PROJECT MANUAL

REPLACEMENT OF ARTIFICIAL TURF FIELD REPLACEMENT
RICHARD MONTGOMERY HIGH SCHOOL
WALT WHITMAN HIGH SCHOOL

Grace Rivera-Oven	**President, Board of Education**
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Department of Facilities Management
Department of Planning and Construction
MONTGOMERY COUNTY PUBLIC SCHOOLS
45 West Gude Drive, Suite 4300
Rockville, Maryland 20850

October 28, 2026

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SECTION 000200 - NOTICE TO CONTRACTORS

DIVISION OF FACILITIES MANAGEMENT
DEPARTMENT OF PLANNING AND CONSTRUCTION
MONTGOMERY COUNTY PUBLIC SCHOOLS
45 WEST GUDE DRIVE, SUITE 4300
ROCKVILLE, MARYLAND 20850

NOTICE TO CONTRACTORS
REPLACEMENT OF SYNTHETIC TURF FIELDS
RICHARD MONTGOMERY HIGH SCHOOL
WALT WHITMAN HIGH SCHOOL

Lump sum sealed bids will be received until **2:00 p.m**., local time, **November 19, 2026**, for the base bid, by the Montgomery County Board of Education, Department of Planning and Construction, 45 West Gude Drive, Suite 4300, Rockville, Maryland 20850, for the Richard Montgomery High School, 250 Richard Montgomery Drive, Rockville, Maryland 20852 and Walt Whitman High School, 7100 Whittier Blvd., Bethesda, Maryland 20817, Artificial Turf Replacement projects.

Sealed bids shall be deposited in the named-box receptacle located on the first floor lobby, 45 W. Gude Drive, Rockville, Maryland 20850. Bids will be publicly opened via phone conference. **Please call 724-418-4509 PIN: 816 353 523 at date/time of the bid opening.**

Documents may be obtained on or after October 28, 2026. Technical questions should be addressed in writing, via email to MCPS, Greg Kellner, Gregory_Kellner@mcpsmd.org with a copy to Darrel Caleb, Darrel_I_Caleb@mcpsmd.org and Construction@mcpsmd.org.

Minority business enterprises are encouraged to respond to this Notice to Contractors.

The bidder shall submit the *Certified MBE Utilization and Fair Solicitation Affidavit* and the *MBE Participation Schedule* contained in Section 008010, "Minority Business Enterprise Procedures," with the bid, and failure to submit these forms will result in the bid being determined as non-responsive. The apparent low bidder shall be requested to submit other minority business enterprise material and supporting data within ten (10) working days after notification that the firm is the apparent low bidder.

Site visits are mandatory and will be held at Richard Montgomery High Schol, 250 Richard Montgomery Drive, Rockville, Maryland 20852, November 5, 2026, at 10:00 a.m. followed by Walt Whitman High School, 7100 Whittier Blvd, Bethesda, Maryland 20817, November 5, 2026, at 11:30 a.m. The window of time is limited to one hour and contractors are encouraged to utilize photos or videos as future access will not be granted after the site visit. The scheduled site visit will convene on the field at the stadium entrances at each location.

The bidder shall carefully review the drawings and specifications before submitting their bid. Should any errors, discrepancies, or omissions be found in these specifications and/or drawings or any discrepancies found between the drawings and the physical conditions at the site, the bidder shall notify MCPS in writing immediately. When the bid has been submitted and received, it shall be understood that the work site has been inspected and that the bidder is aware of the needs and conditions under which the work is to be accomplished including, but not limited to, all work and equipment required to satisfy any and all laws, codes, regulations, etc., that are applicable.

Failure to do so will not relieve the successful bidder of the obligation to furnish all materials and labor necessary to fully carry out the provisions of the contract documents.

Instructions pertaining to the bid bond, performance, and materials payment bond requirements are set forth in Section 002000, “Instructions to Bidders,” and compliance with same shall be the responsibility of the Contractor submitting the bid.

The conditions contained in this Notice to Contractors, by their issuance, become a part of the Contract requirements.

The Board of Education reserves the right to accept any of the bids for Alternate work submitted, and may accept Alternates in any order or combination, unless specifically provided in the Contract Documents.

The Board of Education reserves the right to waive any informalities or immaterial deviations in the bids, or to reject any or all bids.

BY ORDER OF THE BOARD OF EDUCATION

(Electronically Signed)

DONALD J. CONNELLY, DIRECTOR
DEPARTMENT OF PLANNING AND CONSTRUCTION

END OF SECTION 000200

SECTION 002000 - INSTRUCTIONS TO BIDDERS

Described below are general and specific instructions provided to assist bidders in the responsible preparation of complete bids. However, it is imperative that each bidder become familiar with all aspects of the Contract Documents in recognition that only the detailed requirements contained therein shall serve as the basis of compliance for a particular project. This procurement is in accordance with Montgomery County Board of Education Policy DJA, Regulation DJA-RA, and the Procurement Manual. This project may be subject to value engineering. General instructions for preparing construction bids with Montgomery County Public are as follows:

PART 1 - BIDS

1.1 Lump sum sealed bids will be received by the Montgomery County Board of Education for the construction of the facility. Bids are due at the time, date, and place stated in Section 000200, "Notice to Contractors."

1.2 Bids are to be submitted in duplicate in the form of one original and one copy.

1.3 No bid may be withdrawn within sixty (60) days after the actual date of the bid opening. The Owner retains the right to accept a bid within sixty (60) days of bid opening without an increase in bid price or change in time of Project completion.

1.4 Bids withdrawn for any reason after bid opening, or Contractors who fail to enter into a Contract, will be determined not responsible and not permitted to rebid the project. The Owner retains the right to consider bid withdrawals or requests for withdrawal in evaluating the Contractor's responsibility on future solicitations.

1.5 Prices shall be clearly written. Anything other than a price shall be deemed “no cost to the Owner.”

1.6 Contract award shall be based upon best value and price, and in the best interest of the Board of Education of Montgomery County, Maryland. Value will be based on the data provided by the bidder.

PART 2 - DRAWINGS AND SPECIFICATIONS

2.1 Documents may be obtained on or after October 28, 2026. Technical questions should be addressed in writing, via email to MCPS, Greg Kellner, Gregory_Kellner@mcpsmd.org with a copy to Darrel Caleb, Darrel_I_Caleb@mcpsmd.org and Construction@mcpsmd.org.

PART 3 - INSPECTION OF SITE

3.1 Bidders shall visit the site and become familiar with the local site conditions under which the Work is to be performed. Bidders represent and warrant for themselves and any relevant Subcontractors intended to be employed on the Project, that all nature of the Work set out in the drawings and specifications has been observed, that there have been opportunities to inquire about site conditions including public right-of-ways and areas adjacent to the site which might affect the Work, and that their proposal has been prepared with the requisite understanding of the Project and site conditions. Failure to become familiar with the site will not relieve a successful bidder of the obligation to

furnish all materials, labor and services necessary to carry out the provisions of the drawings and specifications and to complete the contemplated Work for the consideration set forth in his bid.

PART 4 - INTERPRETATION

4.1 Should a bidder be in doubt as to the meaning of any notations shown on the Construction Documents, or should any discrepancy or omission be discovered, the Architect shall promptly be notified in writing. All bidders will be notified, in writing, by means of addenda. The Board of Education will not be responsible for any explanations or interpretations of the Contract Documents in any form of communication other than written addenda distributed to all bidders.

4.2 A bidder shall be presumed to have familiarity with site conditions and to understand the meaning of all notations shown on the Construction Documents, unless clarification is sought in the above manner.

4.3 All systems in all divisions are to be bid and constructed as wholly closed, connected, and fully working systems. Any doubts by the Contractor as to the intent of the Construction Documents for such total systems must be verified before bidding.

4.4 Each trade or subcontractor will be deemed to have familiarized itself with all Construction Documents of this project, including Architectural, Structural, Mechanical, Electrical, and Site Work drawings so as to avoid coordination errors, omissions, and misinterpretations. No additional compensation will be authorized for alleged errors, omissions, or misinterpretations as a result of failure to observe this requirement.

4.5 Where a device or piece of equipment is referred to in the singular number, such reference shall be deemed to apply to as many devices as are required to complete the installation.

PART 5 - BID BONDS

5.1 Each bid must be accompanied by a bid bond on an AIA Document A-310 Bid Bond from a surety company authorized to transact surety business in the State of Maryland and have at least an A Minus rating with A. M. Best, properly executed in favor of the Owner for not less than ten percent (10%) of the amount of the largest possible total of bids submitted.

5.2 Bid bonds will be returned within forty-eight (48) hours after the Owner and the successful bidder have executed the Contract. If no Contract has been executed within sixty (60) calendar days after the opening of bids, an unsuccessful bidder may demand return of the bid bond any time thereafter.

5.3 The bonding company furnishing the bid bond shall attach to the bid bond, or deliver to the Owner within two working days of the bid opening, the following statement, signed by an authorized representative of the bonding company:

> "As surety for the (Name of Contractor), (Name of Bonding Company) hereby agrees to furnish the 100 percent Performance and Payment Bonds, as required by the specifications for (Name of Project), on behalf of the Contractor, in the event that such firm be the successful bidder for this project."

Power of Attorney, properly executed, shall accompany bid bond and bond agreement

outlined above if agreement is submitted separately.

PART 6 - PERFORMANCE AND PAYMENT BONDS

6.1 At the time of execution of the Contract, the successful bidder shall deliver to the Owner two (2) copies each of the following:

A Performance Bond in the amount of One Hundred percent (100%) of his Contract Price covering faithful performance of the Contract.

B. Payment Bond in the amount of One Hundred percent (100%) of the Contract Price as security for the payment of all persons performing labor and furnishing materials in connection therewith.

C. Power of Attorney, properly executed, shall accompany bonds.

6.2 The Performance Bond and the Payment Bond shall be submitted on AIA Document A312. The surety company must be authorized to transact business in the State of Maryland, and have at least an A Minus rating with A. M. Best.

6.3 The cost of these bonds shall be included in the amount of the bids.

6.4 Status inquiries from the bonding company should be sent to the Owner, at 45 West Gude Drive, Suite 4300, Rockville, MD 20850.

PART 7 - FORFEIT OF SECURITY

7.1 Failure to Enter Into Contract:

If the bidder fails to execute and deliver the Contract and performance bond within ten (10) working days of notice of acceptance of his bid, the security deposited with the bid shall be forfeited to the Owner as liquidated damages for such failure or refusal. Forfeiture of the security notwithstanding, the Owner reserves the right to seek additional damages for Contractor's failure to execute the Contract.

7.2 Proposed Subcontractors:

A. The Owner will notify the apparent low bidder. Within two (2) working days after that notification, the apparent low bidder (herein after known as the Contractor) shall submit to the Owner, the names of those Subcontractors and persons or organizations (including manufacturers furnishing materials or equipment fabricated to a special design) who are to provide:

1. excavating, filling and grading*
2. site utilities*
3. structural steel*
4. concrete*
5. masonry*
6. drywall and steel stud framing*
7. fireproofing
8. painting
9. finish flooring
10. casework
11. roofing*
12. food service equipment
13. mechanical and electrical material and workmanship*

14. asbestos removal if applicable*

for acceptance by the Owner, along with the Contractor's certification that these same Subcontractors, persons, organizations, or manufacturers will be used on the project and will not be changed without permission of the Owner. If the General Contractor proposes to perform this Work with its own forces, it must submit documentation to support that its current personnel has completed Work of similar scope and nature on projects of like size within the past three years.

B. For above Subcontracts identified with an asterisk (*) exceeding $100,000, the Contractor shall also provide (in addition to the above list of Subcontractors, persons, organizations, and manufacturers) letters from the Subcontractor's surety containing the following statement, signed by an authorized representative of the Subcontractor's surety:

"As surety for the (Name of Subcontractor), (Name of Surety), hereby agrees to furnish the 100% Payment and Performance bonds as required by the specifications for (Name of Project), on behalf of the Subcontractor."

C. Power of Attorney, properly executed, shall accompany the bond agreement outlined above.

7.3 Failure by the Contractor to provide any of the information outlined above within two (2) working days after notification that said Contractor is the apparent low bidder shall result in his bid being deemed nonresponsive and the security deposited with his bid (Bid Bond) shall be forfeited to the Owner as liquidated damages for such failure.

PART 8 - TIME OF COMMENCEMENT AND TIME OF COMPLETION

8.1 On-site Work shall begin on **June 1, 2027**, and the entire Work shall be substantially complete on or before **July 16, 2027**.

PART 9 - LIQUIDATED DAMAGES

9.1 A clause will be inserted in the Contract Between the Owner and Contractor stating, that, from the compensation otherwise to be paid, the Owner may retain the sum of Two Thousand Five Hundred Dollars ($2,500) for each calendar day up to 30 days of delay beyond the completion date of each phase of the project as stipulated in the Contract Documents, and Five Thousand Dollars ($5,000) a day for each calendar day thereafter without limitation. The calculation of liquidated damages will begin again with each phase provided the previous phase has been completed.

9.2 A clause will be inserted in the Contract Between the Owner and Contractor stating that, from the compensation otherwise to be paid, the Owner shall retain the sum of Five Hundred Dollars ($500) for each calendar day beyond the 60th day after Substantial Completion for failure to complete all Contract requirements.

9.3 The time in which the Contractor agrees to complete the Work is the essence of the Contract and failure to complete within the time specified will entitle the Owner to deduct and retain out of monies which may be due the Contractor under this Contract, the sum stated above and in the proposal form for each calendar day in excess of the time stated, including Sundays and legal holidays. The sum shall not be applied as a penalty but as a sum reasonably calculated and mutually agreed upon to compensate the Owner for the actual, direct, indirect, and consequential damages suffered by the Owner because of the

Contractor’s failure to complete the work within the Contract time.

PART 10 - BID ALTERNATES

10.1 Include prices for all bid Alternates as described in Section 012300, “Alternates”, of this manual.

10.2 Bidder-originated Alternates or qualifying statements will not be considered. The Owner shall have the right to accept Alternates in any order or combination.

PART 11 - INFORMATION PRICES

11.1 Since capital construction projects are partially funded by the State of Maryland, information prices are requested for certain items of Work or equipment as stipulated by State guidelines. Where requested, information prices shall be provided which reflect the most accurate cost of those items available.

11.2 Within two (2) working days after notice to proceed, the Contractor must provide the following list of information prices to MCPS. The informational prices are to be used for accounting purposes by the Owner and will in no way affect the award of the total Contract to the lowest qualified bidder. The Contractor's first requisition for payment will be withheld until requested prices have been submitted.

A. SITE WORK

1. Cost of on-site improvements, exclusive of excavation necessary to construction of the building, including site lights, paving, lawns and landscaping.

2. Cost of off-site improvements including off-site storm water management improvements.

B. COST FOR ITEMS INELIGIBLE FOR STATE FUNDING

1. Mobile equipment and furnishings not permanently installed
2. Projection Screens if not mounted on walls or ceilings
3. Gym equipment - climbing ropes, wall-mounted chinning bars, horizontal bars, volleyball and badminton equipment, divider curtains, ceiling mounted rings, archery nets, wallpads
4. Unit kitchens/kitchen equipment in staff rooms
5. Kitchen equipment - Loose pieces (no fixed connections) other than serving counter, station-cashier, cold food and warm food stations
6. Art room spray booth
7. T.V. Studio Cyclorama Curtains, Shower Curtains, and Cubicle Curtains
8. Moveable Metal Storage Shelving
9. Folding and Portable Risers

C. COST OF OWNER'S LIABILITY INSURANCE, PROVIDED BY THE CONTRACTOR.

PART 12 - PROCEDURES FOR TIE BIDS

12.1 Tie bid occurs when two or more bids, plus accepted Alternates, if any, are exactly the same amount. In the event of a tie bid, preference in the award of the bid will be given

first to resident bidders of the State of Maryland. (The residence of a corporation is its principal place of business.) All other tie bids will be awarded by drawing of lots in public.

PART 13 - PREPARATION OF BID FORMS

13.1 Signatures must be longhand, executed by a principal duly authorized to make Contracts, with the bidder's legal name fully stated. Oral, telegraphic, or telephone proposals or modifications will not be considered. If a corporation, give the state in which incorporated, using phrase, "corporation organized under the laws of the State of ." If a partnership, give names of partners, using also the phrase "Co-partners, trading and doing business under the firm name and style of _____." If an individual, use the phrase "doing business under the firm name of _____."

13.2 Acknowledge receipt of each and every addendum on the Bid Form.

13.3 Due to the lack of subcontracting opportunities on this project, there is no Minority Business Enterprise goal. However, the effort to use and the reporting of minority Business participation is strongly encouraged. MBE forms are not required with the bid.

PART 14 - MINORITY BUSINESS ENTERPRISE PARTICIPATION

14.1 As described within the document "Minority Business Enterprise Procedure" which is included in Section 008010 of this project manual, a *Certified MBE Utilization and Fair Solicitation Affidavit* and the *MBE Participation Schedule* MUST accompany all bid proposals. Failure to submit these forms will result in the bid being determined non-responsive. Minority participation requirements must be met as a condition for recommendation of Contract award. The apparent low bidder shall submit additional minority business enterprise material and supporting data, which is specified in the bid documents within ten (10) working days after notification.

PART 15 - SUBSTITUTIONS

15.1 Where a specific manufacturer or trade name is designated, it is to establish a standard of material, design function, finish and quality. Only products of the acceptable manufacturers are to be used in the bidder’s proposal.

A. The Contractor shall be responsible for determining what model or product of the acceptable manufacturer meets the specified standards. Other products which will perform equally the duties imposed by the general design will be considered providing submittal for substitutions is in strict accordance with Section 012500, "Substitutions," and is submitted to the Architect ten (10) days prior to the bid opening. If in the opinion of the Architect, the product so proposed is of equal design function, finish, and quality, approval will be issued in an addendum prior to the bid opening.

15.2 Substitutions in any form other than described herein will not be permitted.

PART 16 - ITEMS NOT IN THE CONTRACT

16.1 Items specifically noted as "N.I.C." or "Not in Contract" are not required under this Contract but are to be furnished and installed by others. Contractor shall be responsible for installation and connection of utilities for all items to be furnished by the Owner or others unless specifically noted otherwise. Contractor shall give reasonable notice to Owner of desired delivery date of items being furnished by Owner or others.

16.2 Items specifically noted as “O.F.C.I.” or “Owner Furnished/Contractor Installed” are to be furnished by others. The cost of installation shall be included in the Contractor’s bid. Contractor shall be responsible for installation and connection of utilities for all items to be furnished by the Owner or others unless specifically noted otherwise. Contractor shall give reasonable notice to Owner of desired delivery date of items being furnished by Owner or others.

PART 17 - PART 17 - AIR AND WATER BALANCING

17.1 Air and water balancing shall be performed by an independent qualified balancing contractor who must be a certified member of the Associated Air Balance Council (AABC) and/or National Environmental Balancing Bureau (NEBB). This Work must be performed as a direct subcontract under the General Contractor.

PART 18 - INSTALLATION OF ACCEPTABLE PRODUCTS

18.1 Where the specifications list acceptable manufacturers' products or materials, it shall be the responsibility of the Contractor, without cost to the Owner, to make the modifications necessary to install the acceptable products even though not specifically identified in the conforming set of drawings and specifications.

PART 19 - HAZARDOUS MATERIAL ABATEMENT WORK

19.1 Hazardous material abatement included in the Specifications is subject to all parts of the total Specifications, and part of the Contract Documents. The General Contractor will in all respects be totally responsible for the hazardous material abatement subcontractors and shall coordinate that Work in conjunction with the total project. This Work is subject to inspection and approval of the MCPS Safety Officer. The Contractor is required to contract Montgomery County Public Schools to review the procedures for verifying hazardous containing material prior to the start of <u>any</u> Work in or interfacing with the existing facility. The Architect is not involved and has no responsibilities for specifying, supervision or acceptance of this Work.

PART 20 - CANCELLATION/REJECTION OF BIDS

20.1 The Owner further reserves the right to reject any or all bids and to waive any informalities or immaterial deviations in the bids.

20.2 The Owner may cancel this Bid, in whole or in part, at any time. The Owner may reject all Bids and re-advertise for new Bids, according to the best interest of the Montgomery County Public Schools.

END OF SECTION 002000

SECTION 003000 - BID PROPOSAL FORM – MCPS

(SUBMIT IN DUPLICATE ON BIDDER'S STATIONERY)

DATE: _____

PROJECT TITLE: ARTIFICIAL TURF FIELD REPLACEMENT RICHARD MONTGOMERY HIGH SCHOOL and WALT WHITMAN HIGH SCHOOL

BID SUBMITTED BY: _____

REGISTERED MARYLAND CONTRACTOR NO.: _____

SUBMITTED TO: **The Board of Education of Montgomery County**
Department of Planning and Construction
45 West Gude Drive, Suite 4300
Rockville, Maryland 20850

PART 1 - GENERAL

1.1 The undersigned BIDDER proposes and agrees, if this Bid is accepted, to enter into an Agreement with the OWNER in the form included in the Contract Documents to complete all Work as specified or indicated in the Contract Documents for the Contract Price and within the Contract Time indicated in this Bid and in accordance with the Contract Documents.

1.2 BIDDER has examined the site and locality where the Work is to be performed, the legal requirements (federal, state and local laws, ordinances, rules and regulations) and the conditions affecting cost, progress or performance of the Work and has made such independent investigations as BIDDER deems necessary.

1.3 BIDDER hereby agrees to furnish all labor, materials, equipment and services required to erect and complete the facility in strict accordance with the Contract Documents for the following price:

1.4 BASE BID

A. TOTAL BASE BID – Richard Montgomery High School

_____ Dollars ($ _____)

B. TOTAL BASE BID – Walt Whitman High School

_____ Dollars ($ _____)

ALTERNATES: Prices shall be clearly written. Anything other than a price shall be deemed "no cost to the Owner."

A. Cost of Alternate No. One — N/A

ADD _____ Dollars ($_____)

B. Cost of Alternate No. Two — N/A

ADD _____ Dollars ($_____)

PART 2 - PROJECT CONSTRUCTION SCHEDULE AND LIQUIDATED DAMAGES

2.1 The undersigned agrees to erect and complete Work in strict accordance with the Contract Documents and be substantially complete by no later than the date(s) set forth in the Construction Schedule prepared and amended by the Construction Manager. The Owner may retain the sum of Two Thousand Five Hundred Dollars ($2,500) for each calendar day up to 30 days of delay beyond the completion date of each phase of the project as stipulated in the Contract and Five Thousand Dollars ($5,000) a day for each calendar day thereafter, without limitation. If the project has a phased completion, the calculation of liquidated damages will begin again with each phase provided the previous phase has been completed.

2.2 BID BOND: BIDDER must include Bid Bond in the form set forth in the "Instructions to Bidders," Section 002000, and the Project Manual, and for not less than ten percent (10%) of the largest possible total of bids submitted.

2.3 The undersigned encloses herewith a Surety Bond in the form set forth in the “Instructions to Bidders,” Section 002000, and the Project Manual.

PART 3 - ACKNOWLEDGEMENTS

3.1 Receipt of the following Addenda to the Drawings and Specifications is acknowledged:

A. Addendum No. ____ Dated _____

B. Addendum No. ____ Dated _____

C. Addendum No. ____ Dated _____

D. Addendum No. ____ Dated _____

3.2 Minority Business Enterprise forms included with the Bid Proposal:

_____ Attachment D Pages D-1 through D-10

(Must be submitted for the bid to be considered responsive)

PART 4 - CONTRACT

4.1 If the undersigned receives written notice of the acceptance, at his designated address, within sixty (60) calendar days after bid opening (or later if bid has not been withdrawn), the undersigned agrees to execute and deliver a Contract and Bonds in accordance with the bid as accepted, within ten (10) calendar days after receiving notice, or forfeit the amount of the Bid Bond.

PART 5 - UNIT PRICES

5.1 Unit prices are for both extra Work and credits. This list of prices will be submitted with the Bid in duplicate and shall become a part of the Contract upon its award. Unit prices listed below are applicable to all Work in this project involving extra materials/services performed by the Contractor or his Subcontractors and/or credits to the Owner for materials/services

deleted from the project. Unit price includes all overhead and profit for the Subcontractor. Contractor mark-up is to be applied per Article 7 of the General Conditions of the Contract for Construction, AIA Document A201 REV.DOC-2007 edition. Prices as stated shall remain in effect through the end of the Contract warranty period. The undersigned acknowledges the unit price values as part of this bid and agrees to add or delete items for the unit prices identified when directed to do so by the Owner.

ITEM	DESCRIPTION OF ITEM	UNIT	PRICE
1.	Earth excavation – machine	cu. yd.	$4.50
2.	Earth excavation – hand	cu. yd.	$60.00
3.	Trench machine earth excavation	cu. yd.	$5.50
4.	Excavate and remove unsuitable material from site		
	- Yardage under 5,000	cu. yd.	$19.00
	- Yardage over 5,000 up to 20,000	cu. yd.	$16.00
	- Yardage over 20,000 to be negotiated at a lower rate		
5.	Furnish, deliver, spread and compact imported fill material		
	- Yardage under 5,000	cu. yd.	$19.00
	- Yardage over 5,000 up to 20,000	cu. yd.	$16.00
	- Yardage over 20,000 to be negotiated at a lower rate		
6.	Imported top soil (spread)	cu. yd.	$25.00
7.	Remove and dispose of petroleum contaminated soil. This unit price only includes material requiring contaminate content removal. If the Owner locates a suitable dumping location not requiring contaminate removal in material, the Contractor shall use unit price 4 above for excavation and removal from site only.	ton	$70.00
8.	Soil Cement Pavement subgrade in 12 inch thickness. Unit price -	sq. yd.	$16.00
9.	Sodding - under 5,000 sq. yd. Includes watering	sq. yd.	$4.10
	- over 5,000 sq. yd. Includes watering	sq. yd.	$4.10
10.	Hydroseeding	sq. yd.	$0.80
11.	Concrete Walk (4 inch) w/ 10/10 wwm	sq. yd.	$38.00
12.	Bank run gravel under slab	cu. yd.	$35.00
	Compacted G.A.B. under asphalt	cu. yd.	$40.00
13.	4” concrete slabs with 6x6 10/10 wwm	sq. ft.	$4.25
14.	Bituminous Paving Play Areas Light duty 4 “ G.A.B. 2½“ 9.5mm 1½” of 4.75mm	sq. yd.	$32.00
15.	Bituminous Paving Heavy Duty 8” G.A.B. 4” Base 2 Layers 19mm 2” Top Coat of 9.5mm	sq. yd.	$37.00

16.	Reinforced concrete footings	cu. yd.	$260.00
17.	4” C.M.U. wall	sq. ft.	$6.00
18.	6” C.M.U. wall	sq. ft.	$6.60
19.	8” C.M.U. wall	sq. ft.	$8.10
20.	12” C.M.U. wall	sq. ft.	$9.00
21.	4” face brick	sq. ft.	$14.40
22.	VCT	sq. ft.	$3.25
23.	Carpeting	sq. yd.	$27.00
24.	Floor patching		
	- Skim coat, up to 1/8 inch thickness	sq. ft.	$0.65
	- Leveling, up to ¼ inch thickness	sq. ft.	$0.92
	- Leveling, up to ½ inch thickness	sq. ft.	$1.32
	- Topping, up to ¾ inch thickness	sq. ft.	$1.50
	- Topping, up to 1 ½ inch thickness	sq. ft.	$2.00
	- Topping, up to 2 inch thickness	sq. ft.	$2.50
25.	Bulk Rock Excavation and Removal Off-Site (see Section 022000)	cu .yd.	$75.00
26.	Trench Rock Excavation and Removal Off-Site	cu. yd.	$150.00
27.	Geothermal Borehole Casing	lin. ft.	$12.00

PART 6 - WARRANTY TO THE LUMP SUM

6.1 The undersigned affirms that the above lump sum Base Bid represents the entire cost of the Project in accordance with the Bid Documents and that no claim will be made on account of any indexes or any other rate affecting the construction industry and/or this project.

