

PROJECT MANUAL

FORT HUNT ELEMENTARY SCHOOL BASEBALL FIELD RENOVATION PROJECT

8832 Linton Lane,
Alexandria, Virginia 22308

SPECIFICATION VOL. 1 OF 1
BID SET – 9/24/24



FAIRFAX COUNTY PUBLIC SCHOOLS

OFFICE OF FACILITIES MANAGEMENT
5025 SIDEBURN ROAD, ROOM 62
FAIRFAX, VIRGINIA 22032
703-764-2457/ FAX 703-239-0462

September 17, 2024

Fort Hunt Elementary School
Baseball Field Renovation
W/O #22002909

Scope of Work:

- Demolition and removal of existing structures (dugouts, concrete pads, asphalt, fencing, 6" timber wall, etc.).
- Installation and removal of silt fence.
- Installation and removal of temporary gravel construction entrance with wash rack.
- Installation and removal of tree protection area.
- Provide minor grading to provide 2% overall grade over the ball field.
- Seed graded areas with Tall Fescue grass seed. **Provide separate line item cost for sodding infield.** The infield arc will be skinned.
- Supply and install infield mix on arc, laser grade to finish, add infield conditioner.
- Build batters boxes, install home plate, install base anchors at 60' distances, Install a double stanchion 46' rubber in front of a 50' pitching block.
- Perimeter cleanup, seed and strawing.
- Supply and install fencing and backstop as per Fairfax County Park Authority standards.
- Supply and install foul poles.
- Supply and install two (2) - three row 15' aluminum bleachers, **provide separate line item cost for bleachers.**
- Supply and install two (2) new 15' x 27' concrete bleacher pads with 6' concrete walkway around backstop to connect both bleacher pads.
- Supply and Install 60'x8' fenced gravel dust bullpen areas.
- Supply and install ADA asphalt walkway from existing access to bleacher pad.
- Re-grade, seed and straw all disturbed areas.

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SECTION 00020**INVITATION TO BID****PART 1 - GENERAL**

- 1.01 **Notice of IFB:** Notice is hereby given that the Fairfax County School Board ("Owner") will receive bids for the **Fort Hunt Elementary School Baseball Field Renovation before, 10:00 a.m. on Tuesday, October 8, 2024.**
- 1.02 Each bidder shall bear and be responsible for all costs, fees and expenses associated with its preparation and submission of a bid in response to this IFB. In no event shall any bidder be reimbursed by the Owner for any such costs, fees or expenses. Bid prices shall be inclusive of all labor, supplies, materials, equipment, permits, and sales or use taxes required to complete the Work in its entirety in strict accordance with the Contract Documents.
- 1.03 The procedure for withdrawal of bids and bid award public notification is set forth in the Instructions to Bidders.
- 1.04 Bids will be considered on a lump sum basis for the entire work described in the Contract Documents.
- 1.05 The Owner will not discriminate against a bidder solicitation or awarding of contracts because of race, religion, color, sex, national origin, age, disability, or any other basis prohibited by state law relating to discrimination in employment. Minority contractors and small business enterprises are invited and encouraged to submit bids in response to this solicitation. Each bidder shall indicate on its Bid Form whether or not it is a Small Business Firm or a Minority Business Firm, as such terms are defined in the instructions to Bidders. All responsive and responsible bidders will receive equal consideration for award.
- 1.06 Drawings and Specifications may be downloaded from <https://www.fcps.edu/get-involved/doing-business-fcps/facilities-management-current-solicitations> or examined at the Owner's Office of Facilities Management location on an appointment basis. Electronic contract document set may be obtained from the Architect of Record: Ballou Justice Upton Architects, 804-270-0909. One (1) set of electronic bidding documents will be furnished to each bidder.
- 1.07 The Contractor shall perform Substantial and Final Completion of Work on or before the respective Substantial and Final Completion dates established in Section 01010, Summary of Work. It is the intent of the Owner to assess liquidated damages in the amounts shown in Section 01010 in the event that these dates are not met.
- 1.08 Contract documents including Drawings and Specifications will be placed on the file at the following locations: (list revised 11/23)

NAME	ADDRESS	PHONE	FAX
<i>DODGE Data</i>	Dodge Data and Analytics 2860 S State Hwy 161, Suite #501 Grand Prairie, TX 75052-7361 support@construction.com www.construction.com	800-393-6343	800-625-3488
<i>Construct Connect</i>	30 Technology Parkway South Suite 100 Norcross, GA 30092 content@constructconnect.com	800-364-2059 Ext. 8232	866-570-8187
<i>Valley Construction News</i>	426 West Campbell Avenue, SW Roanoke, VA 24016 emilyvcn@yahoo.com	540-344-8127	540-344-0292
<i>The Blue Book</i>	800 E. Main Street Jefferson Valley, NY 10535 ATTN: Alex Gugliada agugliada@mail.thebluebook.com	800-431-2584, Ext. 3327	914-243-4396
<i>Builders and Construction Exchange, Inc.</i>	1118 Azalea Garden Road Norfolk, VA 23502 plans@bceva.com	757-858-0680	757-858-0681
<i>Construction Bid Source, LLC</i>	528 Weather Ridge Lane Cary, NC 27513 Attn: Liz Stryker or Pearl Regis projects@constructionbidsource.com	1-888-786-9450	209-772-3573

- 1.13 Unless cancelled or rejected, a responsive bid from the lowest responsible bidder shall be accepted as submitted, except that if the bid from the lowest responsible bidder exceeds available funds, the School Board may negotiate with the apparent low bidder to obtain a contract price within available funds.

The conditions and procedures for such negotiation are set forth in the current version of School Board Policy 8240, the text of which is available for review at www.fcps.edu, search for “Policies, Regulations and Notices”, click this link, then select “Find a Policy”.

In summary, negotiation may be undertaken on behalf of the School Board where, and to the extent such, is deemed to be in the best interests of the School Board. Office of Facilities Management staff, along with the project’s design professionals and the apparent low bidder, will develop appropriate scope modifications that do not impair the proposed function of the project. These modifications will be priced by the apparent low bidder and reviewed by the Office of Facilities Management and the project’s design professionals, which may recommend an award on that basis if such is deemed to be in the best interests of the School Board and the price is within available funds.

THE COUNTY SCHOOL BOARD OF FAIRFAX COUNTY, VIRGINIA

Karl Frisch
Chair

Dr. Michelle Reid
Superintendent of Schools

Janice M. Szymanski
Chief of Facilities Services
& Capital Programs

Justin R. Moss
Executive Director, Office of Facilities Management

END OF SECTION

SECTION 00100

INSTRUCTIONS TO BIDDERS

1. QUALIFICATION OF BIDDER

- A. Each bidder shall be required to be licensed pursuant to Title 54.1, Chapter 11 of the Virginia Code, as amended, before such bidder's bid may be submitted to the Owner and be eligible for consideration hereunder. Each bidder shall place its Virginia Contractor License Number on the outside of the envelope containing its proposal and in the space provided therefore on the signature page of the Bid Form.
- B. The bidder shall be qualified by experience, financing, organization, scheduling and coordination ability, and shall have the necessary labor and equipment to perform the work called for in the Contract Documents. The bidder shall have experience with work of similar type and size to that called for in the Contract Documents and such experience shall be based upon projects that have been completed within the last five years.

2. LICENSE AND REGISTRATION REQUIREMENTS

- A. All firms doing business in Fairfax County shall obtain a license as required by Chapter 4, Article 7, of the Code of the County of Fairfax, Virginia, as amended, entitled "Business, Professional and Occupational Licensing (BPOL) Tax." Questions concerning the BPOL tax should be directed to the Fairfax County Department of Tax Administration, telephone number: (703) 222-8234.
- B. Any foreign corporation transacting business in Virginia shall obtain a Certificate of Authority, as required by Section 13.1-757 of the Code of Virginia, from the Virginia State Corporation Commission, Post Office Box 1197, Richmond, Virginia 23218. The Commission may be reached at (804) 371-9733. The consequences of failing to secure a Certificate of Authority are set forth in § 13.1-758 of the Virginia Code, as amended.
- C. A current State Corporation Commission Corporate Identification number. *Effective July 1, 2010, a company is required to provide FCPS a state authorization number to transact business in the state of Virginia. To obtain a State Corporation Commission Corporate Identification number, contact the state commission at 804-371-9733 or 1-800-552-7945, or <https://www.scc.virginia.gov/index.aspx>, email: sccinfo@scc.virginia.gov or The State Corporation Commission, Post Office Box 1197, Richmond, Virginia 23209.*

3. QUESTIONS AND COMMUNICATIONS; ISSUANCE OF ADDENDA

- A. All contact between prospective Bidders and the Owner with respect to this solicitation will be formally held at scheduled meetings or will be conducted in writing through the Owner's Office of Facilities Management. Except as expressly authorized herein, communications between prospective bidders, their

agents and/or representatives and any representative of the Owner concerning interpretation of all or any portion of this solicitation are prohibited and may not be relied upon for any purpose. No interpretation of the meaning of these documents will be made to any bidder orally.

- B. Any question or request for an interpretation must be in writing and submitted: (i) by mail or hand delivery addressed to Architect and Owner as indicated on the cover page to this solicitation; or (ii) by email to the Architect of Record: Ballou Justice Upton Architects, dley@bjuarchitects.com or email to the Senior Buyer at; acmylechrain@fcps.edu (Angela Mylechraine). In order to be eligible for consideration, a question or request for interpretation must be received on or before the deadline. Deadline will be established in the Pre-Bid Conference referenced in section 00020 ("Invitation to Bid"). Any and all such responses, interpretations and any supplemental instructions will be returned in writing to the prospective bidder requesting such interpretation or will be in the form of written addenda. It shall be the responsibility of each bidder to ensure that all addenda are acquired. Any issued addenda in connection with this project will be posted under 'Current Solicitations'. The bidder may also call the Architect of Record: Ballou Justice Upton Architects, 804-270-0909 and Senior Buyer at 703-764-2457 prior to bid submission in order to determine whether any addenda have been issued in connection with this solicitation." Notwithstanding any provision to the contrary, the failure of any bidder to receive any such addenda or interpretations shall neither constitute grounds for withdrawal of a bid nor relieve such bidder from any obligation under his Bid as submitted. "Points of Interests" will be attached to Addendum 1, which will replace Pre-Bid meetings/addenda. All addenda so issued shall become part of the Contract Documents.
- C. The bidders for this Project are notified that the site for performance of the Work is "unclassified" and that, as such, complete, accurate and/or reliable information regarding surface and subsurface conditions likely to be encountered during performance of the Work is not available. Each bidder shall be provided full and complete access to the site of the Work (but only upon prearrangement with the Office of Facilities Management as to all aspects of the site visit) in order to conduct, at its expense, such tests and investigations of the site as it deems appropriate under the circumstances (and of which it has provided ten (10) days advance written notice to Owner) in order to evaluate and satisfy itself as to the surface and subsurface conditions likely to be encountered during performance of the Work.

Bidders which do not comply with the foregoing prearrangement and notice provisions shall not be permitted to visit the site or to conduct tests and investigations of the site.

It is the intent of these Contract Documents that the successful bidder for this Project shall bear full and complete responsibility for all surface and subsurface conditions, whether known or unknown, reasonably foreseeable or not, that shall be encountered during the performance of the Work and that, as such, each bidder shall include in its bid price for the Work an amount that it deems

sufficient, in its sole and absolute discretion, to protect such bidder from the increased costs of performance that it may incur as a result of its assumption of responsibility for all such surface and subsurface conditions. Notwithstanding any provision in the Contract Documents to the contrary, the successful bidder shall in no event be entitled to additional compensation, time or other relief from its obligations under the Contract Documents as a direct or indirect result of surface or subsurface conditions encountered during performance of the Work. Pursuant to the Contract Documents, the successful bidder shall waive any and all claims against the Owner and the Architect that such bidder has, or may have in the future, arising out of or in connection with surface and subsurface conditions encountered during performance of the Work. In the event that the Owner or the Architect (or any of its or their representatives) provide the bidders with access to or copies of any reports, data or other materials or information pertaining to the surface or subsurface conditions at the site of the Project, each bidder shall: (a) acknowledge that such reports, data or other materials or information were supplied without representation or warranty as to the accuracy or completeness thereof; and (b) certify that it did not rely upon any such information in tabulating its bid price for the Work.

4. BID SECURITY

- A. Each bid shall be accompanied by a bid bond in an amount equal to five percent (5%) of the total amount of the principal's bid on the form prescribed herein (Section 00301). The original bid bond shall be submitted to the attention of the Senior Buyer at Office of Facilities Management, 5025 Sideburn Road, Fairfax, Virginia 22032. The bid bond shall be issued by a surety company licensed to conduct business as a surety in the Commonwealth of Virginia and otherwise satisfying any further requirements with respect to sureties set forth in the General Conditions. In lieu of a bid bond, a bidder may submit a certified check, cashier's check or cash escrow in the face amount required for the bond. Such bid security shall be given as a guarantee that the bidder will enter into a contract and provide the required contract security and insurance if awarded the work.
- B. The bid security of the unsuccessful bidders will be returned on or before the date that is five (5) days after the execution of the contract or, if no such contract shall have been executed, on or before the date that is 60 days after the date of opening of the bids. The bid security of the successful bidder will be returned only after such bidder shall have executed the agreement and furnished the contract security and evidence of insurance required hereunder.
- C. If the bidder to whom the Contract is awarded refuses or neglects to execute the agreement or fails to furnish the required contract security and evidence of insurance within ten (10) days after receipt of the notice, the amount of such bidder's bid security shall be forfeited to the Owner; provided, however, that no such forfeiture shall exceed the lesser of: (i) the difference between the bid for which the bond was written and the next low bid; and (ii) the face amount of the bid bond. If the bidder to whom the contract is awarded refuses or neglects to execute the agreement or fails to furnish the required contract security and

evidence of insurance, then the award of the contract may be annulled and the Owner may: (i) award a contract hereunder to the next best bidder and such bidder shall fulfill every requirement set forth in these documents as if it were the original party to whom the award was made; or (ii) reject all of the bids submitted hereunder, as its interest may require. Except as provided herein with regard to withdrawal of bids, no plea of mistake in the bid shall be available to the bidder for the recovery of its bid security or as a defense to any action based upon such bidder's failure or refusal to execute a contract and to furnish the required contract security and evidence of insurance.

5. CONTRACT SECURITY

- A. The Required Documentation and the Owner/Contractor Agreement will be sent to the successful bidder on the following Monday after bid opening. The Owner/Contractor Agreement shall be signed by an authorized officer of your company. Within seven (7) business days from the date of the Required Documentation, the successful bidder shall execute and deliver to the Owner four (4) copies of the Owner/Contractor Agreement. In Addition, the successful bidder shall furnish the following:
- 1) Two (2) original copies of the performance bond in an amount equal to 100 percent of the contract sum conditioned upon the faithful performance of the contract in strict conformity with the plans, specifications, and conditions of the contract.
 - 2) Two (2) original copies of the payment bond in an amount equal to 100 percent of the contract sum conditioned upon the prompt and faithful payment of all persons and entities who have and fulfill contracts which are directly with the contractor for performing labor or furnishing materials in the prosecution of the work provided for in the contract.
 - 3) One (1) or more certificates of insurance evidencing the types and amounts of insurance coverage required to be maintained by the Contractor under the Contract Documents.
- B. The Notice To Proceed (NTP) and the counter signed Owner/Contractor Agreement will be sent to the successful bidder on the following Monday of FCPS's School Board approval. The successful bidder will be authorized and directed to proceed with the Work after seven (7) business days of the FCPS's School Board approval.
- C. Each of the following Subcontractors shall submit Performance and Payment Bonds in the amount of one hundred percent (100 percent) of its subcontract amount. Bonds shall (i) be substantially in the form herein provided (Sections 00302 and 00303), (ii) name the Contractor as obligee, and (iii) be issued by a surety company licensed to conduct business in Virginia. Cost of said Bonds shall be included in the Contract Sum:

- 1) Electrical
- 2) Plumbing / HVAC
- 3) Sprinkler

D. Any performance or payment bond required hereunder shall be in the form included in these Contract Documents and shall be executed by a surety company that is legally authorized to transact business as a surety in the Commonwealth of Virginia and that otherwise satisfies any requirements with respect to sureties set forth in the General Conditions. In lieu of a payment and/or performance bond, the successful bidder may furnish a certified check or cash escrow in the face amount(s) required for such bond(s).

6. BIDS

A. In order to be entitled to consideration hereunder, bids shall be made in accordance with the following instructions.

- 1) Before submitting a bid, bidders shall visit the site of the work, fully inform themselves as to all existing conditions and limitations, and shall include in the bid a sum to cover the cost of all items included in the Contract Documents.
- 2) Bids shall be made in duplicate upon the Bid Form, a copy of which is bound herein. Bids shall be completed, including each and every item; bids shall be stated both in writing and in figures. The signatures of all persons shall be in longhand. The completed Bid form shall be without erasures or alterations.
- 3) No Bid shall contain any recapitulation of the work to be performed, and no alternate bid will be considered unless called for. No exceptions, exclusions or qualifications, unless expressly authorized, shall be permitted on the Bid Form. No oral, telegraphic or telephonic bids, or modifications, either to the Bid Form or the Bid Envelope, shall be considered.
- 4) Bids shall be time-stamped and deposited in the bid box at, the Office of Facilities Management, 5025 Sideburn Road, Room 62, Fairfax, VA 22032, on or before the day and hour set for the opening of bids, enclosed in an opaque sealed envelope and bearing the title of the work, name of bidder and bidder's Virginia Contractor License Number.
- 5) Bids shall be firm and irrevocable for a period of 60 days following the date of opening of the bids.

7. OPENING OF BIDS

Bids will be opened and read aloud at the time and place set forth in the Invitation to Bid. Bidders, their representatives, and other interested persons may be present at the

opening of the bids. In the event that only one Bid Form is received by the Owner in response to the Invitation to Bid, the Owner may, in its discretion, decline to open such bid and return the unopened envelope to the bidder.

8. **LATE BIDS**

Any Bids or unsolicited materials relating to a Bid that are received by the Owner after the date and time specified for the submission of bids will not be eligible for consideration by the Owner. Bids received after the bid submission deadline will be returned to the Bidder unopened, providing that sufficient bid identification information is shown on the outside of the bid envelope.

9. **WITHDRAWAL OF BIDS:**

- A. A bidder may withdraw his bid from consideration if the price bid was substantially lower than the other bids due solely to a mistake in the bid, provided the bid was submitted in good faith, and the mistake was a clerical mistake as opposed to a judgment mistake, and was actually due to an unintentional arithmetic error or an unintentional omission of a quantity of work, labor, or material made directly in the compilation of a bid, which unintentional arithmetic error or unintentional omission can be clearly shown by objective evidence drawn from inspection of original work papers, documents, and materials used in the preparation of the bid sought to be withdrawn.

If a bid contains both clerical and judgment mistakes, a bidder may withdraw his bid from consideration if the price bid would have been substantially lower than the other bids due solely to the clerical mistake, that was an unintentional arithmetic error or an unintentional omission of a quantity of work, labor, or material made directly in the compilation of a bid that shall be clearly shown by objective evidence drawn from inspection of original work papers, documents, and materials used in the preparation of the bid sought to be withdrawn.

- B. The following is the procedure for withdrawal of a bid and is stated in the advertisement for bids:
- 1) A bidder, who seeks to withdraw his bid in accordance with this provision, shall give notice in writing of his claim of right to withdraw his bid within two business days after the conclusion of the bid opening procedure and shall submit original work papers with such notice to:

Justin R. Moss, Executive Director
Office of Facilities Management
Facilities Services and Capital Programs
Fairfax County Public Schools
5025 Sideburn Road
Fairfax, VA 22032
Telephone Number 703-764-2405; Fax 703-239-0462
Email: jrmoss@fcps.edu

The mistake shall be proved only from the original work papers, documents, and materials delivered as required herein. The work papers, documents, and materials submitted by the bidder shall, at the bidder's request, be considered trade secrets or proprietary information subject to the conditions of subsection F of Section 2.2-4342 of the Code of Virginia.

- C. No bid may be withdrawn when the result would be the awarding of this Contract to another bidder in which the ownership of the withdrawing bidder is more than five percent (5%).
- D. If a bid is withdrawn, the lowest remaining bid shall be deemed to be the low bid. No bidder who is permitted to withdraw a bid shall, for compensation, supply any material or labor, or perform any subcontract or other work agreement for the person or firm to whom the Contract is ultimately awarded or otherwise benefit, directly or indirectly, from the performance of the project for which the withdrawn bid was submitted.
- E. The Office of Facilities Management (OFM), acting for the School Board, shall notify the bidder in writing within five (5) business days of its decision regarding the bidder's request to withdraw its bid. If OFM denies the withdrawal of a bid, it shall state in such notice the reasons for its decision and award the contract to such bidder at the bid price, provided such bidder is a responsible and responsive bidder. At the same time that the notice is provided, OFM shall return all work papers and copies thereof that have been submitted by the bidder.

10. **CANCELLATION, REJECTION OF BIDS; WAIVER OF INFORMALITIES**

The Owner reserves the right to cancel this solicitation, to accept or reject any or all bids submitted hereunder, or to waive any informality in any one or all bids received.

11. **AWARD OF CONTRACT**

- A. The Contract will be awarded, if at all, under the terms and conditions of the Contract Documents to the lowest responsive and responsible bidder, as determined by the Owner, with due consideration given to the ability of the bidder to cooperate with separate contractors for the Project and to coordinate, schedule and complete the Work within the prescribed time period. The Owner reserves the right to award the Contract that would be in the best interests of the Owner.
- B. Public notice of the award of contract or the announcement of the decision to award a contract will be set forth on the website of Fairfax County Public Schools www.fcps.edu, search for "Bid Results", select "Office of Facilities Management", scroll to Bid Results. While school division staff may communicate procurement results to bidders or offerors, each bidder or offeror has the responsibility to monitor the FCPS website for its own purposes.

- C. The Owner reserves the right to require submission of references in sufficient time to make inquiries regarding the responsibility of the bidder before making the award, and the right to require a recent financial statement from the bidder if the Owner deems it necessary. The Owner also emphasizes its intention not to award any contract to a bidder whose past performance shows his firm to be generally late in performance of construction contracts. The ability of the low bidder to provide the required bonds will not in and of itself establish the responsibility of the bidder.
- D. The Owner reserves the right to defer award of any Contract for a period of 60 days after the due date for the bids. Bid prices shall be binding for 60 days following the due date for proposals, unless period for award of bids hereunder is extended by mutual consent of all parties, in which case bid prices shall be binding for such longer period as shall have been agreed upon.
- E. Under circumstances where no add alternates are included on the Bid Form, the low bidder shall be determined by the Owner based upon a comparison of the base bid amounts set forth on such Bid Forms. In the event that one or more add alternates are included on the Bid Form, the low bidder shall be determined by the Owner based upon the aggregate amount of: (i) the base bid, and (ii) any add alternates selected by the Owner. Add alternates shall be selected by the Owner based upon its authorized construction budget and the Owner's needs and requirements at the time of the bid opening. The Owner reserves the right, in its sole discretion, to select or reject any or all of the add alternates (or to select any combination of add alternates) included in the Bid Form. The Owner shall determine the low bidder for the base bid and any selected add alternates by means of a "blind" bid review process which shall operate generally as follows:
- 1) At the bid opening, a designated staff member from the Owner's Office of Facilities Management shall complete two bid tabulation sheets, the first of which shall identify each bidder by name, and the second of which shall omit the names of the bidders and shall refer to each bidder by a generic term such as "Contractor A" and "Contractor B." The Director of the Owner's Office of Facilities Management or his designee (the "Director") shall not attend the bid opening.
 - 2) Following the bid opening, school system staff shall submit only the second, anonymous bid tabulation sheet to the Director for his or her review and consideration. The Director shall determine the low bidder based on the aggregate amount of the base bid and any selected add alternates set forth on the second anonymous bid tabulation sheet, and shall circle and initial his or her choices on such form.
 - 3) Once the Director's selections have been made, the two tabulation sheets shall be compared, and the identity of the low bidder for the base bid and any selected add alternates shall be established.

- F. Any quantities set forth on the Bid Form represent estimates only and are included solely for the purpose of evaluating and comparing the bids received.
- G. A "responsive bidder" shall mean a bidder who has submitted a bid which conforms, in all material respects, to the requirements of the bidding documents.
- H. A "responsible bidder" shall mean a bidder who has the capability, in all respects, to perform fully the Contract requirements and the moral and business integrity and reliability, which will assure good faith performance and who has been prequalified, if required.
- I. The Office of Facilities Management reserves the right to require from the bidder:
 - 1) Submission of references within two (2) business days after the opening of the bids;
 - 2) A list of projects completed by bidder within the last two (2) years which are similar in size and scope to the work described in this solicitation; and/or
 - 3) Financial statements indicating current financial status, prepared in accordance with generally accepted accounting principles, by a duly licensed CPA.
- J. The successful low bidder, upon notice of award of contract, shall submit a completed "Responsible Land Disturber Certification" through FCPS, to Plan and Document Control, Office of Land Development Services (LDS), Fairfax County DPWES.

12. PROTEST OF AWARD OR DECISION TO AWARD

- A. Any bidder may protest the award or the decision to award this Contract by submitting a protest in writing to the Chief of Facilities Services and Capital Programs, or designee, for Facilities Services and Capital Programs 8115 Gatehouse Road, Suite 3500, Falls Church, VA 22042, no later than ten (10) days after the award or the announcement of the decision to award, whichever occurs first; however, that no protest shall lie for a claim that the selected bidder is not a responsible bidder.

The written protest must include the basis for the protest and the nature of the relief sought. The Chief of Facilities Services and Capital Programs, or designee, for the Department of Facilities Services and Capital Programs shall issue a decision in writing within ten (10) days of receipt of the protest, stating the reasons for the action taken.

This written decision shall be final unless the bidder appeals within ten (10) days of receipt of the written decision by instituting legal action as provided in the Code of Virginia.

Nothing in this section shall be construed to permit a bidder to challenge the validity of the terms and conditions of the Invitation to Bid.

- B. If, prior to the award, it is determined that the decision to award is arbitrary and capricious, then the sole relief shall be a finding to that effect.

If, after an award, it is determined that an award of a contract was arbitrary or capricious, then the sole relief shall be as hereinafter provided.

Where the award has been made but performance has not yet begun, the performance may be enjoined.

Where the award has been made and performance has begun, The Chief of Facilities Services and Capital Programs, or designee, for the Department of Facilities Services and Capital Programs may declare the Contract void upon a finding that the action is in the best interest of the school division.

Where a contract is declared void, the performing contractor shall be compensated for the cost of performance at the rate specified in the Contract up to the time of such declaration. In no event shall the performing contractor be entitled to lost profits.

- C. Pending final determination of a protest, the validity of the award shall not be affected by the fact that a protest has been filed.
- D. An award need not be delayed for the period allowed a bidder to protest, but in the event of a timely protest, no further action to award this Contract will be taken unless the Chief of Facilities Services and Capital Programs, or designee, for the Department of Facilities Services and Capital Programs makes a written determination that proceeding without delay is necessary to protect the public interest or that the bid will expire.

13. SUBSTITUTIONS; PRE-APPROVED SUPPLIERS

- A. Unless otherwise provided in the bidding documents, the name of a certain brand, make, or manufacturer is intended to restrict bidders to the specific brand, make, or manufacturer specified. Substitute materials proposed as equal to materials specified shall be submitted in writing to the Owner by the bidder with full substantiating data for evaluation no later than ten (10) days prior to bid opening; substitute materials shall not be considered for evaluation after this time period. Proposed substitute materials which equal or exceed the performance standard of the specified materials in the sole judgment of the Owner will be included in an "Approved Substitute Materials Bulletin" to be issued prior to the bid opening date.
- B. For purposes of this solicitation and any resulting contract, the Owner's designation of any one or more manufacturers, subcontractors and/or suppliers as "pre-approved" shall signify only that such manufacturers, subcontractors and

suppliers previously have submitted work samples to the Owner that satisfied the Owner's requirements. The Owner's designation of any one or more manufacturers, subcontractors and/or suppliers as "pre-approved" shall in no event be deemed or construed to be a representation or warranty on the part of the Owner of any such manufacturer's, subcontractor's or supplier's capability of or capacity for (in terms of financial wherewithal, personnel and equipment availability, managerial ability, product quality or otherwise) performing or furnishing any portion of the Work in accordance with the requirements of this solicitation. Each bidder shall conduct such independent investigation into the qualifications, experience and abilities of its selected manufacturers, subcontractors and suppliers, as it deems appropriate under the circumstances.

14. SMALL AND MINORITY BUSINESS ENTERPRISES

- A. The Fairfax County Human Rights Ordinances and relevant Federal and State Laws, orders and regulations require Fairfax County to ensure that its procurement practices are non-discriminatory and promote equality of opportunity for Small, Minority and Women-Owned Business Enterprises.
- B. Small Business/Organization is an independently owned and operated business which, together with affiliates, has 250 or fewer employees or average annual gross receipts of \$10 million or less averaged over the previous three years.
- C. Minority Business is a business concern that is at least 51 percent owned by one or more minority individuals or in the case of a corporation, partnership or limited liability company or other entity, at least 51 percent of the equity ownership interest in the corporation, partnership or limited liability company or other entity is owned by one or more minority individuals and both the management and daily business operations are controlled by one or more minority individuals. Such individuals shall include Asian American, African American, Hispanic American, Native American, Eskimo or Aleut.
- D. Woman-Owned Business is a business concern that is at least 51 percent owned by one or more women who are U.S. citizens or legal resident aliens, or in the case of a corporation, partnership or limited liability company or other entity, at least 51 percent of the equity ownership interest is owned by one or more women who are U.S. citizens or legal resident aliens, and both the management and daily business operations are controlled by one or more women who are U.S. citizens or legal resident aliens.

15. CONFLICT OF INTEREST

The provisions of the State and Local Government Conflict of Interests Act (Va. Code § § 2.2-3100 *et seq.*) and Article 6 of the Virginia Public Procurement Act entitled "Ethics in Public Contracting" (Va. Code Ann. § § 2.2-4367 *et seq.*) are incorporated herein by reference, and all Bidding Documents shall be deemed to incorporate appropriate reference to these provisions. The Contractor shall incorporate the above conflict-of-interest clause in each subcontract.

16. GOVERNING LAW

- A. The Contract Documents shall be governed by and construed in accordance with the laws of the Commonwealth of Virginia, without reference to conflict of laws principles. In the event that there is a conflict between any provision set forth in the Contract Documents and the Code of Virginia, and specifically Section 2.2-4300 *et seq.* (the "Virginia Public Procurement Act"), the Code of Virginia shall control. The Contractor is cognizant of the provisions of the Comprehensive Conflict of Interest Act (Va. Code Ann. Section 2.2-3100 through 2.2-3127) and Article 6 of the Virginia Public Procurement Act entitled "Ethics in Public Contracting" (Va. Code Ann. Section 2.2-4367 through 2.2-4377).
- B. Legal Provisions Deemed Included: Each and every provision of any law required by law to be inserted in this Contract shall be deemed to be inserted herein, and the Contract shall be read and enforced as though it were included herein and if, through mistake or otherwise, any such provision is not inserted or is not correctly inserted, then upon application of either party the Contract shall forthwith be physically amended to make such insertion. The Owner does not discriminate against faith-based organizations.

17. COMPLIANCE WITH LAWS; PERMITS, FEES, AND NOTICES

The successful bidder shall be required to comply with all local, state and federal laws, rules, regulations and ordinances applicable to the contract and to the work contemplated hereby. The successful bidder shall be required to obtain, at its expense, all permits, licenses and other authorizations necessary for the prosecution of the Work, except that the Owner shall obtain, at its expense, the General Building Permit and any easement agreement necessary and indispensable to the completion of the Project. The successful bidder shall be responsible for giving all notices and complying with all laws, ordinances, rules, regulations and directives of any public authority bearing on the performance of the work.

18. CONSTRUCTION SAFETY

- A. The Contractor shall comply with the construction safety standards promulgated by the U.S. Department of Labor and by the Virginia Department of Labor and Industry.

END OF SECTION

SECTION 00300

BID FORM

Name of Bidder: _____

Bidder's Mailing
Address for Notices: _____

Bidder's Principal
Office Address: _____

Telephone No.: _____
Fax No.: _____
Email Address: _____

Bidder's Designated Contact Person: _____

TO: FAIRFAX COUNTY SCHOOL BOARD (the "Owner")
FAIRFAX COUNTY PUBLIC SCHOOLS
FACILITIES SERVICES AND CAPITAL PROGRAMS
OFFICE OF FACILITIES MANAGEMENT
5025 Sideburn Road, Room 62
Fairfax, VA 22032

RE: **Fort Hunt Elementary School Baseball Field Renovation Project, 8832 Linton Lane,
Alexandria, Virginia 22308.**

Ladies and Gentlemen:

The undersigned Bidder, having examined the Drawings, Specifications and remaining Contract Documents for the above-referenced Project and having visited the site and examined all conditions affecting the Work, hereby proposes and agrees to furnish all labor, supplies, materials, and equipment and to perform all actions necessary to complete the entire Work in strict accordance with the Contract Documents for the following bid amount (to be set forth in words and in figures in the spaces set forth below):

Base Bid Amount:

_____ Dollars and _____ Cents; \$ _____

Infield Sodding

_____ Dollars and _____ Cents; \$ _____

Bleachers

_____ Dollars and _____ Cents; \$ _____

1. **Certain Agreements of the Bidder.** The undersigned Bidder hereby makes the following representations, warranties and covenants to the Owner, which representations, warranties and covenants are intended to be relied upon by the Owner in making an award of the above-referenced Contract.
 - A. The undersigned Bidder hereby acknowledges that time is of the essence to the Contract and agrees to commence the Work on the date set forth as the date for commencement of the Work in the Notice to Proceed or, if no such date is specified, then immediately after receipt of the Notice to Proceed. The undersigned covenants and agrees to fully complete the Work prior to the expiration of the Contract Period, as such term is defined in the Contract Documents. The undersigned hereby declares that the Contract Period is sufficient to assure timely and satisfactory completion of the Work. The undersigned Bidder acknowledges that, in the event that the Work is not completed within the timeframes established in the Contract Documents, then he will be assessed liquidated damages in the amount set forth in Section 01010, Summary of Work, for each day that the time consumed in completing the Work exceeds the time provided therefor in the Contract Documents.
 - B. The undersigned Bidder hereby certifies that the Bid Amount includes: (a) all labor, supplies, materials, equipment, and permits required to complete the Work in its entirety in strict accordance with the Contract Documents; (b) all costs associated with the successful bidder's responsibilities for coordination and cooperation with the Owner and any Separate Contractors at the site of this Project; (c) all costs associated with the successful bidder's responsibilities with regard to surface and subsurface conditions that may be encountered during performance of the Work; (d) all applicable sales and use taxes; and (e) allowances, if any, contemplated by the Contract Documents.
 - C. By signing this Bid, the undersigned Bidder hereby certifies that: (i) neither the Bidder nor any employee of the Bidder who will have direct contact with students has been convicted of a felony or any offense involving the sexual molestation or physical or sexual abuse or rape of a child; and (ii), unless expressly disclosed in an attachment to this Bid on the Bidder's letterhead stationery, neither the Bidder nor any employee of the Bidder who will have direct contact with students has been convicted of a crime of moral turpitude.
 - D. The undersigned Bidder hereby represents and warrants to the Owner that the Bidder: (a) has reviewed and thoroughly understands the scope, terms and conditions set forth in this solicitation; (b) has made due inquiry of the School Board as to the existence of any addenda issued in connection with this solicitation; (c) is satisfied that it has received any and all such addenda and the Bidder has taken the contents thereof into consideration when preparing and submitting this Bid; and (d) accepts full and complete responsibility for the receipt of any and all such addenda and waives any claim of mistake or error in its Proposal based upon its failure, in fact, to have received any one or more addenda.
 - E. The undersigned Bidder further hereby represents and warrants to the Owner that the Bidder: (a) has been provided the opportunity to conduct, at its expense,

such tests and investigations of the site as it deems appropriate under the circumstances in order to evaluate and satisfy itself as to the surface and subsurface conditions likely to be encountered during performance of the Work; (b) if successful hereunder, shall bear full and complete responsibility for all surface and subsurface conditions, whether known or unknown, reasonably foreseeable or not, that shall be encountered during performance of the Work; and (c) has included in its bid price an amount that it deems sufficient, in its sole and absolute discretion, to protect such bidder from the additional costs of performance that it may incur as a result of its assumption of responsibility for all surface and subsurface conditions encountered during performance of the Work. The Bidder hereby acknowledges that any reports, data, or other materials or information supplied by or on behalf of the Owner and/or the Architect with regard to surface and/or subsurface conditions at the site of the Project were given without representation or warranty as to the accuracy or completeness thereof and that the bidder did not rely upon any such information in tabulating its bid price for the Work.

- F. The undersigned Bidder covenants and agrees that in the event this Bid is one of the three lowest, as determined by Owner, Bidder will deliver to the Owner, within 48 hours after the bid opening, a written list of subcontractors (including names, address, and telephone number) for the following portions of the Work:

Electrical	Food Service Equipment
Plumbing	Roofing
Mechanical	Automatic Temperature Controls
Communication and Special Systems	Casework
Site and Site Utilities	Masonry
Structural Steel, Joists and Decks	Sprinkler

2. “Preapproved” or “approved” Manufacturers, Subcontractors and/or Suppliers.

- A. For purposes of this solicitation and any contract which may result herefrom, the Owner’s designation of any one or more manufacturers, subcontractors and/or suppliers as “preapproved” or “approved” shall signify only that such manufacturers, subcontractors and suppliers previously have submitted work samples to the Owner which satisfied the Owner’s requirements for a specified portion of the Work. The Owner’s designation of any one or more manufacturers, subcontractors and/or suppliers as “preapproved” or “approved” shall in no event be deemed or construed to be a representation or warranty on the part of the Owner of any such manufacturer’s, subcontractor’s or supplier’s capability or capacity (in terms of financial wherewithal, personnel and equipment availability, managerial ability or otherwise) of performing any portion of the Work in accordance with the requirements of the Contract Documents. Each Bidder shall conduct such independent investigation into the qualifications, experience and abilities of its selected manufacturers, subcontractors and suppliers as it deems appropriate under the circumstances.
- B. The Contractor hereby acknowledges and agrees that, as between the Owner and the Contractor, the Contractor shall bear full and complete responsibility for the performance of its subcontractors, manufacturers and suppliers, regardless

of whether any such subcontractor, manufacturer or supplier was designated as “preapproved” or “approved” by the Owner. The Owner’s designation of any one or more manufacturers, subcontractors and/or suppliers as “preapproved” shall in no event be deemed or construed to be a representation or warranty on the part of the Owner of any such manufacturer’s, subcontractor’s or supplier’s capability or capacity (in terms of financial wherewithal, personnel and equipment availability, managerial ability or otherwise) of performing any portion of the Work in accordance with the requirements of the Contract Documents. The Contractor is responsible for conducting such independent investigation into the qualifications, experience and abilities of its selected manufacturers, subcontractors and suppliers, as it deems appropriate under the circumstances.

