequence of construction Work will be followed:
 1. Generally, the General Construction Contractor is to schedule, sequence and coordinate the Work with Prime Subcontractors, as required, to logically progress the Work, meeting the overall design intent, construction quality and time of completion. **Schedule inspections and obtain required approvals of all stages of the Work as required by the Local Construction Officials.**
 2. Proper scheduling of the Work includes timely sequencing, preparation, review and approval by the Prime Contractor and **submission of requisite technical and other project submittals and shop drawings** to the Architect for approval to advance the proper, logical progression of the Work.
 3. After mobilization and securing the work site, the General Construction Work Contractor is to perform selective demolition of existing general building construction, layout and coordinate the proposed new building construction with existing construction to remain, as noted on the Construction Drawings.
 - a. Apply for and obtain demolition permit to allow commencement of the Work while permit applications for new Construction are under review by the Construction Official.
 4. Progress the Work of all Trades towards completion, as required, by the Contract Documents to obtain **Substantial Completion** including, inspection and testing by local construction officials, commissioning, testing of Electrical Work to obtain the Certificate of Occupancy.
 5. Provide written formal notification of **Substantial Completion** to the Architect and request Punch-List Observations.
 6. Complete proper preparation, review and approval by the Prime Contractor and submission of all Close-out Documents, Operation and Maintenance Manuals, As-built surveys and drawings to the Architect within contract time required to achieve **Final Completion**.

1.5 PROJECT CONTRACT MILESTONE DATES

A. TIME OF COMPLETION

1. Milestone No. 1

- a. Sign Contract, no later than **twenty (20)** calendar days, Sundays and Holiday's excepted, from **Notice of Award**; on or about **February 23, 2024**.
- b. Contractor submits Bonds and Insurance **ten (10) calendar days from Notice of Award, Sundays and holidays excepted**.
- c. **Notice to Proceed** shall be within **three (3) business days** of date of signing Contract; on or about **March 20, 2024**.

2. Milestone No. 2

- a. **Time Critical submittals** for special equipment, fixtures, etc. shall be submitted within **twenty (20) calendar days from Notice to Proceed**.

3. Milestone No. 3

- a. Submission of all remaining technical shop drawing submittals shall be submitted within **thirty (30) calendar days from Notice to Proceed**.

4. Milestone No. 4

- a. Physical work at the site shall commence on or about **June 24, 2024**.

5. Milestone No. 5

- a. Substantial Completion of the entire project shall be on or before **164 Calendar Days from the Notice to Proceed, August 30, 2024**.
- b. Liquidated Damages - \$2,000.00 / Calendar day of delay.

6. Milestone No. 6

- a. Final Completion of all Work including punch list items and closeout documents, no later than **31 Calendar Days from Substantial Completion, September 30, 2024**.
- b. Liquidated Damages - \$2,000.00 / Calendar day of delay.

1.6 LIQUIDATED AND OTHER DAMAGES

- A. By bidding the Project, the Contractor is accepting that the time allotted for the completion of Work is reasonable. Completion of Work on or about these milestones are prerequisites for the coordinated Work of all Contractors. When the Owner will suffer financial loss and/or extra cost if a milestone task is not completed within the allotted time, the Contractor responsible for the delay in achievement of each milestone, as determined by the Owner's Project Manager and the Architect, shall pay to the Owner a fixed, agreed sum as liquidated damages for each calendar day of delay until the milestone task is substantially completed.
- B. The Liquidated Damages set for above shall be in addition to other consequential losses or damages the Owner may incur by reason of such delay, such as, but not

limited to, the cost of additional architectural and engineering, independent third party inspection and other services resulting from the delay, additional costs to the Owner for payments to other Contractors resulting from delay.

- C. Liquidated Damages are fixed and agreed upon by and between the Contractor and the Owner because of the impracticality and extreme difficulty of fixing and ascertaining the actual damages the Owner would in such event sustain, and said amounts shall be retained from time to time by the Owner for the current periodical payments.
 - 1. The Liquidated Damages set for above are intended to compensate Owner for loss of use during the period of delay, for other delay during construction which may result further delay in substantial and/or final completion dates and for any acceleration costs by other contractors to recover the defaulting contractor's delay.
 - 2. In no way shall costs of Liquidated Damages be construed as a penalty to the Contractor.
- D. The Owner shall have the right to deduct the total amount any Liquidated Damages for which the Contractor may be liable from any monies otherwise due the Contractor, including any retainage under control of the Owner.
- E. The Surety providing the Performance Bond, furnished by the Contractor, will be liable for Liquidated Damages assessed against the Contractor, to the extent that the Contractor shall not make settlement thereof with the Owner.
- F. The Contractor agrees that in the event the Owner is required to incur or advance any additional necessary and reasonable costs (including but not limited to Architect, Attorney or other fees related expenses), as a result of the failure of the Contractor to perform any obligation of this Contract or to perform its obligations in a timely manner as required by the Contract Documents, the Contractor agrees that such additional necessary and reasonable costs shall be borne by the Contractor and may be deducted by the Owner from any payment due the Contractor.
- G. In accordance with N.J.S.A. 18A:18A-19, the Owner shall deduct from the Contract Price, for any wages paid by the Owner to any inspector or inspectors necessarily employed by for the work of this project, for any number of days in excess of the number of days or indicated dates allowed in milestones above. Such sums shall be part of the Liquidated Damages indicated herein after.

END OF SECTION 01800

SECTION 01900 - GUARANTEES AND WARRANTIES

PART 1 - GENERAL

1.1 CONTRACT

- A. Period for all guarantees and warranties shall commence at date of substantial completion for the entire project, as determined by the Architect.
- B. The Contractor's guarantee on all work, covered by Maintenance Bond. . . **Two (2) Yrs.**
 - 1. The Maintenance Bond shall represent a continuing obligation of the Prime Contractor and his/her Subcontractor(s) to repair/replace defective materials and/or labor of products installed in the project for **two (2) years** from the date of Substantial Completion.
- C. Provide all required warranties indicated in specification sections which include but not limited to the following:

1.2 GENERAL CONSTRUCTION WORK

- A. Joint Sealer Assemblies as specified in Section 07900.
 - 1. Special Installer's Warranty: Written warranty, signed by Installer agreeing to repair or replace elastomeric joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.
 - a. Warranty Period: **Five (5) years** from date of Substantial Completion.
 - 2. Special Manufacturer's Warranty: Written warranty, signed by elastomeric sealant manufacturer agreeing to furnish elastomeric joint sealants to repair or replace those that do not comply with performance and other requirements specified in this Section within specified warranty period.
 - a. Warranty Period: **Five (5) years** from date of Substantial Completion.
 - b. Submit two (2) copies of written guarantee for all sealant work of this section signed by the Contractor and the sealant manufacturer for a period of **five (5) years** from the date of acceptance by the Owner.
 - c. Guarantee shall further state that all exterior sealant will be guaranteed against:
 - 1) Adhesive or cohesive failure in joints where movement is under maximum 25% extension or compression.
 - 2) Any crazing greater than 3 mils in depth developing on surface of material.
- B. Aluminum Framed Entrances and Storefronts as specified in Section 08415.
 - 1. Project Warranty: Refer to "Conditions of the Contract" for project warranty provisions.

2. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by an authorized company official.
 - a. Warranty Period: Manufacturer's **two (2) years** standard warranty commencing on the substantial date of completion for the project provided that the warranty, in no event, shall start later than **six (6) months** from the date of shipment by manufacturer.
- C. Aluminum Monumental Swing Doors as specified in Section 08416.
1. Project Warranty: Refer to "Conditions of the Contract" for project warranty provisions.
 2. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by an authorized company official.
 - a. Warranty Period: Manufacturer's **two (2) year** standard warranty commencing on the substantial date of completion for the project provided that the warranty, in no event, shall start later than **six (6) months** from the date of shipment by manufacturer.
- D. Transaction Window Units as specified in Section 08582.
1. Furnish manufacturer's standard warranty document, executed by an authorized Quikserv Corp. officer in which manufacturer agrees to repair or replace windows, drawers and air curtains that fail in materials or workmanship within specified warranty period. This warranty is in addition to, and not a limitation of other rights Owner has under the contract.
 - a. Special Warranty Period:
 - 1) **Two (2) year** parts and labor from date of installation.
 - b. Failures include, but are not limited to, the following:
 - 1) Deterioration of metals, metal finishes, and other materials beyond normal weathering and use.
 - 2) Structural failures including deflections exceeding 1/4 inch.
 - 3) Failure of welds.
- E. Finish Hardware as specified in Section 08700.
1. Guarantee workmanship and material provided against defective manufacture. Repair or replace defective workmanship and material appearing within period of **two (2) year** after substantial completion.
 2. Provide **five (5) year** factory warranty on manual surface door closers against defects in material and workmanship from date of occupancy of project.
 3. Provide **three (3) year** factory warranty on exit devices, locksets and overhead stops against defects in material and workmanship from date of occupancy of project.
 4. Provide **three (3) year** factory warranty on locksets against defects in material and workmanship from date of occupancy of project.

F. Glass and Glazing as specified in Section 08800.

1. Manufacturer's Special Warranty on Coated-Glass Products: Written warranty, made out to Owner and signed by coated-glass manufacturer agreeing to furnish replacements for those coated-glass units that deteriorate as defined in "Definitions" Article, f.o.b. the nearest shipping point to Project site, within specified warranty period indicated below.
 - a. Warranty Period: **Ten (10) years** from date of Substantial Completion.
2. Fabricator's Special Warranty on Insulating Glass: Written warranty, made out to Owner and signed by insulating-glass fabricator agreeing to furnish replacements for insulating-glass units that deteriorate as defined in "Definitions" Article, f.o.b. the nearest shipping point to Project site, within specified warranty period indicated below.
 - a. Warranty Period: **Ten (10) years** from date of Substantial Completion.

G. Security Window Film as specified in Section 08870.

1. Manufacturer and the Authorized Window Film Dealer (collectively referred to as "Seller") warrant for **twelve (12) years** from installation, and provided that the product is maintained in accordance with the Window Care Instructions below, that the Safety & Security Window Film will:
 - a. Maintain Adhesion Properties without blistering, bubbling, or delaminating from the glass,
 - b. Maintain Appearance without discoloration,
 - c. Maintain Strength, Tear, and Penetration Resistant Properties as defined in product literature.

H. Security Glazing (Alternate Bid) as specified in Section 08871

1. General: Submit warranties provided by the manufacturer agreeing to repair or replace defective material or workmanship within the specified warranty periods, starting from the date of substantial completion.
 - a. Laminated Security Glazing: Submit a **ten (10) year** warranty against delamination.
 - b. Insulated Security Glass Units: Submit a **ten (10) year** warranty against defects including loss of seal, interior clouding, and discoloration.

END OF SECTION 01900

PART 2

GENERAL CONSTRUCTION WORK

SECTION 02070 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 DESCRIPTION OF WORK

- A. Extent of selective demolition work is indicated on the drawings.
- B. Type(s) of Selective Demolition Work: Demolition requires the selective removal and subsequent offsite disposal of the following:
 - 1. Portion(s) of both buildings structure as indicated on drawings and as required to accommodate new construction.
 - 2. Removal and protection of existing fixtures and equipment items indicated as "salvage", and reinstallation and/or deliver to the Owner.
- C. Related Work Specified Elsewhere:
 - 1. Remodeling construction work and patching is included within the respective sections of specifications, including removal of materials for re-use and incorporated into remodeling or new construction.

1.3 SUBMITTALS

- A. Proposed Demolition Activities: Submit schedule indicating proposed methods and sequence of operations for selective demolition work to Owner's Representative for review prior to commencement of work. Provide starting and ending dates for each activity as appropriate.
 - 1. Include coordination for shut-off, capping, and continuation of utility services, as required, together with details for dust and noise control protection.
 - 2. Provide detailed sequence of demolition and removal work to ensure uninterrupted progress of Owner's on-site operations.
 - 3. Sequence construction so as to minimize obstruction of exits and provide temporary alternate exits, as required by authorities having jurisdiction.
 - 4. Coordinate with Owner's continuing occupation of portions of both existing buildings, and with Owner's reduced usage during summer months.
- B. Photographs: Photograph existing conditions of both structures, surfaces, equipment or surrounding properties which could be misconstrued as damage resulting from selective demolition work; file with Owner's Representative prior to starting work.

- C. Project Record Documents: Indicate unanticipated structural, electrical, or mechanical conditions.

1.4 JOB CONDITIONS

- A. Occupancy: Owner will be continuously occupying areas of both buildings immediately adjacent to areas of selective demolition. Conduct selective demolition work in manner that will minimize need for disruption of Owner's normal operations. Provide minimum of 72 hours advance notice to Owner of demolition activities which will severely impact Owner's normal operations.
- B. Condition of Structures: Owner assumes no responsibility for actual condition of items or structures to be demolished.
 - 1. Conditions existing at time of commencement of contract will be maintained by Owner insofar as practicable. However, variations within both structures may occur by Owner's removal and salvage operations prior to start of selective demolition work.
- C. Protections: Provide temporary barricades and other forms of protection, as required, to protect Owner's personnel and general public from injury due to selective demolition work.
 - 1. Provide protective measures , as required, to provide free and safe passage of Owner's personnel and general public to and from occupied portions of both buildings.
 - 2. Protect existing finish work, from being damaged during the project, which is to remain in place and becomes exposed during demolition operations.
 - 3. Protect floors with suitable coverings so as to leave the flooring in same condition at end of job.
 - 4. Construct temporary insulated solid dustproof partitions, where required, to separate areas where noisy or extensive dirt or dust operations are performed. Equip partitions with dustproof doors, if required.
 - 5. Remove protections at completion of work.
- D. Damages: Promptly repair damages caused to adjacent facilities by demolition work at no cost to Owner, including but not limited to concealed interior and exterior utility lines not properly investigated by the contractor, prior to commencement of demolition work.
- E. Traffic: Conduct selective demolition operations and debris removal in a manner to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities.
 - 1. Do not close, block or otherwise obstruct streets, walks or other occupied or used facilities without written permission from authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.
- F. Explosives: Use of explosives will not be permitted.

- G. Utility Services: Maintain existing interior utilities indicated to remain, keep in service, and protect against damage during demolition operations.
 - 1. Do not interrupt existing utilities serving occupied or used facilities, except when authorized in writing by authorities having jurisdiction. Provide temporary services during interruptions to existing utilities, as acceptable to governing authorities.

PART 2 - PRODUCTS (Not Applicable).

PART 3 - EXECUTION

3.1 INSPECTION

- A. Prior to commencement of selective demolition work, inspect areas in which work will be performed.
 - 1. **Photograph existing conditions of structure, surfaces, equipment or surrounding properties which could be misconstrued as damage resulting from selective demolition work; file with Owner's Representative prior to starting work.**
 - 2. Commencement of work shall constitute acceptance of conditions. Any necessary remedial work required to correct any unsatisfactory conditions, found after the start of installation, will be provided at no cost to the Owner.
 - 3. Prior to the commencement of work review the demolition activities with the Owner's representative to identify additional salvage items requested by the Owner.

3.2 PREPARATION

- A. Cover and protect furniture, equipment and fixtures to remain from soiling or damage when demolition work is performed in rooms or areas from which such items have not been removed.
- B. Erect and maintain dust-proof partitions and closures, as required, to prevent spread of dust or fumes to occupied portions of both buildings.
 - 1. Provide weatherproof closures for exterior openings resulting from demolition work.
- C. Locate, identify, stub off and disconnect utility services that are not indicated to remain.
 - 1. Provide by-pass connections as necessary to maintain continuity of service to occupied areas of building. Provide minimum of 72 hours advance notice to Owner if shut-down of service is necessary during change-over.

3.3 DEMOLITION

- A. Perform selective demolition work in a systematic manner. Use such methods, as required, to complete work indicated on Drawings in accordance with demolition schedule and governing regulations.
 - 1. Locate demolition equipment throughout structure and promptly remove debris to

avoid imposing excessive loads on supporting walls, floors or framing.

2. Provide services for effective air and water pollution controls, as required by authorities having jurisdiction.
 3. For interior slabs on grade, use removal methods that will not crack or structurally disturb adjacent slabs or partitions. Use power saw where possible.
- B. If unanticipated mechanical, electrical or structural elements which conflict with intended function or design are encountered, investigate and measure both nature and extent of the conflict. Submit report to Owner's Representative / Architect in written, accurate detail. Pending receipt of directive from Owner's Representative / Architect rearrange selective demolition schedule as necessary to continue overall job progress without delay.

3.4 SALVAGE MATERIALS

- A. Salvage Items: Where indicated on Drawings as "Salvage-Deliver to Owner", carefully remove indicated items, clean, store and turn over to Owner and obtain receipt.
1. Unless otherwise indicated all materials, items, equipment, etc. resulting from demolition work shall be removed from the site at the Contractor's expense.
- B. Historic artifacts and other articles of historic significance remain the property of the Owner. Notify Owner's Representative if such items are encountered and obtain acceptance regarding method of removal and salvage for Owner.

3.5 DISPOSAL OF DEMOLISHED MATERIALS

- A. Remove debris, rubbish and other materials resulting from demolition operations from each building site. Transport and legally dispose of materials off-site.
- B. If hazardous materials are encountered during demolition operations, notify the Owner's Representative immediately, comply with applicable regulations, laws, and ordinances concerning removal, handling and protection against exposure or environmental pollution.
- C. Burning of removed materials is not permitted on any project site.

3.6 CLEAN-UP AND REPAIR

- A. Upon completion of demolition work, remove tools, equipment and demolished materials from site. Remove protections and leave interior areas broom clean.
- B. Repair demolition performed in excess of that required. Return structures and surfaces to remain to condition existing prior to commencement of selective demolition work. Repair adjacent construction or surfaces soiled or damaged by selective demolition work.

END OF SECTION 02070

SECTION 04200 - UNIT MASONRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 DESCRIPTION OF WORK

- A. Extent of each type of masonry work is indicated on drawings and schedule.
- B. Type of masonry work required includes:
 - 1. Ground Face Architectural CMU.
 - 2. Prefaced Glazed Concrete Block Units.
 - 3. Concrete masonry lintels and bond beams.
 - 4. Mortar and grout.
 - 5. Reinforcement, anchorage, and accessories.
 - 6. Installation of miscellaneous loose steel lintels, plates and other steel fabrications.
- C. Related Work:
 - 1. Section 05120 - Structural Steel.
 - 2. Section 05400 - Miscellaneous Structural Steel.
 - 3. Section 05500 - Metal Fabrications.
 - 4. Section 07900 - Joint Sealer Assemblies.
 - 5. Section 08415 - Aluminum Storefront.
 - 6. Section 09900 - Painting of exposed to view CMU surfaces.

1.3 QUALITY ASSURANCE

- A. Single Source Responsibility for Masonry Units: Obtain exposed masonry units of uniform texture and color, or a uniform blend within the ranges accepted for these characteristics, from one manufacturer for each different product required for each continuous surface or visually related surfaces.
- B. Single Source Responsibility for Mortar Materials: Obtain mortar ingredients of uniform quality, including color for exposed masonry, from one manufacturer for each cementitious component and from one source and producer for each aggregate.
- C. Field Constructed Mock-Ups: Prior to installation of masonry work, erect sample wall panels to further verify selections made for color and textural characteristics, under sample submittals of masonry units and mortar, and to represent completed masonry work for qualities of appearance, materials and construction.
- D. Build mock-up(s) in size of approximately 18" long by 18" high, masonry panel to confirm selection of unit masonry, color and mortar match.

- F. Source Quality Control: Materials and fabrication procedures are subject to inspection and tests in mill, shop, and field, conducted by a qualified inspection agency. Such inspections and tests will not relieve Contractor of responsibility for providing materials and fabrication procedures in compliance with specified requirements.
- G. Masonry Pre-Installation Meeting: Prior to installation of any above-grade masonry work, there shall be a Masonry Pre-Installation Meeting between the General Construction Work Contractor, all masonry Subcontractors (if any), Construction Manager and the Architect. At this meeting, all masonry construction products and procedures shall be reviewed.

1.4 SUBMITTALS

- A. Product Data: Submit manufacturer's product data for each type of masonry unit, accessory, and other manufactured products, including certifications that each type complies with specified requirements.
- B. Samples for Verification Purposes: Submit the following samples:
 - 1. Unit masonry samples for each type of exposed masonry unit required; include in each set the full range of exposed color and texture to be expected in completed work.
 - 2. Colored masonry mortar samples for each color required showing the full range of color which can be expected in the finished work. Label samples to indicate type and amount of colorant used.
- C. Shop Drawings: Submit shop drawings for the following:
 - 1. All locations of Vertical Control Joints for interior concrete masonry unit walls including control joints shown.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver masonry materials to project in undamaged condition.
- B. Store and handle masonry units to prevent their deterioration or damage due to moisture, temperature changes, contaminants, corrosion or other causes.
- C. Limit moisture absorption of concrete masonry units during delivery and until time of installation to the maximum percentage specified for Type I units for the average annual relative humidity as reported by the U.S. Weather Bureau Station nearest project site.
- D. Store cementitious materials off the ground, under cover and in dry location.
- E. Store aggregates where grading and other required characteristics can be maintained.
- F. Store masonry accessories including metal items to prevent deterioration by corrosion and accumulation of dirt.

1.6 REFERENCE STANDARDS

- A. Comply with the current applicable provisions of all codes, regulations, industry standards

and specifications referenced in this section, unless otherwise modified by the requirements of the Contract Documents, including but not limited to the following:

1. ACI 531 Building Code Requirements for Masonry Structures.
2. ACI 531 Commentary on Building Code Requirements for Masonry Structures.
3. ACI 530.1 Specification for Masonry Construction.
4. ASTM C-90 Load Bearing Masonry Units.
5. ASTM C-129 Non-Load Bearing Masonry Units.
6. ASTM C 140 Testing Concrete Masonry Units.
7. ASTM C 270 Standard Specification for Mortar for Unit Masonry
8. ASTM C 780 Test Method for Preconstruction and Construction Evaluation of Mortars for Plain and Reinforced Unit Masonry.
9. ASTM C 1586 Standard Guide for Quality Assurance of Mortars.
10. NCMA TEK Bulletins.
11. ASTM D7957/D7957M Standard Specification for Solid Round Glass Fiber Reinforced Polymer Bars for Concrete Reinforcement.

1.7 PROJECT CONDITIONS

- A. Do not apply uniform floor or roof loading for at least 12 hours after building masonry walls or columns.
- B. Do not apply concentrated loads for at least 3 days after building masonry walls or columns.
- C. Staining: Prevent grout or mortar or soil from staining the face of masonry to be left exposed or painted. Remove immediately grout or mortar in contact with such masonry.
- D. Protect sills, ledges and projections from droppings of mortar.

PART 2 - PRODUCTS

2.1 GENERAL

- A. Manufacturer: Obtain masonry units from one manufacturer, of uniform texture and color for each kind required, for each continuous area and visually related areas.
 1. Architectural Masonry Units: Subject to compliance with requirements, manufacturers of concrete masonry units which may be incorporated in the work include, but are not limited to, the following:
 - a. Westbrook Concrete Block
 - b. Anchor Concrete Products Inc.
 - c. Clayton Block Co., Inc.
 - d. EP Henry Corporation.
 - e. York Building Products, a Stewart Company.
 - f. Or approved equal.
 2. Prefaced Glazed Facing Block Units: Subject to compliance with requirements, manufacturers of Prefaced Glazed Facing Block units which may be incorporated in the work include, but are not limited to, the following:
 - a. Westbrook Concrete Block.
 - b. Astra-Glaze; Nabco Glazed Products.

- c. Spectra-Glaze II; manufacturer approved by the Burns & Russell Co.
 - d. Or approved equal.
3. Masonry Anchors, Joint Reinforcing, Accessories, etc.: Subject to compliance with requirements, manufacturers of masonry anchors, joint reinforcing, accessories which may be incorporated in the work include, but are not limited to, the following:
- a. Heckman Building Products, Inc.
 - b. Hohmann & Barnard, Inc.
 - c. Or approved equal.

2.2 GROUND FACE BLOCK

- A. Provide "GF-99" or "GF-179" smooth textured concrete masonry units, ASTM C90, in sizes indicated as manufactured by Westbrook Concrete Block; or approved equal.
- B. Provide units with integral liquid polymeric water repellent admixture, mixed with concrete during production of masonry units
 - 1. Units shall be capable of attaining Class E Rating under ASTM E514-74, and no decrease in flexural strength or compressive strength of prisms when compared to "control", under ASTM E72-74.
 - 2. Special shapes: Provide special block types where required for corners, control joints, headers, lintels, and other special conditions, whether or not specifically indicated on the drawings as special.
 - 3. Provide indicated above color(s), selected from manufacturer's available full range of colors. Final selection of color or other color(s) within the product line to be selected by Architect.

2.3 PREFACED CONCRETE BLOCK

- A. Provide lightweight concrete units indicated below with manufacturer's standard smooth resinous tile facing complying with ASTM C744:
 - 1. For units on which prefaced surfaces are molded, comply with the following requirements:
 - a. Hollow Loadbearing Block: ASTM C90, Grade N..
- B. Size: Manufacturer's standard with nominal face dimensions of 16 inch long x 8 inch high (7-5/8 inch x 7-5/8 inch actual) x thicknesses (horizontal center scored) indicated for units on which prefaced surfaces are molded; with 1/16 inch thick returns of facing to create 1/4 inch wide mortar joints with modular coursing.
- C. Color and Pattern: Initial selection of the color to be No. "S-8 Sagebrush" or "S-36 Light Honey"; but final selection of colors or others within the product line to be selected by Architect.
- D. Basis of Design: "SpectraGLAZE" as manufactured by Westbrook Concrete Block; or approved equal.

1. Other Available Products: Subject to compliance with requirements, prefaced concrete block which may be incorporated in the work include, but are not limited to, the following:
 - a. "Astra-Glaze"; Nabco Glazed Products.
 - b. "Spectra-Glaze II"; manufacturer approved by the Burns & Russell Co.
 - c. Or approved equal

2.4 MASONRY BOND BEAMS

- A. Masonry Bond Beams: Prefabricated or built-in-place masonry bond beam CMU's matching adjacent CMU's in color, texture, and density classification, with reinforcing bars placed as indicated and filled with coarse grout.

2.5 MORTAR AND GROUT MATERIALS

- A. General: Do not add admixtures including coloring pigments, air-entraining agents, accelerators, retarders, water repellent agents, anti-freeze compounds or other admixtures, unless otherwise indicated.
 1. Do not use calcium chloride in mortar or grout.
- B. Limit cementitious materials in mortar to portland cement-lime.
- C. Portland Cement: ASTM C150, Type 1, except Type III may be used for cold weather construction. Provide natural color or white cement as required to produce required mortar color.
- D. For colored aggregate mortars use masonry cement, ASTM C91, of natural color or white as required to produce mortar colors required.
- E. Hydrated Lime: ASTM C207, Type S.
- F. Aggregate for Mortar: ASTM C144, except for joints less than 1/4 inch use aggregate graded with 100% passing the No. 16 sieve.
 1. White Mortar Aggregates: Natural white sand or ground white stone.
 2. Colored Mortar Pigments: Natural and synthetic iron oxides and chromium oxides, compounded for use in mortar mixes. Use only pigments with record of satisfactory performance in masonry mortars.
- G. Mortar: ASTM C387, Type N. Provide mortar for face brick and accessories to match original mortar in color, texture, strength and hardness (density and porosity). Determine existing mortar mix constituents and ratios by analysis. Review laboratory evaluations with Architect before proceeding with the work. Match color of existing mortar by use of aggregates matching original aggregate color where possible. Use inorganic coloring pigments if satisfactory color match cannot be attained with natural materials.
 1. Use Type S mortar for interior loadbearing CMU walls and for other applications where another type is not indicated.