PART 7 - AFFIDAVIT

7.1 Special Instructions: An authorized representative of the BIDDER shall complete the following affidavit and insert an answer to Paragraphs A, C, and E.

STATUTORY AFFIDAVIT AND NON-COLLUSION CERTIFICATION

I, _____, being duly sworn, depose and certify:

A. I am the _____ (officer) and duly authorized representative of the firm of the building construction organization named _____ whose address is _____ and that I possess the authority to make this affidavit and certification on behalf of myself and the firm for which I am acting.

B. Except as described in Paragraph 3 below, neither I, nor to the best of my

knowledge, the above firm nor any of its officers, directors, or partners, or any of its employees who are directly involved in obtaining or performing Contracts with any public bodies has:

1. been convicted of bribery, attempted bribery, or conspiracy to bribe, under the laws of any state or of the federal government;

2. been convicted under the laws of this State, another State, or the United States of: a criminal offense incident to obtaining, attempting to obtain, or performing a public or private Contract; or fraud, embezzlement, theft, forgery, falsification or destruction of records, or receiving stolen property; been convicted of a criminal violation of an antitrust statute of the State of Maryland, another state, or the United States;

3. been convicted of a violation of the Racketeer Influenced and Corrupt Organization Act, or the Mail Fraud Act, for acts in connection with the submission of bids or proposals for a public or private Contract;

4. been convicted of any felony offenses connected with obtaining, holding, or maintaining a minority business enterprise certification, as prohibited by Section 14-308 of the State Finance and Procurement Article;

5. been convicted of conspiracy to commit any act or omission that would constitute grounds for conviction under any of the laws or statutes described in Paragraph (a) through (e) above; or

6. been found civilly liable under an antitrust statute of this State, another State, or the United States for act or omissions in connection with the submission of bids or proposals for a public or private Contract.

C. The only conviction, plea, or admission by any officer, director, partner, or employee of this firm to involvement in any of the conduct described in Paragraph 2 above is as follows:

(If none, write "None" below. If involvement, list the date, count, or charge, official or administrative body, the individuals involved, their position with the firm, and the sentence or disposition of the charge.)

(You may attach any explanation necessary.)

D. I affirm that this firm will not knowingly enter into a Contract with a public body under which a person or business debarred or suspended under Maryland State Finance and Procurement Title 16, subtitle 3, Annotated Code of Maryland, as amended, will provide, directly or indirectly, supplies, services, architectural services, construction-related services, leases or real property, or construction.

E. I affirm that this proposal or bid to the Board of Education of Montgomery County is genuine and not collusive or a sham; that said BIDDER has not colluded, conspired, connived and agreed, directly or indirectly, with any BIDDER or person to put in a sham bid or to refrain from bidding and is not in any manner, directly or indirectly, sought by agreement of collusion or communication or conference, with any person to fix the bid prices of the affidavit or any other BIDDER, or to fix any overhead, profit or cost element of said bid price, or that if any BIDDER, or to secure an advantage against the Board of Education of Montgomery County or

any other person interested in the proposed Contract; and that all statements in the proposal or bid are true. I acknowledge that, if the representations set forth in this affidavit are not true and correct, the Board of Education of Montgomery County may terminate any Contract awarded and take any other appropriate action.

I DO SOLEMNLY DECLARE AND AFFIRM under the penalties of perjury that the contents of these affidavits (Statutory and Non-Collusion) are true and correct, that I am executing this Affidavit in compliance with Section 16-311 of the State Finance and Procurement Article, Annotated Code of Maryland, and the Non-Collusion Certification in compliance with requirements of the Montgomery County Board of Education, and that I am executing and submitting this Form of Proposal on behalf of and as authorized by the BIDDER named below.

NOTE: Use one

1. If a corporation, give the state in which incorporated, using phrase, "corporation organized under the laws of the State of _____."
2. If a partnership, give names of partners, using also the phrase "Co-partners, trading and doing business under the firm name and style of _____."
3. If an individual, use the phrase "doing business under the firm name of _____.

Respectfully submitted,
(COMPANY NAME OF BIDDER)

By _____
(*Signature*)

_____
(Official title)

_____
(*Company Name*)

_____
(Contact email)

_____
(Business Address

_____
(Phone)

_____
(Contractor's Maryland Registration Number)

SUBSCRIBED AND SWORN to before me on this __ day of _____, 20___.

NOTARY PUBLIC
My Commission Expires:

END OF SECTION 003000

SECTION 004000 – PROJECT SCOPE INFORMATION

PART 1 – GENERAL

Scope of this project includes, but is not limited to the following:

MCPS is requesting a lump sum cost proposal for the subject work described. The cost proposed for this project should be based on the contractors' determination of quantities. After the award, no extra costs will be allowed on increased quantities unless they represent work required but not specified in the bid plans. This work must be authorized in writing by the Director of the Montgomery County Public Schools, Department of Planning and Construction.

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, apply to this section.

1.2 SCOPE OF WORK

A. Furnish all labor, materials, tools, and equipment necessary to install, in place, all synthetic turf material as indicated on the plans and as specified herein. The installation of all new materials shall be performed in strict accordance with the Manufacturer's written installation instructions, and in accordance with all approved shop drawings.

B. Prior to order of materials, the Synthetic Turf Contractor shall submit the following:

1. Product data, including Independent Laboratory Test Results,
2. Installation details,
3. Sample Warranty,
4. Field layout and striping plans,
5. Details on construction, especially any details that may deviate from plans and specifications.

C. Prior to the beginning of installation, the Synthetic Turf Contractor of the synthetic turf shall verify the base for planarity. Upon written confirmation from the base contractor that compaction/planarity and drainage/permeability specifications have been achieved, the installation of synthetic turf will proceed as arranged.

D. Prior to Final Acceptance, the Synthetic Turf Contractor shall submit to the Owner three (3) copies of Executed Warranty Documents and Maintenance Manuals, which will include necessary instructions for the proper care and preventative maintenance of the synthetic turf system, including painting and striping.

1.3 SHOP DRAWINGS

A. Shop drawings shall be prepared and contain all pertinent information regarding installation. These drawings shall be submitted to the Owner or Owner's representative for approval prior to the manufacturing and shipment of materials.

B. Submit drawings for:

1. Installation details, edge detail, goal post detail, other inserts, and covers, etc., as required by contract.
2. The Synthetic Turf Manufacturer must have been in business under the same ownership for at least five years and shall have been installing similar sports fields for that entire period.
3. Striping plan showing any field lines, markings and boundaries, and field logos per project drawings.

1.4 QUALITY ASSURANCE

A. Synthetic Turf Manufacturer is defined as:

1. A company specializing in the design and manufacturing of infilled turf systems with not less than five (5) years documented experience.
2. The Synthetic Turf Manufacturer must have been in business under the same ownership for at least five (5) years and shall have been installing similar sports fields for that entire period.
3. Manufacturer shall have an experienced technical services and sales professional who is available during the course of the work to meet personally with the Owner, Contractor, and Landscape Architect.

B. Synthetic Turf Manufacturer's Experience:

1. The Synthetic Turf Manufacturer shall have the experience of at least one hundred (100) acceptable installations of full-size fields (minimum 65,000 sq. ft.) in the United States within the past five (5) years of tufted, polyethylene grass-like fabrics that are filled with either all rubber or a mixture of SBR rubber and sand. Submit a list of all applicable installations with the bid.
2. The Synthetic Turf Manufacturer shall have the experience of twenty-five (25) acceptable installations (minimum 65,000 sq. ft.) of fields that are at least eight (8) years old. Submit a list of all applicable installations with the bid.
3. The Synthetic Turf Manufacturer shall have the experience of fifty (50) acceptable installations of the specific fiber system specified. Submit a list of all applicable installations with the bid.
4. The Synthetic Turf Manufacturer shall have the experience (if applicable to this project specification) of one hundred (100) installations with sewn main fabric seams.
5. The Synthetic Turf Manufacturer must be a certified member of the Synthetic Turf Council in good standing.
6. The Synthetic Turf Manufacturer must have and operate its own extensive research and development laboratory. This laboratory must include testing devices for the following tests: Yarn Tensile Strength, Yarn Elongation, Tuft Bind, Grab Tear Strength, Seam Strength, G-max, Force Reduction, Vertical Deformation, Ball Roll, Ball Rebound, Rotational Resistance, Linear Traction, Relative Abrasive Index, UV Resistance, Flammability, and Simulated Aging.

7. Testing of the synthetic turf system is mandatory and must be provided from a laboratory that is accredited by the NVLAP. Testing from laboratories that are not NVLAP accredited will not be accepted. The National Institute of Standards and Technology (NIST) is part of the U.S. Department of Commerce and administers the National Voluntary Laboratory Accreditation Program (NVLAP). Accreditation requirements are established in accordance with the U.S. Code of Federal Regulations (CFR, Title 15, Part 285), *National Voluntary Laboratory Accreditation Program*, and encompass the requirements of ISO/IEC 17025.
8. The Synthetic Turf Manufacturer must have manufactured and installed fields at every level of competition, including high school, college and professional.
9. The Synthetic Turf Manufacturer must have at least (5) five current NCAA Division I, (2) two current NFL game stadium or NFL practice field installation, and (2) two current MLB game stadium or practice fields.
10. The Synthetic Turf Manufacturer must not have had more than (5) five fields replaced, under warranty, during the past five (5) years.
11. The Synthetic Turf Manufacturer must be vertically integrated including in-house tufting, polyethylene monofilament extrusion, in-house coating, polyurethane compounding, manufacture own primary backing, in-house yarn texturizing, ability and flexibility to tuft various gauge widths and have the ability to recycle used/old fields.
12. The Synthetic Turf Manufacturer must have a fully integrated quality system, directly based on and compliant with ISO 9000, ISO 14001 and OHSAS 18001 international standards.
13. The Synthetic Turf System Vendor shall have the capability to remove, reclaim and recycle the synthetic turf system at the end of its useful life.
14. The Synthetic Turf System Vendor must provide documentation outlining their product lifetime recycle / reuse program that is currently in place. A minimum of 5 fields must have been used in this process. All material must demonstrate the capability to reuse in a product that employs a cradle-to-cradle design. Reuse or other diversion plans that do not include production of a new and useful product will not be considered.
15. The Synthetic Turf manufacturer should have the capability to tuft in numbers, lines, hash marks and logo details utilizing a 3-color system.

C. Synthetic Turf Contractor is defined as:

1. A contractor that has built and installed a minimum of ten (10) infilled synthetic turf fields. Turf contractors and on-site superintendent shall provide a resume to provide proof of experience.

a. At any time after award of the contract and before the completion of the project, should any member of the approved crew or subcontractor discontinue their relationship with the synthetic turf crew or subcontractor, the Owner shall be notified. Failure to provide personnel meeting the minimum qualifications shall be considered default of the contract requirements.

D. Warranty: The Synthetic Turf Contractor shall submit its Manufacturer's Warranty, which guarantees the usability and playability of the synthetic turf system for its intended uses for an eight (8) year period commencing with the date of Substantial Completion.

1. The warranty submitted must have the following characteristics:

a. Must provide full-field coverage for eight (8) years from date of Substantial Completion,

b. Must warrant materials and workmanship,

c. Must warrant that the materials installed meet or the product specifications within manufacturing tolerances,
d. Must have a provision to either repair or replace such portion of the installed materials that are no longer serviceable to maintain a serviceable and playable surface,
e. Must be a Manufacturer's warranty from a single source covering workmanship and all self-manufactured or procured materials,
f. Must not be limited to the amount of annual usage,
g. Must provide, at the time of bid, a copy of its pre-paid 3rd party insurance policy. This policy must have an annual aggregate amount of no less than $60 million, and a per incident limit of no less than $7 million per claim. The third-party insurer must have an AM Best rating of A++ or better.

1.5 EXISTING CONDITIONS

A. If the surface on which the new synthetic turf is to be installed is an existing asphaltic/concrete base, the Synthetic Turf Contractor will be responsible for any damage due to negligence to the concrete during removal/installation of the synthetic turf system provided there are no failures below the surface which contribute to the damage. The football goal posts, if any, are to be removed and reinstalled by the Owner or Prime Contractor to facilitate the installation of the new synthetic turf system.

B. If the surface on which the new synthetic turf to be installed is a new asphaltic/concrete base or a new base of compacted, porous aggregate, the Synthetic Turf Contractor will be responsible for any damage to the base during removal/installation of the synthetic turf system after the deficiencies (if any) have been corrected by the base contractor with respect to planarity, compaction, and drainage/permeability. New in ground equipment, football goal post (if any) and /or infield mix backfill within the contiguous synthetic turf limits or immediately adjacent thereto are to be installed prior to the installation of the synthetic turf system. Damage to the synthetic turf system during the installation of such materials is not the responsibility of the Synthetic Turf Contactor.

C. Montgomery County Public Schools reserves the right to perform third party infiltration testing at the expense of the district prior to reinstallation of the shock pad and new synthetic turf. Recommendations will be made to the turf contractor after test results have come back to the district.

1.6 SCHEDULE

A. The Synthetic Turf Contractor shall complete all work on the synthetic turf system in accordance with the published project schedule, or as mutually agreed upon.

B. The synthetic turf contractor will require unencumbered use of staging area within fifty (50) feet of the synthetic turf area(s) being installed in order to complete the work. The Synthetic

Turf Contractor shall also be afforded unencumbered access through the construction site to reach the synthetic turf field area being installed.

1.7 SURFACE AREA

A. The Synthetic Turf Contractor is to verify all measurements.

1.8 UTILITIES

A. Owner or Prime Contractor will supply necessary water, adequate lighting, and electricity for installation. Owner or Prime Contractor shall permit use of toilet and wash up facilities.

PART 2 - PRODUCTS

2.1 Materials:

Synthetic Carpet:

A. Shall be tufted, polyethylene, grass-like fabric coated with a secondary backing of high-grade polyurethane. Refer to grid in table below. The two fibers specified in this grid shall be tufted through the same needle in a grass-like fabric to a finished pile-height also specified in the grid.

B. All components and their installation methods shall be designed and manufactured for use on outdoor athletic fields. The materials as hereinafter specified should be able to withstand exposure in all climates, be resistant to insect infestation, rot, fungus, mildew, ultraviolet light and heat degradation, and shall have the basic characteristics of flow-through drainage, allowing free movement of surface runoff through the synthetic turf fabric where such water may flow to the existing base and into the field drainage system.

C. The finished playing surface shall appear as mowed grass and shall resist abrasion and cutting from normal use.

D. The polyethylene pile yarn shall be a proven athletic caliber yarn designed specifically for outdoor use and stabilized to resist the effect of ultraviolet degradation, heat, foot traffic, water, and airborne pollutants.

E. The system shall be tufted at the pile height and gauge listed in specification grid, refer to grid in section shown in table below.

F. The Primary Backing must be a multi-layer backing, contain UV stabilizers and must pass 3000 hours of QUV A testing, refer to grid in table below.

G. The Secondary Backing of high-grade polyurethane shall be applied to the Primary Backing. Secondary Backing adds resistance to water degradation and strengthens grip on fibers, refer to grid in table below.

H. The backing shall allow for drainage. Partially coated backings or latex coating materials shall not be acceptable.

I. All football markings (including hash marks, numbers, and arrows) must be machine-tufted into the panels prior to shipment. Shear or cut-and-glue methods are not permitted, and all markings must arrive on-site fully tufted into the turf panels.

J. If football markings are not required, all game line markings of up to four colors that run-in panels placed perpendicular to the sideline, including markings that cross panel seams—must also be machine-tufted into the panels. Shear or cut-and-glue methods are not permitted with these markings.

Pile Yarn	Polyethelene Monofilament/Slit Film	METHOD
Linear Density (Denier)	14,000	ASTM D 1577
Yarn Thickness Mono/Slit	100/110 microns	ASTM D 3218
Pile Weight****	42 oz./yd2	ASTM D 5848
Finished Pile Height****	2.0	ASTM D 5823
Product Weight (total)***	62 oz./yd2	ASTM D 5848
Primary Backing Weight****	6 oz./yd2	ASTM D 5848
Secondary Coating Weight+	14 oz./yd2	ASTM D 5848
Fabric Width	15’ (4.57m)	ASTM D 5793
Tuft Gauge	1/2”	ASTM D 5793
Grab Tear Strength Avg.	> 200 lb.-F	ASTM D 5034
Tuft Bind (Avg.)	> 10 lb.-F	ASTM D 1335
Infilltrometer	> 25	ASTM D3885

Except where noted the above specifications are nominal.
* Values are +/-8%. ***Values are +/-10 oz. ****Values are +/-5%. +Values are +/-3 oz./yd2.

L. Organic Infill

1. The following criteria shall be met:
    1. Will not float or be displaced during weather events.

2. Balanced particle sizes distribution.
3. Allow for cooling capabilities.
4. 12-18 Mesh

M. Perimeter edge details, underground storm sewer piping and connections, and goal post foundations required for the system shall be as detailed and recommended by the Design Professional, and as approved by the Owner. The cost for these embedded items shall be included in the Sitework Contractor's price along with the compacted, porous base.

PART 3 – EXECUTION

3.1 GENERAL

A. The installation shall be performed in full compliance with approved shop drawings.

B. Only factory-trained technicians skilled in the installation of athletic caliber synthetic turf systems shall undertake the placement of the system.

C. Subject to the requirements in Section 1.2(B), the surface to receive the synthetic turf shall be verified by the Synthetic Turf Contractor as ready for the installation of the synthetic turf system and must be perfectly clean as installation commences and shall be maintained in that condition throughout the process.

3.2 REMOVAL

A. Synthetic Turf Contractor shall remove the existing synthetic turf.

B. After removal of the stadium surface, the existing synthetic turf shall be rolled up and placed at a location designated by the Owner.

C. **All Bids shall contain a recycling or repurposing plan in written form and shall include the End of Life form (Appendix B) with Section 1 and 2 completed.** The contractor shall be responsible for hiring the independent verification agent for recycling. The stated percentages of the combination of reuse, repurpose and recycle will become a contractual requirement. The recycling plan shall include at a minimum, the names and contact information of all parties involved with and responsible for the reusing, repurposing or recycling of the existing turf carpet and infill. The contractor shall include the types of equipment to be used to remove the material and also explain the methods to be used during the removal.

D. The existing shock pad under the synthetic turf must be removed from the field and protected from ultraviolet rays on site. When the new installation occurs, the pad should be brought out for reinstallation.

3.3 INSTALLATION

A. The completed base and adjacent curbs/perimeter nailer shall be inspected by the Engineer or Sitework Contractor by means of a laser and plotted on a 10-foot grid. Based upon the Contractor's inspection of the topographical survey, the Sitework Contractor shall fine grade the base suitably, including properly rolling and compacting the base to achieve a surface planarity within ¼" in 10-feet (+0, -1/4"). OWNER, ENGINEER, OR PRIME CONTRACTOR SHALL NOT APPROVE THE BASE FOR TOLERANCE TO GRADE WITHOUT OBTAINING THE TOPOGRAPHICAL SURVEY.

B. Subgrade and base shall be uniformly compacted to a minimum of 95% of maximum dry density. Care must be exercised to minimize segregation. Engineer/Sitework Contractor shall make written records available to Synthetic Turf Contractor's inspector for both drainage/permeability and compaction/planarity as obtained from a minimum 10' x 10' grid.

C. The Synthetic Turf Project Superintendent shall thoroughly inspect all synthetic turf materials delivered to the site for both mixing and quantity to assure that the entire installation shall have sufficient material to maintain proper mixing ratios.

D. Synthetic turf shall be loose-laid across the field, stretched, and attached to the perimeter edge detail. Synthetic turf shall be of sufficient length to permit full cross-field installation. No head or cross seams will be allowed except as needed for inlaid fabric striping or to accommodate programmed cut-outs.

E. All seams shall be flat, tight, and permanent with no separation or fraying. Selvedge edges of all panels must be cut and discarded prior to being sewn together. A butt-stitch method of seaming must be implemented and a double-lock stitch with cord recommended by the Synthetic Turf Manufacturer shall be utilized. Bagger stitching is prohibited. Seaming tape is to be constructed of high tenacity, coated non-woven fabric. Inlaid markings shall be adhered to seaming tape with a high strength polyurethane adhesive applied per the Synthetic Turf Manufacturer's standard procedures for outdoor applications. All main fabric seams shall be transverse to the field direction (i.e. run perpendicularly across the field).

F. Infill materials shall be properly applied in numerous lifts using special broadcasting equipment. The synthetic turf shall be raked and brushed properly as the mixture is applied. The infill materials can only be applied when the synthetic turf fabric is dry.

G. *g*-Max (shock attenuation) must test below 125 at installation.

3.4 FIELD MARKINGS AND DECORATIONS

A. Field markings and decorations shall be installed in accordance with approved project shop drawings.

3.4 MAINTENANCE REQUIREMENTS

A. As part of the base bid, the contractor shall provide maintenance as indicated below. The contractor shall also provide to MCPS a LitterKat with magnet as manufactured by GreensGroomer Worldwide (if there is no groomer at the school). The cost of all maintenance indicated below, and the equipment will be considered incidental to the base bid price. No additional compensation will be provided. For all maintenance indicated below, Contractor shall provide all their own equipment and materials to perform the work and shall be conducted by a manufacturer approved maintenance company that will not void any of the warranty.

Maintenance Schedule Spring/Fall 2027

Service Month/Year	**Type of Care**	**Service Description**
March 2027 August 2027	Advanced Care	a) A general sweeping to remove foreign objects such as dirt, leaves, bird droppings, gum and other debris that may collect on the field surface; and b) A deep groom, sweep and rejuvenation to de-compact infill and in an effort to maintain appropriate G-Max levels. Deep Power Groom and Infill Cleaning with De-Compaction
April 2027 May 2027 June 2027 September 2027 October 2027 November 2027	Standard Care	Comprehensive Grooming; Brushing, raking and sweeping of the surface. Cleaning of surface field debris, light de-compaction of infill, field sweeping, and magnet sweep and add infill as needed to high traffic areas (not to exceed 250 lbs. per visit)
March 2027 August 2027		GMAX is performed to take measurements of the infill and impact attenuation. A maintenance summary report is provided for each inspection. Recommendations should be provided if additional care is needed.

3.5 CLEAN UP

A. Synthetic Turf Contractor shall provide the labor, supplies, and equipment, as necessary, for final cleaning of the surfaces.

B. The Synthetic Turf Contractor shall keep the area clean and clear of debris throughout the project.

C. Surfaces, recesses, enclosures, etc., shall be cleaned as necessary to leave the work area in a clean, immaculate condition ready for immediate occupancy and use by Owner.

END OF SECTION

SECTION 004300 - BID SECURITY FORM

PART 1 - GENERAL

1.1 The Bid Security shall be executed using AIA Document A310, Bid Bond.

END OF SECTION

SECTION 005000 - AGREEMENT BETWEEN OWNER AND CONTRACTOR

The provisions of the following Agreement Between Owner and Contractor are in effect even though the Contract may be issued on a Purchase Order.

Notice of bid acceptance will be conveyed through issuance of a “Notice to Proceed” letter. This letter shall indicate the intent of a purchase order and shall be used as the commencement date of the said project.

AGREEMENT BETWEEN OWNER AND CONTRACTOR
MONTGOMERY COUNTY PUBLIC SCHOOLS

THIS AGREEMENT made this **«Date»** day of **«Month» 20**__, by and between the BOARD OF EDUCATION of Montgomery County, Maryland, 850 Hungerford Drive, Rockville, Maryland 20850, hereinafter called the **OWNER**, and **«Contractor», «Contractor_Add1», «Contractor_Add2»,** hereinafter called the **CONTRACTOR**.

For the following Project: **«Project Name»**
«ProjectAdd1»
«ProjectAdd2»

The ARCHITECT is: **«Architect»**
«ArchAdd1»
«ArchAdd2»

WITNESSETH that the OWNER and the CONTRACTOR for the consideration hereinafter agree as follows:

ARTICLE 1 - THE CONTRACT DOCUMENTS.

The Contract Documents consist of this Agreement, General Conditions of the Contract at Section 00700 of the Project Specifications ("General Conditions"), any Performance and Payment Bonds required by the Agreement, and all other documents listed in this Agreement and Modifications issued after execution of this Agreement; these form the Contract and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. An enumeration of the Contract Documents, other than Modifications, appears in Article 9.

This contract is executed by the Board of Education of Montgomery County pursuant to Resolution No. **«RES»** dated **«BOE date».**

ARTICLE 2 - THE WORK OF THIS CONTRACT.

The CONTRACTOR shall execute the entire Work described in the Contract Documents, except to the extent specifically indicated in the Contract Documents to be the responsibility of others.

ARTICLE 3 - DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION.