3. Miscellaneous Provisions.

- A. In the event that changes in the Work, not covered in the Contract Documents and involving added cost, are directed to be performed on a cost-plus fee basis, such fee shall be calculated in accordance with Section No. 01153, paragraph 1.06.
- B. The Owner reserves the right to defer award of Contract for a period of 60 days after the date for submission of bids, or for such longer period as shall be agreed upon by the parties in writing.
- C. The Owner reserves the right to accept or reject any proposed subcontractor, supplier, or materials/product proposed as equal to that specified herein.
- D. Minority or small business firms information:

Please check the following information relevant to your firm: (See Instructions to Bidders for definitions).

Virginia Small Business and Supplier Diversity Certification Number: _____
SWaM Certification Type

Minority Business Firm: Yes _____ No _____

Small Business Firm: Yes _____ No _____

Women-Owned Firm: Yes _____ No _____

The above information is requested for statistical purposes only. All bidders tendering responsive and responsible bids hereunder will receive equal consideration for award.

4. Fairfax County Construction Safety Resolution. The Contractor shall abide by, and shall be subject to, the Fairfax County Construction Safety Resolution, as adopted by the Fairfax County Board of Supervisors on December 8, 2003, and as excerpted and modified below.

- A. Each bid submitted for a contract for construction, alteration, and/or repairs, shall include a list of all the following actions:

- 1) Willful violations, violations for failure to abate, or repeated violations, for which the Bidder was cited by (a) the United States Occupational Safety and Health Administration; (b) the Virginia Occupational Safety and Health Administration; or (c) the occupational safety and health plan for any other public jurisdiction; or
 - 2) Three (3) or more serious construction safety violations for which the Bidder was cited by the (a) United States Occupational Safety and Health Administration; or (b) the Virginia Occupational Safety and Health Administration; or (c) the occupational safety and health plan from any other public jurisdiction.
 - 3) Termination of a contract between the Bidder and any public entity by its purchasing agent or his designee for safety violations.
- B. If the Bidder has not received or been the subject of any such violations referenced in paragraph A in the three (3) years prior to the bid submission, then the Bidder shall so indicate by certification of Safety Violations. The Bidder will also indicate on this form each state in which work was performed in the three (3) years prior to the bid submission.
- C. No construction contract, as discussed above, may be bid on by any Bidder or contractor who has been the subject of any citations for the type and number of violations listed in paragraph A, above, which have become final within three (3) years prior to bid submission.
- 1) Notwithstanding the language of paragraph C, above, any Bidder or contractor who has been the subject of a violation, as described in paragraph A(1), which has become final within three (3) years prior to bid submission, may bid, if the Bidder or contractor satisfactorily passes an eligibility evaluation, as determined by Owner.
 - 2) Notwithstanding the language of paragraph C, above, any Bidder or contractor who has been the subject of the type and number of violations as described in paragraph A(2), which have become final within three (3) years prior to bid submission, may bid, if the Bidder or contractor satisfactorily passes an eligibility evaluation, as determined by Owner.
 - 3) Notwithstanding the language of paragraph C, above, any Bidder or contractor who has previously been terminated from a County contract, as described in paragraph A(3), within three (3) years prior to the bid submission, if the Bidder or contractor satisfactorily passes an eligibility evaluation, as determined by Owner.
- D. Prior to bidding on a project under the provisions of paragraph C above, a contractor may request that a determination be made regarding its eligibility to submit a bid on a contract under the terms of this resolution. However, this request for determination and any subsequent adjudication process must be completed prior to submitting a bid on any project and the request for determination (including all information required) must be received by Owner no

later than twenty-one (21) days before bids are due, unless otherwise stated in the Advertisement for Bid. The information required to be submitted by the Bidder for evaluation is stated in the County Safety Resolution and is available from the Owner's Office of Design and Construction Services. The determination of eligibility rendered by the Director of Design & Construction or his designee shall be final.

- E. No Contractor or Subcontractor contracting for any part of the contract work shall require any laborer, mechanic, or other person employed in the performance of the contract to work in surroundings or under working conditions which are hazardous or dangerous to his safety, as determined under construction safety standards promulgated by the U. S. Department of Labor or by the Virginia Department of Labor and Industry.
- F. No contractor awarded a School Board construction contract shall knowingly employ or contract with any person, company, or corporation for services pursuant to that contract if such person, company, or corporation could not have been awarded such contract due to the restrictions above.

By signing this Bid, the undersigned Bidder confirms that it has not received or been the subject of safety violations in the three (3) years prior to the date of this bid submission, and is in compliance with the requirements above.

The undersigned Bidder hereby acknowledges and agrees that the Owner has the right to reject any or all bids and to waive any informality in a bid. Except as expressly set forth in the Instructions to Bidders, this Bid, once submitted, may not be withdrawn for a period of 60 days from the date fixed for opening of the Bids.

Accompanying this Bid, at the election of the undersigned Bidder, is: (I) a certified check, (ii) a cash escrow, or (iii) a bid bond in an amount equal 5% of the total amount of the Principals's Bid.

Bidder's disclosure pursuant to Safety Resolution (as stated above):

Safety Violation(s): _____

List of public jurisdictions (states and District of Columbia) in which Bidder performed work in the 3 years prior to bid submission:

(Legal Name of Bidder)

By: _____
(Signature of Bidder's Authorized Representative)

Printed Name: _____
Title: _____

Date: _____

Bidder's Virginia Contractor's License Number: _____

Bidder's Virginia State Corporation Commission ID Number (SCC ID#): _____

Fairfax County Business/Professional/Occupation License Number (BPOL #): _____

State in which Bidder's Principal Office is Located: _____

END OF SECTION

SECTION 00301

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, _____ of _____ (hereinafter called the "Principal"), and _____, a corporation organized and existing under the laws of the State of _____, with its principal office in _____, and authorized to do business in the Commonwealth of Virginia as a surety (hereinafter called the "Surety"), are held and firmly bound unto FAIRFAX COUNTY SCHOOL BOARD (hereinafter called the "Obligee") in the full and just sum which is equal to 5% of the total amount of the Principal's Bid (as that term is defined below), as submitted to the Obligee (such total amount referred to herein as the "Total Bid"), in good and lawful money of the United States of America, to be paid upon demand of the Obligee, for the payment of such sum well and truly to be made, the Principal and the Surety bind themselves, their respective successors, and permitted assigns, jointly and severally and firmly by these presents. The Total Bid is the aggregate amount (including amounts set forth with respect to any and all Alternates) set forth on the Principal's Bid Form for performance of the work described below, as submitted to and maintained by the Obligee (such Bid Form referred to herein as the "Bid"). The Surety hereby acknowledges and agrees that the Bid shall be deemed to be incorporated by reference in this Bid Bond to the same extent as if set forth fully herein.

WHEREAS, the Principal intends to submit, or has submitted to the Obligee, a Bid for the Principal to perform work for the Obligee, designated as:

(hereinafter called the "Project") and,

WHEREAS, the Principal desires to provide this Bid Bond in lieu of a certified check or cash escrow otherwise required to accompany the Principal's Bid.

NOW THEREFORE, THE CONDITIONS OF THIS OBLIGATION ARE SUCH THAT, if the Bid be accepted by the Obligee, and if the Principal shall, within ten days after the date of receipt of a written Notice of Award from the Obligee or any agency or department thereof, (i) execute a Contract in accordance with the Bid and upon the terms, conditions and price set forth therein, in the form and manner required by the Obligee, (ii) execute a sufficient and satisfactory Performance Bond in the amount of 100% of the total Contract Sum and a sufficient and satisfactory Payment Bond in the amount of 100% of the total Contract Sum, each payable to the Obligee, on a form prescribed by Obligee and with a surety satisfactory to Obligee, and (iii) provide the Obligee with copies of all required insurance policies, then this obligation is to be void; otherwise this obligation shall be and remain in full force and in the event of the failure of any or all of the foregoing requirements to be satisfied within the time period specified above, the Principal and the Surety immediately shall pay to the Obligee, upon demand, the lesser of: (a) the amount hereof and (b) the difference between the Bid and the next low bid for the Project, in each case in good and lawful money of the United States of America, not as a penalty, but as liquidated damages.

Based upon the Surety's present knowledge and information, the Surety knows of no reason why it would not issue payment and performance bonds on behalf of the Principal for the above-

referenced Project. The foregoing statement shall not be construed as a commitment on the part of the Surety to issue either or both of such bonds on behalf of the Principal.

The obligations evidenced hereby shall constitute the joint and several obligations of the Principal, the Surety, and their respective successors and permitted assigns.

Unless the context requires otherwise, capitalized terms not otherwise defined in this Bond shall have the meanings assigned to them in the Contract Documents.

[SIGNATURES ON FOLLOWING PAGE]

IN WITNESS WHEREOF, we have hereunto set our signatures and seals this _____ day of _____ 20____, all pursuant to due authorization.

_____(SEAL)
Principal (Bidder)
By: _____
Name: _____
Title: _____
Address: _____

State of _____

County/City of _____

The foregoing bond was acknowledged before me this _____, 20____, by _____, whose title is _____, on behalf of _____, the Principal

Notary Public

Title or Rank _____
Serial Number, if any _____

_____(SEAL)
Surety
By: _____
Attorney-in-Fact (attach copy of Power of Attorney)
Name: _____
Title: _____
Address: _____

State of _____
County/City of: _____

The foregoing bond was acknowledged before me this _____, 20____, by _____ whose title is Attorney-in-Fact, on behalf of _____, Surety.

Notary Public

Title or Rank _____
Serial Number, if any _____

END OF SECTION

SECTION 00302

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS, that we, _____ of (hereinafter called the "Principal"), and _____, a corporation organized and existing under the laws of the State of _____, with its principal office in the City of _____ and authorized to transact business in the Commonwealth of Virginia as a surety (hereinafter called the "Surety"), are held and firmly bound unto the FAIRFAX COUNTY SCHOOL BOARD (hereinafter called the "Obligee") in the sum of _____ Dollars (\$_____) lawful money of the United States of America for the payment of which well and truly to be made, the Principal and the Surety bind themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally and firmly by these presents, to perform all Work in accordance with the requirements of the Contract Documents for the Project.

WHEREAS, the Principal has entered into a certain written agreement with the Obligee, dated as of the ____ day of _____, 20____, (hereinafter called the "Contract"), for _____, which Contract is by reference made a part hereof;

WHEREAS, the Principal is obligated to furnish security with respect to its obligation to perform the work to be performed under the Contract; and

WHEREAS, the Principal desires to furnish this Performance Bond in lieu of a certified check or cash escrow otherwise required to be provided to the Obligee.

NOW THEREFORE, THE CONDITIONS OF THE ABOVE OBLIGATIONS ARE SUCH THAT, if the Principal and its successors or assigns, or any of them shall:

Well and truly and in good, sufficient, and workmanlike manner perform or cause to be performed the Contract, and each and every of the covenants, promises, agreements, warranties, and provisions to be performed by the Principal set forth therein, in strict conformity with the plans and specifications, and complete the same within the time period specified therein, all as may be amended from time to time by the parties thereto, and fully indemnify and save harmless the Obligee from all costs and damages which it may suffer by reason of the Principal's failure to do so and fully reimburse and repay the Obligee all costs and expenses which it may incur in making good any such default, then these obligations shall be null and void, otherwise they shall remain in full force and effect.

PROVIDED, HOWEVER, that this bond is subject to the following conditions and limitations:

- (a) In no event shall the Surety, or its successors or assigns be liable hereunder for a greater sum than the amount of this bond.
- (b) No action on this bond shall be brought unless within one year after: (i) completion of the Contract, including the expiration of all warranties and

guarantees; or (ii) discovery of the defect or breach of warranty, if the action be for such, in all other cases.

The Surety, for value received, on behalf of itself and its successors and assigns, hereby stipulates and agrees that the obligations of the Surety and of its successors and assigns under this bond shall not in any manner be impaired or affected by: (a) any extension of time, modification, omission, addition or amendment of or to the Contract or the work to be performed thereunder; (b) any payment thereunder before the time required therein; (c) any waiver of any provision thereof; or (d) any assignment, subletting or other transfer of all or of any part thereof or of any work to be performed or of any moneys due or to become due thereunder; and the Surety, for itself and its successors and assigns, does hereby waive any right to receive notice of any and all of such extensions, modifications, omissions, additions, amendments, payments, waivers, assignments, subcontracts and transfers.

The Surety hereby stipulates and agrees that, in the event that the Obligee declares the Principal to be in default, the Surety will promptly, at the Obligee's election: (a) perform and complete the work to be performed under the Contract in accordance with the terms, conditions and covenants set forth therein with a duly licensed and qualified contractor designated by Obligee; (b) obtain bids from qualified contractors for completing the work to be performed under the Contract in accordance with the terms, conditions and covenants set forth therein and, upon determination by the Obligee and the Surety of the lowest responsible and responsible bidder, (i) arrange for a contract between such bidder and the Obligee and (ii) make funds available directly to the Obligee, or to such contractor(s) as the Obligee shall designate, to pay the costs of completion less the balance of the contract price as such may have been adjusted by change order (such amount, including other costs and damages for which the Surety may be liable hereunder, not to exceed the penal sum set forth in the first paragraph hereof); or (c) remedy the default. The Surety further stipulates and agrees that, within 45 days after its receipt of written notice from the Obligee specifying the Obligee's election of (a), (b) or (c) above, the Surety shall have resumed performance of the work or shall have caused the performance of the work to have been resumed, in accordance with the Obligee's election. In the event the Surety fails to resume the Work within such 45 day period, the Obligee may elect to perform or arrange for the performance of the Work at the sole cost and expense of the Surety in addition to any other rights and remedies available to Obligee. As employed herein, the phrases (i) "balance of the contract price" shall mean the total amount payable by the Obligee to the Principal under the Contract after all proper adjustments have been made, less the aggregate of all amounts paid by the Obligee to the Principal thereunder and (ii) "resume the Work" shall mean the commencement and diligent performance of actual work activities at the site, as demonstrated by discernable daily progress at the rate contemplated by the Contract. All payments to be made by the Surety hereunder shall be paid within thirty (30) days after the Surety's receipt of a request or demand therefor.

The Obligee's omission to call upon the Surety in any instance shall in no event release the Surety from any obligation hereunder.

All notices, requests, demands and other communications which are provided hereunder, shall be in writing and shall be deemed to have been duly given upon the hand delivery thereof during business hours, or upon the earlier of receipt or three (3) days after posting by registered mail or certified mail, return receipt requested, or on the next business day following delivery to

a reliable overnight delivery service, if to the Principal or the Obligee, to the addresses set forth in the Contract, and if to the Surety, to the address set forth beneath its signature.

The obligations evidenced hereby shall constitute the joint and several obligations of the Contractor, the Surety, and their respective heirs, executors, administrators, successors and assigns.

Unless the context requires otherwise, capitalized terms not otherwise defined in this Bond shall have the meanings assigned to them in the Contract Documents.

[SIGNATURES ON FOLLOWING PAGE]

IN WITNESS WHEREOF, we have hereunto set our signatures and seals this _____ day of _____ 20____, all pursuant to due authorization.

_____(SEAL)
Principal (Contractor)
By: _____
Name: _____
Title: _____
Address: _____

State of _____
County/City of _____

The foregoing bond was acknowledged before me this _____, 20____, by _____, whose title is _____, on behalf of _____, the Principal

Notary Public

Title or Rank _____
Serial Number, if any _____

_____(SEAL)
Surety
By: _____
Attorney-in-Fact (attach copy of Power of Attorney)
Name: _____
Title: _____
Address: _____

State of _____
County/City of: _____

The foregoing bond was acknowledged before me this _____, 20____, by _____ whose title is Attorney-in-Fact, on behalf of _____, Surety.

Notary Public

Title or Rank _____
Serial Number, if any _____

END OF SECTION

SECTION 00303

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS, that we, _____ of (hereinafter called the "Principal"), and _____, a corporation created and existing under the laws of the State of _____, and having its principal office in the City of _____ and authorized to transact business in the Commonwealth of Virginia as Surety (hereinafter called the "Surety") are held and firmly bound unto FAIRFAX COUNTY SCHOOL BOARD (hereinafter called the "Obligee" in the sum of Dollars (\$_____) lawful money of the United States of America, for the payment of which well and truly to be made, the said Principal binds itself and its successors and assigns, and the said Surety binds itself and its successors and assigns, all jointly and severally, firmly by these presents to pay for all labor performed and material furnished in accordance with the Contract Documents for the Project.

WHEREAS, the Principal has entered into a certain written agreement with the Obligee, dated as of the ____ day of _____, 20__ (hereinafter called the "Contract"), for _____, which Contract is by reference made a part hereof.

WHEREAS, the Principal is obligated to furnish security with respect to its obligation to pay for all labor performed and material furnished pursuant to the Contract; and

WHEREAS, the Principal desires to furnish this Payment Bond in lieu of a certified check or cash escrow otherwise required to be provided to the Obligee.

NOW, THEREFORE, THE CONDITIONS OF THE ABOVE OBLIGATIONS ARE SUCH THAT, if the Principal and its successors or assigns, or any or either of them shall:

Pay or cause to be paid the wages and compensation for labor performed and services rendered of all persons engaged in the prosecution of the work provided for therein, whether such persons be agents, servants or employees of the Principal, and of its successors or assigns, or of any subcontractor or any assignee thereof, including all persons so engaged who perform the work of laborers or of mechanics regardless of any contractual relationship between the Principal, or its assigns, or any subcontractor or any assignee thereof, and such laborers or mechanics, but not including office employees not regularly stationed at the site of the work, and further, shall pay or cause to be paid all lawful claims of subcontractors and of materialmen and other third persons arising out of or in connection with the Contract and the work, labor, services, supplies and materials furnished in and about the performance and completion thereof, then these obligations shall be null and void, otherwise they shall remain in full force and effect.

PROVIDED, however, that this bond is subject to the following conditions and limitations:

- a. All persons who have performed or rendered services, as aforesaid, all subcontractors, and all persons, firms, corporations, including materialmen and third persons, as aforesaid, furnishing work, labor, services, supplies and material under or in connection with the Contract or in or about the performance

and completion thereof, shall have a direct right of action (subject to the prior right of the Obligee under any claim which it may assert against the Principal and its successors, and assigns and/or the Surety and its successors and assigns) against the Principal and its successors, and assigns and/or the Surety and its successors and assigns on this bond, which right of action shall be asserted in proceedings instituted in the State in which such work, labor, services, supplies or material was performed, rendered or furnished, or where work, labor, services, supplies or material has been performed, rendered or furnished, as aforesaid, in more than one State, then in any such State. Insofar as permitted by the laws of such State, such right of action shall be asserted in a proceeding instituted in the name of the Obligee to the use and benefit of the person, firm or corporation instituting such action and of all other persons, firms and corporations having claims hereunder, and any other person, firm or corporation having a claim hereunder shall have the right to be made a party to such proceedings (but not later than one year after the performance of the Contract including the expiration of any warranty or guarantee) and to have such claim adjudicated in such action and judgment tendered thereof. Prior to the institution of such a proceeding by a person, firm or corporation in the name of the Obligee, as aforesaid, such person, firm or corporation shall furnish the Obligee with a bond of indemnity for costs, which bond shall be in a form and in an amount satisfactory to the Obligee.

- b. Neither the Surety nor its successors or assigns shall be liable hereunder for any damages or compensation recoverable under any worker's compensation or employer's liability statute.
- c. In no event shall the Surety, or its successors or assigns be liable hereunder for a greater sum than the amount of this bond, or subject to any suit, action or proceeding thereon that is instituted by any person, firm or corporation under the provisions of the above section(s), later than one year after such person last performed labor or last furnished or supplied materials.

And the Surety, for value received, for itself and its successors and assigns, hereby stipulates and agrees that the obligations of the Surety and of its successors and assigns, and this bond shall in no way be impaired or affected by any extension of time, modification, omission, addition or change in or to the Contract or the work to be performed thereunder, or by any payment thereunder before the time required therein, or by a waiver of any provision thereof, or by an assignment, subletting or other transfer thereof, or of any part thereof, or of any work to be performed or of any moneys due or to become due thereunder; and the Surety, for itself and its successors and assigns, does hereby waive notice of any and all of such extensions, modifications, omissions, additions, changes, payments, waivers, assignments, subcontracts and transfers, and hereby stipulates and agrees that any and all things done and omitted to be done by and in relation to executors, administrators, successors, assignees, subcontractors, and other transferees, shall have the same effect as to the Surety and its successors and assigns, as though done or omitted to be done by and in relation to the Principal.

The Principal, for itself and its successors and assigns, and the Surety, for itself and its successors and assigns, do hereby expressly waive any objection that might be interposed as to the right of the Obligee to require a bond containing the foregoing provisions, and they do

hereby further expressly waive any defense which they or either of them might interpose to an action brought hereon by any person, firm, or corporation, including subcontractors, materialmen and third persons, for work, labor services, supplies or material, performed, rendered or furnished as aforesaid, upon the ground that there is no law authorizing the Obligee to require the foregoing provisions to be placed in this bond.

Upon request by any person or entity appearing to be a potential beneficiary of this Bond, the Principal shall promptly furnish a copy of this Bond or shall permit a copy to be made on behalf of such potential beneficiary.

The obligations evidenced hereby shall constitute the joint and several obligations of the Contractor, the Surety, and their respective heirs, executors, administrators, successors and assigns.

Unless the context requires otherwise, capitalized terms not otherwise defined in this Bond shall have the meanings assigned to them in the Contract Documents.

[SIGNATURES ON FOLLOWING PAGE]

IN WITNESS WHEREOF, we have hereunto set our signatures and seals this _____ day of _____ 20____, all pursuant to due authorization.

_____(SEAL)
Principal (Contractor)
By: _____
Name: _____
Title: _____
Address: _____

State of _____
County/City of _____

The foregoing bond was acknowledged before me this _____, 20____, by _____, whose title is _____, on behalf of _____, the Principal

Notary Public

Title or Rank _____
Serial Number, if any _____

_____(SEAL)
Surety
By: _____
Attorney-in-Fact (attach copy of Power of Attorney)
Name: _____
Title: _____
Address: _____

State of _____
County/City of: _____

The foregoing bond was acknowledged before me this _____, 20____, by _____ whose title is Attorney-in-Fact, on behalf of _____, Surety.

Notary Public

Title or Rank _____
Serial Number, if any _____

END OF SECTION

SECTION 00700

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SECTION 00700

GENERAL CONDITIONS

PART 1 - DEFINITIONS

- 1.01 Architect. The duly licensed individual or entity who has been engaged by the Owner to observe performance of the Work and to consult with and advise the Owner during the construction process. As employed herein, the term "Architect" may refer to an individual, an organization or to the Architect's authorized representative.
- 1.02 Change Order. A written order to the Contractor signed by the Owner, the Architect, and the Contractor, which authorizes a change in the Work, an adjustment to the Contract Sum, and/or an adjustment to the Contract Period. The latest edition of AIA Standard Form G701 shall be utilized.
- 1.03 Construction Schedule. The schedule for completion of the Work. The Construction Schedule shall be developed utilizing a Critical Path method of scheduling, indicating time periods allotted for the performance of all constituent parts of the Work within the Contract Period.
- 1.04 Contract or Contract Documents. The terms "Contract" and "Contract Documents" shall be used interchangeably herein and shall consist of the following:
- A. The signed Agreement;
 - B. The General Conditions of the Contract, which appear herein;
 - C. The Drawings and Specifications;
 - D. The Supplementary Conditions;
 - E. Any Addenda issued prior to execution of the Agreement;
 - F. The Notice of Award issued by the Owner to the Contractor;
 - G. The Notice to Proceed issued by the Owner to the Contractor;
 - H. Any modifications which are issued subsequent to the execution of the Agreement and which may take the form of a Work Order, a Change Order, or written interpretations issued by the Architect;
 - I. The Contractor's Payment and Performance Bonds;
 - J. The Bidding Documents, which shall include the Contractor's completed Bid Proposal Form and the Instructions to Bidders; and
 - K. All provisions required by Law or Regulation to be incorporated herein, regardless of whether any such provision is referred to or set forth expressly in these Contract Documents.

- 1.05 Contract Period. The period of time allotted in the Contract Documents for completion of the Work, as such period may be adjusted from time to time in the manner prescribed herein.
- 1.06 Contract Sum. The total amount payable to the Contractor for performance of the Work. The Contract Sum is stated in the Contract Documents and shall be subject to adjustments in the manner specified herein.
- 1.07 Contractor. The corporation, limited liability company, partnership or other person or entity that contracts with the Owner to perform the Work. As employed herein, the term "Contractor" may refer to an individual, an organization, or to the Contractor's authorized representative.
- 1.08 Critical Path. The logical and necessary sequence through which all Work items must be completed within their respective timeframes or the completion date for the Project will change. A delay in the completion of any Work item that is on the Critical Path necessarily causes a corresponding delay to the Date of Substantial Completion.
- 1.09 Date of Final Completion. The date certified by the Architect as the date upon which the Work is completely finished, which event shall be achieved by the Contractor within the time period specified in Section 01010, Summary of Work.
- 1.10 Date of Substantial Completion. The date certified by the Architect as the date upon which the Work has been sufficiently completed to allow the Work to be utilized by the Owner for the purpose for which it was intended. Such event shall be achieved by the Contractor within the time period specified in Section 01010, Summary of Work.
- 1.11 Day. The term "day" shall mean "calendar day."
- 1.12 Defective. An item described herein as "defective" shall be deemed to be unsatisfactory, faulty, or deficient in that it does not conform to the requirements of the Contract Documents, or does not meet the requirements of any inspection, reference standard, test, or approval referred to in the Contract Documents, or has been damaged prior to the Date of Final Completion of the Work (unless responsibility for the protection thereof has been assumed by the Owner as of an earlier date).
- 1.13 Director, Office of Facilities Management. The official in charge of day to day construction matters for the Owner. The Director may designate a representative to act on his or her behalf.
- 1.14 Float. The period of time between the early start date and the late start date, or the early finish date and the late finish date of any of the activities set forth on the Construction Schedule. The Owner shall have and retain exclusive ownership of the Float.
- 1.15 Laws and/or Regulations. Any and all laws, rules, regulations, ordinances, codes, and/or orders of any and all governmental bodies, agencies, authorities, and/or courts, which are applicable to the Work (or any aspect thereof) and are in effect at any time or from time to time during the Contract Period.

- 1.16 Notice. Notice shall mean written notice. Written notice shall be deemed to have been duly served on the Contractor if delivered by U.S. Mail, hand delivery, or facsimile transmission to the Contractor's office at the Project or to the business address or fax number of the Contractor as stated in its Bid Form Proposal; or if delivered in person to the Contractor, to the Contractor's foreman or superintendent for the Project, or any officer or director of the Contractor. Unless otherwise specified herein, Notice shall be deemed to have been duly served on the Owner if delivered by U.S. Mail, hand delivery, or facsimile transmission (with a duplicate copy transmitted by another means of delivery authorized hereunder) to the Office of Facilities Management, Fairfax County Public Schools, Sideburn Support Center, 5025 Sideburn Road, Fairfax, Virginia 22032, fax number (703)-239-0462.
- 1.17 Notice to Proceed. A written notice from the Owner to the Contractor, which gives consent for commencement of the Work. Unless otherwise provided, Work shall commence on the date specified in the Notice to Proceed.
- 1.18 Overhead. All costs of administration, field office and home office costs (including extended costs), general superintendence, office engineering and estimating costs, other required insurance, materials used in temporary structures (not including form work), additional premiums on the Performance and Payment Bonds of the Contractor, the use of small tools, scheduling costs, cumulative impact costs and all other costs incidental to the performance of a change in the Work or to the cost of doing business. Small tools are defined as any tool with a replacement value less than \$1,000.
- 1.19 Owner. The School Board of Fairfax County, Virginia, its authorized representatives and employees.
- 1.20 Prevailing Wage Rate. The rate, amount, or level of wages, salaries, benefits and other remuneration prevailing for the corresponding classes of mechanics, laborers, or workers employed for the same work in the same trade or occupation in the locality in which the Project is located, as determined by the Commissioner of Labor and Industry.
- 1.21 Project. The entire improvement of which this Contract and the Work contemplated hereby forms a part. The Project may include construction and/or other activities that are to be performed by the Owner or by one or more Separate Contractors.
- 1.22 Separate Contractor. Any corporation, limited liability company, partnership or other person or entity that contracts with the Owner to perform one or more portions of the Project, other than the Work.
- 1.23 Shop Drawings. All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for the Contractor and are submitted by the Contractor to illustrate a portion of the Work. Shop Drawings are not Contract Documents.
- 1.24 Site. The area upon or in which the Contractor's operations are performed and such other areas adjacent thereto as may be designated as such by the Architect. The Site may

be shared by the Contractor with the Owner and with Separate Contractors and their subcontractors.

- 1.25 Subcontractor. Any corporation, limited liability company, partnership or other person or entity, other than an employee of the Contractor, who contracts with the Contractor to furnish or who actually furnishes labor, materials, services or equipment, or any combination thereof to the Contractor in connection with the Work.
- 1.26 Submittal Schedule. A schedule for submission to the Architect of all required shop drawings, equipment data, and the like, which reflects lead times of critical submittals and is coordinated with the Construction Schedule for timely progress.
- 1.27 Sub-Subcontractor. Any corporation, limited liability company, partnership or other person or entity, other than an employee of a Subcontractor, who contracts with a Subcontractor to furnish, or who actually furnishes labor, materials, service or equipment, or any combination thereof to a Subcontractor in connection with the Work.
- 1.28 Surety. Any entity that has executed as Surety the Contractor's performance and/or payment bonds securing performance of the Work contemplated by this Contract and/or providing for protection of claimants who have and fulfill contracts to supply labor or materials to the Contractor in connection with the Work.
- 1.29 Work. Everything explicitly or implicitly required to be furnished or performed under the Contract Documents. The Work may represent the whole, or a necessary and interdependent part of, the Project.

Number and Gender of Words. Whenever the Contract so admits or requires, all references to one number shall be deemed to extend to and include the other number, whether singular of plural, and the use of any gender shall be applicable to all genders.

PART 2 - EXECUTION AND INTENT OF THE CONTRACT

- 2.01 Execution of Contract Documents. Four (4) copies of the Contract Documents shall be signed by both the Owner and the Contractor.
- 2.02 Familiarity with Site. The Contractor's execution of the Agreement shall constitute a representation that the Contractor has visited the Site, become familiar with local conditions under which the Work is to be performed, and correlated personal observations with the requirements of the Contract Documents.
- 2.03 Order of Precedence. The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work, including without limitation, all labor, materials, equipment and furnishings required in connection therewith. The Contract Documents are complimentary, and what is required by one shall be as binding as if required by all. In the event of any conflict, error or ambiguity in or among the various Contract Documents, such documents shall be accorded the following order of precedence:

Change Orders
Notice to Proceed
Notice of Award
Addenda
Supplementary Conditions
General Conditions
Agreement
Instructions to Bidders
Drawings and Specifications
Payment and Performance Bonds
Bid Form

Except as otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:

- A. the provisions of any standard, specification, manual, or code of any technical society, organization or association (whether or not specifically incorporated by reference in the Contract Documents); or
 - B. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).
- 2.04 Division of Work. The subdivision of the Drawings and Specifications into divisions, sections and articles is for the purpose of ease of reference only and shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade. The Contractor shall be responsible for segregating the Work among the various trades, if necessary or desirable in its discretion.
- A. The Specifications shall serve to amplify the requirements of materials and methods. The mention in any section of the Specifications of any article or operation requires that the Contractor shall provide all such items indicated on, or reasonably inferred from, the Drawings, furnishing for such purpose all labor, materials and equipment required in connection therewith. Omission of any article or operation does not relieve the Contractor of the responsibility for completion of the Work intended by the Drawings and Specifications to be included in the Contract.
- 2.05 Contract Interpretations. The Owner or the Contractor may request contract interpretations in writing from the Architect. Such requests for interpretations must be submitted sufficiently in advance of the date upon which the interpretation is actually required by the Owner or the Contractor to allow the Architect to issue the interpretation so as not to delay the progress of the Work. Written interpretations so requested shall be issued by the Architect in a manner commensurate with the timely execution of the Work, shall be consistent with the intent of the Contract Documents, and shall be in accordance with established progress schedules.

2.06 Copies and Ownership of Drawings, Specifications and Other Documents.

- A. The Contractor will be furnished **[one (1)]** electronic set of Drawings, Specifications and other documents prepared by the Architect (the "Architect's Documents") free of charge. Additional sets may be purchased by the Contractor at the cost of reproduction.
- B. Neither the Contractor nor any Subcontractor or supplier or other person or organization performing or furnishing any of the Work:
 - 1. shall have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the Architect's seal; or
 - 2. shall reuse any of such Drawings, Specifications, other documents, or copies on extensions of the Project or any other project without written consent of the Owner and the Architect.

PART 3 - ARCHITECT

- 3.01 **Contract Administration.** The Architect shall provide administration of the Contract in accordance with the Contract Documents and the Agreement between the Owner and the Architect.
- 3.02 **Owner's Representative.** The Architect shall serve as the Owner's representative during construction, until final payment is due, and with the Owner's concurrence, from time to time during the Correction Period described in Paragraph 12.05(B). The Architect shall advise and cooperate with the Owner and shall act on the Owner's behalf in accordance with the Contract Documents. The Owner shall issue instructions to the Contractor or, at its option, elect to have the Architect issue instructions to the Contractor.
- 3.03 **Observation of Work.** The Architect shall have access to the Work and shall visit the Site periodically in order to determine the progress of the Work and to assess the quality of the completed Work. Based upon its on-site evaluations, the Architect will advise the Owner of the progress of the Work and will endeavor to guard the Owner against defects and deficiencies in the Work. The Architect shall not have control over or charge of and shall not be responsible for construction methods, techniques, procedures, sequences or safety measures employed in connection with the Work. The Architect shall not be responsible for the failure of the Contractor, Subcontractors, or Sub-subcontractors to perform the Work in accordance with the Contract Documents.
- 3.04 **Payment Certifications.** Based upon the Architect's observations and evaluations of the Contractor's Applications for Payment, the Architect shall review and certify the amounts due the Contractor. The Architect may, in its discretion, revise the applications for payment to show the actual value of Work completed in accordance with the Architect's observations of the Work. The Contractor agrees to be bound by the Architect's revisions to the applications for payment.

- 3.05 Interpretation of Contract Documents. The Architect shall interpret the Contract Documents in accordance with Paragraph 2.05, and shall serve as the impartial judge of the performance of the Work.
- 3.06 Rejection of Work. The Architect and/or the Owner shall have the authority to reject Work that is defective or that otherwise does not conform to the requirements of the Contract Documents. The Architect and/or the Owner shall have the authority to order special inspections or tests, regardless of whether or not the Work has been fabricated, installed or completed. No responsibility or duty of the Architect and/or the Owner to the Contractor, Subcontractors, or Sub-subcontractors shall be created by this authority or by good faith decisions rendered in the exercise of this authority.
- 3.07 Preparation of Change Orders; Review of Submittals. The Architect shall prepare Change Orders, shall perform inspections to determine the Dates of Substantial and Final Completion, shall review all required documents submitted by the Contractor, and shall issue Certificates of Substantial Completion and Final Payment in accordance with the provisions of Paragraphs 12.04 and 12.05.
- 3.08 No Contractual Relationship. No contractual relationship shall exist or be deemed to exist between the Architect and the Contractor.
- 3.09 Ownership of Drawings and Specifications. Original Drawings and Specifications are the property of the Architect. Notwithstanding such fact, however, the Project is the property of the Owner, and the Architect may not use the Drawings and Specifications for any purpose not relating to the Project without the Owner's consent. The Owner shall be furnished with such reproductions of Drawings and Specifications as the Owner may reasonably require. Upon completion of the Work or any earlier termination of the Agreement pursuant to Part 17, the Architect will revise the Drawings to reflect changes made during construction and the Architect will promptly furnish the Owner with one complete set of reproducible record prints. All such reproductions shall be the property of the Owner who may use them without the Architect's permission for other projects, for additions to this Project, and/or for completion of this Project by others.

PART 4 - THE OWNER

- 4.01 Owner Representative. The Owner shall provide one or more representatives to observe the Work; provided, however, that the presence of the Owner's representatives shall in no way constitute an approval of means, methods or materials which do not conform to the requirements of the Contract Documents.
- 4.02 Rejection of Work. The Owner shall have the right to reject Work in accordance with Paragraph 3.06.
- 4.03 Completion and Correction of Work. The Owner shall have the right to complete or correct the Work in accordance with Paragraphs 4.05 and 12.05(D).
- 4.04 Review of Payment Applications. The Owner shall have the right to review, revise, and approve the Architect's certifications concerning payment.

- 4.05 Right to Supplement Contractor's Work Force. In the event that the Contractor fails (in the opinion of the Owner) within 3 days following Notice from the Owner: (a) to correct defective Work; or (b) to supply labor, materials, or equipment that is necessary to complete the Work in strict accordance with the requirements of the Contract Documents, then the Owner shall have the right to (i) order the Contractor to stop the Work or a designated portion thereof; and/or (ii) supplement the Contractor's forces, in each case to the extent deemed necessary and advisable by the Owner and until such time as, in the opinion of the Owner, the cause of the order or action shall have been corrected. The Owner shall have the right to: (a) correct the deficiencies set forth in the Notice, either with its own forces or with a separate contractor engaged by the Owner to perform such corrections; (b) deduct the cost of correcting such deficiencies (including costs for additional services in connection therewith) from amounts then or thereafter due the Contractor under the Contract Documents; and (c) order the Contractor to re-start at a designated time all or any portion of the Work stopped by the Owner. If the amounts then or thereafter due the Contractor are insufficient to cover the cost of correcting the deficiencies, then the difference shall be payable by the Contractor to the Owner upon written demand. The Architect's determination of cost hereunder shall be final and binding upon the parties. The Owner's exercise of the right to correct deficiencies shall be in addition to, and shall in no way prejudice or limit, any other remedies available to the Owner. In the event that it is determined for any reason that grounds for stopping all or any portion of the Work did not exist, then, at the election of the Owner, the rights and obligations of the parties hereunder shall be the same as if the Notice directing the Contractor to stop the Work had been delivered under the provisions of Paragraph 17.06 hereof; provided, however, that the Contractor in such event shall be deemed to have received seven days prior written Notice of termination. Any compensation determined to be due the Contractor pursuant to Paragraph 17.06 shall be offset by the cost of correcting the Work. The Contractor shall in no event be entitled to receive anticipated profits or consequential damages of any kind in connection with any termination or action hereunder.
- 4.06 No Discrimination Against Faith-Based Organizations. The Owner does not discriminate against faith-based organizations on the basis of the organization's religious character, or impose conditions that (i) restrict the religious character of the faith-based organizations, except as provided by law, or (ii) impair, diminish or discourage the exercise of religious freedom by the recipients of such goods, services or disbursements.

