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Addendum No. 3

Caesar Rodney School District
Wyoming, DE

Bid No.: SRS-18009-Stokesren

Nellie H. Stokes Elementary School – HVAC Improvements

Tt Project No. 163183-17001-07

Addendum No. 3
to
Drawings and Project Manual

March 9, 2018

REMINDER: Bids are due 3:00pm local time on Thursday, March 15, 2018 at the Caesar Rodney School District, Facilities Management, 7 Front Street, Wyoming, DE 19934.

To: ALL BIDDERS

This ADDENDUM forms a part of the BIDDING AND CONTRACT DOCUMENTS and modifies the following documents:

Original DRAWINGS dated February 26, 2018.

PROJECT MANUAL dated February 26, 2018.

Acknowledge receipt of the ADDENDUM in the space provided on the FORM OF PROPOSAL

This ADDENDUM consists of three (3) pages not including the attachments:

1.0 CLARIFICATIONS TO PRE-BID INFORMATION/AGENDA

1.1 None at this time.

2.0 PROJECT MANUAL – MODIFICATIONS

2.1 Section 00 41 13 - BID FORM

REPLACE Specification Section in its entirety with revised Bid Form attached to this addendum.

2.2 Section 00 81 13 - GENERAL CONTRACTING REQUIREMENTS

REPLACE Specification Section in its entirety with revised Section 00 81 13 GENERAL CONTRACTING REQUIREMENTS attached to this addendum.

2.3 **Section 00 81 14 - DRUG TESTING FORMS**

REPLACE Specification Section in its entirety with revised Section 00 81 14 DRUG TESTING FORMS attached to this addendum.

2.4 **ADD Section 32 31 13 - CHAIN LINK FENCES AND GATES**

ADD Spec Section in its entirety, section attached to this addendum

2.5 **Section 23 06 00 – HVAC Equipment** – Article 2.3 – Air Cooled Screw Chiller, Paragraph A.

ADD: Quantech to the list of acceptable manufacturers for the chiller. Approved manufacturers are subject to the requirements of the contract documents and must comply with all features, efficiencies, capacities, and performance requirements indicated in the Contract Documents.

2.6 **Section 23 06 00 – HVAC Equipment** – Article 2.11 – Variable Speed Drives, Paragraph O.

ADD: Franklin Control Systems to the list of acceptable manufacturers for the variable speed drives. Approved manufacturers are subject to the requirements of the contract documents and must comply with all features, efficiencies, capacities, and performance requirements indicated in the Contract Documents.

2.7 **Section 23 06 00 – HVAC Equipment** – Article 2.16 – Fan Coil Units, Paragraph A.

ADD: IEC (International Environmental Corporation) to the list of acceptable manufacturers for the horizontal fan coil units. Approved manufacturers are subject to the requirements of the contract documents and must comply with all features, efficiencies, capacities, and performance requirements indicated in the Contract Documents.

3.0 **DRAWINGS – MODIFICATIONS**

3.1 **Sheet A-110 – Partial First Floor Plan – Area A**

Revise New Work Keyed Notes No. 2 to be: “8’-0” H. Chain link fence and 3’-6” W. gate. See specifications. Coordinate gate location & center w/ existing conc. sidewalk.”

3.2 **Sheet E-110 – Partial First Floor Plan – Area A – Electrical:**

Add the following verbiage.

Provide a 2P-30A 480V mechanically held contactor with 24V coil in Nema 1 enclosure Contactor LC1 in Main Electrical Room at Panel LP-1 for BMS control of site lighting circuits 17 and 18 (verify with owner – directory information say LEAVE ON). Intercept existing circuits and route via contactor as required.

Provide a 4P-30A 480V mechanically held contactor with 24V coil in Nema 1 enclosure Contactor LC2 in Main Electrical Room at Panel LP-5 for BMS control of exterior site lighting circuits 12 Library Courtyard, 14 Bus Entrance Outdoor Ltg, 16 N. Main Entrance Outdoor Ltg, and 18 Outdoor Stg/Kit Entrance. Field verify existing circuits serve exterior building mounting lighting. Remove Time Clock for control of Circuit 14 located adjacent panel. Intercept existing circuits and route via contactor as required.

Make connection to LC1 coil from PP5-38 serving UH-4 via HOA switch in Nema 1 enclosure mounted in Main Electric Room or as directed by owner. Make connection to LC2 and LC3 coils from PP5-38 via HOA switch in Nema 1 enclosure mounted adjacent to other HOA switch. Provide phenolic label on each indicating Exterior Pole Lts and Exterior Bldg Lts, respectively.

3.3 **Sheet E-111 Partial First Floor Plan – Area B – Electrical:**

Add the following verbiage.

Provide a 3P-30A 480V mechanically held contactor with 24V coil in Nema 1 enclosure Contactor LC3 in West Hall 96 ceiling space above panel LP6 for BMS control of exterior building lighting circuits 7 East Courtyard and 10 South Courtyard. Field verify existing circuits serve exterior building mounting lighting. Intercept existing circuits and route via contactor.

3.4 Add Sheet M-408 – Control Diagram – HVAC:

Drawing indicates ATC interface of exterior building lighting controls and building management system. Interlock ATC system with new lighting contactors provided under the electrical documents. Provide labor and material associated with interlocking all exterior building and exterior site lighting with building management system. See enclosed Sheet M-408.

4.0 REQUEST FOR CLARIFICATIONS/INFORMATION

4.1 Kent Construction Co., Inc.

1. **Question:** Please advise on specs for chain link fence to be proposed.

Response: See above Addendum 3.0 Drawing Modifications, 3.1. See attached Specification Section 323113.

2. **Question:** Is Phase A to be completed in the summer of 2018 and Phase B completed in the summer of 2019? Or is Phase A and B to be completed in the summer of 2018?

Response: See “Alternate No. 1” in ALTERNATES SECTION 01 23 00 in project manual.

3. **Question:** Bid Bond: According to our bonding company, in the second paragraph of the document...”NOW THE CONDITION OF THIS OBLIGATION IS SUCH....”- Is this bid being submitted to the State of Delaware or to Caesar Rodney School District?

Response: Caesar Rodney School District

4. **Question:** Can you confirm what areas of the suspended ceiling get demolished?
On drawing AD140 under Demolition Notes, it shows storage area C2B, West Hall 96, Corridor 89 and kitchen being demolished in its entirety. According to the legend on the same page it shows the dotted suspended ceiling everywhere getting demolished.

Response: Storage Area C2B is a small closet (approx. 12sf) in Classroom C2 and is to remain. West Hall 96, Corridor 89, and kitchen is to be demolished. Per legend on drawing AD-140, ‘dashed’ suspended ceiling system to be demolished.

ATTACHMENT LIST

1. Specification Section 00 41 13 BID FORM
2. Specification Section 00 81 13 GENERAL CONTRACTING REQUIREMENTS
3. Specification Section 00 81 14 DRUG TESTING FORMS
4. Specification Section 32 31 13 CHAIN LINK FENCES AND GATES
5. Sheet M-408 – Control Diagram – HVAC

END OF ADDENDUM No. 3

**HVAC IMPROVEMENTS
STOKES ELEMENTARY SCHOOL
CAESAR RODNEY SCHOOL DISTRICT
DOVER, DELAWARE
200-163183-17001-07
CONTRACT # SRS-18009-Stokesren**

ALTERNATE No. 3: Cleaning of Existing Ductwork – Under Add Alternate the existing ductwork that is indicated to be re-used shall be cleaned per specification section 233123-HVAC Air Distribution System Cleaning. Install building access panels and duct access panels as required to fully clean the existing ductwork that is indicated to be re-used.

Add: _____ (\$ _____)

ALTERNATE No. 4: Chiller Acoustic Discharge Plenum – Provide custom acoustic discharge plenum to provide minimum of 12 dBA reduction as specified in Division 230600 – HVAC Equipment.