3.1 The date of commencement shall be fixed in the Notice to Proceed issued by the OWNER.

3.2 Work shall be started within ten (10) working days after the Notice to Proceed and shall be substantially complete on or before «Completion_Date». **In accordance with the following schedule:**

Phase I	**-**	**on or before (COMPLETION DATE)**
Phase 2	**-**	**on or before (COMPLETION DATE)**
Phase 3	**-**	**on or before (COMPLETION DATE)**

3.3 In case of failure to complete the Contract Work on or before the Substantial Completion date specified above, the OWNER shall retain out of any monies which may be due the CONTRACTOR under the Contract, as prescribed by the specifications, liquidated damages in the sum of **Two Thousand Five Hundred** Dollars **($2,500)** for each calendar day up to 30 days of delay beyond the completion date of each phase of the project as stipulated in the Contract, and **Five Thousand** (**$5,000**) a day for each calendar day thereafter, without limitation. The calculation of liquidated damages will begin again with each phase provided the previous phase has been completed. The daily liquidated damages amounts are not a penalty and reflect a reasonable liquidated sum for the OWNER'S actual damages as a result of the Work not being performed by the CONTRACTOR in a timely fashion. This provision may be waived in whole or in part at the sole discretion of the OWNER.

3.4 The Owner shall retain from any monies which may be due the CONTRACTOR under the Contract the sum of Five Hundred Dollars ($500) for each calendar day beyond the 60th day after Substantial Completion for failure to complete all Contract requirements. This provision may be waived at the sole discretion of the OWNER.

ARTICLE 4 - CONTRACT SUM.

4.1 The OWNER shall pay the CONTRACTOR in current funds for the CONTRACTOR'S performance of the Contract the Contract Sum, **«ContractAmount» Dollars** (**$«Contract»**), subject to additions and deductions as provided in the Contract Documents.

4.2 The Contract Sum is based upon the following alternates, if any, which are described in the Contract Documents and are hereby accepted by the OWNER: Alternates **«Alternates»**.

4.3 Unit prices are as described in the Bid Documents.

ARTICLE 5 - PROGRESS PAYMENTS.

5.1 Based upon Applications for Payment submitted to the ARCHITECT by the CONTRACTOR and Certificates for Payment issued by the ARCHITECT, the OWNER shall make progress payments on account of the Contract Sum to the CONTRACTOR as provided below and elsewhere in the Contract Documents.

5.2 The period covered by each Application for Payment shall be one calendar month ending on the 25th day of the month. Provided that an Application for Payment is received by the ARCHITECT not later than the 25th day of a month, the OWNER shall make payment to the CONTRACTOR thirty (30) calendar days after the ARCHITECT approves the Application for Payment and issues a certificate for payment signed by the ARCHITECT. If an Application for Payment is received by the ARCHITECT after the Application date fixed above, the OWNER shall make payment to the CONTRACTOR thirty (30) calendar days after the ARCHITECT receives and approves the Application for Payment and issues a certificate for payment signed by the ARCHITECT.

5.3 Each Application for Payment shall be based upon the Schedule of Values submitted by the CONTRACTOR in accordance with the Contract Documents. The Schedule of Values shall allocate the entire Contract Sum among the various portions of the Work and be prepared in such form and supported by such data to substantiate its accuracy as the OWNER and/or ARCHITECT may require. This Schedule of Values, unless objected to by the OWNER and/or ARCHITECT, shall be used as a basis for reviewing the CONTRACTOR'S Applications for Payment.

5.4 Applications for Payment shall indicate the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment.

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

5.5.1 Take that portion of the Contract Sum properly allocable to completed Work as determined by multiplying the percentage of completion of each portion of the Work by the share of the total Contract Sum allocated to that portion of the Work in the Schedule of Values, less retainage of five percent (5%);

5.5.2 Add that portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction (or, if approved in advance by the OWNER, suitably stored off the site at a location agreed upon in writing), less retainage of five percent (5%);

5.5.3 Subtract the aggregate of previous payments made by the OWNER; and

5.5.4 Subtract amounts, if any, for which the OWNER and/or ARCHITECT has withheld or nullified a Certificate for Payment as provided in Section 9.5 of the General Conditions.

5.6 Provided that all conditions precedent to any reduction in retention are met, the following must occur:

5.6.1 The CONTRACTOR must furnish the OWNER a “Consent of Surety to Reduction In or Final Release of Retainage” AIA Document G707A, which will be executed by a duly appointed attorney-in-fact and shall have a “live” bona fide Power of Attorney bearing the Seal of the Surety attached thereto;

5.6.2 The OWNER must receive adequate assurance from the ARCHITECT that the CONTRACTOR’S Work is scheduled to be finished on or before the Substantial Completion date;

5.6.3 The OWNER and/or ARCHITECT must recommend in favor of the CONTRACTOR'S request for reduction of retainage; and

5.6.4 The ARCHITECT must furnish OWNER with a writing stating that there is no demonstrated need to make increased retainage withholdings.

5.7 Provided that CONTRACTOR has fully achieved Substantial Completion of the Work, the OWNER shall pay CONTRACTOR a sum sufficient to increase the total payments to 100% of the Contract Sum, less such amounts as the OWNER and ARCHITECT determine for incomplete and punch list work and unsettled claims.

ARTICLE 6 - FINAL PAYMENT.

6.1 Final payment, constituting the entire unpaid balance of the Contract Sum, shall not be made by the OWNER to the CONTRACTOR until all of the following conditions precedent have been fulfilled:

6.1.1 The Contract has been fully performed by the CONTRACTOR except for the CONTRACTOR'S responsibility to correct non-conforming Work as provided in Section 12.2.2 of the General Conditions and to satisfy other requirements, if any, which necessarily survive final payment;

6.1.2 The CONTRACTOR has submitted satisfactory evidence to the ARCHITECT and OWNER that all payrolls, material bills, and any other indebtedness connected with the Work have been paid in full, or are otherwise satisfied;

6.1.3 A final Project Certificate for Payment has been issued by the ARCHITECT;

6.1.4 The OWNER has inspected, accepted, and approved the Work (the CONTRACTOR is responsible for preparing the Work for inspection by the OWNER); and

6.1.5 The CONTRACTOR'S Application for Final Payment shall be authorized by the Surety, as evidenced by a "Consent of Final Payment" AIA Document G707 which will be executed by a duly appointed Attorney-in-Fact and shall have a "live" Power of Attorney-in-Fact bearing the Seal of the Surety attached thereto.

ARTICLE 7 - MISCELLANEOUS PROVISIONS.

7.1 Where reference is made in this Agreement to a provision of the General Conditions or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

7.2 Upon execution of the Agreement, the CONTRACTOR shall immediately prepare Preliminary and Baseline Project Schedules in strict accordance with Section 3.10.3 of the General Conditions for approval by the OWNER. The CONTRACTOR shall fully cooperate in furnishing OWNER with Project Schedule Updates and Recovery Schedules in strict accordance with Sections 3.10.4 and 3.10.5 of the General Conditions.

7.3 CONTRACTOR acknowledges and agrees hereon to compliance with all legal requirements of Title VII of the Civil Rights Act of 1964, amendments thereto and Guidelines issued in connection therewith of Equal Employment Opportunity and all statutes and administrative rules and regulations enacted and promulgated by the State of Maryland thereon.

7.4 The CONTRACTOR shall perform the Work in accordance with the representations made in the Certified MBE Utilization and Fair Solicitation Affidavit and the MBE Participation Schedule submitted as part of the bid proposal. The MBE participation may be revised upward during the course of the Contract. Failure to so perform without prior written consent of the OWNER shall constitute a violation of a material term of the Contract.

7.5 In the event that the Contract Sum is in excess of One Hundred Thousand Dollars ($100,000), the CONTRACTOR shall provide performance and labor and material payment bonds covering the Work, each in the penal sum of one Hundred Percent (100%) of the Contract Sum and made in strict accordance with Section 11.4 of the General Conditions. Such bonds shall name the OWNER (and any second parties required by the Contract Documents) as dual obligees thereunder. The cost of all such performance and labor and material payment bonds shall be included in the Contract Sum.

7.6 Nothing in this Agreement should under any circumstances be construed as an express or implied waiver of OWNER's sovereign immunity protections, or as conferring subrogation or third party beneficiary rights upon any third party who claims to have been injured or otherwise damaged as a result of the Work, any act or omission of CONTRACTOR, or any act or omission of the OWNER or any of its contractors or consultants.

ARTICLE 8 - TERMINATION OR SUSPENSION.

8.1 The Contract may be terminated by the OWNER or the CONTRACTOR as provided in Article 14 of the General Conditions.

8.2 The Work may be suspended by the OWNER as provided in Article 14.3 of the General Conditions.

ARTICLE 9 - ENUMERATION OF CONTRACT DOCUMENTS.

9.1 The Contract Documents, except for Modifications issued after execution of this Agreement, are enumerated as follows:

9.1.1 The General Conditions at Section 00700 of the Project Specifications;

9.1.2 The Schedule of Values, as submitted by the CONTRACTOR and approved by the OWNER;

9.1.3 The Notice to Proceed to Contractor issued by the OWNER;

9.1.4 The Instruction to Bidders and the Specifications are those contained in the Project Manual dated **«ProjectManualDate»**, prepared by **«Architect»**, acting as, and in these Contract Documents entitled, the ARCHITECT;

9.1.5 The Drawings are as follows, and are dated «DrawingsDate», unless a different date is shown below:

Number	Title

9.1.6 The Addenda, if any, are as follows:

Number	Date
	«Add1Date»
	«Add2Date»
	«Add3Date»
	«Add4Date»

9.1.7 The CONTRACTOR'S Bid Form as submitted;

9.1.8 Technical Offer Instructions for prime construction contracts for MCPS projects.

9.1.9 Instructions to Bidders.

ARTICLE 10 - INSURANCE REQUIRED BY THE CONTRACTOR.

10.1 The CONTRACTOR shall purchase and maintain insurance as set forth in Section 11.1 of the General Conditions. Such insurance shall be written for not less than the following limits, or greater if required by law:

10.1.1 Commercial General Liability with a combined single limit for Bodily Injury, Personal Injury and Property Damage of at least $1,000,000 per occurrence and $2,000,000 in the aggregate. This insurance shall be primary insurance with respect to any other insurance or self-insured programs afforded to, or maintained by the OWNER. The policy is to include a per project/per location general aggregate limit and a Waiver of Subrogation is to be added in favor of the OWNER, its directors, employees, representatives, and agents in strict accordance with Section 11.1.8 of the General Conditions. If deductibles apply to any coverages herein, other than a “large deductible” programs, deductibles may not exceed $5,000.00. If a large deductible program

applies to the coverages hereunder, collateral shall be provided to the carriers providing said coverages. Coverage shall be written on an occurrence form and include coverage for:

.1 premises/operations resulting from performance of the Work provided for in this Contract, or due to or arising in any manner from the negligence of CONTRACTOR, its respective employers or agents;

.2 products and completed operations with a provision that coverage is to be maintained for two years after final payment and acceptance of the Project. Coverage will apply to the goods, products, materials, or equipment used or installed under the Contract;

.3 actions of Independent Contractors;

.4 blanket contractual liability, to meet to the fullest extent possible, the CONTRACTOR'S obligations under Section 3.18 of the General Conditions;

.5 explosion, collapse, or underground hazards (X, C, U);

.6 broad form property damage, including completed operations;

.7 personal injury liability, with employee exclusion deleted; and

.8 Commercial General Liability policy shall be endorsed with ISO Form CG 20 10 10 01 and CG 20 37 10 01 or their equivalent naming the Architect, the OWNER, its directors, employees, representatives and agents as additional insureds.

10.1.2 Excess and/or Umbrella Liability in the amount of $10,000,000 providing coverage for Bodily Injury, Property Damage and Personal Injury is required over General Liability, Employers Liability and Automobile Liability Policies.

.1 Umbrella and/or Excess policies are on a true following form basis and may not contain a self-insured retention in excess of $10,000 and they shall include all additional insureds as set-forth in 10.1.1.8.

.2 Severability of interest exclusion shall be deleted.

.3 A Waiver of Subrogation is to be added in favor of the OWNER, its directors, members, employees, representatives and agents in strict accordance with Section 11.1.8 of the General Conditions.

.4 This insurance shall be primary insurance with respect to any other insurance or self-insured

programs afforded to, or maintained by the OWNER.

10.1.3 Commercial Automobile Liability including all owned, non-owned or hired automobiles with a combined single limit of at least $1,000,000 per occurrence for Bodily Injury or Property Damage.

.1 The OWNER, its directors, employees, representatives and agents are to be added as additional insureds.

10.1.4 Workers Compensation and Employers' Liability.

.1 Workers Compensation per Statutory limits established by the State of Maryland.

.2 Include All States coverage – applicable in all but monopolistic states.

.3 Workers Compensation policy shall contain a voluntary compensation endorsement if required.

.4 Employers' Liability with limits of $1,000,000 bodily injury by accident/each accident; $1,000,000 bodily injury by disease/policy limit; $1,000,000 bodily injury by disease/each employee.

.5 Waiver of Subrogation is to be added in favor of the OWNER in strict accordance with Section 11.1.8 of the General Conditions.

10.1.5 Property Insurance Builders' Risk – New Construction and Structural Additions to Existing Buildings. A Builders' Risk policy with a Special Causes of Loss Form is to be purchased by Contractor to cover the interests of Contractor, Owner, Subcontractors and Sub-subcontractors in an amount equal to the full amount of the Guaranteed Maximum Price or the full replacement cost of the Work performed, whichever is greater. The policy will not be subject to a co-insurance clause and shall be written on an Agreed Value basis. The policy is to cover the Project, property stored off-site or on-site, and property in transit. Coverage is to provide for "all risks" of physical damage including:

.1 collapse, damage, resulting damage from faulty workmanship, and resulting damage from faulty material;

.2 a named insured provision that includes the Contractor, Owner, and all subcontractors as insured;

.3 a waiver of subrogation is to be added in favor of the Owner, its directors, members, employees, representatives, and agents in strict accordance with Section 11.3.3 of the

General Conditions;

.4 if deductibles apply to any coverages herein, deductibles may not exceed $1,000.00; and

.5 in the event the building(s) are occupied prior to final completion of the Work and acceptance by the Owner, the Builders' Risk policy shall be endorsed with a "permission to occupy" endorsement.

10.1.6 Installation Floater (Renovation Work) and/or Upgrades of Existing Material and Equipment. CONTRACTOR is to provide an Installation Floater written on an Inland Marine form providing Special Causes of Loss coverage for all materials, equipment, and work that is either installed, or stored on or off site or in transit. Coverage is to provide for:

.1 testing and startup;

.2 a waiver of subrogation is to be added in favor of the OWNER its Directors, employees, representatives, and agents in strict accordance with Section 11.3.3 of the General Conditions;

.3 if deductibles apply to any coverages herein, deductibles may not exceed $1,000.00;

.**4** OWNER is to be added as additional interest/loss payee; and

.5 a certificate of insurance in strict accordance with Section 11.3.2 of the General Conditions.

10.1.7 The Contractor shall provide certificates of insurance for all insurance coverages in strict accordance with Section 11 of the General Conditions. The Certificate of Insurance acceptable to the Owner shall be filed with the Owner prior to commencement of the CONTRACTOR'S Work.

This Agreement is entered into as of the day and year first written above and is executed in at least four (4) original copies of which one is to be delivered to the CONTRACTOR, one to the ARCHITECT for use in the administration of the Contract, and the remainder to the OWNER.

IN WITNESS WHEREOF THE OWNER AND THE CONTRACTOR have hereunto set their hands and seals this day and year first above written.

CONTRACTOR: **«Contractor»**

By:_____**(SEAL)** Title: _____

PRINT NAME: _____

IN PRESENCE OF:

Witness: _____

OWNER: **THE BOARD OF EDUCATION OF MONTGOMERY COUNTY, MARYLAND**

ATTEST:

By: _____
Superintendent of Schools
Secretary-Treasurer

By: _____
President
Board of Education

SECTION 005100 – CONTRACTOR'S REQUISITION FOR PAYMENT Invoicing:

1. The Standard Monthly Contractor's Requisition for Payment,AIA G702 and G703 included herein is the monthly requisition for payment form to be used by Contractors. This form is to be modified as necessary to reflect specification sections of Work.

2. Bidder shall submit invoices to the MCPS Division of Design and Construction at **45 West Gude Drive, Suite 4300, Rockville, Maryland 20850** for payment approval. **All invoices shall identify pertinent information such as purchase order number and building name where work was performed.**

3. A completed State of Maryland, "CERTIFIED MINORITY BUSINESS ENTERPRISE PARTICIPATION STANDARD MONTHLY CONTRACTOR'S REQUISITION FOR PAYMENT' IAC/PSCP Form 306.4 **must** accompany all invoices. **DO NOT HAVE PAYMENTS TO MBE SUB-CONTRACTORS ARE STILL REQUIRED TO HAVE THIS FORM ATTACHED AND IDENTIFY NO MBE PAYMENTS BY PLACING A ZERO ON THIS FORM.**

4. MCPS is not obligated to make any partial payments. However, partial payments may be considered based upon the contractor's justification of expenditures and satisfactory work performed up to 90% of the total project cost. The remaining balance will be paid upon MCPS acceptance of the project as being 100% complete and in compliance with specifications. MCPS will refrain from making any partial payments if, in MCPS opinion, the project falls behind schedule.

5. Partial payment invoices shall be accompanied by a schedule of values allocated to various portions of the work (similar to AIA Document's G702 & G703). This schedule, unless objected to by MCPS, shall be used as a basis for reviewing the contractor's application for partial payment.

6. Project retainage is 5% of the total contract cost and shall be withheld from all payments made to the contractor. Retainage shall be paid upon final acceptance by MCPS that the project is 100% complete as specified.

CERTIFIED MINORITY BUSINESS ENTERPRISE PARTICIPATION STANDARD MONTHLY CONTRACTOR'S REQUISITION FOR PAYMENT

LEA: _____ **DATE:**_____
PROJECT TITLE: _____ **PSC NO:** _____
LOCATION: _____ **REQ NO:** _____

Name of MBE Sub-Contractor	MDOT Certification Number and Classification	TOTAL MBE Contract Amount	Amount to be Paid THIS Requisition	TOTAL Paid to Date	MBE has Received FINAL Payment?	If amount paid is LESS than TOTAL MBE Contract Amount, EXPLAIN VARIANCE
	TOTAL:	$ -	$ -	$ -		

MDOT Certification Number and Classification can be located at
http://mbe.state.mdot.state.md.us/directory/

MBE Classification:
African American = AA African American/Women = AAW
Hispanic American = H Hispanic American/Women = HW
Native American = N Native American/Women = NW
Asian American = A Asian American/Women = AW Women = W

I certify that the figures and information presented above represent accurate and true statements that timely payments have been and will be made to suppliers and subcontractors on this project as requisitioned payments are received, and in accordance with our contracts.

Name of Contractor Firm	Authorized Contractor Signature/Date
Contractor Federal Tax ID Number	Contractor MBE Classification Number (if applicable)
Name of LEA MBE Liaison (Printed)	Signature of LEA MBE Liaison/Date

END OF SECTION

AIA® Document G702™ – 1992

Application and Certificate for Payment

TO OWNER:
Montgomery County Public Schools
Division of Construction
2096 Gaither Road, Suite 203
Rockville, MD 20850

PROJECT: General Contractor

APPLICATION NO:
PERIOD TO:

CONTRACT FOR: General Construction
CONTRACT DATE:
PROJECT NOS: / /

Distribution to:
OWNER: ☒
ARCHITECT: ☐
CONTRACTOR: ☒
FIELD: ☐
OTHER: ☐

FROM CONTRACTOR:

VIA ARCHITECT:

CONTRACTOR'S APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract.
Continuation Sheet, AIA Document G703, is attached.

1. **ORIGINAL CONTRACT SUM** ..... $ _____
2. **Net change by Change Orders** ..... $ _____
3. **CONTRACT SUM TO DATE** (Line 1 ± 2) ..... $ _____
4. **TOTAL COMPLETED & STORED TO DATE** (Column G on G703) ..... $ _____
5. **RETAINAGE:**
   a. 0 % of Completed Work
      (Column D + E on G703) $ _____
   b. 0 % of Stored Material
      (Column F on G703) $ _____
   Total Retainage (Lines 5a + 5b or Total in Column I of G703) ..... $ _____
6. **TOTAL EARNED LESS RETAINAGE** ..... $ _____
   (Line 4 Less Line 5 Total)
7. **LESS PREVIOUS CERTIFICATES FOR PAYMENT** ..... $ _____
   (Line 6 from prior Certificate)
8. **CURRENT PAYMENT DUE** ..... $
9. **BALANCE TO FINISH, INCLUDING RETAINAGE**
   (Line 3 less Line 6) $ _____

CHANGE ORDER SUMMARY	ADDITIONS	DEDUCTIONS
Total changes approved in previous months by Owner	$	$
Total approved this Month	$	$
TOTALS	$	$
NET CHANGES by Change Order	$	

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work for which previous Certificates for Payment were issued and payments received from the Owner, and that current payment shown herein is now due.

CONTRACTOR:

By: _____ Date: _____

State of:

County of:

Subscribed and sworn to before
me this day of

Notary Public:

My Commission expires:

ARCHITECT'S CERTIFICATE FOR PAYMENT

In accordance with the Contract Documents, based on on-site observations and the data comprising this application, the Architect certifies to the Owner that to the best of the Architect's knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED ..... $ _____

(Attach explanation if amount certified differs from the amount applied. Initial all figures on this Application and on the Continuation Sheet that are changed to conform with the amount certified.)

ARCHITECT:

By: _____ Date: _____

This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract

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User Notes: MCPS Revised 4/23/08
(466327405)

AIA® Document G703™ – 1992

Continuation Sheet

AIA Document G702, APPLICATION AND CERTIFICATION FOR PAYMENT, containing Contractor's signed certification is attached.
In tabulations below, amounts are stated to the nearest dollar.
Use Column I on Contracts where variable retainage for line items may apply.

APPLICATION NO: 001
APPLICATION DATE:
PERIOD TO:
ARCHITECT'S PROJECT NO:

A	B	C	D	E	F	G		H	I
ITEM NO.	DESCRIPTION OF WORK	SCHEDULED VALUE	WORK COMPLETED		MATERIALS PRESENTLY STORED (NOT IN D OR E)	TOTAL COMPLETED AND STORED TO DATE (D+E+F)	% (G ÷ C)	BALANCE TO FINISH (C - G)	RETAINAGE (IF VARIABLE RATE)
			FROM PREVIOUS APPLICATION (D + E)	THIS PERIOD					
	GRAND TOTAL	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	0.00%	$ 0.00	$ 0.00

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User Notes:
(333495126)

SECTION 006000 - BONDS AND CERTIFICATES -

PART 1 - GENERAL

1.1 The Performance Bond shall be executed using the modified A312, Payment and Performance Bonds.

1.2 The Payment Bond shall be executed using AIA Document A312, Amended Payment Bond.

END OF SECTION

DRAFT

AIA® Document A312™ – 2010

Payment Bond

CONTRACTOR:
(Name, legal status and address)

« »« »
« »

SURETY:
(Name, legal status and principal place of business)

« »« »
« »

OWNER:
(Name, legal status and address)

« »« »
« »

CONSTRUCTION CONTRACT
Date: « »
Amount: $ « »
Description:
(Name and location)
«Drafts»
« »

BOND
Date:
(Not earlier than Construction Contract Date)
« »
Amount: $ « »

CONTRACTOR AS PRINCIPAL
Company: *(Corporate Seal)*

Signature: _____
Name and Title: « »« »

SURETY
Company: *(Corporate Seal)*

Signature: _____
Name and Title: « »« »

(Any additional signatures appear on the last page of this Payment Bond.)

(FOR INFORMATION ONLY — Name, address and telephone)

AGENT or **BROKER:**

« »
« »
« »

OWNER'S REPRESENTATIVE:
(Architect, Engineer or other party:)

« »
« »
« »
« »
« »
« »

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

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

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

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User Notes: MCPS A312 Payment Bond-2010 (CLEAN) REVISED AUGUST 27, 2015 (829905234)

§ 1 The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner to pay for labor, materials and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.

§ 2 If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies and holds harmless the Owner from claims, demands, liens or suits by any person or entity seeking payment for labor, materials or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.

§ 3 If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond shall arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Section 13) of claims, demands, liens or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials or equipment furnished for use in the performance of the Construction Contract and tendered defense of such claims, demands, liens or suits to the Contractor and the Surety.

§ 4 When the Owner has satisfied the conditions in Section 3, the Surety shall promptly and at the Surety's expense defend, indemnify and hold harmless the Owner against a duly tendered claim, demand, lien or suit.

§ 5 The Surety's obligations to a Claimant under this Bond shall arise after the following:

§ 5.1 Claimants, who do not have a direct contract with the Contractor,

- **.1** have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
- **.2** have sent a Claim to the Surety (at the address described in Section 13).

§ 5.2 Claimants, who are employed by or have a direct contract with the Contractor, have sent a Claim to the Surety (at the address described in Section 13).

§ 6 If a notice of non-payment required by Section 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Section 5.1.1.

§ 7 When a Claimant has satisfied the conditions of Sections 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:

§ 7.1 Send an answer to the Claimant, with a copy to the Owner, within forty-five (45) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and

§ 7.2 Pay or arrange for payment of any undisputed amounts.

§ 7.3 The Surety's failure to discharge its obligations under Section 7.1 or Section 7.2 shall not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Section 7.1 or Section 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

§ 7.4 The Surety shall promptly and at the Surety's expense defend, indemnify and hold harmless the Owner against a duly tendered claim, demand, lien or suit. Failure to do so will give Owner an immediate cause of action against the Surety and Contractor to compel compliance with their obligations pursuant to this Bond. All actual legal fees and expenses expended by the Owner to compel compliance with this Bond and defend against any Claim are recoverable and are over and above the penal amount of the Bond.

§ 8 The Surety's total obligation shall not exceed the amount of this Bond plus the amount of attorney's fees provided under Sections 7.3 and 7.4, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.

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User Notes: MCPS A312 Payment Bond-2010 (CLEAN) REVISED AUGUST 27, 2015 (829905234)

§ 9 Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.

§ 10 The Surety shall not be liable to the Owner, Claimants or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to, or give notice on behalf of, Claimants or otherwise have any obligations to Claimants under this Bond.

§ 11 The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.

§ 12 No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Section 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

§ 13 Notice and Claims to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, shall be sufficient compliance as of the date received.

§ 14 When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

§ 15 Upon request by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.