PART 5 - CONTRACTOR

- 5.01 General Duties and Obligations.
- A. Contractor Responsibilities. The Contractor shall perform all the Work and, except as otherwise expressly provided herein, shall furnish, at its own cost and expense, all labor, materials, equipment, and other facilities as may be necessary and proper for performing and completing the Work. The Contractor shall be responsible for the entire Work until completed and finally accepted by the Owner.

- B. Quality Workmanship. Unless otherwise provided herein, the Work shall be performed in accordance with the best modern practice and with materials and workmanship of highest quality, all as determined by and entirely to the satisfaction of the Owner and the Architect.
- C. Supervision and Construction Procedures. The Contractor shall supervise and direct the Work and coordinate the Work with that of Separate Contractors, if any, using its best skill and attention. Unless otherwise expressly provided, the Contractor shall be solely responsible for and shall have control over construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract. Unless otherwise expressly provided, the means and methods of construction shall be such as the Contractor may choose; provided, however, that the Contractor shall employ adequate and safe procedures, methods, structures and equipment. Neither the Architect's approval nor its failure to exercise its right of approval shall relieve the Contractor of its obligation to accomplish the result intended by the Contract, nor shall the Architect's approval or failure to approve create a cause of action for damages. Notwithstanding the rights and remedies available to the Owner and the Architect hereunder, including without limitation, their respective rights to monitor the progress of the Work and to accept or retract acceptance of Subcontractors, the Contractor expressly acknowledges and agrees that it is in charge of and in control of the Work.
- D. Contractor's Review of Documents. The Contractor shall study and review the Contract Documents and shall compare them with each other and with any information made available by the Owner. If the Contractor finds a conflict, error, ambiguity or discrepancy in or among the Contract Documents, the Contractor shall immediately call it to the attention of the Owner and the Architect in writing before proceeding with the Work affected thereby. The Owner promptly shall resolve the matter in writing. Work performed by the Contractor after issuance of the Notice to Proceed and prior to written resolution thereof by the Owner shall be performed at the Contractor's sole risk.
- E. Contractor's Verification. The Contractor shall be responsible for verifying all dimensions, quantities and details set forth in the Contract Documents and shall notify the Owner and the Architect in writing of all errors, omissions, conflicts and discrepancies. The Contractor acknowledges and agrees that all equipment, materials, finishes, and other such listings are provided for the convenience of the Architect and the Contractor and are not guaranteed to be complete. The Contractor hereby assumes all responsibility for the making of estimates of the size, kind, quantity, and quality of materials, supplies and equipment included in Work.
- F. Differing Site Conditions. It is the intent of these Contract Documents that the Contractor shall bear full and complete responsibility for all surface and subsurface conditions, whether known or unknown, reasonably foreseeable or not, that shall be encountered during the performance of the Work. Notwithstanding any provision in the Contract Documents to the contrary, the

Contractor shall in no event be entitled to additional compensation, time or other relief from its obligations under the Contract Documents as a direct or indirect result of any surface or subsurface conditions encountered during performance of the Work. Consequently, the Contractor hereby waives any and all claims against the Owner and/or the Architect (and any of their members, officers, employees and authorized representatives) that the Contractor has, or may have in the future, arising out of or in connection with. (i) any surface and subsurface conditions encountered during performance of the Work; and (ii) any inaccurate or incomplete reports, data or other materials or information given to the Contractor by or on behalf of the Owner or the Architect that pertains to the surface or subsurface conditions at the Site of the Project. The Contractor covenants and agrees that it shall not make any claim for additional compensation from the Owner as a result of any such subsurface conditions.

- G. Notice to Owner and Architect. The Contractor shall submit to the Owner and the Architect in writing all items required to be brought to the Owner's and/or Architect's attention or to be submitted for approval. These items must be submitted sufficiently in advance of the date upon which the information or approval is actually required by the Contractor to allow the Owner and Architect to take appropriate actions so as not to delay the Work. The Contractor shall not have any right to an extension of time due to delays caused by its failure to submit any item in a timely fashion.

5.02 Character and Competency.

- A. Certain Representations, Warranties and Covenants. The Contractor represents that it is a duly organized and licensed entity which employs qualified and experienced personnel who specialize in performing the type of construction services required hereunder. The Contractor agrees to provide a sufficient number of personnel who are suitably qualified and experienced and who are in all respects acceptable to the Owner to perform the Work in an efficient and timely manner. The Contractor represents that it is capable in all respects (including the possession of sufficient financial resources to provide fully for the payment of employees) of performing the Work and agrees to provide construction services of high quality. The Contractor agrees to diligently and conscientiously devote its resources to the performance of the Work. The Owner, upon written Notice to the Contractor, and in the Owner's sole discretion, shall have the right to direct the Contractor to remove an employee permanently from the Site for any reason.
- B. Direct Contact Certification. The Contractor hereby certifies that. (i) neither the Contractor nor any employee of the Contractor who will have direct contact with students has been convicted of a felony or any offense involving the sexual molestation or physical or sexual abuse or rape of a child; and (ii) absent prior Notice to the Owner, neither the Contractor nor any employee of the Contractor who will have direct contact with students has been convicted of a crime of moral turpitude. The foregoing certification shall be binding upon the Contractor throughout the Contract Period and the Contractor hereby covenants and agrees

to provide the Owner with immediate Notice of any event or circumstance that renders such certification untrue. The Contractor will ensure that no worker shall perform Work in occupied areas during school hours unless prior written approval has been granted by the Owner and proper safety precautions have been exercised to isolate the area of the Work.

- C. Prohibited Activities; Removal from Site. Alcoholic beverages, illegal drugs, and weapons are prohibited on the Site and shall constitute grounds for immediate removal from the Site of the Project. The Contractor shall ensure that neither its employees nor those of any Subcontractor shall fraternize in any manner with any student of Fairfax County Public Schools at the Site of the Work. The Owner shall have the right to remove from the job Site any person whose presence the Owner deems detrimental to the best interests of the Fairfax County Public Schools. Any individual who is removed from the Site pursuant to this paragraph may not return to such Site or to that of any other project of Owner without the prior written permission of the Director of the Owner's Office of Facilities Management.
- D. Contractor's Use of Premises. See Section 01010, Summary of Work, for detailed requirements regarding Contractor's use of premises.

5.03 Permits, Fees and Notices.

- A. Compliance with Laws and Regulations; Required Permits. The Contractor shall comply with all Laws and Regulations and shall obtain, at its expense, all permits, licenses and other authorizations necessary for the prosecution of the Work, except that the Owner shall obtain, at its expense, the General Building Permit and/or any easement agreement necessary and indispensable to the completion of the Project.
- B. Conflict with Laws and Regulations. The Contractor shall be responsible for giving all Notices and complying with all Laws and Regulations. In the event that the Contractor determines that the Contract Documents, or any of them, do not conform in any respect with any Law or Regulation, he shall promptly inform the Architect of such fact in writing. Any required change shall be adjusted by Work Order and incorporated into a subsequent Change Order. If the Contractor performs any Work knowing it to be in conflict with any Law or Regulation without prior notification to the Architect and Owner, the Contractor shall accept all responsibility and bear all costs relating thereto.
- C. VDOT Permits. When applicable, the Contractor shall be responsible for acquiring any Virginia Department of Transportation ("VDOT") permits required for the Project. The Contractor shall be responsible for all application fees, bonding costs and inspection fees associated with such permits. When applicable, the Owner shall pay the Civil Engineer of Record for any costs incurred for additional engineering services required by VDOT in order to obtain these permits.

- 5.04 Responsibility for Those Performing the Work. The Contractor shall be responsible and accountable to the Owner for the acts and omissions of its employees in connection with the performance of the Work and for any Subcontractors or other persons or entities performing any of the Work under a contract with the Contractor or a contract with a Subcontractor.
- 5.05 Drawings and Specifications at the Site. The Contractor shall maintain one copy of all Drawings, Specifications, Addenda, approved Shop Drawings, Change Orders and other Modifications at the Site of the Project. All of the documents are to be kept in good order and marked to record all changes made during construction. The documents shall be made available to the Owner and Architect during performance of the Work. Upon completion of the Work, the Drawings, together with all changes and revisions made during construction of the Project, shall be delivered to the Architect.
- 5.06 Construction Schedule.
- A. Preparation of Construction Schedule. The Contractor, promptly after receipt of the Notice of Award, shall prepare and submit to the Owner and the Architect, for their review and approval, the Construction Schedule. The Construction Schedule, as approved, shall. (i) provide for the expeditious and diligent performance of the Work within the Contract Period; and (ii) be revised as necessary, in the opinion of the Owner, to accommodate and to reflect the progress of the Project as a whole.
 - B. Submittal Schedule. The Contractor shall prepare and keep current, for the Architect's approval, a schedule of submittals (the "Submittal Schedule") which is coordinated with the Construction Schedule and allows the Architect reasonable time to review all submittals.
 - C. Compliance with Schedules. The Contractor shall conform at all times to the most recent Construction Schedule and Submittal Schedule.
 - D. Additional Scheduling Requirements. Additional scheduling requirements are contained in Section 01310 of the General Requirements.
 - E. No Reliance on Silence of Owner or Architect. The Owner's or Architect's silence as to a submitted Construction Schedule that fails to meet or satisfy, in any respect, any milestone dates or other time limitations set forth in the Contract Documents shall not relieve the Contractor of its obligation to meet those time limits, nor shall it render the Owner or Architect liable to any Separate Contractor who suffers damages, increased costs or delays as a result thereof. Similarly, the Owner's or Architect's silence with regard to a Construction Schedule submitted by the Contractor that shows performance in advance of such time limits or milestones shall not create any rights in favor of the Contractor, a Separate Contractor or any other person or entity for performance in advance of such time limits or milestones.
- 5.07 Shop Drawings.

- A. Submission of Shop Drawings. The Contractor shall prepare and submit to the Architect Shop Drawings and similar submittals required by the Contract Documents with reasonable promptness and in accordance with the Submittal Schedule so as not to cause a delay in the Work or in the activities of the Owner or of Separate Contractors. Submittals presented by the Contractor that are not required by the Contract Documents may be returned without action.
 - B. Review Process. The Contractor shall not perform any portion of the Work requiring submittal and review of Shop Drawings or similar submittals until the respective submittal has been approved by the Architect. Such Work shall be performed in strict accordance with the approved submittals.
 - C. Verification and Coordination. By approving and submitting Shop Drawings and similar submittals, the Contractor represents that the Contractor has determined and verified materials, field measurements and field construction criteria related thereto and has checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.
 - D. Deviation from Contract Documents. The Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect's approval of Shop Drawings or similar submittals unless the Contractor has specifically informed the Architect in writing of such deviation at the time of submittal and the Architect has given written approval to the specific deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings or similar submittals by the Architect's approval thereof.
 - E. Attention to Revisions. The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings or similar submittals, to revisions other than those requested by the Architect on previous submittals.
 - F. Informational Submittals. Informational submittals upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents.
 - G. Additional Shop Drawing Requirements. Additional requirements are contained in Section 01340 of the General Requirements.
- 5.08 Inspections of Work in Place. The Contractor shall be responsible for inspection of portions of Work already performed hereunder to determine that such portions are in proper condition to receive subsequent Work.
- 5.09 Required Tests and Inspections. The Contractor shall give the Owner and the Architect sufficient prior Notice of the date and time of required tests and inspections. Unless otherwise provided in the Contract Documents, the Contractor shall be responsible for all costs associated with such tests or inspections.

5.10 Use of Site. The Contractor shall confine the Work to areas permitted by the Contract Documents and any applicable laws, ordinances or permits and shall not unreasonably encumber the Project with any materials or equipment.

5.11 Indemnification.

A. The Contractor hereby assumes all liability for and agrees to indemnify and hold harmless the Owner and the Architect and its or their respective Members, officers, authorized representatives and employees (each of whom shall be referred to herein as an "Indemnified Party") from and against any and all claims, losses, costs, damages, penalties, liabilities and fees (including reasonable attorneys' fees) and expenses resulting from: (i) any material breach of the representations, warranties, covenants and agreements of the Contractor contained in the Contract Documents; (ii) any injuries to persons or property caused by the negligence or other wrongful conduct of the Contractor, any Subcontractor, or any of its or their respective employees or authorized representatives; (iii) any claims filed by the Contractor (or by a Subcontractor, if permitted by law) that are adjudicated in favor of the Owner; or (iv) any other claim arising in any other manner out of or in connection with the performance of this Contract by or on behalf of the Contractor.

Notwithstanding the foregoing, the Contractor will in no event be obligated hereunder to indemnify or hold harmless any Indemnified Party against liability for damage arising out of bodily injury to persons or damage to property suffered in the course of the Work, caused by or resulting solely from the negligence of such Indemnified Party.

B. In the event that a claim is brought against an Indemnified Party by. (a) the Contractor or an employee of the Contractor; (b) any Subcontractor or supplier or any employee thereof; (c) any person or entity engaged by or through the Contractor or any Subcontractor or supplier to furnish or perform any portion of the Work; or (d) any person or entity for whom the Contractor or any Subcontractor or supplier may be vicariously liable, then the indemnification obligations set forth in Section 5.11(A) shall not be limited in any respect by any limitation on the type or amount of damages, compensation, benefits or other remuneration payable by or for the Contractor or any Subcontractor, supplier or other such person or entity under any laws, rules, regulations or plans of any nature governing workers' compensation, disability benefits or other employee benefits.

C. Claims on Behalf of Subcontractors. No claim of any nature shall be made against an Indemnified Party by or on behalf of a Subcontractor unless the Contractor first shall have. (i) evaluated such claim thoroughly and determined it to be meritorious; (ii) issued a written Notice to the Subcontractor finding the Subcontractor's claim to be meritorious and setting forth any additional compensation or additional days to be paid or granted to the Subcontractor on account of such claim; and (iii) paid the Subcontractor in full for such claim. In presenting such a claim, the Contractor shall provide the Owner and the Architect

with a copy of the written Notice to the Subcontractor and with evidence of payment in full of the Subcontractor's claim. No such claim shall exceed the amount actually paid to the Subcontractor by the Contractor.

The Contractor covenants and agrees not to bring a claim against an Indemnified Party for indemnity based upon a Subcontractor's claim except as specifically permitted in this subsection.

- D. Liability Unaffected. Nothing contained herein shall in any manner create any liability against the Owner on account of any claim for labor, services, or materials, or of Subcontractors, and nothing herein contained shall affect the liability of the Contractor or its Sureties to the Owner or to any workmen or materialmen upon bonds given in connection with this Contract. The Contractor hereby acknowledges and agrees that, as between the Owner and the Contractor, the Contractor shall bear full and complete responsibility for the performance of its Subcontractors, manufacturers and suppliers, regardless of whether any such Subcontractor, manufacturer or supplier was designated as "preapproved" by the Owner.
- 5.12 Conflict of Interest. The provisions of the State and Local Government Conflict of Interests Act (Va. Code Ann. " 2.2-3100, *et seq.*) and Article IV of the Virginia Public Procurement Act entitled "Ethics in Public Contracting" (Va. Code Ann. " 2.2-4367, *et seq.*) as the same may be amended from time to time, are incorporated herein by reference. The Contractor shall incorporate the foregoing conflict of interests clause in each subcontract entered into in connection with the Work.
- 5.13 Non-discrimination. The Contractor hereby covenants and agrees as follows:
- A. The Contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex or national origin, except where religion, sex or national origin is a bona fide occupational qualification reasonably necessary to the normal operation of the Contractor. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.
- B. The Contractor, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, will state that such contractor is an equal opportunity employer.
- C. Notices, advertisements and solicitations placed in accordance with federal laws, rules or regulations shall be deemed sufficient for the purpose of satisfying the requirements of this Paragraph 5.13.

The Contractor will include the provisions of the foregoing Paragraph 5.13 (A), (B) and (C) in every subcontract or purchase order of over \$10,000, in order that the provisions contained herein will be binding upon each Subcontractor or vendor in connection with the Work.

- 5.14 Subcontractor Bonds. The Contractor hereby covenants and agrees to require such bonds of any subcontractors as may be specified in the Instructions to Bidders.
- 5.15 Safety and Health Program. The Contractor shall establish and maintain a program to protect the safety and health of all persons (employees, visitors, public) at the Site. Such program shall designate a qualified individual as responsible for implementation of the program, and establish procedures for coordinating safety and health activities with Separate Contractors at the Site. The program shall comply with all Laws and Regulations, including but not limited to the Virginia Occupational and Health Standards for the Construction Industry, 29 CFR Part 1926.20 and 1926.21, and the American National Standards Institute, A10.38-2000 and A10.33-1998 (R2004).
- 5.16 Prevailing Wage Requirements: The Contractor covenants and agrees that the remuneration to any individual performing services as a mechanic, laborer, or worker for the Work will be paid at a rate not less than the Prevailing Wage Rate. The Contractor further covenants and agrees to comply, and cause each Subcontractor to comply, with the following requirements applicable to the Work performed under this Contract:
- A. Upon award of the Contract, the Contractor will certify, under oath, to the Commissioner of Labor and Industry, the pay scale for each craft or trade to be employed on, or to provide labor for, the Project or the Work by the Contractor and any Subcontractors. The Contractor's certification will, for each such craft or trade, specify the total hourly amount to be paid to employees, including wages and applicable fringe benefits, provide an itemization of the amount paid in wages and each applicable benefit, and list the names and addresses of any third-party fund, plan or program to which benefit payments will be made on behalf of employees. Within five (5) days after submitting its certification to the Commissioner of Labor and Industry, the Contractor will provide a copy of the certification to the Owner.
 - B. The Contractor and each Subcontractor will keep, maintain, and preserve: (i) records relating to the wages paid to, and hours worked by, each individual performing the work of any mechanic, laborer, or worker; and (ii) a schedule of the occupation or work classification at which each individual performing the work of any mechanic, laborer, or worker on the Project is employed during each workday and week. The Contractor and each Subcontractor will: (a) preserve such records for a minimum of six (6) years from contract expiration or termination; (b) make such records available to the Department of Labor and Industry or the Owner within 10 days of a request; and (c) certify that such records reflect the actual hours worked and the amount paid to its workers for the time period covered by the request.
 - C. The Contractor and each Subcontractor will post the Prevailing Wage Rates for each craft or trade involved in the Project and the Work, including the effective date of any changes thereto, in a prominent and easily accessible place at the Site or at any such places as are used by the Contractor or Subcontractors to pay wages to their workers. Such posting must be made in English and in such other languages as may be specified by the Owner in order to provide meaningful

access to the information in the posting to workers with limited English proficiency. Within ten (10) days of such posting, the Contractor and each Subcontractor shall certify to the Commissioner of Labor and Industry its compliance with the posting obligation set forth herein.

- D. The Contractor and each Subcontractor will comply with all requirements and obligations applicable to contractors and/or subcontractors pursuant to Section 2-3-2 of the Prevailing Wage Ordinance adopted by the Fairfax County Board of Supervisors on January 25, 2022, as the same may be amended from time to time. The Prevailing Wage Ordinance may be viewed at https://library.municode.com/va/fairfax_county/ordinances/code_of_ordinances?nodelid=1149114

5.17 Drug-Free Workplace Requirement. During the performance of the Work, the Contractor agrees to. (i) provide a drug-free workplace for the Contractor's employees; (ii) post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in the Contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition; (iii) state in all solicitations or advertisements for employees placed by or on behalf of the Contractor that the Contractor maintains a drug-free workplace; and (iv) include the provisions of the foregoing clauses in every subcontract or purchase order of over \$10,000, so that the provisions will be binding upon each subcontractor or vendor. For purposes hereof, a "drug-free workplace" shall mean the Site.

PART 6 - SUBCONTRACTORS

6.01 Absence of Contractual Relationship. Nothing contained in the Contract Documents shall operate to, or otherwise have the effect of, creating a contractual relationship between the Owner or the Architect, on the one hand, and any Subcontractor or Sub-subcontractor on the other.

6.02 Award of Subcontracts and Other Contracts for Portions of the Work.

- A. List of Subcontractors. Unless otherwise specified in the Contract Documents, within ten (10) days after receipt of the Notice of Award of the Contract, the Contractor must submit a written statement to the Architect and the Owner setting forth the name, address, and telephone number of each proposed Subcontractor and Sub-subcontractor and the portion of the Work and/or materials which each such Subcontractor or Sub-subcontractor is proposed to perform or provide, as the case may be. The Contractor also must furnish any other information (including but not limited to an OSHA Form 300) to establish to the satisfaction of the Owner and the Architect that the proposed Subcontractor has the necessary facilities, skill, integrity, safety records, past experience and financial resources to perform the Work in strict accordance with the terms and

conditions of the Contract Documents. The Architect shall advise the Owner of its opinion with regard to each proposed Subcontractor and Sub-subcontractor.

- B. Review by Owner. If the Owner finds, in its sole and absolute discretion, that a proposed Subcontractor or Sub-subcontractor is not qualified, then the Contractor will be notified promptly of such decision in writing. If no such Notice is provided within 20 days after the Contractor's submission of a written statement, then the Owner shall be deemed to have accepted the Subcontractor. If it is determined a Subcontractor or Sub-Subcontractor is not qualified, then the Contractor must utilize another Subcontractor or Sub-Subcontractor at no additional cost to the Owner. The Owner may retract its acceptance of any Subcontractor in the event such Subcontractor evidences an unwillingness or inability to perform its portion of the Work in strict accordance with the requirements of the Contract Documents. Notice of such retraction will be given in writing to the Contractor. Upon receipt of notification of such rejection or retraction, the Contractor shall submit a new Subcontractor for the Owner's review. Any increase or decrease in the Contract Sum resulting from the required substitution shall be adjusted by appropriate Change Order; provided, however, that. (i) no increase in the Contract Sum will be allowed for substitutions unless the Contractor has submitted a list of proposed Subcontractors in accordance with the provisions hereof; and (ii) no such increase shall exceed the amount set forth with respect to such Work, plus 10%.
 - C. Rejection of Subcontractor. The Contractor shall not enter into a contract for performance of any portion of the Work with any Subcontractor who has been rejected by the Owner and/or the Architect.
 - D. Subcontracts. Upon request, the Contractor promptly shall file with the Owner a complete copy of any one or more of its subcontracts. The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the Work to bind Subcontractors to the Contractor in accordance with the terms of these Contract Documents insofar as applicable to the Work of Subcontractors, and to give the Contractor the same power to terminate any subcontract that the Owner may exercise to terminate the Contractor under the provisions of these Contract Documents.
 - E. Responsibility for Subcontractors. The Owner's review or acceptance of Subcontractors as described herein shall not relieve the Contractor of any of its responsibilities, obligations and liabilities hereunder. The Contractor shall be solely responsible to the Owner for the acts, defaults, or omissions of its Subcontractors and of its Subcontractors' officers, authorized representatives and employees.
- 6.03 Subcontractor and Sub-subcontractor Agreements. Work performed by Subcontractors and Sub-subcontractors shall be set forth in a signed, written agreement between the parties. Each such agreement shall:

- A. be consistent in all respects with these Contract Documents and shall neither. (i) contain a provision which negates, conflicts with or otherwise compromises the requirements of the Contract Documents; or (ii) contain a provision which limits or otherwise adversely affects the rights of the Owner and the Architect as such rights are defined in the Contract Documents;
- B. require timely processing of applications for payment and of claims for additional costs, damages, or time, in order that the Contractor may in turn promptly process such applications or claims in conformance with the Contract Documents;
- C. waive the rights of either party against the other in regard to claims for fire or other peril covered by the property insurance described in Paragraph 14.02. Such waiver shall not exclude either party from rightful access to the proceeds of such insurance; and
- D. make specific reference to this Paragraph 6.03 of the General Conditions as a mutually binding provision.

6.04 Payments to Subcontractors.

- A. The Contractor will be liable for the entire amount owed to any Subcontractor with which it contracts, provided that the Contractor will not be liable for amounts otherwise reducible due to the Subcontractor's noncompliance with the terms of its contract. However, in the event that the Contractor withholds all or a part of the amount promised to the Subcontractor under the Contract, the Contractor must notify the Subcontractor, in writing, of its intention to withhold all or a part of the Subcontractor's payment with the reason for nonpayment. Payment by the Owner to the Contractor will not be a condition precedent to payment to any lower-tier Subcontractor. Any provision in the Contract Documents contrary to this paragraph will be unenforceable.
- B. Within seven (7) days after receipt of payment from the Owner, the Contractor shall:
 - 1. Pay each Subcontractor for the proportionate share of the total payment received by the Contractor attributable to Work performed by such Subcontractor; or
 - 2. Notify the Owner and the Subcontractor in writing of the intention to withhold all or part of the amounts due a Subcontractor pursuant to Paragraph 6.04(B)(1) above, and state the reason in reasonable detail for such withholding.
- C. In the event the Contractor fails to submit a timely Application for Payment, and that failure is due exclusively to the actions of the Contractor, the Subcontractor shall have the right to be paid by the Contractor upon demand the amounts due as described in Paragraph 6.04(B)(1).

- D. The Contractor shall pay interest on amounts owed to the Subcontractor which remain unpaid seven (7) days after the Contractor's receipt of payment from the Owner; provided, however, that amounts owed the Subcontractor which have been withheld properly pursuant to Paragraph 6.04(B)(2) shall not accrue interest. Interest on amounts due the Subcontractor and unpaid shall accrue at the rate of .5 percent per month; provided, however, that the Contractor's obligation to pay interest hereunder shall in no event be construed to be or otherwise become an obligation of the Owner. Claims for reimbursement by the Owner for interest charges owed by the Contractor to any Subcontractor shall not be allowed.
- E. Insurance proceeds received by the Contractor under the insurance policies described in Part 14 shall be equitably distributed to the affected Subcontractors in accordance with their respective interests in the underlying claim.
- F. Information concerning percentages of completion of Work performed by a Subcontractor as shown in Application for Payment may be made available to that Subcontractor upon mutual agreement with the Architect and the Owner.
- G. The Contractor shall include in each subcontract a requirement that each Subcontractor shall be bound by and subject to the provisions of Paragraph 6.04(B) through 6.04(E) above in regard to payments made by such Subcontractor to its Sub-subcontractors.

PART 7 - SEPARATE CONTRACTS

- 7.01 **Owner's Right to Award Separate Contracts.** The Owner reserves the right to award one or more separate contracts in connection with other portions of the Project or other construction or operations at the Site. The Contractor hereby acknowledges that for all or some of the Contract Period such Separate Contractors may be present at the Site. The Contractor hereby assumes the risk of delays and disruptions caused by the presence of Separate Contractors at the Site and hereby covenants and agrees that it shall not make a claim against the Owner for additional compensation as a result of the activities of such Separate Contractors, unless such activities give rise to an "unreasonable delay" as set forth in Part 11 hereof.
- 7.02 **Covenant to Coordinate and Cooperate.** As part of the Work and at no additional cost to the Owner, the Contractor covenants and agrees at all times during its performance of the Work to coordinate such performance with the activities and operations of any Separate Contractors. The Contractor shall use its good faith best efforts to cooperate, coordinate and consult with the Owner and all Separate Contractors in the performance of the Work. The Contractor shall connect and coordinate the Contractor's construction and related operations with the construction and related operations of any Separate Contractors to the extent necessary to achieve the timely and satisfactory completion of the Work and in such a manner as to avoid delaying, interfering with, or otherwise placing undue burden upon the activities of any Separate Contractor. The Contractor shall afford the Owner and each Separate Contractor reasonable opportunity for

introduction and storage of their materials and equipment and reasonable access to the Site for performance of their respective activities.

- 7.03 No Interference with Separate Contractors. The Contractor shall not take any action, or omit to take any action, that will delay, interfere with, or otherwise unduly burden the activities of a Separate Contractor or that will obstruct reasonable access by any Separate Contractor to the site of such Separate Contractor's activities and operations.
- 7.04 Scheduling with Separate Contractors. Upon request by the Owner, the Contractor shall meet with the Owner and any Separate Contractors at times designated by the Owner in order to review the Construction Schedule and the schedules of the Separate Contractors and to coordinate and conform those schedules. The Contractor promptly shall make any revisions to the Construction Schedule that are required, in the Owner's sole discretion, to serve the interests of the Project as a whole. The Construction Schedule, as revised, shall then constitute the schedule to be used by the Contractor until subsequently revised.
- 7.05 Report of Discrepancies. Whenever the Contractor's Work depends for proper execution or results upon construction or operations by a Separate Contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly report to the Architect in writing any apparent discrepancies or defects in such construction or operations performed by a Separate Contractor that would render it unsuitable for such proper execution and results. Failure of the Contractor to report such apparent discrepancies and/or defects shall constitute an acknowledgment that the Separate Contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work, except as to defects not then reasonably discoverable.

PART 8 - MISCELLANEOUS PROVISIONS

- 8.01 Governing Law. The Contract Documents shall be governed by and construed in accordance with the laws of the Commonwealth of Virginia, without reference to conflict of laws principles.
- 8.02 Successors, Assigns and Legal Representatives. Except as provided in Part 6 hereof with respect to Subcontractors, this Agreement shall not be assigned, sublet or transferred, in whole or in part, by operation of law or otherwise, by either of the parties hereto except with the prior written consent of the other. Unless specifically stated to the contrary in any written consent to an assignment, no assignment shall operate to release or discharge the assignor from any duty or responsibility under this Agreement. The Owner's consent to a particular subcontract or assignment shall in no event constitute a waiver of the Owner's right to consent to any further or additional subcontracts or assignments.
- 8.03 Entire Agreement. The Contract Documents constitute the entire agreement among the parties pertaining to the Work and supersedes all prior and contemporaneous agreements and understandings of the parties in connection therewith. The Contract Documents may not be modified or amended orally or by course of conduct. Any

modification or amendment shall be set forth in a written Change Order executed by the Owner and the Contractor.

8.04 Royalties and Patents. The Contract Sum includes all royalties and costs arising from patents, trademarks, and copyrights in any way involved in the Work. Whenever the Contractor is required or desires to use any design, device, material or process covered by letters of patent or copyright, the Contractor shall indemnify and save harmless the Owner and Architect, their officers, agents and employees from any and all claims for infringement by reason of the use of any such patented design, device, tool, material, equipment, or process to be performed under the Contract, and shall indemnify the Owner and the Architect, their officers, agents, authorized representatives, and employees for any costs, expenses and damages which may be incurred by reason of any such infringement at any time during the prosecution and after the completion of the Work. Notwithstanding the foregoing, the Contractor shall not be liable hereunder to the extent that any infringement arises by virtue of a design or implementation supplied to the Contractor by the Owner or the Architect.

8.05 Contractual Claims.

- A. If the Contractor wishes to make a contractual claim, whether for extra compensation, damages or any other relief, he shall provide Notice to the Owner and to the Architect in accordance with the provisions of Paragraph 8.09 hereof. The Contractor's failure to comply strictly with the requirements of Paragraph 8.09 shall result in waiver of the claim
- B. Resolution of any outstanding claims, counterclaims, disputes and other matters in question arising out of or relating to the Contract Documents to the extent not resolved by the parties hereto, shall be decided by a court of competent jurisdiction in the Commonwealth of Virginia; provided, however, that nothing contained herein shall be construed to invalidate the finality of the Owner's decisions. The Owner and the Contractor hereby waive any right they may have to a jury trial in connection with the resolution of any such claim, counterclaim, dispute or other matter arising out of or in connection with the Contract Documents. In any such court proceeding, the Owner shall have the right to bifurcate or otherwise reserve the court's determination regarding issues of: (i) the Owner's entitlement to recovery from the Contractor of the Owner's attorney's fees and costs; and (ii) the quantum of any such recovery, until after a decision or other disposition by the court in the underlying matter.

8.06 Tests and Inspections.

- A. The Contractor shall give the Owner and Architect sufficient prior Notice of the date and time of required tests or inspections. The Contractor shall be responsible for all costs associated with such tests or inspections, unless otherwise specifically excluded from the scope of Work defined in the Contract Documents.

- B. If, during the course of the Work, the Architect or Owner decides it is reasonable and necessary to perform supplemental inspections or testing not required by law or Contract Documents, then the Contractor will be instructed in writing to arrange for such testing. It shall be the responsibility of the Contractor to give timely Notice of such inspections or testing to the Owner and Architect. If the supplemental testing or inspections reveal defective or non-complying Work, then the Contractor shall be responsible for all costs associated with the performance of the tests or inspections, any additional costs required to rectify the defective or non-complying Work, and any costs for additional architectural services related thereto. If the Work is found to be in compliance with the requirements of the Contract Documents, then the Contractor shall be entitled to an equitable adjustment in for the reasonable associated costs of the testing or inspections.
- C. The Contractor shall be responsible for securing all certificates or records of additional tests or inspections, and distributing them to the Owner and Architect in a timely manner.
- D. Performance of required or supplemental inspections and testing by persons or organizations other than the Contractor, Subcontractors, or Sub-subcontractors, shall not compromise performance of the Work in compliance with the Contract Documents.

8.07 Conflict with Provisions of Laws or Regulations.

- A. In the event that there is a conflict between a provision of these Contract Documents and that of any Law or Regulation, such conflicting Law or Regulation shall control.
- B. All legal provisions required by law to be included in the Contract Documents shall be deemed to be a part hereof, whether actually set forth or not herein.

8.08 No Claims Against Individuals. No claim whatsoever shall be made by the Contractor against any officer, Member, authorized representative or employee of the Owner or the Architect for, or on account of, anything done or omitted to be done in connection with this Contract, and the Contractor shall be strictly liable for all costs, attorneys fees and expenses incurred by any individual or entity who is sued in violation of this Paragraph.

8.09 Disputes.

- A. Notice of Claim. If the Contractor wishes to dispute that any Work required, necessitated, or ordered by the Architect or the Owner, or otherwise to claim any action required or ordered by the Architect or the Owner to be taken or not taken violates the terms and provisions of this Contract, then he shall proceed with such Work and/or comply with such requirement or order without delay and shall, within five days after the earlier of (a) commencing such Work or (b) receiving Notice of such requirement or order, notify the Owner and the Architect, in writing, of his claim with respect thereto and request a final determination thereof. In order to invoke the procedures of this Paragraph, the Contractor's request

must. (i) refer specifically to this Paragraph by number; (ii) in the case of the Owner, be hand-delivered both to the office of the Director, Office of Facilities Management and to the Project Manager at the Site; (iii) contain a full explanation of the basis of the Contractor's position, and the rationale for Contractor's request, including actual photocopies of all materials or documents (other than Contract Documents) referred to in the Contractor's request; (iv) detail the quantum of any relief requested by the Contractor and provide verified substantiation of all such amounts; (v) describe in detail any other relief requested; (vi) describe in detail all efforts the Contractor has made to mitigate any alleged loss or otherwise avoid the claim; and (vii) be signed by an officer of Contractor under oath. No request for a Change Order, request for change proposal, or other requested modification shall be sufficient, on its own or collectively to satisfy or to defer the commencement of the Notice requirements set forth herein.

- B. Claim Review Process. The Owner shall issue a written determination with regard to any such claim on or before the date that is 14 days after the date of its receipt of the Contractor's written request; provided, however, that in the event that the Owner determines, based upon the size or complexity of the claim at issue, that additional time is required for the issuance of a response, the Owner shall issue written Notice of such finding to the Contractor within 14 days following the date of its receipt of the Contractor's written request and shall issue a written determination with regard to such claim on or before the date that is 60 days after the later of (i) the date of the Owner's receipt of the Contractor's written request or (ii) the Contractor's submission of all supplemental information where such has been requested by the Owner. The Contractor's failure to submit promptly any supplemental information requested by the Owner shall result in the waiver of the claim. In order to reserve its right to claim compensation for such Work, or damages resulting from such compliance, the Contractor shall, within five days after receiving Notice of the Owner's determination and direction, notify the Owner and the Architect, in writing, that the Work is being performed, or that the determination and direction is being complied with, under protest. Failure of the Contractor to so notify the Owner and the Architect as provided herein shall constitute a waiver and release of the Contractor's right to claim compensation for any Work performed under protest or damages resulting from such compliance. Should Owner fail to issue a written determination within the time periods specified herein, such failure shall be deemed to be a denial of the claim entitling the Contractor to institute legal action with respect to the claim without further administrative review by Owner. In no event shall Contractor be permitted to make a total cost claim or the like against Owner, nor any other claim which fails to conform strictly to the above standards or to Virginia law; any such claims shall be deemed to be null and void.
- C. Undisputed Amounts; Claims for Extension of Time. All monies owed and not in dispute will be made available to the Contractor in accordance with the Contract Documents. Any request for an extension of time in connection with disputed Work shall be governed by Part 11 hereof.

- 8.10 Benefit of Agreement. The Contract Documents shall be enforceable and binding upon, and shall inure to the benefit of, the parties hereto, their respective successors and permitted assigns. Nothing contained herein, express or implied, is intended to or shall confer upon any other person any rights, benefits or remedies of any nature whatsoever under or by reason of this Agreement.
- 8.11 No Estoppel. Neither the Owner, nor any officer, Member, employee, or authorized representative thereof, will be bound, precluded, or estopped by any action, determination, decision, acceptance, return, certificate, or payment made or given under or in connection with this Contract by any officer, employee, Member or authorized representative of the Owner or of the Architect, at any time either before or after final completion and acceptance of the Work or any payment therefor. The Owner may, at any time and from time to time. (a) show the true and correct classification, amount, quality, or character of the Work performed, or that any determination, decision, acceptance, return certificate or payment is incorrect or was improperly made in any respect, or that the Work or any part thereof does not in fact conform to the requirements of the Contract Documents; (b) demand and recover from the Contractor any overpayment made to him or such damages as the Owner may sustain by reason of the Contractor's failure to comply with the requirements of the Contract Documents; or (c) both of the foregoing clauses (a) and (b).
- 8.12 No Waiver of Rights. No act or omission on the part of the Owner (including but not limited to those matters set forth in A through D below) shall be deemed to constitute a waiver of any right, duty, obligation or other provision set forth in these Contract Documents:
- A. inspections conducted by the Owner, the Architect, or any of their respective employees, officers, Members or authorized representatives;
 - B. orders for the payment of money;
 - C. payments for, or acceptance of, all or any part of the Work;
 - D. extensions of time or changes to the Contract Documents, Specifications or Drawings.