- H. Mortar for Unit Masonry: Comply with ASTM C270, Proportion Specification, for types of mortar required, unless otherwise indicated.
- I. Grout for Unit Masonry: Comply with ASTM C476.
 - 1. Provide grout with a slump of 8 to 11 inches as measured according to ASTM C143.
- J. The proper use of ASTM C270 and Test Method ASTM C780 for evaluating masonry mortars produced in the laboratory and the construction site is in accordance with ASTM C1586.
- K. Aggregate for Grout: ASTM C404.
- L. Water: Clean and potable.
- M. Colored Aggregate Mortar: Produce mortar of color required by use of colored aggregates in combination with selected cementitious materials.
 - 1. Colors as selected by the Architect from manufacturer's available full range of colors.

2.6 JOINT REINFORCEMENT, TIES AND ANCHORING DEVICES

- A. Materials: Comply with requirements indicated below for basic materials and with requirements indicated under each form of joint reinforcement, tie and anchor for size and other characteristics:
 - 1. Hot-Dip Galvanized Steel Wire: ASTM A82 for uncoated wire and with ASTM A153, Class B-2 (1.5 oz. per sq. ft. of wire surface) for zinc coating applied after prefabrication into units.
- B. Joint Reinforcement: Provide welded-wire units prefabricated with deformed continuous side rods and plain cross rods into straight lengths of not less than 10 feet, with prefabricated corner and tee units, and complying with requirements indicated below:
 - 1. Width: Fabricate joint reinforcement in units with widths of approximately 2 inch less than nominal width of walls and partitions as required to provide mortar coverage of not less than 5/8 inch on joint faces exposed to exterior and 1/2 inch elsewhere.
 - a. Wire Size for Side Rods: 9 gauge.
 - b. Wire Size for Cross Rods: 9 gauge.
 - 2. Ladder design rods spaced not more than 16 inch o.c.
 - 3. Number of Side Rods: One side rod for each face shell of concrete masonry.
 - 4. Configuration:
 - a. Applications of Single Wythe Wall width: Ladder type design rods at not more than 16 inches on center.
 - 1) Basis of Design: Provide Hohmann & Barnard, Inc., No.# 220, Ladder-Mesh; or approved equal.
- C. Flexible Anchors: Where flexible anchors are indicated for connecting masonry to structural framework, provide 2-piece anchors as described below which permit vertical or horizontal

differential movement between wall and framework parallel to, but resist tension and compression forces perpendicular to, plane of wall.

1. For anchorage to steel framework provide manufacturer's standard anchors with triangular-shaped wire tie section sized to extend within 1 inch of masonry face. Coordinate with Steel Contractor for type and size required. Provide 3/16 inch diameter, hot-dip galvanized steel.
- D. Unit Type Masonry Inserts in Concrete: Furnish cast iron or malleable iron inserts of type and size indicated.
- E. Pencil rods at construction joints as shown: Dowels dipped in tar for 1/2 of length.
- F. Reinforcing Bars: Deformed steel, ASTM A615, Grade 60 for bars No. 3 to No. 18.

2.7 MISCELLANEOUS MASONRY ACCESSORIES

- A. Non-Metallic Expansion Joint Strips: Premolded, flexible cellular neoprene rubber filler strips complying with ASTM D1056, Grade 2A1, capable of compression up to 35%, of width and thickness indicated.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Do not wet concrete masonry units.
- B. Cleaning Reinforcing: Before placing, remove loose rust, ice and other coatings from reinforcing.
- C. Thickness: Build single-wythe walls to the actual thickness of the masonry units, using units of nominal thickness indicated.
- D. Leave openings for equipment to be installed before completion of masonry work. After installation of equipment, complete masonry work to match work immediately adjacent to the opening.
- E. Cut masonry units using motor-driven saws to provide clean, sharp, unchipped edges. Cut units as required to provide continuous pattern and to fit adjoining work. Use full-size units without cutting where possible. No discoloration of units caused by cutting will be acceptable.
- F. Pattern Bond:
 1. Concrete masonry units: Running bond, unless otherwise shown.
 2. **Concrete Masonry Units: stack bond, for all walls except UL rated CMU. wall construction.**
 3. Lay concealed masonry with all units in a wythe bonded by lapping not less than 2 inches.

3.2 CONSTRUCTION TOLERANCES

- A. Variation from Plumb: For vertical lines and surfaces of columns, walls and arises do not exceed 1/4 inch in 10 feet, or 3/8 inch in a story height not to exceed 20 feet, nor 1/2 inch in 40 feet or more. For external corners, expansion joints, control joints and other conspicuous lines, do not exceed 1/4 inch in any story or 20 feet maximum, nor 1/2 inch in 40 feet or more. For vertical alignment of head joints do not exceed plus or minus 1/4 inch in 10 feet, 1/2 inch maximum.
- B. Variation from Level: For bed joints and lines of exposed lintels, sills, parapets, horizontal grooves and other conspicuous lines, do not exceed 1/4 inch in any bay or 20 feet maximum, nor 1/2 inch in 40 feet or more. For top surface of bearing walls do not exceed 1/8 inch between adjacent floor elements in 10 feet or 1/16 inch within width of a single unit.
- C. Variation of Linear Building Line: For position shown in plan and related portion of columns, walls and partitions, do not exceed 1/2 inch in any bay or 20 feet maximum, nor 3/4 inch in 40 feet or more.
- D. Variation in Cross-Sectional Dimensions: For columns and thickness of walls, from dimensions shown, do not exceed minus 1/4 inch nor plus 1/2 inch.
- E. Variation in Mortar Joint Thickness: Do not exceed bed joint thickness indicated by more than plus or minus 1/8 inch, with a maximum thickness limited to 1/2 inch. Do not exceed head joint thickness indicated by more than plus or minus 1/8 inch.

3.3 LAYING MASONRY WALLS

- A. Layout walls in advance for accurate spacing of surface bond patterns with uniform joint widths and to accurately locate openings, movement-type joints, returns and offsets. Avoid the use of less-than-half-size units at corners, jambs and wherever possible at other locations.
- B. Lay-up walls to comply with specified construction tolerances, with courses accurately spaced and coordinated with other work.
- C. Stopping and Resuming Work: Rack back 1/2-unit length in each course; do not tooth. Clean exposed surfaces of set masonry, wet units lightly (if required) and remove loose masonry units and mortar prior to laying fresh masonry.
- D. Built-in Work: As the work progresses, build-in items specified under this and other sections of these specifications. Fill in solidly with masonry around built-in items.
 - 1. Fill space between hollow metal frames and masonry solidly with mortar, unless otherwise indicated.
 - 2. Where built-in items are to be embedded in cores of hollow masonry units, place a layer of metal lath in the joint below and rod mortar or grout into core.
 - 3. Fill cores in hollow concrete masonry units with grout 3 courses (24 inches) under bearing plates, beams, lintels, posts and similar items, unless otherwise indicated.

- E. Extend all interior walls full height to underside of structure above, unless otherwise indicated. Include compressible insulation at top to completely close space between wall and structure above.

3.4 MORTAR BEDDING AND JOINTING

- A. Lay hollow concrete masonry units with full mortar coverage on horizontal and vertical face shells. Bed webs in mortar in starting course on existing concrete floor slab, and where adjacent to cells or cavities to be reinforced or filled with concrete or grout. For starting course on floor slab where cells are not grouted, spread out full mortar bed including areas under cells.
- B. Maintain joint widths shown, except for minor variations required to maintain bond alignment. If not shown, lay walls with 3/8 inch joints.
- C. Cut joints flush for masonry walls which are to be concealed or to be covered by other materials, unless otherwise indicated.
- D. Tool exposed joints slightly concave using a jointer larger than joint thickness, unless otherwise indicated.
 - 1. Tool exposed joints for stack bond with scored joints in concrete masonry block walls as indicated, or if not indicated as directed by the Architect in the field.**
- E. Remove masonry units disturbed after laying; clean and reset in fresh mortar. Do not pound corners or jambs to shift adjacent stretcher units which have been set in position. If adjustments are required, remove units, clean off mortar and reset in fresh mortar.

3.5 HORIZONTAL JOINT REINFORCEMENT

- A. Provide continuous horizontal joint reinforcement as indicated. Install longitudinal side rods in mortar for their entire length with a minimum cover of 5/8 inch on exterior side of walls, 1/2 inch elsewhere. Lap reinforcing a minimum of 6 inches.
- B. Cut or interrupt joint reinforcement at control and expansion joints, unless otherwise indicated.
- C. Provide continuity at corners and wall intersections by use of prefabricated "L" and "T" sections. Cut and bend reinforcement units as directed by manufacturer for continuity at returns, offsets, column fireproofing, pipe enclosures and other special conditions.
 - 1. Space continuous horizontal reinforcement as follows:
 - a. For single-wythe walls, space reinforcement at 16" o.c. vertically, unless otherwise indicated.
 - 2. Cut reinforcement units at walls intersecting and/or abutting firewalls. Provide control joints with fire-rated sealant as indicated in Section 07900.
- D. Reinforce masonry openings greater than 1'-0" wide, with horizontal joint reinforcement placed in 2 horizontal joints approximately 8" apart, immediately above the lintel and immediately below the sill. Extend reinforcement a minimum of 2'-0" beyond jambs of the opening except at control joints.

3.6 ANCHORING MASONRY WORK

- A. Provide anchoring devices of the type indicated. If not indicated, provide standard type for facing and back-up involved.
 - 1. Strap anchors for masonry at existing walls.
 - 2. Do not anchor fire walls to Structural Steel, intersecting and/or abutting walls.

3.7 CONTROL AND EXPANSION JOINTS

- A. General: Provide vertical and horizontal expansion, control and isolation joints in masonry maximum 30 feet on center. Build-in related items as the masonry work progresses.
 - 1. Coordinate location of all control and expansion joints in the field with Architect prior to commencement of work.
- B. Build in joint fillers where shown: See Section 07900, Joint Sealers. Joint width for sealants: 3/8 inch unless otherwise indicated. Include straight joints at vertical recessed brick detail.

3.8 QUALITY CONTROL TESTING

- A. Engage an independent testing and inspection agency to perform tests and prepare test reports.
 - 1. Perform tests for condition, size, location and spacing of reinforcement and anchorage of engineered masonry assemblies.
- B. Testing agency shall conduct and interpret tests and state in each report whether test specimens comply with design requirements and indicated standards, and specifically state any deviations therefrom.
 - 1. Provide access for testing agency to places where structural steel reinforcement and anchorage work is being fabricated or produced so that required inspection and testing can be accomplished.
 - 2. Testing agency may inspect structural steel reinforcement and anchorage work at plant before shipment; however, Architect reserves right, at any time before final acceptance, to reject material not complying with specified requirements.
- C. Correct deficiencies in structural steel reinforcement and anchorage work which inspections and laboratory test reports have indicated to be not in compliance with requirements.
 - 1. Perform additional tests, at Contractor's expense, as may be necessary to reconfirm any non-compliance of original work, and as may be necessary to show compliance of corrected work.

3.9 REPAIR, POINTING AND CLEANING

- A. Remove and replace masonry units which are loose, chipped, broken, stained or otherwise damaged, or if units do not match adjoining units as intended. Provide new units to match

adjoining units and install in fresh mortar or grout, pointed to eliminate evidence of replacement.

- B. Pointing: During the tooling of joints, enlarge any voids or holes and completely fill with mortar. Point-up all joints including corners, openings and adjacent work to provide a neat, uniform appearance, prepared for application of sealants.
- C. Clean exposed CMU masonry by dry brushing at the end of each day's work and after final pointing to remove mortar spots and droppings. Comply with recommendations in NCMA TEK Bulletin No. 28.
 - 1. Prepare exposed to view CMU surfaces to receive paint coatings in accordance with Section 09900.

END OF SECTION 04200

SECTION 05400 - MISCELLANEOUS STRUCTURAL STEEL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 DESCRIPTION OF WORK

- A. Definition: Miscellaneous structural steel includes items made from iron and steel shapes, plates, bars, strips, tubes, pipes and castings which are not a part of Structural Steel or other metal fabrication systems specified elsewhere.
- B. Extent of miscellaneous structural steel fabrications is indicated on drawings and schedules.
 - 1. Work of this section shall include miscellaneous structural steel framing and supports for wall openings whether or not shown on the architectural drawings.
 - a. Refer to architectural drawings for the following:
 - 1) Locations and sizes of wall penetrations, etc.
 - b. All miscellaneous structural steel supports shall be in accordance with typical structural steel details and schedules shown on architectural steel drawings and/or as directed by the Architect.
 - c. All miscellaneous structural steel supports shall meet indicated load requirements and/or as directed by the Architect.
 - d. In existing building where alteration and/or renovation work is/are indicated, refer to Division 1 Sections for miscellaneous structural steel framing and supports which may be assigned to be provided and installed by other Trades.
- C. Types of work in this section include metal fabrications for:
 - 1. Loose Steel lintels, bearing and leveling plates and miscellaneous steel framing and supports.
- D. Related Sections:
 - 1. Section 01400 - Testing Laboratory Service
 - 2. Section 05500 - Metal Fabrications
 - 3. Section 08415 - Aluminum Framed Entrances and Storefronts

1.3 QUALITY ASSURANCE

- A. Field Measurements: Take field measurements prior to preparation of shop drawings and fabrication, where possible. Do not delay job progress; allow for trimming and fitting where taking field measurements before fabrications might delay work.
- B. Shop Assembly: Preassemble items in shop to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation.

C. Delegated Design:

1. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated. Designated Design includes, but is not limited to:
 - a. Miscellaneous steel framing, metal framing, hangers, columns, clips, brackets, bearing plates and other components.
2. Professional Engineer Qualifications: A professional engineer legally authorized to practice in the jurisdiction where the Project is located, (State of New Jersey), and experienced in providing engineering services of the kind indicated that have resulted in the installation of structural assemblies, similar to this Project in material, design, and extent and that has a record of successful in-service performance. Provide analysis data and signed & sealed documents.
3. Conform to all applicable State and Local Codes for design loads and all other requirements.
4. Refer to paragraph 1.4 - SUBMITTALS (below).

- D. Welding: Qualify procedures and personnel according to AWS D1.1, "Structural Welding Code--Steel," and AWS D1.3, "Structural Welding Code--Sheet Steel."

1.4 SUBMITTALS

- A. Product Data: Submit manufacturer's specifications, anchor details and installation instructions for products used in miscellaneous metal fabrications, including paint products and grout.
- B. Shop Drawings: Submit shop drawings for fabrication and erection of miscellaneous steel fabrications. Include plans, elevations and details of sections and connections. Show anchorage and accessory items. Provide templates for anchor and bolt installation by others.
 1. Submit shop drawings for miscellaneous steel framing and supports. Signed and sealed shop drawings shall be submitted by a qualified professional Structural Engineer, licenced in the state where the project is located
- C. Where materials or fabrications are indicated to comply with certain requirements for design loadings, include structural computations, material properties and other information needed for structural analysis.
- D. Samples: Submit 2 sets of representative samples of materials and finished products as may be requested by Architect.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Metal Surfaces, General: For fabrication of miscellaneous structural steel work which will be exposed to view, use only materials which are smooth and free of surface blemishes including pitting, seam marks, roller marks, rolled trade names and roughness.

- B. Steel
1. Steel Plates, Shapes and Bars: ASTM A36.
 2. Steel Tubing: Cold-formed, ASTM A500; or hot-rolled, ASTM A501.
 3. Structural Steel Sheet: Hot-rolled, ASTM A570; or cold-rolled ASTM A611, Class 1; of grade required for design loading.
 4. Galvanized Structural Steel Sheet: ASTM A446, of grade required for design loading. Coating designation as indicated, or if not indicated, G90.
 5. Steel Pipe: ASTM A53; Type and grade (if applicable) as selected by fabricator and as required for design loading; black finish unless galvanizing is indicated; standard weight (schedule 40), unless otherwise indicated.
 6. Gray Iron Castings: ASTM A48, Class 30.
 7. Malleable Iron Castings: ASTM A47, grade as selected by fabricator
- C. Brackets, Flanges and Anchors: Cast or formed metal of the same type material and finish as supported rails, unless otherwise indicated.
- D. Concrete Inserts: Threaded or wedge type; galvanized ferrous castings, either malleable iron, ASTM A47, or cast steel, ASTM A27. Provide bolts, washers and shims as required, hot-dip galvanized, ASTM A153.
- E. Grout:
1. Metallic Non-Shrink Grout: Pre-mixed, factory-packaged, ferrous aggregate grout complying with CE CRD-C588, Type M.
 2. Non-Shrink Non-Metallic Grout: Pre-mixed, factory-packaged, non-staining, non-corrosive, non-gaseous grout complying with CE CRD-C621. Provide grout specifically recommended by manufacturer for interior and exterior applications of type specified in this section.
- F. Fasteners:
1. General: Provide zinc-coated fasteners for exterior use or where built into exterior walls. Select fasteners for the type, grade and class required.
 2. Bolts and Nuts: Regular hexagon head type, ASTM A307, Grade A.
 3. Lag Bolts: Square head type, FS FF-B-561.
 4. Machine Screws: Cadmium plated steel, FS FF-S-92.
 5. Wood Screws: Flat head carbon steel, FS FF-S-111.

6. Plain Washers: Round, carbon steel, FS FF-W-92.
 7. Masonry Anchorage Devices: Expansion shields, FS FF-S-325.
- G. Toggle Bolts: Tumble-wing type, FS FF-B-588, type, class and style as required.
1. Lock Washers: Helical spring type carbon steel, FS FF-W-84.
- H. Paint:
1. Surface Preparation: SSPC-2P6 commercial Blast Cleaning.
 2. Primer: Tnemec Series 90-97 Tneme-Zinc, or equal, @ 2.5 - 3.5 mils (dry)
 3. Primer selected must be compatible with finish coats of paint. Coordinate selection of metal primer with finish paint requirements specified in Section 09900.

2.2 FABRICATION, GENERAL

- A. Workmanship: Use materials of size and thickness indicated, or if not indicated, as required to produce strength and durability in finished product for use intended. Work to dimensions indicated or accepted on shop drawings, using proven details of fabrication and support. Use type of materials indicated or specified for various components of work.
- B. Form exposed work true to line and level with accurate angles and surfaces and straight sharp edges. Ease exposed edges to a radius of approximately 1/32" unless otherwise indicated. Form bent-metal corners to smallest radius possible without causing grain separation or otherwise impairing work.
- C. Weld corners and seams continuously, complying with AWS recommendations. At exposed connections, grind exposed welds smooth and flush to match and blend with adjoining surfaces.
- D. Form exposed connections with hairline joints, flush and smooth, using concealed fasteners wherever possible. Use exposed fasteners of type indicated or, if not indicated, Phillips flat-head (countersunk) screws or bolts.
- E. Provide for anchorage of type indicated, coordinated with supporting structure. Fabricate and space anchoring devices to provide adequate support for intended use.
- F. Shop Painting
 1. Shop paint miscellaneous structural steel, except members or portions of members to be embedded in masonry, surfaces and edges to be field welded, and galvanized surfaces, unless otherwise indicated.
 2. Remove scale, rust and other deleterious materials before applying shop coat. Clean off heavy rust and loose mill scale in accordance with SSPC SP-6.

3. Immediately after surface preparation, brush or spray on primer in accordance with manufacturer's instructions. Use painting methods which will result in full coverage of joints, corners, edges and exposed surfaces.
4. Apply one shop coat to fabricated metal items, except apply two coats of paint to surfaces inaccessible after assembly or erection. Change color of second coat to distinguish it from the first.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Coordinate and furnish anchorages, setting drawings, diagrams, templates, instructions, and directions for installation of anchorages, such as concrete inserts, sleeves, anchor bolts and miscellaneous items having integral anchors, which are to be embedded in concrete or masonry construction. Coordinate delivery of such items to project site.
 1. Coordinate work of this section with other work affected by other Trades.
 2. Obtain locations, opening sizes, weighs and other required information from affected trades.
 3. Comply with coordination requirements indicated in Division 1 Sections.

3.2 INSTALLATION

- A. Fastening to In-Place Construction: Provide anchorage devices and fasteners where necessary for securing miscellaneous metal fabrications to in-place construction; including, threaded fasteners for concrete and masonry inserts, toggle bolts, through-bolts, lag bolts, wood screws and other connectors as required.
- B. Cutting, Fitting and Placement: Perform cutting, drilling and fitting required for installation of miscellaneous metal fabrications. Set work accurately in location, alignment and elevation, plus, level, true and free of rack, measured from established lines and levels. Provide temporary bracing or anchors in formwork for items which are to be built into concrete masonry or similar construction.
- C. Fit exposed connections accurately together to form tight hairline joints. Weld connections which are not to be left as exposed joints, but cannot be shop welded because of shipping size limitations. Grind exposed joints smooth and touch-up shop paint coat. Do not weld, cut or abrade the surfaces of exterior units which have been hot-dip galvanized after fabrication, and are intended for bolted or screwed field connections.
- D. Field Welding: Comply with AWS Code for procedures of manual shielded metal-arc welding, appearance and quality of welds made, and methods used in correcting welding work.

3.3 ADJUST AND CLEAN

- A. Touch-Up Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with same material as used for shop painting.

- B. Apply by brush or spray to provide a minimum dry film thickness of 2.0 mils.
- C. For galvanize surfaces: Clean field welds, bolted connections and abraded areas and apply galvanizing repair paint to comply with ASTM A780.

END OF SECTION 05400

SECTION 07900 - JOINT SEALER ASSEMBLIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Part 1 through Part 6 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes joint sealant assemblies for the following applications which include performances of materials, installation requirements, as indicated herein in this specification and as specified by cross references in other Parts 1 through 6 specification sections.
- B. Exterior joints in the following vertical surfaces and nontraffic horizontal surfaces:
 - 1. Joints between different materials.
 - 2. Perimeter joints between existing masonry wall materials and frames of aluminum storefront systems, as applicable.
 - 3. Other joints, as indicated.
- C. Interior joints in the following vertical surfaces and horizontal nontraffic surfaces:
 - 1. Perimeter joints of exterior openings, where indicated.
 - 2. Vertical control joints on exposed surfaces of interior masonry walls and partitions.
 - a. Perimeter joints between interior wall surfaces and frames of interior storefront systems.
 - b. Other joints, as indicated.
- D. Preparation of all joints to be sealed.
- E. Exterior joints in vertical surfaces and nontraffic horizontal surfaces as indicated below:
 - 1. Cutting out as needed to give proper depth.
 - 2. Installation of proper back up material for each joint.
 - 3. Cleaning to remove all dust, dirt, oil films, loose material etc.
 - 4. Masking of adjacent surfaces.
 - 5. Priming of joint surfaces.

1.3 QUALITY ASSURANCE

- A. VOC Content of Interior Sealants and Sealant Primers: Comply with the following limits when calculated according to 40 CFR 59, Subpart D (EPA Method 24):

1. Sealants: Not more than 250 g/L.
 2. Sealant Primers for Nonporous Substrates: Not more than 250 g/L.
 3. Sealant Primers for Porous Substrates: Not more than 775 g/L.
- B. Installer Qualifications: An experienced installer who has specialized in installing joint sealants similar in material, design, and extent to those indicated for this Project and whose work has resulted in joint-sealant installations with a record of successful in-service performance.
1. Source Limitations: Obtain each type of joint sealant through one source from a single manufacturer.
 2. Preconstruction Compatibility and Adhesion Testing: Submit to joint sealant manufacturers, for testing indicated below, samples of materials that will contact or affect joint sealants.
 - a. Use manufacturers standard test methods to determine whether priming and other specific joint preparation techniques are required to obtain rapid, optimum adhesion of joint sealants to joint substrates.
 - b. Testing will not be required if joint sealant manufacturers submit joint preparation data that are based on previous testing of current sealant products for adhesion to, and compatibility with, joint substrates and other materials matching those submitted.
 - c. Preconstruction Field-Adhesion Testing: Before installing elastomeric sealants, field test their adhesion to joint substrates as follows:
 - (1) Locate test joints where indicated or, if not indicated, as directed by Architect.
 - (2) Conduct field tests for each application indicated below:
 - (a) Each type of elastomeric sealant and joint substrate indicated.
 - (b) Each type of nonelastomeric sealant and joint substrate indicated.
 - (3) Notify Architect seven days in advance of dates and times when test joints will be erected.
 - (4) Sealant Manufacturer Responsibility:
 - (a) Manufacturer shall provide Technical Representative to perform Sealant Joint Field Pull Test. Manufacturer Sales representative is not acceptable to perform Field Pull Test.
 - (b) Technical Representative performing Field Pull Test must be an employee of the Sealant Manufacturer. Outside Sales Agent or Contract Technical Representative is not acceptable to perform Field Pull Test.
 - (5) Test Method: Test joint sealants by hand-pull method described below:
 - (a) Install joint sealants in 60-inch long joints using same materials and methods for joint preparation and joint-sealant installation required for the completed Work. Allow sealants to cure fully before testing.
 - (b) Make knife cuts from one side of joint to the other, followed by two cuts approximately 2 inches long at sides of joint and meeting cross cut at one end. Place a mark 1 inch from cross-cut end of 2-inch piece.
 - (c) Use fingers to grasp 2-inch piece of sealant between cross-cut end and 1-inch mark; pull firmly at a 90-degree angle or more in direction of side cuts while holding a ruler along side of sealant. Pull sealant out of joint

- to the distance recommended by sealant manufacturer for testing adhesive capability, but not less than that equaling specified maximum movement capability in extension; hold this position for 10 seconds.
- (d) For joints with dissimilar substrates, check adhesion to each substrate separately. Do this by extending cut along one side, checking adhesion to opposite side, and then repeating this procedure for opposite side.
 - (6) Report whether sealant in joint connected to pulled-out portion failed to adhere to joint substrates or tore cohesively. Include data on pull distance used to test each type of product and joint substrate. For sealants that fail adhesively, retest until satisfactory adhesion is obtained.
 - (7) Evaluation of Preconstruction Field-Adhesion-Test Results: Sealants not evidencing adhesive failure from testing, in absence of other indications of noncompliance with requirements, will be considered satisfactory. Do not use sealants that fail to adhere to joint substrates during testing.
3. Mockups: Before installing joint sealants, apply elastomeric sealants as follows to verify selections made under sample Submittals and to demonstrate aesthetic effects and qualities of materials and execution:
- a. Joints in mockups of assemblies specified in other Sections that are indicated to receive elastomeric joint sealants, which are specified by reference to this Section.
 - b. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Meetings."
4. PROJECT CONDITIONS
- a. Environmental Limitations: Do not proceed with installation of joint sealants under the following conditions:
 - (1) When ambient and substrate temperature conditions are outside limits permitted by joint sealant manufacturer.
 - (2) When ambient and substrate temperature conditions are outside limits permitted by joint sealant manufacturer or are below 40°F.
 - (3) When joint substrates are wet.
 - b. Joint-Width Conditions: Do not proceed with installation of joint sealants where joint widths are less than those allowed by joint sealant manufacturer for applications indicated.
 - c. Joint-Substrate Conditions: Do not proceed with installation of joint sealants until contaminants capable of interfering with adhesion are removed from joint substrates.

C. Special Project Warrantee and Guarantee:

- 1. Special Installer's Warranty: Written warranty, signed by Installer agreeing to repair or replace elastomeric joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.
 - a. Warranty Period: **Five (5) years** from approved date of Substantial Completion.
- 2. Special Manufacturer's Warranty: Written warranty, signed by elastomeric sealant manufacturer agreeing to furnish elastomeric joint sealants to repair or replace those that do not comply with performance and other requirements specified in this Section within specified warranty period.
 - a. Warranty Period: **Five (5) years** from approved date of Substantial Completion.