§ 16 Definitions

§ 16.1 Claim. A written statement by the Claimant including at a minimum:

- **.1** the name of the Claimant;
- **.2** the name of the person for whom the labor was done, or materials or equipment furnished;
- **.3** a copy of the agreement or purchase order pursuant to which labor, materials or equipment was furnished for use in the performance of the Construction Contract;
- **.4** a brief description of the labor, materials or equipment furnished;
- **.5** the date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
- **.6** the total amount earned by the Claimant for labor, materials or equipment furnished as of the date of the Claim;
- **.7** the total amount of previous payments received by the Claimant; and
- **.8** the total amount due and unpaid to the Claimant for labor, materials or equipment furnished as of the date of the Claim.

§ 16.2 Claimant. An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors,

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and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials or equipment were furnished.

§ 16.3 Construction Contract. The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.

§ 16.4 Owner Default. Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

§ 16.5 Contract Documents. All the documents that comprise the agreement between the Owner and Contractor.

§ 17 If this Bond is issued for an agreement between a Contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

§ 18 Any alterations which may be made in the terms of the Contract or in the work to be done under it, or the giving by the Owner of any extension of time for the performance of the Contract, or any other forbearance on the part of either the Owner or the Contractor to the other shall not in any way release the Contractor and the Surety or either of them, their heirs, executors, administrator, successors or assigns, from their liability hereunder, notice to the Surety of any such alteration, extension or forbearance being hereby waived.

§ 19 Any increase in the Contract amount shall automatically result in a corresponding increase in the penal amount of the bond without notice to or consent from the Surety, such notice and consent being hereby waived. Decreases in the Contract amount shall not, however, reduce the penal amount of the bond unless specifically provided in said Change Order.

§ 20 Surety acknowledges that this Bond is for the construction of a school and that any claim made hereunder will include, but not be limited to, claims under the State of Maryland's Little Miller Act, and that this bond fully covers such a claim and any definitions contained herein shall conform to all who may make a claim under the aforementioned Act.

(Space is provided below for additional signatures of added parties, other than those appearing on the cover page.)

CONTRACTOR AS PRINCIPAL		**SURETY**	
Company:	*(Corporate Seal)*	Company:	*(Corporate Seal)*
Signature:		Signature:	
Name and Title:	« »« »	Name and Title:	« »« »
Address:	« »	Address:	« »

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AIA® Document A312™ – 2010

Performance Bond

CONTRACTOR:
(Name, legal status and address)

« »« »
« »

SURETY:
(Name, legal status and principal place of business)

« »« »
« »

OWNER:
(Name, legal status and address)

« »« »
« »

CONSTRUCTION CONTRACT
Date: « »
Amount: $ « »
Description:
(Name and location)

«Drafts»
« »

BOND
Date:
(Not earlier than Construction Contract Date)
« »
Amount: $ « »

CONTRACTOR AS PRINCIPAL		**SURETY**	
Company:	*(Corporate Seal)*	Company:	*(Corporate Seal)*
Signature:		Signature:	
Name and Title:	« »« »	Name and Title:	« »« »

(Any additional signatures appear on the last page of this Performance Bond.)

(FOR INFORMATION ONLY — Name, address and telephone)

AGENT or **BROKER:**

« »
« »
« »

OWNER'S REPRESENTATIVE:
(Architect, Engineer or other party:)

« »
« »
« »
« »
« »
« »

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

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

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

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§ 1 The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.

§ 2 If the Contractor performs the Construction Contract in a timely manner and corrects all of its defective work and indemnifies and holds the Owner harmless from all claims, losses, payments and liabilities including attorneys fees and expenses in accordance with the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except to participate in a conference as provided in Section 3.

§ 3 If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond shall arise after

.1 the Owner first provides notice to the Contractor and the Surety that the Owner is declaring a Contractor Default. Such notice shall indicate whether the Owner is requesting a conference among the Owner, Contractor and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) calendar days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Section 3.1 shall be held within ten (10) calendar days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default;

.2 the Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and

.3 the Owner has agreed to pay the undisputed Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected and approved by the Owner to perform the Construction Contract in accordance with all of the terms of the Construction Contract.

§ 4 Failure on the part of the Owner to comply with the notice requirement in Section 3.1 shall not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations.

§ 5 When the Owner has satisfied the conditions of Section 3, the Surety shall promptly and at the Surety's expense send an answer to the Owner within 30 calendar days after receipt of the Owner's notice stating any amounts that are disputed and the basis for challenging any such amounts and take one of the following actions:

§ 5.1 Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;

§ 5.2 Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;

§ 5.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Section 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or

§ 5.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances:

.1 After investigation lasting no more than 20 calendar days after the date of the initial notice from the Owner, determine the amount for which it may be liable to the Owner and, within 10 calendar days after the amount is determined, make payment to the Owner; or

.2 Deny liability in whole or in part and notify the Owner, no more than 30 calendar days after the date of the initial notice from the Owner, citing the reasons for denial.

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§ 6 If the Surety does not proceed as provided in Section 5, within the time periods stated therein, the Surety shall be deemed to be in default on this Bond , and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Section 5.4, and the Owner refuses the payment or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.

§ 7 If the Surety elects to act under Section 5.1, 5.2 or 5.3, then the responsibilities of the Surety to the Owner shall be equal to that of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication, for

.1 the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;

.2 additional legal, design professional and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Section 5; and

.3 liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

§ 8 The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors and assigns.

§ 9 The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.

§ 10 Any proceeding, legal or equitable, under this Bond may be instituted in the Circuit Court for Montgomery County, MD and shall be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

§ 11 Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears.

§ 12 When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

§ 13 Definitions

§ 13.1 Balance of the Contract Price. The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made, including 1. all valid and proper payments made to or on behalf of the Contractor under the Construction Contract; 2. Owner's right to withhold Contract balances for damages and costs arising out of Contractor's untimely performance of the Work, costs to correct defective Work, and all costs, damages and liabilities arising out of Contractor's obligations to hold the Owner harmless and indemnify the Owner including attorney's fees and expenses, and any other costs that may be withheld by the Owner under the Contract; and 3. allowance to the Contractor of any amounts received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled..

§ 13.2 Construction Contract. The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

§ 13.3 Contractor Default. Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with the terms of the Construction Contract.

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§ 13.4 Owner Default. Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

§ 13.5 Contract Documents. All the documents that comprise the agreement between the Owner and Contractor.

§ 14 Surety acknowledges that this Bond is for the construction of a school or school facility and that the failure of the Contractor to complete construction when contemplated by the Construction Contract will result in damages to the Owner, all of which shall be deemed actual damages relating to the Contract for which the surety will be responsible.

§ 15 If this Bond is issued for an agreement between a Contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

§ 16 If the Surety fails to discharge its obligations under Sections 5, 5.1, 5.2, 5.3 or 5.4, the Surety shall indemnify the Owner for actual attorney's fees the Owner incurs to recover any sums due and owing to Owner (even if the attorney's fees exceed the amount of the Bond).

(Space is provided below for additional signatures of added parties, other than those appearing on the cover page.)

CONTRACTOR AS PRINCIPAL		**SURETY**	
Company:	*(Corporate Seal)*	Company:	*(Corporate Seal)*
Signature:		Signature:	
Name and Title:	« »« »	Name and Title:	« »« »
Address:	« »	Address:	« »

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SECTION 007000 - GENERAL CONDITIONS

The General Conditions are the General Conditions of the Contract for Construction, the included AIA Document A201-2007 edition as modified by Montgomery County Public Schools (MCPS). A vertical line in the left margin of the document indicates where MCPS has added necessary information and where MCPS has added to or deleted from the original AIA text.

AIA® Document A201™ – 2007

General Conditions of the Contract for Construction

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

THE OWNER:
(Name and address)
The Board of Education of Montgomery County, Maryland
850 Hungerford Drive
Rockville, Maryland 20850

THE ARCHITECT:
(Name and address)

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

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

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(Paragraphs deleted)

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ARTICLE 1 GENERAL PROVISIONS

§ 1.1 BASIC DEFINITIONS

§ 1.1.1 THE CONTRACT DOCUMENTS

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

§ 1.1.2 THE CONTRACT

The Contract Documents form the Contract for Construction. The Contract together with the performance bond and payment bond, if any, represent the entire and integrated agreement between the parties hereto and supersede prior negotiations, representations or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect's consultants, (2) between the Owner and a Subcontractor or a Sub-subcontractor, (3) between the Owner and the Architect or the Architect's consultants except as may be expressly provided in the agreement between the Owner and the Architect or (4) between any persons or entities other than the Owner and the Contractor. The Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Architect's duties.

§ 1.1.3 THE WORK

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

§ 1.1.4 THE PROJECT

The Project is the total construction described in the Agreement of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner and by separate contractors.

§ 1.1.5 THE DRAWINGS

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

§ 1.1.6 THE SPECIFICATIONS

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

§ 1.1.7 THE PROJECT MANUAL

The Project Manual is a volume, whether printed or digital, assembled for the Work which may include the bidding requirements, sample forms, Conditions of the Contract and Specifications.

§ 1.1.8 INITIAL DECISION MAKER

The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2 and certify termination of the Agreement under Section 14.2.2.

§ 1.1.9 THE PROJECT SCHEDULE

The Project Schedule shall be defined as the time span commencing with the Owner's notice to proceed and ending with the time completion stipulated in the Agreement. The Project Schedule includes any amendments or revisions thereto, as approved by the Owner. The Project Schedule shall constitute the schedule to be used by the Contractor.

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§ 1.2 CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS

§ 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results. In the case of conflict or inconsistency between Drawings and Specifications or within Drawings or Specifications not clarified by addendum, the Contractor shall (1) provide the better quality or greater quantity of Work (2) comply with the more stringent requirement either or both in accordance with the Architect's interpretation. The Contractor shall notify the Architect of discrepancies found before materials are fabricated or Work performed.

§ 1.2.1.1 The Contractor shall adhere to dimension though differing from scale measurements. In the absence of dimension or in case of doubt as to the proper measurement consult the Architect. Actual field dimensions where applicable are to be verified by the Contractor in the field prior to proceeding.

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

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

§ 1.2.4 Design requirements, when shown, specified, or both, shall prevail over the standard product of a company or companies named. Deviation from Contract requirements must have approval of the Architect and the Owner.

§ 1.2.5 In the case of a minor omission in the Drawings and/or Specifications, the existence of which is required for functional operations of the completed Project, the labor, materials, time, and supervision required to include such an omission shall be considered to be reasonably inferable to produce the intended results and shall be completed by the Contractor at no increase in the Contract Sum or Contract Time.

§ 1.3 CAPITALIZATION

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

§ 1.4 INTERPRETATION

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

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

§ 1.5.1 The Drawings, Specifications and other documents, including those in electronic form, prepared by the Architect and the Architect's consultants are Instruments of Service through which the Work to be executed by the Contractor for the Owner is described. The Contractor may retain one record set. Neither the Contractor nor any Subcontractor, Sub-subcontractor or material or equipment supplier shall own or claim a copyright in the Drawings, Specifications and other documents prepared by the Architect or the Architect's consultants, and unless otherwise indicated the Architect and the Architect's consultants shall be deemed the authors. All copies of Instruments of Service, except the Contractor's Record Set, shall be returned or suitably accounted for to the Owner, or request, upon completion of the Work. The Drawings, Specifications and other documents prepared by the Architect and the Architect's consultants, and copies thereof furnished to the Contractor, are for use solely with respect to this Project. They are not to be used by the Contractor or any Subcontractor, Sub-subcontractor or material or equipment supplier on other projects or for additions to this Project outside the scope of the Work without the specific written consent of the Owner.

§ 1.5.2 The Contractor, Subcontractors, Sub-subcontractors and material or equipment suppliers are authorized to use and reproduce applicable portions of the Drawings, Specifications and other documents prepared by the Architect and the Architect's consultants appropriate to and for use in the execution of their Work under the Contract Documents. All copies made under this license shall bear the statutory copyright notice, if any, shown on the Drawings, Specifications and other documents prepared by the Architect and the Architect's consultants. Submittal or

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(2051699317)

distribution to meet official regulatory requirements or for other purposes in connection with this Project is not to be construed as publication in derogation of the Architect's or Architect's consultants' copyrights or other reserved rights. The Drawings, Specifications, and other documents are and shall be always the property of the Owner and the Owner will retain all common law, statutory, and other reserved rights in addition to the copyright.

§ 1.6 TRANSMISSION OF DATA IN DIGITAL FORM

If the parties intend to transmit Instruments of Service or any other information or documentation in digital form, they shall endeavor to establish necessary protocols governing such transmissions, unless otherwise already provided in the Agreement or the Contract Documents.

ARTICLE 2 OWNER

§ 2.1 GENERAL

§ 2.1.1 The Owner is the Board of Education of Montgomery County, 850 Hungerford Drive, Rockville, Maryland 20850, and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. Except as otherwise provided in Section 4.2.1, the Architect does not have such authority. The term "Owner" means the Owner or the Owner's authorized representative.

§ 2.1.2 The Contractor understands that the Owner is a public agency and no mechanics' liens are permitted against its property.

§ 2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

§ 2.2.1 [INTENTIONALLY OMITTED]

§ 2.2.2 Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure and pay for necessary easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

§ 2.2.3 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site to the extent reasonably required for the execution of the Work and requested by the Contractor in writing. Subsurface investigation data is provided only for the information and convenience of the Contractor. The Owner does not warrant and disclaims responsibility for the location of the utilities or the accuracy of tests concerning the soil surface, and subsurface structures and conditions. The Owner further disclaims responsibility for interpretation of that data by others, as in projecting soil bearing values, soil stability, and presence, level and extent of underground water. The Contractor warrants that it has made itself familiar with the Project site and obtained all information required by it concerning the conditions of the Project site, including soil, surface and subsurface structures and conditions as well as the location of utilities and the improvements to be constructed. The Contractor is solely responsible for all direct or indirect costs resulting from any conditions differing from those contained in the information provided by the Owner as set forth herein.

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

§ 2.2.5 The Contractor will be furnished, free of charge, a minimum of 20 complete sets of Drawings and 20 copies of the Project Specifications, including all addenda. Additional sets or copies if not available will be furnished by the Architect at the actual cost of reproduction and handling.

§ 2.3 OWNER'S RIGHT TO STOP THE WORK

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or repeatedly fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3.

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§ 2.4 OWNER'S RIGHT TO CARRY OUT THE WORK

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents or to maintain scheduled progress and fails within a seven-day period after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such deficiencies. In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect or failure. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner.

ARTICLE 3 CONTRACTOR

§ 3.1 GENERAL

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

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

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

§ 3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

§ 3.2.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed and correlated personal observations with requirements of the Contract Documents.

§ 3.2.2 The Contractor represents that it has visited the Project site, familiarized itself with the location and conditions under which the Work is to be performed and has correlated its observations with the requirements of the Contract Documents. The Contractor represents that the Contract Documents are sufficient to provide for the efficient performance and completion of the Work in accordance with the Contract Documents and all legal requirements, whether by way of statute, common law, regulation, or building code applicable to the Work. The aforegoing includes all Work, whether or not specifically demonstrated in the Contract Documents, which may be reasonably inferred to be required or useful for such performance and completion. The Contractor shall continue to carefully study and compare the Contract Documents with each other and with information furnished by the Owner pursuant to Section 2.2 or obtained by the Contractor by his own investigation and tests. The Contractor shall at once report to the Owner and Architect all errors, inconsistencies, or omissions discovered. If the Contractor performs any construction activity knowing or having reason to know it involves an error, inconsistency, or omission in the Contract Documents, the Contractor shall assume responsibility for such performance and the cost of correction thereof. The Contractor shall further ensure that the Subcontractors and Sub-subcontractors shall be familiar with the requirements of the Contract Documents.

§ 3.2.3 Any design errors or omissions noted by the Contractor during this review shall be reported promptly to the Architect and the Owner in writing. The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Architect any nonconformity discovered by or made known to the Contractor as a request for information in such form as the Architect may require.

§ 3.2.4 If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall make Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner as would have been avoided if the Contractor had performed such obligations. If the Contractor performs these obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract

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Documents for differences between field measurements or conditions and the Contract Documents or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities.

§ 3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract. The Contractor shall evaluate the jobsite safety and shall be fully and solely responsible for the jobsite safety of means, methods, techniques, sequences or procedures.

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

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

§ 3.3.4 SURVEY, LINES AND LEVELS

The Contractor shall be solely responsible for properly laying out the Work and for all lines and measurements for all of the Work executed under the Contract Documents. The Contractor shall verify the figures shown on the Drawings before laying out the Work and the Contractor will notify the Owner and Architect of any errors or inaccuracies found. Neither the Architect nor the Owner shall have any responsibility for laying out the Work. In the event there is a discrepancy between the Drawings and the field conditions, the Architect and the Contractor will coordinate and attempt to resolve the difference.

.1 The Contractor shall establish on the site all necessary reference lines and permanent benchmarks from which the Contractor shall establish building lines and elevations. In the case of exterior Work, a registered land surveyor shall be used by the Contractor to establish the reference lines and permanent bench marks and to lay out the Work. The Contractor shall be solely responsible for the proper location and level of all the Work and for the maintenance of the reference lines and bench marks.

.2 A registered professional engineer, customarily involved in this type of work shall be used by the Contractor to determine all lines and elevations for various parts of the Work which are exterior to the building shell, including, as the Work progresses: establishment of bench marks and axis lines and other lines and dimensional reference points as required for the information and guidance of all trades; field checking of the building shell and surveys thereof as may be required by the technical sections of the Specifications.

.3 All dimensions and grades shown on the Drawings are believed to be correct but the Contractor shall verify them at the site and notify the Architect and Owner in writing of any discrepancies found before proceeding with the Work; similarly, as to final lines and grades established by official surveys, the Contractor shall check the Drawings against such established lines and grades and notify the Architect and Owner in writing of any discrepancies found. In the absence of such notifications, extra Work caused by discrepancies shall not entitle the Contractor to additional compensation.

§ 3.4 LABOR AND MATERIALS

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

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

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§ 3.4.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them.

§ 3.5 WARRANTY

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

§ 3.6 TAXES

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

§ 3.7 PERMITS, FEES, NOTICES, AND COMPLIANCE WITH LAWS

§ 3.7.1 The Contractor will apply for and the Owner will directly pay for the general building permit, demolition permit, sediment control permit, and WSSC permits. The Contractor shall apply, secure, and pay for all incidental permits including but not limited to, Maryland Department of the Environment Air Quality General Permit to Construct, governmental fees, bonding requirements, and licenses necessary for proper execution and completion of the Work including the use and occupancy permit, local and state transportation department permits to perform Work in a public right-of-way, and electrical permit. No compensation or mark-up for these fees will be allowed on incident permits. The Contractor shall secure all certificates of inspection and occupancy, as may be required by the authorities having jurisdiction over the Work. These shall be delivered to the Architect upon receipt by the Contractor. The Contractor shall notify the Owner of any application for inspection or permits required to be executed, made, or submitted by the Owner.

§ 3.7.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work.

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

(Paragraph deleted)

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

§ 3.7.5 If the Contractor believes additional cost is due to (1) a written interpretation from the Architect, (2) an order by the Owner to stop the Work where the Contractor was not at fault, (3) a written order for a minor change in the Work issued by the Architect, (4) failure of payment by the Owner, (5) termination of the Contract by the Owner, (6) Owner's suspension or (7) other reasonable grounds, Claim shall be filed in accordance with this Section 3.7

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§ 3.8 ALLOWANCES

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

§ 3.8.2 Unless otherwise provided in the Contract Documents:

.1 allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;

.2 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit and other expenses contemplated for stated allowance amounts shall be included in the allowances; and

.3 whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.

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

§ 3.9 SUPERINTENDENT

§ 3.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor. The superintendent shall be on the job site at all times and shall not be responsible for any other project being constructed by the Contractor. The superintendent shall be permanently assigned to the Project and may not be changed without written consent of the Owner. The Owner shall have the right to require the Contractor to remove from the Project any superintendent whose performance the Owner deems to be unsatisfactory.

(Paragraphs deleted)

§ 3.9.2 The Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner through the Architect the name and qualifications of a proposed superintendent. The Architect may reply within 14 days to the Contractor in writing stating (1) whether the Owner or the Architect has reasonable objection to the proposed superintendent or (2) that the Architect requires additional time to review. Failure of the Architect to reply within the 14 day period shall constitute notice of no reasonable objection.

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

§ 3.10 CONTRACTOR'S CONSTRUCTION SCHEDULES

§ 3.10.1 THE PROJECT SCHEDULE AND PROGRESS OF THE WORK

.1 The Contractor shall provide, operate and maintain a computerized Project Schedule using the Critical Path Method (CPM) to plan and schedule the execution of the Work, to assist the Owner in appraising the reasonableness of the schedule, to evaluate the progress of the Work, to make progress payments and to make decisions relative to time and/or cost adjustments which may result from changes in the Work. The software utilized for the CPM shall be the current version of Primavera Project Planner.

.2 It is expressly understood and agreed that the time of beginning, the rate of progress and the time of completion of the Work are of the essence of this Contract. The Work shall be executed with such progress as required to prevent any delay to the Contract milestone dates and the general completion of the Contract. The Contractor shall mitigate, to the maximum extent possible, delays to the Work, regardless of the cause of such delay.

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.3 By execution of the Contract, the Contractor represents that he has closely analyzed the Work, the materials, the equipment and methods of construction involved, the availability of skilled and unskilled labor, restrictions of the site, all testing, inspections and approvals, constraints imposed by the Contract and his own work load and capacity to perform the Work and agrees that the specified times are reasonable considering the existing conditions prevailing in the locality of the Work, including weather conditions and other factors, with a reasonable allowance for variations from average.

§ 3.10.2 RESPONSIBILITIES

.1 The Contractor shall continuously employ or retain the services of a Construction Scheduler. The Construction Scheduler shall have at least five (5) years of verifiable experience as the person primarily responsible for preparing and maintaining detailed project schedules on projects of the same or similar size and nature as this project. Within seven (7) calendar days of the Contractor's receipt of the Notice to Proceed, the Contractor shall provide the identification, qualifications and experience of the Contractor's Construction Scheduler and all other members of the Contractor's scheduling staff to the Owner.

.2 The Owner shall have the right to approve or disapprove the use of the proposed Construction Scheduler for this project and will notify the Contractor within seven (7) calendar days from receipt of the Contractor's information. In the case of disapproval, the Contractor shall resubmit another Construction Scheduler within seven (7) calendar days for renewed consideration. No progress payments will be made until the Contractor's Scheduler is approved and has submitted the ninety (90) day Project Schedule.

.3 The Contractor shall provide the sequencing, logic, duration, cost and manpower requirements of all activities, the initial CPM network diagram, supporting tabular reports and an electronic copy of same on Owner-approved electronic medium. Following acceptance of the initial Baseline Project Schedule by the Owner, the Contractor shall update the percentage complete, the remaining duration, the actual start date and actual finish date of each activity on a monthly basis concurrent with each Application for Payment. The Contractor shall provide an updated CPM network diagram, supporting tabular reports and an electronic copy of same on a monthly basis. The Contractor is at all times fully and totally responsible for the Project Schedule and is to direct its forces in a manner that will allow for completion of the Work within the Contract Time and the Contract Sum.

.4 The information provided by the Contractor in accordance with 3.10.2.3 shall represent its best efforts and the best efforts of its Subcontractors and the Sub-subcontractors to schedule the Work. Similarly, progress information submitted by the Contractor shall be an accurate representation of its actual performance. The Project Schedule shall at all times reflect an accurate record of the Contractor's actual progress as well as a reasonable and attainable projection of remaining Work. If the Progress Schedule does not represent the actual prosecution of the Work or an accurate projection of remaining Work, the Owner may, in its sole and exclusive judgment, direct the Contractor to revise the Project Schedule. Such revision shall be at no increase in the Contract Time or Contract Sum.

§ 3.10.3 PROJECT SCHEDULE PREPARATION AND REQUIREMENTS

.1 Prior to the commencement of the Work, the Contractor shall submit to the Owner a Preliminary Schedule, prepared in accordance with this Subparagraph, covering the first ninety (90) calendar days of construction operations. The Contractor shall not receive payment for any work until this partial Schedule is accepted by the Owner.

.2 Within forty-five (45) calendar days following the Notice to Proceed, the Contractor shall submit to the Owner its proposed Baseline Project Schedule, including a CPM network diagram, supporting tabular reports and an electronic copy of same. The Baseline Project Schedule shall

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include submittal, approval, fabrication and delivery of equipment and materials as well as construction activities. The Contractor shall submit a CPM network diagram, a tabular report sorted by activity ID, a tabular report sorted by total float, a predecessor/successor report sorted by activity ID, a cost loading report, a manpower loading curve, a project calendar and an electronic copy of the Schedule.

.3 The Owner and/or its Consultant shall conduct a review of the Baseline Project Schedule and provide written comments to the Contractor within fourteen (14) calendar days following submittal by the Contractor. The Contractor shall review the Owner's comments and if required, revise and resubmit the Baseline Project Schedule within fourteen (14) calendar days. Such revision shall be at no increase in the Contract Time or Contract Price. Approval of the Baseline Project Schedule by the Architect or Owner shall not relieve the Contractor from compliance with the requirements of the Contract.

.4 The detailed CPM network diagrams shall show the sequence and interdependence of activities required to execute the Work of the Contract. It shall be constructed to show the order in which the Contractor proposes to carry out the Work, to indicate restrictions of access and to show availability of work areas and availability and use of manpower, materials and equipment. The Contractor shall utilize the network diagrams and tabular reports in planning, scheduling, coordinating and performing the Work under the Contract, including all activities of Subcontractors, equipment vendors and suppliers.

.5 The degree of detail of the Project Schedule and the selection and number of activities shall be subject to the approval of the Owner and/or its Consultant, and shall include, but not be limited to:

.a Contract completion date and milestones, substantial completion dates, beneficial occupancy dates, phased occupancy dates, restraints of work in the Contract and the final completion date, as required by the Contract;

.b Type of work to be performed, the sequences and the labor trades involved;

.c All submittals, approvals, fabrication and delivery of construction materials and major pieces of equipment purchased for the Contract;

.d All construction interface requirements involving Owner Furnished Equipment (OFE), including early and late delivery dates, provisions for storage and protection of OFE, and installation.

.e Approvals required by regulatory agencies or other third parties;

.f All subcontract work;

.g Scheduling of work to be performed by Utility Companies or other third parties upon which work to be performed under this Contract is dependent;

.h Required tests, submission of test reports and approval of test reports;

.i All start-up testing, commissioning and training activities required under the Contract;

.j Punchlist and final clean-up; and

.k Identification of any manpower, material or equipment restrictions, as well as any activity requiring unusual shift work, such as two (2) shifts per day, six (6) day work weeks, specified overtime or work at times other than regular days or hours, shall be clearly identified on the Project Schedule.