Add: _____ (\$ _____)

ALTERNATE No. 5: Piping and Equipment Insulation Replacement – Under Alternate remove all existing Chilled/Heating Water Piping and equipment insulation on piping and equipment that is indicated to remain. Remove all existing Hangers to allow for New Insulation and Hangers to be provided under New Work. Provide New Piping Insulation, Hangers and Equipment insulation on the existing piping and insulation to remain as specified for New Work.

Add: _____ (\$ _____)

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BID FORM

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

This bid shall remain valid and cannot be withdrawn for thirty (30) days from the date of opening of bids (60 days for School Districts and Department of Education), and the undersigned shall abide by the Bid Security forfeiture provisions. Bid Security is attached to this Bid.

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

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

Should I/We be awarded this contract, I/We pledge to achieve substantial completion of all the work within _____ calendar days of the Notice to Proceed.

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

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

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

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

(State of Corporation)

Business Address: _____

Witness: _____ **By:** _____
(SEAL) (Authorized Signature)

(Title)
Date: _____

ATTACHMENTS

- Sub-Contractor List
- Non-Collusion Statement
- Affidavit of Employee Drug Testing Program
- Bid Security
- (Others as Required by Project Manuals)

HVAC IMPROVEMENTS
STOKES ELEMENTARY SCHOOL
CAESAR RODNEY SCHOOL DISTRICT
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BID FORM

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b Delaware Code, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor **must be listed for each category** where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the *Owner*, **it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.** This form must be filled out completely with no additions or deletions.

<u>Subcontractor Category</u>	<u>Subcontractor</u>	<u>Address (City & State)</u>	<u>Subcontractors tax payer ID # or Delaware Business license #</u>
1. Concrete	_____	_____	_____
2. Carpentry	_____	_____	_____
3. Insulation	_____	_____	_____
4. Electrical	_____	_____	_____
5. Fire Alarm	_____	_____	_____
6. Fire Protection	_____	_____	_____
7. HVAC	_____	_____	_____
8. Plumbing	_____	_____	_____
9. Metals Fabrication	_____	_____	_____

**HVAC IMPROVEMENTS
STOKES ELEMENTARY SCHOOL
CAESAR RODNEY SCHOOL DISTRICT
DOVER, DELAWARE
200-163183-17001-07
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BID FORM
NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date (*to the Office of Management and Budget, Division of Facilities Management*).

All the terms and conditions of *SRS-18009-Stokesren* have been thoroughly examined and are understood.

NAME OF BIDDER: _____

**AUTHORIZED REPRESENTATIVE
(TYPED):** _____

**AUTHORIZED REPRESENTATIVE
(SIGNATURE):** _____

TITLE: _____

ADDRESS OF BIDDER: _____

E-MAIL: _____

PHONE NUMBER: _____

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

My Commission expires _____ NOTARY PUBLIC _____.

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

**HVAC IMPROVEMENTS
STOKES ELEMENTARY SCHOOL
CAESAR RODNEY SCHOOL DISTRICT
DOVER, DELAWARE
200-163183-17001-07
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**AFFIDAVIT
OF
EMPLOYEE DRUG TESTING PROGRAM**

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors implement a program of mandatory drug testing for Employees who work on Large Public Works Contracts funded all or in part with public funds.

We hereby certify that we have in place or will implement during the entire term of the contract a Mandatory Drug Testing Program for our employees on the jobsite, including subcontractors that complies with this regulation:

Contractor/Subcontractor Name: _____

Contractor/Subcontractor Address: _____

Authorized Representative (typed or printed): _____

Authorized Representative (signature): _____

Title: _____

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

My Commission expires _____. NOTARY PUBLIC _____.

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

SECTION 00 81 13
GENERAL REQUIREMENTS

TABLE OF ARTICLES

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

1.1 CONTRACT DOCUMENTS

1.1.1 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 to an extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the intended results.

1.1.2 Work including material purchases shall not begin until the Contractor is in receipt of a bonafide State of Delaware Purchase Order. Any work performed or material purchases prior to the issuance of the Purchase Order is done at the Contractor's own risk and cost.

1.2 EQUALITY OF EMPLOYMENT OPPORTUNITY ON PUBLIC WORKS

1.2.1 For Public Works Projects financed in whole or in part by state appropriation the Contractor agrees that during the performance of this contract:

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

ARTICLE 2: OWNER

(NO ADDITIONAL GENERAL REQUIREMENTS – SEE SUPPLEMENTARY GENERAL CONDITIONS)

ARTICLE 3: CONTRACTOR

3.1 Schedule of Values: The successful Bidder shall within twenty (20) days after receiving notice to proceed with the work, furnish to the Owner a complete schedule of values on the various items comprising the work.

3.2 Subcontracts: Upon approval of Subcontractors, the Contractor shall award their Subcontracts as soon as possible after the signing of their own contract and see that all

material, their own and those of their Subcontractors, are promptly ordered so that the work will not be delayed by failure of materials to arrive on time.

- 3.3 Before commencing any work or construction, the General Contractor is to consult with the Owner as to matters in connection with access to the site and the allocation of Ground Areas for the various features of hauling, storage, etc.
- 3.4 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, unless the Contract Documents give other specific instructions.
- 3.5 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Contract. The Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them.
- 3.6 The Contractor warrants to the Owner that materials and equipment furnished will be new and of good quality, unless otherwise permitted, and that the work will be free from defects and in conformance with the Contract Documents. Work not conforming to these requirements, including substitutions not properly approved, may be considered defective. If required by the Owner, the Contractor shall furnish evidence as to the kind and quality of materials and equipment provided.
- 3.7 Unless otherwise provided, the Contractor shall pay all sales, consumer, use and other similar taxes, and shall secure and pay for required permits, fees, licenses, and inspections necessary for proper execution of the Work.
- 3.8 The Contractor shall comply with and give notices required by laws, ordinances, rules, regulations, and lawful orders of public authorities bearing on performance of the Work. The Contractor shall promptly notify the Owner if the Drawings and Specifications are observed to be at variance therewith.
- 3.9 The Contractor shall be responsible to the Owner for the acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons performing portions of the Work under contract with the Contractor.
- 3.10 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract. At completion of the Work the Contractor shall remove from and about the Project all waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials. The Contractor shall be responsible for returning all damaged areas to their original conditions.
- 3.11 STATE LICENSE AND TAX REQUIREMENTS
- 3.11.1 Each Contractor and Subcontractor shall be licensed to do business in the State of Delaware and shall pay all fees and taxes due under State laws. In conformance with Section 2503, Chapter 25, Title 30, Delaware Code, "the Contractor shall furnish the Delaware Department of Finance within ten (10) days after entering into any contract

with a contractor or subcontractor not a resident of this State, a statement of total value of such contract or contracts together with the names and addresses of the contracting parties.”

- 3.12 The Contractor shall comply with all requirements set forth in Section 6962, Chapter 69, Title 29 of the Delaware Code.
- 3.13 During the contract Work, the Contractor and each Subcontractor, shall implement an Employee Drug Testing Program in accordance with OMB Regulation 4104 - “Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on “Large Public Works Projects”. “Large Public Works” is based upon the current threshold required for bidding Public Works as set by the Purchasing and Contracting Advisory Council.

ARTICLE 4: ADMINISTRATION OF THE CONTRACT

4.1 CONTRACT SURETY

4.1.1 PERFORMANCE BOND AND LABOR AND MATERIAL PAYMENT BOND

4.1.2 All bonds will be required as follows unless specifically waived elsewhere in the Bidding Documents.

4.1.3 Contents of Performance Bonds – The bond shall be in the form approved by the Office of Management and Budget. The bond shall be conditioned upon the faithful compliance and performance by the successful bidder of each and every term and condition of the contract and the proposal, plans, specifications, and bid documents thereof. Each term and condition shall be met at the time and in the manner prescribed by the Contract, Bid documents and the specifications, including the payment in full to every person furnishing materiel or performing labor in the performance of the Contract, of all sums of money due the person for such labor and materiel. (The bond shall also contain the successful bidder’s guarantee to indemnify and save harmless the State and the agency from all costs, damages and expenses growing out of or by reason of the Contract in accordance with the Contract.)