3. Guarantee shall further state that all exterior sealant will be guaranteed against:
 - a. Adhesive or cohesive failure in joints where movement is under maximum 25% extension or compression.
 - b. Any crazing greater than 3 mils in depth developing on surface of material.

1.4 SUBMITTALS

- A. Product Data from manufacturers for each joint sealer product required, including instructions for joint preparation and joint sealer application, include color samples showing full range of colors available, for each product exposed to view.
 1. Product Certificates: Signed by manufacturers of joint sealants certifying that products furnished comply with requirements and are suitable for the use indicated.
- B. Product Test Reports: From a qualified testing agency indicating sealants comply with requirements, based on comprehensive testing of current product formulations.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to Project site in original unopened containers or bundles with labels informing about manufacturer, product name and designation, color, expiration period for use, pot life, curing time, and mixing instructions for multi-component materials.
- B. Store and handle materials in compliance with manufacturers' recommendations to prevent their deterioration or damage due to moisture, high or low temperatures, contaminants, or other causes.

1.6 PROJECT CONDITIONS

- A. Environmental Conditions: Do not proceed with installation of joint sealers under the following conditions:
 1. When ambient and substrate temperature conditions are outside the limits permitted by joint sealer manufacturers.
 2. When ambient and substrate temperature conditions are outside the limits permitted by joint sealer manufacturer or below 40°F (4.4°C).
 3. When joint substrates are wet due to rain, frost, condensation, or other causes.
- B. Joint Width Conditions: Do not proceed with installation of joint sealers where joint widths are less than allowed by joint sealer manufacturer for application indicated.
- C. Joint Substrate Conditions: Do not proceed with installation of joint sealers until contaminants capable of interfering with their adhesion are removed from joint substrates.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

- A. Compatibility: Provide joint sealers, joint fillers and other related materials that are

compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.

- B. Colors: Provide color of exposed joint sealers indicated or, if not otherwise indicated, as selected by Architect from manufacturer's available full range of standard and optional colors.
- C. Grade of Sealant: For each application, provide the grade of sealant (nonsag, self-leveling, no track, knife grade, etc.) as recommended by the manufacturer for the particular condition of installation (location, joint shape, ambient temperature, and similar conditions) to achieve the best possible overall performance. Grades specified herein are for normal condition of installation.

2.2 MISCELLANEOUS MATERIALS

- A. Joint Primer/Sealer: Provide the type of joint primer/sealer recommended by the sealant manufacturer of the joint surfaces to be primed or sealed.
- B. Bond-Breaker Tape: Polyethylene tape or other plastic tape as recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint filler materials or joint surfaces at back of joint where such adhesion would result in sealant failure. Provide self-adhesive tape where applicable.
- C. Sealant Backer Rod: Provide materials which are in compliance with ASTM D 1056; compressible rod stock of polyethylene foam, polyethylene jacketed polyurethane foam, butyl rubber foam, neoprene foam or other flexible, permanent, durable non-absorptive material as recommended for compatibility with sealant by the sealant manufacturer.
 - 1. Materials shall be capable of remaining resilient at temperatures down to minus 26°F.

2.3 SEALANTS

A. Sealant Type 6: Hybrid Sealants (Silyl-Terminated Polyether (STPE) Joint Sealants

- 1. **STPE, S, NS, 50, NT:** Single-component, nonsag, plus 50 percent and minus 50 percent movement capability, nontraffic-use, silyl-terminated polyether joint sealant; ASTM C920, Type S, Grade NS, Class 50, Use NT.
 - a. Uses: Interior and exterior horizontal and vertical joints of door and window perimeters, expansion and control joints, coping and coping to facade joints, EIFS and architectural panels, fiber cement panels, etc.
 - b. Products: Subject to compliance with requirements, provide one of the following:
 - 1) "DynaTrol® I-XL Hybrid" as manufactured by Pecora Corporation. Available in ten (10) colors.
 - 2) "DynaTrol® I-XL Hybrid FTH" as manufactured by Pecora Corporation. Field tintable, available in fifty (50) colors.
 - 3) Equivalent by Tremco, an RPM Co.
 - 4) Equivalent by Sika.
 - 5) Equivalent by Dow Corning.
 - 6) Or approved equal.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine joints indicated to receive joint sealers, with Installer present, compliance with requirements for joint configuration, installation tolerances and other conditions affecting joint sealer-performance. Do not proceed with installation of joint sealers until unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealers to comply with recommendations of joint sealer manufacturers and the following requirements:
- B. Remove all foreign material from joint substrates which could interfere with adhesion of joint sealer, including dust; paints, except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer; old joint sealers; oil; grease; waterproofing; water repellants; water; surface dirt; and frost.
- C. Clean concrete, masonry, unglazed surfaces of porous joint substrate surfaces by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealers. Remove loose particles remaining from above cleaning operations by vacuuming or blowing out joints with oil-free compressed air.
- D. Remove laitance and form release agents from concrete.
- E. Clean metal, glazed surfaces of nonporous surfaces by chemical cleaners or other means which are not harmful to substrates or leave residues capable of interfering with adhesion of joint sealers.
- F. Joint Priming: Prime joint substrates where indicated or where recommended by joint sealer manufacturer based on preconstruction joint sealer-substrate tests or prior experience. Apply primer to comply with joint sealer manufacturer's recommendations. Confine primers to areas of joint sealer bond, do not allow spillage or migration onto adjoining surfaces.
- G. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces which otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.
- H. Install joint fillers of type indicated to provide support of sealants during application and at position required to produce the cross-sectional shapes and depths of installed sealants relative to joint widths which allow optimum sealant movement capability.
 - 1. Do not leave gaps between ends of joint fillers.
 - 2. Do not stretch, twist, puncture, or tear joint fillers.
 - 3. Remove absorbent joint fillers which have become wet prior to sealant application and replace with dry material.

- I. Install bond breaker tape between sealants and joint fillers, compression seals, or back of joints where adhesion of sealant to surfaces at back of joints would result in sealant failure.
- J. Install compressible seals serving as sealant backings to comply with requirements indicated above for joint fillers.
- K. Installation of Sealants: Install sealants by proven techniques that result in sealants directly contacting and fully wetting joint substrates, completely filling recesses provided for each joint configuration, and providing uniform, cross-sectional shapes and depths relative to joint widths which allow optimum sealant movement capability.

3.3 CLEANING

- A. Clean off excess sealants or sealant smears adjacent to joints as work progresses by methods and with cleaning materials approved by manufacturers of joint sealers and of products in which joints occur.

END OF SECTION 07900

SECTION 08415 - ALUMINUM FRAMED ENTRANCES AND STOREFRONTS

PART 1 - GENERAL

1.01 SUMMARY

- A. Basis of Design for the Aluminum Exterior and Interior Storefront Systems, including:
1. Interior: YKK AP Series YES 45 FS Storefront System (Monolithic Glazing); or approved equal.
 2. Exterior: YKK AP Series YES 45 FI Storefront System (Insulating Glazing); or approved equal.
- B. Related Sections:
1. Section 07900 – Joint Sealer Assemblies.
 2. Section 08416 – Aluminum Monumental Swing Doors.
 3. Section 08800 - Glass and Glazing.

1.02 SYSTEM PERFORMANCE DESCRIPTION

- A. Performance Requirements: Provide aluminum storefront systems that comply with performance requirements indicated, as demonstrated by testing manufacturer's assemblies in accordance with test method indicated.
1. Air Infiltration: When tested in accordance with ASTM E 283 at differential static pressure of 6.24 PSF (299 Pa), completed storefront systems shall have maximum allowable infiltration of:
 - a. 0.06 CFM/FT² (1.10 m³/h·m²) for YES 45 FS systems.
 - b. 0.06 CFM/FT² (1.10 m³/h·m²) for YES 45 FI systems.
 2. Water Infiltration: No uncontrolled water when tested in accordance with ASTM E 331 at test pressure differential of:
 - a. 10 PSF (479 Pa) for YES 45 FS systems.
 - b. 12 PSF (575 Pa) for YES 45 FI systems.(or when required, field tested in accordance with AAMA 503). Fastener Heads must be seated and sealed against Sill Flashing on any fasteners that penetrate through the Sill Flashing.
 3. Wind Loads: Completed storefront system shall withstand wind pressure loads normal to wall plane indicated:
 - a. Exterior Walls:
 - 1) Positive Pressure: Delegated Design.
 - 2) Negative Pressure: Delegated Design.
 - b. Interior Walls (Pressure Acting in Either Direction)
 4. Deflection: Maximum allowable deflection in any member when tested in accordance with ASTM E 330 with allowable stress in accordance with AA Specifications for Aluminum Structures.
 - a. Without Horizontals: L/175 or 3/4" (19.1mm) maximum.
 - b. With Horizontals: L/175 or L/240 + 1/4" (6.4mm) for spans greater than 13'-6" (4.1m) but less than 40'-0" (12.2m).

5. Thermal Movement: Provide for thermal movement caused by 180 degrees F. (82.2 degrees C.) surface temperature, without causing buckling stresses on glass, joint seal failure, undue stress on structural elements, damaging loads on fasteners, reduction of performance, or detrimental effects.
6. Thermal Performance: When tested in accordance with AAMA 1503 and NFRC 100:
 - a. Condensation Resistance Factor (CRF_f): A minimum of 58 for YES 45 FI systems.
 - b. Thermal Transmittance U Value: 0.53 BTU/HR/FT²/°F or less for YES 45 FI systems.

Note: Thermal Performance for the glazed system as a whole will be affected by the characteristics of the glass specified.

1.03 SUBMITTALS

- A. General: Prepare, review, approve, and submit specified submittals in accordance with "Conditions of the Contract" and Division 1 Submittals Sections. Product data, shop drawings, samples, and similar submittals are defined in "Conditions of the Contract."
- B. Product Data: Submit product data for each type storefront series specified.
- C. Substitutions: Whenever substitute products are to be considered, supporting technical data, samples, and test reports must be submitted in accordance with AIA A201 and Section 00800 in order to make a valid comparison.
- D. Shop Drawings: Submit shop drawings showing layout, profiles, and product components, including anchorage, accessories, finish colors and textures.
- E. Samples: Submit verification samples for colors on actual aluminum substrates indicating full color range expected in installed system.
- F. Quality Assurance / Control Submittals:
 1. Test Reports: Submit certified test reports showing compliance with specified performance characteristics and physical properties.
 2. Installer Qualification Data: Submit installer qualification data.
- G. Closeout Submittals:
 1. Warranty: Submit warranty documents specified herein.
 2. Project Record Documents: Submit project record documents for installed materials in accordance with Division 1 Project Closeout (Project Record Documents) Section.

1.04 QUALITY ASSURANCE

- A. Qualifications:
 1. Installer Qualifications: Installer experienced (as determined by contractor) to perform work of this section who has specialized in the installation of work similar to that required for this project. If requested by Owner, submit reference list of completed projects.

2. Manufacturer Qualifications: Manufacturer capable of providing field service representation during construction process.
- B. Mock-Ups (Field Constructed): Install at project site a job mock-up using acceptable products and manufacturer approved installation methods. Obtain Owner's and Architect's acceptance of finish color, and workmanship standard.
 1. Mock-Up Size:
 2. Maintenance: Maintain mock-up during construction for workmanship comparison; remove and legally dispose of mock-up when no longer required.
 3. Incorporation: Mock-up may be incorporated into final construction upon Owner's approval.
- C. Pre-Installation Meetings: Conduct pre-installation meeting to verify project requirements, substrate conditions, manufacturer's installation instructions, and manufacturer's warranty requirements.

1.05 PROJECT CONDITIONS / SITE CONDITIONS

- A. Field Measurements: Verify actual measurements/openings by field measurements before fabrication; show recorded measurements on shop drawings. Coordinate field measurements, fabrication schedule with construction progress to avoid construction delays.

1.06 WARRANTY

- A. Project Warranty: Refer to "Conditions of the Contract" for project warranty provisions.
- B. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by an authorized company official.
 1. Warranty Period: Manufacturer's **one (1) year** standard warranty commencing on the substantial date of completion for the project provided that the warranty, in no event, shall start later than **six (6) months** from the date of shipment by manufacturer.

PART 2 - PRODUCTS

2.01 MANUFACTURER(S)

- A. Basis of Design Manufacturer: YKK AP America Inc.; or approved equal.
 1. Interior Storefront System: YKK AP YES 45 FS Storefront System; or approved equal.
 2. Exterior Storefront System: YKK AP YES 45 FI Storefront System; or approved equal.
- B. Storefront Framing System:
 1. Description: Center rabbet, exterior flush glazed; jambs and vertical mullions continuous; head, sill, intermediate horizontal attached by screw spline joinery.

2. Components: Manufacturer's standard extruded aluminum expansion mullions, 0-15 degree hinged mullions, 90 degree corner posts, flexible corner posts, three way corner post, 93-170 degree flexible corner posts, entrance door framing and indicated shapes.

2.02 MATERIALS

- A. Extrusions: ASTM B 221 (ASTM B 221M), 6063-T5 Aluminum Alloy.
- B. Aluminum Sheet:
 1. Anodized Finish: ASTM B 209 (ASTM B 209M), 5005-H14 Aluminum Alloy, 0.050" (1.27 mm) minimum thickness.
 2. Painted Finish: ASTM B 209 (ASTM B 209M), 3003-H14 Aluminum Alloy, 0.080" (1.95 mm) minimum thickness.

2.03 ACCESSORIES

- A. Manufacturer's Standard Accessories:
 1. Fasteners: Zinc plated steel concealed fasteners; Hardened aluminum alloys or AISI 300 series stainless steel exposed fasteners.
 2. Glazing: Setting blocks, edge blocks, and spacers in accordance with ASTM C 864, shore durometer hardness as recommended by manufacturer; Glazing gaskets in accordance with ASTM C 864.
 3. 0.050 Aluminum Sill Flashing End Dams must have 3 point attachment.

2.04 RELATED MATERIALS

- A. Glass: Refer to Section 08800 - Glass and Glazing.

2.05 FABRICATION

- A. Shop Assembly: Fabricate and assemble units with joints only at intersection of aluminum members with uniform hairline joints; rigidly secure, and sealed in accordance with manufacturer's recommendations.
 1. Hardware: Drill and cut to template for hardware. Reinforce frames and door stiles to receive hardware in accordance with manufacturer's recommendations.
 2. Welding: Conceal welds on aluminum members in accordance with AWS recommendations or methods recommended by manufacturer. Members showing welding bloom or discoloration on finish or material distortion will be rejected.

2.06 FINISHES AND COLORS

- A. YKK AP America Anodized Plus®; or approved equal, Finish: Match Existing (YB5N* Dark Bronze Anodized Plus® - Verify in Field).

Anodized Plus® is an advanced sealing technology that completely seals the anodic film yielding superior durability (See AAMA 612).

C. Anodized Finishing: Prepare aluminum surfaces for specified finish; apply shop finish in accordance with the following:

1. Anodic Coating: Electrolytic color coating followed by an organic seal applied in accordance with the requirements of AAMA 612. Aluminum extrusions shall be produced from quality-controlled billets meeting AA-6063-T5.
 - a. Exposed Surfaces shall be free of scratches and other serious blemishes.
 - b. Extrusions shall be given a caustic etch followed by an anodic oxide treatment and then sealed with an organic coating applied with an electrodeposition process.
 - c. The anodized coating shall comply with all of the requirements of AAMA 612: Voluntary Specifications, Performance Requirements and Test Procedures for Combined Coatings of Anodic Oxide and Transparent Organic Coatings on Architectural Aluminum. Testing shall demonstrate the ability of the finish to resist damage from mortar, salt spray, and chemicals commonly found on construction sites, and to resist the loss of color and gloss.
 - d. Overall coating thickness for finishes shall be a minimum of 0.7 mils.
2. CASS Corrosion Resistance Test, CASS 240/ASTM B368 Test Method.
3. Other AAMA 2605 Performance Tests specified in these specifications, such as: 7.3 Dry Film Hardness; 7.8.2 Salt Spray Resistance; 7.9.1.2 Color Retention, South Florida; 7.9.1.4 Gloss Retention, South Florida.

C. Finishes Testing:

1. Apply 0.5% solution NaOH, sodium hydroxide, to small area of finished sample area; leave in place for sixty minutes; lightly wipe off NaOH; Do not clean area further.
2. Submit samples with test area noted on each sample.

PART 3 - EXECUTION

3.01 MANUFACTURER'S INSTRUCTIONS / RECOMMENDATIONS

- A. Compliance: Comply with manufacturer's product data, including product technical bulletins, installation instructions and product carton instructions. Latest Installation Instructions.

3.02 EXAMINATION

- A. Site Verification of Conditions: Verify conditions (which have been previously installed under other sections) are acceptable for product installation in accordance with manufacturer's instructions.

3.03 PREPARATION

- A. Adjacent Surfaces Protection: Protect adjacent work areas and finish surfaces from damage during product installation.
1. Aluminum Surface Protection: Protect aluminum surfaces from contact with lime, mortar, cement, acids, and other harmful contaminants.

3.04 INSTALLATION

- A. General: Install manufacturer's system in accordance with shop drawings, and within specified tolerances.
 - 1. Protect aluminum members in contact with masonry, steel, concrete, or dissimilar materials using nylon pads or bituminous coating.
 - 2. Shim and brace aluminum system before anchoring to structure.
 - 3. Provide sill flashing at exterior storefront systems. Extend extruded flashing continuous with splice joints; set in continuous beads of sealant.
 - 4. Verify storefront system allows water entering system to be collected in gutters and wept to exterior. Verify metal joints are sealed in accordance with manufacturers installation instructions.
 - 5. Locate expansion mullions where indicated on reviewed shop drawings.
 - 6. Seal metal to metal storefront system joints using sealant recommended by system manufacturer.

3.05 FIELD QUALITY CONTROL

- A. Manufacturer's Field Services: Upon request, provide manufacturer's field service consisting of site visit for inspection of product installation in accordance with manufacturer's instructions.
- B. Field Test: Conduct field test to determine watertightness of storefront system. Conduct test in accordance with AAMA 501.2.

3.06 ADJUSTING AND CLEANING

- A. Adjusting: Adjust swing doors for operation in accordance with manufacturer's recommendations.
- B. Cleaning: The General Contractor shall clean installed products in accordance with manufacturer's instructions prior to owner's acceptance, and remove construction debris from project site. Legally dispose of debris.
- C. Protection: The General Contractor shall protect the installed product's finish surfaces from damage during construction.

END OF SECTION

SECTION 08416 – ALUMINUM MONUMENTAL SWING DOORS

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes: Aluminum Swing Doors, including:
 - 1. YKK AP Series 50M Monumental Swing Entrances; or approved equal.
- B. Related Sections:
 - 1. Section 08700 – Finish Hardware.
 - 2. Section 08800 - Glass and Glazing.

1.02 SYSTEM PERFORMANCE DESCRIPTION

- A. Performance Requirements: Provide aluminum swing doors that comply with performance requirements indicated, as demonstrated by testing manufacturer's assemblies in accordance with test methods indicated.
 - 1. Air Infiltration (Single Acting Butt Hinges or Offset Pivots): Air infiltration shall be tested in accordance with ASTM E 283 at static pressure of 1.57 PSF (75 Pa). Infiltration shall not exceed 0.50 CFM/FT² for single door or 1.00 CFM/FT² for pair doors.
 - 2. Structural: Door corner structural strength shall be tested per manufacturer's dual moment test procedure and certified by an independent testing laboratory to ensure corner integrity and weld compliance. Certified test procedures and results are available upon request.
 - 3. Structural Uniform Load Test:
 - a. For 40M: ± 70 psf.
 - b. For 50M: ± 65 psf.
 - 4. Forced Entry Resistance: 300 lbs. satisfactory.

1.03 PROJECT CONDITIONS / SITE CONDITIONS

- A. Field Measurements: Verify actual measurements/openings by field measurements before fabrication; show recorded measurements on shop drawings. Coordinate field measurements, fabrication schedule with construction progress to avoid construction delays.

1.04 SUBMITTALS

- A. General: Prepare, review, approve, and submit specified submittals in accordance with "Conditions of the Contract" and Division 1 Submittals Sections. Product data, shop drawings, samples, and similar submittals are defined in "Conditions of the Contract."
- B. Product Data: Submit product data for each entrance series specified.
- C. Substitutions: Whenever substitute products are to be considered, supporting technical data, samples, and test reports must be submitted in accordance with AIA A201 and Section 00800 in order to make a valid comparison.
- D. Shop Drawings: Submit shop drawings showing layout, profiles, and product components, including anchorage, accessories, and finish colors.
- E. Samples: Submit verification samples for colors. Minimum 2-1/2 inch by 3 inch (61 mm by 73 mm) samples on actual aluminum substrates indicating full color range expected in installed system.
- F. Quality Assurance / Control Submittals:
 - 1. Test Reports: Submit certified test reports showing compliance with specified performance characteristics and physical properties.
 - 2. Installer Qualification Data: Submit installer qualification data.
- G. Closeout Submittals:
 - 1. Warranty: Submit executed warranty documents specified herein, endorsed by YKK AP authorized official and installer.

2. Project Record Documents: Submit project record documents, including operation and maintenance data for installed materials in accordance with Division 1 Project Closeout (Project Record Documents) Section.
 - a. Maintenance Data: Maintenance procedures for care and cleaning of entrance systems.

1.05 QUALITY ASSURANCE

- A. Qualifications:
 1. Installer Qualifications: Installer experienced (as determined by contractor) to perform work of this section who has specialized in the installation of work similar to that required for this project. If requested by Owner, submit reference list of completed projects.
 2. Manufacturer Qualifications: Manufacturer capable of providing field service representation during construction process.
- B. Mock-Ups (Field Constructed): Install at project site a job mock-up using acceptable products and manufacturer approved installation methods. Obtain Owner's and Architect's acceptance of finish color, and workmanship standard.
 1. Mock-Up Size:
 2. Maintenance: Maintain mock-up during construction for workmanship comparison; remove and legally dispose of mock-up when no longer required.
 3. Incorporation: Mock-up may be incorporated into final construction upon Owner's approval.
- C. Pre-Installation Meetings: Conduct pre-installation meeting to verify project requirements, substrate conditions, manufacturer's installation instructions, and manufacturer's warranty requirements.

1.06 WARRANTY

- A. Project Warranty: Refer to "Conditions of the Contract" for project warranty provisions.
- B. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by an authorized company official.
 1. Warranty Period: Manufacturer's **one (1) year** standard warranty commencing on the substantial date of completion for the project provided that the warranty, in no event, shall start later than six (6) months from the date of shipment by the manufacturer.

PART 2 PRODUCTS

2.01 MANUFACTURERS (Acceptable Manufacturers/Products)

- A. Basis of Design Manufacturer(s): YKK AP America Inc.; or approved equal.
 1. Monumental Swing Doors: YKK AP Series 40M and 50M Swing Doors; or approved equal.
 - a. 50M Description: 2" (54.0 mm) thick heavy wall door stile by 5" (127.0 mm).
 2. Corner Construction: Fabricate door corners joined by concealed reinforcement secured with screws, and sigma deep penetration welding.
 3. Glazing Stops: Manufacturer's standard snap-in glazing stops with EPDM glazing gaskets to prevent water infiltration.
 4. Weather-stripping: Manufacturer's standard pile type in replaceable rabbets for stiles; manufacturer's standard EPDM bulb type for door frames.
 5. Hardware: Manufacturer's standard as selected by Architect.
 6. 3/16" typical wall thickness for main members of doors (excluding glass stop).

2.02 MATERIALS

- A. Extrusions: ASTM B 221 (ASTM B 221M), 6063-T5 Aluminum Alloy.
- B. Aluminum Sheet:
 1. Anodized Finish: ASTM B 209 (ASTM B 209M), 5005-H14 Aluminum Alloy, 0.050" (1.27 mm) minimum thickness.

2.03 ACCESSORIES

A. Manufacturer's Standard Accessories:

1. Fasteners: Zinc plated steel concealed fasteners; Hardened aluminum alloys or AISI 300 series stainless steel exposed fasteners, countersunk, finish to match aluminum color.
2. Sealant: Non-skinning type, AAMA 803.3.
3. Glazing: Setting blocks, edge blocks, and spacers in accordance with ASTM C 864, shore durometer hardness as recommended by manufacturer; Glazing gaskets in accordance with ASTM C 864.

2.04 RELATED MATERIALS

- A. Section 08700 – Finish Hardware.
- B. Section 08800 – Glass & Glazing.

2.05 FABRICATION

- A. Shop Assembly: Fabricate and assemble units with joints only at intersection of aluminum members with uniform hairline joints; rigidly secure, and sealed in accordance with manufacturer's recommendations.
 1. Hardware: Drill and cut to template for hardware. Reinforce frames and door stiles to receive hardware in accordance with manufacturer's recommendations.
 2. Welding: Conceal welds on aluminum members in accordance with AWS recommendations or methods recommended by manufacturer. Members showing welding bloom or discoloration on finish or material distortion will be rejected.

2.06 FINISHES AND COLORS

- A. YKK AP America Anodized Plus® Finish: Match Existing (YB5N* Dark Bronze Anodized Plus® - Verify in Field).

Anodized Plus® is an advanced sealing technology that completely seals the anodic film yielding superior durability (See AAMA 612).
- B. Anodized Finishing: Prepare aluminum surfaces for specified finish; apply shop finish in accordance with the following:
 1. Anodic Coating: Electrolytic color coating followed by an organic seal applied in accordance with the requirements of AAMA 612-02. Aluminum extrusions shall be produced from quality controlled billets meeting AA-6063-T5.
 - a. Exposed Surfaces shall be free of scratches and other serious blemishes.
 - b. Extrusions shall be given a caustic etch followed by an anodic oxide treatment and then sealed with an organic coating applied with an electrodeposition process.
 - c. The anodized coating shall comply with all of the requirements of AAMA 612-02: Voluntary Specifications, Performance Requirements and Test Procedures for Combined Coatings of Anodic Oxide and Transparent Organic Coatings on Architectural Aluminum. Testing shall demonstrate the ability of the finish to resist damage from mortar, salt spray, and chemicals commonly found on construction sites, and to resist the loss of color and gloss.
 - d. Overall coating thickness for finishes shall be a minimum of 0.7 mils.
- C. Finishes Testing:
 1. Apply 0.5% solution NaOH, sodium hydroxide, to small area of finished sample area; leave in place for sixty minutes; lightly wipe off NaOH; Do not clean area further.
 2. Submit samples with test area noted on each sample.

PART 3 EXECUTION

3.01 MANUFACTURER'S INSTRUCTIONS / RECOMMENDATIONS

- A. Compliance: Comply with manufacturer's product data, including product technical bulletins, installation instructions, and product carton instructions.

3.02 EXAMINATION

- A. Site Verification of Conditions: Verify conditions (which have been previously installed under other sections) are acceptable for product installation in accordance with manufacturer's instructions.
 - 1. Verify location of preset anchors, perimeter fasteners, and block-outs are in accordance with shop drawings.

3.03 PREPARATION

- A. Adjacent Surfaces Protection: Protect adjacent work areas and finish surfaces from damage during product installation.
 - 1. Aluminum Surface Protection: Protect aluminum surfaces from contact with lime, mortar, cement, acids, and other harmful contaminants.

3.04 INSTALLATION

- A. General: Install manufacturer's system in accordance with shop drawings, and within specified tolerances.
 - 1. Protect aluminum members in contact with masonry, steel, concrete, or dissimilar materials using nylon pads or bituminous coating.
 - 2. Shim and brace aluminum system before anchoring to structure.

3.05 FIELD QUALITY CONTROL

- A. Manufacturer's Field Services: Upon request, provide manufacturer's field service consisting of site visit for inspection of product installation in accordance with manufacturer's instructions.