.6 The activities included in the Project Schedule shall be analyzed in detail to determine activity time durations in units of project workdays. Duration shall be based on the optimum labor, equipment and materials required to perform each activity on a normal workday basis. No on-site activity shall have a duration greater than fifteen (15) work days except non-construction activities such as submittals, submittal reviews, fabrication and delivery of materials or equipment, concrete curing and testing. Only on-site construction activities will be shown as resource loaded to reflect cost and manpower, except for those non-construction activities specifically approved by the Owner for cost loading.

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.7 The Project Schedule shall contain adequate "group codes" to enable the logical sorting of activities. At a minimum, the schedule should contain codes for major work areas, floors or levels, building elevations, and the Subcontractor or party responsible for that work activity.

.8 The Project Schedule shall utilize only one project calendar (unless multiple calendars are required by Section 3.10.3.5.k)

.9 The Contractor's failure to include in its Project Schedule any element of the Work required for the performance of the Contract shall not excuse the Contractor from completing the Work of the Contract within the Contract Time.

.10 COST LOADING: Within the Baseline Project Schedule the Contractor shall allocate the cost required to complete each construction activity. The cost shall accurately represent the cost to the Contractor for labor, equipment and materials inclusive of the Contractor's field and home office overhead and profit. The Contractor's field and home office overhead and profit for each activity shall be developed on a pro-rata basis and included in the total cost for each activity. The sum of all activity costs shall equal the Contract Sum. The Contractor shall certify that its cost allocation is accurate and that the value assigned to each activity represents the Contractor's estimated direct cost, overhead and profit of performing that activity. The Schedule of values shall be derived from and be consistent with this cost data. The Owner shall be entitled to rely on this cost data for additive and deductive Change Orders. If, in the sole and exclusive opinion of the Owner and/or its Consultant, the cost data is not accurate: i.e., is unbalanced, the Contractor shall present to the Owner such documentation as the Owner and/or its Consultant may require to substantiate its cost data and allocation.

.11 Should the Contractor not submit cost data acceptable to the Owner, the Owner may impose cost data to facilitate Applications for Payment without any increase in the Contract Time or Contract Sum until such time as the Contractor submits acceptable cost data. The Contractor shall continue to work during this period.

.12 The following computer generated reports in hard copy and in electronic format shall be required as part of the Baseline Project Schedule and each monthly update thereof as a condition precedent to the receipt of progress payments under the Contract:

.a Earned Value Report, in tabular format, sorted by organizational responsibility, including cumulative earnings for each activity, for the Contractor, for each Subcontractor, and for the entire Project; and

.b Net and Cumulative Cash Flow Earnings and Projection, in histogram and tabular formats, for the entire Project.

.13 Within the Baseline Project Schedule the Contractor shall allocate the manpower required to complete each construction activity. The following computer generated reports in hard copy and in electronic format shall be required as part of the Baseline Project Schedule and each monthly update thereof as a condition precedent to the receipt of progress payments under the Contract:

.a Manpower Report, in tabular format, sorted by organizational responsibility for the Contractor and each Subcontractor, comparing the Baseline Project Schedule with the monthly updated actual and projected manpower.

.14 The following computer generated data in hard copy and in electronic format shall be required as part of the Baseline Project Schedule submittal and each monthly update thereof as a condition precedent to the receipt of progress payments under the Contract:

.a Schedule report activity number from lowest to highest;

.b Schedule report by total float from lowest to highest, then by early start;

.c Schedule report by early start date for the next fifty (50) work days, then by activity number;

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.d Cost reports as required by 3.10.3.12;
.e Manpower report as required by 3.10.3.13; and
.f Network diagrams shall be prepared with a title block and a calendar day time line on each page. The network diagram shall be a time scaled precedence format showing a continuous flow of information from left to right. The critical path shall be clearly and graphically identified on the network diagrams.

§ 3.10.4 PROJECT SCHEDULE UPDATES

.1 The Contractor shall be responsible for updating the percentage complete, the remaining duration, the actual start date and actual finish date of each activity on a monthly basis. The Contractor may modify the Project Schedule to reflect actual sequencing of the Work and other factors which impact the Project Schedule with the prior concurrence of the Owner.

.2 If the update of the Project Schedule indicates delays to the critical path of the Project, the Owner may require that the Contractor provide a Recovery Schedule and Report setting forth the Contractor's plan to eliminate these delays as set forth in paragraph 3.10.5. If the Owner makes such a request, the Contractor shall provide its Recovery Schedule and Report within seventy-two (72) hours of the Owner's request. The submittal of the Recovery Schedule and Report shall be a condition precedent to the receipt of progress payments under the Contract.

.3 The following computer generated data in hard copy and in electronic format shall be required as part of each monthly update thereof as a condition precedent to the receipt of progress payments under the Contract:

.a Schedule report activity number from lowest to highest;
.b Schedule report by total float from lowest to highest, then by early start;
.c Schedule report early start date for the next fifty (50) work days, then by activity number;
.d Cost reports as required by 3.10.3.13; and
.f Network diagrams shall be prepared with a title block and a calendar day time line on each page. The network diagram shall be a time scaled precedence format showing a continuous flow of information from left to right. The critical path shall be clearly and graphically identified on the network diagrams.

.4 A monthly Update Schedule Narrative Report summarizing the current status of the following information shall be a condition precedent to receipt of monthly progress payments:

.a the status of interim and completion milestones;
.b the critical path of the Project;
.c major work performed during the preceding period;
.d major work planned to being within the succeeding period;
.e all modifications to the schedule; and
.f concerns regarding prosecution of the Work.

.5 Upon the Owner's acceptance and approval of the monthly schedule update submitted by the Contractor, the Monthly Project Schedule Update will become the Baseline Project Schedule.

§ 3.10.5 RECOVERY SCHEDULE

.1 In the event it becomes apparent from the updated Project Schedule that any Milestone Date or Substantial Completion Date previously established in the Project Schedule may not be met, the Contractor shall, at the Owner's request, take any or all of the following actions with no increase in Contract Time or Contract Sum:

.a Increase construction manpower to substantially eliminate the delay and return the Project to schedule:

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.b Increase the number of working hours per shift, shifts per day or the amounts of construction equipment or any combination of the foregoing which will substantially eliminate the delay and return the Project to schedule;

.c Reschedule activities to the maximum degree practicable to concurrently accomplish the Work within the Time required by the Contract Documents; and

.d Modify the Project Schedule and submit this Recovery Schedule to the Owner for approval.

If the Contractor fails to take any of these actions within seventy-two (72) hours after receiving notice from the Owner, the Owner may (1) take action to attempt to return the Project to schedule and (2) deduct the cost of such actions from the monies due or to become due to the Contractor.

§ 3.11 DOCUMENTS AND SAMPLES AT THE SITE

The Contractor shall maintain at the site for the Owner one copy of the Drawings, Specifications, Addenda, Change Orders and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and one copy of approved Shop Drawings, Product Data, Samples and similar required submittals. These shall be available to the Architect and shall be delivered to the Architect for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

§ 3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

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

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

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

§ 3.12.4 Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents. Their purpose is to demonstrate the way by which the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Architect is subject to the limitations of Section 4.2.7. Informational submittals upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals which are not required by the Contract Documents may be returned by the Architect without action.

§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve and submit to the Architect Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors.

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

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

§ 3.12.8 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Architect in writing of such deviation at the time of submittal and (1) the Architect with prior approval of the Owner has given

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written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Architect's approval thereof.

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

§ 3.12.10 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. The Contractor shall not be required to provide professional services in violation of applicable law. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall cause such services or certifications to be provided by a properly licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner and the Architect shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor all performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review, approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Contractor shall not be responsible for the adequacy of the performance and design criteria specified in the Contract Documents.

§ 3.12.11 Further Submittal requirements are in Division 1 of the Project Manual, Section 01330.

§ 3.13 USE OF SITE

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

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

§ 3.14 CUTTING AND PATCHING

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

§ 3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or separate contractors by cutting, patching or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter such construction by the Owner or a separate contractor except with written consent of the Owner and of such separate contractor; such consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold from the Owner or a separate contractor the Contractor's consent to cutting or otherwise altering the Work.

§ 3.15 CLEANING UP

§ 3.15.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract on a regular basis. Contractor shall maintain all turf areas, including the public right-of-way bordering school property up to the curb, and landscaping that are not to be disturbed by the Work. At completion of the Work, the Contractor shall remove from and about the Project waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials.

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§ 3.15.2 The Contractor shall keep all sidewalks bordering school property clear of debris and maintain snow and ice removal when necessary to comply with local codes.

§ 3.15.3 If the Contractor fails to clean up or maintain turf areas, sidewalks, and landscaping, the Owner may do so and the cost thereof shall be charged to the Contractor.

§ 3.16 ACCESS TO WORK

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

§ 3.17 ROYALTIES, PATENTS AND COPYRIGHTS

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

§ 3.18 INDEMNIFICATION

§ 3.18.1 To the fullest extent permitted by law, Contractor shall indemnify and hold harmless and defend the Owner, its directors, employees, representatives, and agents from and against any and all claims, losses, damages, and liabilities, including attorneys' fees and expenses, including but not limited to claims for bodily injury, personal injury, sickness, death, or property damage, including loss of use, which arise in whole or in part from the Work, a breach of terms of this Agreement, or the negligence of Contractor (or those acting under its direction, control or supervision, including Subcontractors). The scope of the duties set forth in this Section 3.18.1 shall not extend to claims, losses, or damages caused by the Owner's sole negligence. Nothing in this indemnity clause or elsewhere in the Contract Documents should under any circumstances be construed as an express or implied waiver of Owner's sovereign immunity protections, or as conferring subrogation or third party beneficiary rights upon any third party who claims to have been injured or otherwise damaged as a result of the Work, any act or omission of Contractor or any of its Subcontractor, or any act or omission of the Owner or any of its contractors on consultants.

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

ARTICLE 4 ADMINISTRATION OF THE CONTRACT

§ 4.1 ARCHITECT

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

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

§ 4.1.3 In case of termination of employment of the Architect, the Owner shall appoint a successor Architect whose status under the Contract Documents shall be that of the Architect.

§ 4.2 ADMINISTRATION OF THE CONTRACT

§ 4.2.1 The Architect or Owner will provide administration of the Contract as described in the Contract Documents and will be included among the Owner's representative (1) during construction (2) until final payment is due and (3)with the Owner's concurrence, from time to time during the one-year period for correction of Work described in Section 12.2. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents, unless otherwise modified in writing in accordance with other provisions of the Contract.

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§ 4.2.2 The Architect and the Owner will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, neither the Owner nor the Architect will be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not have control over or charge of, or responsibility for, the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents, except as provided in Section 3.3.1.

§ 4.2.3 On the basis of the site visits, the Architect will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and report to the Owner (1) known deviations from the Contract Documents and from the most recent construction schedule submitted by the Contractor, and (2) defects and deficiencies observed in the Work. The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not have control over or charge of and will not be responsible for acts or omissions of the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

§ 4.2.4 COMMUNICATIONS FACILITATING CONTRACT ADMINISTRATION
Except as otherwise provided in the Contract Documents or when direct communications have been specially authorized, or when direct communications in the opinion of the Owner will facilitate the prosecution of the Work, the Owner and Contractor shall endeavor to communicate with each other through the Architect about matters arising out of or relating to the Contract. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and material suppliers shall be through the Contractor. Communications by and with separate contractors shall be through the Owner.

§ 4.2.5 Based on the Owner's and Architect's evaluations of the Work as provided in Subparagraph 4.2.2 and on the date comprising the Contractor's Applications for Payment, the Architect will review and, with the Owner's prior approval, certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

§ 4.2.6 The Owner and the Architect shall have the right to determine whether the Work is being performed in accordance with the requirements of the Contract Documents. The Owner and the Architect have authority to reject Work that does not conform to the Contract Documents. Whenever the Owner or the Architect considers it necessary or advisable, the Owner or the Architect will have authority to require inspection or testing of the Work in accordance with Sections 13.5.2 and 13.5.3, whether or not such Work is fabricated, installed or completed. However, neither this authority of the Owner and the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, material and equipment suppliers, their agents or employees, or other persons or entities performing portions of the Work.

§ 4.2.7 The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with promptness as to cause no delay in the Work or in the activities of the Owner, Contractor or separate contractors, while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5 and 3.12. The Architect's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by the Architect, of any construction means, methods, techniques, sequences or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 4.2.8 The Architect will prepare Change Orders and Construction Change Directives, and may with prior approval of the Owner authorize minor changes in the Work as provided in Section 7.4. The Architect will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 15.1.4.

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§ 4.2.9 The Architect and/or Owner will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion. The Architect will issue Certificates of Substantial Completion pursuant to Section 9.8; receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10 and issue a final Certificate for Payment pursuant to Section 9.10.

§ 4.2.10 If the Owner and Architect agree, the Architect will provide one or more project representatives to assist in carrying out the Architect's responsibilities at the site. The duties, responsibilities and limitations of authority of such project representatives, if any, shall be as set forth in an exhibit to be incorporated in the Contract Documents.

§ 4.2.11 The Architect will initially interpret and decide matters concerning performance under and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If no agreement is made concerning the time within which interpretations required of the Architect shall be furnished in compliance with this Section 4.2, then delay shall not be recognized on account of failure by the Architect to furnish such interpretations until 15 days after written request is made for them.

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

§ 4.2.13 The Architect's decisions on matters relating to aesthetic effect shall be final and subject to no further proceedings, if consistent with the intent expressed in the Contract Documents.

(Paragraph deleted)
§ 4.2.14 The Architect will review and respond to requests for information about the Contract Documents. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

ARTICLE 5 SUBCONTRACTORS

§ 5.1 DEFINITIONS

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

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

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

§ 5.2.1 Prior to the application for first payment, a complete list of all proposed Subcontractors, not previously submitted in accordance with Part 6 of the Instructions to Bidders, shall be submitted for acceptance by the Owner. The Owner shall notify the Contractor in writing if the Owner, after due investigation, has reasonable objection to any proposed Subcontractor and does not accept him. Failure of the Owner to make objection promptly to any proposed Subcontractor, excluding those Subcontractors listed in accordance with Part 6 of the Instructions to Bidders shall constitute notice of no reasonable objection. Each Subcontractor may be required to furnish the Owner, in duplicate, through the Architect, proof of his financial stability and experience to perform the particular work in which he will be engaged.

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

§ 5.2.3 If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Architect has no reasonable objection.

§ 5.2.4 No Subcontractor, person, or entity previously accepted may be changed without the written permission of the Owner.

§ 5.3 SUBCONTRACTUAL RELATIONS

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

§ 5.3.2 All Subcontract Agreements between the Contractor and it Subcontractors shall be written on the Standard Form of Agreement, AIA Document A401, Between Contractor and Subcontractor, 2007 Edition (as modified to reflect the Contract and Owner's requirements of the Contract Documents and the Owner).

§ 5.4 CONTINGENT ASSIGNMENT OF SUBCONTRACTS

§ 5.4.1 Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner provided that assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor in
(Paragraphs deleted)
writing.

§ 5.4.2 Upon such assignment: (i) Owner shall only be responsible for contractual obligations that accrue in their entirety after the date of assignment, and shall under no circumstances be responsible for payment or other obligations of the Contractor that accrued in whole or in part prior to the assignment and (ii) the Subcontractor(s) or other party(s) whose agreements are assigned shall be obligated to expeditiously proceed with the performance and completion of the specified scope of work in their respective agreements, notwithstanding the pendency of payment disputes with the Contractor.

(Paragraph deleted)

§ 5.5 ASSIGNMENT OF SUBCONTRACTS

§ 5.5.1 At the request of the Owner, the Contractor shall accept assignment of, and liability for, all purchase orders, contracts, subcontracts, and other agreements for procurement of materials, equipment, and services in connection with any related Work as defined in the Summary of Work, Section 01010, or as otherwise set forth in the Contract Documents. The Contractor shall be responsible for such items and services, if any, as if the Contractor had originally entered into the purchase order, contract, subcontract, or other agreement assigned. All warranty and correction of the work obligations under the Contract Documents shall also apply to such items and services assigned. Upon such assignment, the Contractor shall be as fully responsible to the Owner for performance of the Work and provision of materials and for the acts and omissions of the assigned Subcontractors and material suppliers and all persons either directly or indirectly employed by them as the Contractor is for the acts and omissions of all other subcontractors and

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material suppliers with whom the Contractor has directly entered into subcontracts or agreements for other portions of the Work.

§ 5.6 REPLACMENT OF SUBCONTRACTORS

§ 5.6.1 Contractor agrees and understands that it is of paramount importance to Owner for Contractor to achieve timely completion of the Work. Accordingly, in the event Owner determines in its reasonable discretion that (i) Contractor has failed to maintain progress in accordance with the Contractor's Construction Schedule and (ii) lack of performance on the part of one or more Subcontractors (regardless of the reason for such lack of performance) is a substantial cause of the delay, Owner may order Contractor to replace such Subcontractor(s). In such event, Owner may direct Contractor to engage a replacement Subcontractor(s) chosen by Owner, and Contractor shall contract with such replacement Subcontractor(s) on legal terms and conditions substantially similar to those of the terminated subcontract(s), unless Contractor has reasonable, articulable grounds to believe the replacement subcontractor is unqualified to perform the work. In the event the contract sum of the replacement subcontract(s) exceeds the balance remaining under the corresponding terminated subcontract(s), with respect to work not yet performed under the terminated subcontract(s) Owner may in its reasonable discretion agree to adjust the Contract Sum in an equitable manner. In the event Owner does not agree to any such adjustment, and Contractor disagrees with Owner's decision, Contractor may submit a Claim in accordance with Article 15.

§ 5.6.2 Under no circumstances shall Contractor be entitled to an adjustment of the Contract Time or Contract Sum, arising out of Owner's exercise of its rights under Section 5.6.1 above, except to the limited extent it can demonstrate the following as a threshold matter: (i) Owner's determination that the replaced subcontractor(s)' performance was a substantial cause of the underlying delay had no reasonable basis in fact; (ii) in circumstances where the Owner directs the Contractor to engage a specified replacement Subcontractor, that the Contractor raised timely objection to the Owner that the replacement subcontractor was unqualified to perform the work, and the replacement subcontractor in fact was so unqualified; or (iii) in circumstances where the Owner directs the Contractor to engage a specified replacement Subcontractor, that the Contractor offered to contract with an equally qualified replacement Subcontractor, for a substantially lower contract price, and Owner rejected such offer. Upon establishing one or more of the threshold conditions, Contractor's entitlement to relief shall be limited to the extent Contractor can specifically demonstrate that the critical path was impacted, and/or that its reimbursable Costs were increased, as a result.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

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

§ 6.1.1 The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project or other construction or operations on the site under Conditions of the Contract identical or substantially similar to these including those portions related to insurance and waiver of subrogation.

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

§ 6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each separate contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with other separate contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to the construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, separate contractors and the Owner until subsequently revised.

(Paragraph deleted)

§ 6.2 MUTUAL RESPONSIBILITY

§ 6.2.1 The Contractor shall afford the Owner and separate contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a separate contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly report

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to the Architect apparent discrepancies or defects in such other construction that would render it unsuitable for such proper execution and results. Failure of the Contractor so to report shall constitute an acknowledgment that the Owner's or 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.

§ 6.2.3 The Contractor shall promptly remedy damage wrongfully caused by the Contractor to completed or partially completed construction or to property of the Owner or separate contractors as provided in Section 10.2.5.

(Paragraphs deleted)

§ 6.3 OWNER'S RIGHT TO CLEAN UP

If a dispute arises among the Contractor, separate contractors and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and reasonably allocate the cost among those responsible.

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 GENERAL

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

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

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

§ 7.2 CHANGE ORDERS

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

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

Acceptance of a Change Order by the Contractor constitutes an accord and satisfaction and represents payment in full for both Contract Time and Contract Sum and for any and all costs, impacts, cumulative impacts, and for delays and disruptions arising out of, or incidental to, the Work included in the Change Order. Any and all further Claims by the Contractor arising from or in connection with the Work covered by the Change Order are waived. Any attempted reservation of right in connection with a Change Order is null and void.

§ 7.2.2 Change Order Procedures.

§ 7.2.2.1 A written request for a change in the Work may be made by the Owner, the Architect, or the Contractor, but only the Owner may authorize and approve the change. A written request by Contractor for a Change in the Work shall be made within (21) days after the occurrence of the event-giving rise to that Change Order request or such Change Order request shall be waived and the Contractor shall be barred from pursuing litigation on that Change Order request. All changes will be issued in the form of a written "Change Order Form" or as a "Charge to Contract Allowance" initiated by the Architect, signed by the Owner, and Architect, and the Contractor, which authorizes the change in the Work, and indicates mutually agreed upon changes to the Contract Time or Contract Sum (additive and/or deductive) or charged against a Contract Allowance. Change Orders are to be submitted to the Owner with an original and four copies with original signatures by the Architect and Contractor.

§ 7.2.2.2 The Contractor shall furnish, in duplicate, to the Owner and the Architect, a fully itemized breakdown of costs associated with changes requested. All requests for a change in the Work must include a full description for all proposed changes regardless of their nature. For the Work to be performed by Subcontractors, the Contractor shall

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furnish the Subcontractor's itemized cost proposal containing an itemized listing of labor and materials, including support material (i.e., invoices from suppliers indicating amount and cost, itemized breakdown of labor cost by category). All change proposals and support material shall be submitted to the Architect and Owner within 21 calendar days after the need for a change had been identified.

§ 7.2.2.3 When changes, alterations, deductions, or additions are requested, the value of such Work will be determined using the following guidelines:

.1 When unit prices are predetermined as described in these Specifications and are included as part of the Contract with the Owner, proposed changes will be based upon support material indicating the number of units.

.2 Labor prices for Change Order proposals for both Contractors and Subcontractors shall be the actual hourly rates expended, which in no case may exceed the labor rates for the labor specialty contained in the most current edition of Means Building Construction Cost Data. New rates will take effect for Work to be performed after January 1st of each calendar year.

.3 Means base labor rates, whether hourly or based upon the activity, may be used. The number of hours to accomplish the work will be reviewed for approval by the architect or its consultants, and the Owner's representatives. The Contractor's or Subcontractor's labor burden percentage shall be the actual rate paid, which will not be allowed to exceed the quoted Workers' Compensation insurance rate plus the Average Fixed Overhead rate by trade.

.4 Any additional labor cost proposed at time and one-half must be pre-approved by the Owner in writing. This attachment must accompany each Change Order proposal.

.5 No allowance to the Contractor shall be made or allowed for loss of anticipated profits on account of any changes in the Work.

.6 Change Orders which include alternates not a part of the original Contract award will be at the alternate price documented in the original bid proposal for a period of up to 120 calendar days from award of the Contract with no additional **mark-up**. Additional mark-ups for alternates accepted after 120 calendar days will be negotiated.

.7 If a change involves only a credit, the Contract price will be reduced by the net credit received from the Subcontractor or the amount it would have cost the Contractor if the omitted item or Work had not been eliminated.

.8 If a change involves both an extra and a credit, both sums shall be shown and the two sums balanced to determine the adjusted total extra or credit prior to the calculation of overhead and profit.

.9 Unless otherwise specified, the allowance mark-up for combined overhead and profit for Change Order Work self-performed by the Subcontractor's and Sub-subcontractor's forces will be based on the Cost of the Work in accordance with the following schedule:

Cost of the Work	Combined limits on Overhead and Profit
$0-999	20%
$1,000-4,999	18%
$5,000-9,999	14%
$10,000-24,999	12%
Over $25,000	To be negotiated.

Total Cost of Subcontractor's Work shall mean the Cost of the Subcontractor's and Sub-subcontractor's Work plus the Combined Limits for Overhead and Profit (in accordance with the above schedule.)

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.10 Similarly, the allowance for combined overhead and profit for Work performed directly by the Contractor's forces will be based on the Cost of Work in accordance with the schedule set forth in §7.2.2.3.9 above. Otherwise, on Work partly or solely performed by a Subcontractor's and Sub-subcontractors forces the Contractor will be limited to ten percent (10%) overhead and profit on the total value under $25,000. The limits on overhead and profit allowance to the Contractor for Change Order Work performed partly or solely by a Subcontractor's or Sub-subcontractors forces over $25,000 will be negotiated but in no event will it exceed ten percent (10%) of the Total Value of Subcontractor's Work.

.11 Allowable percentage mark-ups for cumulative overhead and profit for both Contractors and Subcontractors includes full and final compensation to Contractor for the cost of bonding, architecture, design and engineering, estimating, field supervision above the level of working foremen including superintendents, coordination, safety, clean-up, assistant superintendents and general foremen, field engineers, accountants, timekeepers, office managers, and other on-site staff, office supplies, drinking water, temporary heat, water, light, and power, safety equipment, clean-up, all items incidental to the work including, but not limited to, small tools, expendables, field offices, trailers, tool trailers, field toilets, dumpsters, personnel vehicles (including pick-up trucks), minor consumables, all other cost of labor, materials, equipment, and overhead or profit not incorporated in the Work or Change Order work and directly or indirectly associated with Work or Change Order work, including home office costs, overhead costs of all sorts including general, administrative, corporate and legal overhead costs, preparation of cost proposals and schedule analyses connected with the Change Order (whether such Change Order is contemplated or implemented), liability, property damage and other insurances, executives, managers, administrators, office managers, supervisors, assistants and other home staff or staff not located on the Project site, and for all impact/cumulative impact costs arising out of or associated with the Change Order Work.

.12 Owner's Verification Rights.

.1 If the Contractor has submitted cost, negotiated pricing data, or time and materials cost in connection with the pricing of any modification to this Contract, unless the pricing was based on unit prices included in the Contract, the Owner or his designated representative shall have the right to examine records, documents, and other data of the Contractor related to negotiation pricing, or performing the modification, in order to evaluate the reasonableness, accuracy, completeness, and currency of the cost or pricing data.

.2 The Contractor shall make available at its office the materials described in Subparagraph .1 above, for examination until final payment is made under this Contract.

.3 The provisions of Subparagraphs .1 and .2 above apply to all Subcontractors under this Contract.

§ 7.3 CONSTRUCTION CHANGE DIRECTIVES

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

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

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

.1 mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;

.2 unit prices stated in the Contract Documents or subsequently agreed upon;

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.3 cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or

.4 as provided in Section 7.3.6.