In order to be effective, any waiver by the Owner must be in writing and must expressly use the term "waiver," or a variation thereof. In no event shall any waiver of any breach of this Contract be held as a waiver of any subsequent breach of this Contract. The terms of this Contract shall be in addition to, and not a limitation on, any and all rights and remedies which the Owner has or may have at law or in equity. The Owner will have the right to enjoin the Contractor against any breach of the terms of this Contract without any showing that such relief is necessary to avoid irreparable injury or that there is no adequate remedy at law.

PART 9 - CHANGES IN THE WORK

- 9.01 Minor Changes.

- A. **Owner's Right to Make Changes.** The Owner reserves the right to make such additions, deletions, or changes to the Work as may be necessary in its sole and absolute discretion to complete the Work; provided, however, that no such additions, deletions or changes shall materially affect the substance hereof or materially change the Contract Sum. This Contract shall in no way be invalidated by any such additions, deletions or changes. No claim shall be made by the Contractor for loss of anticipated profits resulting from any such addition, deletion, or change to the Work.
- B. **Construction Conditions.** Construction conditions may require minor changes in the location and installation of the Work and equipment to be furnished and other Work to be performed hereunder. The Contractor, when ordered by the Architect, shall make such adjustments and changes in the locations and Work as may be necessary without additional cost to the Owner, provided such adjustments and changes do not materially alter the character and quantity of the Work as a whole, or the Contract Sum, and provided further that Drawings and Specifications showing such adjustments and changes are given to the Contractor by the Owner or Architect within a reasonable time before work involving such adjustment and changes is begun. The Owner and the Architect shall be the sole judges of what constitutes a minor change for which no additional compensation shall be allowed.
- C. **Time Extension for Minor Changes.** The Contractor shall be entitled to an extension of time for such minor changes only for the number of days which the Architect may determine to be necessary to complete such changes and only to the extent that such changes actually delay the completion of the Project, and then only if the Contractor shall have strictly complied with all the requirements of the Contract Documents.

9.02 Extra Work.

- A. **Order for Extra Work.** The Owner may, in its sole and absolute discretion, at any time by issuance of a Work Order or Change Order and without notice to the Sureties require the performance of such Extra Work as it deems necessary or desirable. A Work Order or a Change Order covering Extra Work shall be valid only if issued in writing and signed by the Owner and the Architect, and the Extra Work so ordered must be performed by the Contractor. The Contractor hereby covenants and agrees to perform such Extra Work on the terms and conditions set forth in the applicable Work Order or Change Order, as the case may be, and hereby waives any claim, suit or cause of action of any nature based, in whole or in part, upon the allegation that any Extra Work ordered hereunder and/or any Work omitted pursuant to Paragraph 9.03 hereof, individually or in the aggregate, constitute a cardinal change to, or other material deviation from, the Contract Documents and/or the Work contemplated thereby. Any attempt by the Contractor to alter or modify a Change Order or to reserve a claim thereunder shall be void and of no legal effect. Each Change Order, when executed, shall constitute full and final compensation for all matters directly or indirectly related to or arising from the changes to the Work ordered thereby (the "Changed Work"), including, but

not limited to, all Overhead and all other direct and indirect costs associated with the Changed Work and any and all adjustments (of whatever nature) to the Contract Sum or to the Contract Period attributable to the Changed Work.

- B. Compensation for Extra Work. The amount of compensation to be paid to the Contractor for any Extra Work set forth in a Work Order or a Change Order shall be determined as follows:
1. By such applicable unit prices, if any, as are set forth in the Contract; or
 2. If no such unit prices are set forth, then by a lump sum or other prices mutually agreed upon by the Owner and the Contractor; or
 3. If no such unit prices are set forth in the Contract and if the parties cannot agree upon a lump sum or other unit prices, then by the actual and reasonable costs as determined by the Architect in accordance with Section 01153 of the General Requirements.
- C. Full and Final Compensation. Regardless of the manner in which the adjustment to the Contract Sum on account of Extra Work is determined, such adjustment shall be deemed to include all amounts, whether direct, indirect or consequential, resulting from the performance of the Extra Work, including but not limited to all Overhead. The adjustment to the Contract Sum, if any, shall constitute the final, full and mutual accord and satisfaction for all costs related to such change.
- D. Notice and Records of Extra Work. At least one day prior to the performance of Extra Work hereunder, the Contractor shall provide Notice to the Owner and Architect setting forth: (1) his intention to perform Extra Work; (2) the nature of the Extra Work and the precise location, time of commencement, duration, and basis therefor; and (3) Subcontractors involved therein. Unless such Notice of Extra Work is provided in the manner prescribed herein, such Extra Work shall not be compensated. Records of Extra Work performed hereunder, if any, shall be submitted by the Contractor to the Owner at the end of each day on which such Extra Work shall have been performed. Duplicate copies of accepted records shall be made and signed by both the Contractor or its representative and the Owner's representative, and one copy shall be retained by each.
- E. Payment Requests. Payment requests for approved and duly authorized Extra Work shall be submitted by the Contractor upon a certified statement supported by receipted bills. Such statements shall be submitted for payment by the Owner in the month in which such Extra Work was performed and in accordance with Paragraph 12.03 hereof.
- F. Time Extension for Extra Work. The Contractor shall be entitled to an extension of time for Extra Work duly authorized by the Architect only for the number of days required, in the opinion of the Architect, to complete such Extra Work, and then only if the Contractor has strictly complied with all the requirements of the Contract Documents.

9.03 Omitted Work.

- A. Omission of Work by Owner. The Owner may at any time by a written order and without notice to any Surety require the omission of such Work as the Owner may find necessary or desirable in its sole and absolute discretion.
- B. Order for Omission of Work. Order An order for omission of Work shall be valid only if signed by the Owner and the Architect and the Work so ordered must be omitted by the Contractor. The amount of any credit due the Owner as a result of any such omission of Work shall be determined in accordance with Paragraph 9.02(B)(1), (2) and (3) above.

9.04 Suspension of Work.

- A. Suspension of Work by Owner. The Owner may suspend the Work by written order in order to. (i) coordinate the activities and operations of the Contractor with that of any Separate Contractors; (ii) expedite completion of the Project, even though completion of the Work may be delayed thereby; or (iii) serve the best interests of the Owner or of the Project as a whole. No single suspension by the Owner shall exceed 10 days.
- B. Order for Suspension of Work. An order for suspension of the Work (or any portion thereof) shall be signed by the Owner and the Architect, shall identify the Work that is to be suspended by the Contractor, and shall set forth the effective dates of such suspension. Such order (and the effective dates of the suspension) may be updated by the Owner from time to time during the course of the suspension.
- C. Compensation for Suspension. In the event of a suspension of the Work (or any portion thereof) hereunder, the Contractor shall accept as full compensation for such suspension. (i) the actual costs incurred by the Contractor on this Project for demobilization and remobilization, as documented to the satisfaction of the Owner and the Architect; and (b) an extension of time for completion of the Work for such number of days as the Owner and the Architect shall determine that the suspension shall have actually and adversely impacted the Critical Path for the Work.

- 9.05 Audit. The Owner and its authorized representatives shall, until the expiration of three years from the date of final payment under these Contract Documents, have the right to examine and copy those books, records, accounts, documents, papers and other supporting data which involve transactions related to this Contract or which otherwise permit adequate evaluation of the cost or pricing data submitted, along with the computations and projections used therein (the "Records"), and the Contractor hereby covenants to maintain the Records in good order for such time and to deliver promptly the Records to the Owner within 5 days after its written request. In the event that the Contractor fails to comply with this Paragraph 9.05, then the Owner, in addition to any other available remedies, shall have the right to withhold payment of amounts otherwise

due the Contractor until such time as the Contractor shall have complied fully with the obligations set forth herein.

PART 10 - CHANGE ORDER AND WORK ORDER PROCEDURES

10.01 Definitions.

- A. Change Order. Refer to the definition in Paragraph 1.02.
- B. Work Order. Refer to the definition in Paragraph 1.28.
- C. Overhead. Refer to the definition in Paragraph 1.18.

10.02 Change Orders. See Section 01153 of the General Requirements.

PART 11 - TIME

11.01 Time of Start and Completion; Liquidated Damages.

- A. Commencement and Performance of Work; Time of the Essence. The Contractor shall commence the Work within ten (10) days after the date stated as the date to proceed in the Notice to Proceed. Time being of the essence with respect to this Contract, the Contractor shall prosecute the Work diligently, using such means and methods of construction as will secure its full completion in accordance with the requirements of the Contract Documents, and will complete the Work within the Contract Period. By executing the Agreement, the Contractor confirms that the Contract Period constitutes a reasonable period for performing the Work. The Contractor shall proceed expeditiously with adequate forces, scheduling and resources to complete the Work within the Contract Period. The actual Dates of Substantial and Final Completion will be established by the Architect after inspections have been conducted in accordance with Paragraphs 12.04 and 12.05 hereof.
- B. Liquidated Damages. The Owner and the Contractor hereby acknowledge and agree that time is of the essence with respect to this Contract and that in the event the Contractor fails to complete the Work within the Contract Period, the Owner will incur actual and considerable monetary damage, the actual amounts of which are uncertain and not readily ascertainable. The stipulated amount per day set forth in the Summary of Work (Section 01010) is reasonably in proportion to the probable loss to the Owner and that amount per day is hereby agreed upon as the liquidated damages for each day that the time consumed in completing the Work exceeds the time allowed. This stipulated amount shall in no event be considered to be a penalty or otherwise than as the liquidated and adjusted damages to the Owner because of the delay, and the Contractor and its Surety hereby agree that the stated sum per day for each such day of delay shall be deducted and retained out of the monies which may become due hereunder and if not so deductible, the Contractor and its Surety shall be liable therefor.

11.02 Extension of Time.

- A. Extension of Time. The parties to this Contract wish to provide a framework for resolving issues in connection with any delays that may occur on this Project. No extension beyond the date of completion fixed by the terms of the Contract will be effective unless granted in writing and signed by the Owner's representative.
- B. Contractor's Notice of Delay. Notice of delay must be given in writing to the Director of the Owner's Office of Design and Construction, with copies to the Architect and to the Owner's on-Site project manager within 5 days after the commencement of the delay and in strict accordance with the General Conditions. Each such Notice shall. (i) be submitted in written, narrative form on the Contractor's letterhead; (ii) be identified as a "Notice of Delay;" (iii) shall describe, in reasonable detail, the nature of the delay encountered; (iv) shall have appended to it a copy of this Paragraph 11.02; and (v) shall set forth the date of the commencement of the delay. An update to the Construction Schedule shall in no event be deemed to be sufficient, on its own and unless submitted as part of an application for extension of time as provided herein, to satisfy the Notice of requirements set forth in this Paragraph 11.02. In case of a continuing cause of delay, only one Notice shall be required.
- C. Contractor's Application for Extension of Time. The Contractor's application for any extension of time shall be in writing and addressed to the Director of the Owner's Office of Design and Construction, with copies to the Architect and to the Owner's on-site project manager, not more than 20 days after the commencement of the delay. Any such application for extension of time shall. (i) be on the Contractor's letterhead; (ii) describe in reasonable detail the reasons for and causes of the delay; (iii) demonstrate in a clear and convincing fashion the extent to which, if any, the delay impacts the Critical Path for the Project; (iv) contain a justification for each additional day which is requested; (v) be identified as an "Application for Extension of Time; and (vi) have appended to it a copy of this Paragraph 11.02(A), together with copies of any documents referenced therein. If the delay should continue for longer than 20 days, the Contractor must submit the substantiation and support for such delay no less frequently than in 20 day increments. Any application for extension of time which does not conform in every respect to the requirements of this Paragraph 11.02(A) shall be deemed to have been waived.
- D. Basis for Extension of Time. If such an application is made, the Contractor shall be entitled to an extension of time for delay in completion of the Work if obstructed or delayed in the commencement, prosecution or completion of any part of the Work on the Critical Path by any act or delay of the Owner, or by riot, insurrection, war, pestilence, acts of public authorities, fire, earthquakes, or by strikes, or other causes, which causes of delay mentioned in this Paragraph, in the opinion of the Owner, are entirely beyond the expectation and control of the Contractor.

- E. Measurement of Delay. The Contractor shall, however, be entitled to an extension of time for such causes only for the number of days of delay which the Architect may determine to be due solely and exclusively to such causes and only to the extent that such occurrences actually and adversely impact the Critical Path for the Work, and then only if the Contractor shall have strictly complied with all of the requirements of these Contract Documents.
- F. Delay for Abnormal Weather Conditions. The Contract Period will be adjusted to account for unusually severe and abnormal weather conditions that prevent or inhibit the Contractor's performance of the Work and lengthen the Critical Path indicated on the Construction Schedule (such unusually severe and abnormal weather conditions referred to herein as "Inclement Weather"). The occurrence of Inclement Weather shall be established by reference to climatological data compiled by the U.S. Department of Commerce National Oceanic and Atmospheric Administration for Washington-Dulles International Airport or Washington National Airport, whichever is closest to the Site of the Project.
- G. Procedure for Protesting Denial of Extension of Time. In the event that the Contractor is denied an extension of time hereunder, he may contest such decision by notifying the Architect, the Director of the Owner's Office of Design and Construction and the Project Manager in writing within four days after the issuance of such denial, stating in detail its reasons for disagreement and submitting all information necessary for a final determination by the Owner pursuant to Paragraph 8.09 hereof. The Contractor shall provide the Architect and the Owner with all substantive information that supports the Contractor's claim for an extension of time. The Contractor must address all elements of the denial of such time extension. No claim for an extension of time under this provision will be valid unless submitted as stated herein.
- H. Supplier and Subcontractor Delays. Except as expressly set forth in Section 11.02(J), delays caused by the failure of the Contractor's materialmen, manufacturers, and dealers to furnish approved shop drawings, materials, fixtures, equipment, appliances, or other supplies on time or the failure of Subcontractors to perform their Work in conformity with the approved Construction Schedule shall not constitute a basis for an extension of time.
- I. Remedy for Delay. Except as expressly set forth in Section 11.02(J) hereof, no claim for payment, compensation or adjustment of any kind (other than the extensions of time provided for herein) shall be made or asserted against the Owner by the Contractor for costs or damages caused by hindrances or delays from any cause, whether such hindrances or delays be avoidable or unavoidable, and the Contractor shall make no claim for damages by reason of any such hindrances or delays, and will accept in full satisfaction of such hindrances or delays an extension of time to complete performance of the Work as specified.
- J. Owner-Caused Delay. Notwithstanding the provisions of Section 11.02(I), nothing contained herein is intended to, or shall have the effect of, waiving, releasing or extinguishing any rights of the Contractor to recover costs or

damages for an unreasonable delay in performing this Contract, either on its behalf or on behalf of a Subcontractor, if and to the extent that such delay is caused by acts or omissions of the Owner, its agents or employees, and due to causes within their control. In order to seek costs or damages in connection with any such unreasonable delay, the Contractor must comply fully with each of the requirements set forth in Section 11.02(B) hereof, and shall identify each Notice of delay and application for extension of time submitted thereunder, respectively, as a "Notice of Delay and Additional Costs" and as an "Application for Extension of Time and Additional Costs." Each Notice of Delay and Additional Costs shall contain, in addition to the requirements set forth in Section 11.02(B). (i) a description of the nature of the monetary loss or damage associated with the unreasonable delay; (ii) an explanation as to why the delay is deemed to be "unreasonable;" (iii) a clear demonstration of how such unreasonable delay was caused solely and exclusively by acts or omissions of the Owner, its agents and employees, and due to causes within their control; and (iv) a detailed description of all efforts the Contractor has made to mitigate any alleged loss or otherwise avoid the claim. In addition to the requirements set forth in Section 11.02(B), each Application for Extension of Time and Additional Costs shall demonstrate in a clear and convincing fashion. (i) that the delay was "unreasonable;" and (ii) the extent, if any, to which the delay was caused by acts or omissions of the Owner, its agents or employees, and due to causes within their control. In the event it is determined that the Contractor (either on its behalf or on behalf of a Subcontractor) is entitled to costs or damages on account of such an Owner-caused unreasonable delay, the amount thereof shall be determined as set forth in Section 11.02(K).

- K. Contractor's Liquidated Damages. The parties recognize the difficulty in calculating damages incurred by the Contractor resulting from unreasonable delays caused by acts or omissions of the Owner, its agents and/or employees, and due to causes within their control. As such, the parties hereby agree that the amount set forth in the Summary of Work (Section 01010) shall be the liquidated damages for each and every day that the Contractor and/or any Subcontractor(s) incurs compensable costs or damages for unreasonable delays in performing this Contract and that this figure represents a reasonably accurate forecast of the daily aggregate, anticipated actual damages in the event of an unreasonable delay. The parties hereby acknowledge and agree that the liquidated damages provided for hereunder represent full and final compensation for all losses, costs and damages incurred in the aggregate by the Contractor and its Subcontractors (if any) in connection with an unreasonable delay and that neither the Contractor nor any Subcontractor will in any event submit a claim or seek further or additional compensation in excess of the stated amount. The Contractor shall include in each of its subcontract agreements for the Project a liquidated damages provision similar to that set forth herein.
- L. Reimbursement of Owner's Costs and Expenses. In the event that the Contractor makes a claim against the Owner for costs or damages due to unreasonable delays caused by the Owner, its agents and/or employees and such claim is determined to be false or to have no basis in law or otherwise is

resolved in favor of the Owner, in whole or in part, then the Contractor shall be liable to the Owner for a percentage of all the costs the Owner incurs in investigating, analyzing, negotiating, and litigating the claim. The percentage for which the Contractor shall be liable shall be equal to the percentage of the Contractor's total delay claim that is determined through litigation or administrative procedures to be false or to have no basis in law or otherwise resolved in favor of the Owner.

- M. **Phased Construction.** Where portions of the Work have been phased in order to accommodate Owner's use of existing premises, and the beginning date and ending date for the performance of the phased Work have been stipulated, and the beginning date must be changed to accommodate unforeseen circumstances, then the ending date shall accordingly be adjusted so that the amount of time allotted for the phased Work shall not change.

PART 12 - PAYMENTS AND COMPLETION

12.01 Prices.

- A. **Contract Sum.** For the Contractor's complete performance of the Work, the Owner agrees to pay, and the Contractor agrees to accept, subject to the terms and conditions hereof, the Contract Sum, taking into consideration any deductions based on award of a combination of alternates, if applicable, plus the amount required to be paid for Extra Work ordered under Paragraph 9.02 hereof, less credit for any Work omitted pursuant to Paragraph 9.03 hereof.
- B. **Unit Prices; Estimated Quantities.** The amount awarded as a unit price for any unit price Contract item shall represent payment in full for all the material, equipment and labor necessary to complete, in conformity with the Contract Documents, each unit or item of Work shown, specified, or required with respect to such unit price Contract Item. With respect to unit price items, the number of units actually required to complete the Work under the Contract may be less or more than stated in the bid. The Contractor agrees that no claim will be made for any damages or for loss of profits or overhead because of a difference between the quantities of the various classes of Work assumed and stated in the bid as a basis for comparing bids and the quantities of Work actually performed.
- C. **No Other Payments Due.** No payment other than the amount awarded will be made for any class of work included in a lump sum Contract item or a unit price Contract item, unless specific provision is made therefor in the Contract Documents.

12.02 **Submission of Schedule of Values.** See Section 01370 of the General Requirements. The Schedule of Values, once accepted by the Architect, may be used for checking the Contractor's applications for partial payments hereunder but shall not be binding upon the Owner or the Architect for any purpose whatsoever.

12.03 Partial Payments.

- A. Applications for Partial Payment. On or about the first of each month, the Contractor shall make and certify an estimate of the amount and fair value of the Work performed during the preceding month and may apply for partial payment. The Architect may, in his discretion, revise the estimate to show the actual value of Work completed in accordance with the Architect's observation of the Work. The Contractor agrees to be bound by the Architect's revisions to its applications for partial payment. Whenever the monthly estimate, after approval by the Architect, shows that the value of the Work completed during the period covered by the payment request exceeds \$1,000.00, the Architect will issue a Certificate of Payment for such Work. Such Certificate will authorize payment by the Owner in an amount equal to the value of the Work completed less any sums retained or deducted by the Owner under the terms of the Contract Documents, and less retainage of 5 percent of payments claimed. Within 45 days after receipt of each Certificate of Payment, the Owner shall pay the Contractor in accordance with the applicable Certificate and the Contract Documents. Unless withheld in accordance with Paragraph 12.03(B) hereof, amounts not paid when due shall accrue interest at a rate of .5% per month. The Owner may, in its sole and absolute discretion, reduce the amount of retainage withheld, in the latter stages of the Project. For additional requirements, see Section 01152 for other Requirements.
- B. Withholding Payment. The Owner may withhold payment to the Contractor hereunder to such extent as may be necessary in the opinion of the Architect to protect the Owner due to loss because of:
1. defective Work not remedied;
 2. third party claims (including Separate Contractor Claims) filed or reasonable evidence indicating probable filing of such claims;
 3. failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment;
 4. reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
 5. damage to the Owner or another person or entity (including a Separate Contractor);
 6. reasonable evidence that the Work will not be completed within the Contract Period;
 7. persistent failure to carry out the Work in accordance with, or to otherwise observe the requirements of, the Contract Documents; or

8. liability, damage, or loss due to injury to persons or damages to the Work or property of Separate Contractors, or the subcontractors of others, caused by the act or neglect of the Contractor or any of its Subcontractors or Sub-subcontractors.
- C. Owner's Application of Withheld Amounts. The Owner shall have the right, as an authorized representative for the Contractor and without the Surety's consent, to apply any such amounts so withheld in such manner as the Owner may deem proper to satisfy such claims or to secure such protection. The application of these amounts shall be deemed payments for the account of the Contractor and shall reduce the Owner's obligation to the Contractor accordingly.
- D. Payment for Materials and Equipment. Unless otherwise provided herein, no partial payment will be made for any materials or equipment supplied hereunder before they are. (i) incorporated in the Work in a permanent manner as required by the Contract Documents, (ii) properly stored at the Site of the Project or (iii) properly stored in a bonded warehouse to the satisfaction of the Owner.
- E. Equipment and Materials Stored On Site. The cost of equipment and materials delivered and stored at the Site of the Project and tested for adequacy may be included in the Contractor's application for partial payment; provided, however, that the Contractor shall furnish written evidence satisfactory to the Owner that the Contractor is the owner of such materials or equipment at the time of payment therefor by the Owner and that such equipment is being stored and maintained in accordance with the Contract Documents and the manufacturer's recommendations. The amount to be paid by the Owner for such equipment and nonperishables will be 90 percent of the documented invoice cost to the Contractor as supported by receipted bills, which shall be furnished to Owner at the time the request for payment is made. Such payment shall not relieve the Contractor of full responsibility for completion of the Work and for protection of materials and equipment until incorporated in the Work in a permanent manner as required by the Contract Documents.
- F. Payment Affidavits. Before any payment will be made under this Contract, the Contractor and every Subcontractor, if required, shall deliver to the Architect a written, verified statement, in satisfactory form, showing in detail all amounts then due and unpaid by the Contractor to all laborers, workers, and mechanics, employed under the Contract for the performance of the Work at the Site of the Project, for daily or weekly wages, or to other persons for materials, equipment, or for supplies delivered at the Site of the Project during the period covered by the payment request.
- G. No Improper Payments. Upon the request of the Architect, as a prerequisite for payment pursuant to the terms of this Contract, the Contractor shall give the Owner a statement that no employee of the Owner has received or has been promised, directly or indirectly, any financial benefit, by way of a fee, commission, finder's fee or in any other manner, or any other remuneration arising from or directly or indirectly related to this Contract. All parties agree that

the Owner shall have the right, in its sole and absolute discretion, to withhold payment to the extent of any such fee or commission. The Contractor shall not be entitled to interest and shall not have any claim on account of any payments being withheld under this Paragraph 12.03 G.

12.04 Substantial Completion.

- A. Notice of Substantial Completion; Inspection by Architect. When the Contractor considers that the Work, or in the case of phased construction, such portion thereof which the Owner agrees in writing to accept separately, is substantially complete, the Contractor shall provide the Owner and the Architect written notification of such fact. The Contractor shall conduct a "pre-punch" inspection, and shall submit a written and dated "pre-punch" list prior to requesting the formal Punch List Inspection by the Owner and the Architect. (The Contractor shall have the Job Superintendent and a representative from each of the major sub-contractors present at the Punch List Inspection) Upon receipt of the Contractor's "pre-punch" list and concurrence of the Owner's Field Inspector, the Architect and the Owner shall conduct the Punch List Inspection and shall prepare a comprehensive list of items to be completed and/or corrected. The Contractor shall proceed promptly to complete and correct items on the list. 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. Subsequently, the Architect and the Owner will make an inspection to determine whether the Work, or such designated portion thereof, is substantially complete. If the Architect's inspection discloses any item, whether or not included on the list, which is not in accordance with the requirements of the Contract Documents, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. The Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion.
1. Phased construction. Where the Work shall be performed in phases, Owner acceptance of each phase shall not occur until all of the following activities have taken place:
 - a. The Contractor shall perform a "pre-punch" inspection, shall notify the Owner upon completion of the inspection, and shall supply the Owner with a written and dated copy of its "pre-punch" list, which shall compile all deficiencies in the work observed by the Contractor.
 - b. The Owner and Architect shall review the "pre-punch" list, and shall determine whether or not a "punch list" inspection shall take place.
 - c. Upon such determination, the Owner, the Architect and the Contractor (including the Job Superintendent and a representative from each of the major sub-contractors) shall conduct the "punch

list” inspection and shall compile a list of deficiencies for correction by the Contractor. The Contractor shall correct the deficiencies contained in the “punch list” in the time period indicated in Paragraph 12.04(B).

- d. The Contractor shall not proceed to the next construction phase until all items on the “punch list” have been corrected, and the Owner has agreed in writing to allow the Contractor to proceed to the next phase.

B. Punch List:

1. The Contractor shall have a maximum of sixty (60) days after the date of issuance of any punch list to complete all of the Work items contained thereon. Where the Project consists of discrete construction phases, the Contractor shall have a maximum of fourteen (14) days after the date of each punch list for each phase to complete the Work contained on the list. If the Work is not completed within the designated period, the sum of \$50.00 per day per punch list item will be deducted from the Contract Sum until the Date of Final Completion.
2. In the event that the Contractor refuses or fails to complete any one or more punch list items within the time period specified herein, then the Owner shall have the right (but not the obligation) to complete any such Punch List item with its own forces or with such other contractors as it deems advisable and to charge the account of the Contractor and its Surety therefore. This right of completion shall be in addition to, and not in lieu of, any remedy provided by another section of these Contract Documents. In the event the Owner exercises its right hereunder to complete all items on a Punch List, the \$50.00 daily amount shall not thereafter continue to be assessed for that Punch List item, although nothing contained herein shall be construed to eliminate or reduce the daily amount then accrued.

- C. Certification By Architect. When the Work, or any Owner-designated portion thereof, is substantially complete, the Architect shall prepare and issue a Certificate of Substantial Completion (substantially in the form of AIA Document 6704) which shall establish the date of Substantial Completion, the responsibilities of the Owner and the Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and shall fix the time within which the Contractor shall finish all items on the list accompanying the Certificate of Substantial Completion. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work, or such designated portion thereof, unless otherwise provided in the Certificate of Substantial Completion. The Certificate of Substantial Completion shall be submitted to the Owner and to the Contractor for their written acceptance of responsibilities assigned to each of them therein.

- D. Payment by Owner. Upon Substantial Completion of the Work, or such Owner-designated portion thereof, and upon application by the Contractor and issuance of a Certificate of Substantial Completion by the Architect, the Owner shall make payment, less retainage, for such Work or such portion thereof as provided in the Contract Documents.

12.05 Final Inspection.

- A. Notice of Final Completion; Inspection by Architect. Upon written notification by the Contractor that the Work is finally complete, and upon the Contractor's submission of a final application for payment, the Architect will conduct a final inspection of the Work. When the Architect determines that the Work has been satisfactorily completed and the Contract Documents fully performed, he shall promptly prepare and issue a Final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of its observations and inspections, the Work has been completed in accordance with the Contract Documents and that the amount stated in the Final Certificate of Payment, less the Correction Retainage (as defined below), is due and payable.
- B. Payment by Owner; Correction Retainage. The Owner shall, within 45 days after receipt of the Final Certificate of Payment, pay the Contractor the amount stated therein, less a percentage of the Contract Sum based upon the following schedule:

Cost of Contract (\$5,000 minimum)	Retained %
Up to and including \$ 50,000	1.00%
Above \$50,000 to \$750,000 inclusive	0.75%
Above \$750,000 to \$1,250,000 inclusive	0.60%
Above \$1,250,000 to \$2,000,000 inclusive	0.50%
Above \$2,000,000 to \$3,000,000 inclusive	0.425%
Above \$3,000,000	0.4%

Such retained sum (the "Correction Retainage") shall be held by the Owner for a period of one year from the Date of Substantial Completion (the "Correction Period") as collateral security for the prompt and complete correction and/or performance by the Contractor of any and all Work determined by the Owner, in its sole and absolute discretion, to be defective, incomplete or to have been improperly performed. The Owner shall pay to the Contractor the Correction Retainage, less any amounts expended in accordance with Paragraph 12.05(D), within thirty days after the expiration of the Correction Period.

- C. Correction of Work by Contractor. In the event the Work, or any portion thereof, is determined during the Correction Period to be defective, incomplete or to have been improperly performed, the Contractor shall, within three days after written Notice from the Owner, commence to remove all defective and deteriorated Work and materials and replace it with Work and materials that conform in all respects with the requirements of the Contract Documents and to complete all incomplete

work in accordance with the Contract Documents within 14 days or such longer period as shall be requested by the Contractor and agreed-upon by the Owner.

- D. Contractor's Failure to Correct Work. In the event the Contractor fails to commence the removal, replacement, completion or correction of such Work within three days after the date of written Notice from the Owner and to complete such Work within the time period established in Paragraph 12.05(C), then the Owner will cause such work to be performed by other contractors and will deduct the cost of such Work from the Correction Retainage. In the event that the Correction Retainage is insufficient to cover such costs, then the Owner shall charge the Contractor and its Surety for the amount of the deficiency and the Contractor and/or the Surety shall pay such amount to the Owner in full on or before the date that is thirty days after the expiration of the Correction Period.

12.06 Final Payment Request. Neither final payment nor any retainage shall become due until the Contractor submits the following items to the Architect. (i) an affidavit that payrolls, bills for materials and equipment, and all other indebtedness in connection with the Work for which the Owner might be responsible have been paid or otherwise satisfied; (ii) a certificate evidencing that insurance required by the Contract Documents to remain in force following final payment is currently in effect and will not be canceled or allowed to expire until at least 30 days' prior written Notice has been provided to the Owner; (iii) 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; (iv) consent of the Surety to final payment; and (v) if required by the Owner, other data establishing the payment or satisfaction of obligations (such receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract) and such guaranties and indemnities all in such form and detail as may be required 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, in its sole and absolute discretion, sufficient to indemnify the Owner against any claim or lien. If any such claim 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 such claim, including all costs associated therewith, including reasonable attorneys' fees.

12.07 Effect of Final Payment. The Contractor's acceptance of final payment constitutes a waiver of all claims against the Owner in connection with the Project, except for the Contractor's claim to the Correction Retainage, if any, when due. No payment, final or otherwise, shall operate to release the Contractor, or its Surety, from any obligations under the Contract.

PART 13 - PROTECTION OF PERSONS AND PROPERTY

13.01 Safety Program. The Contractor shall be responsible for instituting, maintaining and supervising prudent safety procedures, as well as for complying with all safety laws, regulations, ordinances and other directives of jurisdictional authorities in order to prevent injury, damage or loss to:

- A. All employees involved in performance of the Work;

- B. All students, teachers, administrative personnel, and employees, and other persons in proximity to, or otherwise affected by the Work;
 - C. The Work, materials and equipment to be incorporated therein, whether in storage on or off the Site;
 - D. Property at the Site or in proximity to the Work and which is designated to be maintain by the Contractor;
 - E. Property that is located on-site or in proximity to the Work and is designated to be altered, renovated or relocated by the Contractor.
- 13.02 Use of Explosives. The use of explosives shall be allowed only. (i) when necessary for the performance of the Work; (ii) when prior Notice is given to, and when the approval is received from, the Owner; and (iii) when conducted by qualified personnel in accordance with applicable safety laws and regulations.
- 13.03 Protection of Work. During performance of the Work and until final acceptance thereof, the Contractor shall be under an absolute obligation to protect the finished and unfinished Work against any damage, loss, or injury. The Contractor shall take proper precautions to protect the finished Work from loss or damage, pending completion and final acceptance of all Work included in the Contract. Such precautions shall not relieve the Contractor from any and all liability and responsibility for loss or damage to the Work occurring before final acceptance by the Owner. Such loss or damage shall be at the risk of and borne by the Contractor, whether arising from acts or omissions of the Contractor or others and whether or not covered by the Contractor's builder's risk insurance. In the event of any such loss or damage, the Contractor shall repair, replace, and make good the Work without extension of time. Therefore, the Contractor shall take special precautions throughout all its operations to guard against fire and shall reduce the amount of inflammable materials stored at the Site to the minimum amount consistent with the proper handling and storing of such materials.
- 13.04 Safety Representative. The Contractor shall select one or more on-site personnel whose duty shall be accident prevention. One such person shall be the Contractor's superintendent, unless otherwise designated by the Contractor in writing to the Owner and the Architect.
- 13.05 Structural Overload. The Contractor shall not structurally overload or permit any part of the Work to be overloaded so as to endanger its safety or the safety of others.

PART 14 - INSURANCE

14.01 Contractor's Statutory and Legal Liability Insurance.

- A. During the Contract Period, the Contractor shall, at its own expense, purchase and maintain insurance to provide coverage for claims resulting from the Contractor's performance of the Work. Such coverage shall extend to work performance by Subcontractors, persons or organizations directly or indirectly

hired by the Contractor or any Subcontractor in connection with the Work, or any other persons or organizations who may cause liability to be incurred by the Contractor or any Subcontractor in connection with the Work. Such coverage shall include the following:

1. Claims arising under workers' compensation, disability benefit, or other related benefits programs.
 2. Claims resulting from bodily injury, occupational illness or death of any employee performing the Work.
 3. Claims resulting from bodily injury, illness, disease, or death of any person in contact with the Work but who is not engaged as an employee.
 4. Claims arising under personal injury liability coverage for injury to any employee, which are directly or indirectly attributable to its employment for performance of the Work.
 5. Claims arising under personal injury liability coverage for injury to any person not an employee, which are attributable to performance of the Work.
 6. Claims arising for damage or destruction of tangible property, including loss of use of the affected property as a result of such damage or destruction.
- B. During the Contract Period, the Contractor shall, at its own expense, purchase and maintain the following insurance in the minimum limits specified with companies properly licensed to do business in the Commonwealth of Virginia, rated not less than A-/VII by A.M. Best Company and satisfactory to Owner. The Contractor shall maintain and provide proof of General Liability and Umbrella Excess Liability insurance for at least one (1) year following completion of the project. The Owner, "The Fairfax County School Board, its members, officers, authorized representatives and employees", shall be designated on each policy as "The Fairfax County School Board" as an additional named insured except for workers' compensation where the correct certificate of insurance coverage shall be furnished.
1. Workers' Compensation including Occupational Disease and Employer's Liability Insurance.
 - a. Statutory. Amounts and coverage as required by District of Columbia, Maryland, and Virginia Workers' Compensation Law, including provision for voluntary D. C. benefits as required in labor union agreements, and including the "All States" endorsement.
 - b. Employer's Liability.

Bodily Injury by Accident - \$100,000 Each Accident
Bodily Injury by Disease - \$500,000 Policy Limit
Bodily Injury by Disease - \$100,000 Each Employee

2. Commercial General Liability Insurance. Contractor shall provide coverage written on ISO occurrence form CG 00 01 10 01 (or a substitute form providing equivalent coverage) to include the following:
 - a. Contractual liability as required by the indemnification provision of Paragraph 5.11.
 - b. Personal injury liability, including offenses related to employment.
 - c. Coverage of explosion, collapse, or underground hazards.
 - d. Broad form property damage liability, including completed operations coverage.
 - e. Additional insured endorsement shall include coverage for Owner with respect to liability arising out of the completed operations of Contractor.
 - f. Additional Insured coverage shall apply as primary insurance and shall be non-contributory with respect to any other insurance or self-insurance programs afforded to Owner.
 - g. Status of the Owner as an insured shall not restrict coverage with respect to the escape of pollutants at or from a site owned or occupied by the Owner.
 - h. There shall be no endorsement or modification limiting the scope of coverage for liability arising from pollution.
 - i. Limits of Commercial General Liability Insurance.
 - (1) \$1,000,000 bodily injury and property damage per occurrence;
 - (2) \$1,000,000 personal injury and advertising injury per person;
 - (3) \$2,000,000 products/completed operations aggregate; and
 - (4) \$1,000,000 aggregate products and completed operations; and
 - (5) \$2,000,000 general aggregate, per project.

- ii. Business Auto Liability Insurance. (Includes owned, non-owned and hired vehicles.)
 - (1) Contractual liability coverage shall be included with respect to all auto rentals or lease agreements.
 - (2) Limits of \$1,000,000 combined bodily injury and property damage per accident.
- iii. Umbrella Excess Liability Insurance. Unless a different dollar limit is prescribed for this division of the Work in Section 01010, the lesser of \$5,000,000 or that amount which, when added to requirements of Paragraphs 14.01(B)(1), 14.01(B)(2), 14.01(B)(3) and 14.01(B)(4), total \$5,000,000. (For example, a \$4,000,000 umbrella in excess of the \$1,000,000 limits under the sections listed above shall meet the limits requirements of this paragraph). Coverage terms and conditions under the Umbrella Excess Liability Insurance policy shall be at least as broad as underlying coverages.
- i. The limits of liability of the insurance described in Paragraph 14.01(B) may be superseded if the limits prescribed by law are greater.
- j. Owner's Liability Insurance. The Owner may, at its own expense, purchase and maintain its own liability insurance to protect against claims which may arise in connection with the Work, or the Owner may self insure such risks.