4.1.4 Invoking a Performance Bond – The agency may, when it considers that the interest of the State so require, cause judgement to be confessed upon the bond.

4.1.5 Within twenty (20) days after the date of notice of award of contract, the Bidder to whom the award is made shall furnish a Performance Bond and Labor and Material Payment Bond, each equal to the full amount of the Contract price to guarantee the faithful performance of all terms, covenants and conditions of the same. The bonds are to be issued by an acceptable Bonding Company licensed to do business in the State of Delaware and shall be issued in duplicate.

4.1.6 Performance and Payment Bonds shall be maintained in full force (warranty bond) for a period of two (2) years after the date of the Certificate for Final Payment. The Performance Bond shall guarantee the satisfactory completion of the Project and that the Contractor will make good any faults or defects in his work which may develop during the period of said guarantees as a result of improper or defective workmanship, material or apparatus, whether furnished by themselves or their Sub-Contractors. The Payment Bond

shall guarantee that the Contractor shall pay in full all persons, firms or corporations who furnish labor or material or both labor and material for, or on account of, the work included herein. The bonds shall be paid for by this Contractor. The Owner shall have the right to demand that the proof parties signing the bonds are duly authorized to do so.

4.2 FAILURE TO COMPLY WITH CONTRACT

4.2.1 If any firm entering into a contract with the State, or Agency that neglects or refuses to perform or fails to comply with the terms thereof, the Agency which signed the Contract may terminate the Contract and proceed to award a new contract in accordance with this Chapter 69, Title 29 of the Delaware Code or may require the Surety on the Performance Bond to complete the Contract in accordance with the terms of the Performance Bond. Nothing herein shall preclude the Agency from pursuing additional remedies as otherwise provided by law.

4.3 CONTRACT INSURANCE AND CONTRACT LIABILITY

4.3.1 In addition to the bond requirements stated in the Bid Documents, each successful Bidder shall purchase adequate insurance for the performance of the Contract and, by submission of a Bid, agrees to indemnify and save harmless and to defend all legal or equitable actions brought against the State, any Agency, officer and/or employee of the State, for and from all claims of liability which is or may be the result of the successful Bidder's actions during the performance of the Contract.

4.3.2 The purchase or nonpurchase of such insurance or the involvement of the successful Bidder in any legal or equitable defense of any action brought against the successful Bidder based upon work performed pursuant to the Contract will not waive any defense which the State, its agencies and their respective officers, employees and agents might otherwise have against such claims, specifically including the defense of sovereign immunity, where applicable, and by the terms of this section, the State and all agencies, officers and employees thereof shall not be financially responsible for the consequences of work performed, pursuant to said contract.

4.4 RIGHT TO AUDIT RECORDS

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

4.4.2 Said books and records shall be maintained by the Contractor for a period of seven (7) years from the date of final payment under the Prime Contract and by the Subcontractor for a period of seven (7) years from the date of final payment under the Subcontract.

ARTICLE 5: SUBCONTRACTORS

5.1 SUBCONTRACTING REQUIREMENTS

- 5.1.1 All contracts for the construction, reconstruction, alteration or repair of any public building (not a road, street or highway) shall be subject to the following provisions:
1. A contract shall be awarded only to a Bidder whose Bid is accompanied by a statement containing, for each Subcontractor category, the name and address (city or town and State only – street number and P.O. Box addresses not required) of the subcontractor whose services the Bidder intends to use in performing the Work and providing the material for such Subcontractor category.
 2. A Bid will not be accepted nor will an award of any Contract be made to any Bidder which, as the Prime Contractor, has listed itself as the Subcontractor for any Subcontractor unless:
 - A. It has been established to the satisfaction of the awarding Agency that the Bidder has customarily performed the specialty work of such Subcontractor category by artisans regularly employed by the Bidder's firm;
 - B. That the Bidder is duly licensed by the State to engage in such specialty work, if the State requires licenses; and
 - C. That the Bidder is recognized in the industry as a bona fide Subcontractor or Contractor in such specialty work and Subcontractor category.
- 5.1.2 The decision of the awarding Agency as to whether a Bidder who list itself as the Subcontractor for a Subcontractor category shall be final and binding upon all Bidders, and no action of any nature shall lie against any awarding agency or its employees or officers because of its decision in this regard.
- 5.1.3 After such a Contract has been awarded, the successful Bidder shall not substitute another Subcontractor for any Subcontractor whose name was set forth in the statement which accompanied the Bid without the written consent of the awarding Agency.
- 5.1.4 No Agency shall consent to any substitution of Subcontractors unless the Agency is satisfied that the Subcontractor whose name is on the Bidders accompanying statement:
- A. Is unqualified to perform the work required;
 - B. Has failed to execute a timely reasonable Subcontract;
 - C. Has defaulted in the performance on the portion of the work covered by the Subcontract; or
 - D. Is no longer engaged in such business.
- 5.1.5 Should a Bidder be awarded a contract, such successful Bidder shall provide to the agency the taxpayer identification license numbers of such subcontractors. Such numbers shall be

provided on the later of the date on which such subcontractor is required to be identified or the time the contract is executed. The successful Bidder shall provide to the agency to which it is contracting, within 30 days of entering into such public works contract, copies of all Delaware Business licenses of subcontractors and/or independent contractors that will perform work for such public works contract. However, if a subcontractor or independent contractor is hired or contracted more than 20 days after the Bidder entered the public works contract the Delaware Business license of such subcontractor or independent contractor shall be provided to the agency within 10 days of being contracted or hired.

- 5.1.6 The Contractor may employ additional Subcontractors on the jobsite only after submitting a copy of the Subcontractor's Employee Drug Testing Program to the Owner for approval. A Contractor or Subcontractor shall not commence work until the Owner has concluded its review and determined that the submitted Employee Drug Testing Program complies with OMB Regulation 4104.

5.2 PENALTY FOR SUBSTITUTION OF SUBCONTRACTORS

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

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

5.3 ASBESTOS ABATEMENT

- 5.3.1 The selection of any Contractor to perform asbestos abatement for State-funded projects shall be approved by the Office of Management and Budget, Division of Facilities Management pursuant to Chapter 78 of Title 16.

5.4 STANDARDS OF CONSTRUCTION FOR THE PROTECTION OF THE PHYSICALLY HANDICAPPED

- 5.4.1 All Contracts shall conform with the standard established by the Delaware Architectural Accessibility Board unless otherwise exempted by the Board.

5.5 CONTRACT PERFORMANCE

- 5.5.1 Any firm entering into a Public Works Contract that neglects or refuses to perform or fails to comply with its terms, the Agency may terminate the Contract and proceed to

award a new Contract or may require the Surety on the Performance Bond to complete the Contract in accordance with the terms of the Performance Bond.

ARTICLE 6: CONSTRUCTION BY OWNER OR SEPARATE CONTRACTORS

- 6.1 The Owner reserves the right to simultaneously perform other construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project or other Projects at the same site.
- 6.2 The Contractor shall afford the Owner and other Contractors reasonable opportunity for access and storage of materials and equipment, and for the performance of their activities, and shall connect and coordinate their activities with other forces as required by the Contract Documents.