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

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

§ 7.3.6 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Architect shall determine the method and the adjustment on the basis of actual cost and expenses and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an allowance for overhead and profit based on the provisions of Section 7.2.2. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data.

Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.6 shall be limited to the following:

.1 Costs of labor, including social security, old age and unemployment insurance, fringe benefits required by agreement or custom, and workers' compensation insurance;

.2 Costs of materials, supplies and equipment, including cost of transportation, whether incorporated or consumed;

.3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others.

(Paragraphs deleted)

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

§ 7.3.8 Pending execution of a Change Order pursuant to 7.3.9, amounts covered by the Construction Change Directive may not be included in Applications for Payment. The determination of the Architect shall be treated in accordance with Article 15.

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

(Paragraph deleted)

§ 7.4 MINOR CHANGES IN THE WORK

The Architect has authority to order minor changes in the Work not involving adjustment in the Contract Sum or extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes will be effected by written order signed by the Architect and shall be binding on the Owner and Contractor.

ARTICLE 8 TIME

§ 8.1 DEFINITIONS

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

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

Init.

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

§ 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

§ 8.2 PROGRESS AND COMPLETION

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

§ 8.2.2 The Contractor shall not, except by agreement or instruction of the Owner in writing, prematurely commence operations on the site or elsewhere prior to the effective date of insurance required by Article 11 to be furnished by the Contractor and Owner. The date of commencement of the Work shall not be changed by the effective date of such insurance. Unless the date of commencement is established by the Contract Documents or a notice to proceed given by the Owner, the Contractor shall notify the Owner in writing not less than five days or other agreed period before commencing the Work.

§ 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

§ 8.3 DELAYS BY THE CONTRACTOR

§ 8.3.1 Should the progress of the Work be delayed by any fault, neglect, act, or omission of the Contractor or any person or firm employed by the Contractor, the Contractor shall, at his own cost and expense, work such overtime as may be necessary to make up for all time lost and to avoid delay in completion of the Work, and the Contractor further agrees to compensate the Owner for and hold it harmless against any and all costs, expenses, losses, liability, and damages which it may sustain or incur by reason of such delay. If, in the opinion of the Architect and Owner, the progress of the Work is unsatisfactory, overtime Work will be demanded by the Owner and the Contractor shall institute overtime Work to meet the Construction Schedule at no additional cost to the Owner. The Contractor shall submit within ten (10) days of notice by the Owner a recovery schedule pursuant to Section 3.10.5 indicating how the delay will be remedied. The Owner reserves the right to employ its own forces to meet the Construction Schedule and may deduct and retain from funds due to the Contractor an amount sufficient to pay such additional costs, charges, or damages incurred or reasonably anticipated to be incurred.

(Paragraphs deleted)

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 CONTRACT SUM

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

§ 9.2 SCHEDULE OF VALUES

§ 9.2.1 Where the contract is based on a stipulated sum of money or Guaranteed Maximum Price, the Contractor shall submit to the Architect and the Owner before the first Application for Payment, a schedule of values allocating the entire contract sum to the specification sections that are applicable to various portions of the Work, prepared in the MCPS Contractor's Requisition for Payment form and supported by such data to substantiate its accuracy as the Architect and the Owner may require. This schedule, when and only when approved in writing by the Architect and the Owner, shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 9.2.2 For LEED Projects the following will apply:

.1 The General Contractor shall coordinate preparation of its Schedule of Values for its part of the Work with preparation of the Contractors' Construction Schedule.

.a Correlate line items in the Schedule of Values with other required administrative schedules and forms, including:

.1 Contractor's construction schedule
.2 Application for Payment Form
.3 List of subcontractors

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.4 Schedule of allowances
.5 Schedule of alternates
.6 List of products
.7 List of principal suppliers and fabricators
.8 Schedule of submittals

.b Submit the Schedule of Values to the Architect at the earliest feasible date, but in no case later than 7 days before the date scheduled for submittal of the initial Application for Payment.

.2 Format and Content: Use the Project Manual Table of Contents as a guide to establish the format for the Schedule of Values. Also include all items shown on the drawings but not included in the particular specification section.

.a Identification: Include the following project identification on the Schedule of Values:

.1 Project name and location
.2 Name of the Architect
.3 Project Number
.4 Contractor's name and address
.5 Date of Submittal

.b Arrange the Schedule of Values in a tabular form with separate columns to indicate the following for each item listed: provide a line item for each specification section and a scheduled value for each specification section.

.1 Generic name
.2 Related Specification Section
.3 Name of subcontractor
.4 Name of manufacturer or fabricator
.5 Name of supplier
.6 Change Orders (numbers) that have affected value
.7 Dollar value
.8 Percentage of Contract Sum to the nearest one-hundredth percent, adjusted to total 100 percent.

.c Provide a breakdown of the Contract Sum in sufficient detail to facilitate continued evaluation of Applications for Payment and progress reports. Break principal subcontract amounts down into several line items.

.1 Each line item of the Schedule of Values must be broken down into the following 3 categories: Material, Labor & Equipment. This is in order to comply with certain LEED credits.
.2 The schedule of values shall contain line items for:
a. Diverting a minimum of 95% (by weight) of the waste generated from site preparation and demolition activities as defined in section 02100 and LEED credit MR2.2.
b. Diverting a minimum of 75% (by weight) of the waste generated from construction activities as defined in section 01505 and LEED credit MR2.2.
c. Implementing the Construction Indoor Air Quality Plan as described in section 01506 and LEED credit EQ3.1.

§ 9.3 APPLICATIONS FOR PAYMENT

§ 9.3.1 At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment for operations completed in accordance with the most recently

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approved schedule of values. Such application shall be notarized and supported by such data substantiating the Contractor's right to payment. The Contractor shall comply with the following requirements.

.1 At the time the Contractor is preparing each monthly application for payment, it will be required that, upon completion of the Contractor's rough pencil draft covering a payment request, and prior to preparing the final draft, the rough draft will be reviewed by the Architect, Owner's representative, and the Contractor. Agreement shall be reached among the three prior to the requisition being forwarded formally to the Architect for subsequent transmittal to the Owner for payment.

.2 Each Application for Payment shall be prepared by the Contractor on IAC/PSCP form 306.4 Standard Monthly Contractor's Requisition for Payment as prescribed by the Owner. Each such Application shall bear the signature of the Contractor, Architect and Owner's representative and shall be notarized.

.3 The Contractor shall present the original plus three (3) copies to the Architect for review and processing. The Architect will deliver the original plus two (2) copies to the Owner for acceptance.

.4 If not otherwise provided in the Contract Documents, sample copies of the Application for Payment Form may be obtained from the Owner upon request. Forms may be reproduced in kind and quantity required by the Contractor.

.5 The Contractor shall submit a release of liens/claims from each Subcontractor performing Work or supplying materials covered by the previous progress payment.

.6 All Applications for Payment shall bear the following certification and shall be duly notarized: "I certify that the above is a true statement of the status of Work and materials, and it conforms with the Contract and duly authorized changes; that all just and lawful bills and other charges against the undersigned and the Subcontractors for labor, materials, and equipment required by the Contract have been (and will be) paid in full through all prior requisitions and that all Work is free and clear of liens, claims, security interests or encumbrances in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided labor, materials and equipment relating to the Work as of the date of the certification."

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

(Paragraph deleted)

§ 9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage and transportation to the site for such materials and equipment stored off the site.

§ 9.3.2.1 When the Application for Payment includes materials or equipment stored off the job site, the Application for Payment shall be accompanied with a certified statement including:

.1 description of items;
.2 bills of sale transferring title to the Owner by proper endorsement;
.3 location of storage;
.4 certification that items are currently covered by all contractual requirements, including liability and fire insurance;
.5 certification that items or any part thereof will not be installed in any other construction project other than Work under this Contract; and
.6 The Owner shall have the right of access to any portion of the Work at any time for the purpose of inspection thereof, including materials stored off site for which payment is being requested under Paragraph 9.3.2.1.

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§ 9.3.2.2 When Application for Payment includes material or equipment stored on the job site, the Application for Payment shall be accompanied by:

.1 description of items; and
.2 invoices from the supplier for line items over $10,000.

§ 9.3.3 For LEED Projects the following will apply:

.1 Application Preparation: Complete every entry on the form, including notarizations and execution by person authorized to sign legal documents on behalf of the Contractor.

.a Every application for payment, including initial, substantial and final completion, shall be accompanied by an accounting of the construction waste generated by the job and the construction waste diverted from landfills as set forth in specifications section 01505 – "Waste Management". Failure to provide this documentation will result in rejection of the pay application.

.2 Final Payment Application: Administrative actions and submittals which must precede or coincide with submittal of the final Application for Payment include the following:

.a Submit a summary of all project waste generated and all required backup documentation per construction waste management section 01505 and LEED credits MR2.1 and MR2.2. Proof that the contractor has diverted the required amount of construction waste from landfills will be prerequisite for final completion.

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

§ 9.4 CERTIFICATES FOR PAYMENT

§ 9.4.1 The Architect will, within seven days after receipt of the Contractor's Application for Payment, either issue to the Owner a Certificate for Payment, by signing the Contractor's Application for Payment with a copy to the Contractor, for such amount as the Architect determines is properly due, or notify the Contractor and Owner in writing of the Architect's reasons for withholding certification in whole or in part as provided in Section 9.5.1.

§ 9.4.2 The Architect's signature on the Contractor's Application for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data comprising the Application for Payment, that, to the best of the Architect's knowledge, information and belief, the Work has progressed to the point indicated and that the quality of the Work is in accordance with the Contract Documents. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion and to specific qualifications expressed by the Architect. The issuance of a Certificate for Payment will further constitute a representation that the Contractor is entitled to payment in the amount certified. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work, (2) reviewed construction means, methods, techniques, sequences or procedures, (3) reviewed copies of requisitions received from Subcontractors and material suppliers and other data requested by the Owner to substantiate the Contractor's right to payment, or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 9.5 DECISIONS TO WITHHOLD CERTIFICATION

§ 9.5.1 The Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 9.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 9.4.1. If the Contractor and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such

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representations to the Owner. The Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 3.3.2, because of:

.1 defective Work not remedied;

.2 third party claims filed or reasonable evidence indicating probable filing of such claims unless security acceptable to the Owner is provided by the Contractor;

.3 failure of the Contractor to make payments properly to Subcontractors or 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 contractor;

.6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay;

.7 failure to carry out the Work in accordance with the Contract Documents;

.8 failure by the Contractor to submit or maintain records or reports requested by the Contract Documents;

.9 failure by the Contractor to maintain documents and samples at the site in accordance with the Contract Documents; or

.10 failure by the Contractor to meet all other conditions precedent for payment in accordance with the Contract Documents.

§ 9.5.2 When the above reasons for withholding certification are removed, certification will be made for amounts previously withheld.

§ 9.5.3 If the Architect withholds certification for payment under Section 9.5.1.3, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or material or equipment suppliers to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect and the Architect will reflect such payment on the next Certificate for Payment.

§ 9.6 PROGRESS PAYMENTS

§ 9.6.1 After the Architect has issued a Certificate for Payment and all other conditions precedent for payment under the Contract Documents have been met, the Owner shall make payment on or before the 25th day of each month, as follows: Ninety-five percent (95%) of the value of the Work completed up to the first day of the month, as approved by the Architect and the Owner including the value of materials suitably stored at the Project site (or other approved location in accordance with Section 9.3.2) less the aggregate of previous payments.

§ 9.6.2 Reduction of retention shall not be considered until receipt of the Project Record Documents detailed in Section 01720 of the specifications.

§ 9.6.3 The Contractor shall pay each Subcontractor, no later than (3) working days after receipt of payment from the Owner, the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

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

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

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

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

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

§ 9.7 FAILURE OF PAYMENT

If the Architect does not issue a Certificate for Payment, through no fault of the Contractor, within seven days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven days after the date established in the Contract Documents the amount certified by the Architect, then the Contractor may, upon seven additional days' written notice to the Owner and Architect, stop the Work until payment of the amount owing has been received.

§ 9.8 SUBSTANTIAL COMPLETION

§ 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use, provided, however, that as a condition precedent to Substantial Completion, the Owner has received all certificates of occupancy and any other permits, approvals, licenses, and other documents from any authority having jurisdiction thereof necessary for the beneficial occupancy of the Project. The term "Substantial Completion is further defined at Division 1 Section 01011 of the Project Manual.

§ 9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete in accordance with Subparagraph 9.8.1, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be corrected. The Contractor shall proceed promptly to complete and correct items on the list before the Architect/Owner will generate their punch-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.

§ 9.8.3 Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents the Architect will notify the Contractor in writing generally stating the reasons it will not certify Substantial Completion. The Contractor shall within fourteen (14) days of receipt of the letter (or within such shorter time period as the Project Manual's Division 1 General Requirements may prescribe), complete or correct such items.

§ 9.8.4 When the Work or designated portion thereof is substantially complete, the Architect will prepare a Certificate of Substantial Completion which shall establish the date of Substantial Completion, shall establish responsibilities of the Owner and 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. The Contractor

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shall, within 60 days of receipt of the Architect's list of items, complete all items of listed Work and additions thereto, unless otherwise agreed to in the Certificate of Substantial Completion. If the Contractor fails to complete all listed Work within the time allotted, the Owner may terminate the Contract pursuant to Paragraph 14.2. If the Contractor fails to complete all listed Work within the time allotted, and the Owner allows the Contractor to complete the Work beyond the 60-day period, all regular progress payments will be suspended until such Work is complete as certified by the Architect. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion. If the Owner, due to failure of the Contractor, has the listed Work completed by another contractor, the responsibility of the Contractor for the warranties required under the Contract Documents will continue, and the Contractor will obtain for the Owner all requested assurances from the manufacturers and suppliers.

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

§ 9.8.6 Within 30 days of the issuance of the Certificate of Substantial Completion, the Contractor shall submit the final Project Record Documents to the Architect for approval as specified in the Contract Documents. Failure to make this submission within the stipulated time period shall result in the suspension of all regular progress payments until the documents are received and approved by the Architect.

§ 9.9 PARTIALOCCUPANCY OR USE

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

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

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

§ 9.10 FINALCOMPLETION AND FINAL PAYMENT

§ 9.10.1 Upon receipt of the Contractor's written notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection and, when the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect in form and substance satisfactory to the Owner (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the

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Owner, (3) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment and (5), if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner and (6) all other conditions precedent in accordance with the Contract Documents are fulfilled. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien. The final payment of the Contractor shall not become due until all final Project record documents as required by the Contract Documents have been received and accepted by the Architect.

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

.1 claims, security interests or encumbrances arising out of the Contract and unsettled;
.2 failure of the Work to comply with the requirements of the Contract Documents; or
.3 terms of special warranties required by the Contract Documents.

§ 9.10.4 Acceptance of final payment by the Contractor, a Subcontractor, or Sub-subcontractor, or an equipment or material supplier shall constitute a waiver of claims by that payee.
(Paragraphs deleted)

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 SAFETY PRECAUTIONS AND PROGRAMS

The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Contract.

§ 10.2 SAFETY OF PERSONS AND PROPERTY

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

.1 employees on the Work and other persons who may be affected thereby;
.2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor or the Contractor's Subcontractors or Sub-subcontractors; and
.3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

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

§ 10.2.3 The Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent sites and utilities.

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

§ 10.2.5 The Contractor shall promptly remedy damage and loss to property referred to in Sections 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3, except damage or loss attributable to acts or omissions of the Owner or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

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

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

§ 10.2.8 INJURY OR DAMAGE TO PERSON OR PROPERTY
Students or other school personnel, as well as the general public, may be on the project site and in the immediate vicinity of the Work indicated. The Contractor shall provide suitable barriers, warning signs and devices and take other protective measures that may be required to protect students, other persons, and vehicles in the vicinity of Work. It shall be the Contractor's responsibility to stop any operations immediately which could be considered as dangerous to any person in the vicinity of the Contractor's operations at the site. The Contractor shall immediately advise the Owner and the Architect of the situation which caused the Work to be stopped so that administrative steps can be taken by the Owner to prevent reoccurrence of the situation. If either party to the Contract suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, written notice of such injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

§ 10.2.9 Where construction is undertaken in an occupied facility, the Contractor will be required to issue identification badges to each employee, Subcontractor, Sub-subcontractor and/or material supplier or any other person visiting the construction site on a daily basis. The identification badges shall be numbered with at least a 48pt. type for easy identification. A log of persons and identification numbers will be kept in the Contractor's construction trailer at all times. Such badges will be collected at the end of each workday.

§ 10.2.10 No firearms of any kind including those that may be locked in a vehicle are permitted on Owner's properties.

§ 10.2.11 There will be no smoking on Owner's properties.

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

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

§ 10.3.2 Upon receipt of the Contractor's written notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. The Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of such material or substance or who are to perform the task of removal or safe containment of such material or substance. If the presence of the material or substance is verified, when the material or substance has been rendered harmless, Work in the affected area shall resume as directed by the Owner.

§ 10.3.3 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Architect, Architect's consultants and agents and employees of any of them from and against damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area if in fact the material or substance presents the risk of bodily injury or

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death as described in Section 10.3.1 and has not been rendered harmless, provided that such damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss or expense is due to the fault or sole negligence of the party seeking indemnity.

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

(Paragraphs deleted)

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

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

§ 10.4 EMERGENCIES

In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7. Under no circumstances shall Contractor be entitled to additional compensation or an extension of time if the emergency was caused by Contractor, its Subcontractors or others for whom Contractor is responsible.

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 CONTRACTOR'S LIABILITY INSURANCE

§ 11.1.1 For the duration of the Agreement, the Contractor shall purchase from and maintain insurance with a company or companies lawfully authorized to do business within the State of Maryland. Written certification of this requirement shall be presented to Owner through the Architect. Insurers must have at least an A-X rating with A.M. Best. No acceptance and/or approval of any insurance by the Owner shall be construed as relieving or excusing Contractor, or Surety, or its bonds, from any liability or obligation imposed upon any or all of them by the provisions of the Contract Documents. Such insurance shall protect the Contractor and the Owner from claims set forth below which may arise out of or result from the Contractor's operations under the Agreement, whether on-site or off-site, and for which the Contractor may be legally liable, whether such operations are by the Contractor or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

.1 claims under workers' compensation, disability benefits and other similar employee benefit acts including private entities performing Work at the site and exempt from the coverage on account of the number or employees or occupation, which entities shall maintain voluntary compensation coverage pursuant to the statutory requirements of the State of Maryland for the duration of the Project;

.2 claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees or persons or entities excluded by statute from the requirements of Section 11.1.1.1 but required by Contract Documents to provide the insurance which entities shall maintain Employers' Liability coverage at the specified limits for the duration of the Project;

.3 claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees;

.4 claims for damages insured by personal injury liability coverage including libel, slander, false arrest, wrongful detention and malicious prosecution, which are sustained (1) by any person as the result of an offense directly or indirectly related to the employment of such person by the Contractor, or (2) by any other person for whose acts the Contractor may be liable;

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.5 claims for damages, other than to the Work itself, because of physical injury to or destruction of tangible property, including loss of use resulting therefrom;

(Paragraph deleted)

.6 claims for bodily injury or property damage arising out of completed operations for which coverage will be maintained for two (2) years after final payment and acceptance of the Project. Coverage will apply to the goods, products, materials, or equipment used or installed under the Contract;

.7 claims involving contractual liability insurance applicable to meet, to the fullest extent possible, Contractor's obligations under Section 3.18; and

.8 claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of any owned, hired, or non-owned motor vehicle

(Paragraph deleted)

§ 11.1.3 Notice to Proceed will not be issued and the Contractor will not be authorized to commence Work until Contractor has obtained all of the minimum amounts of insurance required by this Article 11 and such insurance has been approved by the Owner. The Contractor shall not allow any Subcontractor or Sub-subcontractor to commence work on Subcontracts or Sub-subcontracts until the same insurances have been obtained by the Contractor for all Subcontractors and/or Sub-subcontractors and are approved by the Owner. The Contractor shall obtain from each Subcontractor and Sub-subcontractor and file with the Owner, through the Architect, duly executed certificates of all required insurance. All policies shall be written in the name of the Contractor with the Owner added as an additional insured. If required by the Owner, the Contractor shall furnish the Owner with certified copies of each policy required by him, his Subcontractor or Sub-subcontractors.

§ 11.1.4 The Contractor shall neither cause any insurance to be canceled nor permit any insurance to lapse during the execution of the Work. Coverages, excepting completed operations, shall be maintained without interruption from date of commencement of the Work until date of final payment and acceptance of the Project. Completed Operations coverage will be maintained for 2 years thereafter. All insurance policies required hereunder shall include the following provisions: "It is agreed that this policy is not subject to cancellation, non-renewal, non-payment of premium, material change or reduction in coverage until 30 calendar days prior written notice (as evidenced by return of registered or certified letter) has been given to the Owner." Certificates of Insurance shall contain information identifying the locations and operations for which the insurance applies, the expiration date, and the above-mentioned notice of cancellation or modification clause.

§ 11.1.5 If the Owner is damaged by the failure of the Contractor, or its Subcontractors, to maintain the specified insurance or to notify the Owner, then the Contractor shall bear all costs attributable thereto.

§ 11.1.6 In the event the Contractor fails to maintain any insurance required under the Contract Documents, the Owner may, but shall not be obligated to, purchase and maintain such insurance on the Contractors behalf and shall be reimbursed by the Contractor for the cost thereof in the manner provided for in Section 2.4.

§ 11.1.7 Contractual and other liability insurance provided under this Contract shall not contain a supervision, inspection, or engineering services exclusion that would preclude liability coverage for the Owner due to supervision and/or inspection of the Project.

§ 11.1.8 Waivers of Subrogation.

The Contractor and its insurance companies waive all rights against (1) the Owner and the Owner's agents and employees and (2) the Architect and the Architect's consultants for any claims, suits, losses or damages covered by any policies which are required to be purchased and maintained under the insurance provisions of the Contract Documents. The Owner or Contractor, as appropriate, shall require of the Architect, Architect's consultants, separate contractors described in Article 6, if any, and the subcontractors, sub-subcontractors, agents and employees of any of them, by appropriate agreements, written where legally required for validity, similar waivers each in favor of the Owner. All policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged, and the waiver of subrogation shall apply only to the extent of actual payment of insurance proceeds.

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§ 11.2 OWNER'S LIABILITY INSURANCE [INTENTIONALLY OMITTED]

§ 11.3 PROPERTY INSURANCE

§ 11.3.1 If the Owner requests in writing that insurance for risks other than those described in the Contract Documents, i.e. earthquake, flood, pollution or any other difference in conditions coverages, the Contractor shall, if possible, include such insurance, and the cost thereof shall be charged to the Owner by appropriate Change Order.

(Paragraphs deleted)

§ 11.3.2 Before an exposure to loss may occur, the Contractor shall file with the Owner Certificates of Insurance evidencing the insurance coverages required by the Contract Documents. All insurance policies required hereunder shall include the following provision: "It is agreed that this policy is not subject to cancellation, non-renewal, non-payment of premium, material change or reduction in coverage until 30 calendar days prior written notice (as evidenced by return of registered or certified letter) had been given to the Owner." Certificates of Insurance shall contain information identifying the locations and operations for which the insurance applies, the expiration date, and the above-mentioned notice of cancellation or modification clause. The Contractor shall not allow any Subcontractor or Sub-subcontractor to commence work on Subcontracts and/or Sub-subcontracts until the same insurances have been obtained by the Contractor for all Subcontractors and/or Sub-subcontractors and are approved by the Owner. The Contractor shall obtain from each Subcontractor and Sub-subcontractor and file with the Owner, through the Architect, duly executed certificates of all required insurance.

§ 11.3.3 Waivers of Subrogation. The Contractor and its respective insurance companies waive all rights against (1) the Owner and the Owner's agents and employees and (2) the Architect and Architect's consultants for damages caused by fire or other causes of loss to the extent covered by property insurance obtained pursuant to this Section 11.3 or other property insurance applicable to the Work, except such rights as they have to proceeds of such insurance held by the Owner as fiduciary. The Owner or Contractor, as appropriate, shall require of the Architect, Architect's consultants, separate contractors described in Article 6, if any, and the subcontractors, sub-subcontractors, agents and employees of any of them, by appropriate agreements, written where legally required for validity, similar waivers each in favor of the Owner. All policies shall provide such waivers of subrogation by endorsement or an otherwise acceptable form. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged, and the waiver of subrogation shall apply only to the extent of actual payment of insurance proceeds.

§ 11.3.4 NOT USED

§ 11.3.5 NOT USED

(Paragraphs deleted)

§ 11.4 PERFORMANCE BOND AND PAYMENT BOND

§ 11.4.1 In accordance with the Contract Documents, the Contractor shall furnish Payment and Performance bonds covering the faithful performance of the Contract and the payment of all obligations arising thereunder. Both bonds shall be submitted in the form set forth in Section 00601, Division O, of the Project Manual in the amount of one hundred percent (100%) of the Contract amount, shall name the Owner [and the Washington Suburban Sanitary Commission] as Obligees and shall (1) be issued by firms licensed to write bonds in the State of Maryland having at least an A minus rating with A.M. Best; (2) bind the Surety to the Obligees for the performance of all Work in accordance with the Contract Documents; and (3) defend, indemnify and hold harmless the Obligees from claims, demands, liens, or suits by any person or entity whose claim, demands, lien or suit is for the payment of labor materials or equipment furnished for use in the performance of the Work. All bonds shall be executed by a duly appointed attorney in fact and will have a "live" Power of Attorney bearing the seal of the Surety thereon. Unless otherwise set forth in the Contract Documents the Contractor shall pay premiums for required bonds. Obtaining of bonds by the Contractor shall be a condition precedent to commencement of the Work. If additional Work is performed, the amounts of the bonds shall automatically increase to cover the value of the additional work.