3.06 ADJUSTING AND CLEANING

- A. Adjusting: Adjust swing doors for operation in accordance with manufacturer's recommendations.
- B. Cleaning: The General Contractor shall clean installed products in accordance with manufacturer's instructions prior to owner's acceptance, and remove construction debris from project site. Legally dispose of debris.
- C. Protection: The General Contractor shall protect the installed product's finish surfaces from damage during construction.

END OF SECTION 08416

SECTION 08582 - TRANSACTION WINDOW UNITS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Manual pass, service and teller window units.
 - 2. Glazing.
 - 3. Deal tray and shelves.
 - 4. Intercom and talk through.

- B. Related Sections:
 - 1. Section 04200 - Unit Masonry
 - 2. Section 07900 - Joint Sealer Assemblies
 - 3. Section 08415 - Aluminum Framed Entrances and Storefronts

1.2 REFERENCES

- A. American Architectural Manufacturers Association:
 - 1. AAMA 611 - Voluntary Specification for Anodized Architectural Aluminum.
 - 2. AAMA 2603 - Voluntary Specification, Performance Requirements and Test Procedures for Pigmented Organic Coatings on Aluminum Extrusions and Panels.

- B. American Society Mechanical Engineers Standards:
 - 1. ASME SA-240/SA-240M - Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications.

- C. ASTM International:
 - 1. ASTM A27/A27M - Standard Specification for Steel Castings, Carbon, for General Application.
 - 2. ASTM A 36/A 36M. - Standard Specification for Carbon Structural Steel.
 - 3. ASTM A47/A47M - Standard Specification for Ferritic Malleable Iron Castings.
 - 4. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
 - 5. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
 - 6. ASTM A307 - Standard Specification for Carbon Steel Bolts and Studs, 60 000 PSI Tensile Strength.
 - 7. ASTM A 653/A 653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
 - 8. ASTM A666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless-Steel Sheet, Strip, Plate, and Flat Bar.
 - 9. ASTM B221/B221M - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
 - 10. ASTM C1036 - Standard Specification for Flat Glass.

11. ASTM C1048 - Standard Specification for Heat-Treated Flat Glass-Kind HS, Kind FT Coated and Uncoated Glass.
 12. ASTM D790 - Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
 13. ASTM D1929 - Standard Test Method for Determining Ignition Temperature of Plastics.
 14. ASTM E488 - Standard Test Methods for Strength of Anchors in Concrete and Masonry Elements.
 15. ASTM E699 - Standard Practice for Evaluation of Agencies Involved in Testing, Quality Assurance, and Evaluating of Building Components.
 16. ASTM E2188 - Standard Test Method for Insulating Glass Unit Performance.
 17. ASTM E2189 - Standard Test Method for Testing Resistance to Fogging in Insulating Glass Units.
 18. ASTM E2190 - Standard Specification for Insulating Glass Unit Performance and Evaluation.
 19. ASTM F588 - Standard Test Methods for Resistance of Window Assemblies to Forced Entry Excluding Glazing.
 20. ASTM F2329 - Standard Specification for Zinc Coating, Hot-Dip, Requirements for Application to Carbon and Alloy Steel Bolts, Screws, Washers, Nuts, and Special Threaded Fasteners.
- D. Consumer Products Safety Commission:
1. CPSC 16 CFR 1201 - Safety Standard for Architectural Glazing.
- E. DuPont Powder Coating Test Method:
1. DPC TM 10.219 - PCI Powder Smoothness.
- F. National Association of Architectural Metal Manufacturers.
1. NAAMM No. 3 Finish: Ground unidirectional uniform finish obtained with 80 - 100 grit abrasive.
- G. SAE International:
1. AMS5511 - Steel, Corrosion-Resistant, Sheet, Strip, and Plate, 19Cr - 9.5Ni (304L), Solution Heat Treated.
 2. AMS5513 - Steel, Corrosion-Resistant, Sheet, Strip, and Plate 19cr 9.2Ni (SAE 30304) Solution Heat Treated.
- H. Steel Structures Painting Council:
1. SSPC Paint 20 - Zinc-Rich Primers (Type I - Inorganic and Type II - Organic).

1.3 PERFORMANCE REQUIREMENTS

- A. System Design: Design and size components to withstand dead loads and live loads caused by pressure acting normal to plane of window as calculated in accordance with applicable code.
- B. Forced-Entry-Resistance Performance: Provide units identical to those tested for compliance with requirements indicated, and as follows:
1. Tested for forced-entry resistance according to ASTM F588 by a testing agency acceptable to authorities having jurisdiction.

1.4 SUBMITTALS

- A. AIA A232 and Section 00800 - Submittal Procedures: Requirements for submittals.
- B. Shop Drawings:
 - 1. Indicate configuration, sizes, rough-in, mounting, construction and glazing details as well as installation clearances and finishes.
- C. Product Data:
 - 1. Submit manufacturer's product data for specified Products indicating materials, operation characteristics, and finishes.
- D. Samples:
 - 1. Submit two samples, 4 x 4 inches (100 x 100 mm) in size illustrating metal finishes for each finish specified.
- E. Test Reports:
 - 1. [Indicate compliance with specified bullet resistance performance.]
- F. Manufacturer's Installation Instructions:
 - 1. Submit installation instructions with requirements to accommodate specific site conditions.

1.5 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing Products specified in this section with a recommended minimum of ten (10) years' documented experience.
 - 1. Participates in a Quality Assurance validation Program.
 - a. Facility Audit.
- B. Installer: Company specializing in installation of window systems specified with a recommended minimum of three (3) years' documented experience.
- C. Testing Agency Qualifications:
 - 1. Qualified according to ASTM E699 and experienced in ballistics and forced-entry resistance testing.

1.6 DELIVERY, STORAGE, AND PROTECTION

- A. Section 01600 - Product Requirements: Requirements for transporting, handling, storing, and protecting products.
- B. Ordering: To avoid construction delays comply with ordering instructions and lead time requirements as set by window system manufacturer.
- C. Pack window units and accessories in manufacturer's standard shipping containers and protective packaging. Deliver units in manufacturer's original packaging and unopened containers with identification labels intact.
- D. Store window units and accessories on raised blocks to prevent moisture damage protected from exposure to weather and vandalism.

1.7 FIELD MEASUREMENTS

- A. Verify field measurements prior to fabrication and record on the shop drawings.

1.8 COORDINATION

- A. Section 01040 - Administrative Requirements: Requirements for coordination.
- B. Coordinate work with adjacent materials specified in other Sections and as indicated on Drawings and approved shop drawings.
- C. Coordinate installation of anchorages for security windows. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, anchor bolts, and items with integral anchors, that are to be embedded in masonry. Deliver such items to Project site in time for installation.

1.9 WARRANTY

- A. Furnish manufacturer's standard warranty document, executed by an authorized Quikserv Corp.; or approved equal, officer in which manufacturer agrees to repair or replace windows, drawers and air curtains that fail in materials or workmanship within specified warranty period. This warranty is in addition to, and not a limitation of other rights Owner has under the contract.
 - 1. Warranty Period:
 - a. **One (1) year** parts and labor from date of installation.
 - 2. Failures include, but are not limited to, the following:
 - a. Deterioration of metals, metal finishes, and other materials beyond normal weathering and use.
 - b. Structural failures including deflections exceeding 1/4 inch.
 - c. Failure of welds.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Aluminum Extrusions: ASTM B221/B221M. Provide alloy and temper recommended by manufacturer for strength, corrosion resistance, and application of required finish, but not less than 22,000-psi (150-MPa) ultimate tensile strength and not less than 0.125 inch (3.2 mm) thick at any location for main frame and sash members.
- B. Steel Plates, Shapes, and Bars: ASTM A36/A36M.
- C. Metallic-Coated Steel Sheet:
 - 1. ASTM A653/A653M, CS (Commercial Steel), Type B; with G90 (Z275) zinc (galvanized) coating designation.
 - 2. AMS5511, steel, corrosion-resistant, sheet, strip, and plate, 19Cr - 9.5Ni (304L), solution heat treated.
 - 3. AMS5513, steel, corrosion-resistant, sheet, strip, and plate 19cr 9.2Ni (SAE 30304) solution heat treated.

- D. Stainless Steel Sheet, Strip, Plate, and Flat Bars:
 1. ASTM A666, austenitic stainless steel, Type 304, stretcher-leveled standard of flatness.
 2. ASME SA-240/SA-240M, chromium and chromium-nickel stainless steel plate, sheet, and strip for general applications.
- E. Concealed Bolts: ASTM A307, Grade A unless otherwise indicated.
- F. Embedded Plate Anchors: Fabricated from steel shapes and plates, minimum 3/16 inch (4.8 mm) thick; with minimum 1/2-inch- (12.7-mm-) diameter, headed studs welded to back of plate.
- G. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.
- H. Bituminous Paint: Cold-applied, asphalt-mastic paint complying with SSPC-Paint 12 requirements except containing no asbestos; formulated for 30-mil (0.76-mm) thickness per coat.
- I. Sealants: For sealants required within fabricated security windows, provide type recommended by manufacturer for joint size and movement. Sealant shall remain permanently elastic, nonshrinking, and nonmigrating.
- J. Gaskets: For gaskets required within fabricated security windows, provide type recommended by manufacturer for joint size and movement. Gaskets shall remain permanently elastic, nonshrinking, and nonmigrating.

2.2 WINDOW COMPONENTS

- A. Comply with requirements of UL listing for ballistics-resistance levels as specified.
- B. Bullet Resistant Glazing:
 1. Model QSBR - Sheet:
 - a. LEXGARD® SP1250 Level 3 - .44 Magnum caliber rated.
- C. Miscellaneous Glazing Materials: Provide material, size, and shape complying with requirements of glass manufacturers, and with a proven record of compatibility with surfaces contacted in installation:
 1. Cleaners, Primers, and Sealers: Type recommended by sealant or gasket manufacturer.
 2. Setting Blocks: Elastomeric material with a Type A Shore durometer hardness of 85, plus or minus 5.
 3. Spacers: Elastomeric blocks or continuous extrusions with a Type A Shore durometer hardness required by glass manufacturer to maintain glass lites in place for installation indicated.
 4. Edge Blocks: Elastomeric material of hardness needed to limit glass lateral movement (side walking).

2.3 BULLET RESISTANT PASS, SERVICE AND TELLER WINDOW UNITS & PACKAGE RECEIVER UNITS

- A. Basis of Design Manufacturers:
 - 1. Quikserv Corp.; or approved equal.
 - a. Model T1 - 3636S:
 - 1) Rough Opening: 36-3/8 inches (w) x 36-3/8 inches (h).
 - 2) Glazing:
 - a) Level 3 Bullet Resistant.
 - 3) Main Tower Transaction Window Finish: Dark Bronze (Match Existing).
 - a) UL Rated Level 3 framing available.
 - 4) PAC Entry Transaction Window Finish: Clear Anodized (Match Existing).
 - a) UL Rated Level 3 framing available.

2.4 GLAZING

- A. Bullet Resistant Glazing:
 - 1. LEXGARD® SP1250 laminate: 4-ply, clear, polycarbonate of the following construction:
 - a. 1/8 inch polycarbonate sheet with high AR abrasion-resistant surface.
 - b. Polyurethane bonding interlayer.
 - c. 1/2 inch polycarbonate sheet.
 - d. Polyurethane bonding interlayer.
 - e. 1/2 inch polycarbonate sheet.
 - f. Polyurethane bonding interlayer.
 - g. 1/8 inch polycarbonate sheet with high AR abrasion-resistant surface.
 - h. Material shall have a flexural strength of at least 13,500 psi per ASTM D790; and shall have AR (high performance abrasion-resistant) surfaces for enhanced service life and resistance to marring. Material shall conform applicable flammability code as a CC-1 rated Approved Light Transmitting Plastic.
 - i. Level 3 - .44 Magnum caliber rated.

2.5 DEAL TRAYS AND SHELVES

- A. Manufacturers - Deal Trays:
 - 1. Quikserv Corp.; or approved equal.
 - a. Model QS-1110:
 - 1) Transfer Area: 8 inches (w) x 2 inches (d) x 9 inches (l).
 - 2) Finish: 304 Stainless Steel with number 3 finish.
 - 2. Substitutions: In accordance with Contract Documents.

2.6 INTERCOM AND TALK THROUGH

- A. Manufacturers - Talk Through:
 - 1. Quikserv Corp.; or approved equal.

- a. Model: 6 inch Round Heavy Stainless-Steel Level 3 Speak-Thru.

2.7 FABRICATION

- A. Fabricate window to dimensions indicated on Drawings.
- B. Fabricate windows, and accessories to provide a complete system for assembly of components and anchorage of window and accessories.
 - 1. Provide units that are reglazable from the secure side without dismantling the nonsecure side of framing.
 - 2. Prepare security windows for glazing unless preglazing at the factory is indicated.
- C. Rigidly fit and secure joints and corners with internal reinforcement. Make joints and connections flush, and hairline. Fully weld corners.
 - 1. Fabricate framing with manufacturer's standard, internal opaque armoring in thicknesses required for security windows to comply with ballistics-resistance performance indicated.
- D. Prepare components with reinforcement required for hardware.
- E. Welding: To greatest extent possible, weld before finishing and in concealed locations to minimize distortion or discoloration of finish. Remove weld spatter and welding oxides from exposed surfaces by descaling or grinding.
- F. Metal Protection: Separate dissimilar metals to protect against galvanic action by painting contact surfaces with primer or by applying sealant or tape recommended by manufacturer for this purpose.
- G. Factory-cut openings in glazing for speaking apertures.
- H. Preglazed Fabrication: Preglaze window units at factory, where required for applications indicated.
- I. Bottom Sills: Stainless steel construction, no bottom tracks and no pop rivets.
- J. Handles: Stainless steel, manufacturer's standard profile and finish.

2.8 SHOP FINISHING

- A. Aluminum Finishes:
 - 1. Clear Anodized Aluminum Surfaces: AA-M10C22A31 non-specular as fabricated mechanical finish, medium matte chemical finish, and Architectural Class II 0.7 mils (0.018 mm) clear anodized coating (match existing).
 - a. Conform to AAMA 611
 - 2. Color Anodized Aluminum Surfaces: AA-M10C22A34 non-specular as fabricated mechanical finish, medium matte chemical finish, and Architectural Class II 0.7 mils (0.018 mm) dark bronze coating (match existing).
 - a. Conform to AAMA 611.

- B. Concealed Steel Items: Galvanized in accordance with ASTM A123 to thickness Grade 85, 2.0 oz/sq ft (610 gm/sq m).
- C. Stainless Steel: 304 Stainless Steel with NAAMM No. 3 finish.
- D. Apply bituminous paint to concealed metal surfaces in contact with cementitious or dissimilar materials.
- E. Touch-Up Primer for Galvanized Steel Surfaces: SSPC Paint 20 zinc rich.
- F. Extent of Finish:
 - 1. Apply factory coating to all surfaces exposed at completed assemblies.
 - 2. Apply finish to surfaces cut during fabrication so that no natural aluminum is visible in completed assemblies, including joint edges.
 - 3. Apply touch-up materials recommended by coating manufacturer for field application to cut ends and minor damage to factory applied finish.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verification of existing conditions before starting work.
- B. Verify construction is ready to receive Products specified in this section.
- C. Verify rough openings are correct size and in correct location.
- D. Examine roughing-in for embedded and built-in anchors to verify actual locations of security window connections before security window installation.
- E. Inspect built-in and cast-in anchor installations, before installing security windows, to verify that anchor installations comply with requirements. Prepare inspection reports.
 - 1. Remove and replace anchors where inspections indicate that they do not comply with specified requirements. Reinspect after repairs or replacements are made.
 - 2. Perform additional inspections to determine compliance of replaced or additional work. Prepare anchor inspection reports.
- F. For glazing materials whose orientation is critical for performance, verify installation orientation.
- G. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Furnish frames and anchors to other sections as required for installation in surrounding partition and casework construction.

3.3 INSTALLATION

- A. Install Products in accordance with manufacturer's instructions.
- B. Align Products plumb, level and square.
- C. Rigidly secure Products to adjacent supporting construction.
- D. Glaze windows in accordance with manufacturer's instructions.
- E. Seal perimeter joints in accordance with Section 07900.
- F. Protection: Where dissimilar metals will contact each other, protect against galvanic action by painting contact surfaces with primer or by applying sealant or tape recommended in writing by manufacturer for this purpose. Where aluminum will contact concrete or masonry, protect against corrosion by painting contact surfaces with bituminous paint.

3.4 ADJUSTING

- A. Section 01700 - Execution Requirements: Requirements for adjusting.
- B. Remove and replace defective work, including security windows that are warped, bowed, or otherwise unacceptable.

3.5 CLEANING AND PROTECTION

- A. Section 01700 - Execution Requirements: Requirements for cleaning.
- B. Remove protective material from factory finished surfaces.
- C. Wash surfaces by method recommended and acceptable to sealant and window manufacturer; rinse and wipe surfaces clean.
- D. Remove excess sealant by moderate use of mineral spirits or other solvent acceptable to sealant and window manufacturer.
- E. Clean metal and glass surfaces to polished condition.
 - 1. Lubricate sliding security window hardware.
 - 2. Lubricate transaction drawer hardware.
- F. Provide temporary protection to ensure that security windows are without damage at time of Substantial Completion.

END OF SECTION 08582

SECTION 08700 - DOOR HARDWARE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Hardware for fire-rated doors.
- B. Lock cylinders for doors with balance of hardware specified in other sections.
- C. Thresholds.

1.02 RELATED REQUIREMENTS

- A. Section 081113 - Hollow Metal Doors and Frames.
- B. Section 081213 - Hollow Metal Frames.
- C. Section 081416 - Flush Wood Doors.
- D. Section 081433 - Stile and Rail Wood Doors.
- E. Section 084313 - Aluminum-Framed Storefronts: Door hardware, except as noted in section.

1.03 REFERENCE STANDARDS

- A. ADA Standards - 2010 ADA Standards for Accessible Design 2010.
- B. BHMA A156.3 - Exit Devices 2020.
- C. BHMA A156.4 - Door Controls - Closers 2019.
- D. BHMA A156.5 - Cylinders and Input Devices for Locks 2020.
- E. BHMA A156.6 - Standard for Architectural Door Trim 2021.
- F. BHMA A156.16 - Auxiliary Hardware 2018.
- G. BHMA A156.18 - Materials and Finishes 2020.
- H. BHMA A156.21 - Thresholds 2019.
- I. BHMA A156.26 - Standard for Continuous Hinges 2021.
- J. BHMA A156.28 - Standard for Recommended Practices for Mechanical Keying Systems 2018.
- K. BHMA A156.115 - Hardware Preparation in Steel Doors and Steel Frames 2016.
- L. BHMA A156.115W - Hardware Preparation in Wood Doors with Wood or Steel Frames 2006.
- M. DHI (H&S) - Sequence and Format for the Hardware Schedule 2019.
- N. DHI (KSN) - Keying Systems and Nomenclature 2019.
- O. DHI (LOCS) - Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames 2004.
- P. DHI WDHS.3 - Recommended Locations for Architectural Hardware for Flush Wood Doors 1993; also in WDHS-1/WDHS-5 Series, 1996.
- Q. ICC A117.1 - Accessible and Usable Buildings and Facilities 2017.
- R. ITS (DIR) - Directory of Listed Products Current Edition.
- S. NFPA 80 - Standard for Fire Doors and Other Opening Protectives 2022.
- T. NFPA 105 - Standard for Smoke Door Assemblies and Other Opening Protectives 2022.
- U. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies 2022.
- V. UL (DIR) - Online Certifications Directory Current Edition.

- W. UL 10C - Standard for Positive Pressure Fire Tests of Door Assemblies Current Edition, Including All Revisions.
- X. UL 1034 - Standard for Safety Burglary-Resistant Electrical Locking Mechanisms Current Edition, Including All Revisions.
- Y. UL 1784 - Standard for Air Leakage Tests of Door Assemblies Current Edition, Including All Revisions.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordinate the manufacture, fabrication, and installation of products that door hardware is installed on.
- B. Sequence installation to ensure facility services connections are achieved in an orderly and expeditious manner.
- C. Preinstallation Meeting: Convene a preinstallation meeting one week prior to commencing work of this section; require attendance by affected installers and the following:
 - 1. Architect.
 - 2. Installer's Architectural Hardware Consultant (AHC).
 - 3. Hardware Installer.
 - 4. Owner's Security Consultant.
- D. Furnish templates for door and frame preparation to manufacturers and fabricators of products requiring internal reinforcement for door hardware.
- E. Keying Requirements Meeting:
 - 1. Attendance Required:
 - 2. Agenda:
 - a. Establish keying requirements.
 - b. Verify locksets and locking hardware are functionally correct for project requirements.
 - c. Verify that keying and programming complies with project requirements.
 - d. Establish keying submittal schedule and update requirements.
 - 3. Incorporate "Keying Requirements Meeting" decisions into keying submittal upon review of door hardware keying system including, but not limited to, the following:
 - 4. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.
 - 5. Deliver established keying requirements to manufacturers.

1.05 SUBMITTALS

- A. See AIA A232 and Section 00800 - Administrative Requirements for submittal procedures.
- B. Product Data: Manufacturer's catalog literature for each type of hardware, marked to clearly show products to be furnished for this project, and includes construction details, material descriptions, finishes, and dimensions and profiles of individual components.
- C. Shop Drawings - Door Hardware Schedule: A detailed listing that includes each item of hardware to be installed on each door.
 - 1. Prepared by or under supervision of Architectural Hardware Consultant (AHC).
 - 2. Comply with DHI (H&S) using door numbering scheme and hardware set numbers as indicated in Contract Documents.
 - a. Submit in vertical format.
 - 3. Include complete description for each door listed.
- D. Shop Drawings - Electrified Door Hardware: Include diagrams for power, signal, and control wiring for electrified door hardware that include details of interface with building safety and security systems. Provide elevations and diagrams for each electrified door opening as follows:

1. Prepared by or under supervision of Architectural Hardware Consultant (AHC) and Electrified Hardware Consultant (EHC).
 2. Elevations: Include front and back elevations of each door opening showing electrified devices with connections installed and an operations narrative describing how opening operates from either side at any given time.
 3. Diagrams: Include point-to-point wiring diagrams that show each device in door opening system with related colored wire connections to each device.
- E. Samples for Verification:
1. Submit minimum size of 2 by 4 inch (51 by 102 mm) for sheet samples, and minimum length of 4 inch (102 mm) for other products.
 2. Submit one (1) sample of hinge, latchset, lockset, closer, and _____ illustrating style, color, and finish.
 3. Include product description with samples.
- F. Manufacturer's Installation Instructions: Indicate special procedures and perimeter conditions requiring special attention.
- G. Manufacturer's qualification statement.
- H. Installer's qualification statement.
- I. Supplier's qualification statement.
- J. Maintenance Data: Include data on operating hardware, lubrication requirements, and inspection procedures related to preventative maintenance.
- K. Keying Schedule:
1. Submit three (3) copies of Keying Schedule in compliance with requirements established during Keying Requirements Meeting unless otherwise indicated.
- L. Warranty: Submit manufacturer's warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.
- M. Project Record Documents: Record actual locations of concealed equipment, services, and conduit.
- N. Maintenance Materials and Tools: Furnish the following for Owner's use in maintenance of project.
1. See Section 01600 - Product Requirements, for additional provisions.

1.06 QUALITY ASSURANCE

- A. Standards for Fire-Rated Doors: Maintain one copy of each referenced standard on site, for use by Architect and Contractor.
- B. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with minimum three years of documented experience.
- C. Installer Qualifications: Company specializing in performing work of the type specified for commercial door hardware with at least three years of documented experience.
- D. Supplier Qualifications: Company with certified Architectural Hardware Consultant (AHC) and Electrified Hardware Consultant (EHC) to assist in work of this section.

1.07 DELIVERY, STORAGE, AND HANDLING

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

1.08 WARRANTY

- A. See Sections 01700 & 01900 - Closeout Submittals for additional warranty requirements.

- B. Manufacturer Warranty: Provide manufacturer warranty against defects in material and workmanship for period indicated, from Date of Substantial Completion. Complete forms in Owner's name and register with manufacturer.
 - 1. Closers: Five years, minimum.
 - 2. Exit Devices: Three years, minimum.
 - 3. Locksets and Cylinders: Three years, minimum.

PART 2 PRODUCTS

2.01 GENERAL REQUIREMENTS

- A. Provide specified door hardware as required to make doors fully functional, compliant with applicable codes, and secure to extent indicated.
- B. Provide individual items of single type, of same model, and by same manufacturer.
- C. Closers:
 - 1. Provide door closer on each exterior door, unless otherwise indicated.
 - 2. Provide door closer on each fire-rated and smoke-rated door.
 - 3. Spring hinges are not an acceptable self-closing device, unless otherwise indicated.
- D. Fasteners:
 - 1. Provide fasteners of proper type, size, quantity, and finish that comply with commercially recognized standards for proposed applications.
 - a. Aluminum fasteners are not permitted.
 - b. Provide phillips flat-head screws with heads finished to match door surface hardware unless otherwise indicated.
 - 2. Provide machine screws for attachment to reinforced hollow metal and aluminum frames.
 - a. Self-drilling (Tek) type screws are not permitted.
 - 3. Provide stainless steel machine screws and lead expansion shields for concrete and masonry substrates.
 - 4. Provide wall grip inserts for hollow wall construction.
 - 5. Fire-Resistance-Rated Applications: Comply with NFPA 80.
 - a. Provide wood or machine screws for hinges mortised to doors or frames, strike plates to frames, and closers to doors and frames.
 - b. Provide steel through bolts for attachment of surface mounted closers, hinges, or exit devices to door panels unless proper door blocking is provided.

2.02 PERFORMANCE REQUIREMENTS

- A. Provide door hardware products that comply with the following requirements:
 - 1. Applicable provisions of federal, state, and local codes.
 - 2. Accessibility: ADA Standards and ICC A117.1.
 - 3. Fire-Resistance-Rated Doors: NFPA 80, listed and labeled by qualified testing agency for fire protection ratings indicated, based on testing at positive pressure in accordance with NFPA 252 or UL 10C.
 - 4. Hardware on Fire-Resistance-Rated Doors: Listed and classified by UL (DIR), ITS (DIR), testing firm acceptable to authorities having jurisdiction, as suitable for application indicated.
 - 5. Hardware for Smoke and Draft Control Doors (Indicated as "S" on Drawings): Provide door hardware that complies with local codes, and requirements of assemblies tested in accordance with UL 1784.
 - 6. Hardware Preparation for Steel Doors and Steel Frames: BHMA A156.115.
 - 7. Hardware Preparation for Wood Doors with Wood or Steel Frames: BHMA A156.115W.
 - 8. Products Requiring Electrical Connection: Listed and classified by UL (DIR) as suitable for the purpose specified.

2.03 HINGES

- A. Manufacturers: Conventional butt hinges.
 - 1. BEST; dormakaba Group; or approved equal.
- B. Properties:
 - 1. Continuous Hinges: As applicable to each item specified.
 - a. Geared Continuous Hinges: As applicable to each item specified.
 - 1) Non-handed.
 - 2) Anti-spinning through-fastener.
 - 3) UL 10C listed for fire-resistance-rated doors.
 - (a) Metal Door Installation: Rated up to 90 minutes.
 - (b) Wood Door Installation: Rated up to 60 minutes.
 - 4) Sufficient size to permit door to swing 180 degrees
- C. Sizes: See Door Hardware Schedule.
 - 1. Hinge Widths: As required to clear surrounding trim.
 - 2. Sufficient size to allow 180-degree swing of door.
- D. Finishes: See Door Hardware Schedule.
 - 1. Fully polish hinges; front, back, and barrel.
- E. Grades:
 - 1. Continuous Hinges: Comply with BHMA A156.26, Grade 1.
- F. Types:
 - 1. Continuous Hinges: Include geared hinges.
- G. Options: As applicable to each item specified.
- H. Quantities:
 - 1. Continuous Hinges: One per door leaf.
- I. Applications: At swinging doors.
- J. Products:
 - 1. Continuous Hinges:
 - a. Aluminum geared hinges.