ARTICLE 7: CHANGES IN THE WORK

- 7.1 The Owner, without invalidating the Contract, may order changes in the Work consisting of Additions, Deletions, Modifications or Substitutions, with the Contract Sum and Contract completion date being adjusted accordingly. Such changes in the Work shall be authorized by written Change Order signed by the Professional, as the duly authorized agent, the Contractor and the Owner.
- 7.2 The Contract Sum and Contract Completion Date shall be adjusted only by a fully executed Change Order.
- 7.3 The additional cost, or credit to the Owner resulting from a change in the Work shall be by mutual agreement of the Owner, Contractor and the Architect. In all cases, this cost or credit shall be based on the 'DPE' wages required and the "invoice price" of the materials/equipment needed.
- 7.3.1 "DPE" shall be defined to mean "direct personnel expense". Direct payroll expense includes prevailing wage rates plus a maximum multiplier of 1.35 times DPE. For example, if the prevailing wage rate is \$50/hour, the DPE would be \$67.50/hour (50 x 1.35).
- 7.3.2 "Invoice price" of materials/equipment shall be defined to mean the actual cost of materials and/or equipment that is paid by the Contractor, (or subcontractor), to a material distributor, direct factory vendor, store, material provider, or equipment leasing entity. Rates for equipment that is leased and/or owned by the Contractor or subcontractor(s) shall not exceed those listed in the latest version of the "Means Building Construction Cost Data" publication.
- 7.3.3 In addition to the above, the General Contractor is allowed a fifteen percent (15%) markup for overhead and profit for additional work performed by the General Contractor's own forces. For additional subcontractor work, the Subcontractor is allowed a fifteen (15) percent overhead and profit on change order work above and beyond the direct costs stated previously. To this amount, the General Contractor will be allowed a mark-up not exceeding seven and one half percent (7.5%) on the subcontractors work. These mark-ups shall include all costs including, but not limited

to: overhead, profit, bonds, insurance, supervision, etc. No markup is permitted on the work of the subcontractors subcontractor. No additional costs shall be allowed for changes related to the Contractor's onsite superintendent/staff, or project manager, unless a change in the work changes the project duration and is identified by the CPM schedule. There will be no other costs associated with the change order.

ARTICLE 8: TIME

8.1 Time limits, if any, are as stated in the Project Manual. By executing the Agreement, the Contractor confirms that the stipulated limits are reasonable, and that the Work will be completed within the anticipated time frame.

8.2 If progress of the Work is delayed at any time by changes ordered by the Owner, by labor disputes, fire, unusual delay in deliveries, abnormal adverse weather conditions, unavoidable casualties or other causes beyond the Contractor's control, the Contract Time shall be extended for such reasonable time as the Owner may determine.

8.3 Any extension of time beyond the date fixed for completion of the construction and acceptance of any part of the Work called for by the Contract, or the occupancy of the building by the Owner, in whole or in part, previous to the completion shall not be deemed a waiver by the Owner of his right to annul or terminate the Contract for abandonment or delay in the matter provided for, nor relieve the Contractor of full responsibility.

8.4 **SUSPENSION AND DEBARMENT**

8.4.1 Per Section 6962(d)(14), Title 29, Delaware Code, "Any Contractor who fails to perform a public works contract or complete a public works project within the time schedule established by the Agency in the Invitation To Bid, may be subject to Suspension or Debarment for one or more of the following reasons: a) failure to supply the adequate labor supply ratio for the project; b) inadequate financial resources; or, c) poor performance on the Project."

8.4.2 "Upon such failure for any of the above stated reasons, the Agency that contracted for the public works project may petition the Director of the Office of Management and Budget for Suspension or Debarment of the Contractor. The Agency shall send a copy of the petition to the Contractor within three (3) working days of filing with the Director. If the Director concludes that the petition has merit, the Director shall schedule and hold a hearing to determine whether to suspend the Contractor, debar the Contractor or deny the petition. The Agency shall have the burden of proving, by a preponderance of the evidence, that the Contractor failed to perform or complete the public works project within the time schedule established by the Agency and failed to do so for one or more of the following reasons: a) failure to supply the adequate labor supply ratio for the project; b) inadequate financial resources; or, c) poor performance on the project. Upon a finding in favor of the Agency, the Director may suspend a Contractor from Bidding on any project funded, in whole or in part, with public funds for up to 1 year for a first offense, up to 3 years for a second offense and permanently debar the Contractor for a third offense. The Director shall issue a written decision and shall send a copy to the Contractor and the Agency. Such decision may be appealed to the Superior Court within thirty (30) days for a review on the record."

8.5 RETAINAGE

8.5.1 Per Section 6962(d)(5) a.3, Title 29, Delaware Code: The Agency may at the beginning of each public works project establish a time schedule for the completion of the project. If the project is delayed beyond the completion date due to the Contractor's failure to meet their responsibilities, the Agency may forfeit, at its discretion, all or part of the Contractor's retainage.

8.5.2 This forfeiture of retainage also applies to the timely completion of the punchlist. A punchlist will only be prepared upon the mutual agreement of the Owner, Architect and Contractor. Once the punchlist is prepared, all three parties will by mutual agreement, establish a schedule for its completion. Should completion of the punchlist be delayed beyond the established date due to the Contractor's failure to meet their responsibilities, the Agency may hold permanently, at its discretion, all or part of the Contractor's retainage.

ARTICLE 9: PAYMENTS AND COMPLETION

9.1 APPLICATION FOR PAYMENT

9.1.1 Applications for payment shall be made upon AIA Document G702. There will be a five percent (5%) retainage on all Contractor's monthly invoices until completion of the project. This retainage may become payable upon receipt of all required closeout documentation, provided all other requirements of the Contract Documents have been met.

9.1.2 A date will be fixed for the taking of the monthly account of work done. Upon receipt of Contractor's itemized application for payment, such application will be audited, modified, if found necessary, and approved for the amount. Statement shall be submitted to the Owner.

9.1.3 Section 6516, Title 29 of the Delaware Code annualized interest is not to exceed 12% per annum beginning thirty (30) days after the "presentment" (as opposed to the date) of the invoice.

9.2 PARTIAL PAYMENTS

9.2.1 Any public works Contract executed by any Agency may provide for partial payments at the option of the Owner with respect to materials placed along or upon the sites or stored at secured locations, which are suitable for use in the performance of the contract.

9.2.2 When approved by the agency, partial payment may include the values of tested and acceptable materials of a nonperishable or noncontaminative nature which have been produced or furnished for incorporation as a permanent part of the work yet to be completed, provided acceptable provisions have been made for storage.

9.2.2.1 Any allowance made for materials on hand will not exceed the delivered cost of the materials as verified by invoices furnished by the Contractor, nor will it exceed the contract bid price for the material complete in place.

9.2.3 If requested by the Agency, receipted bills from all Contractors, Subcontractors, and material, men, etc., for the previous payment must accompany each application for payment. Following such a request, no payment will be made until these receipted bills have been received by the Owner.

9.3 SUBSTANTIAL COMPLETION

9.3.1 When the building has been made suitable for occupancy, but still requires small items of miscellaneous work, the Owner will determine the date when the project has been substantially completed.

9.3.2 If, after the Work has been substantially completed, full completion thereof is materially delayed through no fault of the Contractor, and without terminating the Contract, the Owner may make payment of the balance due for the portion of the Work fully completed and accepted. Such payment shall be made under the terms and conditions governing final payment that it shall not constitute a waiver of claims.

9.3.3 On projects where commissioning is included, the commissioning work as defined in the specifications must be complete prior to the issuance of substantial completion.

9.4 FINAL PAYMENT

9.4.1 Final payment, including the five percent (5%) retainage if determined appropriate, shall be made within thirty (30) days after the Work is fully completed and the Contract fully performed and provided that the Contractor has submitted the following closeout documentation (in addition to any other documentation required elsewhere in the Contract Documents):

9.4.1.1 Evidence satisfactory to the Owner that all payrolls, material bills, and other indebtedness connected with the work have been paid,

9.4.1.2 An acceptable RELEASE OF LIENS,

9.4.1.3 Copies of all applicable warranties,

9.4.1.4 As-built drawings,

9.4.1.5 Operations and Maintenance Manuals,

9.4.1.6 Instruction Manuals,

9.4.1.7 Consent of Surety to final payment.

9.4.1.8 The Owner reserves the right to retain payments, or parts thereof, for its protection until the foregoing conditions have been complied with, defective work corrected and all unsatisfactory conditions remedied.