14.02 Property Insurance.

- A. The Contractor shall purchase and maintain property insurance upon the entire Work at the Site to the full insurance value thereof. This insurance shall include the interests of the Owner, the Contractor, Subcontractors and Sub-subcontractors in the Work, and shall insure against all risks of loss. Such insurance shall include, but not be limited to, coverage for the following:
 - 1. Loss by explosion of boilers during testing (any exclusion applicable to such loss shall be waived).
 - 2. Partial or complete occupancy by the Owner (any exclusion applicable to occupancy shall be removed).
 - 3. Loss without coinsurance penalty (coinsurance or similar "insurance to value" requirements shall be eliminated).

4. Coverage of property in transit and unscheduled locations sufficient in limits to adequately cover maximum anticipated values at risk.
5. Coverage of Contractor's labor, overhead and profit.

A copy of this policy of insurance shall be available upon written request by the Owner.

14.03 Notice of Insurance.

- A. Proof of insurance, satisfactory to Owner, for each type of coverage listed herein shall be provided within 10 days after the Contractor's receipt of the Award Letter, and no Work shall proceed unless all such insurance is in effect. The Contractor shall not allow any Subcontractor to commence Work on its subcontract until all such insurance of the Subcontractor has been so obtained and approved by the Contractor and found to be in accordance with the requirements set forth herein. The Contractor certifies by commencement of the Work that its insurance and that of Subcontractors is in effect and meets the requirements set forth herein.

14.04 Notice of Cancellation.

- A. All of the aforesaid insurance policies must be endorsed to provide that the insurance company shall give 30 days prior written Notice to the Owner if the policies are to be terminated or if any changes are made during the life of the Contract which will affect in any way the insurance requirements set forth herein.

14.05 Copies of Insurance Policies.

- A. Before commencing the Work, the Contractor shall cause its insurance carrier to provide the Owner with a certified copy of each policy that he and each of its Subcontractors shall carry in accordance herewith, together with receipted bills evidencing proof of premium payment.

14.06 No Waiver.

- A. Nothing contained herein shall have effect or shall be deemed to effect a waiver of the Owner's sovereign immunity under law.

PART 15 - CONTRACT SECURITY

15.01 Contract Security.

- A. The Contractor shall execute and deliver to the Owner Performance and Payment Bonds on the forms provided herein, each in an amount equal to the Contract Sum. The Performance and Payment Bonds shall be executed by a

solvent and responsible surety company licensed to conduct business in the Commonwealth of Virginia, named in the current list of "Surety Companies Acceptable on Federal Bonds" as published in the Federal Register by the Audit Staff Bureau of Accounts, U.S. Treasury Department, and acceptable to the Owner. These bonds shall be issued and countersigned by a local authorized representative of such surety company who is a resident of the Commonwealth of Virginia, regularly commissioned and licensed in the Commonwealth and producing satisfactory evidence of the authority of the person or persons executing the bonds to execute them on behalf of the Surety. The Performance and Payment Bonds shall serve as security for the faithful performance of this Contract, and for the payment of all persons performing labor and furnishing materials and services in connection with this Contract. The premiums on the Performance and Payment Bonds shall be paid by the Contractor and shall be included in the Contract Sum.

- B. If at any time the Owner shall become dissatisfied with any Surety or Sureties upon the Performance and Payment Bonds, or if for any other reason such bond shall cease to be adequate security for the Contractor, the Contractor shall within five days after notification of such fact, substitute acceptable bonds in such form and sum and signed by such other sureties as may be satisfactory to the Owner. The premiums on such Bonds shall be paid by the Contractor and shall be included in the Contract Sum. No further partial payments shall be deemed due nor shall be made until the new sureties have qualified.
- C. The Contract Documents may require one or more of the Subcontractors to furnish payment and/or performance bonds.

PART 16 - UNCOVERING AND CORRECTION OF WORK

16.01 Uncovering of Work.

- A. If a portion of the Work is covered contrary to the Architect's request or to the requirements contained in the Contract Documents, the Contractor shall, at its own expense and upon the written request of the Architect or Owner, uncover and replace such Work without an adjustment to the Contract Period.
- B. If a portion of the Work has been covered which the Architect has not specifically requested to observe prior to its being covered, the 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 charged to the Owner. If such Work is not in accordance with the Contract Documents, the costs of uncovering and replacing such Work shall be deducted from amounts then or thereafter due the Contractor and, if such amounts are insufficient to cover such costs, then the Contractor shall pay any such deficiency promptly following written demand by the Owner.

16.02 Correction of Work.

- A. The Contractor shall promptly correct any Work which is defective or otherwise fails to conform to the requirements of the Contract Documents (the "Rejected Work"), whether observed before or after Substantial Completion and whether or not fabricated, installed or completed. The Contractor shall bear all costs associated with the correction of any Rejected Work, including additional testing and inspections and compensation for the Architect's services and expenses made necessary thereby.
- B. The Contractor's obligation to correct defective or non-complying Work shall continue for a period of one (1) year after the date of Substantial Completion. The time period of this obligation may be extended by terms of warranties or other circumstances where required by law. The Contractor shall correct the Work in accordance with Paragraph 16.02(A) promptly following receipt of a written request by the Owner.
- C. Nothing contained herein shall affect the Owner's right to correct nonconforming Work pursuant to Paragraph 12.05(D) hereof.

16.03 Acceptance of Defective or Nonconforming Work.

The Owner reserves the right to accept any defective or noncomplying Work; provided, however, that in such event the Contract Sum shall be reduced by an appropriate and equitable amount to account for such defect or noncompliance. Such adjustment shall be effected whether or not final payment has been made pursuant to Paragraph 12.05 hereof.

PART 17 - CONTRACTOR'S DEFAULT & TERMINATION

17.01 Owner's Right and Notice.

- A. The parties agree that:
 - 1. if the Contractor fails to begin the Work when required to do so; or
 - 2. if, at any time during the progress of the Work, the Contractor is not prosecuting the Work with reasonable speed and diligence, or is delaying the Work unreasonably or unnecessarily; or
 - 3. if the force of workmen or the quality or quantity of material furnished is not sufficient to insure completion of the Work within the Contract Period and in strict accordance with the Contract Documents; or
 - 4. if the Contractor fails to make prompt payments to suppliers or to Subcontractors for Work performed in connection with the Contract; or
 - 5. if the Contractor fails to cooperate in good faith with the Owner and/or any Separate Contractor, or in any manner of substance fails to observe the provisions of this Contract; or

6. if any of the Work, machinery, or equipment is defective and is not replaced as herein provided;

then the Architect shall certify such fact or condition to the Owner and the Owner, without prejudice to any other rights or remedies it may have hereunder, shall have the right to declare the Contractor in default in whole or in part. In the event the Owner elects to declare the Contractor in default, the Owner shall notify the Contractor and its Sureties by written Notice describing the nature of the default and providing the Contractor a right to cure such default within three calendar days after the date of the Notice, or within such longer period as the Owner, in its sole and absolute discretion, may prescribe. In the event the default is not cured within the time period specified by the Owner, the Owner shall have the right to take any actions necessary to correct or complete the Work, as set forth in Paragraph 17.03 hereof.

17.02 Contractor's Duty upon Default. Upon Notice from the Owner that he is in default hereunder, the Contractor shall discontinue all further operations in connection with the Work, or such specified part thereof, and shall immediately vacate the Site, or such specified part thereof, leaving untouched all plant, materials, equipment, tools, supplies and job site records, and shall cooperate fully with the Owner by providing the Owner with any keys or access devices used to gain entry to the Site.

17.03 Completion of Work after Default.

- A. If the Contractor defaults or neglects to perform the Work in accordance with the Contract Documents and fails within a three (3) day period after receipt of written Notice from the Owner to commence and continue correction of such default or neglect, the Owner may, without prejudice to the other rights the Owner may have, correct such defaults or deficiencies by such means and in such manner, by contract with or without public letting, or otherwise as it may deem advisable, utilizing for such purpose without additional cost to the Owner such of the Contractor's plant, materials, equipment, tools and supplies remaining on the Site, and also such Subcontractors as it may deem advisable and may take any or all of the following actions:
 1. delete part or parts of the Work from the Contract and contract to have it performed by others;
 2. supplement the Contractor's work force;
 3. withhold payments due the Contractor and use such payments to satisfy any claims for monies owed by the Contractor in connection with the Project, in accordance with Paragraph 12.03(B);
 4. replace or repair any defective Work, machinery or equipment;
 5. terminate the Contractor.

- B. The Contractor and his Sureties shall bear all costs associated with completing or correcting the Work, including without limitation, the cost of reletting, the amount of any liquidated damages, and any and all costs incurred in connection with the actions listed in this Paragraph 17.03. Any costs incurred in connection with completing or correcting the Work shall be deducted from the amounts then or thereafter due the Contractor. In the event such amounts are not sufficient to cover the costs incurred in connection with completing or correcting the Work, the Contractor and its Surety shall pay to the Owner the amount of any deficiency.

17.04 Partial Default. In the event the Owner declares the Contractor in default in accordance with the provisions of Paragraph 17.01 hereof with respect to a portion of the Work, the Contractor shall discontinue such portion of the Work declared in default, shall continue performing the remainder of the Work in strict conformity with the terms of the Contract and shall not hinder or interfere with any other contractor or persons whom the Owner may engage to complete the Work for which the Contractor was declared in default. The costs of such completion shall be paid by the Contractor and its Sureties as provided in Paragraph 17.03(B).

17.05 Owner's Right to Terminate for Cause. The parties agree that:

- A. if legal proceedings have been instituted by others than the Owner in such manner as to interfere with the progress of the Work and to potentially subject the Owner to the peril of litigation or outside claims; or
- B. if the Contractor is adjudicated bankrupt or makes an assignment for the benefit of creditors; or
- C. if in any proceeding instituted by or against the Contractor, an order is made or entered granting an extension of the time of payment, composition, adjustment, modification, settlement or satisfaction of its debts or liabilities; or
- D. if a receiver or trustee is appointed for the Contractor or the Contractor's property; or
- E. if the Contract or any part hereof is sublet without the prior written consent of the Owner; or
- F. if the Contract or any rights, monies, or claims hereunder are assigned in whole or in part by the Contractor, otherwise than as herein specified; or
- G. if the Work to be done under this Contract is abandoned; or
- H. if the Contractor fails to cure any default declared pursuant to Paragraph 17.01 within the time period specified therefor;

then such fact or condition shall be certified by the Architect to the Owner and thereupon, without prejudice to any other rights or remedies the Owner may have, the

Owner shall have the right to terminate the Contract immediately upon written Notice to the Contractor.

If, after issuance of a Notice of termination of the Contract under the provisions of this Paragraph 17.05, it is determined for any reason that the Contractor was not in default under the provisions of Paragraph 17.05(A) through 17.05(H), or that cause for such termination otherwise did not exist under the provisions of Paragraph 17.05(A) through 17.05(H), then the rights and obligations of the parties shall be the same as if the Notice of termination had been delivered under the provisions of Paragraph 17.06 hereof; provided, however, that the Contractor in such event shall be deemed to have received seven days prior written Notice of termination. Any compensation thereupon owing to the Contractor under Paragraph 17.06 shall be offset by the cost of remedying any defective Work performed by or on behalf the Contractor. In no event shall the Contractor be entitled to recover anticipated profits or consequential damages of any kind in connection with any termination of these Contract Documents.

- 17.06 Owner's Right to Terminate for Convenience. The Owner shall have the right to terminate this Contract at its own convenience for any reason by giving seven days prior written Notice of termination to the Contractor. In such event, the Contractor shall be paid an amount equal to the lesser of. (1) the actual cost of any Work, labor or materials actually performed or in place and the actual cost of any labor, equipment or materials ordered in good faith which could not be canceled, less the salvage value thereof, plus 10%; or (2) the pro rata percentage of completion based upon the Schedule of Values (as described in Paragraph 12.02) plus the actual cost of any labor, equipment or materials ordered in good faith which could not be canceled, less the salvage value thereof. Each subcontract shall contain a similar termination provision for the benefit of the Contractor and the Owner. The Contractor shall not be entitled to receive anticipated profits on unperformed portions of the Work or consequential damages. The Owner and its authorized representatives shall have the right in accordance with the provisions of Paragraph 9.05 to verify any amounts claimed by the Contractor to be due under this Paragraph.

PART 18 - MISCELLANEOUS SPECIAL CONDITIONS

18.01 Laying Out Work.

- A. The Contractor shall, upon entering the Site of the Project for the purpose of commencing the Work, locate all general reference points and take all such action as is necessary to prevent their destruction; lay out the Work, except where otherwise required by Contract Documents, and be responsible for all lines, elevations, measurements of buildings, grading, paving, utilities and other Work executed by him under the Contract. The Contractor shall exercise proper and reasonable care in verifying figures shown on the Drawings before laying out the Work and will be held responsible for any error resulting from its failure to exercise such care.
- B. The Contractor shall establish permanent bench marks referenced to finish floor lines. Contractor shall employ a licensed surveyor who shall, after masonry

corners have been set, certify over its seal to the Owner that the building is located properly in relation to property lines and in accordance with Drawings.

18.02 Inspection and Approval of Site Improvements.

- A. On-site and off-site improvements shall conform to the County of Fairfax Design and Construction Standards.
- B. The Contractor shall notify the Owner's field representative three days prior to the beginning of all street or storm sewer work.
- C. All work shall be staked out by a certified surveyor and cut sheets shall be submitted to the Department of Public Works with a copy to the Owner's Field Representative.
- D. The Contractor shall perform the Work in such a manner as to prevent the washing of any soil, silt or debris onto adjacent properties and he shall be held responsible for any damage resulting from its failure to prevent the washing of such materials upon adjacent properties for a period of one year after final acceptance of the completed Work.

18.03 Partial Use or Occupancy. The Contractor shall permit the Owner to use and occupy any completed or partially completed portion or unit of the Project prior to final acceptance by the Owner.

The Owner's use and occupancy shall not constitute final acceptance of the Work and shall in no event relieve the Contractor of its obligation to maintain the insurance coverage described in Part 14 hereof.

18.04 Release of Bonds. The Surety providing the bonds in connection with the Project shall obtain a written release from the Owner prior to the expiration date of the bonds.

18.05 No Asbestos. No materials or equipment containing asbestos shall be utilized in the construction of the Project.

END OF SECTION

SECTION 01040

SUPERVISION AND COORDINATION

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and General Provisions of Contract including General Conditions and other Division 1 Specification Sections, apply to the work of this Section.

1.02 RELATED WORK

- A. Section 01153: Change Order Procedures.
- B. Section 01340: Shop Drawings, Product Data and Samples.
- C. Section 01410: Testing Laboratory Services.
- D. Section 01720: Project Record Information.

1.03 DESCRIPTION OF WORK

- A. (New High Schools and High School Renovations Only): Contractor shall employ and pay for the services of a full time, qualified Project Manager, located at the project site, dedicated solely to the project, for the duration of the construction work.
- B. This contract will require the Contractor to utilize two shifts for part or all of the project. The Contractor shall employ and pay for the services of two full time, qualified Project Superintendents (one for each shift) for the duration of the construction work.
- C. Qualifications of Project Manager and Project Superintendents:
 - 1. Experienced in field work of the type required for this Project.
 - 2. Submit name and address to Architect/Engineer.

1.04 PROJECT MANAGER'S RESPONSIBILITIES

- A. Implement Change Order procedures in accordance with Section 01153.
- B. Assist Project Superintendent(s) with schedules, material deliveries and subcontractor coordination and scheduling.
- C. Participate in Progress Meetings

1.05 PROJECT SUPERINTENDENT RESPONSIBILITIES

- A. Coordinate the work of the Contractor and the Subcontractors for the work of all trades.
- B. Coordinate the schedules of the Contractor, the Subcontractors and materials and equipment suppliers.
- C. Verify timely deliveries of products for installation by the trades.
- D. Verify that labor and materials are adequate to maintain schedules.
- E. Conduct conferences and maintain communications with Subcontractors, suppliers, and other concerned parties as necessary to:
 - 1. Maintain coordination and schedules.
 - 2. Resolve matters in dispute.
- F. Participate in Project Meetings.
- G. Report progress of work. Submit daily report to Owner's Representative listing number and type of work force and work in progress.
- H. Recommend needed changes in Schedules.
- I. Assist in compiling and assembling Project Record Information.
- J. Observe required testing. Maintain a record of tests including:
 - 1. Testing agency and name of inspector.
 - 2. Subcontractor.
 - 3. Manufacturer's representative present.
 - 4. Date and time of testing.
 - 5. Type of product or equipment.
 - 6. Type of test, and results.
 - 7. Retesting required.
- K. Verify that Subcontractors maintain accurate record documents.
- L. Attend all punch list inspections.

1.06 SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

- A. Prior to submittal, review for compliance with Contract Documents. Contractor shall stamp submittals approving them for materials, fit and coordination, prior to submission to Architect.
- B. Check field dimensions and clearance dimensions.
- C. Check relation to available space.
- D. Check anchor bolt settings.
- E. Review the effect of any changes on the work of other contracts or trades.
- F. Check compatibility with equipment and work of other trades.

END OF SECTION

SECTION 01050
FIELD ENGINEERING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and General Provisions of Contract, including General Conditions and other Division 1 Specification Sections, apply to the Work of this Section.

1.02 DESCRIPTION

- A. Provide and pay for field engineering services required for the Project.
- B. Provide and pay for survey work required in execution of the Project.
- C. Provide and pay for civil, structural or other professional engineering services specified, or required to execute Contractor's construction methods.
- D. Owner's Representative will identify existing control points and property line corner stakes indicated on the Drawings as required.

1.03 RELATED WORK

- A. General Conditions: Section 00700
- B. Summary of Work: Section 01010
- C. Storm/sanitary sewers and water mains: Section 02721
- D. Current "Fairfax County public facilities manual"

1.04 QUALIFICATIONS OF SURVEYOR OR ENGINEER

- A. Qualified engineer or registered land surveyor, acceptable to Contractor and Owner.

1.05 SURVEY REFERENCE POINTS

- A. The Owner will provide a benchmark on the site and property corners or references for the location and stakeout of this work.
- B. Locate and protect control points prior to starting site work, and preserve all permanent reference points during construction.
- C. Make no changes or relocations without prior written notice to Architect.

- D. Report to Architect when any reference point is lost or destroyed or required relocation because of necessary changes in grades or locations.
- E. Require surveyor to replace Project Control points which may be lost or destroyed at no cost to the Owner.

1.06 ACCURACY OF EXISTING TOPOGRAPHY

- A. The existing contours shown on the site plans are correct within one half a contour interval (1') on at least eighty percent (80%) of the site, and contours on the remaining twenty percent (20%) are in error by no more than 1 contour interval (2').

1.07 STAKES & GRADES

- A. The Contractor shall set rough grade stakes in sufficient number so that the site can be accurately graded to meet the intent of the site plan. Stakes for final grading will be set and topsoil of the required thickness shall be spread to the required grade. Stakes, with appropriate cut sheets, shall be set for all sanitary and storm sewers on all curbs and gutters. The stakes shall be set on minimum 50-foot stations and at all odd pluses.
- B. Upon completion of subgrade excavation and embankment in all areas to be paved, the subgrade elevation may be checked by the Owner. Grade stakes indicating the finished compacted surface of the base course shall be set, prior to installing base material. The Contractor shall save all such stakes. Upon completion of all work, and before acceptance of same, proper tests for determination of compaction, gradation, thickness, etc., of base and surface courses shall be made by the Owner.

1.08 EASEMENTS

- A. The Contractor shall verify the acquisition of all off-site easements prior to the start of any off-site construction. This shall be done by contacting the Architect.
- B. The Contractor shall restore all off-site easements in accordance with the terms of the easement agreement. He shall clean up all rubbish and surplus materials, and leave the easement in presentable shape at least comparable with the condition that it was before the construction work began. Upon completion of said restoration, the Contractor shall obtain a written release from the property owner granting the easement.
- C. Information as to existing underground construction and sub-surface conditions such as rock, unstable material or ground water is shown in accordance with the best available data. All must be investigated or verified in the field prior to or upon construction by the Contractor. Location and elevation of points of pickup or discharge of sanitary or storm sewage and surface water and inverts for

sanitary or storm connections shall be verified prior to construction by the Contractor.

- D. The existence and location of underground utilities and/or other construction indicated on the plans are not guaranteed and shall be investigated and verified in the field by the Contractor. Trenches, in which these utilities and/or construction are placed, are not guaranteed as to degree of compaction and shall be investigated and verified in the field by the Contractor. If these trenches are not up to present standards of 95% compaction, they shall be compacted to 95% compaction prior to or upon construction by the Contractor. Work in the vicinity of existing structures and utilities shall be carefully done by hand. The Contractor shall be held responsible for any damage to and for maintenance and protection of existing facilities and structures.
- E. Any existing structures, services or other appurtenances located in or affected by the construction of the work herein shall be adjusted, moved or relocated as required. The work shall be performed by the Contractor.
- F. Utility poles, lines and gas mains that are the property of the utility companies will be relocated when required by others upon reasonable advance notification.

1.09 RECORDS

- A. On completion of foundation walls and major site improvements prepare a certified survey showing all dimensions, locations, angles and elevations of construction.
- B. Storm and Sanitary "As-Builts:" The Contractor shall provide the Owner with "As-Built" storm and sanitary sewer plans traced on mylar, showing plan and profile, both in ink. The plans shall be prepared by a duly licensed engineer or land surveyor and certified by him as accurately showing the rims, inverts, and percents of grade of the sewers and shall meet all other requirements of Fairfax County for "As-Built" storm and sanitary sewer plans. Submit to Fairfax County Department of Public Works and Environmental Services (DPWES) for approval.
- C. Grading "As-Built:" Upon completion of all site work and improvements, the Contractor shall so notify the Owner in writing stating that the work has been completed in accordance with the plans and specifications. The Contractor shall prepare at his expense "As-Built" drawings of the site work. Final acceptance of the on-site and off-site improvements shall be contingent upon the "As-Built" drawings showing substantial compliance with the contract documents. The Contractor shall pay for subsequent "As-Built" drawings required by his noncompliance with the contract documents.

1.10 SUBMITTALS

- A. Submit name and address of Surveyor or professional engineer to Architect.

- B. On request of Architect submit documentation to verify accuracy of field engineering work.
- C. Submit certificate signed by registered engineer or surveyor certifying that elevations and locations of improvements are in conformance or non-conformance with Contract Documents.
- D. Rough grade cut sheets shall be submitted to the Department of Public Works for approval 24 hours prior to the start of construction. Furnish to Owner's Field Representative a copy of the approved cut sheets.

END OF SECTION

SECTION 01091

APPLICABLE STANDARDS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and General Provisions of Contract, including General Conditions and other Division 1 through Division 16 Specification Sections, apply to this Section.

1.02 RELATED WORK

- A. Specific naming of codes or standards occurs in other sections of these specifications.

1.03 DESCRIPTION

- A. Throughout the Contract Documents, reference is made to codes and standards which establish qualities and types of workmanship and materials, and which establish methods for testing and reporting on the pertinent characteristics.
- B. Where materials or workmanship are specified in the Contract Documents to meet or exceed the specifically named code or standard, it is the Contractor's responsibility to provide materials and workmanship which meet or exceed the specifically named code or standard.
 - 1. It is the Contractor's responsibility, when so required by the Contract Documents or by written request from the Architect, to provide all required proof that the materials or workmanship, or both, meet or exceed the requirements of the specifically named code or standard. Such proof shall be in the form requested in writing by the Architect, and generally will be required to be copies of a certified report of tests conducted by a testing agency approved for that purpose by the Architect.
- C. The most current adopted edition of the individual standards or test procedures, published by the associations establishing applicable standards, and referenced throughout the Contract Documents, shall apply. Exception: The edition of the VUSBC governing the Contract Documents shall be that edition which was in force for purposes of permit review and issuance by Fairfax County Department of Public Works and Environmental Services (DPWES).

1.04 QUALITY ASSURANCE

- A. Familiarity with pertinent codes and standards: In procuring all items used in this Work, it is the Contractor's responsibility to verify the detailed requirements of the specifically named codes and standards and to verify that the items procured for use in this Work meet or exceed the specified requirements.

- B. Rejection of non-complying items: The Architect reserves the right to reject items incorporated into the Work which fail to meet the specified minimum requirements. The Architect further reserves the right, and without prejudice to other recourse the Architect may take, to accept non-complying items subject to an adjustment in the Contract Amount as approved by the Architect and the Owner.

1.05 APPLICABLE INDUSTRY AND CODE REFERENCE STANDARDS

- A. Applicable standards listed in the Specifications include, but are not necessarily limited to, standards promulgated by the following agencies and organizations:
1. AAMA - American Architectural Manufacturers Association, 1827 Walden Office Square, Suite 550, Schaumburg, IL 60173-4268. 1-847-303-5664.
 2. AASHTO - American Association of State Highway and Transportation Officials, 444 N. Capitol St., N.W., Suite 249, Washington, D.C. 20001. 1-202-624-5800.
 3. ACI - American Concrete Institute, 38800 Country Club Drive, Farmington Hills, MI 48333-9094. 1-248-848-3700.
 4. AGA - American Gas Association, 400 N. Capitol Street., N.W., Washington, D. C. 20001. 1-800-841-8430.
 5. AISC - American Institute of Steel Construction, Inc., One East Wacker Drive, Suite 3100, Chicago, IL 60601-2001. 1-312—670-2400.
 6. ICC/ANSI A117.1-2003 - American National Standards Institute, Inc. 25 West 43rd Street, Fourth Floor, New York, NY 10036. 1-212-642-4900.
 7. ASTM - American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959. 1-610-832-9585.
 8. American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc., (ASHRAE), 1791 Tullie Cir., N.E., Atlanta, GA 30329. 1-800-5-ASHRAE.
 9. AWI - Architectural Woodwork Institute, 1952 Isaac Newton Square W., Reston, VA 20190. 1-703-733-0600.
 10. AWS - American Welding Society, Inc., 550 N.W., Lejuene Road, Miami, FL 33126. 1-800-433-9353.
 11. BIA - Brick Industry Association, 11490 Commerce Park Drive, #300, Reston, VA 22091-1525. 1-703-620-0010.

12. BHMA – Builder’s Hardware Manufacturers Association, 355 Lexington Ave., 17th Floor, New York, NY 10017. 1-212-297-2122.
13. CRI – Carpet and Rug Institute, 310 Holiday Ave., P.O. Box 2048, Dalton, GA 30722. 1-800-882-8846.
14. CRSI - Concrete Reinforcing Steel Institute, 933 North Plum Grove Road, Schaumburg, IL 60173-4758. 1-847-517-1200.
15. CS - Commercial Standard of NIST, U.S. Department of Commerce, Government Printing Office, Washington, D.C. 20402.
16. DHI – Door and Hardware Institute, 14150, Newbrook Dr., Suite 200, Chantilly, VA 20151-2223. 1-703-222-2410.
17. Glass Association of North America, 2945 S.W. Wanamaker Dr., Suite A, Topeka, KS 66614. 1-785-271-0208.
18. International Building Code, International Code Council, Inc., in cooperation with Building Officials and Code Administrators International, Inc., 4051 West Flossmoor Road, Country Club Hills, IL 60478-5795, 1-800-214-4321 (as incorporated into the Virginia USBC).
19. MFMA – Maple Flooring Manufacturers Association, 60 Revere Dr., Suite 500, Northbrook, IL 60062. 1-847-480-9138.
20. NAAMM - The National Association of Architectural Metal Manufacturers, 8 South Michigan Avenue, Suite 100, Chicago, IL 60603. 1-312-332-0405.
21. NCMA - National Concrete Masonry Association, 2302 Horse Pen Road, P.O. Box 781, Herndon, VA 20171-3499. 1-703-713-1900.
22. NEC - National Electrical Code (See NFPA).
23. NEMA - National Electrical Manufacturers Association, 660 White Plains Rd., Suite 600, Tarrytown, NY 10591. 1-914-524-8650.
24. NFPA - National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02269. 1-800-344-3555.
25. NIST - National Institute of Standards and Technology, Office of Standards Service, 100 Bureau Dr., Gaithersburg, MD 20899. 1-301-975-2758.
26. NRCA - National Roofing Contractors Association, 10255 West Higgins Road, Suite 600, Rosemont, IL 60018-5607. 1-847-299-9070.

27. NSF - National Sanitation Foundation, 3475 Plymouth Road, Ann Arbor, MI 48105.
28. NTMA – National Terrazzo and Mosaic Association, 110 E. Market St., Suite 200A, Leesburg, VA 20176. 1-800-323-9736.
29. OSHA - Occupational Safety and Health Administration, US Dept. of Labor/OSHA, 200 Constitution Avenue, N.W., Washington, D.C. 20210. 1-202-693-1999.
30. PCA - Portland Cement Association, 5420 Old Orchard Road, Skokie, IL 60077-1083. 1-847-966-6200.
31. SMACNA - Sheet Metal and Air-Conditioning Contractors Association International, 4201 Lafayette Center Dr., Chantilly, VA 20151. 1-703-803-2980.
32. SDI - Steel Deck Institute, P.O. Box 25, Fox River Grove, IL 60021-0025. 1-847-458-4647.
33. SDI - Steel Door Institute, 30200 Detroit Road, Cleveland, OH 44145-1967. 1-440-899-0010.
34. SJI - Steel Joist Institute, 3127 10th Avenue, North, Myrtle Beach, South Carolina 29577-6760. 1-843-626-1995.
35. SSPC - Steel Structures Painting Council, 40 24th Street, 6th Floor, Pittsburgh, Pennsylvania 15222-4656. 1-412-281-2331.
36. TCA - Tile Council of America, Inc., 100 Clemson Research Boulevard, Anderson, SC 29625. 1-864-646-TILE.
37. UL - Underwriters Laboratories, Inc., 333 Pfingsten Road, Northbrook, Illinois 60062-2096. 1-877-854-3577.
38. VDOT - Virginia Department of Transportation, P.O. Box 256, 2400 Pine Forest Drive, Colonial Heights, Virginia 23834.
39. Federal Specs and Federal Standards - General Services Administration, Specification Section, Room 6654, 7th & D Streets S.W., Washington, D.C. 20407.
40. VUSBC - Virginia Uniform Statewide Building Code.
41. 2010 ADA Standards for Accessible Design. Department of Justice 800-514-0301

42. Fairfax County Special Inspections Program: Special Inspections: Implementation in Fairfax County – Current Edition (SIFC- Current Edition), as administered by the Fairfax County Critical Structures Section, Department of Public Works and Environmental Services.
43. Fairfax County “Public Facilities Manual” (PFM).
44. Commonwealth of Virginia, “Erosion and Sediment Control Handbook.”
45. VA CHPS-Virginia Collaborative for High Performance Schools, 2443 Fair Oaks Blvd. #259, Sacramento, CA 95825.

1.06 JOB SITE ACCESS

- A. The Contractor shall provide one (1) copy of all reference standards at the job site for review by the Architect and Owner's Representative.

END OF SECTION

SECTION 01152

APPLICATIONS FOR PAYMENT

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

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

1.02 DESCRIPTION

- A. Submit Applications for Payment to Architect in accordance with the schedule established by Conditions of the Contract and Agreement Between Owner and Contractor.

1.03 RELATED WORK

- A. Lump Sum Price: Agreement Between Owner and Contractor.
- B. Progress Payments, Retainages, and Final Payment. General Conditions, Section 00700.
- C. Allowances: Section 01020.
- D. Construction Progress Schedules: Section 01310.
- E. Schedule of Values: Section 01370.
- F. Contract Close-out: Section 01700.

1.04 FORMS

- A. Application for each progress payment shall be prepared using the standard Fairfax County Public Schools Forms (copy enclosed), which include the following:
 - 1. Requisition Form
 - 2. Stored Material Log
 - 3. Change Order Log
 - 4. Certification Form

1.05 PREPARATION OF APPLICATION FOR EACH PROGRESS PAYMENT

- A. Fill in required information, complete list of all component items of Work, fill in columns for all line items included in the Schedule of Values. Round all values off to the nearest dollar.
- B. Requisition Form: Describe each line item and list scheduled value, previous completed value, value of work for the current application, total value to date, and balance of uncompleted work. Calculate percentage of completion. Provide a total for all line items for each column.
- C. Stored Material Log: Describe all stored materials, listing previous value, received value for the application period, and installed value for the application period. List the total of these values (current value) for each item. Provide a total for all columns, less 10% retainage.
 1. The Contractor may bill for materials stored off the site with the following provisions:
 - a. Provide a copy of manufacturers invoice indicating nature of materials and amount of invoice.
 - b. Indicate location of materials stored.
 - c. Materials shall be marked to indicate that they are the property of Fairfax County Public Schools, and to indicate their destination.
 - d. Provide proof of sufficient insurance coverage to cover the value of the materials stored. The policy or certificate of insurance shall be in the name of Fairfax County Public Schools and must be submitted prior to the submission of the requisition. The Owner reserves the right to inspect the materials stored off the site prior to processing the requisition.
- D. Change Order Log: Identify and describe all Change Orders, Change Proposals and prepared Modification Requests. List total value, previous value, value for application period, total value to date, and balance of uncompleted work. Provide a total for all columns, less 5% retainage.
- E. Complete all items in item 1, "Analysis of Work Performed" on the certification form.
- F. Execute certification form with the signature of a duly authorized officer of the Contractor on all copies of the completed form.
- G. Submit 5 copies of the application for payment.

1.06 PROGRESS PAYMENTS

- A. The Owner will make a Progress Payment to the Contractor on the basis of a duly certified and approved estimate of the work performed during the preceding calendar month under this Contract, but to insure the proper performance of this contract, the Owner will retain five percent (5%) of the value of change orders and ten percent (10%) of the portion of the Contract Sum properly allocable to materials and equipment suitably stored at or off the site until final completion and acceptance of all work included in the Contract.
- B. As the Work progresses, the Owner may in its sole and absolute discretion decide to reduce the retainage on a Project where such is found to be in the best interests of the school division.

1.07 PREPARATION OF APPLICATION FOR FINAL PAYMENT

- A. Fill in Application Form as specified for progress payments.
- B. Use continuation sheet for presenting the final statement of accounting as specified in Section 01700: Contract Close-out.

1.08 SUBMITTAL PROCEDURE

- A. Submit Applications for Payment on a monthly basis or as stipulated in the Owner Contractor agreement.
- B. Submit for review and obtain certification signature of the School Board Inspector on all completed copies of the application. The Contractor shall provide supplementary information to facilitate review of application if requested.
- C. Upon review and certification by the School Board Inspector, submit all copies to the Architect. Upon review and certification by the architect, all copies shall be forwarded to the School Board representative.
- D. Upon review and certification by the School Board representative, the application shall be forwarded for payment.
- E. Upon rejection by any certifying party, the Contractor shall make corrections or adjustments required by the rejection, and shall be required to obtain certification of the corrected application by all parties.

END OF SECTION

CONTRACTOR LETTERHEAD

FAIRFAX COUNTY PUBLIC SCHOOLS REQUISITION

PROJECT:
DATE:
REQUISITION #

1. ANALYSIS OF WORK PERFORMED

Table with 4 columns: Item (A-H), Description, Percentage, and Value. Rows include: (A) TOTAL COST OF WORK PERFORMED TO DATE, (B) LESS AMOUNT RETAINED, (C) NET AMOUNT EARNED ON CONTRACT TO DATE, (D) MATERIALS STORED (ATTACH SCHEDULE), (E) ADD OR DEDUCT CHANGE ORDERS (ATTACH SCHEDULE), (F) TOTAL AMOUNT EARNED ON CONTRACT TO DATE, (G) LESS PREVIOUS PAYMENTS, (H) BALANCE DUE THIS PAYMENT.

2. CERTIFICATION OF CONTRACTOR

ACCORDING TO THE BEST OF MY KNOWLEDGE AND BELIEF, I CERTIFY THAT ALL ITEMS AND AMOUNTS SHOWN ON THE FACE OF THIS REQUISITION FOR PAYMENT ARE CORRECT; THAT ALL WORK HAS BEEN PERFORMED AND/OR MATERIAL SUPPLIED IN FULL ACCORDANCE WITH THE REQUIREMENTS OF THE REFERENCED CONTRACT, AND/OR DULY AUTHORIZED DEVIATIONS, SUBSTITUTIONS, ALTERATIONS, AND/OR ADDITIONS; THAT THE FOREGOING IS A TRUE AND CORRECT STATEMENT OF THE CONTRACT ACCOUNT UP TO AND INCLUDING THE LAST DAY OF THE PERIOD COVERED BY THIS REQUISITION; THAT NO PART OF THE "BALANCE DUE THIS PAYMENT" HAS BEEN RECEIVED AND THAT I WILL MAKE TIMELY PAYMENT FROM THESE PROCEEDS TO MY SUBCONTRACTORS AND/OR SUPPLIERS IN ACCORDANCE WITH MY CONTRACTUAL ARRANGEMENTS WITH THEM.

BY _____ CONTRACTOR _____ SIGNATURE OF AUTHORIZED REPRESENTATIVE
_____ 19 _____ TITLE _____

3. CERTIFICATION OF SCHOOL BOARD INSPECTOR

I CERTIFY THAT I HAVE CHECKED AND VERIFIED THE ABOVE AND FOREGOING REQUISITION FOR PAYMENT DURING MY REGULAR INSPECTION.

_____ SCHOOL BOARD INSPECTOR _____ DATE

4. CERTIFICATION OF ARCHITECT

I CERTIFY THAT I HAVE CHECKED AND VERIFIED THE ABOVE AND FOREGOING REQUISITION FOR PAYMENT; THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF IT IS A TRUE AND CORRECT STATEMENT OF WORK PERFORMED AND/OR MATERIAL SUPPLIED BY THE CONTRACTOR; THAT ALL WORK AND/OR MATERIAL INCLUDED IN THIS REQUISITION HAS BEEN INSPECTED BY ME AND/OR BY DULY AUTHORIZED REPRESENTATIVE OR ASSISTANTS AND THAT IT HAS BEEN PERFORMED AND/OR SUPPLIED IN FULL ACCORDANCE WITH REQUIREMENTS OF THE REFERENCED CONTRACT; AND THAT PAYMENT CLAIMED BY THE CONTRACTOR IS CORRECTLY COMPUTED ON THE BASIS OF WORK PERFORMED AND/OR MATERIAL SUPPLIED TO DATE.