§ 11.4.2 In accordance with the Contract Documents, any bonded Subcontractor identified in whose Contract exceeds $100,000 in value shall provide the Contractor Payment and Performance bonds in the amount of one hundred percent (100%) of the Subcontract amount and shall name the Contractor and Owner as Obligees. Payment and Performance bonds submitted by the Subcontractor shall be submitted on AIA Document A312, and shall (1) be issued by companies licensed to write bonds in the State of Maryland having at least an A Minus rating with A.M. Best; (2) bind

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the Surety to the Obligees for the performance of all Work in accordance with the Contract Documents and (3) defend, indemnify and hold harmless the Obligees from claims, demands, liens, or suits by any person or entity whose claim, demands, lien or suit is for the payment of labor materials or equipment furnished for use in the performance of the Work. All Subcontractor bonds shall be executed by a duly appointed attorney in fact and will have a "live" Power of Attorney bearing the seal of the Surety thereon. Unless otherwise set forth in the Contract Documents the Subcontractor shall pay premiums for required bonds. Obtaining of bonds by the Subcontractor shall be a condition precedent to commencement of the Subcontractor Work. If additional Work is performed the amounts of the bonds shall automatically increase to cover the value of the additional Work. The site work Subcontractor shall name the Washington Suburban Sanitary Commission as their interest appears, as an obligee on its bond. The Contractor shall submit copies of all required Subcontractor bonds to the Owner prior to allowing the Subcontractor to commence Work.

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

§ 11.4.4 The Contractor and Sureties acknowledge that the Performance Bond includes such performance as may be required of the Contractor by the Owner and Architect during the various guaranty and warranty periods set forth in the Contract Documents.

§ 11.4.5 The Contractor shall furnish a separate maintenance bond naming the Owner and the Washington Suburban Sanitary Commission as additional insureds which shall be provided to cover a period of one year dating from the time of substantial completion of the off-site sanitary sewer and water system (when applicable) and/or the water service connection. The bond shall be in the amount equal to 50 percent of the value of the off-site water system and/or water service connection work.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 UNCOVERING OF WORK

§ 12.1.1 If a portion of the Work is covered contrary to the Architect's request or to requirements specifically expressed in the Contract Documents, it shall, if requested in writing by the Architect, be uncovered for the Architect's examination and be replaced at the Contractor's expense without change in the Contract Time or the Contract Sum.

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

§ 12.2 CORRECTION OF WORK

§ 12.2.1 BEFORE OR AFTER SUBSTANTIAL COMPLETION

§ 12.2.1.1 The Contractor shall promptly correct Work rejected by the Architect or Owner failing to conform to the requirements of the Contract Documents, whether discovered before or after Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such Work, including additional testing and inspections, the cost of uncovering and replacement and compensation for the Architect's services and expenses made necessary thereby, shall be at the Contractor's expense. The warranty period for the designated Work does not begin until correction has been completed in accordance with the Contract Documents.

§ 12.2.1.2 Defective Work shall include work that may be caused by deterioration or failure to perform due to premature wear (not caused by abuse), inherent defects in materials, workmanship of manufacturer or fabrication, or improper execution of the Work.

§ 12.2.1.3 The cost of correcting such rejected work also includes all contingent damages arising therefrom, including damage to other Work (whether or not installed by the Contractor) and to other property of the Owner.

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§ 12.2.2 AFTER SUBSTANTIAL COMPLETION

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9.1, or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor, at Contractor's expense, shall correct it promptly after receipt of written notice from the Owner to do so unless the Owner has previously given the Contractor an express written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.4. If the Contractor does not proceed with correction of such nonconforming Work within a reasonable time fixed by written notice from the Architect, the Owner may remove it and store the salvable materials or equipment at the Contractor's expense. If the Contractor does not pay costs of such removal and storage within ten days after written notice, the Owner may sell such materials and equipment at auction or at private sale and shall account for the proceeds thereof, after deducting costs and damages that should have been borne by the Contractor, including compensation for the Architect's service and expenses made necessary thereby. If such proceeds of sale do not cover costs which Contractor should have borne, the Contract Sum shall be reduced by the deficiency. If payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the Owner.

§ 12.2.2.2 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work. This obligation shall survive acceptance of the Work under the Contract and termination of the Contract.

(Paragraph deleted)

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

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

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

§ 12.3 ACCEPTANCE OF NONCONFORMING WORK

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

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 GOVERNING LAW

The Contract shall be governed by the law of the place where the Project is located.

§ 13.1.2 Maryland law requires that any person/contractor who enters into a contract with a public or non-public school "may not knowingly employ an individual to work at a school if the individual is a registered sex offender." An employer who violates this requirement may be found guilty of a misdemeanor and if convicted may be subject to up to five years in prison and/or a $5,000.00 fine. Contractors are reminded of their legal obligation in hiring their work force for school projects, including direct employees, sub-consultants, subcontractors, and independent contractors. Pertinent excerpts of the new law can be found in Section 00710.

§ 13.1.3 4 Effective July 1, 2015, Maryland law requires that any contractor/subcontractor "that will have direct, unsupervised, and uncontrolled access to children" in a public school" to obtain a national and State criminal history

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records check in accordance with MD Code, Family Law, Title 5, Subtitle 5, Part VI. A person who violates this requirement may be found guilty of a misdemeanor and if convicted may be subject to up to one year in prison or a $1,000.00 fine. Contractors are reminded of their legal obligation in hiring their work force for school projects, including direct employees, sub-consultants, subcontractors, and independent contractors. Pertinent excerpts of the new law can be found in Section 00710.

§ 13.1.4 Contractors convicted of violating these Maryland laws will be barred from future MCPS contracts.

§ 13.2 SUCCESSORS AND ASSIGNS

§ 13.2.1 The Contractor respectively binds itself, its partners, successors, assigns and legal representatives to the Owner and to successors, assigns and legal representatives of the Owner in respect to covenants, agreements and obligations contained in the Contract Documents. Except as otherwise provided in the Contract Documents, the Contractor shall not assign the Contract as a whole without written consent of the Owner. If the Contractor attempts to make such an assignment without such consent, the Contractor shall nevertheless remain legally responsible for all obligations under the Contract.

(Paragraph deleted)

§ 13.3 WRITTEN NOTICE

Written notice shall be deemed to have been duly served if delivered in person to the individual, to a member of the firm or entity, or to an officer of the corporation for which it was intended; or if delivered at or sent by registered or certified mail or by courier service providing proof of delivery to the last business address known to the party giving notice.

§ 13.4 RIGHTS AND REMEDIES

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

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

§ 13.5 TESTS AND INSPECTIONS

§ 13.5.1 Tests, inspections and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules and regulations or lawful orders of public authorities. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures. The Owner shall bear costs of (1) tests, inspections or approvals that do not become requirements until after bids are received or negotiations concluded, and (2) tests, inspections or approvals where building codes or applicable laws or regulations prohibit the Owner from delegating their cost to the Contractor.

§ 13.5.2 If the Architect, Owner or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection or approval not included under Section 13.5.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection or approval by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Owner and Architect of when and where tests and inspections are to be made so that the Owner and Architect may be present for such procedures. Such costs, except as provided in Section 13.5.3, shall be at the Owner's expense.

§ 13.5.3 If such procedures for testing, inspection or approval under Sections 13.5.1 and 13.5.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure including those of repeated procedures and compensation for the Architect's services and expenses shall be at the Contractor's expense.

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

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

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

(Paragraphs deleted)

§ 13.7 NOT USED

§ 13.8 EQUAL OPPORTUNITY

§ 13.8.1 The Contractor shall maintain policies of employment as follows:

.1 The Contractor and the Contractor's Subcontractors shall not discriminate against any employee or applicant for employment because of race, religion, color, sex, ancestry, national origin, age, marital status, or physical or mental handicap unrelated in nature and extent as to reasonably preclude the performance of the employment. The Contractor shall take affirmative action to insure that applicants are employed, and that employees are treated during employment without regard to their race, religion, color, sex, ancestry or national origin, age, marital status, or physical or mental handicap unrelated to job performance. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and for employment, notices setting forth the policies of non-discrimination.

.2 The Contractor and the Contractor's Subcontractors shall, in all solicitations or advertisements for employees placed by them or on their behalf, state that "All qualified applicants will receive consideration for employment without regard to race, religion, color, sex, ancestry or national origin, age, marital status, or physical or mental handicap unrelated in nature and extent so as to reasonably preclude the performance of the employment."

§ 13.9 BUY AMERICAN STEEL

§ 13.9.1 The Contractor shall comply with provisions of the State Finance and Procurement Article of the Maryland Annotated Code, Sections 17-301 through 17-306, inclusive, known as the "Maryland Buy American Steel" Act of the General Assembly of Maryland.

§ 13.9.2 Wherever in the Contract, "steel products," as hereinafter defined, are part of the supplies, services, or construction required by the Owner, for the construction, reconstruction, alteration, repair, improvement, or maintenance of public works, the Contract Sum shall be based solely upon "steel products" manufactured in the United States of America or one of its territories, continental or insular, subject to the jurisdiction of the United States in sufficient quantities to meet the requirement of this Contract.

§ 13.9.3 The "Buy American Steel" Act of Maryland defines "steel products" as any product "rolled, formed, shaped, drawn, extruded, forged, cast, fabricated, or otherwise similarly processed, or processed by a combination of two or more of such operations from steel made in the United States by the open hearth, basic oxygen, electric furnace, Bessemer, or other steel making process."

§ 13.10 LIMITATION OF LIABILITY

The Owner shall be liable only to the extent of the Owner's interest in the Project. No officer, director, employee, or agent of the Owner shall ever be personally or individually liable with respect to the Contract or the Work. Each Subcontract shall include the foregoing limitation, which shall be effective if the Owner should succeed to the Contractor's rights and obligations under a Subcontract.

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ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 TERMINATION BY THE CONTRACTOR

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

.1 issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;

.2 an act of government, such as a declaration of national emergency that requires all Work to be stopped;

.3 all conditions precedent for payment under the Contract Documents have been met by Contractor and the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Sections 9.4.1 and the Owner has not made payment within the time stated in the Contract Documents.

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

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' written notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work properly executed and for proven loss with respect to materials, equipment, tools, and construction equipment and machinery.

§ 14.1.4 If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor or a Subcontractor or their agents or employees or any other persons performing portions of the Work under contract with the Contractor because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' written notice to the Owner and the Architect, terminate the Contract and recover from the Owner as provided in Section 14.1.3.

§ 14.2 TERMINATION BY THE OWNER FOR CAUSE

§ 14.2.1 The Owner may terminate the Contract if the Contractor:

.1 repeatedly refuses or fails to supply enough properly skilled workers or proper materials;

.2 fails to make payment to Subcontractors for materials or labor in accordance with the respective agreements between the Contractor and the Subcontractors;

.3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations or lawful orders of a public authority; or

.4 otherwise is guilty of substantial breach of a provision of the Contract Documents; or

.5 fails to maintain progress in accordance with the Contractor's Construction Schedule as defined in Section 3.10.

§ 14.2.2 When any of the above reasons exist, the Owner, upon certification by the Initial Decision Maker that sufficient cause exists to justify such action, may without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' written notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

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.1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;

.2 Accept assignment of subcontracts pursuant to Section 5.4; and

.3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

Notwithstanding the preceding sentences in this section, in the event Owner determines in its reasonable discretion that (i) Contractor has failed to maintain progress in accordance with the Contractor's Construction Schedule as set forth in Section 14.2.1.5 above and (ii) terminating the Contract is necessary or advisable achieve timely Substantial Completion, Owner may terminate the Contract without need of certification from the Initial Decision Maker. Additionally, if the total Contract Time set forth in the Agreement (as may be adjusted only by fully executed Change Order) is 180 days or less, the seven day written notice period set forth above in this Section 14.2.2 shall be reduced to three days.

§ 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished. The Surety shall not, without the written consent of the Owner, retain the Contractor for the completion of the Work and the Contractor shall not, without written consent of the Owner, perform any of the Work.

§ 14.2.4 The Contractor and Surety shall be responsible for all costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner. If such costs and damages exceed any unpaid Contract balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Architect, upon application, and this obligation for payment shall survive termination of the Contract.

§ 14.3 SUSPENSION BY THE OWNER FOR CONVENIENCE

§ 14.3.1 The Owner may, without cause and for no reason or any reason (including lack of appropriated funds sufficient to cover the balance of payment for Work not yet performed), order the Contractor in writing to suspend, delay or interrupt the Work in whole or in part for such period of time as the Owner may determine.

§ 14.3.2 The Contract Sum and Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay or interruption as described in Section 14.3.1. Adjustment of the Contract Sum shall not include profit. No adjustment shall be made to the extent:

.1 that performance is, was or would have been so suspended, delayed or interrupted by another cause for which the Contractor is responsible; or

.2 that an equitable adjustment is made or denied under another provision of the Contract.

§ 14.4 TERMINATION BY THE OWNER FOR CONVENIENCE

§ 14.4.1 The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause. Termination by the Owner under this Paragraph shall be by a notice of termination delivered to the Contractor specifying the extent of termination and the effective date.

§ 14.4.2 Upon receipt of written notice from the Owner of such termination for the Owner's convenience, the Contractor shall immediately, in accordance with instructions from the Owner, proceed with performance of the following duties regardless of delay in determining or adjusting amounts due under this Paragraph:

.1 cease operations as directed by the Owner in the notice;

.2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and

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.3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

§ 14.4.3 In case of such termination for the Owner's convenience, the Contractor shall recover as its sole remedy payment for Work properly performed in connection with the terminated portion of the Work prior to the effective date of termination and for items properly and timely fabricated off the Project site, delivered, and stored in accordance with the Owner's instructions. The Contractor hereby waives and forfeits all other claims for payment and damages, including, without limitation, anticipated profits.

§ 14.4.4 The Owner shall be credited for (1) payments previously made to the Contractor (2) claims which the Owner has against the Contractor under the Contract, and (3) the value of materials, supplies, equipment, or other items that are to be disposed of by the Contractor that are part of the Contract Sum. The Owner may, at its option, also require that the Contractor assign the balance of the Contract to another contractor of the Owner's choosing. If the Contractor fails or refuses to execute any documents necessary to effectuate such assignment, the Owner may execute such documents on behalf of the Contractor.

§ 14.4.5 Upon determination by a court of competent jurisdiction that termination of the Contractor pursuant to Paragraph 14.2 was wrongful or otherwise improper, such termination shall be deemed to be a termination for convenience pursuant to Section 14.4 and the provisions of Section 14.4.3 shall apply.

ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 CLAIMS

§ 15.1.1 DEFINITION

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, adjust or interpretation of Contract terms, payment of money, extension of time or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. All contractor Claims will be supported by clear and convincing evidence. Claims must be initiated by written notice. The responsibility to substantiate Claims shall rest with the party making the Claim. Strict compliance by the Contractor with all provisions set forth in Section 15.1 is a condition precedent of Contractor's right to have a claim.

§ 15.1.2 TIME LIMITS ON CLAIMS

Claims by the Contractor must be initiated within 21 days after occurrence of the event giving rise to such Claim or such Claim shall be finally and completely waived for all purposes, and the Contractor shall thereafter be barred from pursuing litigation. Claims by the Contractor must be initiated by written notice to the Architect and the Owner.

§ 15.1.3 CONTINUING CONTRACT PERFORMANCE

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

§ 15.1.4 CLAIMS FOR CONCEALED OR UNKNOWN CONDITIONS

The Contractor shall make no claims for any concealed or subsurface conditions, nor shall it be entitled to any increase in the Contract Sum for any such conditions, with the sole and exclusive exception of conditions which (i) with respect to subsurface conditions, are of a highly unusual nature and type for the geographic area where the Project is located; (ii) with respect to concealed conditions within existing structures, are of a highly unusual nature and type for the constructed improvement concealing same; (iii) could not have been reasonably inferred from the Contract Documents; and (iv) Contractor neither knew of nor had reason to know of the conditions prior to the date the Contract was made. With respect to any conditions which fall within this exclusive and limited exception, written notice by the Contractor shall be given to the Owner promptly before conditions are disturbed and in no event later than 48 hours after the conditions were first observed. The Architect will promptly investigate such conditions and, if they differ materially as described above and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend an equitable adjustment in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not so materially different and that no change in the terms of the Contract is justified, the Architect shall so notify the Owner and Contractor in writing, stating the reasons, and such determination of no change shall be binding upon Owner and Contractor. Claims by Contractor in

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opposition to any recommendation of an adjustment of the Contract Sum or Contract Time must be made within 21 days after the Architect has given its recommendation, and shall be subject to further proceedings pursuant to Paragraph 15.2. Strict compliance by the Contractor with the procedures set forth in this subsection 15.1.4 is condition precedent of Contractor's right to make a claim for concealed or unknown conditions.

§ 15.1.5 CLAIMS FOR ADDITIONAL COST

If the Contractor wishes to make a Claim for an increase in the Contract Sum, written notice as provided herein shall be given before proceeding to execute the Work or such claim shall be finally and completely waived for all purposes and the Contractor shall thereafter be barred from pursuing litigation. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

§ 15.1.5.1 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed in a proposed Change Order or Construction Change Directive so that application of such unit prices to quantities of Work proposed will cause substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

§ 15.1.5.2 If the Contractor believes additional cost is due to (1) a written interpretation from the Architect, (2) an order by the Owner to stop the Work where the Contractor was not at fault, (3) a written order for a minor change in the Work issued by the Architect, (4) failure of payment by the Owner, (5) termination of the Contract by the Owner, (6) Owner's suspension or (7) other reasonable grounds, Claim shall be filed in accordance with this Section 15.1.

§ 15.1.6 CLAIMS FOR ADDITIONAL TIME

§ 15.1.6.1 If the Contractor wishes to make Claim for an increase in the Contract Time, written notice as provided herein shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work.

§ 15.1.6.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated and had an adverse effect on the critical path. Any claims for extension of Contract Time based on delays caused by abnormal weather shall be substantiated by the following:

.1 Record of "normal weather conditions" established from historical weather data determined from climatological data sheets obtained from (U.S. Department of Commerce) National Weather Service Station for locality closest to project site for a five-year period preceding the date of the Contract. The Contractor shall provide the Monthly NOAA data sheets, which indicate daily weather data. The annual summary data sheets, which do not include daily weather data, are not acceptable.

.2 Weather data from National Weather Service for the time period cited in the claim for extension.

.3 Copy of Superintendent's daily report for the time period cited in the claim for extension.

.4 Copy of the Contractor's Construction Schedule indicating critical major sequence of Work.

.5 The Contractor agrees that it shall not be entitled to a time extension for normal inclement weather which can be expected at the Project locale due to precipitation or temperature, based upon actual data from the U. S. Department of Commerce, National Weather Service/National Oceanic and Atmospheric Administration (NOAA) for the locality closest to the Project site for a five-year period preceding the date of the Contract. The Contractor acknowledges and warrants that in making its proposal or bid and Construction Schedule for the Work, it gave due care and consideration to this expected number of calendar days of inclement weather for the locale of the Project and allowed for the impact of inclement weather on subsequent work. During the time of performance, should the expected number of calendar days of inclement weather for the locale of the Project be less than originally anticipated by the Contractor, those days not so affected by inclement weather shall be considered float-time in the Construction Schedule.

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.6 The Contractor agrees that the measure of abnormal inclement weather due to precipitation or temperature during the period covered by this Contract shall be the number of days in excess of those shown in the weather data referenced in Section 15.1.6.2 hereof, in which precipitation exceeds .10 inches (or in the case of snow of ice pellets, 1 inch or more), or in which the highest temperature was 32 degrees Fahrenheit or below or the lowest temperature was 95 degrees Fahrenheit or above.

.7 Extensions of time will be made only for days in which abnormal inclement weather criteria cited in 15.1.6.2.6 occur.

.8 If the total calendar days lost due to inclement weather, from the start of the Work at the Project site by the Contractor until the principal portions of the Work are enclosed, exceeds the total number of days to be expected to be lost for the same time period, a time extension, if granted, shall only be the number of calendar days needed to equal the excess number of calendar days lost to such abnormal inclement weather. Time extensions from weather delays do not entitle the Contractor to "extended overhead" recovery.

.9 Submit claims for additional time related to inclement weather of the Specifications in order to maintain schedule. The Architect will determine (and only after receipt from the Contractor, in writing, that a claim will be made for the day (s) in question) whether or not inclement weather caused loss of a workday. Said determination shall prevail should a dispute arise due to differing conditions between the Project site weather and the NWS/NOAA weather service station identified in Section 15.1.6.1.

.10 Notwithstanding any other provision of the Contract, the Contractor agrees that its right to receive an extension of time shall be the Contractor's sole and exclusive remedy with regard to any delays or interference with the Contractor's schedule for completion of the Work, and the Contractor hereby waives any and all claims, for the monetary damages arising out of or related to any such delay or interference, including, but not limited to, claims for delay damages, interference damages, impact damages, acceleration damages, and any other form of time-related damages.

§ 15.1.6.3 In the case of a Claim alleging delay, the Contractor shall state the precise number of days of delay claimed, the impact of the delay on any aspect of the Work and shall support the Claim by a competently prepared schedule based analysis. If the Architect finds that the Contractor has been delayed at any time in the progress of the Work by an act or neglect of the Owner or Architect, or of an employee of either, or of a Separate Contractor employed by the Owner, or by changes ordered in the Work, or by labor disputes, fire, unusual delay in deliveries, unavoidable casualties or other causes beyond the Contractor's control, or by delay authorized by the Owner pending litigation, or by other causes which the Architect determines may justify delay, then the Architect shall state, in the alternative, for the Owner's consideration, the appropriate increase to the Contract Time and/or the Contract Sum based on the Contractor's claim to cover only premium labor rates for overtime and fringe benefits required to overcome the effect of such delay. The Contractor shall have no right to claim and the Architect shall have no authority to award damages for additional general conditions, overhead, extended overhead, or home office overhead costs. All claims made by the Contractor, or by any Subcontractor of any tier through the Contractor, shall be accompanied by a certification by an officer of the Contractor having overall responsibility for the Contractor's affairs stating (1) the claim is made in good faith, (2) after diligent analyses by the Contractor the supporting data are accurate and complete to the best of the Contractor's knowledge and belief; and (3) the amount requested accurately reflects the contract adjustment for which the Contractor believes the Owner is liable. For Subcontractor claims the Contractor may not rely on Subcontractor certifications but must conduct an independent evaluation sufficient to certify the claim as stated above. False or inaccurate certification of a claim will entitle the Owner to recover its costs of defending such claim including but not limited to attorney, accountant and expert fees and associated costs.

§ 15.1.7 CLAIMS FOR CONSEQUENTIAL DAMAGES

The Contractor waives all Claims for consequential damages arising out of or relating to this Contract including:

.1 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit

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

§ 15.2 RESOLUTION OF CLAIMS AND DISPUTES

§ 15.2.1 DECISION OF ARCHITECT Claims, including those alleging an error or omission by the Architect but excluding those arising under Sections 10.3 or 10.4 or out of workmanship errors or other construction defects discovered after Substantial Completion , shall be referred initially to the Architect for decision. An initial decision by the Architect shall be required as a condition precedent to litigation of all Claims between the Contractor and Owner unless 30 days have passed after the Claim has been referred to the Architect with no decision having been rendered by the Architect. The Architect will not decide disputes between the Contractor and persons or entities other than the Owner.

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

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

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

§ 15.2.5 The Architect will approve or reject Claims by written decision, which shall state the reasons therefor and which shall notify the parties of any change in the Contract Sum or Contract Time or both. The approval or rejection of a Claim by the Architect shall be final and binding on the parties but subject to litigation.

(Paragraphs deleted)

§ 15.2.6 When a written decision of the Architect states that (1) the decision is final but subject to litigation and (2) that litigation over the subject matter of the Claim covered by such decision must be filed within six months after the date on which the party filing suit receives the final written decision, then failure to file suit within said six-month period shall result in the Architect's decision becoming final and binding upon the Owner and Contractor, and any right to file suit thereafter shall be waived. If the Architect renders a decision after litigation has been initiated, such decision may be entered as evidence, but shall not supersede litigation unless the decision is acceptable to all parties concerned.

§ 15.2.7 Upon receipt of a Claim against the Contractor or at any time thereafter, the Architect or the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Architect or Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

(Paragraphs deleted)

§ 15.4 LITIGATION

§ 15.4.1 Any claim arising out of or related to the Contract, except Claims relating to aesthetic effect and except those waived as provided for in Sections 15.1.2, 15.1.4, 15.1.5, 15.1.6, 15.1.7, 9.10.3 and 9.10.4 shall, after decision by the Architect or 30 days after submission of the Claim to the Architect without a decision having been rendered, be subject to litigation in Circuit Court in Montgomery County, Maryland, and the Contractor waives jurisdiction or venue in any other court or tribunal.

(Paragraphs deleted)

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§ 15.4.2 Suit shall be filed within the time limits and in the venue specified in Sections 15.2.6 and 15.4.1 as applicable, or the Architect's decision shall become final and estopped from pursuing litigation.

§ 15.4.3 LIMITATION ON CONSOLIDATION OR JOINDER

No litigation arising out of or relating to the Contract shall include, by consolidation or joinder or in any other manner, the Architect, the Architect's employees or consultants, except by written consent containing specific reference to the Agreement and signed by the Architect, Owner, Contractor and ay other person or entity sought to be joined. No litigation shall include, by consolidation or joinder or in any other manner, parties other than the Owner, Contractor, a separate contractor as described in Article 6 and other persons substantially involved in a common question of fact or law whose presence is required if complete relief is to be accorded in litigation. No person or entity other than the Owner, Contractor or a separate contractor as described in Article 6 shall be included as an original third party or additional third party to litigation whose interest or responsibility is insubstantial. Consent to litigation involving an additional person or entity shall not constitute consent to litigation of a claim not described therein or with a person or entity not named or described therein. The foregoing agreement to litigate and other agreements to litigate with an additional person or entity duly consented to by parties to the Agreement shall be specifically enforceable under applicable law in the Circuit Court of Montgomery County.

§ 15.4.3.1 CLAIMS AND TIMELY ASSERTION OF CLAIMS

The party filing litigation may assert in the case only the Claim which was filed with and decided by the Architect, and the Court shall have no jurisdiction to consider any amendment, modification or supplementation to that Claim.

(Paragraph deleted)

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Contractors' Obligation Regarding Criminal Records of Individuals Assigned to Work in MCPS Facilities

Beginning July 1, 2015, all MCPS contracts must include the following provisions:

I. Prohibition against assigning registered sex offenders and individuals convicted of sexual offenses, child sexual abuse, and other crimes of violence to MCPS contracts:

Maryland Law requires that any person who enters into a contract with a county board of education "may not knowingly employ an individual to work at a school" if the individual is a registered sex offender. Under § 11-722 of the Criminal Procedure Article of the Maryland Code, an employer who violates this requirement is guilty of a misdemeanor and, if convicted, may be subject to up to five years imprisonment and/or a $5000 fine.