ARTICLE 10: PROTECTION OF PERSONS AND PROPERTY

- 10.1 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 take all reasonable precautions to prevent damage, injury or loss to: workers, persons nearby who may be affected, the Work, materials and equipment to be incorporated, and existing property at the site or adjacent thereto. The Contractor shall give notices and comply with applicable laws ordinances, rules regulations, and lawful orders of public authorities bearing on the safety of persons and property and their protection from injury, damage, or loss. The Contractor shall promptly remedy damage and loss to property at the site caused in whole or in part by the Contractor, a Subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable.
- 10.2 The Contractor shall notify the Owner in the event any existing hazardous material such as lead, PCBs, asbestos, etc. is encountered on the project. The Owner will arrange with a qualified specialist for the identification, testing, removal, handling and protection against exposure or environmental pollution, to comply with applicable regulation laws and ordinances. The Contractor and Architect will not be required to participate in or to perform this operation. Upon completion of this work, the Owner will notify the Contractor and Architect in writing the area has been cleared and approved by the authorities in order for the work to proceed. The Contractor shall attach documentation from the authorities of said approval.
- 10.3 As required in the Hazardous Chemical Information Act of June 1984, all vendors supplying any materials that may be defined as hazardous, must provide Material Safety Data Sheets for those products. Any chemical product should be considered hazardous if it has a warning caution on the label relating to a potential physical or health hazard, if it is known to be present in the work place, and if employees may be exposed under normal conditions or in any foreseeable emergency situation. Material Safety Data Sheets must be provided directly to the Owner along with the shipping slips that include those products.
- 10.4 The Contractor shall certify to the Owner that materials incorporated into the Work are free of all asbestos. This certification may be in the form of Material Safety Data Sheet (MSDS) provided by the product manufacturer for the materials used in construction, as specified or as provided by the Contractor.

ARTICLE 11: INSURANCE AND BONDS

- 11.1 The Contractor shall carry all insurance required by law, such as Unemployment Insurance, etc. The Contractor shall carry such insurance coverage as they desire on their own property such as a field office, storage sheds or other structures erected upon the project site that belong to them and for their own use. The Subcontractors involved with this project shall carry whatever insurance protection they consider necessary to cover the loss of any of their personal property, etc.
- 11.2 Upon being awarded the Contract, the Contractor shall obtain a minimum of two (2) copies of all required insurance certificates called for herein, and submit one (1) copy of each certificate, to the Owner, within 20 days of contract award.
- 11.3 Bodily Injury Liability and Property Damage Liability Insurance shall, in addition to the coverage included herein, include coverage for injury to or destruction of any property arising out of the collapse of or structural injury to any building or structure due to

demolition work and evidence of these coverages shall be filed with and approved by the Owner.

11.4 The Contractor's Property Damage Liability Insurance shall, in addition to the coverage noted herein, include coverage on all real and personal property in their care, custody and control damaged in any way by the Contractor or their Subcontractors during the entire construction period on this project.

11.5 Builders Risk (including Standard Extended Coverage Insurance) on the existing building during the entire construction period, shall not be provided by the Contractor under this contract. The Owner shall insure the existing building and all of its contents and all this new alteration work under this contract during entire construction period for the full insurable value of the entire work at the site. Note, however, that the Contractor and their Subcontractors shall be responsible for insuring building materials (installed and stored) and their tools and equipment whenever in use on the project, against fire damage, theft, vandalism, etc.

11.6 Certificates of the insurance company or companies stating the amount and type of coverage, terms of policies, etc., shall be furnished to the Owner, within 20 days of contract award.

11.7 The Contractor shall, at their own expense, (in addition to the above) carry the following forms of insurance:

11.7.1 Contractor's Contractual Liability Insurance

Minimum coverage to be:

Bodily Injury	\$500,000	for each person
	\$1,000,000	for each occurrence
	\$1,000,000	aggregate
Property Damage	\$500,000	for each occurrence
	\$1,000,000	aggregate

11.7.2 Contractor's Protective Liability Insurance

Minimum coverage to be:

Bodily Injury	\$500,000	for each person
	\$1,000,000	for each occurrence
	\$1,000,000	aggregate
Property Damage	\$500,000	for each occurrence
	\$500,000	aggregate

11.7.3 Automobile Liability Insurance

Minimum coverage to be:

Bodily Injury	\$1,000,000	for each person
	\$1,000,000	for each occurrence
Property Damage	\$500,000	per accident

- 11.7.4 Prime Contractor's and Subcontractors' policies shall include contingent and contractual liability coverage in the same minimum amounts as 11.7.1 above.
- 11.7.5 Workmen's Compensation (including Employer's Liability):
 - 11.7.5.1 Minimum Limit on employer's liability to be as required by law.
 - 11.7.5.2 Minimum Limit for all employees working at one site.
- 11.7.6 Certificates of Insurance must be filed with the Owner guaranteeing fifteen (15) days prior notice of cancellation, non-renewal, or any change in coverages and limits of liability shown as included on certificates.
- 11.7.7 Social Security Liability
 - 11.7.7.1 With respect to all persons at any time employed by or on the payroll of the Contractor or performing any work for or on their behalf, or in connection with or arising out of the Contractor's business, the Contractor shall accept full and exclusive liability for the payment of any and all contributions or taxes or unemployment insurance, or old age retirement benefits, pensions or annuities now or hereafter imposed by the Government of the United States and the State or political subdivision thereof, whether the same be measured by wages, salaries or other remuneration paid to such persons or otherwise.
 - 11.7.7.2 Upon request, the Contractor shall furnish Owner such information on payrolls or employment records as may be necessary to enable it to fully comply with the law imposing the aforesaid contributions or taxes.
 - 11.7.7.3 If the Owner is required by law to and does pay any and/or all of the aforesaid contributions or taxes, the Contractor shall forthwith reimburse the Owner for the entire amount so paid by the Owner.

ARTICLE 12: UNCOVERING AND CORRECTION OF WORK

- 12.1 The Contractor shall promptly correct Work rejected by the Owner or failing to conform to the requirements of the Contract Documents, whether observed before or after Substantial Completion and whether or not fabricated, installed or completed, and shall correct any Work found to be not in accordance with the requirements of the Contract Documents within a period of two years from the date of Substantial Completion, or by terms of an applicable special warranty required by the Contract Documents. The provisions of this Article apply to work done by Subcontractors as well as to Work done by direct employees of the Contractor.
- 12.2 At any time during the progress of the work, or in any case where the nature of the defects shall be such that it is not expedient to have them corrected, the Owner, at their option,

shall have the right to deduct such sum, or sums, of money from the amount of the contract as they consider justified to adjust the difference in value between the defective work and that required under contract including any damage to the structure.

ARTICLE 13: MISCELLANEOUS PROVISIONS

13.1 CUTTING AND PATCHING

13.1.1 The Contractor shall be responsible for all cutting and patching. The Contractor shall coordinate the work of the various trades involved.

13.2 DIMENSIONS

13.2.1 All dimensions shown shall be verified by the Contractor by actual measurements at the project site. Any discrepancies between the drawings and specifications and the existing conditions shall be referred to the Owner for adjustment before any work affected thereby has been performed.

13.3 LABORATORY TESTS

13.3.1 Any specified laboratory tests of material and finished articles to be incorporated in the work shall be made by bureaus, laboratories or agencies approved by the Owner and reports of such tests shall be submitted to the Owner. The cost of the testing shall be paid for by the Contractor.

13.3.2 The Contractor shall furnish all sample materials required for these tests and shall deliver same without charge to the testing laboratory or other designated agency when and where directed by the Owner.

13.4 ARCHAEOLOGICAL EVIDENCE

13.4.1 Whenever, in the course of construction, any archaeological evidence is encountered on the surface or below the surface of the ground, the Contractor shall notify the authorities of the State Historic Preservation Office and suspend work in the immediate area for a reasonable time to permit those authorities, or persons designated by them, to examine the area and ensure the proper removal of the archaeological evidence for suitable preservation by the Division of Historical and Cultural Affairs.