SIGNED _____ ARCHITECT _____ DATE

5. PRE-PAYMENT CERTIFICATION BY FAIRFAX COUNTY SCHOOL BOARD

I CERTIFY THAT I HAVE CHECKED AND VERIFIED THIS REQUISITION AND THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, IT IS A TRUE AND CORRECT STATEMENT OF WORK PERFORMED AND/OR MATERIAL SUPPLIED BY THE CONTRACTOR; THAT ALL WORK INCLUDED IN THIS ESTIMATE HAS BEEN INSPECTED AND THAT IT HAS BEEN PERFORMED AND OR SUPPLIED IN FULL ACCORDANCE WITH REQUIREMENTS OF THE CONTRACT.

FAIRFAX COUNTY SCHOOL BOARD

SIGNED _____ DATE

SECTION 01153
CHANGE ORDER PROCEDURES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and General Provisions of Contract, including General Conditions and other Division 1 Specifications Section, apply to this Section.

1.02 RELATED WORK

- A. General Conditions of the Contract: Section 00700.
- B. Section 01020: Contingency Allowance.
- C. Section 01152: Applications for Payment.
- D. Section 01370: Schedule of Values.
- E. Section 01630: Substitutions

1.03 WORK DESCRIPTION

- A. Promptly implement Change Order procedures:
 - 1. Provide full written data required to evaluate changes.
 - 2. Maintain detailed records for work done on a time-and-material/force account basis.
 - 3. Provide full documentation to Architect/Engineer on request.
- B. Contractor and Owner will designate in writing the person who is authorized to execute Change Orders.

1.04 DEFINITIONS

- A. Change Order: See Section 00700, General Conditions.
- B. Proposed Modification: See Section 00700, General Conditions.

1.05 PRELIMINARY PROCEDURES

- A. Owner or Architect/Engineer may initiate changes by submitting Proposed Modification to Contractor. Request will include:

1. Detailed description of the Change, Products, and location of the change in the Project.
 2. Supplementary or revised Drawings and Specifications.
 3. A specific period of time during which the requested price will be considered valid, which shall be 90 calendar days, unless otherwise stated.
 4. The specific action to be initiated by the Contractor.
 5. The amounts of the unit prices to be:
 - a. Those stated in the Agreement and the Proposal Form.
 - b. Those mutually agreed upon between Owner and Contractor.
- B. Contractor may initiate changes by submitting a written notice to Architect/Engineer, containing:
1. Description of the proposed changes.
 2. Statement of the reason for making the changes.
 3. Statement of the effect on the Contract Sum and the Contract Time.
 4. Statement of the effect on the work.
 5. Documentation supporting any change in Contract Sum or Contract Time, as appropriate.
 6. All claims by the Contractor arising out of or relating to the performance of the work or any termination hereunder shall be made in writing and shall be decided by the Director of the Office of Design and Construction or his designated representative. All claims must be filed with the Office of Design and Construction within five (5) calendar days after sustaining the injury underlying the claim. Failure to comply with this provision shall constitute an absolute waiver of such claim. The Director or the Office of Design and Construction or his designated representative shall issue his written decision within thirty (30) days of his receipt of the written claim which decision shall be final.

1.06 DOCUMENTATION OF PROPOSALS AND CLAIMS

- A. Support each quotation for a lump-sum proposal, and for each unit price which has not previously been established, with sufficient substantiating data to allow Owner and Architect/Engineer to evaluate the quotation.

1. Proposal costs attributable to labor shall be based upon labor rates for each category of personnel. A list of labor rates shall be submitted to the Owner for review and concurrence within 30 calendar days of the Notice to Proceed. See paragraph B2 below for allowable inclusions for establishment of labor rates.
- B. Provide data for lump sum proposals in accordance with the following criteria:
1. The Contractor's proposal shall be itemized and segregated by labor, equipment, and materials for the various components of the Change in the Work (no aggregate labor total will be acceptable) and shall be accompanied by signed proposals of any Subcontractors who shall perform any portion of the Change in the Work and of any entities who shall furnish materials or equipment for incorporation therein.
 2. The portion of the proposal relating to labor, whether by the Contractor's forces or the forces of any of its Subcontractors, shall include anticipated gross wages of Job Site labor, including foremen, who shall be directly involved in the Change in the Work (for such time as they will be so involved), plus payroll costs (including premium costs of overtime labor, if overtime is authorized, Social Security, Federal or State unemployment insurance taxes and fringe benefits required by collective bargaining agreements entered into by the Contractor or any such Subcontractor in connection with such labor).
 3. The portion of the proposal relating to materials may include the reasonable anticipated direct costs to the Contractor or to any of its Subcontractors of materials shall be purchased for incorporation in the Change in the Work, plus transportation and applicable sales or use taxes.
 4. The proposal may further include the Contractor's and any of his Subcontractor's reasonable anticipated equipment rental costs, except small hand tools, in connection with the Change in the Work. For rented equipment an hourly rental rate shall be used which shall be determined by using the monthly rental rates taken from the current edition of the RS Means for construction Equipment and dividing it by 176. An allowance shall be made for operating costs for each and every hour the equipment is actually operating in accordance with the rates listed in the aforesaid RSMMeans database. The Contractor shall be allowed no more than 65% of the rental rate on Contractor owned equipment.
 5. Base Cost is defined as the total of labor, material, and equipment rentals as described in Subparagraphs 1.06B3 and 1.06B4. The actual net cost in money to the Owner for the Change in the Work shall be computed as follows:

- a. Contractor overhead and profit: If the Contractor performs the Change in the Work, his compensation shall be the Base Costs as described above, plus a mark-up of 20% on Base Costs less than or equal to \$10,000. If the Base Costs exceed \$10,000, his compensation shall be the Base Cost, plus a mark-up of 20% on Base Costs less than or equal to \$10,000, and a mark-up of 15% on Base Costs above \$10,000.
 - b. Subcontractor overhead and profit: If the work is performed by a Subcontractor, his compensation shall be the Base Costs as described above plus a mark-up as described in Paragraph 5.a. above for overhead and profit. The Contractor's compensation shall be a mark-up of ten percent (10%) of the Subcontractors Base Costs.
 - c. Sub-subcontractor overhead and profit: If the work is performed by a Sub-subcontractor, his compensation shall be the Base Costs as herein described plus a mark-up as described in paragraph 5.a. above for overhead and profit. The Subcontractors compensation shall be a mark-up of ten percent (10%) of the Sub-subcontractor's Base Costs for his overhead. The Contractor's compensation will be a mark-up of ten percent (10%) of the Sub-subcontractor Base Costs.
6. The mark-up on the cost of labor, materials, and equipment described in Paragraphs 5.a., 5.b., and 5.c. above shall compensate the Contractor, Subcontractor or Sub-subcontractor for all indirect costs associated with or relating to the Change in the Work including, but not limited to, labor and/or equipment inefficiency, acceleration, changes in sequence, delays, overtime, interference, impact on unchanged work, gross receipts tax, superintendent, small tools, reproduction, administration, insurance, unrelated safety requirements, temporary structures and offices, all other general and administrative, home office, and field office expenses.
- a. The mark-up on the cost of labor, materials, and equipment described in Paragraphs 5.b. and 5.c. above shall compensate the contractor or Subcontractor for all indirect costs associated with or relating to the change in the Work including but not limited to, gross receipt tax, superintendent, reproduction, administration, and insurance.
- C. Support each claim for additional costs, and for work done on a time-and-material basis, with documentation as required for a lump-sum proposal, plus additional information:
1. Name of the Owner's authorized agent who ordered the work, and date of the order. Include copies of written authorization when applicable.

2. Dates and times that work was performed, and by whom, verified and signed by Owner's Field Representative.
 3. Time record, summary of hours worked, and hourly rates paid.
 4. Receipts and invoices for:
 - a. Equipment used, listing dates and times of use.
 - b. Products used, including listing of quantities.
 - c. Subcontracts.
- D. Document requests for substitutions of Products as specified in Section 01600.

1.07 PREPARATION OF CHANGE ORDERS

- A. Architect/Owner will prepare each Change Order. Three copies shall be prepared, each with original signature.
- B. Form: Change Order - AIA Document G701.
- C. Change Order will describe changes in the work, both additions, deletions and any voided proposed modifications.
- D. Change Order will provide an accounting of the adjustment in the Contract Sum and in the Contract Time.
- E. Upon completion of work under a Change Order, enter the pertinent changes in Record Documents.

1.08 CHANGE ORDER CONTENTS

- A. Contents of Change Orders will be based on, either:
 1. Architect/Engineer's proposed Modification and Contractor's responsive Proposal as mutually agreed between Owner and Contractor.
 2. Contractor's Proposal for a change as recommended by Architect/Engineer and as mutually agreed between Owner and Contractor.
- B. Owner and Architect/Engineer will sign and date the Change Order as authorization for the Contractor to proceed with the changes.
- C. Contractor will sign and date the Change Order to indicate agreement with the terms therein.

END OF SECTION

SECTION 01200
PROJECT MEETINGS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and General Provisions of Contract, including General Conditions and other Division 1 Specification Sections, apply to the Work of this Section.

1.02 RELATED WORK

- A. Pre-Bid Conferences: Instructions to Bidders.
- B. Summary of Work: Section 01010.
- C. Construction Progress Schedules: Section 01310.
- D. Shop Drawings, Product Data and Samples: Section 01340.
- E. Project Record Information: Section 01720.
- F. Operating and Maintenance Data: Section 01730.

1.03 DESCRIPTION OF WORK

- A. Architect/Owner will schedule and administer pre-construction meetings, periodic progress meetings and specially called meetings throughout the progress of the Work. Architect/Owner will:
 - 1. Preside at meetings.
 - 2. Record the minutes, including all significant proceedings and decisions.
 - 3. Distribute copies of minutes after each meeting to the Contractor, Owner's Office, and Owner's Representative.
- B. Representatives of Contractor, Subcontractors and suppliers attending the meeting shall be qualified and authorized to act on behalf of the entity each represents.
- C. Architect will attend meetings to ascertain that Work is being expedited consistent with Contract Documents and the construction schedules. Consulting Engineers will attend meetings when so directed by the Architect.

1.04 PRE-CONSTRUCTION MEETING

- A. Schedule immediately after date of Notice to Proceed.

- B. Location: A central site, convenient for all parties, as designated by the Owner.
- C. Attendance:
 - 1. Owner's Representative.
 - 2. Architect/Engineers.
 - 3. Contractor's Superintendent.
 - 4. Major Subcontractors.
 - 5. Major Suppliers.
 - 6. Others as appropriate as determined by the Architect and Contractor.
- D. Suggested Agenda (including, but not limited to the following):
 - 1. Distribution and discussion of:
 - a. List of major subcontractors and suppliers.
 - b. Projected Construction Schedules.
 - 2. Critical work sequencing:
 - a. Major equipment deliveries and priorities.
 - 3. Project Coordination.
 - a. Designation of responsible personnel.
 - 4. Procedures and processing of:
 - a. Field decisions.
 - b. Submittals.
 - c. Change Orders.
 - d. Applications for Payment.
 - 5. Adequacy of distribution of Contract Documents.
 - 6. Procedures for maintaining Record Information.
 - 7. Use of premises:

- a. Office, work, and storage areas.
- b. Owner's requirements.
8. Construction facilities, controls and construction aids.
9. Temporary utilities.
10. Safety and first aid procedures.
11. Security procedures.

1.05 PROGRESS MEETINGS

- A. Schedule progress meetings every second week unless it is determined by Architect and Owner that additional meetings are necessary.
- B. Hold specially called meetings as required by progress of the work.
- C. Location of the meetings: The Project field office of the Contractor.
- D. Attendance:
 1. Architect and his professional consultants as needed.
 2. Subcontractors as appropriate. (Major and Active)
 3. Suppliers as appropriate. (Major and Active)
 4. Owner's Representatives
- E. Agenda of each progress meeting.
 1. Review and approval of minutes of previous meeting
 2. Safety Concerns
 3. School Coordination Issues
 4. Submittals
 5. Delivery Schedules
 6. Utility Coordination
 7. Field observations, problems, conflicts
 8. Outstanding RFI's, PM's, CO's

9. Outstanding Punch Lists
10. Uncorrected Deficiencies
11. Status of DPWES, Fire Marshal, Health Inspections
12. Third Party Inspections and Certifications
13. Abatement Issues
14. Any other problems which might impact the schedule
15. Corrective measures and procedures to regain projected schedule
16. Previous two-week look-ahead review
17. Two-week look-ahead
18. Maintenance of quality standards and controls
19. Site Cleanliness
20. Security Issues
21. Project Closeout related items
22. Other pertinent business

END OF SECTION

SECTION 01530

BARRIERS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and General Provisions of Contract, including General Conditions and other Division 1 Specification Sections, apply to the Work of this Section with special attention to the following:
 - 1. Summary of Work: Section 01010.
 - 2. Construction Aids, Enclosures: Section 01520.

1.02 DESCRIPTION OF WORK

- A. Furnish, install and maintain suitable barriers to prevent public entry, and to protect the Work, existing facilities, trees and plants from construction operations; remove when no longer needed or at completion of Work.
- B. Maintenance of Means of Egress
 - 1. The Contractor shall keep open and maintain all existing and temporary fire exits in the existing school during the course of construction.
 - 2. Provide alternate fire exits if necessary including barriers and signs as may be required by local fire official.
 - 3. Contractor shall coordinate and arrange with local fire officials to implement a plan for temporary exiting of existing school building should alternate fire exits be required.

1.03 REQUIREMENTS OF REGULATORY AGENCIES

- A. Comply with Federal, State, and local codes and regulations.

PART 2 - PRODUCTS

2.01 BARRIERS

- A. Materials shall be determined at Contractor's option, of type, size and quantity as appropriate to serve the required purpose.

PART 3 - EXECUTION**3.01 TREE AND SHRUB PROTECTION**

- A. The Contractor shall preserve and protect all existing trees and shrubs on or adjacent to the site which have not been designated for removal or relocation. The Contractor shall be responsible for all unauthorized cutting or damaging of trees and shrubs, including damage due to careless operation of equipment materials stockpiles shall not be permitted within branch spread. All trees susceptible to possible damage by equipment shall be boxed with boards and wire to protect the trunk. Barricades shall be erected to prevent operation of heavy equipment within the drip lines of trees to remain.
- B. Interfering branches shall be removed without injury to the trunks. Care shall be taken by the Contractor in felling trees authorized for removal to avoid any unnecessary damage to trees and shrubs that are to remain in place. Any branches of trees broken during such operations shall be trimmed in accordance with recommended practice. The Contractor shall replace or restore at his own expense all trees and shrubs not protected as required herein that may be destroyed or damaged by construction operations.

3.02 REMOVAL

- A. Completely remove barricades, including foundations, when construction has progressed to the point that they are no longer needed and when approved by the Architect.
- B. Clean and repair damage caused by installation. Fill and grade the areas of the site to required elevations and slopes and clean the area.

END OF SECTION

SECTION 01560
TEMPORARY CONTROLS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and General Provisions of Contract, including General Conditions and other Division 1 Specification Sections, apply to the Work of this Section, with special attention to the following:
 - 1. Construction Aids: Section 01520.
 - 2. Barriers: Section 01530.
 - 3. Cleaning: Section 01710.

1.02 RELATED WORK

- A. Related requirements specified in Division 2: Site Work.

1.03 DESCRIPTION OF WORK

- A. Contractor shall provide and pay for all controls required by Fairfax County Regulations for noise, dust, water, pest and rodent, debris, pollution, traffic and erosion whether indicated in the Contract Documents or not.
- B. All site controls and features shall be constructed and maintained in accordance with the latest edition of the Fairfax County Public Facilities Manual.

1.04 OTHER REGULATIONS

- A. All regulations of the Fairfax County Department of Public Works and Environmental Services.

1.05 OPEN BURNING

- A. Not Permitted

1.06 EROSION CONTROL

- A. The Contractor shall perform the work in such a manner as to prevent the washing of any soil, silt, or debris onto adjacent properties, and shall be held responsible for any damage incurred for a period of one year after date of acceptance of the completed work. This includes construction of berms, siltation pond, collars on structures, etc., or any other device that might aid as a deterrent to erosion.

- B. The Contractor shall construct a siltation trap in natural ground at the base of all perimeter fill slopes. The siltation trap shall be 2 feet deep, 2 feet wide at the bottom with 2:1 side slopes. All excavated material shall be placed on the downhill side of the construction to act as a berm. Minimum one-foot top berms shall be maintained at all times during the construction of perimeter fills.
- C. The Contractor agrees to hold the School Board or any of its agents harmless from any and all liability or damage that may arise out of a violation of the Siltation Ordinance and agrees to indemnify them against any loss.
- D. If at any time during the construction of this property silt goes offsite and if, when this occurs, the site plan and specifications for siltation and erosion control as approved by Fairfax County are not being complied with, then the Contractor shall pay to the Owner the sum of \$5,000 as liquidated damages.
- E. This provision for liquidated damages shall be a continuing one and for each and every occurrence there shall be paid to the Owner the sum of \$5,000 as liquidated damages.

1.07 INSPECTION AND APPROVAL

- A. The County School Board of Fairfax County, Virginia, shall provide an inspector to represent it in the inspections of the work. The presence of this inspector shall in no way be construed by the Contractor as approval of methods or materials that do not conform to the requirements of this Contract.

1.08 TRAFFIC CONTROL

- A. The Contractor shall maintain, at his expense, all boundary, adjacent and/or access roads, regardless of status, classification, or ownership, which he or his subcontractor uses, under permit or otherwise during the course of construction of this project. Maintenance shall be performed as needed to keep the road passable at all times, so as to guarantee that other users of the road can travel thereon with a minimum of inconvenience and interruption of normal routine.
- B. Contractor shall, at his expense, provide and maintain all traffic control devices, signals, barriers, flares, lights, flagmen, etc. required by law when his operations conflict with the movement of traffic, both vehicular and pedestrian, on dedicated streets and highways.

1.09 PERMITS AND FEES

- A. Contractor shall obtain and pay for all permits and fees required for the performance of this Work.

END OF SECTION

SECTION 01700
CONTRACT CLOSEOUT

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and General Provisions of Contract, including General Conditions and other Division 1 Specification Sections, apply to the Work of this Section, with special attention to the following:
 - 1. Section 01010 - Summary of Work.
 - 2. Section 01720 - Project Record Information
 - 3. Section 01730 - Operating and Maintenance Data

1.02 CLOSEOUT PROCEDURES

- A. Comply with procedures stated in General Conditions of the Contract for issuance of Certificate of Substantial Completion.
- B. Owner will occupy designated portion of Project for the purpose of installation of equipment, conduct of business, under provision stated in Certificate of Substantial Completion.
- C. When Contractor considers Work has reached final completion, submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for Architect's inspection.
- D. In addition to submittals required by conditions of Contract, provide submittals required by governing authorities, and submit final statement of accounting giving total adjusted Contract Sum, previous payments, and sum remaining due.
- E. Owner's Representative will issue final change order reflecting approved adjustments to Contract Sum not previously made by Change Order.
- F. Ceiling Concealment Inspection.
 - 1. General: Prior to installation of ceiling panels, an inspection shall be conducted to ascertain the quality and degree of completion of all work above the finished ceiling and to record any discrepancies in the Contract Documents. The inspection shall be conducted by the Owner's Representative and the Contractor and recorded on forms provided by the Owner's Representative.

2. Ceiling Suspension System: Grilles, registers, diffusers, light fixtures, and cut panels around fixtures may be installed prior to the inspection, however, ceiling panels shall not be laid in place until after the inspection and all discrepancies have been corrected.
- G. Wall Close-in Inspection: Prior to wall close-in, an inspection shall be conducted to ascertain the quality and degree of completion of all work concealed within walls and record any discrepancies in the Contract Documents. The inspection shall be conducted by the Owner's Representative, Architect, and the Contractor and recorded by the Contractor on forms provided by the Owner's Representative.
- H. Copies of the Inspection Reports: Reports shall be prepared by the Contractor with copies to the Owner's Representative, Architect, and the Consulting Engineers. The inspection report shall be annotated as each discrepancy is corrected and any discrepancy remaining at the time of the Final Inspection shall be included on the punch list.
- I. Substantial Completion: See Section 00700, General Conditions, paragraph 12.04.
- J. Final Inspection: See Section 00700, General Conditions, paragraph 12.05.

1.03 SYSTEMS DEMONSTRATION

- A. Prior to final inspection, demonstrate operation of each system to Owner's Representative.
- B. Instruct Owner's designated operating and maintenance personnel in operation, adjustment, and maintenance of materials, products, equipment and systems, using the operation and maintenance data as the basis of instruction.

END OF SECTION

SECTION 01740

WARRANTIES AND BONDS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and General Provisions of Contract, including General Conditions and other Division 1 Specification Sections, apply to the Work of this Section, with special attention to the following:
 - 1. Bid Proposal Bonds: Instructions to Bidders.
 - 2. Performance Bond and Labor and Material Payment Bond: Sections 00302 and 00303.
 - 3. General Warranty of Construction: General Conditions, Section 00700 (16.02).
 - 4. Contract Close-out: Section 01700.
 - 5. Operating and Maintenance Data: Section 01730.

1.02 DESCRIPTION OF WORK

- A. Compile specified Warranties and Bonds.
- B. Co-execute submittals when so specified.
- C. Review submittals to verify compliance with Contract Documents.
- D. Assemble and format, include in Record and Information Booklets and submit to Architect for review and transmittal to Owner.

1.03 SUBMITTAL REQUIREMENTS

- A. Assemble warranties, bonds and service and maintenance contracts, executed by each of the respective manufacturers, suppliers and subcontractors.
- B. Number of original signed copies required: See Section 01730, submittal procedures.
- C. Product or work item: List each firm or manufacturer, with name of Principal or representative, address and telephone number.
 - 1. Product Identification: Provide serial and/or model numbers for specific identification of equipment.

- D. Indicate date of beginning of warranty, bond or service and maintenance contract.
- E. Specify duration of warranty, bond, or service maintenance contract.
- F. Provide information for Owner's personnel:
 - 1. Proper procedure in case of failure.
 - 2. Instances which might affect the validity of warranty or bond.
- G. Contractor, name of responsible principal, address, and telephone number.

1.04 FORM OF SUBMITTALS

- A. Format:
 - 1. Size 8 1/2" x 11", punch sheets for 3 ring binder.
 - 2. Fold larger sheets to fit into binders.
 - 3. Incorporate into Record and Information Booklets in accordance with format described in Section 01730.

1.05 EFFECTIVE DATE AND DURATION OF WARRANTIES AND BONDS

- A. The Contractor shall provide and maintain warranties on all completed work performed under this Contract for a period of one (1) year, unless noted otherwise in the individual specification section. The start of the Warranty Period for all completed work shall commence on the date of legal occupancy by the Owner for each separate phase.
- B. All materials, products, equipment, etc. provided under this contract shall carry the manufacturer's standard warranties. Where standard equipment through the manufacturer exceed the periods listed in these specifications, the manufacturer's warranty shall take precedence. **No additional cost extended warranties or service agreements are required under this contract.**

1.06 SUBMITTALS REQUIRED

- A. Submit warranties, bonds, and service and maintenance contracts as specified in the respective sections of Specifications, and as specified by this Section.

END OF SECTION

SECTION 02100
SITE PREPARATION

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and General Provisions of Contract, including General Conditions and Supplementary Conditions and Division 1 through Division 16 Specification Sections, apply to the Work of this Section.

1.02 RELATED WORK

- A. Summary of Work: Section 01010
- B. Barriers: Section 01530.
- C. Earthwork: Section 02200.
- D. Selective Demolition: Section 02070.
- E. Topsoiling, Seeding and Sodding: Section 02930.

1.03 DESCRIPTION OF WORK

- A. Demolition, clearing and grubbing required for this work includes, but is not necessarily limited to the following:
 - 1. Providing erosion and siltation control in accordance with the approved site plan and in conformance with Fairfax County Standards, and the Commonwealth of Virginia Erosion and Sediment Control Handbook.
 - 2. Tree removal - including removal of stumps, roots and other debris protruding through ground surface.
 - 3. Removing shrubs, grass, weeds, and other vegetation.
 - 4. Removing improvements or obstructions that interfere with new construction.
 - 5. Constructing temporary barriers (at drip line of tree) around trees designated to remain, and other tree preservation measures as shown on the site plan or required by the county inspector.
 - 6. Disconnecting and removing existing utility lines on the site except those designated to remain or designated to be abandoned in place.
 - 7. Removal of all debris.

8. Protect existing trees, shrubs, lawns, curbs, gutters and pavement not designated to be removed, and utilities above and below grade.
 9. Contractor shall be responsible for providing sediment and erosion control for ALL disturbed areas prior to and during the course of construction. Such disturbed areas shall include the contractor's staging areas, all disturbed areas as shown on the contract drawings, and all disturbed areas that are not shown on the contract drawings.
- B. Definitions:
1. The term "Demolition, Clearing, and Grubbing", includes the removal of all existing objects (except for those designed to remain) down to the existing ground level, or below grade if required to properly execute the Work, plus such other work as described in this Section.
 2. The terms "Relocate" and "Salvage" include the careful removal of existing materials to prevent damage, and re-installation in the location designated on the plans. Existing materials designated to be relocated or salvaged, and damaged due to improper methods or care shall be replaced in kind at no cost to the Owner.

1.04 JOB CONDITIONS

- A. Existing Utilities: The location of all existing utilities are approximate. These locations have been determined from field survey, public utility records and/or Owner records.
1. The Contractor shall be responsible for contacting "Miss Utility" and all Owner's or controlling agencies of existing utilities within the construction area for verification of locations, prior to beginning of work.
 2. The Contractor shall be responsible for verifying the locations and depths of all existing utilities that may be affected by the work prior to any excavation, demolition or construction.
 3. The Contractor shall be responsible for coordination of utility relocation or removal by others with all phases of construction activities.
- B. Performance of Work:
1. The Contractor shall coordinate a preconstruction meeting consistent with the requirements set forth in 3.01-4 of this section.
 2. The Contractor shall provide, install and maintain safety barriers as required by applicable health and safety regulations and as specified in Section 01520 and Virginia Erosion and Sediment Handbook.

C. Maintaining Traffic:

1. Minimize interference with normal use of roads, streets, driveways, sidewalks, and adjacent facilities.
2. Do not close or obstruct streets, sidewalks, alleys, or passageways without written permission or an approved traffic control plan from authorities having jurisdiction.
3. If required by governing authorities, provide alternate routes around closed or obstructed traffic ways. The Contractor shall provide a traffic control plan and shall submit it for review and approval by the authorities having jurisdiction prior to any disruption of traffic in public rights-of-way.

D. Dust Control:

1. Use necessary means to prevent spread of dust during performance of work as specified in the Virginia Erosion and Sediment Control Handbook.
2. Moisten surfaces as required to prevent dust from being a nuisance to the public, adjacent property owners, and concurrent performance of other work on site.

E. Disposal of Waste:

1. On-site burning shall not be permitted.
2. Remove waste materials and unsuitable or excess topsoil from site and legally dispose.

F. Protection:

1. Protect existing site features and other objects designated to remain.
2. Provide erosion and sediment control measures as indicated on the approved plans. Phase I erosion and sediment controls shall be installed by the Contractor, and inspected and approved by Fairfax County prior to beginning any site demolition or other land disturbing activities.
3. Protect existing site features designated to be salvaged or removed and returned to Owner.
4. In event of damage, repair or replace at no additional cost to Owner.

1.05 SUBMITTALS:

- A. Submit copies of written notifications to public utility companies for disconnection of active utilities.
- B. Submit completed "Responsible Land Disturber" Certification as required by Fairfax County, Office of Site Development Services.

PART 2 – PRODUCTS (Not Used)

PART 3 - EXECUTION

3.01 PREPARATION

- A. Site Inspection:
 - 1. Prior to start of work, inspect entire site and all objects designated to be removed or preserved.
 - 2. Locate existing utility lines and determine requirements for disconnecting and capping.
 - 3. Contact "Miss Utility" at 811 or 1-800-522-7001 to locate existing active utility lines traversing site and determine requirements for protection.
 - 4. Contractor shall notify the Owner's representative, the Architect and the Fairfax County Department of Public Works and Environmental Services prior to and again after commencing activities involving site disturbance, in order to obtain approval of clearing limits and siltation and erosion control procedures.
- B. Clarification:
 - 1. It is not the intent of the drawings to necessarily show all objects existing on site that may be affected by the work of this section.
 - 2. Verify with Architect all objects to be removed or preserved before commencing work.
- C. Bench Marks: The Contractor shall establish and maintain bench marks, monuments, stake-outs and other reference points on the site. Re-establish if disturbed or destroyed, at no cost to owner. This work shall be performed by a professional civil engineer or registered land surveyor, licensed to practice in the Commonwealth of Virginia.

3.02 PROTECTION AND RESTORATION:

- A. Existing Facilities: Protect existing facilities and structures designated to remain, temporarily or permanently, from damage during demolition or construction activities. Repair items damaged during demolition or construction activities to their original condition, or replace with new at no additional cost to the Owner. Do not overload structural elements or pavements to remain. Provide new supports and reinforcement for existing construction weakened by demolition and/or removal work. Repairs, reinforcement or structural replacement shall be approved by the Architect or the Owner's Representative.
- B. Existing Utility Services: Protect existing utility services designated to remain temporarily or permanently, or to be relocated or removed by others. Contractor shall sequence demolition and construction activities to minimize utility service interruptions to existing facilities to remain. Where removal of existing utility services is required for other site construction, provide temporary covering of exposed areas, and temporary service or connections for utilities until permanent utility service replacements are completed.
 - 1. Contractor shall coordinate with affected utility companies to determine extent of relocation work to be done by others.
 - 2. Contractor shall coordinate utility relocation or removal by others with all phases of construction activity.

3.03 LIMITS OF CONSTRUCTION

- A. Clear areas as required for access to site excavation and performance of Work.
 - 1. Clearing shall be limited to areas indicated on Drawings. No clearing shall be performed in unmarked areas of Site Plan without written permission of the Architect and Owner.
 - 2. Field flags shall be in place prior to the use of clearing equipment. The Owner's representative and Architect should be notified prior to the start of clearing.
- B. Do not disturb features outside of construction area, or features within construction limits not indicated to be removed. Contractor shall be held responsible for damage to these items and other items not indicated to be removed within or outside of construction limits.

3.04 EXISTING SITE IMPROVEMENTS DEMOLITION:

- A. Existing Pavements: Demolish existing pavements, regardless of pavement thickness, or materials, to limits indicated at no increase to contract sum. Neatly

cut existing bituminous concrete pavement to straight, smooth and sharp edges perpendicular to pavement surface.

- B. Existing Walks: Demolish existing walks to limits indicated. Neatly saw cut existing portland cement concrete walks, at nearest control joint to limits indicated, to straight, smooth and sharp edges perpendicular to walk surface.
 - 1. Contractor's Option: Remove existing portland cement concrete walks to nearest expansion joint beyond demolition limits indicated at no increase to contract sum.
- C. Existing Curbing: Demolish existing curbing to limits indicated, unless nearest expansion joint is less than six (6) feet from the indicated limits of removal. In that case, remove existing concrete curbing to the nearest expansion joint beyond the indicated demolition limits at no increase to the Contract Sum. Neatly saw cut existing portland cement concrete curbing, to limits indicated, to smooth, clean and sharp edges perpendicular to top and face of curbing.
 - 1. Contractor's Option: Remove existing concrete curbing to nearest expansion joint beyond demolition limits indicated at no increase to contract sum.
- D. Existing Entrances and Aprons: Demolish existing entrances and aprons indicated.
- E. Miscellaneous: Demolish existing fencing indicated, including posts, footings and related appurtenances. Demolish additional miscellaneous existing site improvements indicated, specified and required to construct project.

3.05 EXISTING UNDERGROUND UTILITY DEMOLITION:

- A. Excavate and expose existing underground utilities and related structures designated for, or as required to implement, removals. For excavation operations refer to Section 02200 "Earthwork". Remove existing utility structure castings. Backfill excavations, upon completion of utility demolition operations. For backfill operations refer to Section 02200 "Earthwork".

3.06 TREES:

- A. Protect roots and branches of trees designated to remain by placing a barrier around the perimeter of the tree at the drip line. No heavy equipment shall be allowed within the drip line of trees designated to remain.

- B. Remove only trees and shrubs designated to be removed within construction area, unless otherwise specifically indicated or directed.
- C. Completely remove stumps, roots and other debris protruding through ground surface.
- D. Upon permission of the Owner, carefully and cleanly cut branches obstructing new construction.
- E. All trees shall be planted a minimum of 5-feet away from utilities and completely clear of utility easements.

3.07 GRUBBING:

- A. Remove all surface rocks, stumps, roots and other vegetation within limits of construction.
- B. Do not leave any roots greater than 3 inches in diameter in the ground without the permission of the Owner.

3.08 STRIPPING TOPSOIL

- A. Strip topsoil to whatever depths encountered in such a manner to prevent mixing of topsoil with underlying subsoil or other objectionable material.
- B. Remove heavy growths of grass from areas before stripping.
- C. Where trees are indicated to be left standing, stop topsoil stripping at sufficient distance from trees to prevent damage to main root system.
- D. Stockpile topsoil where directed by Owner and provide erosion protection for all stockpiles.
- E. Construct storage piles to freely drain surface water.
- F. Cover storage piles if required to prevent windblown dust and erosion.
- G. Stabilize storage piles with temporary seeding in accordance with Virginia State Regulations.

3.09 REPLACING OF TOPSOIL

- A. Stripped topsoil shall be used for finish grading whenever soil conditions permit - Refer to Section 02930, Topsoil & Sodding.
- B. The Contractor shall furnish and place imported topsoil, if sufficient topsoil is not available at this site at no additional cost to the Owner.

3.10 REMOVAL OF DEBRIS

- A. Promptly remove cleared debris from the site in accordance with the approved Waste Management Plan. Burning of debris on site is not permitted.
- B. Obtain permission from applicable regulatory authority for disposal of debris to legal waste disposal site.

3.11 DAMAGED ITEMS

- A. Contractor is fully responsible for replacement of all damaged structures, fences, trees, walks, lawn, utilities, curb and gutter and etc. at its own expense.

END OF SECTION

SECTION 02200

EARTHWORK

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and General Provisions of Contract, including General Conditions and Supplementary Conditions and Division 1 through Division 16 Specification Sections, apply to the Work of this Section, with special attention to the following:
 - 1. Division One Sections for Testing Laboratory Services

1.02 RELATED WORK

- A. Section 02010: Subsurface Investigation
- B. Section 02070: Selective Demolition
- C. Section 02100: Site Preparation
- D. Section 02250: Temporary Shoring
- E. Section 02510: Paving and Surfacing
- F. Section 02930: Topsoiling, Seeding and Sodding

1.03 REFERENCE STANDARDS

- A. ASTM D698 - Moisture - Density Relations of Soils and Soil Aggregate Mixtures
- B. ASTM D1556-82 - Density of Soil in place by the Sand - Cone Method
- C. ASTM D2167-84 - Density and Unit Weight of Soil in Place by the Rubber Balloon Method
- D. ASTM D2487-85 - Soils for Engineering Purposes
- E. Virginia Erosion and Sediment Control Handbook

1.04 REQUIREMENTS OF REGULATORY AGENCIES

- A. Do not close or obstruct any street, sidewalk, alley, or passageway. Conduct operations to minimize interference with the normal use of roads, driveways, alleys, sidewalks, or other facilities adjacent to the Work.
- B. The successful low bidder, upon notice of award of contract, shall submit a completed "Responsible Land Disturber Certification" through FCPS, to Plan and

Document Control, Office of Land Development Services (LDS), Fairfax County DPWES.

1.05 LAYOUT AND GRADES

- A. Contractor shall provide construction surveying by a registered land surveyor or professional civil engineer licensed to practice in the Commonwealth of Virginia for the following:
1. Establishment of field survey control lines and temporary benchmarks.
 2. Providing line and grade offset stakes for curb/gutter and furnishing of cut sheets to the Architect and the Owner.
 3. Providing line and grade survey for water, storm and sanitary sewer pipes and location of structures.
 4. Providing building layout lines and grading stakes.
 5. Provision and maintenance of all surveying stakes, lines, and benchmarks.
- B. "Finished grades" are the required final grade elevations indicated on the civil drawings. Spot elevations govern over proposed contours. Where not otherwise indicated, project site area outside of buildings shall be given uniform slopes between points for which finished grades are indicated or between such points and existing established grades.
- C. "Subgrade" is the required surface of subsoil, borrow fill or compacted fill. This surface is immediately beneath site improvements, specially dimensioned fill, paving, loaming, or other surfacing material.

1.06 QUALITY CONTROL

- A. The Owner shall retain the services of an experienced Geotechnical Engineer for the purpose of inspecting the earthwork.
- B. The Contractor shall be responsible for coordinating the required testing and inspections with the Soils Engineering Company retained by the Owner. Any additional costs incurred by the Special Inspections agency due to missed readiness dates or times, or inaccessibility of the site, shall be the responsibility of the Contractor.

1.07 EXISTING UTILITIES

- A. Locate and identify active utilities prior to excavation including notifying "Miss Utility" at 811 or 1-800-552-7001. Carefully protect active site utilities from damage and relocate or remove as required by the drawings. Should an active

utility line be exposed during construction, its location and elevation shall be plotted on record drawings. Notify both the Owner and the Utility Owner in writing. Provide all required coordination to prevent delays.

- B. Inactive or abandoned utilities encountered during construction operation and utilities to be removed shall be removed, abandoned, plugged or capped as indicated on the drawings or per Section 02100 of the Specifications or in accordance with the utility owner's standards and regulations, as applicable.

1.08 PROTECTION

A. Shoring and Sheeting:

1. Provide shoring, sheeting and bracing at excavations, as required, to ensure complete safety against collapse of earth at side of excavations.
2. Comply with local safety regulations and with the provisions of the Manual of Accident Prevention in Construction of the Associated General Contractors of America, Inc.
3. Remove shoring, as backfilling operations progress, taking necessary precautions to prevent collapse of excavation sides.
4. Shoring or sheeting shall not constitute a condition for which an increase may be made in the Contract Sum.

- B. Make no excavations to the full depth indicated when freezing temperatures may be expected, unless the footings or slabs can be placed immediately after the excavation has been completed. Protect the bottom so excavated from frost if placing of concrete is delayed. Should protection fail, remove frozen materials and replace with concrete or gravel fill, as directed by the Owner's Representative. Stockpiled materials shall be protected at all times from inclement weather and other conditions which can affect the suitability for re-use as fill or structural fill. Moisture control of stockpiled materials shall be the responsibility of the contractor.