2.04 EXIT DEVICES

- A. Manufacturers:
 - 1. BEST, dormakaba Group; or approved equal.
- B. Properties:
 - 1. Actuation: Crossbar.
 - 2. Touchpads: "T" style metal touchpads and rail assemblies with matching chassis covers end caps.
 - 3. Latch Bolts: Stainless steel deadlocking with 3/4 inch (19 mm) projection using latch bolt.
 - 4. Lever Design: Match project standard lockset trims.
 - 5. Cylinder: Include where cylinder dogging or locking trim is indicated.
 - 6. Strike as recommended by manufacturer for application indicated.
 - 7. Sound dampening on touch bar.
 - 8. Dogging:
 - a. Non-Fire-Resistance-Rated Devices: Cylinder 1/4 inch (6 mm) hex key dogging.
 - b. Fire-Resistance-Rated Devices: Manual dogging not permitted.
 - 9. Touch bar assembly on wide style exit devices to have a 1/4 inch (6.3 mm) clearance to allow for vision frames.
 - 10. All exposed exit device components to be of architectural metals and "true" architectural finishes.

11. Handing: Field-reversible.
 12. Fasteners on Back Side of Device Channel: Concealed - exposed fasteners not allowed.
 13. Vertical Latch Assemblies' Operation: Gravity, without use of springs.
- C. Grades: Complying with BHMA A156.3, Grade 1.
1. Provide exit devices tested and certified by UL or by a recognized independent laboratory for mechanical operational testing to 10 million cycles minimum with inspection confirming Grade 1 Loaded Forces have been maintained.
- D. Options:
- E. Products:
1. 2000; or approved equal.

2.05 ELECTRIC STRIKES

- A. Manufacturers:
1. RCI; dormakaba Group; or approved equal.
- B. Properties:
1. Provide UL (DIR) listed burglary-resistant devices.
 2. Provide UL 1034 compliant devices.
 3. Provide UL 10C compliant devices.
 4. Non-handed devices suitable for door frame material and scheduled lock configuration.
 5. Include transformer and rectifier as necessary for complete installation.
 6. Holding Force: 1,500 lbs (680.4 kg).
 7. Accommodating latch projections of 1/2 inch (13 mm) or 5/8 inch (16 mm).
- C. Options: As applicable to each item specified.
1. Voltage: 12 VAC.
- D. Installation: Connect electric strikes into fire alarm where non-rated doors are scheduled to release with fire or sprinkler alarm condition.
- E. Products:
1. 0 Series (0161, 0162, F0162, 0163); or approved equal.

2.06 LOCK CYLINDERS

- A. Manufacturers:
1. BEST, dormakaba Group; or approved equal.
- B. Properties:
1. Lock Cylinders: Provide key access on outside of each lock, unless otherwise indicated.
 - a. Provide cylinders from same manufacturer as locking device.
 - b. Provide cams and/or tailpieces as required for locking devices.
 - c. Provide cylinders with appropriate format interchangeable cores where indicated.
- C. Grades:
1. Standard Security Cylinders: Comply with BHMA A156.5.
- D. Material:
- E. Types: As applicable to each item specified.
- F. Applications: At locations indicated in hardware sets, and as follows
1. As required for items with locking devices provided by other sections, including at elevator controls and cabinets.
 - a. When provisions for lock cylinders are referenced elsewhere in the Project Manual to this Section, provide compatible type of lock cylinder, keyed to building keying system, unless otherwise indicated.

- G. Products:
 - 1. Rim/mortise.

2.07 MORTISE LOCKS

- A. Manufacturers:
 - 1. BEST, dormakaba Group; or approved equal.
- B. Properties:
 - 1. Mechanical Locks: Manufacturer's standard.
 - a. Fitting modified ANSI A115.1 door preparation.
 - b. Door Thickness Coordination Fitting 1-3/4 inch (44 mm) to 2-1/4 inch (57 mm) thick doors.
 - c. Latch: Solid, one-piece, anti-friction, self-lubricating stainless steel.
 - 1) Latchbolt Throw: 3/4 inch (19 mm), minimum.
 - d. Auxiliary Deadlatch: One-piece stainless steel, permanently lubricated.
 - e. Backset: 2-3/4 inch (70 mm).
 - f. Lever Trim:
 - 1) Functionality: Allow the lever handle to move up to 45 degrees from horizontal position prior to engaging the latchbolt assembly.
 - 2) Strength: Locksets outside locked lever designed to withstand minimum 1,400 inch-lbs (158.2 Nm) of torque. In excess of that, a replaceable part will shear. Key from outside and/or inside lever will still operate lockset.
 - 3) Spindle: Designed to prevent forced entry from attacking of lever.
 - 4) Independent spring mechanism for each lever.
 - (a) Trim to be self-aligning and thru-bolted.
 - 5) Handles: Made of forged or cast brass, bronze, or stainless-steel construction. Levers that contain a hollow cavity are not acceptable.
 - 6) Levers to operate a roller bearing spindle hub mechanism.
 - 2. Electrified Locks: Same properties as standard locks, and as follows:
 - a. Voltage: 12 VDC.
 - b. Function: Electrically locked (Fail Safe) or unlocked (Fail Secure), as indicated for each lock in Door Hardware Schedule.
- C. Finishes: See Door Hardware Schedule.
 - 1. Core Faces: Match finish of lockset.
- D. Options:
 - 1. Provide locksets made in a manufacturing facility to compliant with ISO 9001-Quality Management and ISO 14001-Environmental Management.
- E. Products: Mortise locks, including standard and electrified types.
 - 1. 40H; or approved equal.

2.08 DOOR PULLS AND PUSH PLATES

- A. Manufacturers:
 - 1. Trimco; or approved equal.
- B. Properties:
 - 1. Pull Type: Straight, unless otherwise indicated.
 - 2. Push Plate Type: Flat, with square corners, unless otherwise indicated.
 - a. Edges: Beveled, unless otherwise indicated.
- C. Grades: Comply with BHMA A156.6.
- D. Material: Stainless steel, unless otherwise indicated.
- E. Products: 1191-3; or approved equal.

2.09 CLOSERS

- A. Manufacturers:
 - 1. BEST, dormakaba Group; or approved equal.
- B. Properties:
 - 1. Surface Mounted Closers: Manufacturer's standard.
 - a. Construction: R14 high silicon aluminum alloy.
 - b. Maximum Projection from Face of Door: 2-7/16 inches (62 mm).
 - c. Mechanism: Separate tamper-resistant adjusting valves for closing and latching speeds.
 - 1) Include advanced backcheck feature.
 - 2) Include delayed action feature.
 - d. Hydraulic Fluid: All-weather type.
 - e. Arm Assembly: Standard for product specified.
 - 1) Include hold-open, integral stop, or spring-loaded stop feature, as specified in Door Hardware Schedule.
 - 2) Parallel arm to be a heavy-duty rigid arm.
 - 3) Where "IS" or "S-IS" arms are specified in hardware sets, if manufacturer does not offer this arm provide a regular arm mount closer in conjunction with a heavy-duty overhead stop equal to a dormakaba 900 Series.
 - f. Covers:
 - 1) Type: Standard for product selected.
 - (a) Full.
 - 2) Material: Plastic.
 - 3) Finish: Painted.
- C. Grades:
 - 1. Closers: Comply with BHMA A156.4, Grade 1.
 - a. Underwriters Laboratories Compliance:
 - 1) Product Listing: UL (DIR) and ULC for use on fire-resistance-rated doors.
 - (a) UL 228 - Door Closers-Holders, With or Without Integral Smoke Detectors.
- D. Types:
 - 1. Rack-and-pinion, surface-mounted. 1-1/2 inches (38 mm) minimum bore.
- E. Options:
- F. Installation:
 - 1. Mounting: Includes surface mounted installations.
 - 2. Mount closers on non-public side of door and stair side of stair doors unless otherwise noted in hardware sets.
 - 3. At outswinging exterior doors, mount closer on interior side of door.
 - 4. Provide adapter plates, shim spacers, and blade stop spacers as required by frame and door conditions.
 - 5. Where an overlapping astragal is included on pairs of swinging doors, provide coordinator to ensure door leaves close in proper order.
- G. Products:
 - 1. Surface Mounted:
 - a. HD8000; or approved equal.

2.10 STOPS AND HOLDERS

- A. Manufacturers:
 - 1. Trimco; or approved equal.
- B. General: Provide overhead stop/holder when wall or floor stop is not feasible.

- C. Grades:
 1. Door Holders, Wall Bumpers, and Floor Stops: Comply with BHMA A156.16 and Resilient Material Retention Test as described in this standard.
- D. Material: Base metal as indicated for each item by BHMA material and finish designation.
- E. Types:
 1. Wall Bumpers: Bumper, concave, wall stop.
- F. Installation:
 1. Non-Masonry Walls: Confirm adequate wall reinforcement has been installed to allow lasting installation of wall bumpers.
- G. Products:
 1. Wall Bumpers.

2.11 THRESHOLDS

- A. Manufacturers:
 1. Dormakaba or approved equal
- B. Properties:
 1. Threshold Surface: Fluted horizontal grooves across full width.
- C. Grades: Thresholds: Comply with BHMA A156.21.
- D. Types: As applicable to project conditions. Provide barrier-free type at every location where specified.
- E. Products:
 1. dormakaba or approved equal

2.12 KEYS AND CORES

- A. Manufacturers:
 1. BEST, dormakaba Group; or approved equal.
- B. Properties: Complying with guidelines of BHMA A156.28.
 1. Provide small format interchangeable core.
 2. Provide Patented CORMAX keys and cores.
 3. Provide keying information in compliance with DHI (KSN) standards.
 4. Keying Schedule: Arrange for a keying meeting, with Architect, Owner and hardware supplier, and other involved parties to ensure locksets and locking hardware, are functionally correct and keying complies with project requirements.
 5. Keying: Master keyed.
 6. Include construction keying and control keying with removable core cylinders.
 7. Supply keys in following quantities:
 - a. Master Keys: 4 each.
 - b. Construction Master Keys: 6 each.
 - c. Construction Keys: 15 each.
 - d. Construction Control Keys: 2 each.
 - e. Control Keys if New System: 2 each.
 8. Provide key collection envelopes, receipt cards, and index cards in quantity suitable to manage number of keys.
 9. Deliver keys with identifying tags to Owner by security shipment direct from manufacturer.
 10. Permanent Keys and Cores: Stamped with applicable key marking for identification. Do not include actual key cuts within visual key control marks or codes. Stamp permanent keys "Do Not Duplicate."
 11. Include installation of permanent cores and return construction cores to hardware supplier. Construction cores and keys to remain property of hardware supplier.

- C. Products:
 - 1. Patented:
 - a. CORMAX; or approved equal.

2.13 KEY CONTROL SYSTEMS

- A. Manufacturers:
 - 1. BEST, dormakaba Group; or approved equal.
- B. Properties: Manufacturer's scalable system for keeping track of keys, users, and doors.
 - 1. Key Management System: For each keyed lock on project, provide one set of consecutively numbered duplicate key tags with hanging hole and snap catch.
 - 2. Password Policy for Logins: Configurable.
 - 3. User Interface: Tile icons and customizable dashboard.
 - 4. Importing and Appending Data: At any time.
 - 5. User Directory Synchronization: Active, reducing manual entry.
 - 6. Email Notifications: Configurable for keys and other items currently due back on a designated day, notifications when keys and items are issued, and notifications when keys and other items are returned.
 - 7. Global Search Functionality: Capable of listing cores and their location, building, and doors.
 - 8. Relational Database: Allowing cross-referencing of people to cores and keys, doors, and buildings they access.
 - 9. Reports: Customizable.
 - 10. Self-service Password retrieval functionality.
 - 11. Program Installation: Standalone.
 - 12. Software Access: Allowing authorized users secure access to the software from anywhere, provided user can access their organization's secure network.
 - 13. Minimum Installation Requirements: As indicated in manufacturer's written installation instructions.
- C. Products:

2.14 KEY CABINETS

- A. Manufacturers:
 - 1. Telkee; or approved equal.
- B. Properties:
 - 1. Key Management System: For each keyed lock on project, provide one set of consecutively numbered duplicate key tags with hanging hole and snap catch.
 - 2. Security Key Tags: For each keyed lock on project, provide one set of matching key tags for permanent attachment to one key of each set.
 - 3. Provide key collection envelopes, receipt cards, and index cards in quantity suitable to manage number of keys.
 - 4. Mounting: Wall surface mounted.
 - 5. Capacity: Actual quantity of keys, plus 25 percent additional capacity.
 - 6. Key cabinet lock to facility's keying system.
- C. Finishes: Baked enamel, manufacturer's standard color.
- D. Material: Sheet steel.
- E. Products:
 - 1. Telkee RWC-50-5; or approved equal.

2.15 FINISHES

- A. Finishes: Identified in Hardware Sets.

- B. Finishes: Provide door hardware of same finish, unless otherwise indicated.
 - 1. Finish: 630; satin stainless steel, with stainless steel 3000 series base material (former US equivalent 32D), 652; satin chromium plated over nickel, with steel base material (former US equivalent 26D), and 689; aluminum painted, with any base material (former US equivalent US28); BHMA A156.18.

PART 3 - EXECUTION

4.01 EXAMINATION

- A. Verify that doors and frames are ready to receive this work; labeled, fire-rated doors and frames are properly installed, and dimensions are as indicated on shop drawings.
- B. Correct all defects prior to proceeding with installation.
- C. Verify that electric power is available to power operated devices and of correct characteristics.

4.02 INSTALLATION

- A. Install hardware in accordance with manufacturer's instructions and applicable codes.
- B. Install hardware using the manufacturer's fasteners provided. Drill and tap all screw holes located in metallic materials. Do not use "Riv-Nuts" or similar products.
- C. Install hardware on fire-rated doors and frames in accordance with applicable codes and NFPA 80.
- D. Install hardware for smoke and draft control doors in accordance with NFPA 105.
- E. Use templates provided by hardware item manufacturer.
- F. Do not install surface mounted items until application of finishes to substrate are fully completed.
- G. Wash down masonry walls and complete painting or staining of doors and frames.
- H. Complete finish flooring prior to installation of thresholds.
- I. Door Hardware Mounting Heights: Distance from finished floor to center line of hardware item. As indicated in following list; unless noted otherwise in Door Hardware Schedule or on drawings.
 - 1. For Steel Doors and Frames: Install in compliance with DHI (LOCS) recommendations.
 - 2. For Steel Doors and Frames: See Section 6549.
 - 3. For Steel Door Frames: See Section 081213.
 - 4. For Aluminum-Framed Storefront Doors and Frames: See Section 084313.
 - 5. For Wood Doors: Install in compliance with DHI WDHS.3 recommendations.
 - 6. Flush Wood Doors: See Section 081416.
 - 7. Stile and Rail Wood Doors: See Section 081433.
 - 8. Mounting heights in compliance with ADA Standards:
 - a. Locksets: 40-5/16 inch (1024 mm).
 - b. Push Plates/Pull Bars: 42 inch (1067 mm).
 - c. Deadlocks (Deadbolts): 48 inch (1219 mm).
 - d. Exit Devices: 40-5/16 inch (1024 mm).
 - e. Door Viewer: 43 inch (1092 mm); standard height 60 inch (1524 mm).
- J. Set exterior door thresholds with full-width bead of elastomeric sealant at each point of contact with floor providing a continuous weather seal; anchor thresholds with stainless steel countersunk screws.
- K. Include in installation for existing doors and frames any necessary field modification and field preparation of doors and frames for new hardware. Provide necessary fillers, reinforcements, and fasteners for mounting new hardware and to cover existing door and frame preparations.

4.03 CLEANING

4.04 PROTECTION

- A. Protect finished Work under provisions of Section 017000 - Execution and Closeout Requirements.
- B. Do not permit adjacent work to damage hardware or finish.

END OF SECTION 08700

Manufacturer List

Code	Name
BE	BEST ACCESS SYSTEMS
BY	BY RELATED SECTION
DM	DORMA DOOR CONTROLS
NA	NATIONAL GUARD
PR	BEST PRECISION EXIT DEVICES
ST	BEST HINGES AND SLIDING
TR	TRIMCO

Option List

Code	Description
B4E-HEAVY-KP	BEVELED 4 EDGES - KICK PLATES
CA-03	CYLINDER ATTACHMENT KIT (RIM/SVR DEVICE)
CD	CYLINDER DOGGING
CSK	COUNTER SINKING OF KICK AND MOP PLATES
FC	FULL PLASTIC COVER
LBR	LESS BOTTOM ROD

Finish List

Code	Description
626	SATIN CHROMIUM PLATED
628	SATIN ALUMINUM, CLEAR ANODIZED
630	SATIN STAINLESS STEEL
689	ALUMINUM PAINTED
AL	ALUMINUM

Hardware Sets

Set #AL01 - CARD READER ELECTRIC STRIKE

EXTERIOR, - DOOR 100A-1

1	Continuous Hinge	661HD UL 'HEIGHT TO SUIT'	AL	ST
1	Rim Exit Device	2103 CA-03	630	PR
1	Rim Cylinder	12E-72 PATD	626	BE
1	Construction Core	7190224		BE
1	Core	1CX-7 TO SUIT EXISTING KEY SYSTEM	626	BE
1	Electric Strike	BES-F0162		BE
1	Door Pull	1191-4	630	TR
1	Closer	HD8016 SDS	689	DM
1	Card Reader	CARD READER BY OWNER'S SECURITY VENDOR		BY
1	Power Supply	DKPS-2A		DM
1	Request To Exit	REQUEST TO EXIT		BY
1	Door Position Switch	DPS BY OWNER'S SECURITY VENDOR		BY
1	Remote Release	REMOTE RELEASE SYSTEM BY OWNERS SECURITY VENDOR		BY
1	Drip Cap	16 A X LAR		NA
1	Gasketing	WEATHERSTRIP BY ALUM AND GLASS MFG		BY
1	Door Sweep	BY ALUM AND GLASS MFG		BY
1	Threshold	THRESHOLD AS DETAILED BY ARCHITECT		BY

NOTE:

1. CARD READER TO RELEASE ELECTRIC STRIKE TO ALLOW AUTORIZED ENTRY.
2. ACCESS CONTROL SYSTEM TO BE PROGRAMMED FOR OPEN AND CLOSED TIMES.
3. OWNERS SECURITY VENDOR TO PROVIDE REMOTE RELEASE DESK TOP SWITCH AT MAIN DESK.
4. ALWAYS FREE EGRESS.

NEW DOOR X EXISTING FRAME

DOOR NEEDS TO HAVE FULL SIZE STILES FOR REG HEAD EXIT DEVICE
GC TO FILL AND PATCH EXISTING FRAME PREPS THAT WILL NO LONGER BE USED WITH NEW DOOR
HARDWARE.

GC TO PREP EXISTING FRAME FOR NEW DOOR HARDWARE

Set #AL01.1 - CARD READER ELECTRIC STRIKE

EXTERIOR, - DOOR 100A-2

1	Continuous Hinge	661HD UL 'HEIGHT TO SUIT'	AL	ST
1	Rim Exit Device	2103 CA-03	630	PR
1	Rim Cylinder	12E-72 PATD	626	BE
1	Construction Core	7190224		BE
1	Core	1CX-7 TO SUIT EXISTING KEY SYSTEM	626	BE
1	Electric Strike	BES-F0162		BE
1	Door Pull	1191-4	630	TR

1	Closer	HD8016 SDS	689	DM
1	Power Supply	DKPS-2A		DM
1	Request To Exit	REQUEST TO EXIT		BY
1	Door Position Switch	DPS BY OWNER'S SECURITY VENDOR		BY
1	Remote Release	REMOTE RELEASE SYSTEM BY OWNERS SECURITY VENDOR		BY
1	Drip Cap	16 A X LAR		NA
1	Gasketing	WEATHERSTRIP BY ALUM AND GLASS MFG		BY
1	Door Sweep	BY ALUM AND GLASS MFG		BY
1	Threshold	THRESHOLD AS DETAILED BY ARCHITECT		BY

NOTE:

1. NO CARD READER REQUIRED
2. ACCESS CONTROL SYSTEM TO BE PROGRAMMED FOR OPEN AND CLOSED TIMES.
3. OWNERS SECURITY VENDOR TO PROVIDE REMOTE RELEASE DESK TOP SWITCH AT MAIN DESK.
4. ALWAYS FREE EGRESS.

NEW DOOR X EXISTING FRAME

DOOR NEEDS TO HAVE FULL SIZE STILES FOR REG HEAD EXIT DEVICE
GC TO FILL AND PATCH EXISTING FRAME PREPS THAT WILL NO LONGER BE USED WITH NEW DOOR
HARDWARE.
GC TO PREP EXISTING FRAME FOR NEW DOOR HARDWARE

Set #AL02 - CARD READER ELECTRIC STRIKE

DOOR 100B-1 VESTIBULE CARD READER

DOOR 092.1A-2 SECURED VESTIBULE

1	Continuous Hinge	661HD UL 'HEIGHT TO SUIT'	AL	ST
1	Rim Exit Device	2103 CA-03	630	PR
1	Rim Cylinder	12E-72 PATD	626	BE
1	Perm Core	1CX-7 TO SUIT EXISTING KEY SYSTEM	626	BE
1	Construction Core	7190224		BE
1	Electric Strike	BES-F0162		BE
1	Door Pull	1191-4	630	TR
1	Closer	HD8016 SDS	689	DM
1	Card Reader	CARD READER BY OWNER'S SECURITY VENDOR		BY
1	Power Supply	DKPS-2A		DM
1	Request To Exit	REQUEST TO EXIT		BY
1	Door Position Switch	DPS BY OWNER'S SECURITY VENDOR		BY
1	Remote Release	REMOTE RELEASE SYSTEM BY OWNERS SECURITY VENDOR		BY
1	Gasketing	WEATHERSTRIP BY ALUM AND GLASS MFG		BY
1	Door Sweep	BY ALUM AND GLASS MFG		BY

NOTE:

DOOR NEEDS TO HAVE FULL SIZE STILES FOR REG HEAD EXIT DEVICE

1. CARD READER TO RELEASE ELECTRIC STRIKE TO ALLOW AUTORIZED ENTRY.
2. ACCESS CONTROL SYSTEM TO BE PROGRAMMED FOR OPEN AND CLOSED TIMES.
3. OWNERS SECURITY VENDOR TO PROVIDE REMOTE RELEASE DESK TOP SWITCH AT MAIN DESK.
4. ALWAYS FREE EGRESS.

Set #AL03 - RIM DEVICE CYL DOGGING

DOOR 100B-2 VESTIBULE CYLINDER DOGGING

1	Continuous Hinge	661HD UL 'HEIGHT TO SUIT'	AL	ST
1	Rim Exit Device CD	2103 CA-03 CD	630	PR
1	Rim Cylinder	12E-72 PATD	626	BE
1	Mortise Cylinder	1E-74 PATD	626	BE
2	Construction Core	7190224		BE
2	Core	1CX-7 TO SUIT EXISTING KEY SYSTEM	626	BE
1	Door Pull	1191-4	630	TR
1	Closer	HD8016 SDS	689	DM
1	Gasketing	WEATHERSTRIP BY ALUM AND GLASS MFG		BY
1	Door Sweep	BY ALUM AND GLASS MFG		BY

NOTE:

1. RIM EXIT DEVICE DEVICES EQUIPPED WITH CLINDER DOGGING.
2. WHEN DOOR IS DOGGED OPEN UNLOCKED DOOR IS PUSH PULL
3. WHEN CYLINDERS ARE LOCKED DOOR IS ENTER BY KEY ONLY
4. ALWAYS FREE EGRESS.

DOOR NEEDS TO HAVE FULL SIZE STILES FOR REG HEAD EXIT DEVICE

NEW DOOR X EXISTING FRAME

DOOR NEEDS TO HAVE FULL SIZE STILES FOR REG HEAD EXIT DEVICE

GC TO FILL AND PATCH EXISTING FRAME PREPS THAT WILL NO LONGER BE USED WITH NEW DOOR HARDWARE.

GC TO PREP EXISTING FRAME FOR NEW DOOR HARDWARE

Set #AL04- PAIR

2	Continuous Hinge	661HD UL 'HEIGHT TO SUIT'	AL	ST
1	SVR Exit Device LBR CD	2203 CA-03 CD LBR	630	PR
1	SVR Exit Device LBR CD	2203 CD LBR	630	PR
2	Door Pull	1191-4	630	TR
1	Rim Cylinder	12E-72 PATD	626	BE
3	Perm Core	1CX-7 TO SUIT EXISTING KEY SYSTEM	626	BE
3	Construction Core	7190224		BE

2	Mortise Cylinder	1E-74 PATD	626	BE
2	Closer	HD8016 SDS	689	DM
2	Weatherstrip	WEATHERSTRIP BY ALUM AND GLASS MFG	628	BY

NOTE:

1. SURFACE VERTICAL ROD EXIT DEVICE DEVICES EQUIPPED WITH CLINDER DOGGING.
2. WHEN DOORS ARE DOGGED OPEN UNLOCKED DOORS ARE PUSH PULL
3. WHEN CYLINDERS ARE LOCKED DOORS ARE ENTER BY KEY ONLY
4. ALWAYS FREE EGRESS.

NEW DOOR X EXISTING FRAME

DOOR NEEDS TO HAVE FULL SIZE STILES FOR REG HEAD SVR EXIT DEVICE

GC TO FILL AND PATCH EXISTING FRAME PREPS THAT WILL NO LONGER BE USED WITH NEW DOOR HARDWARE.

GC TO PREP EXISTING FRAME FOR NEW DOOR HARDWARE

Set #01 - MORTISE LOCK STOREROOM FUNCTION

1	Continuous Hinge	661HD UL 'HEIGHT TO SUIT'	AL	ST
1	Mortise Lockset			
	Storeroom	45H-7D 15H PATD CORMAX PATENTED KEYING S1	626	BE
1	Construction Core	7190224		BE
1	Perm Core	1CX-7 TO SUIT EXISTING KEY SYSTEM	626	BE
1	Closer	HD8016 AF80P FC	689	DM
1	Kick Plate	K0050 10" X 2" LDW B4E, HEAVY-KP CSK	630	TR
1	Wall Bumper	1270CV	626	TR
1	Weatherstrip	WEATHERSTRIP BY ALUM AND GLASS MFG	628	BY

NOTE:

ALUM AND GLASS DOOR TO HAVE A 6" WIDE DOOR STILE TO ACCOMODATE THE MORTISE LOCK

1. MORTISE LOCK STOREROOM FUNCTION (ALWAYS NEED A KEY TO ENTER)
2. ALWAYS FREE EGRESS.

Set #EXIST - EXISTING TO REMAIN

1	Hardware Existing to Remain		ALL OTHER	
	EXISTING HARDWARE TO REMAIN			BY

Opening List

Opening	Hdw Set
100C	CR01
100A-1	AL01
100A-2	AL01.1
100B-1	AL02
100B-2	AL03
100B-3	AL04
092.1A-1	EXIST
092.1A-2	AL02

SECTION 08800 - GLASS AND GLAZING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Related Sections:
 - 1. Section 01030 - Alternate Bids.
 - 2. Section 08415 - Aluminum Framed Entrances and Storefronts.
 - 3. Section 08416 - Aluminum Monumental Swing Doors.
 - 4. Section 08870 - Security Window Film.
 - 5. Section 08871 - Security Glazing (Alternate Bid).