13.5 GLASS REPLACEMENT AND CLEANING

13.5.1 The General Contractor shall replace without expense to the Owner all glass broken during the construction of the project. If job conditions warrant, at completion of the job the General Contractor shall have all glass cleaned and polished.

13.6 WARRANTY

13.6.1 For a period of two (2) years from the date of substantial completion, as evidenced by the date of final acceptance of the work, the contractor warrants that work performed under this contract conforms to the contract requirements and is free of any defect of equipment,

material or workmanship performed by the contractor or any of his subcontractors or suppliers. However, manufacturer's warranties and guarantees, if for a period longer than two (2) years, shall take precedence over the above warranties. The contractor shall remedy, at his own expense, any such failure to conform or any such defect. The protection of this warranty shall be included in the Contractor's Performance Bond.

ARTICLE 14: TERMINATION OF CONTRACT

- 14.1 If the Contractor defaults or persistently fails or neglects to carry out the Work in accordance with the Contract Documents or fails to perform a provision of the Contract, the Owner, after seven days written notice to the Contractor, may make good such deficiencies and may deduct the cost thereof from the payment then or thereafter due the Contractor. Alternatively, at the Owner's option, and the Owner may terminate the Contract and take possession of the site and of all materials, equipment, tools, and machinery thereon owned by the Contractor and may finish the Work by whatever method the Owner may deem expedient. If the costs of finishing the Work exceed any unpaid compensation due the Contractor, the Contractor shall pay the difference to the Owner.
- 14.2 “If the continuation of this Agreement is contingent upon the appropriation of adequate state, or federal funds, this Agreement may be terminated on the date beginning on the first fiscal year for which funds are not appropriated or at the exhaustion of the appropriation. The Owner may terminate this Agreement by providing written notice to the parties of such non-appropriation. All payment obligations of the Owner will cease upon the date of termination. Notwithstanding the foregoing, the Owner agrees that it will use its best efforts to obtain approval of necessary funds to continue the Agreement by taking appropriate action to request adequate funds to continue the Agreement.”

END OF SECTION

EMPLOYEE DRUG TESTING REPORT FORM

Period Ending: _____

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors who work on Large Public Works Contracts funded all or in part with public funds maintain testing data that includes but is not limited to the data elements below.

Project Number: _____

Project Name: _____

Contractor/Subcontractor Name: _____

Contractor/Subcontractor Address: _____

Number of employees who worked on the jobsite during the report period: _____

Number of employees subject to random testing during the report period: _____

Number of Negative Results _____ Number of Positive Results _____

Action taken on employee(s) in response to a failed or positive random test:

Date: _____

This form is not required to be submitted to the Owner. Included as a reference to show information required to be maintained by the Contractor. The Owner shall have the right to periodically audit all Contractor and Subcontractor test results at the Contractor's or Subcontractor's offices (or by other means to make the data available for inspection by the Owner).

**EMPLOYEE DRUG TESTING
REPORT OF POSITIVE RESULTS**

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors who work on Large Public Works Contracts funded all or in part with public funds to notify the Owner in writing of a positive random drug test.

Project Number: _____

Project Name: _____

Contractor/Subcontractor Name: _____

Contractor/Subcontractor Address: _____

Name of employee with positive test result: _____

Last 4 digits of employee SSN: _____

Date test results received: _____

Action taken on employee in response to a positive test result:

Authorized Representative of Contractor/Subcontractor: _____
(typed or printed)

Authorized Representative of Contractor/Subcontractor: _____
(signature)

Date: _____

This form shall be sent by mail to the Owner within 24 hours of receipt of test results.

Enclose this test results form in a sealed envelope with the notation "Drug Testing Form – DO NOT OPEN" on the face thereof and place in a separate mailing envelope.

SECTION 32 31 13
CHAIN LINK FENCES AND GATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Chain-link fences.
 - 2. Gates: Swing.
 - 3. Gates: Premanufactured gate with panic bar
 - 4. Privacy Slats

1.3 PERFORMANCE REQUIREMENTS

- A. Design Wind Load: Comply with applicable requirements of building code in effect for Project including applicable portions of ASCE 7 for Wind Load Pressure and CLFMI WLG 2445 Wind Load Guide for the Selection of Line Post Spacings.

1.4 SUBMITTALS

- A. General: Submit all action submittals (except Samples for Verification) and informational submittals required by this Section concurrently.
- B. Action Submittals:
 - 1. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for chain-link fences and gates.
 - a. Fence and gate posts, rails, and fittings.
 - b. Chain-link fabric, reinforcements, and attachments.
 - c. Polymer coating.
 - 1) Note: Polymer-coated samples and polymer coating product data are to be submitted simultaneously.
 - d. Accessories: Privacy slats.

- e. Gates and hardware.
 - 2. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work. Show accessories, hardware, gate operation, and operational clearances.
 - 3. Samples for Verification:
 - a. Polymer-Coated Components: In 6-inch lengths for components and on full-sized units for accessories.
 - 1) Note: Polymer-coated samples and polymer coating product data are to be submitted simultaneously.
 - 4. Warranty: Sample of special warranty.
- C. Informational Submittals:
- 1. Qualification Data: Submit list of completed projects using products proposed for this Project, including owner's contact and telephone number for each project, demonstrating compliance with "Quality Assurance" article.
 - 2. Product Test Reports: For framing strength according to ASTM F 1043.
- D. Closeout Submittals:
- 1. Operation and Maintenance Data: For the following to include in operation and maintenance manuals:
 - a. Polymer finishes.
 - b. Gate hardware.
 - 2. Warranty: Executed special warranty.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Minimum two years experience in installing chain link fences and gates similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful performance.
- B. Mockups: If required by Architect, build mockups to set quality standards for fabrication and installation.

1.6 PROJECT CONDITIONS

- A. Field Measurements: Verify layout information for chain-link fences and gates shown on Drawings in relation to property survey and existing structures. Verify dimensions by field measurements.

1.7 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which Contractor agrees to repair or replace components of chain-link fences and gates that fail in materials or workmanship within specified warranty period.
1. Failures include, but are not limited to, the following:
 - a. Failure of any component of fence to perform as designed.
 - b. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
 - c. Faulty operation of gate(s).
 2. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 CHAIN-LINK FENCE FABRIC

- A. General: Provide fabric in one-piece heights measured between top and bottom of outer edge of selvage knuckle. Comply with CLFMI Product Manual and with requirements indicated below:
1. Fabric Height: As indicated on Drawings.
 2. Steel Wire Fabric:
 - a. General Use: Wire with a diameter of 0.148 inch (9 gauge) minimum. For polymer coated fabric, wire with a diameter of 0.148 inch core (9 gauge core) minimum.
 3. Mesh Size: 2 inches, unless noted otherwise.
 4. Coatings:
 - a. Polymer-Coated (Vinyl) Fabric: ASTM F 668, Class 2b, fused and adhered over zinc-coated steel wire.
 - 1) Color: Black, complying with ASTM F 934.
 - 2) Basis of Design: Subject to compliance with requirements, polymer coating that may be incorporated into the Work include, but are not limited to, the following:
 - a) Merchants Metals Brighton Colorcoat II fused and adhered polymer coating.
 5. Selvage: Knuckled at both selvages.