1.09 DISPOSAL AND STOCKPILING

- A. Remove all excavated materials not suitable for fill or backfill, including surplus excavated materials, from site and dispose of material legally.
- B. Stockpiling of excavated material suitable for reuse will be permitted where convenient on site and does not interfere with the Work or Owners use of the premises. Owner's Representative shall approve stockpile location prior to placement of material.
- C. Stockpiled materials shall be protected at all times from inclement weather and other conditions which can affect the suitability for re-use as fill or structural fill.

Moisture control of stockpiled materials shall be the responsibility of the contractor.

1.10 TOP SOIL

- A. Contractor shall provide all topsoil required for finishing to grades shown on Drawings. Topsoil shall be provided from site stockpiles, or from off-site sources as necessary.

1.11 DEFINITIONS

- A. Material shall be "unclassified" insofar as removal of material to be excavated is concerned including rock, regardless of the nature or manner in which they are removed. Removal of paving, curbs and paving foundations is classified as "general excavation".
- B. Unsuitable material is defined as topsoil, organic soils, underlying silty and slightly organic subsoil, existing fill and other material judged unsuitable by the Geotechnical Engineer, and located beyond normal or design limits of excavation (i.e. below design subgrade levels).
- C. Rock excavation shall be defined as removal of boulders larger than one (1) cubic yard in volume and removal of ledge rock, concrete or masonry structures which cannot be ripped with a one and one-half (1 ½) cubic yard backhoe or equivalent and requires drilling, blasting, or other special methods for removal.

1.12 SUBMITTALS

- A. Location and source of off-site sources providing additional topsoil, as necessary.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Excavated materials may not be suitable for compacted structural fill. Soil materials used as fill under floor slabs and footings shall be SM, or better, ASTM D2487. Soil materials used as fill under pavements and as general site fill shall be SC or better, ASTM D2487. Soil material for fill or backfill shall be free of organic matter or debris, waste materials, frozen materials, vegetable matter and rock or stones exceeding three inches in any dimension, shall be non-frost susceptible soils, and shall have a liquid limit of less than 40 and a plasticity index of less than 20.

1. Fill material used within the top 12 inches of fill shall be free of rocks or stones exceeding two inches in any dimension.

2. Provide materials from off-site source if available on-site materials do not meet the above requirements at no increase to contract sum. Imported materials shall be approved by the Geotechnical Engineer.
- B. Gravel Fill: Washed gravel, or crushed stone, coarse aggregate No. 21B, VDOT.
 - C. Porous Fill (Below Building Slabs): ASTM C 33 Coarse Aggregate, size number 467 (1-1/2 inch to No. 4), blast furnace slag shall be prohibited.
 1. Contractor's Option: VDOT size 57 Stone with Geotechnical Engineers approval.
 - D. Topsoil: Fertile, friable, natural surface topsoil capable of producing and sustaining satisfactory turf and landscaping and free of roots, rocks, gravel, sand, spilled concrete, mortar and other debris. Obtain topsoil from project site stockpiles established during clearing operations. Obtain additional topsoil required for landscape development from off-site sources and transport to the project site at no increase to contract sum. Topsoil shall not be delivered in frozen or muddy condition.
 - E. The use of clayey soils for backfill for below grade walls is strictly PROHIBITED. Backfill for below grade walls shall consist of silty sands, coarse grained drainage material, USCS SM or more permeable with an impermeable clay cap, two foot thick with positive slope away from building per foundation drain detail as outlined in Section 02010: Subsurface Investigation.
 - F. Use of recycled materials such as existing brick, CMU block, Portland cement concrete, gravel base course stone and existing fill soils which have been processed at a recycling facility to produce suitable structural fill materials meeting the requirements for suitable structural fill material contained in the structural fill requirements of this specification may be approved by the Owner. Recycled materials that are proposed for use as structural fill materials for use in grading operations shall be sampled, tested and classified by the Geotechnical engineer for suitability.
 - G. Underground Plastic Utility Identification Tapes: All underground utilities shall be properly marked with 6" wide detectable 5 mil thick continuously printed plastic tape, properly marked and color keyed for the type of utility to be identified. For all storm, sanitary lines and laterals, provide insulated tracer wire in accordance with 703.7 latest version of the Virginia Plumbing Code.

PART 3 - EXECUTION

3.01 INSPECTION

- A. Prior to beginning work, become familiar with site, conditions and portions of work specified.

- B. Backfilling prior to approvals:
 - 1. Do not allow or cause work performed or installed to be covered up or enclosed prior to obtaining all necessary inspections, tests, and approvals required.
 - 2. Should work be enclosed or covered up before approval, uncover work and restore disturbed areas at no additional cost to Owner.

3.02 EXCAVATING

- A. Excavate to lines, elevations and limits indicated on the drawings, allowing sufficient distance and space to permit erection of forms, shoring and inspections. Excavate as required for placement of utilities and foundations, regardless of type, condition or moisture content of material encountered. If suitable bearings for foundations are not encountered at the depths indicated, immediately notify the Architect and the Owner and do not proceed further until instructions are received.
- B. Excavation is unclassified and no consideration will be given to nature of materials encountered within normal excavation limits. Unclassified excavation comprises and includes satisfactory removal and disposal of all materials encountered. Remove excess earth, including excess topsoil, debris, and material not suitable for fill from site; retain best quality soil for backfilling.
- C. Foundation excavations shall not be exposed for extended periods of time. Footing construction shall be inspected by the Geotechnical Engineer and shall be completed during the same day they are excavated. Footing excavations left open overnight shall be re-inspected by the Geotechnical Engineer prior to foundation construction. The cost of re-inspection and any required remedial measures required due to deterioration of the footing subgrade shall be the sole responsibility of the contractor.
- D. Shore and brace excavations for footings, sumps, areaways, pits, and tanks with members of suitable size and arrangement where necessary to prevent injury to persons, caving or erosion. Remove shoring and bracing as excavations are backfilled.
- E. Contractor shall determine quantities of cut and fill in order to grade site to elevations shown on the civil drawings. Any excess material will be removed from the site in accordance with Paragraph 1.09 (Disposal and Stockpiling) of this section. Any imported material needed to bring site to grades shown on the civil drawings shall be approved by the Geotechnical Engineer prior to bringing such material on site. No additional compensation for importing or removal of soil, in order to bring site into conformance with site plan grades and elevations, shall be considered by the Owner.

- F. During demolition, site preparation, grading, trenching or any other construction related activity if rock is encountered, the contractor shall excavate, remove and dispose of rock within the limits required and in accordance with the contract documents. For pipe and conduit installation, rock excavation shall be carried to a level at least six (6) inches below the bottom of the pipe or conduit for placement of select bedding. Rock excavation and disposal shall be part of the base bid contract and no additional payment considered.
- G. Blasting shall be done only when authorized by the Architect and Owner. All blasting shall be done in accordance with local and state ordinances. Blasting shall not be allowed on Renewal and Addition projects.

3.03 EXCESS WATER CONTROL

- A. Do not place, spread, or roll fill material during unfavorable weather conditions.
- B. Do not resume operations until moisture content and fill density are acceptable to the Geotechnical Engineer.
- C. Provide berms and channels to prevent flooding of subgrade. Promptly remove water collecting in depressions.
- D. Where soil has been softened or eroded by flooding or placed during unfavorable weather, remove damaged areas and re-compact as specified for fill and compaction.
- E. Provide and maintain during construction, ample means and devices with which to promptly remove and dispose of water from every source entering excavations.
- F. Dewater by approved means outlined in the current version of Virginia Erosion and Sediment Control Handbook to ensure dry excavations and preservation of final lines and grades at bottoms of excavations.

3.04 SITE PREPARATION

- A. Prior to the construction of slabs or pavements or the placement of any fill in slab or pavement areas, all topsoil and other organic materials, frozen, wet, soft or loose soils, and other deleterious materials shall be removed and legally disposed.
- B. Upon completion of excavation activities, exposed subgrade shall be proofrolled utilizing a heavily loaded dump truck or other pneumatic-tired vehicle of similar size and weight, in the presence of the Geotechnical Engineer. Proofrolling shall not be performed during or following wet weather conditions. Any unsuitable materials discovered during proofrolling operations shall be removed and replaced as specified below. Upon completion of proofrolling activities and

approval of the subgrade by the Geotechnical Engineer, exposed subgrade shall be further prepared as follows:

1. Unpaved Areas: Scarify subgrade to six inch depth prior to topsoil placement.
2. Paved Areas: Scarify subgrade to minimum twelve-inch depth and compact to 95 percent maximum dry density. The soils should be aerated or moistened as necessary to maintain the moisture content within 2 percentage points of optimum moisture content. Density test methods: ASTM D 698. Remove unsuitable earth, exhibiting excessive heaving during compaction operations, as specified.

3.05 UNSUITABLE EARTH

- A. Immediately notify the Architect/Owner and Geotechnical Engineer in the event unsuitable earth is encountered during earthwork or subsequent construction operations. Stop all work within immediate area of unsuitable earth. Do not remove unsuitable earth until authorization is obtained from the Owner and Geotechnical Engineer and proper measurements are obtained followed by written authorization. Excavate and dispose of all unsuitable earth under the supervision of the Geotechnical Engineer and in accordance with paragraph 1.09. Backfill excavated area as specified.

3.06 FILLING AND BACKFILLING

- A. Provide structural fill or backfill from approved on-site material stockpiles, or from off-site if required, to raise all grades to elevations shown on the drawings. Gravel fill (crushed stone) may be substituted in place of fill.
- B. All structural fill or backfill, and fill in sloped areas, shall be placed in loose lifts not exceeding 8 inches. Fill in landscaped areas may be placed in loose lifts not exceeding 12 inches. All fill and backfill shall be uniformly compacted with suitable equipment to at least the specified minimum degree of compaction. The soils should be aerated or moistened as necessary to maintain the moisture content within 2 percentage points of optimum moisture content.
 1. Fill and backfill in structural and pavement areas should be compacted to at least 95 percent of the Standard Proctor maximum dry density (ASTM D-698). The upper 12 inches below slabs on grade shall be compacted to a minimum of 98 percent of the Standard Proctor maximum dry density (ASTM D-698).
 2. Fill and backfill in slope areas shall be compacted to at least 95 percent of the Standard Proctor maximum dry density (ASTM D-698). Subgrade for fills on slopes shall be benched into the existing slopes.

3. Fill and backfill in landscaped areas shall be compacted to at least 90 percent of the Standard Proctor maximum dry density (ASTM D-698).
- C. The Geotechnical Engineer shall perform field density tests on each lift of fill necessary to ensure that adequate compaction is achieved. If any compaction problems are encountered during construction, the Geotechnical Engineer shall be contacted. The Geotechnical Engineer shall recommend modifications to the compaction procedures if required.
 - D. Do not begin backfilling until construction below finish grade has been approved, forms removed, and the excavations cleaned of trash and debris. Bring backfill to required grades. Do not place backfill in wet or frozen areas. Do not operate heavy equipment for spreading and compacting backfill near foundations, curbs, or walls closer than distance equal to height of backfill above top of structural members. Compact area remaining by power-driven hand tampers suitable for material being compacted. Do not place backfills against walls until at least seven days after completion of the walls, and unless walls are adequately braced.

3.07 CLEANUP

- A. Thoroughly clean the entire project of trash and other debris. Haul excess materials away and legally dispose of off site. Public streets shall be kept clear of mud and construction debris.

3.08 QUALITY CONTROL

- A. The Geotechnical Engineer shall field inspect the installation of the earthwork. Upon completion of the inspection, the Geotechnical Engineer shall certify by a seal of a professional engineer, licensed in the Commonwealth of Virginia, that the Earthwork was installed in accordance with the Contract Documents.
- B. Site Preparation and Proofrolling: The Geotechnical Engineer shall inspect the site after it has been stripped and excavated. The Geotechnical Engineer shall determine if any undercutting or in-place densification is necessary to prepare a subgrade for slab support. The Geotechnical Engineer shall witness the proofrolling with a fully loaded dump truck (minimum 20 tons) provided by the Contractor prior to the placement of engineered fill. Areas of proposed excavation shall be proofrolled after rough finished grade has been established. Proofrolling shall not be performed within 10 feet of an existing building or structure.
- C. Fill Placement and Compaction: The Geotechnical Engineer shall witness any required filling operations and shall take sufficient in-place density tests to verify that the specified degree of fill compaction is achieved. He shall observe and approve borrowed materials used and shall determine if the existing moisture contents are suitable.

- D. Footing Excavation Inspections: The Geotechnical Engineer shall inspect the excavations for the building foundations. He shall verify that the design bearing pressures are available and that no loose or soft pockets exist beneath the bearing surfaces of the footing excavations. Based on the inspection, the Owner's Representative shall either approve the bearing surface or shall require that loose or soft soils be undercut to expose satisfactory bearing materials.
- E. The Geotechnical Engineer shall provide the Architect and Owner with written verification of all testing regarding fill selection, fill placement, and soil bearing capacity at all footings.
- F. Infiltration Facilities: The Geotechnical Engineer shall provide the Architect and Owner with written verification that the material used to construct the BMP facilities meets the requirements of contract drawings and specifications.

END OF SECTION

SECTION 02510
PAVING AND SURFACING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and General Provisions of Contract, including General Conditions and other Division 1 Specification Sections, apply to the Work of this Section, with special attention to the following:
 - 1. Testing Laboratory Services: Section 01410
 - 2. Project Record Information: Section 01720

1.02 RELATED WORK

- A. Subsurface Investigation: Section 02010
- B. Earthwork: Section 02200 (sub-grade preparation)
- C. Cast in Place Concrete: Section 03300

1.03 REFERENCE STANDARDS

- A. Virginia Department of Transportation Standards and Specifications
- B. American Disabilities Act Accessibility Guidelines (ADAAG)

1.04 QUALITY ASSURANCE

- A. Qualifications of Asphalt Concrete Producer: Use only materials which are furnished by a bulk asphalt concrete producer regularly engaged in production of hot-mix, hot-laid asphalt concrete.
- B. Qualification of Testing Agency: The Owner will use a recognized commercial testing laboratory with not less than five years experience in conducting tests and evaluations of asphalt concrete materials and design.
- C. The Owner will provide asphalt concrete testing and inspection service.
- D. The Owner will provide field testing facilities for quality control testing during paving operations.
- E. Qualifications of workmen:
 - 1. Provide at least one person who shall be thoroughly trained and experienced in the skills required, who shall be completely familiar with

the design and application of work described for this Section, and who shall be present at all times during the progress of the work of this Section and shall direct all work.

2. For actual finishing of asphaltic concrete surfaces and operation of the required equipment, use only personnel who are thoroughly trained and experienced.

1.05 REQUIREMENTS OF REGULATORY AGENCIES

- A. Codes and Standards: In addition to complying with all pertinent codes and regulations, comply with the referenced portions of Virginia Department of Transportation "Standards and Specifications" and the Virginia Department of Transportation "Road and Bridge Specifications".

1.06 SUBMITTALS

- A. Submit test reports and certificates for asphalt concrete materials and mixes.
- B. Certify that materials comply with specification requirements signed by asphalt concrete producer and Contractor.

1.07 PAVING QUALITY REQUIREMENTS

- A. General: In addition to other specified conditions, comply with the following minimum requirements.
- B. The Owner's Testing Service will:
 1. Test in-place asphalt concrete courses for compliance with requirements for thickness and surface smoothness.
 2. Take not less than 4-inch diameter pavement specimens for each completed course, from locations as directed by Architect.
- C. The Contractor shall repair holes from test specimens as specified for patching defective work.
- D. Thickness: In-place compacted thicknesses will not be acceptable if exceeding following allowable variation from thicknesses shown on Drawings.
 1. Surface Course: 1/2 inch, plus or minus.
- E. Surface Smoothness
 1. The Contractor will test finished surface of each asphalt concrete course for smoothness, using a 10 foot straightedge applied parallel to and at right angles to centerline of paved areas

2. Check surface areas at intervals directed by Architect.
3. Surfaces will not be acceptable if exceeding the following:
 - a. Surface Course: 1/4 inch in 10 feet
4. Provide final surfaces of uniform texture, conforming to required grades and cross sections.

1.08 WEATHER LIMITATIONS

- A. Do not apply asphalt concrete when the surface is wet or contains an excess of moisture which would prevent uniform distribution and the required penetration.
- B. Construct asphalt concrete surface course only when atmospheric temperature is above 40 degrees F, when the underlying base is dry and when weather is not rainy.
- C. Base course may be placed when air temperature is above 30 degrees F and rising, and when acceptable to the Architect and the Owner.
- D. Grade Control: Establish and maintain the required lines and grades, including crown and cross-slope, for each course during construction operations.
- E. Do not place Portland cement concrete when ambient air temperature is below 40 degrees Fahrenheit or air temperature has been below 35 degrees Fahrenheit for 12 or more consecutive hours or between 15 November and 1 March, without written authorization from the Architect with owner.

1.09 TRAFFIC CONTROL

- A. Sequence and schedule paving work in order to maintain vehicular and pedestrian traffic during paving operations, and as required for other construction activities. If working in the state right-of-way, the contractor shall obtain all necessary permits from the Virginia Department of Transportation (VDOT) and prepare traffic control plans for VDOT approval.

1.10 PRODUCT HANDLING AND PROTECTION

- A. Protection: Use all means necessary to protect the materials of this Section before, during and after installation and to protect the work and materials of all other trades.
- B. Replacements: In the event of damage, immediately make all repairs and replacement necessary to the approval of the Architect and at no additional cost to the Owner.
- C. Protect asphaltic concrete from traffic for a minimum of 48 hours.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Sub-base Course: VDOT Section 208, Grade 21A
- B. Asphalt Base Course: Superpave: VDOT Special Provision Section 211, Type BM-25
- C. Surface Course: Superpave: VDOT Special Provision Section 211, Type SM-9.5A
- D. Prime Coat: VDOT Section 210 and 311 cut-back asphalt, AASHTO M82, Grade MC-30
- E. Tack Coat: VDOT Section 210 and 310 emulsified asphalt, CSS-1H (cationic emulsion)
- F. Overlay Binder Coat: asphalt cement, AASHTO M20, type AC-20
- G. Overlay protective membrane:
 - 1. "Petromat", Phillips Fiber Corp.
 - 2. "Amo Pave", Amoco Fabrics Company.
 - 3. Pre-bid approved manufacturer.
- H. Joint Sealant: AASHTO M81, Grade CSS-1H.
- I. Grade Sealer: VDOT Section 213.
- J. Traffic Marking Paint: VDOT Traffic Paint Type A alkyd paving paint.
- K. Expansion Joint Material: Pre-molded asphaltic cork filler strip VDOT Section 212.
- L. Pavement Marking Removal Paint: Black Traffic Paint, as manufactured by Baltimore Paint and Chemical Corporation, Baltimore, Maryland, or approved equal.
- M. Existing Pavement Marking Removal: Existing painted lines shall be removed and existing paving areas prepared for new painted lines by application of two coatings of VDOT Seal Coat, VDOT Section 312.
- N. Concrete: VDOT Class "A-4.0" (4,000 psi) General Use hydraulic cement concrete, Section 217.

- O. Concrete Reinforcement: ASTM A 185 welded wire mesh, size indicated, flat sheets.
- P. Stair Nosing: Cast-in type of abrasive nosing. Size as indicated, and of aluminum, or hot-dip-galvanized steel.
- Q. Stair Hand Rails: Size as indicated, and of aluminum. Hot-dip-galvanized may be substituted with approval of the Owner's Representative.
- R. Stair Hardware: As indicated, and of galvanized steel.
- S. Construction, Expansion and Isolation Joint Filler: ASTM D 994, bituminous preformed joint filler, 1/2 inch thick.
- T. Joint Sealant: Pourable Polyurethane sealant for use between building and concrete walk.
- U. Gravel Base: VDOT Aggregate: Section 208, Grade 21B.
- V. Forms: Steel or wood.
- W. Curing Materials: Burlap Mats: ASSHTO M 182, Class 1.
- X. Miscellaneous Products:
 - 1. Form release compound: Nonstaining and approved by the Architect.
 - 2. Cement Mortar: VDOT Section 218: Hydraulic Cement Mortar.
- Y. Other materials not specifically described but required for proper and complete installation of the work of this section, and subject to the approval of the architect.
- Z. Pervious Pavers:
 - 1. Techo-bloc Blu 80 Smooth
 - 2. Keystone ECO City Lock L10
 - 3. Pre-bid approved Manufacturer

PART 3 - EXECUTION

3.01 INSPECTION

- A. Examine the areas and conditions under which work of this Section will be installed. Correct conditions detrimental to proper and timely completion of the Work. Do not proceed until unsatisfactory conditions have been corrected.

3.02 BITUMINOUS CONCRETE

- A. All asphaltic concrete shall be hot plant mixed, and shall be furnished from a commercial asphalt hot mix plant.
- B. The aggregates shall have a temperature between 275 degrees F and 325 degrees F when placed in the mixer. The liquid asphalt shall be heated to a temperature between 275 degrees F and 350 degrees F, and shall be added during mixing.
- C. Mix the combined aggregates and liquid asphalt in a pug mill mixer with a capacity of not less than 3,000 pounds per batch. Continue the mixing for at least 45 seconds after all ingredients have been placed in the mixture, and until the liquid asphalt is distributed uniformly throughout the mixture.
- D. The mixture shall have a temperature between 290 degrees F and 320 degrees F when it leaves the plant.

3.03 PAVING

- A. Sub-grade preparation to achieve compacted sub-base shall be accomplished under the work of Section 02200, Earthwork. Prior to applying prime coat, carefully inspect sub-base surface and remove any loose materials.
- B. Proof roll compacted sub-base surface to identify soft or unstable areas requiring replacement and/or additional compaction. Do not begin paving operations until such areas have been corrected, and testing laboratory results indicate satisfactory compaction. Grade sub-base to profiles indicated on drawings.
- C. Place asphaltic concrete on sub-base; spread, grade and compact in accordance with VDOT standards. Place in strips at least 10' wide, except that small, inaccessible areas shall be placed by hand. Place and roll succeeding strips so as to overlap and blend with joints of previous strips.

3.04 ROLLING

- A. Begin rolling when mixture will bear weight of rolling without excessive displacement. Compact small, inaccessible areas with hand tampers or vibrating plate compactors.
- B. Perform initial rolling immediately after rolling of joints and outside edges. Inspect surface after initial rolling, and repair displaced or loosened areas.
- C. Follow initial rolling immediately after with second rolling while mixture is still hot. Continue until mixture is compacted.
- D. Perform finish rolling while mixture is still warm enough to allow removal of roller marks.

- E. Remove and replace paved areas found to be defective; cut out such areas and fill with fresh, hot mixture, and compact by rolling.

3.05 OVERLAY PAVING

- A. Extent of milling and overlay paving is indicated on the drawings. Provide minimum 2 inches thick VDOT SM 9.5 unless otherwise noted on the Drawings. All debris from milling operations shall be legally disposed of off site.
- B. Apply Tack Coat to surfaces of previously constructed asphaltic or portland cement concrete. Allow to dry prior to receiving overlay paving.
- C. Install protective membrane in accordance with manufacturer's installation instructions.
- D. Avoid smearing and splattering of adjoining curbs and gutters with overlay materials. Clean such surfaces when contaminated by overlay materials.

3.06 FINISH TOLERANCES

- A. Finish all surfaces to the following tolerances.
- B. Asphaltic Concrete Surfacing: Plus or minus 0.05' at any point from line and grade shown on the Drawings.
- C. Apply prime coat to compacted sub-base in accordance with the manufacturer's recommendations.
- D. Variations: Finished surfaces shall be free from birdbaths (sump areas), and shall show no variation from the designed elevations greater than 1/4" when checked with a 10'-0" straight edge.

3.07 FRAME ADJUSTMENTS

- A. Set frames of subsurface structures to final grade as a part of this Work, including adjustments of existing frames, and new frames furnished under other Work of Project.

3.08 PLACING FRAMES

- A. Surround frames set to elevation with a ring of compacted asphalt concrete base prior to paving.
- B. Place asphalt concrete mixture up to 1 inch below top of frame, slope to grade, and compact by hand tamping.
- C. Adjust frames to proper position to meet paving.

- D. If permanent covers are not in place, provide temporary covers over openings until completion of rolling operations.
- E. Set cover frames to grade, flush with surface of adjacent pavement.

3.09 EXISTING WORK DAMAGED BY CONSTRUCTION

- A. Where existing streets, roads, driveways, or other pavements have been cut, removed, or otherwise disturbed by new construction, they shall be repaired as follows.
 - 1. The areas shall be backfilled and compacted, in accordance with the same standards as backfilling for new work, to secure a compaction of ninety-five percent (95%) of maximum density as determined by the standard proctor density test (ASTM D698) at 2 percent of optimum moisture content.
 - 2. All existing curbs and gutters, sidewalks, base course, and sod shall be replaced to appropriate line and grade to preclude the ponding of water, with construction similar in design and material as existing, or as otherwise specified.
 - 3. Wearing surface shall then be replaced with two inches (2") of bituminous concrete, designation SM-2A in accordance with the Virginia Department of Transportation Specifications.
 - 4. Existing paved areas to be patched shall be repaired using the proposed pavement section, as shown on the Contract drawings. All patching will occur immediately upon completion of the associated excavation activity, regardless of overall construction phasing.
 - 5. Existing areas to be patched lying within state right-of-ways shall be repaired in strict accordance with the Virginia Department of Transportation Standards and Specifications for such work and shall include a minimum of 25-feet of milling and overlay on each side of the patch.

3.10 MARKING ASPHALT CONCRETE PAVEMENT

- A. Sweep surface with power broom supplemented by hand brooms to remove loose material and dirt.
- B. Do not begin marking asphalt concrete pavement until authorized by the Architect/Owner.
- C. Apply paint with mechanical equipment.
- D. Provide uniform straight edges.

- E. Apply not less than 2 separate coats in accordance with manufacturer's recommended rates.

3.11 CURBS AND GUTTERS

- A. Provide VDOT 21-A stone (6" thick) compacted to 95% proctor density under all curbs and gutters (per AASHTO-T99-61), with minimum 8" sub-base per VDOT Specification 21-A.
- B. Set forms to line and grade.
- C. Install forms over full length of curb, gutter, or sidewalk.
- D. Position integral curb joints at same location as pavement joints.
- E. Form contraction joints using steel templates or division plates.
- F. Remove templates or plates as soon as concrete has hardened sufficiently to retain its shape.
- G. Install expansion joint material behind curb at abutment to sidewalks, curb returns and adjacent structures.
- H. Place top of expansion joint material 1/2 inch below curb surface.
- I. Apply asphalt sealer on top of expansion joint material flush with concrete surface.
- J. Consolidate concrete with mechanical vibrators.
- K. Round face of curbs at top with finishing tool of correct radius.
- L. Finish exposed surfaces with wood float followed by light brushing with broom, brush or burlap.
- M. Apply curing material and cure for 7 days.

3.12 INSTALLATION

- A. After the subgrade has been inspected and approved by the inspector, curb and gutter and transverse curb and gutter shall be constructed where shown on the Drawings.

3.13 SIDEWALKS AND RAMPS

- A. Concrete sidewalks and ramps shall be constructed to the widths and at the locations shown on the Drawings. Include woven wire fabric 6 x 6 - W1.4 X W1.4 in all walks.

- B. Provide one course concrete construction, 4" thick over 6" gravel base and sub-grade compacted to 95% maximum density at optimum moisture.
- C. Expansion joints shall be 1/2 inch wide spaced maximum 16 feet on center in two directions. Provide where walks abut buildings, curbs, platforms, etc. Premolded expansion strips shall extend full width and depth of walk. All joints to be sealed with gray colored self-leveling joint sealant.
- D. Score walks with hand tooled joints at 4'-0" intervals, unless denoted at closer intervals on Drawings, in two directions maximum for their full width and to a depth of at least 1/3 walk thickness (no saw cut joints allowed).
- E. Provide a lightly brushed finish.
- F. See Drawings for areas where reinforcing and gravel fill are required at entrances.
- G. Where existing sidewalks are to be joined or replaced by new sidewalks, saw cut and remove those sections of existing sidewalks indicated on the Drawings to be removed.
- H. Ends of existing sidewalk shall be cleanly saw cut and a 1/2" thick expansion joint filler installed between new and existing work.
- I. Asphalt walks shall be constructed to the widths and at locations indicated on Drawings.
- J. Curb ramps shall comply with Virginia Department of Transportation Standards and Specification for Type CG-12.
- K. Protect completed concrete work from damage. Remove and replace damaged or defective work.
- L. Underdrains in accordance with VDOT's standards shall be provided where the sidewalk is located within area with high ground water or wet soil conditions.

3.14 GENERAL CONCRETE NOTE

- A. Expansion joints in the sidewalk, between sidewalk and curb and gutter, and gaps between the sidewalk and the building wall shall receive urethane based caulking on school property.

3.15 PATCHING

- A. Patch to match material, color, and texture of surrounding area.
- B. Remove and replace defective work.

- C. Uniform smooth surface shall be achieved between the patched area and existing asphalt surface

3.16 PROTECTION

- A. After final rolling, do not permit vehicular traffic on asphalt concrete pavement until it has cooled and hardened. Erect barricades as required.
- B. Provide barricades and warning devices as required to protect pavement and the general public.
- C. Cover openings of structures in the area of paving until permanent coverings are placed.

3.17 AS-BUILT DRAWINGS

- A. Provide electronic as-built drawings in current version of AutoCAD and PDF format, and two full-sized hard copies, prepared by a certified land surveyor practicing in the Commonwealth of Virginia for all new curb and gutter, sidewalks, buildings, parking, and site improvements. Obtain necessary county approvals of as-builts from DPWES, and the supplying water company as required. The Contractor shall be responsible to address and satisfy all review comments to ensure approval of the as-builts and final release. Provide preliminary draft of as-builts for review by Engineer of Record after final grade achieved for Curb & Gutter, Sidewalk, Parking, etc. Final owner acceptance of new construction and release of contractor obligations shall not occur until the as-built drawings are approved, and the work is accepted, by Fairfax County DPWES and the Owner.

END OF SECTION

SECTION 02831

CHAIN LINK FENCES AND GATES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and General Provisions of Contract, including General Conditions and other Division 1 Specification Sections, apply to the Work of this Section.

1.02 DESCRIPTION OF WORK

- A. PVC coated Fence fabric posts; rails, tension components and fittings for all fencing including, perimeter and interior site fencing, preschool and kindergarten play areas, and athletic fencing.
- B. PVC coated No Climb Fence fabric, posts, rails, tension components and fittings for equipment enclosure.
- C. Excavation for post bases.
- D. Concrete anchorage for posts.

1.03 RELATED WORK

- A. Section 02930: TOPSOILING and SODDING.
- B. Section 03300: CAST-IN-PLACE CONCRETE.

1.04 WORK EXCLUDED

- A. Temporary Construction Fence.

1.05 ERECTOR QUALIFICATIONS

- A. Minimum of two years of experience installing similar fencing.

1.06 REFERENCES

- A. Chain Link Fence Manufacturers Institute (CLFMI) and ASTM F567 - Standard of chain link fence installation.
- B. ASTM A120 - Black and hot dip zinc coated (galvanized) welded and seamless steel pipe.
- C. ASTM A123 - Hardware (hot-galvanized coatings on products fabricated from rolled, pressed and forged steel shapes, bars, and strip).
- D. ASTM C94 - Ready-mixed concrete.

E. ASTM A491 - Aluminum coating of chain link fabric (steel core wire).

F. ASTM F668 - PVC coated steel chain link fabric, class 2B

1.07 SHOP DRAWINGS AND PRODUCT DATA

A. Submit shop drawings and product data in accordance with Section 01340.

B. Clearly indicate plan layout, grid, spacing of components, accessories, fitments, and anchorage.

C. Submit manufacturer's installation instructions and procedures including standard details of fence and gate installation.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

A. Anchor Fence, Inc.

B. Sonco Fence, Inc.

C. Cyclone Fence

D. Allied Tube and Conduit (Fence Division)

E. Master Halco

F. Other domestic manufacturers meeting the requirements of this Section.

2.02 MATERIALS

A. All Fencing

1. Framework: Thermally fused and adhered PVC or Polyolefin coated, sizes as indicated.

2. Mesh: Thermally fused PVC coated chain link fabric "Standard Industrial" "Tennis Court" or "No Climb" type as indicated.

2.03 CONCRETE MIX

A. Concrete: ASTM C94, normal Portland Cement, 2000 psi at 28 days, 2 inch to 3 inch slump.

2.04 FENCE COMPONENTS

- A. Gate Posts:
1. Posts for swing gates shall be of the following nominal sizes for single swing gates or one leaf each of double gates:
 - a. Gates up to 6' wide shall be 3.00" O. D.
 - b. Gates over 6' to 13' wide shall be 4.0" O. D. @ 9.11 pounds
 - c. Gates over 13' to 18' wide shall be 6.625" O. D. @ 18.97 pounds
 - d. Gates over 18' wide shall be 8.625" O. D. @ 28.55 pounds
- B. Top Rail and Bottom Rail:
1. Top and bottom rail for 72" and 120" fabric shall be 1.66" O. D.
 2. Top and bottom rail for 48" fabric shall be 1-5/8" O. D.
- C. Braces: Brace material shall be same as top rail.
- D. No Climb Fabric: Shall be as follows or as indicated on the drawings and the Gas meter enclosure.
1. 96 inches high: One piece of Polyolefin coated 9-gauge wire woven in a 5/8-inch chain link diamond mesh pattern. Top and bottom selvage shall have a knuckled finish. (Master Halco, Basis of design)
- E. Fabric: Shall be one or more of the following based upon fence height shown on the Drawings.
1. 48 inches high: One piece of 9-gauge wire woven in a 2-inch chain link diamond mesh pattern. Top and bottom selvage shall have a knuckled finish.
 2. 72 inches high: One piece of 9-gauge wire woven in a 2-inch chain link diamond mesh pattern. Top and bottom selvage shall have a knuckled finish.
 3. 120 inches high: One piece of 11-gauge wire woven in a 1 3/4-inch chain link diamond mesh pattern. Top and bottom selvage shall have knuckled finish.
- F. Fabric Connections:
1. Fabric shall be securely fastened to all terminal, corner, and gateposts by 1/4 x 3/4 inch tension bars with 11-gauge pressed steel bands.
 2. Fabric shall be securely fastened to all line posts with .062 by .375 self-locking line post fabric.

3. Fabric shall be securely fastened to top rail with .062 by .375 self-locking line post fabric.
- G. Line Posts: Shall be one or more of the following:
1. All intermediate line posts for 72-inch fabric shall be 1.9" O. D.
 2. All intermediate line posts for 120-inch fabric shall be 2.375" O. D.
 3. All intermediate line posts for 48-inch fabric shall be 2.00" O. D.
 4. All posts shall be equipped with tops designed to exclude moisture and to hold top rail.
- H. Terminal Posts:
1. All end, corner, and pull posts shall be 3.00" O. D. with tops designed to exclude moisture and to hold top rail.
- I. Pipe and Fittings:
1. All pipes shall be standard weight steel, A.S.A. Schedule 40, of domestic manufacture of sizes and weights specified, or Allied SS-40.
 2. Fittings: All fittings used in the complete fence assembly shall be of malleable cast iron or pressed steel.
- J. Gates:
1. Gates shall be of size and at locations as indicated on the Drawings, complete with latches, stops, keepers and hinges.
 2. Frames shall be 1.9" O. D. pipe per linear foot with heavy malleable iron or pressed steel corner fittings securely fastened to provide a rigid frame of ample strength free from sag and twist. Each frame shall be equipped with 3/8-inch diameter adjustable truss rods.
 3. Fabric, to match the fence, shall be installed in the frame by means of tension bars and hook bolted at intervals not exceeding 14 inches.
 4. Hinges shall be of bearing pattern, of adequate strength for gate, and with large bearing surfaces for fastening in position. The hinges shall not twist or turn under the action of the gate. The gates shall be capable of being opened and closed easily by one person and swing 180 degrees.
 5. Malleable iron latches for single-swing gates shall be guillotine-type designed to prevent the gate from opening in the wrong direction.

6. Locking device for double-swing gates shall consist of fulcrum-type latch, a center drop rod, a center gate stop, and two semi-automatic holdbacks (set in concrete).

2.05 FINISH

- A. Provide manufacturers standard "Black" PVC coating, thermally fused, ASTM class 2B.

PART 3 - EXECUTION

3.01 GENERAL:

- A. Install line posts, corner posts, top rails, post caps, wire fabric and gates to provide a rigid structure for fence heights of 48", 72" or 120" as indicated on the Drawings. Note: Unless otherwise indicated on the Drawings, all perimeter site fencing shall be 6' high.

3.02 POST SETTINGS:

- A. All posts shall be of sufficient length to provide a minimum 36" setting into concrete footing. Top of footing shall be crowned in order to shed water.
- B. Footing diameters shall be as follows:
 1. Line posts: 10" minimum
 2. Terminal posts: 12" minimum
 3. Gate posts: a minimum of 3 times wider than the post diameter.
- C. Footings shall consist of 1-2-4 concrete mix.

3.03 TOP AND BOTTOM RAILS

- A. Provide top rail couplings approximately every 20 feet.
- B. Top rails shall pass through intermediate line post tops and shall form a continuous brace from end to end of each stretch of fence. Fasten to corner posts using heavy pressed steel connections.
- C. Bottom rails shall connect to line post using Boulevard clamp.

3.04 BRACES

- A. Brace material shall be installed midway between top rail and ground, and shall extend from corner, end, pull and gateposts to the first adjacent line post. Securely fasten to posts using heavy pressed steel connections. Truss from line post back to terminal or gateposts with 3/8" diameter rod and turnbuckle.

3.05 LINE POSTS

- A. All posts shall be evenly spaced, 10 feet on center maximum.

3.06 WIRE FABRIC

- A. Position bottom of fabric approximately 2" above finish grade with tension wire stretched tight between posts.
- B. Fasten fabric to top rail, line posts, braces, and bottom tension wire with ties spaced 14" on center maximum.
- C. Fasten fabric to top rail with ties spaced 24" on center maximum.
- D. Attach fabric to ends and corners with tension bars and bar clips.
- E. Stretch fabric between terminal posts, or at intervals of 100 feet maximum, whichever is the least dimension.

3.07 CLEAN UP

- A. Remove all trash, debris and excess materials associated with the work from the job site and dispose of legally.

END OF SECTION

SECTION 02930

TOPSOILING, SEEDING AND SODDING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and General Provisions of Contract, including General and Supplementary Conditions and Division 1 through Division 16 Specification Sections, apply to the Work of this Section.