1.2 SUMMARY

- A. Extent of glass and glazing work is indicated on drawings and schedules.
- B. Types of work or locations requiring glass and glazing include, but are not limited to, glass types scheduled herein and on the drawings.
 - 1. Doors, side lites and transoms.
 - 2. Storefront Framing.

1.3 QUALITY ASSURANCE

- A. Glazing Standards: Comply with recommendations of Flat Glass Marketing Association (FGMA) "Glazing Manual" and "Sealant Manual" except where more stringent requirements are indicated. Refer to those publications for definitions of glass and glazing terms not otherwise defined in this section or other referenced standards.
- B. Safety Glass: Categories I and II materials complying with testing requirements in CPSC 16CFR1201 and permanently marked with label of:
 - 1. Safety Glazing Certification Council (SGCC).
- C. Insulating Glass Seal Standard: Comply with ASTM E 774, Class C.
 - 1. Comply with International Building Code for insulated tempered glass.
 - 2. Label each unit permanently on spacer or on one pane.
 - 3. Certification agency:
 - a. Insulating Glass Certification Council (IGCC).
 - b. Associated Laboratories, Inc. (ALI).

- D. Single Source Responsibility for Glass: To ensure consistent quality of appearance and performance, provide materials produced by a single manufacturer or fabricator with a recommended 5 years' of successful experience in the production of each kind and condition of glass indicated and composed of primary glass obtained from a single source for each type and class required.
- E. Installer (Glazier): A qualified installer who employs glass installers for this Project who are certified under the National Glass Association's Certified Glass Installer Program
 - 1. Firm with a recommended 5 years of successful experience in glazing work similar to required work.
- F. All glass shall bear the Label of the manufacturer.
- G. Insulating-Glass Certification Program: Permanently marked either on spacers or on at least one component lite of units with an appropriate certification label of IGCC.

1.4 SUBMITTALS

- A. Product Data: Submit manufacturer's technical data for each glazing material and fabricated glass product required, including documentation of compliance with requirements and instructions for handling, storing, installing, cleaning and protecting each type of glass and glazing material, and installation and maintenance instructions.
- B. Before any glass is delivered to the job site, submit sections and details of glass installation at framing members.
- C. Samples: Submit for verification purposes, 12" square samples of each type of glass indicated except for clear single pane units, and 12" long samples of each color required (except black) for each type of sealant or gasket exposed to view. Install sealant or gasket sample between two strips of material representative of adjoining framing system in color.
 - 1. Submit insulating glass samples with completed edge-seal construction, but hermetic seal need not be maintained.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Protect glass and glazing materials during delivery, storage and handling to comply with manufacturer's directions and as required to prevent edge damage to glass, and damage to glass and glazing materials from effects of moisture including condensation, of temperature changes, of direct exposure to sun, and from other causes.

1.6 PROJECT CONDITIONS

- A. Examine framing and substrate work to receive glass and glazing materials, and condition under which glass is to be installed. Do not proceed with glazing until unsatisfactory conditions have been corrected.
- B. Environmental Conditions: Do not proceed with glazing when ambient and substrate temperature conditions are outside the limits permitted by glazing material manufacturer or when joint substrates are wet due to rain, frost, condensation or other causes.
 - 1. Install liquid sealants at ambient and substrate temperatures above 40°F.

1.7 WARRANTY

- A. Manufacturer's Special Warranty on Coated-Glass Products: Written warranty, made out to Owner and signed by coated-glass manufacturer agreeing to furnish replacements for those coated-glass units that deteriorate as defined in "Definitions" Article, f.o.b. the nearest shipping point to Project site, within specified warranty period indicated below.
 - 1. Warranty Period: **Ten (10) years** from date of Substantial Completion.
- B. Manufacturer's Special Warranty on Insulating Glass: Written warranty, made out to Owner and signed by insulating-glass manufacturer agreeing to furnish replacements for insulating-glass units that deteriorate as defined in "Definitions" Article, f.o.b. the nearest shipping point to Project site, within specified warranty period indicated below.
 - 1. Warranty Period: **Ten (10) years** from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Subject to compliance with requirements, manufacturers offering products which may be incorporated in the work include; but are not limited to, the following:
 - 1. Standard Glass and Insulating Glass Products:
 - a. Pilkington, Libbey-Owens-Ford, (LOF)
 - b. Vitro Architectural Glass (formally PPG Glass)
 - c. Guardian Industries Corp.
 - d. Or approved equal.

2.2 PRIMARY GLASS PRODUCTS

- A. Clear Float Glass: ASTM C 1036, Type I (transparent glass, flat), Class 1 (clear), Quality-Q3 (glazing select).
- B. Heat Treated Float Glass (Tempered Plate Glass): ASTM C 1048; Type I; Quality-Q3; Class I (clear)
 - 1. Provide prime glass of color and type indicated, which has been heat treated to strengthen glass in bending to not less than 4.5 times annealed strength.
- C. Uncoated Tinted Float Glass: Type I (transparent glass, flat), Class 2 (tinted heat absorbing and light reducing), Quality-Q3 (glazing select), and as follows for the interior glass work:
 - 1. Manufacturer's standard **clear**, with visible light transmittance of 70% and shading coefficient of 0.44 for 1/4" thick glass.
- D. Energy Advantage Low-E Glass: Manufacturer's standard clear color Low-E glass, coated on third surface with light transmittance for the exterior insulated glass to match the existing from the following:

1. Gray Tint: 33% and shading coefficient of .28 for 1/4" thick glass.
2. Midnight Gray Tint (3rd Surface): 7% and shading coefficient of .14 for 1/4" thick glass.
3. Gray Tint: 49% and shading coefficient of .34 for 1/4" thick glass.

2.3 INSULATING GLAZING

- A. Factory-assembled units consisting of sealed lites of glass separated by a dehydrated interspace, qualified according to ASTM E 2190, and complying with other requirements specified.
- B. Provide insulating glass for applications in exterior doors, side lites, storefront units, as follows:
 1. Exterior pane shall 1/4-inch thick tinted glass to meet indicated requirements.
 2. Interior pane shall be 1/4-inch thick "Low-E" coating on the third surface.
 3. Units shall be tempered where within 6 feet of a door or where "tempered" or "safety" glass is required by Code.
 4. Double Glass Performance Data:
 - a. Clear:
 - 1) Visible light transmittance of 70%,
 - 2) Solar Energy Transmittance of 33%,
 - 3) U-Factor: Summer (Air) of 0.27,
 - 4) U-Factor: Winter (Air) of 0.29,
 - 5) Solar Heat Gain Coefficient of 0.38,
 - 6) Shading coefficient of 0.44.
 - b. Gray Tint (2nd surface):
 - 1) Visible light transmittance of 33%,
 - 2) Solar Energy Transmittance of 18%,
 - 3) U-Factor: Summer (Air) of 0.28,
 - 4) U-Factor: Winter (Air) of 0.29,
 - 5) Solar Heat Gain Coefficient of 0.25,
 - 6) Shading coefficient of 0.28.
 - c. Midnight Gray Tint (3rd surface):
 - 1) Visible light transmittance of 7%,
 - 2) Solar Energy Transmittance of 3%,
 - 3) U-Factor: Summer (Air) of 0.28,
 - 4) U-Factor: Winter (Air) of 0.29,
 - 5) Solar Heat Gain Coefficient of 0.12,
 - 6) Shading Coefficient of 0.14.
 - d. Gray Tint (2nd surface):
 - 1) Visible light transmittance of 49%,
 - 2) Solar Energy Transmittance of 24%,
 - 3) U-Factor: Summer (Air) of 0.27,
 - 4) U-Factor: Winter (Air) of 0.29,
 - 5) Solar Heat Gain Coefficient of 0.30,
 - 6) Shading coefficient of 0.34.

2.4 LAMINATED GLASS

- A. Laminated Glass: ASTM C 1172, and complying with testing requirements in 16 CFR 1201 for category II materials, for kinds of laminated glass indicated and other requirements specified as following:
 - 1. Interlayer: Interlayer material as indicated below, clear or in colors, and of thickness indicated with a proven record of no tendency to bubble, discolor, or lose physical and mechanical properties after laminating glass lites and installation.
 - a. Interlayer Material: Polyvinyl butyral sheets.
 - 2. Laminating Process: Fabricate laminated glass to produce glass free of foreign substances and air or glass pockets as follows:
 - a. Laminate lites with polyvinyl butyral interlayer in autoclave with heat plus pressure.
 - 3. Inner Lite: Type I (transparent glass, flat), Class 2 (tinted heat absorbing and light reducing), Quality q3 (glazing select).
 - a. Class 2 (tinted).
 - b. Thickness: 1/4"
 - 4. Outer Lite: Tempered glass type.
 - a. Thickness: 1/4".
 - 5. Plastic Interlayer: 0.060 inch thick.

2.5 ELASTOMERIC GLAZING SEALANTS AND PREFORMED GLAZING TAPES

- A. General: Provide color of exposed glazing sealant compound as selected by Architect from manufacturer's standard colors, or black if no color is so selected. Comply with manufacturer's recommendations for selection of hardness, depending upon the location of each application, conditions at time of installation, and performance requirements as indicated. Select materials, and variations or modifications, carefully for compatibility with surfaces contacted in the installation.
- B. 1 Part Silicone Rubber Glazing Sealant: Elastomeric silicone sealant complying with FS TT-D-001543, Class A, non-sag. Provide acid type recommended by manufacturer where only non-porous bond surfaces are contacted; provide non-acid type recommended by manufacturer where one or more porous bond surfaces are contacted.
- C. Butyl Rubber Glazing Tape: Partly-vulcanized, self-adhesive, non-staining, elastomeric butyl rubber tape. 98% solids, intended for 35% compression, no appreciable deterioration for 3000 hour test in Atlas Weatherometer; either plain or pre-shimmed as required for proper installation of glass.

2.6 MISCELLANEOUS GLAZING MATERIALS

- A. Cleaners, Primers and Sealers: Type recommended by sealant or gasket manufacturer.
- B. Setting Blocks: Neoprene, EPDM or silicone blocks as required for compatibility with glazing sealants, 80 to 90 Shore A durometer hardness.

- C. Spacers: Neoprene, EPDM or silicone blocks, or continuous extrusions, as required for compatibility with glazing sealant, of size, shape and hardness recommended by glass and sealant manufacturers for application indicated.
- D. Edge Blocks: Neoprene, EPDM or silicone blocks as required for compatibility with glazing sealant, of size and hardness required to limit lateral movement (side-walking) of glass.
- E. Compressible Filler Rods: Closed-cell or waterproof-jacketed rod stock of synthetic rubber or plastic foam, flexible and resilient, with 5-10 psi compression strength for 25 percent deflection.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Require Glazier to inspect work of glass framing erector for compliance with manufacturing and installation tolerances, including those for size, squareness, offsets at corners; for presence and functioning of weep system; for existence of minimum required face or edge clearances; and for effective sealing of joinery. Obtain Glazier's written report listing conditions detrimental to performance of glazing work. Do not allow glazing work to proceed until unsatisfactory conditions have been corrected.

3.2 STANDARDS AND PERFORMANCE

- A. Comply with combined printed recommendations of glass manufacturers, of manufacturers of sealants, gaskets and other glazing materials, except where more stringent requirements are indicated, including those of referenced glazing standards.
- B. Glazing channel dimensions as indicated in details are intended to provide for necessary bite on glass, minimum edge and face clearances, and adequate sealant thicknesses, with reasonable tolerances. Adjust as required by job conditions at time of installation.
- C. Protect glass from edge damage during handling and installation; use a rolling block in rotating glass units to prevent damage to glass corners. Do not impact glass with metal framing. Use suction cups to shift glass units within openings; do not raise or drift glass with a pry bar. Rotate glass with flares or bevels along one horizontal edge which would occur in vicinity of setting blocks so that these are located at top of opening. Remove from project and dispose of glass units with edge damage or other imperfections of kind that, when installed, weakens glass and impairs performance and appearance.
- D. Apply primers to joint surfaces where required for adhesion of sealants, as determined by preconstruction sealant-substrate testing.
- E. Inspect each piece of glass immediately before installation, and discard pieces which have significant edge damage or face imperfections.
- F. Unify appearance of each series of lites by setting each piece to match others as nearly as possible. Inspect each piece and set with pattern, draw and bow oriented in the same direction as other piece.

- G. Install insulating glass units to comply with recommendations by Sealed Insulating Glass Manufacturers Association, except as otherwise specifically indicated or recommended by glass and sealant manufacturers.

3.3 PREPARATION FOR GLAZING

- A. Clean glazing channel and other framing members to receive glass, immediately before glazing. Remove coatings which are not firmly bonded to substrate. Remove lacquer from metal surfaces where elastomeric sealants are used.
- B. Apply primer or sealer to joint surfaces where recommended by sealant manufacturer.

3.4 GLAZING

- A. Install setting blocks of proper size in sill rabbet, located one quarter of glass width from each corner, but with edge nearest corner not closer than 6" from corner, unless otherwise required. Set blocks in thin course of sealant which is acceptable for heel bead use.
- B. Provide spacers inside and out, of correct size and spacing to preserve required face clearances, for glass sizes larger than 50 united inches (length plus height), except where gaskets or glazing tapes with continuous spacer rods are used for glazing. Provide 1/8" minimum bite of spacers on glass and use thickness equal to sealant width, except with sealant tape use thickness slightly less than final compressed thickness of tape.
- C. Provide edge blocking to comply with requirements of referenced glazing standard, except where otherwise required by glass unit manufacturer.
- D. Set units of glass in each series with uniformity of pattern, draw, bow and similar characteristics.
- E. Provide compressible filler rods or equivalent back-up material, as recommended by sealant and glass manufacturers, to prevent sealant from extruding into glass channel weep systems and from adhering to joints back surface as well as to control depth of sealant for optimum performance, unless otherwise indicated.
- F. Force sealants into glazing channels to eliminate voids and to ensure complete "wetting" or bond of sealant to glass and channel surfaces.
- G. Tool exposed surfaces of sealants to provide a substantial "wash" away from glass. Install pressurized tapes and gaskets to protrude slightly out of channel, so as to eliminate dirt and moisture pockets.
- H. Where wedge-shaped gaskets are driven into one side of channel to pressurize sealant or gasket on opposite side, provide adequate anchorage to ensure that gasket will not "walk" out when installation is subjected to movement.
- I. Miter cut wedge-shaped gaskets at corners and install gaskets in manner recommended by gasket manufacturer to prevent pull away at corners; seal corner joints and butt joints with sealant recommended by gasket manufacturer.

3.5 PROTECTION AND CLEANING

- A. Cure glazing sealants and compounds in compliance with manufacturer's instructions and recommendations, to obtain high early bond strength, internal cohesive strength and surface durability.
- B. Protect glass from breakage immediately upon installation by use of crossed streamers attached to framing and held away from glass. Do not apply markers to surfaces of glass. Remove nonpermanent labels and clean surfaces.
- C. Remove and replace glass which is broken, chipped, cracked, abraded or damaged in other ways during construction period, including natural causes, accidents and vandalism.
- D. Maintain glass in a reasonably clean condition during construction, so that it will not be damaged by corrosive action and will not contribute (by wash-off) to deterioration of glazing materials and other work. Comply with manufacturer's instructions.
- E. Wash and polish glass on both faces not more than 4 days prior to date scheduled for inspections intended to establish date of substantial completion in each area of project. Comply with glass manufacturer's recommendations for final cleaning.

END OF SECTION 08800

SECTION 08870 - SECURITY WINDOW FILM

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SECTION INCLUDES

- A. Field applied security film and rigid pvc cap system applied to glazed surfaces and glazing framing systems.

1.3 RELATED SECTIONS

- A. Section 08415 - Aluminum Storefronts
- B. Section 08800 - Glass and Glazing

1.4 REFERENCES

- A. ASHRAE - American Society for Heating, Refrigeration, and Air Conditioning Engineers; Handbook of Fundamentals.
- B. ASTM International (ASTM):
 1. ASTM D 882 - Standard Test Method for Tensile Properties of Thin Plastic Sheeting.
 2. ASTM D 1004 - Standard Test Method for Tear Resistance (Graves Tear) of Plastic Film and Sheeting.
 3. ASTM D 1044 - Standard Method of Test for Resistance of Transparent Plastics to Surface Abrasion (Taber Abrader Test).
 4. ASTM D 2582 - Standard Test Method for Puncture-Propagation Tear Resistance of Plastic Film and Thin Sheeting.
 5. ASTM D 4830 - Standard Test Methods for Characterizing Thermoplastic Fabrics Used in Roofing and Waterproofing.
 6. ASTM E 84 - Standard Method of Test for Surface Burning Characteristics of Building Materials.
 7. ASTM E 308 - Standard Recommended Practice for Spectrophotometry and Description of Color in CIE 1931 System.
 8. ASTM E 903 - Standard Methods of Test for Solar Absorbance, Reflectance and Transmittance of Materials Using Integrating Spheres.

9. ASTM E 1886 - Standard Test Method for Performance of Exterior Windows, Curtain Walls, Doors, and Impact Protective Systems Impacted by Missile(s) and Exposed to Cyclic Pressure Differentials.
 10. ASTM E 1996 - Standard Specification for Performance of Exterior Windows, Curtain Walls, Doors and Impact Protective Systems Impacted by Windborne Debris in Hurricanes.
- C. Window 5.2 - A Computer Tool for Analyzing Window Thermal Performance; Lawrence Berkeley Laboratory.
 - D. ANSI Z97.1 - American National Standard for Safety Glazing Materials Used in Buildings - Safety Performance Specifications and Methods of Test.
 - E. Consumer Products Safety Commission 16 CFR, Part 1201 - Safety Standard for Architectural Glazing Materials.
 - F. GSA Standard Test for Glazing and Glazing Systems Subject to Airblast Loadings.
 - G. ISO 16933, International Standard for Glass in Building: Explosion-resistant security glazing - Test and classification for arena air-blast testing.
 - H. Underwriters Laboratories Inc. (UL): UL 972 - Burglary Resisting Glazing Material.

1.5 PERFORMANCE REQUIREMENTS

- A. Fire Performance: Surface burning characteristics when tested in accordance ASTM E 84:
 1. Flame Spread: 25, maximum.
 2. Smoke Developed: 450, maximum.
- B. Abrasion Resistance: Film must have a surface coating that is resistant to abrasion such that, less than 5 percent increase of transmitted light haze will result in accordance with ASTM D 1044 using 50 cycles, 500 grams weight, and the CS10F Calbrase Wheel.

1.6 SUBMITTALS

- A. Submit under provisions of AIA A201 and Section 00800.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 1. Preparation instructions and recommendations.
 2. Storage and handling requirements and recommendations.
 3. Installation methods.
- C. Selection Samples: For each film specified, submit film samples representing manufacturer's film type for the project.
- D. Verification Samples: For each film specified, two samples representing film color and pattern.

- E. Performance Submittals: Provide laboratory data of emissivity and calculated window U-Factors for various outdoor temperatures based upon established calculation procedure defined by the ASHRAE Handbook of Fundamentals, Chapter 29, or Lawrence Berkeley Laboratory Window 5.2 Computer Program.
- F. **Letter from the manufacturer of the security film that the contractor is a certified installer.**
- G. **Shop drawings from the installer / manufacturer of the security window film illustrating all conditions of the Impact Protection Adhesive (IPA) overlap distance onto the adjacent glazing framing system.**

Note: Installation of the security window film shall not proceed until the submittals of all conditions are submitted.

1.7 QUALITY ASSURANCE

- A. Manufacturer Qualifications: All primary products specified in this section will be supplied by a single manufacturer with a minimum of ten years experience.
- B. Installer Qualifications: All products listed in this section are to be installed by a single installer with a minimum of five years demonstrated experience in installing products of the same type and scope as specified.
 - 1. **Provide documentation that the installer is authorized by the Manufacturer to perform Work specified in this section.**
 - 2. Provide a commercial building reference list of 5 properties where the installer has applied window film. This list will include the following information:
 - a. Name of building.
 - b. The name and telephone number of a management contact.
 - c. Type of glass.
 - d. Type of film.
 - e. Amount of film installed.
 - f. Date of completion.
 - 3. Provide a Glass Stress Analysis of the existing glass and proposed glass/film combination as recommended by the film manufacturer.
 - 4. Provide an application analysis to determine available energy cost reduction and savings.
- C. **Window Security Film Pre-Installation Meeting:** Prior to installation of the Security Window Film, there shall be a Pre-Installation Meeting with the General Contractor, Window Security Film Subcontractor, Construction Manager and the Architect. At this meeting, products and installation requirements and shall be reviewed.
- D. Mock-Up: Provide a mock-up for evaluation and approval by the Architect of surface preparation techniques and application workmanship.
 - 1. Finish areas designated by Architect.

2. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
3. Refinish mock-up area as required to produce acceptable work.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Store and dispose of hazardous materials, and materials contaminated by hazardous materials, in accordance with requirements of local authorities having jurisdiction.

1.9 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.10 WARRANTY

- A. At project closeout, provide to Owner or Owners Representative an executed current copy of the manufacturer's standard limited warranty against manufacturing defect, outlining its terms, conditions, and exclusions from coverage.
- B. Basis of Design Manufacturer and the Authorized Window Film Dealer (collectively referred to as "Seller") warrant for **twelve (12) years** from installation, and provided that the product is maintained in accordance with the Window Care Instructions below, that the Safety & Security Window Film will:
 1. Maintain Adhesion Properties without blistering, bubbling, or delaminating from the glass,
 2. Maintain Appearance without discoloration,
 3. Maintain Strength, Tear, and Penetration Resistant Properties as defined in product literature.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Basis of Design: "3M Scotchshield Ultra S800 Safety and Security Window Film", as manufactured by 3M Commercial Solutions; or approved equal. Optically clear microlayered polyester film, nominally 8 mils (0.008 inch) thick, with a durable acrylic abrasion resistant coating over one surface and a pressure sensitive adhesive on the other. The film is clear and does not contain dyed polyester. The adhesive is pressure-activated, not water-activated, and forms a physical bond, not chemical bond, to the glass. The film is microlayered with both plastic and ductile polyester layers for tear resistance.
 1. Subject to compliance with requirements of the Contract Documents, manufacturers offering products which may be incorporated in work include the following:

- a. Solar Gard Armorcoat 8-Mil Clear Safety and Security film, as manufactured by Saint-Gobain Solar Gard,
- b. Or approved equal.

Note: Requests for substitutions will be considered in accordance with provisions of AIA A201 and Section 00800.

2. Physical / Mechanical Performance Properties (nominal):
 - a. Film Color: Clear.
 - b. Film Thickness (excluding coatings or adhesive liner): Nominal 8 mils
 - c. Tensile Strength (ASTM D882):
 - 1) Base Film: 32,000 psi (MD) / 32,000 psi (TD).
 - 2) Coated Film: 32,000 psi (MD) / 32,000 psi (TD).
 - d. Break Strength (ASTM D882):
 - 1) Base Film: 250 lb/in (MD) / 250 lb/in (TD).
 - 2) Coated Film: 245 lb/in (MD) / 265 lb/in (TD).
 - e. Percent Elongation at Break (ASTM D882):
 - 1) Base Film: 115 % (MD) / 115 % (TD).
 - 2) Coated Film: 132 % (MD) / 130 % (TD).
 - f. Yield Strength:
 - 1) Base Film: 12,000 psi (MD).
 - 2) Coated Film: 15,000 psi (MD).
 - g. Percent Elongation at Yield (ASTM D882):
 - 1) Base Film: 7% (MD).
 - 2) Coated Film: 9% (MD).
 - h. Graves Tear Resistance (ASTM D1004):
 - 1) Maximum Force (lbs):
 - a) Base Film: 40 (MD) / 40 (TD).
 - b) Coated Film: 40 (MD) / 40 (TD).
 - 2) Maximum Extension (in):
 - a) Base Film: 0.45 (MD) / 0.65 (TD).
 - b) Coated Film: 0.50 (MD) / 0.57 (TD).
 - 3) Graves Area Tear Resistance (lbs%):
 - a) Base Film: 1,100 (MD) / 1,300 (TD).
 - b) Coated Film: 1,100 (MD) / 1,300 (TD).
 - i. Puncture Propagation Tear Resistance (ASTM D2582):
 - 1) Coated Film: 9 lbf (MD) / 10 lbf (TD).
 - j. Puncture Strength (ASTM D4830):
 - 1) Material Properties (as supplied).
 - 2) Coated Film: 185 lbf.
2. Uniformity: No noticeable pin holes, streaks, thin spots, scratches, banding or other optical defects.
3. Variation in Total Transmission across the width: Less than 2 percent over the average at any portion along the length.
4. Identification: Labeled as to Manufacturer as listed in this Section.
5. Solar Performance Properties: Film applied to 1/4 inch (6 mm) thick clear glass.
 - a. Visible Light Transmission (ASTM E 903): 87 percent.

- b. Visible Reflection (ASTM E 903): Not more than 10 percent.
 - c. Ultraviolet Transmission (ASTM E 903): Less than 0.5 percent.
 - d. Solar Heat Gain Coefficient (ASTM E 903): 0.79.
6. Impact Resistance for Safety Glazing: Tested on 1/4 inch (6 mm) annealed glass.
 - a. Safety Rating (CPSC 16 CFR, Part 1201): Category II (400 ft.-lbs).
 - b. Safety Rating (ANSI Z97.1): Class A, Unlimited Size.
 7. Impact Resistance and Pressure Cycling: Film shall pass impact of Large Missile "C" and withstand subsequent pressure cycling (per ASTM's E1996 and E1886) at +/- 75 psf Design Pressure with use of 3M Impact Protection Adhesive. Film applied to 1/4- inch tempered glass.
 8. Blast Hazard Mitigation:
 - a. GSA Rating of "2"/ ASTM F1642 "Minimal Hazard" with blast pressure of 7 psi and 43 psi*msec blast impulse, on 1/4 inch (6 mm) tempered single pane glass and 3M Impact Protection Profile attachment system.
 9. Forced Entry Resistance: Product shall have been evaluated for time to resist complete body passage by a qualified 3rd Party test lab.

2.2 IMPACT PROTECTION FILM ATTACHMENT SYSTEMS

- A. Impact Protection Adhesive (IPA): Weatherable, UV-resistant, moisture curable structural sealant wet glaze.
 1. Color(s) available from the following to be selected by the Architect:
 - a. Black.
 - b. White.
 2. Material Properties (as supplied):
 - a. Typical Cure Time: 3 - 7 days (25 degrees C, 50% RH)
 - b. Full Adhesion: 7 - 14 days
 - c. Tack-Free Time (ASTM D 5895): 21 minutes (25 degrees C, 50% RH)
 - d. Flow, Sag or Slump (ASTM D 2202): 0 inches
 - e. Specific Gravity: 1.4
 - f. Working Time: 10 - 20 minutes (25 degrees C, 50% RH)
 - g. VOC Content: 16 g/L
 3. Material Properties (as cured - 21 days at 25 degrees C, 50% RH):
 - a. Ultimate Tensile Strength (ASTM D412): 380 psi (2.62 MPa)
 - b. Ultimate Elongation (ASTM D412): 640 psi
 - c. Durometer Hardness, Shore A (ASTM D2240): 38-39 points
 - d. Tear Strength, Die B (ASTM D624): 72 ppi
 4. Uniformity: Product shall have uniform consistency and appearance, with no clumping.
 5. Impact Resistance and Pressure Cycling:
 - a. As part of a filmed glass system, film attachment shall demonstrate ability to withstand Medium Large Missile C and Small Missile A impact, with subsequent pressure cycling (per ASTMs E 1996 and E 1886) at +/- 75 psf design pressure.