2.2 FENCE FRAMING

- A. Posts and Rails: Comply with ASTM F 1043 for framing, including rails, braces, and line; terminal; and corner posts. Provide members with minimum dimensions and wall thickness according to ASTM F 1043 based on the following:
1. Fence Height: As indicated on Drawings.
 2. Heavy Industrial Strength: Group IC, SS40, round steel electric-resistance-welded pipe.
 3. Line Post Size (determined by height):
 - a. 4 feet up to and including 6 feet high: 2 inches o.d.
 - b. 7 feet up to and including 9 feet high: 2-1/2 inches o.d.
 - c. 10 feet up to and including 12 feet high: 3 inches o.d.
 - d. Over 12 feet high: 4 inches o.d.
 4. End, Corner and Pull Post:
 - a. 4 feet up to and including 6 feet high: 2-1/2 inches o.d.
 - b. 7 feet up to and including 9 feet high: 3 inches o.d.
 - c. 10 feet up to and including 12 feet high: 4 inches o.d.
 - d. Over 12 feet high: 4 inches o.d.
 5. Horizontal Framework Members: Intermediate, top and bottom rails complying with ASTM F 1043. Size in accordance with the following guidelines unless otherwise indicated on drawings
 - a. Top, Intermediate and Bottom Rail: 1.66 inches in diameter.
 - b. Bottom Rail: Provide bottom rail for:
 6. Brace Rails: Comply with ASTM F 1043.
 7. Coatings for Type I Steel Framing:
 - a. Polymer coating over metallic coating: ASTM F1043 Section 7, Paragraph 7.3 and Section 8, Paragraph 8.1, and ASTM F 668 Class 2b, 10 to 15 mils (0.254 - 0.38 mm) fused and adhered over zinc-coated framework.
 - 1) Color: Match chain-link fabric, complying with ASTM F 934.
 - 2) Basis of Design: Subject to compliance with requirements, polymer coating that may be incorporated into the Work include, but are not limited to, the following:
 - a) Merchants Metals Brighton Colorcoat II fused and adhered polymer coating.

2.3 TENSION WIRE

- A. Polymer-Coated Steel Wire: For use on fencing with polymer coated fence fabric. 0.177-inch-diameter, tension wire complying with ASTM F 1664, Class 2b over zinc-coated steel wire.
 - 1. Color: Match chain-link fabric, complying with ASTM F 934.

2.4 SWING GATES

- A. General: Comply with ASTM F 900 for gate posts and single and double swing gate types.
 - 1. Gate Leaf Width: 36 inches unless otherwise noted on drawings..
 - 2. Gate Fabric Height: As indicated on drawings.
- B. Pipe and Tubing:
 - 1. Coating and finish to match fence framing.
 - 2. Gate Post Size:
 - a. Gate Leaf up to 6 feet Wide: 2.875 inches o.d.; 4.64 lbs./l.f.
 - b. Gate Leaf over 6 feet and under 12 feet wide: 4 inches o.d.; 6.56 lbs./lin. ft. (weight applicable to Group IC SS40 framework only)
- C. Frame Corner Construction: Welded.
- D. Hardware:
 - 1. Hinges: 180-degree inward swing unless otherwise noted on Drawings.
 - 2. Latches permitting operation from both sides of gate with provision for padlocking accessible from both sides of gate.
 - 3. Padlock and Chain: Owner furnished.
 - 4. Closer: Manufacturer's standard.

2.5 FITTINGS

- A. General: Comply with ASTM F 626.
- B. Post Caps: Provide for each post. Post caps to be weather-tight, securely fastened and vandal-resistant.
 - 1. Provide line post caps with loop to receive tension wire or top rail.
- C. Rail and Brace Ends: For each gate, corner, pull, and end post.
- D. Rail Fittings: Provide the following:
 - 1. Top Rail Sleeves: Pressed-steel or round-steel tubing not less than 6 inches long.
 - 2. Rail Clamps: Line and corner boulevard clamps for connecting intermediate and bottom rails in the fence line-to-line posts.

- E. Tension and Brace Bands: Pressed steel.
- F. Tension Bars: Steel. Length not less than 2 inches shorter than full height of chain-link fabric with minimum cross-section of 3/16 inch x 3/4 inch. Provide one bar for each gate and end post, and two for each corner and pull post, unless fabric is integrally woven into post.
- G. Truss Rod Assemblies: Steel, hot-dip galvanized after threading. Provide rod and turnbuckle or other means of adjustment.
- H. Tie Wires, Clips, and Fasteners: According to ASTM F 626.
 - 1. Round Wire Ties: For attaching chain-link fabric to posts, rails, and frames, complying with the following:
 - a. General Use Fencing including Foul Line, Outfield and Tennis Court Fencing:
 - 1) Aluminum: ASTM B 211; Alloy 1350-H19; 0.148-inch-diameter, mill-finished wire. Coating to match chain-link fence fabric. (Provide polymer coating on fencing with polymer coated fabric.)
 - b. Baseball and Softball Backstops and Dugouts:
 - 1) Hot-Dip Galvanized Steel: 0.148-inch (9 gauge core) diameter wire. Coating to match chain-link fence fabric. (Provide polymer coating on fencing with polymer coated fabric.)
 - 2. Hog Rings: For attaching chain link fabric to bottom tension wire.
 - a. Aluminum: ASTM B 211; Alloy 1350-H19; 0.192 inch (6 gauge), mill-finished wire.
- I. Fitting Finish:
 - 1. Metallic Coating for Pressed Steel or Cast Iron: Not less than 1.2 oz. /sq. ft. zinc.
 - a. Polymer coating over metallic coating to match coating of chain link fence fabric.
 - 2. Aluminum: Mill finish with coating to match chain-link fence fabric. (Provide polymer coating on fencing with polymer coated fabric.)

2.6 PRIVACY SLATS

- A. Material: Heavy duty polyethylene reinforced tubular slats with “wings”:
 - 1. Provide 100% coverage.
 - 2. Slats must span full height of fence (i.e., no partial height slats).
 - 3. Width: 1 ¼”.
 - 4. Manufactured for chain-link fences from virgin polyethylene containing UV inhibitor.
 - 5. Sized to fit mesh specified with vandal-resistant fasteners and lock strips.
 - 6. Installed vertically.
 - 7. Verify wind-loading is appropriate for fencing specified and application.

- B. Color: As selected by Architect from manufacturer's full range.

2.7 CONCRETE

- A. Concrete Footings: Refer to Division 03 concrete section for cast-in-place concrete, ASTM F 567 Section 5 and Drawings and Details for footing size. Bottom of footing must not be smaller than the top to prevent frost heaving.

2.8 GROUT AND ANCHORING CEMENT

- A. Nonshrink, Nonmetallic Grout: Premixed, factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107 and compatible with galvanized and clear coatings. Provide grout, recommended in writing by manufacturer, for exterior applications.
- B. Erosion-Resistant Anchoring Cement: Factory-packaged, nonshrink, nonstaining, hydraulic-controlled expansion cement formulation for mixing with potable water at Project site to create pourable anchoring, patching, and grouting compound. Provide formulation that is resistant to erosion from water exposure without needing protection by a sealer or waterproof coating and that is recommended in writing by manufacturer, for exterior applications. To be compatible with galvanized and clear coatings.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and conditions, with Installer present, for compliance with requirements for site clearing, earthwork, pavement work, and other conditions affecting performance of the Work.
 - 1. Do not begin installation before final grading is completed unless otherwise permitted by Architect.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.
- C. Beginning installation constitutes Contractor's acceptance of substrates and conditions.

3.2 PREPARATION

- A. Stake locations of fence lines, gates, and terminal posts. Do not exceed intervals of 500 feet or line of sight between stakes. Indicate locations of utilities, lawn sprinkler system, underground structures, benchmarks, and property monuments.

3.3 INSTALLATION, GENERAL

- A. Install chain-link fencing to comply with ASTM F 567 and more stringent requirements indicated.