1.02 RELATED WORK

- A. Earthwork: Section 02200
- B. Landscaping: Refer to Civil Drawings and Section 02950.
- C. Temporary Seeding for Erosion Control: Refer to Civil Drawings and Section 02100.

1.03 REFERENCE STANDARDS

- A. Fairfax County Public Facilities Manual
- B. Virginia Sediment and Erosion Control Handbook

1.04 AREAS TO BE SODDED

- A. All areas disturbed during construction that are to receive vegetative stabilization.

1.05 QUALITY ASSURANCE

- A. All sod shall be transplanted within 24 hours from the time it is harvested, unless stacked at the project site in a manner approved by the Owner's Representative. Stacked sod shall be kept moist and protected from exposure to wind and sun. Any sod permitted to dry out shall be rejected.
- B. Plant sod only during periods of favorable weather when conditions are suitable. Do not place sod at any time temperature is below freezing. No frozen sod shall be used, and no seed or sod shall be placed on frozen, powder-dry or excessively wet soil.
- C. Certification of Grass Seed: For each grass seed monostand or mixture, provide information from seed Producer stating the botanical and common name, percentage by weight of each species, percentage of purity, germination, weed seed content, year of production and date of packaging.

- D. Soil amendments and rate of application shall be determined by laboratory test on soil.
1. Areas to be seeded or sodded shall have a soil pH range of 6.5 - 7.0. Contractor shall be responsible for ensuring correct soil pH.
 2. Test pH level in at least five equidistant locations on the site. Review with the Owner's Representative or Architect who will determine whether the average soil pH value is within acceptable range. If existing soil pH is adequate, no soil amendments are required.
 3. If average pH value is greater than 7.0, add a commercial grade sulfur at rate derived from lab test, over area to be seeded.
 4. If average soil pH value is less than 6.5, then agricultural limestone shall be applied at rate derived from lab test.

1.06 SUBMITTALS

- A. Submit statement of certification from local nursery from which sod shall be obtained.
- B. Upon request, submit square yard of sod to project site for inspection by Architect and owner's representative.
- C. Submit certificates, signed by producer and contractor, stating that soil amendments and sod comply with this specification. Certificates to include the following:
1. Limestone: Type, percentage of calcium magnesium carbonates or oxides, and gradation.
 2. Fertilizer: Type and analysis.
- D. Submit copy of laboratory test results and soil amendment recommendations for review by the Architect and the Owner's Representative.

1.07 DELIVERY, STORAGE AND HANDLING

- A. Sod: Harvest, deliver, store and handle sod in compliance with the requirements of TPI's "Specifications for Turfgrass Sod Materials," and "Specifications for Turfgrass Sod Transplanting and Installation" contained in the "Guidelines Specifications to Turfgrass Sodding".
- B. Seed: Deliver seed in original sealed, labeled and undamaged packaging.

1.08 GUARANTEE, INSPECTION AND FINAL ACCEPTANCE

- A. Guarantee that at end of ninety days after sodding, a healthy first class lawn shall exist.
- B. Upon written request from Contractor, at least ten days before date of inspection, Owner or Architect will perform an inspection of sodded areas.
- C. After inspection, list of deficiencies or omissions requiring correction will be proposed. Items shall be corrected and are subject to same guarantee and final inspection until found acceptable. Be responsible for continued maintenance of that portion of the lawn, which, after ninety days, has not been accepted by Owner.
- D. Notwithstanding punch list items, Owner will certify in writing substantial completion of lawns and acceptance of work. Upon completion, reinspection of repairs or renewals necessary, Owner will assume responsibility for continued maintenance of lawn.

PART 2 - PRODUCTS

2.01 TOPSOIL

- A. Topsoil shall be a natural, friable, granular soil containing organic matter, uniform composition and texture, and free from clay subsoil, stones, weed plant root, sticks, gravel, trash or harmful chemicals. Obtain topsoil from project site stockpiles established during clearing operations. The project topsoil shall be amended to meet these specifications. Obtain additional topsoil required for landscape development from off-site sources and transport to the project site at no increase to contract sum. Obtain approval from Architect to supply topsoil from more than one site. Do not excavate or haul topsoil when wet or frozen.

2.02 SOIL AMENDMENTS

- A. Limestone: Agricultural grade limestone ground to such fineness that at least 10% passes a 100-mesh sieve, 50% passing a 40-mesh sieve, and at least 90% passes a 20-mesh sieve.
- B. Sulfur: Commercial grade sulfur of equal grade, and quality as specified for limestone.
- C. Gypsum: Agricultural grade gypsum ground to such fineness that at least 10% passes a 100-mesh sieve, 50% passing a 40-mesh sieve, and at least 90% passes a 20-mesh sieve.

2.03 FERTILIZER

- A. Fertilizer: Complete organic or inorganic fertilizer with percentages of nitrogen, phosphoric acid, potash, and trace elements determined by the soil test. Fertilizer

shall be delivered to the site in original unopened containers that bear manufacturer's guaranteed statement of analysis. Rate of application shall be determined by the soil test and/or grass product planting recommendations.

2.04 SOD AND SEED

- A. Sod: State certified, nursery grown in nearby area, well rooted, free from disease, defects, insect infestation, or any unhealthy or abnormal condition, and free of weeds.
- B. Grass Seed: Fresh, clean, dry, new crop seed complying with AOSA "Journal of Seed Technology; Rules for Testing Seeds" for purity and germination tolerances. Germination: not less than 95%. Seed purity: not less than 85% pure seed and not more than 0.5% weed seed.
- C. Sod and Seed Composition:
 - 1. Tall Fescue (Drought Tolerant, Full Sun Mixture)
 - a. Certified Tall Fescue Cultivars, a mixture of at least two different types - 95%
 - b. Certified Kentucky Bluegrass - 5%
 - 2. Medium Quality Bermuda Grass (if specified on contract Drawings)
 - a. Mohawk Advanced Synthetic Turf-Type
 - b. La Prima Synthetic Turf-Type
- D. Submit statement giving locations of property from which sod is to be obtained and submit square yard sample of sod to site if requested.

PART 3 - EXECUTION

3.01 FINISH GRADE

- A. After rough grading has been completed and site cleared of construction debris, cover areas disturbed by construction or rough grade with minimum four inches of topsoil over earth to provide finish grade.
- B. Final grades are indicated. Do not allow soil to pond. Firm topsoil by rolling to prevent washing and sinking. Degree of finish shall be that ordinarily obtained with blade grader or scraper. Finish surface to within 0.10 foot above or below established grade elevations indicated.
- C. Surface soil of final grade shall be hand raked prior to topsoil placement.

3.02 TOPSOIL PLACEMENT

- A. Topsoil shall be placed at a 4" depth over all areas to be sodded.
- B. All subgrade areas to be sodded shall be loosened by discing or scarifying to a depth of no less than 4".
- C. All areas to be sodded shall be free from roots, brush, stones, trash, etc. larger than 0.5" in diameter or length.
- D. All proposed grades must be maintained after topsoil placement.

3.03 APPLICATION OF SOIL AMENDMENTS

- A. Soil testing shall be made to determine the exact requirements of lime and fertilizer. If soil amendments are required, apply at rates specified. Blend topsoil mix to subgrade and mix soil amendments uniformly into topsoil by tilling, disking or harrowing to five inch depth. Adjacent to existing trees, adjust depth to avoid disturbances of tree roots. Tests shall be performed by a state laboratory or recognized commercial laboratory.

3.04 FERTILIZING/LIME:

- A. Fertilizer
 - 1. All Fertilizer shall be uniform in composition, free flowing and suitable for application with approved equipment.
 - 2. Application rates shall be determined by testing.
 - 3. Fertilizer shall be evenly distributed over the entire area to be sodded.
- B. Lime
 - 1. All Lime material shall be ground limestone (hydrated or burnt lime may be substituted) which contains at least 50% total oxides (calcium plus magnesium oxide).
 - 2. Application rates shall be determined by testing.
 - 3. Lime shall be evenly distributed over the entire area to be sodded.
- C. All Fertilizer and lime shall be uniformly mixed into the top 4" of soil by discing, harrowing or other approved methods. Any undulations or irregularities in the surface resulting from fertilizing, tilling or other causes shall be leveled prior to sodding.

3.05 SODDING

- A. Sod shall be laid smooth, edge to edge, with staggered joints and immediately pressed firmly into contact with sod bed by rolling to eliminate air pockets. True and even surface shall be provided to ensure knitting without displacement of sod or deformation of surfaces of sodded areas. In ditches or swales, sod shall be placed with longer dimension perpendicular to flow of water in ditch. On slopes of 1:4 and greater, the sod shall be laid with staggered joints. Sod shall be secured by biodegradable stakes or other approved method.
- B. Following compaction, screened topsoil of good quality shall be used to fill cracks, and excess soil worked into grass with rakes or other suitable equipment. Grass shall not be smothered with excess fill soil. Exposed edges of sod shall be buried flush with adjacent soil.
- C. Sod shall not be laid on soil surface that are frozen. During High temperature, the soil shall be lightly irrigated immediately prior to laying the sod.

3.06 SEEDING

- A. Sow seed with spreader or seeding machine. Do not use wet seed or seed that exhibits mold or is otherwise damaged. Broadcast seed evenly by sowing in two directions at right angles to each other. Seed only when wind is calm. Sow Tall Fescue seed at the rate of 5 to 8 lb. per 1000 sq. ft. and Bermuda grass seed at the rate of 3 to 5 lb. per 1000 sq. ft.

3.07 HYDROSEEDING

- A. Mix specified seed, fertilizer, and fiber mulch in water, using equipment specifically designed for hydroseed application. Continue mixing until homogeneous slurry is obtained.
- B. Mix slurry with specified tackifier and apply uniformly.
- C. Apply mulch at rate required to obtain specified seed sowing rate.

3.08 MAINTENANCE

- A. Ensure the establishment of a healthy, first class lawn. Be responsible for all maintenance, protection, and repair until Owner accepts planted area. Include watering, rolling, fertilizing and mowing.
- B. Maintenance and protection of all seeded and sodded areas shall continue until Owner accepts lawn. Barriers, sign, and/or flags shall be used on established pedestrian circulation ways as determined by Owner to indicate areas where trespassing is not allowed.

- C. During the maintenance period repair or re-work washouts, dry areas, dead areas or erosion at no additional cost to Owner. Repair damage by vandalism at no additional cost to Owner.

END OF SECTION

SECTION 03200
CONCRETE REINFORCEMENT

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and General Provisions of Contract, including General Conditions and other Division 1 Specification Sections, apply to the Work of this Section.

1.02 RELATED WORK

Section 03300: Cast-in place concrete.

1.03 QUALITY ASSURANCE

- A. Comply with the latest adopted edition of the Virginia USBC.
- B. Comply with pertinent recommendations contained in "Manual of Standard Practice for Detail Reinforced Concrete Structures," ACI 315, and "Building Code Requirements for Reinforced Concrete", ACI 318.
- C. Comply with pertinent provisions of the CRSI "Manual of Standard Practice".
- D. Installer Qualifications: A company specializing in placement of concrete reinforcement steel, with a minimum of 3 years experience on projects of similar size and scope.

1.04 REFERENCES STANDARDS

- A. ASTM A615 - Specifications for Deformed Billet Steel Bars for Concrete Reinforcement.
- B. ASTM A82 - Specifications for Cold-Drawn Steel Wire for Concrete Reinforcement.
- C. ASTM A1064 - Specifications for Wire Fabric for Concrete Reinforcement.
- D. ASTM A36 - Structural Steel.
- E. ACI 318 - Building Code Requirements for Reinforced Concrete.
- F. CRSI - Manual of Standard Practice.

1.05 SUBMITTALS

- A. Submit Shop Drawings indicating material, grade, sizes and dimensions for fabrication and placing of reinforcing steel and bar supports.

- B. Provide bar schedules, stirrup spacing, and diagrams of bent bars.
- C. Do not place any reinforcing until Shop Drawings are approved.

1.06 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver reinforcement to project site in bundles marked with metal tags indicating bar size and length.
- B. Protect concrete reinforcement before, during and after installation and the installed work and materials of other sections.
- C. Store in a manner to prevent excessive rusting and fouling with dirt, grease, and other bond-breaking coatings.
- D. Maintain identification after bundles are broken.
- E. In event of damage, immediately make repairs and replacements necessary.

PART 2 - PRODUCTS

2.01 CONCRETE REINFORCEMENT

- A. Concrete reinforcement materials: New, free from rust, and complying with the following:
 - 1. Bars for reinforcement: A615, grade 60; stirrups and ties grade 60.
 - 2. Wire fabric: ASTM A1064.
 - 3. Bar supports: "Bar Support Specifications," CRSI Manual of Standard Practice, Type: plastic tipped accessories.
 - 4. Tie Wire: Cold drawn steel; ASTM A-82.
 - a. Supports for reinforcement: Provide supports including bolsters, chairs, spacers and other devices for supporting and fastening reinforcing bars and welded wire fabric in place. Use wire bar type supports complying with CRSI recommendations.
 - b. For exposed-to-view concrete surfaces and where support legs are in contact with forms, provide supports with plastic protection (CRSI, Class1) or stainless steel protection (CRSI, Class 2).

2.02 FABRICATION

- A. Fabricate reinforcement in strict accordance with accepted Shop Drawings, and in accordance with ACI 315 and CRSI recommended practice.
- B. Fabricate bars with kinks or bends only as indicated on the drawings.
- C. Do not field-bend or straighten steel. Do not re-bend or straighten reinforcement to correct fabrication errors.
- D. Design:
 - 1. Bend bars cold.
 - 2. Make bend for stirrups and ties in accordance with ACI 315.

PART 3 - EXECUTION**3.01 PLACING**

- A. Before start of concrete placement, accurately place concrete reinforcement, positively securing and supporting by concrete blocks, metal chairs or spacers, or metal hangers.
- B. Clearance: Clear space between bars and cover for bars shall conform to the Requirements of ACI 318.
- C. Splicing:
 - 1. Horizontal bars:
 - a. Place bars in horizontal members with laps at splices in accordance with the Contract Documents and the Requirements of ACI-318 (Latest Edition).
 - b. Bars may be wired together at laps.
 - c. Wherever possible, stagger the splices of adjacent bars.
 - 2. Wire fabric:
 - a. Make splices in wire fabric at least 1-1/2 meshes wide.
 - 3. Other splices:
 - a. Make only those other splices indicated on accepted Shop Drawings or specifically accepted by Architect.

- b. Place required steel dowels and securely anchor into position before concrete is placed.
- c. In the event conduits, piping, inserts, sleeves or other items interfere with placing reinforcement as indicated or as otherwise required, immediately consult Architect and Owner's Representative and obtain approval of new procedure before placing concrete.

3.02 CLEANING REINFORCEMENT

Steel reinforcement, at the time concrete is placed around it, shall be free from rust scale, loose mill scale, oil, paint, and other coatings which will destroy bond between steel and concrete.

3.03 PROTECTION DURING CONCRETING

Keep reinforcing steel in proper position during concrete placement.

3.04 INSPECTION BEFORE CONCRETE PLACEMENT

Do not place any concrete until reinforcing steel has been inspected and approved.

END OF SECTION

SECTION 03300

CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and General Provisions of Contract, including General Conditions and other Division 1 Specification Sections, apply to the Work of this Section.

1.02 RELATED WORK

- A. Section 03200: Concrete reinforcement.
- B. Section 04200: Masonry accessories cast in concrete.
- C. Section 05500: Metal fabrications cast in concrete.
- D. Section 01400: Testing services.

1.03 QUALITY ASSURANCE

- A. Perform cast-in-place concrete work in accordance with ACI 318 (latest edition), unless specified otherwise in this Section.
 - 1. The Owner will employ a testing laboratory to conduct tests and provide test results.
 - 2. The testing laboratory shall conduct testing in accordance with the requirements of the Fairfax County Special Instructions Manual and other Fairfax County standards, review test results, and submit reports indicating whether test specimens comply with or deviate from applicable requirements.

1.04 TESTING LABORATORY SERVICES

- A. Provide free access to work and cooperate with appointed firm.
- B. Submit proposed mix design to inspection and testing firm for review prior to commencement of work.
- C. Tests of cement and aggregates may be performed to ensure conformance with requirements stated herein.
- D. Cast the following number of test cylinders for each 150 C.Y. or 5,000 S. F. (not less than one set of test cylinders for each days pour):

1. Two (2) Lab Cured for 28 days
 2. Two (2) Lab Cured for 7 days.
 3. All field cured cylinders as directed by local building official.
- E. One additional test cylinder will be taken and held in reserve as required for 56 day testing, and be cured on job site under same conditions as concrete it represents.
- F. One slump test will be taken for each set of test cylinders taken.
- G. At contractor's option, cylinders may be either 6 x 12 inch or 4 x 8 inch.

1.05 SUBMITTALS

- A. Submit pour schedule and diagrams of floor slabs, sidewalks, and footings to Architect for approval.
- B. Submit concrete mix design, including material certificates for cement, aggregate and admixtures. Certificates shall state compliance with the applicable referenced ASTM standards.
- C. Submit catalog data and written application instructions for all concrete compounds.

1.06 REFERENCE STANDARDS

- A. ASTM C33 - Concrete Aggregates.
- B. ASTM C150 - Portland Cement.
- C. ASTM C595 – Blended Hydraulic Cements
- D. ASTM C989 – Blast Furnace Slag
- E. ASTM C618 – Fly Ash
- F. ACI 301 - Specifications for Structural Concrete for Building.
- G. ACI 318 - Building Code Requirements for Reinforced Concrete.
- H. ASTM C260 - Air Entraining Admixtures for Concrete.
- I. ASTM C94 - Ready-Mixed Concrete.
- J. ASTM D994 - Pre-formed Asphalt Expansion Joint Fillers for Concrete Paving and Structural Construction.
- K. ACI 305 - Recommended Practice for Hot Weather Concreting.

- L. ACI 306 - Recommended Practice for Cold Weather Concreting.
- M. ASTM C309/C1315 - Liquid Membrane-Forming Compound for Curing Concrete.
- N. ACI 347 - Recommended Practice for Concrete Formwork.
- O. APA - American Plywood Association.
- P. ACI 315 - Recommended Practice for Detailing Reinforced Concrete Structures.
- Q. ACI 304 - Recommended Practice for Measuring, Mixing, Transporting, and Placing Concrete.

1.07 ADJUSTMENT OF CONCRETE QUANTITIES

- A. No payments will be made for extra concrete needed as a result of unauthorized material removed below the required depth found in the field.

PART 2 - PRODUCTS

2.01 CEMENT

- A. ASTM C150, Type I/II or ASTM C595 Type IS. Use only one of these types of cement for the entire project.

2.02 AGGREGATE

- A. Coarse aggregate for stone concrete: ASTM C33, with maximum size 3/4 in. for reinforced concrete and 1-1/2 in. for plain (unreinforced) concrete.
- B. Fine aggregate: Clean, durable sand, uncoated, grains free from silt, loam, and clay. Graded from fine to coarse with 95-100 percent by weight passing a No. 4 sieve and 3-8 percent passing a No. 100 sieve. ASTM C33 with following maximum permissible limits for deleterious substances, measured in percentage by weight: clay lumps 1.00; coal and lignite 0.25; materials finer than No. 200 sieve 3.00.

2.03 WATER

- A. Mixing Water: Drinkable in accordance with ACI 318

2.04 ADMIXTURES

- A. Hydration Control: (ASTM C494, Type B and Type D)
 - 1. Pozzolith 100-XR; Master Builders; (Degussa Admixtures, Inc)Cleveland, OH, 1-800-628-9990 (www.degussa.com)
 - 2. Plastiment; Sika Chemical Corporation, Lyndhurst, NJ, 1-800-933-SIKA (www.sikausa.com).

- B. Air-Entraining: ASTM C260.
- C. Water-reducing: ASTM C494, Type A.
- D. Water reducing/retarding: ASTM C494, Type D.
- E. Water reducing/accelerating: ASTM C494, Type E.
- F. Use of calcium chloride as an additive is **not permitted**. (Admixtures for concrete shall contain not more than 0.1 percent chloride ions by weight).

2.05 FORMS

- A. Formwork: Comply with Building Code and ACI 347. Design, erect, support and maintain forms to safely carry all superimposed loads until such time as such loads can be safely supported by the concrete work. Construct formwork to shape, sizes and dimensions as shown on required to ensure accurate alignment and elevation, and level and plumb finished concrete work.
- B. Forms for Unexposed Finish Concrete: Form with plywood, lumber, metal or other acceptable material. Provide lumber dressed on at least two (2) edges and one side for tight fit.
- C. Forms for Exposed Finish Concrete Column Wraps: Use two-piece fiberglass forms to provide a smooth exposed surface. Joints shall be placed so as to be parallel with the face of the radiused building.
- D. Forms for Exposed Finish Concrete: Unless otherwise indicated, construct formwork for exposed concrete surfaces with plywood, metal, metal-framed plywood faced or other acceptable panel-type materials, to provide continuous, straight, smooth, exposed surfaces.
- E. Use plywood complying with U.S. Product Standard PS-1 "B-B (Concrete Form) Plywood", Class I, Exterior Grade or better, mill-oiled and edge-sealed, with each piece bearing legible trademark of an approved inspection agency.
- F. Form Ties: Steel Wire snap ties with positive breakbacks which will leave no metal closer than 1" from formed surface of concrete, leave a cone-shaped recess.
- G. Form Coatings:
 - 1. Where surfaces are painted
 - a. "Duogard Plus", W. R. Meadows, Inc., Hampshire, IL 1-800-342-5976, (www.wrmeadows.com)
 - b. "Majic Cote", Symons, DesPlaines, IL 1-800-733-7654 (www.symons.com).
 - 2. Other Surfaces (Nonstaining form oil): "Duogard II", W. R. Meadows.

2.06 CONCRETE DESIGN MIX

- A. Controlled concrete proportioned as outlined in Section 5.3 ACI 318, unless specified otherwise. Allowable design stresses are based on minimum 28-day compressive strength indicated. Submit design mix for each class of concrete for Architect's approval.
- B. Proportions of aggregate to cement shall produce non-segregating plastic mixture of consistency required to give specified finish and be worked readily into corners and angles of forms and around reinforcement with method of placement employed. Accomplish variations in consistency by changes in proportioning of mix with changing W/C (water/cement) ratios established.
- C. Admixtures:
 - 1. Admixtures used in concrete: of one manufacturer.
 - 2. Use air-entraining admixture in concrete exposed to elements to obtain air content of 5 percent, plus or minus 1.5 percent for 1-inch maximum aggregate and 6 percent plus or minus 2 percent for 3/4 inch maximum aggregate. Do not premix air-entraining admixture with other admixtures.
 - 3. Retarding densifier: in concrete, except concrete for footings and isolated piers.
 - 4. For low temperature conditions, an accelerating densifier may be used in lieu of a retarding densifier in walls.
 - 5. A water-reducing admixture may be used in lieu of a retarding densifier in slabs.
 - 6. Proportion admixtures in accordance with manufacturer's recommendations.
- D. Slump Limits: $3" \pm 1"$; 4 inch maximum.

2.07 MIXING CONCRETE

- A. Ready-mixed ASTM C94, except addition of water for material with insufficient slump shall not be permitted.
- B. Provide a certificate signed by authorized official of supplier, with each load of concrete stating the following:
 - 1. Time truck left plant.
 - 2. Mix of concrete.
 - 3. Amount of water and cement in mix.

4. Time truck is unloaded at project site.
- C. Retain certificates at project site for inspection by testing laboratory.
- D. Not more than one hour shall elapse from time water is introduced into mixer drum until drum is discharged. Do not use concrete that has stood outside the mixer drum for more than 30 minutes. Do not add water to a mix that has stiffened to increase workability. Retempering of partly set concrete is not permitted.

2.08 FORMWORK FABRICATION

- A. Fabricate formwork mortartight, braced to prevent displacement under vibration and sagging between supports. For surfaces exposed to view in finished work, use new, clean, smooth plywood free from blemishes, square-cut and in sizes as large as practical.
- B. Fabricate forms for removal without hammering or prying against concrete.
- C. Provide temporary clean-out openings at base of forms and other locations in formwork to facilitate cleaning and inspection for placing concrete.

2.09 MISCELLANEOUS MATERIALS

- A. Vapor Retarder: "Moistop Ultra 10, Fortifiber Building Systems Group, Reno, NV 1-800-773-4777 (www.fortifiber.com), 10 mil polyolefin film, or Stego Wrap 10 mil Class A Vapor Retarder, San Clemente, CA 1-877-464-7834 (www.stegoindustries.com) or Pre-bid approved equal. Barrier shall resist deterioration when tested in accordance with ASTM E154, and shall meet or exceed ASTM E1745 for Class A.
- B. Porous Fill: Clean, water-worn tailings free from clay, dirt, wood and debris, graded from 2 in. to 3/4 in.
- C. Expansion Joint Material: 1/2 inch (12.7mm) asphalt expansion joint filler complying with the following:
 1. ASTM D994
 2. FS HH-F-341F, Type III
 3. AASHTO M33
 4. FAA Specification P-610-2.7
- D. Curing and Sealing Compound (for concrete floors scheduled to remain exposed only): Acrylic, water based curing compound, VOC compliant, non-yellowing, ASTM C-309/C1315, Type 1.

1. "Kure-N-Seal W", Sonneborn (Degussa Building Systems), Shakopee, MN, 1-800-443-9517 (www.DegussaBuildingSystems.com)
 2. "VOCOMP-25-1315", W.R. Meadows, Inc.
- E. Cement feathering compound: Ardex "SD-F Feather Finish", Portland cement-based, latex-modified; or comparable.
- F. Perimeter "Zip Strip": Provide a removable bond break "zip strip" capable of producing a clean 1/2" x 1/2" joint to be used for sealing all joints where walls penetrate and abut floor slab. "Sealtight Snap-Cap," W. R. Meadows, 1/2" (12.7mm), or comparable.

PART 3 - EXECUTION

3.01 FORMS

- A. Construct formwork to lines, dimensions, and shapes of concrete indicated, to a tolerance of 1/8 inch in 10 feet. Provide watertight joints in forms. Provide support to maintain tolerance specified during placing of concrete.
- B. Coat forms with form release agent prior to each use of form.
- C. Secure keys in position by continuous wood blocking rigidly secured to forms or reinforcing.
- D. Do not use pinch bars or other metal tools in exposed work to pry forms loose.
- E. Use form ties to prevent form deflection, and to prevent spalling of concrete surfaces upon removal of forms.

3.02 COORDINATION WITH OTHER WORK

- A. Provide in locations indicated slots, chases, recesses or openings not formed by sleeves, frames, boxes or equipment specified in other Sections.
- B. Examine Contract Documents for work specified in other Sections requiring either building in or provisions for later setting. Set items specified in other Sections and provide protection required to prevent damage or displacement during placing of concrete.
- C. Grout and fill with concrete as required throughout the project, except as otherwise specified, and including column base plates, door saddles, frames in concrete walls, and openings after pipes are in place.
- D. Minimum 1-inch concrete cover is required over conduits and pipes embedded in concrete. Do not place pipes or conduits having an outside diameter larger than 1/3 slab thickness in slabs.

- E. Place conduits and pipes as indicated. Place conduits and pipes to avoid changing location of reinforcing steel.
- F. Provide inserts required to bond adjacent construction to concrete.

3.03 PREPARATION

- A. Prior to placing concrete, clean equipment for transporting concrete. Remove debris and ice from spaces to receive concrete. Oil or wet form, as specified, and clean reinforcement of ice or other coatings. Remove water from areas to receive concrete.
- B. Reinforcement, forms and earth in contact with concrete shall be free from frost. Do not place concrete during rainfall without adequate protection. Make preparation to protect newly placed concrete from rainfall until concrete has hardened sufficiently to preclude rainfall damage.
- C. Place expansion joint material as indicated for slab isolation at perimeter walls and columns. Depress joint material 1/2 in. below finish slab for installation of "Zip Strip" specified in this section and sealant specified in Section 07900.

3.04 PLACING CONCRETE

- A. Convey concrete to point of final placement by methods preventing segregation or loss of materials. Place concrete as near as practical in final position to avoid segregation due to handling and flowing. Do not use concrete that has partially hardened, been contaminated by foreign materials or been retempered.
- B. Place concrete in layers not exceeding 18 inches in depth avoiding inclined planes and piling and concrete in forms permitting escape of water or free flow of concrete.
- C. Place concrete for columns and walls through canvas, wood, rubber or metal elephant trunks, 6 inches in diameter minimum, to avoid segregation of concrete in free fall. Do not allow concrete to ricochet against forms for exposed surfaces. Deposit concrete directly to center of forms. Space drop chutes on 10-foot centers, maximum. Do not use drop chutes longer than 12 feet. Provide illumination to permit inspection of the interior of forms.
- D. Vibration:
 - 1. Exposed surfaces shall be finished with a smooth, dense, concrete without honeycombing. Tamp, space, and vibrate concrete thoroughly during placing.
 - 2. Quantity, capacity and type of vibrators used is left to discretion of the Contractor. Maintain a reserve of vibrators in event of breakdown.

3. Exercise care in use of vibrators to prevent scarring or roughening of forms. Vibrators shall not cause separation of free water from mix. Do not vibrate in one spot to extent pools of grout are formed.
 4. Do not vibrate to the extent of causing segregation of aggregate. Insert and withdraw vibrators slowly. Vibrators shall run continuously while being withdrawn. Insert unit in a depth to vibrate lower layer of concrete. Do not insert into concrete that is partly hardened or that will not become plastic under vibrator action. Do not apply vibration to steel reinforcing extending into partially hardened concrete.
 5. Exercise care to prevent formation of water pockets and bubbles against form faces.
- E. Place concrete in continuous operation until panel or section is completed. Locate construction joints at point of minimum shear.

3.05 FORMS REMOVAL

- A. Forms not supporting weight of concrete, such as sides of beams, walls, columns, and similar work, may be removed after cumulatively curing at not less than 50° F. for at least 24 hours after placing concrete, provided that concrete is sufficiently hard so as not to be damaged by form removal, and provided that curing and protection measures are maintained.
- B. Forms supporting the weight of concrete shall not be removed in less than 14 days or until the concrete has attained at least 70% of the design strength.

3.06 CURING AND PROTECTION

- A. Curing:
1. Spray top surface of slabs with liquid membrane-forming compound in accordance with manufacturer's directions as soon as the newly placed surface has been finished and will not be marred by application.
 2. Respray surfaces subjected to heavy rainfall within three hours of compound application.
 3. Where practicable, keep forms in place for a seven-day curing period. Keep top exposed concrete surface wet and forms moist. Loosen forms to allow curing water to run down between concrete and forms.
 4. If forms cannot remain in place for seven days, cover concrete with fabrics that have moisture-retaining properties. Examine fabrics to detect elements that might discolor concrete finish. Keep fabric moist continuously to ensure a film of water on concrete surface.
- B. Cold weather protection:

1. Protection of concrete during cold weather shall comply with ACI 306; heating of concrete shall be in accordance with ASTM C94-78. Cold weather techniques shall be used where the mean daily temperature falls below 40 degrees F for at least two (2) consecutive days.
2. Temperature of the concrete at time of placement shall not be less than 50 degrees F. Temperature of the soil against which concrete to be placed shall not be less than 40 degrees F.
3. Concrete temperature shall be maintained at a minimum of 50 degrees F for at least seventy-two (72) hours after placement.
4. Contractor shall provide to the architect a description of cold weather protection procedures to be used, including the methods for determining the need for the procedures.

C. Hot Weather Protection:

1. Protection of concrete during hot weather shall comply with ACI 301 and ACI 305. Hot weather protection procedures shall be used when the temperature of the concrete mix exceeds 85 degrees F.
2. Temperature of the concrete mix may exceed 85 degrees F only if water reducing and retarding compound complying with ASTM C494 is used.
3. Hot weather precautions shall be instituted by the contractor when the anticipated rate of evaporation, as determined by guidelines in ACI 305, is expected to reach 0.2 pounds per square foot per hour (lb/sq. ft./hr.).
4. The contractor shall provide to the architect a description of hot weather protection procedures to be used, including the methods for determining when the procedures will need to be implemented. Provide written recommendations from the manufacturer for use of water reducing and retarding compounds.

3.07 CONTRACTION JOINTS FOR GRADE SLABS

- A. Contraction joints shall be located as indicated on Drawings or, if not indicated, so as not to impair the strength and appearance of the structure. Joints shall be spaced at a maximum of 20 feet on center, in either direction and shall coincide with column grids, where present. Install contraction joints in accordance with approved joint location shop drawings.
- B. Sawcut joints in grade slabs immediately after finishing, and after curing compound has been applied so that the slab surface is not damaged by equipment and sawcutting does not dislodge aggregate. In general, sawcutting of joints shall take place within a period of 7 to 14 hours after concrete is placed, depending on actual project conditions. Sawcutting shall be scheduled to occur within this timeframe to minimize the risk of shrinkage cracking. Work shall not be postponed until the following work day.

- C. Contraction joints shall be 1/8 inch wide by a depth equal to 25% of slab thickness.

3.08 FINISHES OTHER THAN FLOORS

- A. After removal of forms, remove fins and forms marks by grinding on exposed interior and exterior surfaces scheduled to receive paint or membrane waterproofing. Patch voids and honeycombs.
- B. Interior and exterior exposed concrete surfaces: "Rubbed Finish." Apply grout, clean-down after the patching, grinding, and cleaning operations are complete. The grout wash shall follow the patching operation as soon as possible and the procedure shall be as follows:
 - 1. Mix one part portland cement and 1-1/2 parts fine sand with sufficient water to produce a grout having the consistency of thick paint. Use white portland cement for cement in grout. Wet the surface of the concrete sufficiently to prevent absorption of water from grout and apply grout with a brush or burlap completely filling air bubbles and holes. Immediately after applying grout, float surface with a cork or other suitable float, scouring vigorously. While the grout is still plastic, finish surface with a sponge rubber float, removing excess grout.
 - 2. Finishing shall be done at time when grout will not pull from holes of depressions. Next, allow surface to dry until surface takes on a powdery appearance, then rub vigorously with dry burlap to remove completely dried grout. No visible film or grout shall remain after rubbing. Complete entire cleaning operation for an area the day it is started. Do not leave grout on overnight.
 - 3. After the concrete has been grout-cleaned, if slightly dark spots or streaks remain, wipe off lightly with a fine abrasive hone without using water. Rubbing with the hone shall not be sufficient to change the texture of the concrete. Include final operation as part of grout cleaning where necessary.
- C. In foundation walls below grade and both sides of pit walls, cut back ties and spreaders to a depth of approximately 1-1/2 in. Cut back honeycombed concrete and voids to sound concrete. Cuts shall be to depth of at least 1-1/2 in. with edges perpendicular to surface.
- D. Concrete surfaces not exposed to view may be left "as is." Fill holes resulting from cutting back of scale pockets, honeycomb, surface voids and the removal of form wires or spreaders with cement mortar.

3.09 FLOOR AND SLAB FINISHES

- A. Measure floor finish tolerances in accordance with ASTM E1155. Individual floor sections shall be bounded by construction joints, contraction (control) joints, or column lines that form the smallest sections.

- B. Floor Slab Tolerance: After final troweling operation slab shall have a surface place tolerance not exceeding 1/4 inch in 10 feet when tested with a loft straightedge, but 1/4 inch shall not be cumulative.
- C. Where specified tolerances in surface elevation of slabs are exceeded, grind or patch the surface to obtain specified tolerance. Grind as soon as possible but not before 3 days of cure. Install patching material in accordance with manufacturer's instructions.
- D. Finishes:
 - 1. Scratched finish for surfaces to receive bonded applied cementitious finishes: After the surface has been struck off, consolidated and leveled, roughen surface with stiff brushes or rakes before final set.
 - 2. Troweled finish for surface to receive finish flooring or be exposed: Float finish surfaces first and then apply power-driven trowel and then hand trowel. First troweling after power floating shall be with a power trowel producing a smooth surface relatively free of defects. Additional troweling by hand after surface has hardened sufficiently to produce a ringing sound as the trowel is moved over the surface. Thoroughly consolidate surface by hand trowel operation. Finished surface shall be free of trowel markings and be uniform in texture and appearance. On surfaces receiving floor coverings, remove defects of sufficient magnitude to show through floor covering by grinding.
 - 3. Broom finish: Light/medium broom on ramps and sidewalks, to be approved in field by Architect, finish to be consistent.
- E. Floor Slab Recesses and Slopes:
 - 1. Where floor drains are indicated on Drawings, slope floor slabs to drain.

3.10 QUALITY CONTROL TESTING DURING CONSTRUCTION BY OWNER

- A. Concrete shall be sampled and tested for quality control during the placement of concrete as follows:
 - 1. Sampling Fresh Concrete: ASTM C172, except modified for slump to comply with ASTM C94.
 - 2. Slump: ASTM C143; one test for each concrete load at point of discharge, and one for each set of compressive strength test specimens. The testing laboratory or Owner's Representative shall have the authority to reject any concrete that does not have the specified slump.
 - 3. Air Content: ASTM C231, pressure method; one for each set of compressive strength test specimens.
- B. Compression Test Specimens

1. ASTM C31: One set of 5 standard cylinders for each compressive strength test, unless otherwise directed. Mold and store cylinders for laboratory cured test specimens except when field-cure test specimens are required.
2. Tests shall be made by an independent testing laboratory. Not less than one test for each 150 cubic yards of concrete, or fraction thereof, or each 5,000 sq. ft. of slab, for each class of concrete placed will be required, and in any event not less than one test for each day's pour of each class of concrete. Four specimens will be made for each test: ASTM C39 and C31.
3. Standard age of test shall be 28 days. Seven-day test results shall be reported to Architect for two cylinders of each class of concrete. Test 2 cylinders at 28 days and 2 at 7 days.
4. If strength of laboratory control cylinders for any portion of structure falls below the compressive strength required for the design, Architect shall have the right to order change in proportions of water content of concrete for remaining portions of structure. In addition, where there is question as to quality of concrete in structure, Architect may require tests in accordance with ASTM C42. Should such tests fail to develop minimum strengths specified, faulty concrete shall be replaced.
5. Report test results in writing to the Architect and the Contractor on the same day that tests are made. Reports of compressive strength tests shall contain the project identification name and number, date of concrete placement, name of Contractor, name of concrete supplier and truck number, name of concrete testing service, concrete type and class, location of concrete batch in the structure, design compressive strength at 28 days, concrete mix proportions and materials, compressive breaking strength and type of break for both 7-day and 28-day tests. Furnish copy of each test to local building inspections office at same time other submittals are made.
6. Contractor must provide a concrete cylinder storage box acceptable to the testing and inspection laboratory.

END OF SECTION