- b. As part of a filmed glass system, film attachment shall demonstrate ability withstand structural load requirements of ASTM E330 when tested at +/- 100 psf design pressure.
- 6. Blast Hazard Mitigation:
 - a. GSA level "2" rating (minimal hazard) of "2" with minimum blast load of 11 psi overpressure and 55 psi*msec blast impulse.

2.3 RIGID PVC ATTACHMENT SYSTEM

- A. Basis of Design: "BondKap", as manufactured by FilmFastener LLC; or approved equal, attachment system. Weatherable Rigid PVC secured using approved structural silicones such as Dow Corning 995; GE SCS2000 "Wet Glaze" type attachment; or approved equal. The rigid PVC aids in the integrity of the silicone to maintain proper alignment and increases the tensile/tear strength of the silicone, while provided and aesthetic cover to an unsightly large bead of silicone.
 - 1. Select from the available Rigid PVC Profiles to suit the condition:
 - a. BK 2001; or approved equal.
 - 1) Width: 1.516 inches.
 - 2) Typically used for commercial storefront applications where added protection is necessary such as high profile faculities.
 - b. BK 2004; or approved equal.
 - 1) Width: 1.30 inches.
 - 2) Typically used for commercial storefront applications.
 - c. BK2005; or approved equal.
 - 1) Width: 2.588 inches.
 - 2) Typically used for commercial storefront doors.
 - d. BK 2006; or approved equal.
 - 1) Width: 1.78 inches.
 - 2) Typically used for commercial storefront doors.
 - 2. Material properties.
 - a. Full cure of silicone 30 to 60 days depending on BondKap; or approved equal profile.
 - b. Strength and elongation dependent upon silicone used.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. If preparation of glass surfaces is the responsibility of another installer, notify Architect in writing of deviations from manufacturer's recommended installation tolerances and conditions.
 - 1. Glass surfaces receiving new film should first be examined to verify that they are free from defects and imperfections, which will affect the final appearance:
- B. Do not proceed with installation until glass surfaces have been properly prepared and deviations from manufacturer's recommended tolerances are corrected. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result under the project conditions.

- C. At the request of the specifying authority, an adhesion test to the frame surface may be conducted by applying a 4 - 6 inch long bead, approximately 0.5 – 1 inch in width, masking one side of the frame surface underneath the strip with tape. Allow the Impact Protection Adhesive to cure for 7 days and test adhesion by pulling up on the masked end and a 90 degree angle. If cohesive failure is observed (adhesive residue left behind on the frame surface), adhesion is acceptable; if adhesive failure is observed (clean peel from the frame), adhesion is unacceptable and product is not recommended.
- D. Impact Protection Adhesive (IPA) Examination:
1. If application of window film is/was the responsibility of another installer, notification in writing shall be made of deviations from manufacturer's recommended installation tolerances and conditions.
 2. Filmed glass surfaces receiving new attachment should first be examined to verify that they are free from defects and imperfections, and that the film edges extend sufficiently to the frame edges.
 3. Do not proceed with installation until film and frame surfaces have been properly prepared and deviations from manufacturer's recommended tolerances are corrected. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result under the project conditions.
 4. Conduct an adhesion test to the frame surface may be conducted by applying a 4 - 6 inch long bead, approximately 0.5 - 1 inch in width, masking one side of the frame surface underneath the strip with tape. Allow the Impact Protection Adhesive to cure for 7 days and test adhesion by pulling up on the masked end and a 90 degree angle. If cohesive failure is observed (adhesive residue left behind on the frame surface), adhesion is acceptable; if adhesive failure is observed (clean peel from the frame), adhesion is unacceptable and product is not recommended.
- E. Rigid PVC Profile Examination.
1. Assure the Rigid PVC Profile is the correct length, color and profile for the installation.
 2. Assure the Rigid PVC Profile has not been subject to direct sunlight and has warped. If damage has occurred replace as necessary. Rigid PVC Profile will not warp once properly installed and has full adhesion with the structural silicone.
- F. Commencement of installation constitutes acceptance of conditions.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions (See attached Impact Protection Adhesive Attachment System document).
 - 1. Install film on surface 2 (single pane glass).
- B. Cut film edges neatly and square at a uniform distance of 1/8 inch (3 mm) to 1/16 inch (1.5 mm) of window sealant. Use new blade tips after 3 to 4 cuts.
- C. Spray the slip solution, composed of one capful of baby shampoo or dishwashing liquid to 1 gallon of water, on window glass and adhesive to facilitate proper positioning of film.
- D. Apply film to glass and lightly spray film with slip solution.
- E. Squeegee from top to bottom of window. Spray slip solution to film and squeegee a second time.
- F. Bump film edge with lint-free towel wrapped around edge of a 5-way tool.
- G. Upon completion of film application, allow 30 days for moisture from film installation to dry thoroughly, and to allow film to dry flat with no moisture dimples when viewed under normal viewing conditions.
- H. Recommended minimum bead overlap for blast mitigation is 0.5 inch on both film and frame surfaces (excluding the glazing stops or compression gaskets).
- I. To ensure a straight and consistent bead width is achieved, masking tape may be applied to film and frame surfaces before application of Impact Protection Adhesive.
- J. Dispense Impact Protection Adhesive with a caulk gun and nozzle having an opening cut to approximate size of desired bead width.
 - a. Install as specified by silicone manufacturer and rigid pvc manufacturer.
 - b. Cut the tip of the silicone the appropriate size for the rigid pvc in use.
 - c. Apply the silicone to the frame and glass or on the rigid pvc profile depending on which profile is in use.
 - d. Place the rigid pvc on the silicone at the specified angle to achieve maximum contact with silicone frame and glass.
 - 1) If alternative rigid pvc selection is used and silicone has been applied to the rigid pvc, press the silicone rigid pvc combination to the desired position on the glass and frame.
 - e. Apply sufficient pressure to assure silicone is mated to rigid pvc glass and frame. You should be able to perceive the silicone under the rigid pvc. If not lift the rigid pvc and apply more silicone. If an excess of silicone is protruding past the rigid pvc, see cleaning and protection.

3.4 CLEANING AND PROTECTION

- A. Remove left over material and debris from Work area. Use necessary means to protect film before, during, and after installation.

- B. Touch-up, repair or replace damaged products before Substantial Completion.
- C. After application of film, wash film using common window cleaning solutions, including ammonia solutions, 30 days after application. Do not use abrasive type cleaning agents and bristle brushes to avoid scratching film. Use synthetic sponges or soft cloths.
- D. Common window cleaning solutions may be used 30 days after installation.

END OF SECTION 08870

Product Features and Benefits

3M™ Safety & Security Impact Protection Attachment (IPA) Sealant is a liquid caulk edge retention system designed to hold the 3M Safety and Security Window film in place to help provide additional impact protection from a variety of sources including bomb blasts, extreme weather and forced entry events. The 3M Impact Protection System (film + IPA) helps protect against personal injury from flying glass.

- Excellent tear, elongation and tensile strength
- Anchors the filmed glass to the window frame
- Available in Black, White and Gray



Film Installation

- Follow 3M Window Film Flat Glass Installation instructions (found on 3M Dealer Advantage site).

Project Site Considerations

- Ensure the work area is clean, dry and free of obstacles. Window film should be allowed to dry for at least 14 days before installing IPA. If residual moisture from film installation is visible near edges of film, wipe dry, wait an additional 7 days and check again.
- To ensure good adhesion, apply a 1/2" bead of IPA on the frame and onto a piece of tape. After 14 days, grab the IPA on the tape and pull the IPA from the frame until either the IPA removes cleanly from the frame (poor adhesion) or the IPA splits and leaves IPA on the surface (good adhesion). Contact your 3M sales representative or 3M Application Engineer with questions.

Materials

- 3M™ Impact Protection Attachment Sealant (Black, Gray or White)
- Caulk gun (electric or manual) and nozzle
- Small squeegee or putty knife, trimmed to size with scissors or utility knife
- Masking tape (3M™ ScotchBlue™ Painter's Tape #2090 works well)
- Cutting tool(s) such as retractable utility knife and scissors
- 3M™ Super Fine Synthetic Steel Wool Pad (optional)
- Rubbing Alcohol (or 2 parts Isopropyl Alcohol to 1 part water)
- Lint-free toweling
- Rubber nitrile gloves
- Thin tip permanent marker (optional)

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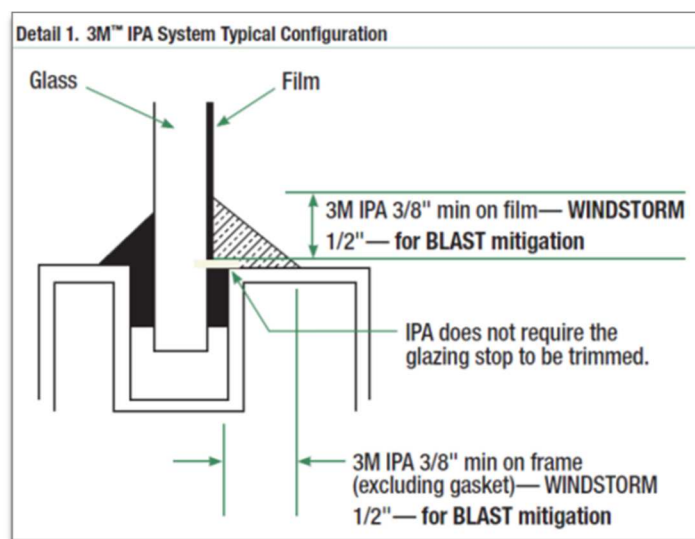
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Window Prep

- Ensure window frame and film surfaces are dry and free of dirt, debris, dust and grease. Remove any contaminants on frame surface with rubbing alcohol.
 - (Spot cleaning may be required with other more aggressive cleaners or tools, such as a synthetic steel wool pad, as required prior to cleaning with the rubbing alcohol.)
 - Apply rubbing alcohol generously to lint-free toweling and wipe the frame and several inches onto the film.
 - Immediately wipe dry with a clean lint-free towel.
- IPA requires a clean, dry and smooth frame surface to bond properly.
- Do NOT spray soapy water or common glass cleaners to clean the frame as their residue could reduce IPA bond strength.
- As needed, consult with building owner or project manager prior:
 - 3M does not assume liability for any damage that may be incurred during cleaning.
 - Trimming of the gasket is optional but in some cases could impact stability of the glass.
 - Consult local air quality rules before use.
 - Have a plan for proper disposal of extra IPA, masking tape and toweling waste.
- Do NOT use any abrasive cleaners or tools on the film/glass surface.
- Ensure that there is adequate space on the frame to allow for the proper amount of IPA contact with the frame. This minimum “distance” of IPA varies depending on the intended use or purpose of the IPA (e.g. 1/2 inch for blast mitigation in Detail 1, below).



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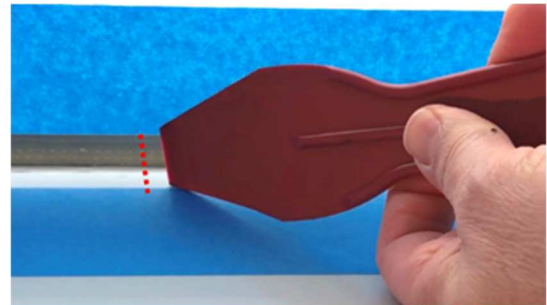
3M™ Impact Protection Attachment (IPA) Sealant Installation

1. Apply a 2 in. (48 mm) strip of 3M™ Masking Tape to the film surface ensuring that the tape is the required “distance” from the edge of the film along all four sides.
Note: This “distance” will depend on the intended use (e.g. 1/2 inch for blast mitigation in **Detail 1**, above). You can measure as you apply the tape, or prior you can lightly mark the distance on the film with a marker the same color as the IPA (to hide the mark).



2. Apply a 2 in. (48 mm) strip of 3M Masking Tape to the window frame ensuring that the tape is the required “distance” from the edge of the gasket. Trimming the gasket is optional, but tape should be applied at the “distance” from the gasket edge. **Note:** This “distance” will depend on the intended use (e.g. 1/2 inch for blast mitigation). You can measure as you apply the tape, or prior you can lightly mark the distance on the frame with a marker.

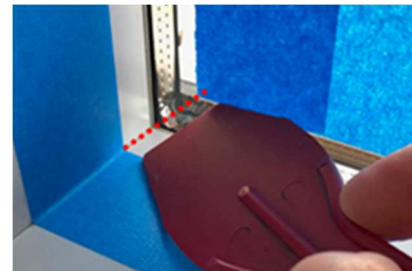
1&2



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Note: The space between the parallel pieces of tape will allow a uniform sealant bead to be applied to the glass/frame interface, resulting in the proper amount of IPA on the frame and on the film (“distance” required).

3. Prepare squeegee tools to smooth the IPA. A good option is a plastic putty knife cut to the dimension between the masking tape so that the spatula edges make contact with the edges of the masking tape. Cut a slightly wider tool that fits the corners. (see red dotted lines in images)
4. Prepare the caulk gun nozzle with a flat opening (no angle) so that the nozzle edges make contact with the edges of the masking tape.



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5. Clean the surface where the IPA will be applied to remove any finger oils or debris. Apply rubbing alcohol to a lint-free towel and wipe the window frame and film. Immediately wipe dry with a clean lint-free towel.
6. Load the IPA tube into the caulk gun and pierce the tube about 4 times with a blade. Do not cut the end off the tube, as this will allow the IPA to run freely and potentially make a mess.
7. Apply a triangular bead of IPA sealant around the entire frame in the area between the tape. Apply ample IPA in the corners as it is easier to squeegee outward. On the straight areas, keeping the caulk gun held at a 90-degree angle to the IPA bead will provide a smoother bead. Avoid making any air bubbles or gaps.
8. Smooth the sealant bead with an appropriate tool to give a finished look. It is best to start in one side of a corner and pull outward 5-10 inches, clean off the spatula, then start in the same corner and wipe the other direction. The flat sides can be smoothed by starting near the corners and wiping the full length of the side. For best appearance and performance, wipe all sides with a clean spatula within the tack time before a skin forms (approx. 10 mins). The IPA surface should be flat, not concave.
9. Carefully remove the masking tape strips from the glass/frame immediately after tooling. Do not allow the excess sealant to contact the film, frame or flooring surfaces. A drop cloth should be used to protect the work area. Be careful not to step on sealant and transfer it to surrounding surfaces.



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(continued)

Note: Should you get some of the sealant on the surrounding surfaces (frame, window, etc.), first try wiping up the bulk of the IPA with paper toweling. For smaller areas, you can use toweling with some rubbing alcohol.

Note: Curing time for the IPA Sealant will vary depending on temperature and relative humidity. It is not recommended to clean the film/IPA system for at least 36 hours following the installation. Full curing/ adhesion can take 21 days or more, depending on conditions.

Note: Read and follow all product labels, inserts and installation instructions before use. When using any equipment, always follow the manufacturers' instructions for safe operation.

Health and Safety

When handling any chemical products, read the manufacturers' container labels and the Safety Data Sheets (SDS) for important health, safety and environmental information. To obtain SDS sheets for 3M products go to 3M.com/SDS, or by mail or in case of an emergency, call 1-888-364-3577 or 1-651-737-6501.

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SECTION 08871 - SECURITY GLAZING (ALTERNATE BID)

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

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

1.02 SUMMARY

- A. This Section includes the following where security glazing will be installed in lieu of security window film where indicated on the drawings:
 - 1. Laminated Security Glazing
 - 2. Insulated Security Glass Units
- B. Related Sections:
 - 1. Section 01030 - Alternate Bids.
 - 2. Section 08415 – Aluminum Framed Entrances and Storefronts.
 - 3. Section 08416 – Aluminum Monumental Swing Doors.

1.03 QUALITY ASSURANCE

- A. Manufacturers Qualifications: Provide glazing systems produced by a manufacturer with a recommended 5-years successful experience in the fabrication of assemblies of the type and quality required.
- B. Installer’s Qualifications: Glazed systems shall be installed by a firm with a recommended 5-years’ successful experience in the installation of systems like those required.

1.04 ACTION SUBMITTALS

- A. Samples: Submit 12-inch square samples of each glass product. Submit 6-inch-long samples of glazing sealant and glazing tape, for color review.
- B. Manufacturer’s Data: Submit manufacturers’ technical data and instructions for installing and maintaining each glazing material

1.05 EXTENDED WARRANTIES

- A. General: Submit warranties provided by the manufacturer agreeing to repair or replace defective material or workmanship within the specified warranty periods, starting from the date of substantial completion.
 - 1. Laminated Security Glazing: Submit a **ten (10) year** warranty against delamination.

2. Insulated Security Glass Units: Submit a **ten (10) year** warranty against defects including loss of seal, interior clouding, and discoloration.

PART 2 - PRODUCTS

2.01 MANUFACTURER

- A. Security Glazing Manufacturers and Fabricators: Subject to compliance with requirements, firms producing glass products which may be incorporated into the work include the following:
 1. Armoured One, LLC; or approved equal.
 - a. Products:
 - 1) AOTSG516L – 5/16-inch Laminated Security Glass
 - 2) AOTSG1IGU – 1-inch Insulated Security Glass Unit

2.02 AOTSG516L - LAMINATED SECURITY GLAZING

- A. Thickness: 5/16-inch Clear
- B. ASTM C1172 – Standard Specification for Laminated Architectural Flat Glass
- C. WEY-SA-C1 – Standard for Shooter/Attack Certification and Forced Entry Class 1.
- D. GSA Level C – General Services Administration Standard Test Method for Glazing and Window Systems Subject to Dynamic Overpressure Loadings.
- E. ASTM F1642 – Standard Test Method for Glazing and Glazing Systems Subject to Air blast Loadings.
- F. UL972 – Standard for Burglary Resisting Glazing.
- G. ASTM E330 – Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.
- H. 16 CFR 1201 - Safety Standard for Architectural Glazing Materials; Consumer Products Safety Commission; current edition.
- I. ANSI Z97.1 - American National Standard for Safety Glazing Materials Used in Buildings, Safety Performance Specifications and Methods of Test; 2010.

2.03 AOTSG1IGU - INSULATED SECURITY GLASS UNITS

- A. Thickness: 1-inch Clear
- B. ASTM C1172 – Standard Specification for Laminated Architectural Flat Glass
- C. WEY-SA-C3 – Standard for Shooter/Attack Certification and Forced Entry Class 3.
- D. GSA Level C – General Services Administration Standard Test Method for Glazing and Window Systems Subject to Dynamic Overpressure Loadings.

- E. ASTM F1642 – Standard Test Method for Glazing and Glazing Systems Subject to Air blast Loadings.
- F. UL972 – Standard for Burglary Resisting Glazing.
- G. ASTM E330 – Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.
- H. 16 CFR 1201 - Safety Standard for Architectural Glazing Materials; Consumer Products Safety Commission; current edition.
- I. ANSI Z97.1 - American National Standard for Safety Glazing Materials Used in Buildings, Safety Performance Specifications and Methods of Test; 2010.

2.04 GLAZING MATERIALS

- A. General: Provide standard color of glazing materials as selected by Architect. Comply with manufacturer's recommendations for applications and conditions at time of installation.
- B. Polyurethane Glazing Gasket: Polyurethane gasket or stick tape, color to be selected by Architect, thickness and size as shown on drawings.
- C. Cleaners, Primers and Sealers: Type recommended by sealant or gasket manufacturer.
- D. Setting Blocks: Neoprene, silicone or EPDM, 70-90 durometer hardness, with proven compatibility with glazing materials used.
- E. Spacers: Neoprene, silicone or EPDM, 40-50 durometer hardness with proven compatibility with glazing materials used.
- F. Compressible Fillers: Closed-cell or waterproof-jacketed rod stock of synthetic rubber or plastic foam, proven to be compatible with sealants used, flexible and resilient, with 5-10 psi compression strength for 25% deflection.
- G. Sealant: Neutral-curing silicone glazing sealant complying with ASTM C 920, Type S, Grade NS, Class 100/50, Use NT.
 - 1. VOC Content: For sealants used inside of the weatherproofing system, not more than 250 g/L when calculated according to 40 CFR 59, Subpart D.
- H. Dowsil 995 – Dow Corning Corp. (Applied to interior of vision kit to adhere security glazing to the interior or the frame.); or approved equal.

PART 3 – EXECUTION

3.01 GENERAL

- A. Each glazing installation must withstand normal temperature changes, and impact loading without failure of glass, failure of sealants or gaskets, deterioration of glazing materials and other defects in the work.

- B. Protect glass from damage during handling and installation, and subsequent operation of glazed components of the work. Discard units with edge damage or other imperfections.
- C. Glazing channel dimensions are intended to provide for necessary bite on glass, minimum edge clearance, and adequate tape or sealant thicknesses, with reasonable tolerances.
- D. Comply with recommendations by manufacturers of glass and glazing products, except where more stringent requirements are indicated, including those of referenced glazing standards.

3.02 PREPARATION

- A. Clean glazing channel and other framing members to receive glass, immediately before glazing. Remove coatings which are not firmly bonded to substrate.
- B. Where sealants are used, apply primer or sealant to joint surfaces where recommended by sealant manufacturer.

3.03 GLAZING

- A. Where indicated, provide spacers for size and spacing required for glass sizes larger than 50 united inches, except where gaskets or pre-shimmed tapes are used for glazing. Provide 1/4-inch minimum bite of spacer on glass and use thickness equal to sealant width, except with sealant tape use thickness slightly less than final compressed thickness of tape.
- B. Set units of glass in each series with uniformity of pattern, draw, bow and similar characteristics.
- C. Where sealants are used at butt joints, apply sealant in thin continuous clear bead. Tool sealant to a uniform, continuous, even profile.
- D. Using DOW 995 structural sealant, or approved equal, bond the security glazing to interior of frame, by adding a bead of sealant to the edges of glazing and the framing on both sides of glazing.
- E. Apply glazing stops and clean up any excess structural sealants from finished surfaces.

3.04 PROTECTION AND CLEANING

- A. Remove and replace glass which is broken, chipped, cracked, abraded or damaged in other ways during construction period, including natural causes, accidents and vandalism.
- B. Wash and polish glass on both faces not more than 4 days prior to date scheduled for inspections intended to establish Date of Substantial Completion in each area of project. Comply with glass manufacturer's recommendations for final cleaning.

END OF SECTION 08871

SECTION 09650 - RESILIENT ACCESSORIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 DESCRIPTION OF WORK

- A. Extent of resilient accessories is shown on drawings.
 - 1. Rubber resilient wall base.

1.3 RELATED SECTIONS

- A. Section 04200 - Unit Masonry.

1.4 QUALITY ASSURANCE

- A. Codes and Standards: Comply with provisions of following codes, specifications and standards, except where more stringent requirements are shown or specified:
 - 1. ASTM F 1861 Type TS, Group 1 Performance Requirements for Resilient Rubber Wall Base.
 - 2. ASTM F 137 Standard Test Method for Flexibility of Resilient Flooring Materials protocol for Resilient Rubber Wall Base.
 - 3. ASTM F 1515 Standard Test Method for Measuring Light Stability of Resilient Flooring protocols for Resilient Rubber Wall Base.
 - 4. ASTM D 2240 Not less than 85 Shore A.
 - 5. ASTM D 3389 Abrasion Resistance: less than 1 gram weight loss.
- B. Manufacturer: Provide each type of resilient accessories as produced by a single manufacturer, including recommended primers, adhesives, and sealants.
 - 1. Wherever possible, provide each type of required resilient flooring and accessories produced by a single manufacturer.

1.5 SUBMITTALS

- A. Product Data: Submit manufacturer's technical data for each type of resilient accessory.
- B. Samples for Verification Purposes: Submit the following samples in triplicate of each type, color, and pattern of resilient flooring required, showing full-range of color and pattern variations.

1. For initial selection of colors submit, prior to above, samples in form of actual sections of resilient accessories, showing full range of colors available.
- C. Certification for Fire Test Performance: Submit certification from an independent testing laboratory acceptable to authorities having jurisdiction that resilient flooring complies with fire test performance requirements.
- D. Maintenance Instructions: Submit 2 copies of manufacturer's recommended maintenance practices for each type of resilient accessory required.
- E. Replacement Material: After completion of work, deliver 5% to project site replacement materials from same manufactured lot as materials installed.

1.6 PROJECT CONDITIONS

- A. Maintain minimum temperature of 65°F (18°C) or more than 85°F (29°C) in spaces to receive resilient accessories for at least 48 hours prior to installation, during installation, and for not less than 48 hours after installation.
 1. Store resilient materials in spaces where they will be installed for at least 48 hours before beginning installation.
- B. Maintain the ambient relative humidity between 40% and 60% during installation.
- C. Install resilient accessories after other finishing operations, including painting, have been completed.
- D. Until Substantial Completion, maintain ambient temperatures within range recommended by manufacturer, but not less than 55°F (13°C) or more than 85°F (29°C).

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Subject to compliance with requirements, manufacturers offering products which may be incorporated in the work include but not limited to the following:
 1. Rubber Resilient Wall Base and Accessories:
 - a. "Pinnacle", as manufactured by Roppe Corporation,
 - b. "BaseWorks Thermoset Rubber Wall Base", as manufactured by Johnsonite,
 - c. "RubberMyte" as manufactured by Burke Mercer Flooring Product,
 - d. Equivalent by Mohawk,
 - e. Or approved equal.
- B. Products specified herein have been selected because of their quality of construction, configuration, design, function, available finishes, components, accessories, dimensions, shape and style.
 1. The use of one manufacturer's catalog numbers, and the specific requirements set forth in drawings and specifications, are not intended to preclude the use of other products by other manufacturer's or which may be equivalent, but are given for the purpose of

establishing a standard of design and quality for materials, construction and workmanship.

- C. Comparable products of other manufacturers will be considered if it can be clearly shown that their products are equal to or will exceed the construction quality requirements, intended performances and all other design attributes listed above and provided that deviations in dimensions and profiles are minor and do not materially detract from the design concept or intended performances as judged solely by the Architect/Owner.

2.2 ACCESSORIES

- A. Wall Base: Provide rubber base complying with ASTM F-1861, Type TS, Group 1. Vulcanized SBR rubber with matching preformed corner units, and as follows:
 - 1. Height: 4-inches, unless otherwise indicated on the drawings.
 - 2. Thickness: 1/8 inch gauge.
 - 3. Style: Standard top-set cove.
 - 4. Finish / Colors: Matte finishes in colors as selected by Architect from manufacturer's available full range of colors. Allow for more than one color in any given area.
 - 5. Color Stability: Meets or exceeds ASTM F 1861 requirements for color stability when tested to ASTM F 1515 Standard Test Method for Measuring Light Stability of Resilient Flooring protocols.
 - 6. Phthalate, chlorine and halogen free.
- B. Adhesives (Cements): Water resistant, stabilized type as recommended by flooring manufacturer to suit material and substrate conditions.
 - 1. Adhesives to be used for resilient floor applications shall not generate any odor or unpleasant smell.

2.3 COLORS

- A. Colors shall be as selected and directed by the Architect.
 - 1. All selections shall be made from manufacturer's full product lines, for all products and accessories, (including premium colors).

PART 3 - EXECUTION

3.1 EXAMINATION

- A. General: Inspect substrates and conditions of installation to verify that work may properly commence. Do not proceed with the work until unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Broom clean or vacuum surfaces to be covered, and inspect substrate.
 - 1. Remove paint, and other materials that could interfere with adhesion of resilient products.

3.3 GENERAL INSTALLATION REQUIREMENTS

- A. Comply with manufacturer's published recommendations for installation.