1. Install fencing on established boundary lines inside property line.

3.4 CHAIN-LINK FENCE INSTALLATION

- A. Post Excavation: Drill or hand-excavate holes for posts to diameters and spacings indicated, in firm, undisturbed soil.
- B. Post Setting: Set posts in concrete at indicated spacing into firm, undisturbed soil. Mechanically driven posts only allowed if shown on Drawings or specifically approved by Architect.
 1. Verify that posts are set plumb, aligned, and at correct height and spacing, and hold in position during setting with concrete or mechanical devices.
 - a. Concrete Fill: Minimum 28 day compressive strength 3000 psi (20 MPa). Refer to Division 03 Section "Cast-in-Place Concrete".
 - b. Place concrete around posts to dimensions indicated and vibrate or tamp for consolidation. Protect aboveground portion of posts from concrete splatter.
- C. Types of Post Footings: As indicated on Drawing or as approved by Architect.
 1. Concealed Concrete: As indicated on Drawings to allow covering with surface material.
- D. Terminal Posts: Locate terminal end, corner, and gate posts per ASTM F 567 and terminal pull posts at changes in horizontal or vertical alignment of 15 degrees or more.
- E. Line Posts: Space line posts uniformly at 10 feet o.c. unless otherwise indicated on Drawings.
- F. Post Bracing and Intermediate Rails: Install according to ASTM F 567, maintaining plumb position and alignment of fencing. Diagonally brace terminal posts to adjacent line posts with truss rods and turnbuckles. Install braces at end and gate posts and at both sides of corner and pull posts.
 1. Locate horizontal braces at midheight of fabric 72 inches or higher, on fences with top rail and at two-third fabric height on fences without top rail. Install so posts are plumb when diagonal rod is under proper tension.
- G. Tension Wire: Install according to ASTM F 567, maintaining plumb position and alignment of fencing. Pull wire taut, without sags. Fasten fabric to tension wire with hog rings spaced a maximum of 24 inches o.c. Install tension wire in locations indicated before stretching fabric. Provide horizontal tension wire at the following locations:
 1. Extended along bottom of fence fabric. Install bottom within 6 inches of bottom of fabric and tie to each post with tie wires.
- H. Top Rail: Install according to ASTM F 567, maintaining plumb position and alignment of fencing. Run rail continuously through line post caps, bending to radius for curved runs and terminating into rail end attached to posts or post caps fabricated to receive rail at terminal posts. Provide expansion couplings as recommended in writing by fencing manufacturer.

- I. Intermediate and Bottom Rails: Install and secure to posts with fittings.
- J. Chain-Link Fabric: Apply fabric to outside of enclosing framework. Leave 2 inches between finish grade or surface and bottom selvage unless otherwise indicated. Pull fabric taut and tie to posts, rails, and tension wires. Anchor to framework so fabric remains under tension after pulling force is released.
- K. Tension or Stretcher Bars: Thread bar through first row of diamonds of fabric and secure to end, corner, pull, and gate posts with tension bands spaced not more than 15 inches o.c.
- L. Tie Wires: Use wire of proper length to firmly secure fabric to line posts and rails. Attach wire at one end to chain-link fabric, wrap wire around post a minimum of 180 degrees, and attach other end to chain-link fabric per ASTM F 626. Aluminum ties: Both ends of the tie are to make two complete wraps around wire pickets. Bend ends of wire to minimize hazard to individuals and clothing.
 - 1. Maximum Spacing: Tie fabric to line posts at 12 inches o.c. and to braces at 24 inches o.c.
 - 2. Privacy Slats: Install slats in direction indicated, securely locked in place, vertically.

3.5 FENCE INSTALLATION ADJACENT TO BUILDING WALL OR COLUMN

- A. Install fencing and gates with maximum 2" gap between fence post and building wall or column unless otherwise noted.

3.6 SWING GATE INSTALLATION

- A. Install gates according to manufacturer's written instructions, level, plumb, and secure for full opening without interference. Attach fabric as for fencing. Attach hardware using tamper-resistant or concealed means. Install ground-set items in concrete for anchorage. Adjust hardware for smooth operation and lubricate where necessary.

3.7 ADJUSTING

- A. Gates: Adjust gates to operate smoothly, easily, and quietly, free of binding, warp, excessive deflection, distortion, nonalignment, misplacement, disruption, or malfunction, throughout entire operational range. Confirm that latches and locks engage accurately and securely without forcing or binding.

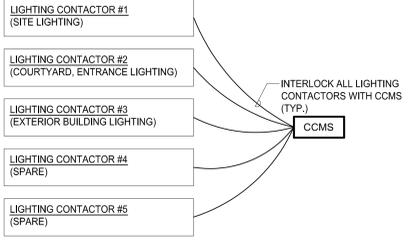
3.8 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's personnel to adjust, operate, and maintain chain-link fences and gates.

3.9 COMPLETION AND CLEAN UP

- A. Leave the area of installation free of debris and excess soil, concrete, and gravel resulting from installation of the fence. Clean fencing of concrete slurry, hydroseeding overspray and any other excess material. Seed and mulch all areas around the fencing where bare earth is left exposed.

END OF SECTION



- NOTES:
- COORDINATE EXACT QUANTITY AND LOCATION OF CONTACTORS WITH DIVISION 26.
 - COORDINATE ON/OFF SCHEDULE WITH OWNER.
 - PROVIDE BUILDING/SITE GRAPHIC OF LIGHTING CONTACTORS AND ZONES CONTROLLED ON ATC SYSTEM.

AUTOMATIC TEMPERATURE CONTROL POINT LIST											
EQUIPMENT OR SYSTEM	DISCRETE & ANALOG CONTROL										
	EXTERIOR BUILDING/SITE LIGHTING	<table border="1"> <tr> <td>START & STOP</td> <td>TOTAL RUN</td> <td>OPTIMAL START-STOP</td> <td>TIME PROGRAM</td> <td>GRAPHIC DISPLAY</td> </tr> <tr> <td>●</td> <td>●</td> <td>●</td> <td>●</td> <td>●</td> </tr> </table>	START & STOP	TOTAL RUN	OPTIMAL START-STOP	TIME PROGRAM	GRAPHIC DISPLAY	●	●	●	●
START & STOP	TOTAL RUN	OPTIMAL START-STOP	TIME PROGRAM	GRAPHIC DISPLAY							
●	●	●	●	●							

NOTES:
1. PROVIDE ADDITIONAL DIGITAL POINTS AS NECESSARY TO ACCOMPLISH THE SPECIFIED SEQUENCE OF OPERATION.

ATC CONTROL SEQUENCE

EXTERIOR SITE/BUILDING LIGHTING CONTROL

A. GENERAL

- PROVIDE ALL INTERLOCKS AND WIRING TO PROVIDE AUTOMATIC CONTROL OF EXTERIOR/BUILDING LIGHTING TO THE EXTENT INDICATED ON THE ELECTRICAL DOCUMENTS.
- ATC SYSTEM SHALL PROVIDE START/STOP WITH MANUAL OVERRIDE OF EXTERIOR SITE/BUILDING LIGHTING.
- THE ATC SYSTEM SHALL BE INTERLOCKED WITH LIGHTING RELAYS/CONTACTORS AS INDICATED ON ELECTRICAL DOCUMENTS.
- THE EXTERIOR SITE/BUILDING LIGHTS SHALL BE ENERGIZED/DE-ENERGIZED BASED ON TIME OF YEAR AND DAILY SCHEDULING. REVIEW SCHEDULE WITH OWNER PRIOR TO IMPLEMENTATION. SCHEDULE SHALL BE ADJUSTABLE THROUGH THE AUTOMATIC TEMPERATURE CONTROL SYSTEM.

1 LIGHTING CONTROL BY AUTOMATIC TEMPERATURE CONTROL SYSTEM

NO SCALE

2 NOT USED

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Project No.: 200-163183-17001-07

Designed By: RAK

Drawn By: BWH

Checked By: DRH

CAESAR RODNEY SCHOOL DISTRICT
HVAC IMPROVEMENTS FOR
NELLIE H. STOKES ELEMENTARY SCHOOL
CONTROL DIAGRAMS
HVAC

MARK	DATE	DESCRIPTION	BY
1	02/26/18	ISSUED FOR BID	RAK
2	03/07/18	ADDENDUM (ATC CONTROL OF EXT. LIGHTS)	RAK

M-408

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Bar Measures 1 Inch