3.4 INSTALLATION OF ACCESSORIES

- A. Apply wall base to walls, columns, pilasters, casework and other permanent fixtures in rooms or areas where base is required. Install base in lengths as long as practicable, with preformed corner units, or fabricated from base materials with mitered or coped inside corners. Tightly bond base to substrate throughout length of each piece, with continuous contact at horizontal and vertical surfaces.
 - 1. Job-formed Corners:
 - a. Outside Corners: Form by bending without producing discoloration (whitening) at bends.
 - b. Inside Corners: Butt one piece to corner, then scribe next piece to fit.
- B. On masonry surfaces, or other similar irregular substrates, fill voids along top edge of resilient wall base with manufacturer's recommended adhesive filler material.
- C. Place resilient edge strips tightly butted to flooring and secure with adhesive. Install edging strips at edges of flooring which would otherwise be exposed.

3.5 CLEANING AND PROTECTION

- A. Perform following operations immediately upon completion of installation:
 - 1. Sweep or vacuum thoroughly.
 - 2. Remove any excess adhesive or other surface blemishes, using appropriate cleaner recommended by resilient flooring manufacturers.

3.6 EXTRA STOCK

- A. Deliver stock of maintenance materials to Owner. Furnish maintenance materials from same manufactured lot as materials installed and enclosed in protective packaging with appropriate identifying labels.
 - 1. Accessories: Furnish not less than 5% of each type, size and color selected and installed.

END OF SECTION 09650

SECTION 09900 - PAINTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Related Section(s):
 - 1. Section 04200 - Unit Masonry.
 - 2. Section 05500 - Metal Fabrications.
 - 3. Division 16 - Electrical Work.

1.2 DESCRIPTION OF WORK

- A. Extent of painting work is indicated on drawings and schedules, and as herein specified.
- B. Work includes painting and finishing of interior exposed items and surfaces throughout project, except as otherwise indicated.
 - 1. Surface preparation, priming and coats of paint specified are in addition to shop-priming and surface treatment specified under other sections of work.
- C. "Paint" as used herein means all coating systems materials, including primers, emulsions, enamels, stains, sealers and fillers, and other applied materials whether used as prime, intermediate or finish coats.
- D. Surfaces to be Painted: Except where natural finish of material is specifically noted as a surface not to be painted, paint exposed surfaces whether or not colors are designated in "schedules". Where items or surfaces are not specifically mentioned, paint the same as similar adjacent materials or areas. If color or finish is not designated, Architect will select these from standard colors or finishes available.
- E. Following categories of work are not included as part of field-applied finish work.
 - 1. Shop Priming: Unless otherwise specified, shop priming of ferrous metal items is included under various sections for structural steel, steel windows, miscellaneous metal, hollow metal work, and similar items. Also, for fabricated components such as architectural woodwork, wood casework, and shop fabricated or factory built mechanical and electrical equipment or accessories. This is in addition to the prime coat specified herein.
 - 2. Pre-Finished Items: Unless otherwise indicated, do not include painting when factory-finishing or installer-finishing is specified for such items as (but not limited to) metal toilet enclosures, prefinished partition systems, acoustic materials, architectural woodwork and casework, and shop fabricated or factory built mechanical and electrical equipment, including light fixtures, switchgear and distribution cabinets.

3. Concealed Surfaces: Unless otherwise indicated, painting is not required on surfaces such as walls or ceilings in concealed areas and generally inaccessible areas, foundation spaces, furred areas, utility tunnels, pipe spaces, duct shafts and elevator shafts.
 4. Finished Metal Surfaces: Unless otherwise indicated, metal surfaces of anodized aluminum, stainless steel, chromium plate, copper, bronze and similar finished materials will not require finish painting.
 5. Operating Parts: Unless otherwise indicated, moving parts of operating units, mechanical and electrical parts, such as valve and damper operators, linkages, sinkages, sensing devices, motor and fan shafts will not require finish painting.
 6. Do not paint over any code-required labels, such as Underwriters' Laboratories and Factory Mutual, or any equipment, identification, performance rating, name, or nomenclature plates.
- F. Electrical Work: Painting of electrical work is specified herein.
1. Painting of electrical work is limited to those items exposed to view.
 2. Electrical items to be painted include, but are not limited to, the following:
 - a. Conduit and fittings.
 - b. Backboxes.
 - c. Junction boxes.

1.3 QUALITY ASSURANCE

- A. Single Source Responsibility: Provide primers and other undercoat paint produced by same manufacturer as finish coats. Use only thinners approved by paint manufacturer, and use only within recommended limits.
- B. Coordination of Work: Review other sections of these specifications in which prime paints are to be provided to ensure compatibility of total coatings system for various substrates. Upon request from other trades, furnish information or characteristics of finish materials provided for use, to ensure compatible prime coats are used.
- C. Industry Standards: Comply with industry standard established by the Painting and Decorating Contractors of America PDCA for applications, methods and recommendations and use of tools and equipment for paint and stain coatings, primers and block fillers.
- D. Lead and Chromate Contents:
1. All paint products must be free of any lead or chromate contents.
- E. Volatile Organic Compound Compliant (VOC.):
1. All paint products must meet the State VOC environmental regulations (OTC Regulation compliant) and the following:
 - a. Chemical Components of Interior Paints and Coatings: Provide products that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24) and the following chemical restrictions:

- (1) Primer, Sealer and Undercoater: VOC content of not more than 200 g/L.
 - (2) Specialty Primer, Sealer and Undercoater: VOC content of not more than 350 g/L.
 - (3) Rust Preventative Coating: VOC content of not more than 400 g/L.
 - (4) Flat Paints and Coatings: VOC content of not more than 100 g/L.
 - (5) Non-Flat Paints and Coatings: VOC content of not more than 150 g/L.
 - (6) Nonflat High Gloss Coatings: VOC content of not more than 250 g/L.
 - (7) Aromatic Compounds: Paints and coatings shall not contain more than 1.0 percent by weight of total aromatic compounds (hydrocarbon compounds containing one or more benzene rings).
- G. Paint Coordination: Provide finish coats which are compatible with prime paints used. Review other sections of these specifications in which prime paints are to be provided to ensure compatibility of total coatings system for various substrates. Upon request from other trades, furnish information on characteristics of finish materials proposed for use, to ensure compatible prime coats are used. Provide barrier coats over incompatible primers or remove and reprime as required. Notify Architect in writing of any anticipated problems using specified coating systems with substrates primed by others.
1. At galvanized surfaces, primer shall be a zinc dust-zinc oxide coating.

1.4 SUBMITTALS

- A. Product Data: Submit manufacturer's technical information including paint label analysis and application instructions for each material proposed for use.
- B. Samples: Prior to beginning work, Contractor shall furnish color chips (2 fan decks) for surfaces to be painted. Use representative colors when preparing samples for review. Submit samples for Architect's review of color and texture only. Provide a listing of material and application for each coat of each finish sample.
1. On 12" x 12" hardboard, provide two samples of each color and material, with texture to simulate actual conditions. Resubmit samples as requested by Architect until acceptable sheen, color, and texture is achieved.
- C. Acknowledgment of Contract Documents: Contractor / Installer shall submit to the Architect certifications signed by each of the Contractor and Installer attesting acknowledgment of requirements of the Contract Documents for specific project requirements indicated in this specifications.
1. Installer shall submit proof of evidence, (this project specification section) with his/her letter of certificate.
 2. Contractor / Installer shall not proceed with painting work of this section until submittal of required certifications are completed.
 3. Any work performed prior to completion of this submittal shall be subject to total rejection by the Architect. All rejected work shall be rectified without any additional cost to the Owner.

- D. Coating Maintenance Manual: Upon conclusion of the project, the contractor in conjunction with the coating manufacturer shall furnish a coating maintenance manual such as the Sherwin-Williams "Custodian Project Color and Product Information" report or equal. Manual shall include an area summary with finish schedule, area detail designating where each product/color/finish was used, product data pages, SDS pages, care and cleaning instructions, touch up procedures and color samples of each color and finish used.

1.5 DELIVERY AND STORAGE

- A. Deliver materials to job site in original, new and unopened packages and containers bearing manufacturer's name and label, and following information:
1. Name or title of material.
 2. Fed. Spec. number, if applicable.
 3. Manufacturer's stock number and date of manufacturer.
 4. Manufacturer's name.
 5. Contents by volume, for major pigment and vehicle constituents.
 6. Thinning instructions.
 7. Application instructions.
 8. Color name and number.

1.6 JOB CONDITIONS

- A. Apply solvent-thinned paints only when temperature of surfaces to be painted and surrounding air temperatures are between 45°F (7°C) and 95°F (35°C), unless otherwise permitted by paint manufacturer's printed instructions.
- B. Do not apply paint in snow, rain, fog or mist, or when relative humidity exceeds 85%, or to damp or wet surfaces, unless otherwise permitted by paint manufacturer's printed instructions.
- C. Painting may be continued during inclement weather if areas and surfaces to be painted are enclosed and heated within temperature limits specified by paint manufacturer during application and drying periods.
- D. Provide sufficient temporary illumination producing overall space/room minimum illumination level of 50 ft. candles while preparing or painting of surfaces and to assure the production of quality finishes.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Subject to compliance with requirements, manufacturers offering products which may be incorporated in the work include but are not limited to the following:
1. Benjamin Moore
 2. PPG Architectural Coatings
 3. The Sherwin-Williams Company
 4. Linetec Inc.
 5. Or approved equal

2.2 COLORS AND FINISHES

- A. Prior to beginning work, Contractor shall furnish color chips for surfaces to be painted from manufacturers full line of products. This shall include custom colors.
 - 1. Contractor shall allow for a total of 20 different colors of each type of paint, (excluding graphics and /or art work as indicated) with change of color within a room or space occurring either on a horizontal or vertical line, [allow for multiple (6) colors at each room unless otherwise shown]. Where roof structure is exposed, steel beams, steel joists and metal decking will be painted with different colors, as selected by the Architect.
 - 2. Contractor shall allow for split frames at all existing hollow metal door and borrowed lite frames to be painted.
 - 3. Final acceptance of colors will be from samples supplied on the job.
- B. Color Pigments: Pure, non-fading, applicable types to suit substrates and service indicated.

2.3 MATERIALS

- A. Material Quality: Provide best quality grade of various types of coatings as regularly manufactured by acceptable paint materials manufacturers. Materials not displaying manufacturer's identification as a standard, best-grade product will not be acceptable.
- B. Provide undercoat paint recommended and produced by the same manufacturer as the finish coats. Use only thinners approved by the paint manufacturer, and use only within recommended limits.

2.4 INTERIOR PAINT SCHEDULE

- A. Semi-Gloss (Satin) Enamel:
 - 1. 1st Coat: Sherwin-Williams, Pro Industrial Pro-Cryl Universal Primer.
 - 2. 2nd Coat: Acrylic Enamel, Sherwin-Williams, Pro Industrial HP Acrylic.
 - 3. 3rd Coat: Acrylic Enamel, Sherwin-Williams, Pro Industrial HP Acrylic.
 - 4. Apply to following interior surfaces: Hollow metal work, miscellaneous steel and ferrous metal fabrications.
 - 5. Apply as many coats as necessary to produce a uniform substrate and finish appearance.
- B. Egg-Shell / Satin Enamel - Acrylic Latex:
 - 1. Base Coats: Enamel Undercoat; Primer-Sealer to suit substrate or Loxon Block Surfacer for Concrete Masonry/CMU Block.

* Block Filler shall be Level 3 - Premium Fill; one or multiple coats for high performance block filler in accordance with PDCA industry standards. Apply mock-up to confirm appearance before application of finish coats.

2. 2nd Coat: Sherwin-Williams, ProMar 200 Zero VOC Eg-Shel.
3. 3rd Coat: Sherwin-Williams, ProMar 200 Zero VOC Eg-Shel.
4. Apply to the following interior surfaces: Concrete masonry units, gypsum drywall and other interior assemblies to receive paint.
5. Apply as many coats as necessary to produce a uniform substrate and finish appearance.

2.5 EXTRA STOCK

- A. Contractor shall provide one gallon of extra stock for each color/type selected for use on the project. Provide unopened containers clearly marked with manufacturers color number and name.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Applicator must examine areas and conditions under which painting work is to be applied and notify Contractor in writing of conditions detrimental to proper and timely completion of work. Do not proceed with work until unsatisfactory conditions, included rotted or otherwise defective materials, have been observed by all concerned and corrected in a manner acceptable to Applicator.
- B. Starting of painting work will be construed as Applicator's acceptance of surfaces and conditions within any particular area.
- C. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions otherwise detrimental to formation of a durable paint film.

3.2 SURFACE PREPARATION

- A. General:
 1. Perform preparation and cleaning procedures in accordance with paint manufacturer's instructions and as herein specified, for each particular substrate condition.
 2. Provide barrier coats over incompatible primers or remove and reprime as required. Notify Architect in writing of any anticipated problems in using the specified coating systems with substrates primed by others.
 3. Remove hardware, hardware accessories, machined surfaces, plates, lighting fixtures, and similar items in place and not to be finish-painted, or provide surface-applied protection prior to surface preparation and painting operations. Remove, if necessary,

for complete painting of items and adjacent surfaces. Following completion of painting of each space or area, reinstall removed items.

4. Clean surfaces to be painted before applying paint or surface treatments. Remove oil and grease prior to mechanical cleaning. Program cleaning and painting so that contaminants from cleaning process will not fall onto wet, newly-painted surfaces.
 5. Painting of materials shall commence only when the moisture content of the materials complies with manufacturer's recommendations as follows:
 - a. Concrete and masonry - 22% maximum.
 - b. Gypsum drywall - 12% maximum.
 - c. Plaster - 15% maximum.
- B. Cementitious Materials:
1. Prepare cementitious surfaces of concrete, concrete block, cement plaster and gypsum drywall board to be painted by removing efflorescence, chalk, dust, dirt, grease, oils, and by roughening as required to remove glaze.
 2. Determine alkalinity and moisture content of surfaces to be painted by performing appropriate tests. If surfaces are found to be sufficiently alkaline to cause blistering and burning of finish paint, correct this condition before application of paint. Do not paint over surfaces where moisture content exceeds that permitted in manufacturer's printed directions.
- C. Ferrous Metals:
1. Clean ferrous surfaces, which are not galvanized or shop-coated, of oil, grease, dirt, loose mill scale and other foreign substances by solvent or mechanical cleaning.
 2. Touch-up shop-applied prime coats wherever damaged or bare, where required by other sections of these specifications. Clean and touch-up with same type shop primer.
 3. Galvanized Surfaces: Clean free of oil and surface contaminants with non-petroleum based solvent.

3.3 MATERIALS PREPARATION

- A. Mix and prepare painting materials in accordance with manufacturer's directions.
- B. Maintain containers used in mixing and application of paint in a clean condition, free of foreign materials and residue.
- C. Stir materials before application to produce a mixture of uniform density, and stir as required during application. Do not stir surface film into material. Remove film and, if necessary, strain material before using.
- D. Tinting: Tint each undercoat a lighter shade to simplify identification of each coat when multiple coats of same material are applied. Tint undercoats to match the color of the finish coat, but provide sufficient differences in shade of undercoats to distinguish each separate coat.

3.4 APPLICATION

- A. General: Apply paint in accordance with manufacturer's directions. Use applicators and techniques best suited for substrate and type of material being applied.
- B. Where finish schedule calls for walls to be painted, paint all new and existing surfaces in same area. Paint from corner to corner on walls or to a major change in direction of surface to be painted. Provide crisp, clean, sharp lines where new painted surfaces abut existing painted surfaces.
- C. **Apply additional coats when undercoats, stains or other conditions show through final coat of paint, until paint film is of uniform finish, color and appearance. Give special attention to insure that surfaces, including edges, corners, crevices, welds, and exposed fasteners receive a dry film thickness equivalent to that of flat surfaces.**
- D. Sand lightly between each succeeding enamel coat.
- E. Scheduling Painting: Apply first-coat material to surfaces that have been cleaned, pretreated or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.
- F. Allow sufficient time between successive coatings to permit proper drying. 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 of paint does not cause lifting or loss of adhesion of the undercoat.
- G. **Minimum Coating Thickness: Apply materials at not less than manufacturer's recommended spreading rate, to establish a total dry film thickness as recommended by coating manufacturer and an acceptable finished appearance in finish, color and appearance as determined by the Architect.**
- H. Primer Coat: Apply primer coat of material which is required to be painted or finished, and which has not been prime coated by others.
 - 1. **Re-coat primed and sealed surfaces where there is evidence of suction spots or unsealed areas in first coat, to assure a finish coat with no burn-through or other defects due to insufficient sealing.**
- I. **Block Fillers: Apply block fillers using manufacturer's recommended application techniques with sufficient material and coats to achieve a pinhole-free, "Level 3 - Premium Fill Surface", and in accordance with PDCA 's industry standards.**
- J. Pigmented (Opaque) Finishes: Completely cover to provide an opaque, smooth surface of uniform finish, color, appearance and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness or other surface imperfections will not be acceptable.
- K. Completed Work: Match approved samples for color, texture and coverage. Remove, refinish or repaint work not in compliance with specified requirements.

3.5 CLEAN-UP AND PROTECTION

- A. Clean-Up: During progress of work, remove from site discarded paint materials, rubbish, cans and rags at end of each work day.
- B. Upon completion of painting work, clean all paint-spattered surfaces. Remove spattered paint by proper methods of washing and scraping, using care not to scratch or otherwise damage finished surfaces.
- C. Protection: Protect work of other trades, whether to be painted or not, against damage by painting and finishing work. Correct any damage by cleaning, repairing or replacing, and repainting, as acceptable to Architect.
 - 1. Provide "Wet Paint" signs as required to protect newly-painted finishes. Remove temporary protective wrappings provided by others for protection of their work, after completion of painting operations.
 - 2. At completion of work of other trades, touch-up and restore all damaged or defaced painted surfaces.

END OF SECTION 09900

SECTION 10440 - SPECIALTY SIGNS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 DESCRIPTION OF WORK

- A. Extent of specialty signs is shown on the drawings.
- B. Forms of specialty signs required include the following:
 - 1. Panel signs (Room Identification Signs).
 - 2. Installation of all specialty signs.

1.3 QUALITY ASSURANCE

- A. Uniformity of Manufacturer: For each sign form and graphic image process indicated furnish products of a single manufacturer.
- B. All signs shall conform to the International Building Code and ICC/ANSI A117.1. - 2017 requirements for accessible building elements.
 - 1. All signs to permanent rooms and spaces shall include Braille in accordance with N.J.A.C. 5:23-7.11 (j).

1.4 SUBMITTALS

- A. Product Data: Submit manufacturer's technical data and installation instructions for each type of sign required.
- B. Samples: Submit samples of each sign form and material showing finishes, colors, surface textures and qualities of manufacturer and design of each sign component including graphics.
 - 1. Submit full-size sample units, if requested by the Architect. Acceptable units may be installed as part of the work.
- C. Shop Drawings: Submit shop drawings for fabrication and erection of specialty signs. Include plans, elevations, and large scale details of sign wording and lettering layout. Show anchorages and accessory items. Furnish location template drawings for items supported or anchored to permanent construction.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Subject to compliance with requirements, manufacturers offering products which may be incorporated in the work include, but are not limited to, the following:

1. Americraft Inc.
2. Architectural Graphics Inc.
3. ASI Sign Systems, Inc.
4. Bayuk Graphic Systems, Inc.
5. Brandon Signage Co.
6. Designer Sign Company.
7. Gemini
8. Howard Industries
9. Metro Signs.
9. Mohawk Sign Systems.
10. Or approved equal.

2.2 MATERIALS

- A. GENERAL: Provide manufacturer's standard plastic signage which comply with the requirements established in the International Building Code and ICC/ANSI 117.1 - 2017 Barrier Free Standards. All signs to permanent rooms and spaces shall include Braille in accordance with N.J.A.C. 5:23-7.11 (j).
1. Acrylic sheet material to be cut to the desired sizes with radius or square corners as indicated, or as per approved shop drawings.
 2. "Helvetica Regular" letter style, Domed Grade II Braille and other pictograms as described herein.
 3. Colors: As selected by the Architect from manufacturer's standards after award of contract, or as specified herein.

2.3 FABRICATION

- A. Unframed Panel Signs: Fabricate unframed panel signs with edges mechanically and smoothly finished to conform with the following requirements:
1. Edge Condition: Square cut.
 2. Corner Condition: Provide radius corners for each sign type.

2.4 SIGNAGE

- A. GENERAL: ALL signage MUST comply with the requirements established in the International Building Code and ICC/ANSI 117.1 - 2017. All signs to permanent rooms and spaces shall include Braille in accordance with N.J.A.C. 5:23-7.11 (j).
- B. INTERIOR SIGNAGE:
1. Signage:
 - a. Provide plastic signs, as shown on drawings and schedules.
 - 1) Informational Signage:
 - a) Provide informational plastic signs at selected doors, as shown on drawings and schedules.
 - i) Signs - "THIS IS NOT AN EXIT", "EXIT", etc.:
 - (1) Provide sand-carved process, 1/8" thick non-combustible, self-extinguishing solid composite plastic

with integral tactile letters and symbols raised a minimum of 1/32" from sign face.

- 4) Sizes: As indicated or as directed by the Architect / Owner.
 - 5) All signs shall have radius corners.
2. Signage Locations:
- a. Along the door on the latch side and shall be mounted as follows:
 - 1) 48" minimum to the lowest tactile character on the sign measured from the finish floor.
 - 2) 60" maximum to baseline of highest tactile character on the sign measured from the finish floor.
 - b. For locations having double doors, mounting shall be to the right of the right hand door.
 - c. Where there is no wall space on the latch side of the door, including double leaf doors, signs shall be placed on the nearest adjacent wall.
3. Graphic Content and Style: Provide sign copy to comply with the requirements indicated for sizes, styles, spacing, content, positions, materials, finishes and colors of letters, numbers, symbols and other graphic devices.
- a. Raised Copy Thickness: Not less than 1/32" from the sign face.
 - b. Raised characters shall be in different color and meets the Barrier Free requirements for a 70% contrast ratio of colors. Colors shall be selected from manufacturer's available full range of colors.
 - c. Raised characters and symbols for tactile signs shall be 5/8" high minimum and 2" high maximum. Sign size shall suit the required letters and numbers.
4. Braille Copy: Braille Copy shall be Grade II and shall conform to Specification 800, National Library Service, Library of Congress. Braille shall be raised integral .0625 diameter.
- a. Braille shall be separated 1/2" minimum from the corresponding raised characters or symbols.
5. Mounting: As directed by the Architect using required fasteners.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. General: Locate sign units and accessories where shown or scheduled, using mounting methods of the type described and in compliance with the applicable Codes and regulation.
- B. Install sign units level, plumb and at the height indicated, with sign surfaces free from distortion or other defects in appearance.
- C. Wall Mounted Panel Signs: Attach panel signs to wall surfaces using the methods indicated below:
 1. Silicone Adhesive Mounting: Use liquid silicone adhesive recommended by the sign manufacturer to attach sign units to irregular, porous or vinyl-covered surfaces.
 - a. Use double-sided vinyl tape where recommended by the sign manufacturer to hold the sign in place until the adhesive has fully cured.

- b. Fasteners and Anchors: Manufacturer recommended concealed types for indicated signage and substrate materials.

3.2 CLEANING AND PROTECTION

- A. At completion of the installation, clean soiled sign surfaces in accordance with the manufacturer's instructions. Protect units from damage until acceptance by the Owner.

END OF SECTION 10440

SECTION 16000 - ELECTRICAL WORK

PART 1 - GENERAL REQUIREMENTS

1.1 RELATED WORK

- A. Drawings and general provisions of Contract, including General and supplementary Conditions and Division 1 Specifications, apply to work of this section.

1.2 DESCRIPTION OF WORK

- A. All lighting, communication devices, door electric strikes, door intercom device, exit sign(s), duplex convenience outlets, conduit, wiring work and all associated work required by the demolition and installation of new work as indicated on drawing A103.

1.3 ELECTRICAL STANDARDS AND DEFINITIONS

- A. Standards; General
 - 1. All work shall be done in accordance with the requirements of the National Electrical Code as a minimum standard. In every instance where the drawings and/or specifications indicate a more stringent requirement than is mandated by the National Electrical Code, the more stringent requirement shall govern the work.
 - 2. Whenever Underwriters Laboratories, Inc., has facilities for testing and approving or listing any class, category, or type of material or equipment, only material or equipment so tested and approved shall be used.
 - 3. Contractor shall provide to the Owner a certificate of final approval from an Underwriters' inspection agency which is authorized to inspect in the locality where the work is performed.

1.4 COORDINATION

- A. Contractor shall refer to the Demolition Section specified in Division 7, for information on the sequence of construction/demolition operations.

1.5 CONTRACTOR'S RESPONSIBILITY

- A. NOTIFYING THE OWNER: The Contractor shall notify the Owner and Architect in writing of all equipment which requires temporary disruption required due to the demolition and/or new work. The written description shall include a schedule and graphic location of electric equipment to be removed.
 - 1. The Contractor shall obtain written authorization from the Owner prior to proceeding with the removal/modification of existing equipment.
- B. Contractor shall be fully responsible for the care and protection of all existing mechanical; and electrical equipment to be removed and replaced. If material is stored on the site, location of storage shall be as directed by the Owner's representative.

PART 2 - PRODUCTS

2.1 GENERAL

- A. Provide products to match existing in all respects in accordance with applicable local and building codes.

PART 3 - EXECUTION

3.1 REMOVALS, DEMOLITION, RELOCATIONS AND TEMPORARY FACILITIES

- A. In advance of the demolition work on a particular section of existing construction, the Electrical Subcontractor shall perform, as follows:
 - 1. De-energize all electric wires in conduits and wireways, and all other electric devices on the particular section of existing construction to be demolished.
 - 2. Before any electric conduit is cut as part of the demolition process, contractor shall remove all wires from the conduit. Remove wires to the closest pullbox or junction box beyond the area of demolition. If no such pullbox or junction box exists, remove wires the entire distance back on the panelboard. Where any wires are removed pursuant to the requirements of this specification, contractor shall provide new wires for the full lengths as required to restore the integrity of the circuits.
 - 3. All devices not in or attached to the particular section of existing construction which is undergoing demolition or reconstruction shall be kept energized and in operation. Temporary wiring shall be provided wherever necessary to maintain facilities in operation. All such temporary wiring shall be installed in such manner as not to impede normal operation of the building.
 - 4. All wires removed shall be considered to be scrap and shall not be reused. Removed appurtenances not to be reinstalled shall be scrapped.
- B. All equipment and material shall be installed (in strict accordance with manufacturers' instructions) in complete and final operating order, and Contractor shall test all switches, and all other electric equipment for correct operation. If any operation is not correct, contractor shall rewire and retest until correct operation is achieved.
- C. If, during the demolition, any circuit is cut intentionally or inadvertently, and such circuit is required for operation of any fixture, outlet, switch, or any other item of equipment, the integrity of every such circuit shall be restored by Contractor.

3.2 WIRING METHOD

- A. All new wiring, including wiring of existing equipment relocated, shall be concealed.
- B. All wiring shall be in raceway.
- C. Concealed wiring shall be in rigid non-corrosive conduit with weatherproof connections. Flexible conduit may be used for difficult conditions if such conduit meets the requirements of the National Electrical Code.

- D. Equipotential Grounding (Common Grounding): Common grounding of all ground mediums within the building shall be ensured by interconnecting with main size conductors and fittings.
- E. Grounded metal bodies located within the required bonding distance as determined by the bonding distance formulas in NFPA 78 shall be bonded to the system using bonding conductors and fittings.
- F. Ground Terminations: Connect to existing building grounds.

3.3 CLEAN-UP/CLOSE-OUT; GENERAL

- A. At the completion of the work, remove all excess materials and all debris, tools and equipment from the site.

END OF SECTION 16000