Effective July 1, 2015, amendments to § 6-113 of the Education Article of the Maryland Code further require that a contractor or subcontractor for a local school system may not knowingly assign an employee to work on school premises with direct, unsupervised, and uncontrolled access to children, if the employee has been convicted of, or pled guilty or nolo contendere to, a crime involving:

a) A sexual offense in the third or fourth degree under § 3–307 or § 3–308 of the Criminal Law Article of the Maryland Code or an offense under the laws of another state that would constitute an offense under § 3–307 or § 3–308 of the Criminal Law Article if committed in Maryland;

b) Child sexual abuse under § 3-602 of the Criminal Law Article, or an offense under the laws of another state that would constitute child sexual abuse under § 3-602 of the Criminal Law Article if committed in Maryland; or

c) A crime of violence as defined in § 14–101 of the Criminal Law Article, or an offense under the laws of another state that would be a violation of § 14–101 of the Criminal Law Article if committed in Maryland, including: (1) abduction; (2) arson in the first degree; (3) kidnapping; (4) manslaughter, except involuntary manslaughter; (5) mayhem; (6) maiming; (7) murder; (8) rape; (9) robbery; (10) carjacking; (11) armed carjacking; (12) sexual offense in the first degree; (13) sexual offense in the second degree; (14) use of a handgun in the commission of a felony or other crime of violence; (15) child abuse in the first degree; (16) sexual abuse of a minor; (17) an attempt to commit any of the crimes described in items (1) through (16) of this list; (18) continuing course of conduct with a child under § 3-315 of the Criminal Law Article; (19) assault in the first degree; (20) assault with intent to murder; (21) assault with intent to rape; (22) assault with intent to rob; (23) assault with intent to commit a sexual offense in the first degree; and (24) assault with intent to commit a sexual offense in the second degree.

Each contractor is required to submit, following award of a contract, documentation confirming that its direct employees and those of any subcontractors and/or independent contractors assigned to perform work in a MCPS school facility under the contract meet this obligation. Additionally, the contractor must confirm that it continues to meet this obligation on an annual basis and/or when there are changes in the work-force that the contractor and/or its subcontractors use to perform the work required by the contract.

Violation of this provision is a material breach of contract for which MCPS may take appropriate action up to and including termination of the contract and exclusion from consideration for future MCPS contracts.

II. Required criminal background check process for certain individuals in the contractor's workforce:

Under recent amendments to § 5-551 of the Family Law Article of the Maryland Code, each contractor and subcontractor shall require that any individuals in its work-force must undergo a criminal background check, including fingerprinting, if the individuals will work in a MCPS school facility in circumstances where they have direct, unsupervised, and uncontrolled access to children. The term "work-force" in this and the preceding section refers to all of the contractor's direct employees, subcontractors and their employees, and/or independent contractors and their employees that the contractor uses to perform the work required by the contract.

Fingerprinting for the criminal background check may be performed by the MCPS Office of Human Resources and Development, 45 W. Gude Drive, Rockville, MD 20850, or through another service approved by MCPS. Individuals fingerprinted by MCPS will be required to provide written consent, and MCPS will maintain copies of all records for criminal background checks performed by MCPS. If the contractor uses another service approved by MCPS, the results of the criminal background check must be provided to MCPS for record keeping. A list of MCPS approved fingerprinting agencies can be found on the Procurement Unit website at http://www.montgomeryschoolsmd.org/departments/procurement.

The contractor must take appropriate steps to promptly follow up on information identified in the criminal background check related to the sexual offenses, child sexual abuse offenses, and crimes of violence enumerated above, as well as any information regarding offenses involving distribution of drugs or other controlled substances, or any other criminal information identified by MCPS as warranting further explanation insofar as it may significantly affect the safety and security of MCPS students. If, after following up, the contractor believes that the individual is qualified and should be assigned to work (or continue to work) in a MCPS school facility, then the contractor will provide a written summary to MCPS justifying its recommendation. MCPS will rely on the contractor's summary to determine whether to accept the contractor's

recommendation, and the contractor will be responsible for any consequences of a material misrepresentation in its written summary.

Once the contract is awarded, the contractor is responsible for implementing the background check process. An individual in the contractor's work-force may not begin work in a MCPS school facility on an assignment where the individual will have direct, unsupervised, and uncontrolled access to children, until: (a) the background check results for that individual have been received by MCPS; (b) the contractor certifies to MCPS that the individual has received training and/or reviewed informational materials, as appropriate, regarding recognizing, reporting, and preventing child abuse and neglect, consistent with the content provided in training for MCPS employees; and (c) the individual obtains a MCPS identification badge. The badge will be issued by the MCPS Department of Safety and Security, 850 Hungerford Drive, Room 131, Rockville, MD 20850. Appointments are made by calling 301-279-3066. The contractor will be required to return all badges at the conclusion of the contract.

The criminal background check and badging process will be at the contractor's expense.

Violation of this provision is a material breach of contract for which MCPS may take appropriate action up to and including termination of the contract and exclusion from consideration for future MCPS contracts.

MINORITY BUSINESS ENTERPRISE PROCEDURES FOR STATE FUNDED PUBLIC SCHOOL CONSTRUCTION PROJECTS

Revised JULY 2020

Approved by the Montgomery County Board of Education on September 22, 2008.

DATE OF ORIGINAL APPROVAL: September 22, 2008

REVISED: October 14, 2008

REVISED: July 30, 2020

These procedures were approved by the Interagency Committee on School Construction on June 26, 2008 and, amended on September 18, 2008, shall be utilized by each public school system in Maryland as a condition for the receipt of State funds through the Public School Construction Program.

The effective date for implementation for projects in Montgomery County is October 14, 2008.

MINORITY BUSINESS ENTERPRISE PROCEDURES FOR STATE FUNDED PUBLIC SCHOOL CONSTRUCTION PROJECTS

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MINORITY BUSINESS ENTERPRISE PROCEDURES FOR STATE FUNDED PUBLIC SCHOOL CONSTRUCTION PROJECTS

BACKGROUND

In 1978, the Maryland General Assembly passed legislation, which was signed into law to establish the State's Minority Business Enterprise Program. This new law set as a goal that at least 10 percent of each unit of State government's total dollar value of procurement contracts for purchases and/or contracts be awarded to minority business enterprises. This law was subsequently modified and the goal was increased to 14 percent. In 2001 the General Assembly significantly changed the program, setting the overall goal to 25 percent with subcontracting sub-goals of 7 percent for certified African American-owned businesses and 10 percent for certified women-owned businesses. In 2012, the General Assembly passed legislation authorizing the Governor's Office of Minority Affairs (GOMA), in consultation with the Maryland Department of Transportation (MDOT) and the Office of the Attorney General, to set the overall aspirational MBE goal every two years. GOMA proposed the increase to 29% after considering several factors prescribed by law, including the relative availability of minority- and women-owned businesses as demonstrated by the State's most recent Disparity Study, as well as the past participation of MBEs in state procurement. The 29% goal will be in place for fiscal years 2021 and 2022 on State-funded contracts.

In 1979, the Rules, Regulations, and Procedures for the Administration of the School Construction Program were revised by the Board of Public Works to require each local board of education to adopt procedures to attempt to include minority business enterprises in State funded school construction projects. The State law was revised and now states: "The Interagency Committee on School Construction (IAC) shall require each local board of education to adopt procedures consistent with this chapter before obtaining funds for public school construction projects".

In May 2007, the Rules, Regulations, and Procedures were replaced by regulations. The regulations concerning project procurement (COMAR 23.03.03) indicate that the State's minority business enterprise goals and procedures apply to all State funded projects, irrespective of procurement method.

In July 2011, a Sub-Goal Directive was issued by the Governor's Office of Minority Affairs (GOMA). This Directive established the process for setting contract-by-contract sub-goals. Sub-goals consistent with demonstrated underrepresentation were pre-established within the Directive.

The 2012 MBE Program statute directs the Board of Public Works (BPW) to issue regulations that:

- Requiring bidders or offerors to complete a bid document that specifies the overall percentage of the contract they agree to achieve through MBEs clarifies that the documents the bidder or offeror submits for its MBE participation commitments must be made part of the executed contract with the State; and
- Requires that every contract that includes MBE participation goals contain a liquidated damages provision in the event that the prime contractor does not comply in good faith with its MBE participation commitments.

OVERVIEW

This Minority Business Enterprise (MBE) procedure document was originally developed in response to a requirement set forth in the Rules, Regulations, and Procedures for the Administration of the School Construction Program. The MBE requirement was initially established under HB 64, which was passed in the 1978 session of the Maryland General Assembly and signed into law as Chapter 575 of the Acts of 1978.

Since the Board adopted its original Minority Business Enterprise Procedures, there have been changes in State statutes, regulations adopted by the Board of Public Works, procedural requirements, project eligibility requirements and the sub-goals to be set for school construction projects. This revised procedure is consistent with current legislation and the changes to the Code of Maryland Regulations (COMAR) requirements, effective November 7, 2005, May 21, 2007, and November 14, 2011.

The revised procedures issued by GOMA in July 2011 provide guidance for establishing overall goals that are contract-specific and reasonable, and for setting subgoals only on contracts that actually have subcontracting opportunities. The procedures for setting overall MBE goals have not changed, however once the overall goal is decided by the Procurement Review Group (PRG), the subgoal analysis must be completed for contracts that have a total potential MBE participation over a minimum threshold amount, as defined for specific Major Industry Categories.

All activities funded through the Public School Construction Program fall within Construction in the Major Industry Categories. In place of the original goals of 7 percent for African American-owned businesses and 10 percent for certified women-owned businesses, the subgoals for construction are now 8 percent for African American-owned businesses and 11 percent for women-owned businesses. Subgoals are not to be set for other minority groups, which may however be represented in the overall contract goal.

1.0 PURPOSE

The purpose of the Procedures is to fulfill the intent of the law and the guidelines issued by GOMA by setting appropriate goals for minority business enterprise participation in every contract that includes State funding through the Public School Construction Program (PSCP). Local Educational Agencies (LEAs) shall attempt to achieve the result that a minimum of 29 percent of the total dollar value of all construction contracts is made directly or indirectly with certified minority business enterprises when State PSCP funds are utilized, with a minimum of 8 percent from certified African American-owned businesses, a minimum of 11 percent from certified women-owned businesses, and the balance from any certified minority business enterprises. All general contractors, including certified MBE firms, when bidding as general or prime contractors are required to attempt to achieve the MBE subcontracting goals from certified MBE firms.

2.0 EFFECTIVE DATE

These procedures have been adopted for use in Montgomery County and supersede previously utilized MBE procedures, and will take effect on or after September 22, 2008, in accordance with Title 14, §3, State Finance and Procurement Article, effective July 1, 2011.

3.0 DEFINITIONS

1. **Certification** means the determination that a legal entity is a minority business enterprise consistent with the intent of Subtitle 3 of the State Finance and Procurement Article.
2. **Certified Minority Business Enterprise** means a minority business that holds a certification issued by the Maryland State Department of Transportation (MDOT).
3. **Corporation**, as defined by MDOT, is an artificial person or legal entity created by or under the authority of the laws of any state of the United States, the District of Columbia or a territory or commonwealth of the United States and formed for the purpose of transacting business in the widest sense of that term, including not only trade and commerce, but also manufacturing, mining, banking, insurance, transportation and other forms of commercial or industry activity where the purpose of the organization is profit. For eligibility for certification, disadvantaged and/or minority individuals must own at least 51 percent of the voting stock and at least 51 percent of the aggregate of all classes of stock that have been issued by the corporation. (Note: stock held in trust is not considered as stock held by the disadvantaged businesspersons when computing the business person(s) ownership.)
4. **Managerial Control**, as defined by MDOT, means that a disadvantaged or minority owner(s) has the demonstrable ability to make independent and unilateral business decisions needed to guide the future and destiny of a business. Control may be demonstrated in many ways. For a minority owner to demonstrate control, the following examples are put forth, but are not intended to be all inclusive:
   a. Articles of Incorporation, Corporate Bylaws, Partnership Agreements and other agreements shall be free of restrictive language which would dilute the minority owner's control thereby preventing the minority owner from making those decisions which affect the destiny of a business;
   b. The minority owner shall be able to show clearly through production of documents the areas of the disadvantaged business owner's control, such as, but not limited to:
      1) Authority to sign payroll checks and letters of credit;
      2) Authority to negotiate and sign for insurance and/or bonds;
      3) Authority to negotiate for banking services, such as establishing lines of credit; and
      4) Authority to negotiate and sign for contracts.
   c. Agreements for support services that do not lessen the minority owner's control of the company are permitted as long as the disadvantaged or minority business owner's authority to manage the company is not restricted or impaired.
5. **Minority Business Enterprise (MBE)** means any legal entity, except a joint venture, that is (a) organized to engage in commercial transactions, and (b) at least 51 percent owned and controlled by one or more individuals who are socially and economically disadvantaged including: African Americans; American Indian/Native Americans; Asians; Hispanics; Physically or mentally disabled individuals; Women; or A non-profit entity organized to promote the interests of physically or mentally disabled individuals.
6. **Minority Business Enterprise Liaison** means the employee of the school system designated to administer the Minority Business Enterprise Procedures for State funded public school construction projects.
7. **Operational Control**, as defined by MDOT, means that the disadvantaged or minority owner(s) must possess knowledge necessary to evaluate technical aspects of the business entity. The primary consideration in determining operational control and the extent to which the disadvantaged or minority owner(s) actually operates a business will rest upon the specialties of the industry of which the business is a part. The minority owner should have a working knowledge of the technical requirements needed to operate in his/her industry. Specifically, in the construction industry and especially among small (one to five person firms) contractors, it is reasonable to expect the disadvantaged or minority owner(s) to be knowledgeable of all aspects of the business. Accordingly, in order to clarify the level of operational involvement which a minority owner must have in a business for it to be considered eligible, the following examples are put forth, but are not intended to be all inclusive:
   a. The minority owner should have experience in the industry for which certification is being sought; and
   b. The minority owner should demonstrate that basic decisions pertaining to the daily operations of the business are independently made. This does not necessarily preclude the disadvantaged or minority owner(s) from seeking paid or unpaid advice and assistance. It does mean that the minority owner currently must possess the knowledge to weigh all advice given and to make an independent determination.
8. **Ownership**, as defined by MDOT, means that:
   a. The minority owner(s) of the firm shall not be subject to any formal or informal restrictions, which limit the customary discretion of the owner(s). There shall be no restrictions through, for example, charter requirements, by-law provisions, partnership agreements, franchise or distributor agreements or any other agreements that prevent the minority owner(s), without the cooperation or vote of any non-minority, from making a business decision of the firm.
   b. This means that the disadvantaged or minority persons, in order to acquire their ownership interests in the firm, have made real and substantial contributions of capital, expertise or other tangible personal assets derived from independently owned holdings without benefit of a transfer of assets, gift or inheritance from non-minority persons. Examples of insufficient contributions include a promise to contribute capital, a note payable to the firm or its owners who are not minority persons or the mere participation as an employee rather than as a manager. If the ownership interest held by a disadvantaged or minority person is subject to formal or informal restrictions, such as options, security interests, agreements, etc., held by a non-minority person or business entity, the options, security interests, agreements, etc., held by the non-minority person or business entity must not significantly impair the disadvantaged or minority person's ownership interest.
9. **Partnership** means an unincorporated association of two or more persons to carry on as co- owners of a business for profit. For a partnership to be deemed eligible for certification under the MDOT Program, the disadvantaged or minority person's interest must be at least 51 percent of the partnership capital.
10. **Socially and Economically Disadvantaged** means a citizen or lawfully admitted permanent resident of the United States who is socially disadvantaged and economically disadvantaged. The law establishes the level of personal net worth at $1,500,000, increased

by the Consumer Price Index (CPI); above this net personal worth figure, an individual may not be found to be socially and economically disadvantaged. The current personal net worth figure can be found on the MDOT website at: http://www.mdot.maryland.gov/Office%20of%20Minority%20Business%20Enterprise/Resources%20Information.

11. **Sole Proprietorship**, as defined by MDOT, is a for-profit business owned and operated by a disadvantaged or minority person in his or her individual capacity. For a sole proprietorship to be deemed eligible for certification under the DBE/MBE Program, the disadvantaged or minority person must be the sole proprietor.
12. **Days** means business days unless otherwise specified. Business days are defined as Monday through and including Friday, with the exception of Nationally or State recognized holidays.

4.0 MBE GOAL SETTING PROCEDURES

1. General
   a. The overall MBE goal and the subgoals, if appropriate, are established on a per-contract basis for the purposes of solicitation.
      1) Where a project consists of more than one contract, the individual contract goals and subgoals, if appropriate, should reflect the overall project goal and subgoals, if appropriate.
      2) The words "if appropriate" and "if applicable" throughout this document reflect the understanding that for some solicitations, no African American or Asian American subgoals should be established.
   b. The MBE program requires that all race-neutral measures be considered before making use of race-based measures. Using a combination of race-neutral and race-based measures for each specific school construction project will help ensure that certified MBE firms are afforded the opportunity to submit bids and be utilized to the greatest extent possible.
      1) *Race-neutral measures* include any action taken by the LEA to make it easier for all contractors, including MBEs, to compete successfully for public school construction project contracts. These might include widespread advertising of bidding opportunities, job fairs, and similar publicity events.
      2) *Race-based measures* include setting an overall MBE goal and MBE subgoals, if appropriate, based upon race, gender, ethnicity, etc., for a specific contract.
2. General Considerations for Setting MBE Goal and Subgoal. The overall MBE goal and the subgoals, if appropriate, should be set for each specific project contract, considering but not limited to, the following factors:
   a. The extent to which the work to be performed can reasonably be segmented to allow for MBEs to participate in the project contract;
   b. A determination of the number of certified MBEs that potentially could perform the identified work;
   c. The geographic location of the project in relationship to the identified certified MBEs;
   d. Information obtained from other State and local departments/agencies related to establishing a MBE goal and/or subgoals for similar construction projects or work in the jurisdiction;
   e. Information obtained from other State and local departments/agencies related to MBE participation in similar construction projects or work in the jurisdiction; and
   f. Any other activities or information that may be identified as useful and productive.
3. MBE Subgoal Setting Procedure
   a. Once an overall MBE participation goal is set for a project contract, each unit shall determine the appropriate contract subgoals.
   b. If the expected value of the procurement is not equal to or in excess of $200,000, the Subgoal process is discretionary.
   c. All State funded public school construction is classified as Construction in the Major Industry Category schedule established by regulation.
      1) Accordingly, subgoals for school construction projects receiving State funding participation apply to the following Subgroups:
         - African American: 8%
         - Women-owned: 11%
      2) Dually certified firms are to be counted as being owned by a member of the relevant ethnic Subgroup, not as a woman-owned business.
   d. Subgoals shall only be set when the overall goal is greater than or equal to the sum of the subgoals listed in subsection 3. of this section, plus two (2), i.e., the overall goal must be at least 21%; otherwise, no subgoals may be established for the contract.
   e. A subgoal may not be set if the number of certified firms in the Subgroup is less than three (3).
   f. If the Subgroup has three (3) or more certified firms available to perform the work, the Recommended Subgoal should be set at the number specified above, unless a basis is provided in the Procurement Review Group documentation for not applying the specified subgoal.
   g. For each procurement that has an overall goal, the MBE Program Subgoal Worksheet (Appendix I) shall be completed and signed by the LEA Procurement Officer and MBE Liaison
4. The Superintendent or designee shall establish one or more procurement review groups (PRG). The PRG must include at a minimum the MBE liaison and the Procurement Officer (PO) or a representative from the procurement office. The PRG could also include a capital improvement project manager, the project architect, the cost estimator, the Construction Manager, and/or other individuals selected by the Superintendent or designee.
   a. The PRG should communicate and/or meet as needed to consider the subcontracting goal and subgoals, if applicable, for individual projects or groups of projects.
   b. The PRG should consider the factors cited in 4 above when establishing the MBE goal and subgoals, if applicable, for each project or segmented piece of a project that are reasonable and attainable.
   c. The PRG must complete and submit a written analysis for each state funded school construction project with an estimated cost that is expected to exceed $200,000.
      1) For state-funded projects that required review of construction documents (CD), the written analysis and the MBE

Program Worksheet (appendix I) shall be submitted with the CD documents to the Department of General Services, and will be reviewed by the DGS for submission, appropriate signatures and correspondence between the goal and subgoals, if applicable, indicated in the analysis and those of the procurement documents.

2) For state-funded projects that do not require review of construction documents, the written analysis and the MBE Program Worksheet shall be submitted to the PSCP, and will be reviewed for submission and appropriate signatures.

3) For locally funded projects that are anticipating to be requested for state approval of planning and funding, the written analysis and the MBE Program Worksheet shall be submitted with CD documents to the MSDE, and will be reviewed for submission, appropriate signatures, and correspondence between the goal and subgoals, if applicable, indicated in the analysis and those of the procurement documents. Submission of the documents is a pre-condition for recommendation for state approval of planning and funding when submitted in an annual CIP.

d. For projects estimated to cost between $50,000 and $200,000 the same analysis form is to be completed and submitted. This could be a responsibility of the PRG, but could be performed by others as well.

1) For state-funded projects that require review of construction documents (CD), the written analysis and the MBE Program Worksheet shall be submitted with the CD documents to the DGS, and will be reviewed for submission, appropriate signatures, and correspondence between the goal and subgoals, if applicable, indicated in the analysis and those of the procurement documents.

2) For state-funded projects that do not require review of construction documents, the written analysis and the MBE Program Worksheet shall be submitted to the PSCP and will be reviewed for submission and appropriate signatures.

e. If the project cost is estimated to exceed $200,000 then a copy of the written analysis shall also be sent to GOMA at the same time that the written analysis is submitted to the DGS or the PSCP.

f. The PRG should consult with local counsel for the Board of Education as needed.

5. It is recognized that by utilizing the factors cited in 4 above, the MBE goal and/or subgoals, if applicable, for a specific project or portion thereof may be significantly higher than the overall goals of the program (29% overall, with 8% from African American-owned businesses and 11% from women-owned businesses). It is also recognized and possible that there will be MBE goals set that are lower than those stated above or even that no MBE goal and/or subgoals will be set for a specific project or the segmented piece of the project.

6. Assistance in reviewing the factors cited above and setting a goal and/or subgoals, if applicable, for specific projects or a segmented piece of a project can be obtained by contacting the PSCP and/or GOMA.

5.0 IMPLEMENTING PROCEDURES - $50,000 OR LESS

For construction projects estimated to cost $50,000 or less, the following procedures will be utilized

1. A MBE goal and/or MBE subgoals are not required to be set for contracts that are anticipated to be for $50,000 or less.
2. All advertisements, solicitations, and solicitation documents shall include the following statement:
   a. "Certified Minority Business Enterprises are encouraged to respond to this solicitation."
3. To encourage greater MBE participation the staff of the school system should send out notices of potential projects and a specific project to MBEs to solicit bids or proposals directly from minority business enterprise contractors that are certified.
4. A copy of the solicitation notice, preferably electronically, shall be sent to GOMA at the same time the advertisement for the solicitation is released.
5. When a pre-bid or pre-proposal conference or meeting is held, the MBE liaison or designated representative shall explain that all bidders or offerors are encouraged to utilize certified MBEs for this project or segments of the project.
6. Upon request for a specific project, the school system shall provide one set of drawings and specifications (and addenda when issued) to minority business enterprise associations recognized by GOMA. They will be available free of charge to be picked up at a location designated by the LEA. A review of the bid or proposal activity submitted by an association's members may be initiated to justify continuation of this service.
7. Minority Business Enterprise forms identified in Section 6.0 of this procedure for projects over $50,000, are not required to be submitted for these projects ($50,000 or less).
8. The names of prime contractors obtaining drawings and specifications will be shared with certified MBEs and MBE associations, upon request.
9. At the time of the contract award, the MBE Liaison or a designated person will record any anticipated certified minority business enterprise participation data made available from the successful contractor.
10. A business that presents itself as a minority business may participate in a project but may not be counted toward MBE participation until it is a certified minority business enterprise. If the MBE is not certified at the time of contract award, it may not be counted at that time. Only the funds paid after MDOT certification can be counted as MBE participation in the project. If a certified MBE fails to meet the standards specified in State Finance and Procurement Article14-301 (G) and (I), Annotated Code of Maryland, the payments made to the MBE can be recorded and counted under a contract entered into when the MBE was eligible and certified. Ineligibility of an MBE to participate in the MBE program may not be the sole cause of the termination of the MBE contractual relationship for the remainder of the term of the contract.
11. The contractor will complete the Standard Monthly Contractor's Requisition for Payment (IAC/PSCP Form 306.4), specifically page 3 of 16, Minority Business Enterprise Participation, with each requisition submitted for payment. If certified MBE firms are known at the time of contract award their names and other appropriate information should be entered on page 3 of the first and all subsequent requisitions for payment. Any MBEs identified during the life of the project should be added as soon as the contractor engages them after approval by the LEA.
12. Upon completion of the project the contractor will provide a summary of the total of all funds paid to certified MBE firms. This should be within the contractor's final requisition for payment. The summary shall be forwarded to the PSCP with the close-out paperwork.

6.0 IMPLEMENTING PROCEDURES - Over $50,000

For construction projects estimated to cost in excess of $50,000, the following procedures will be utilized:

1. All advertisements, solicitations, and solicitation documents shall include the following statements:
   a. "Certified Minority Business Enterprises are encouraged to respond to this solicitation notice."
   b. "The contractor or supplier who provides materials, supplies, equipment and/or services for this construction project shall attempt to achieve the specific overall MBE goal of __ percent established for this project. All prime contractors, including certified MBE firms, when submitting bids or proposals as general or prime contractors, are required to attempt to achieve this goal from certified MBE firms."
   c. If subgoals have been established for this project then one of the following should be included:
      1) "The subgoals established for this project are __ percent from African American-owned businesses and __ percent from women-owned businesses."
      2) "The subgoal established for this project is __ percent from African American-owned businesses."
      3) "The subgoal established for this project is __ percent from women-owned businesses."
   d. "Notwithstanding any subgoals established above, the Contractor is encouraged to use a diverse group of subcontractors and suppliers from any/all of the various MBE classifications to meet the remainder of the overall MBE participation goal."
   e. "The bidder or offeror is required to submit with its bid or proposal a completed Attachment A – MDOT Certified MBE Utilization and Fair Solicitation Affidavit and Attachment B, MBE Participation Schedule, as described in the solicitation documents.
   f. If there is no overall MBE goal or MBE subgoals established for the project, then only 1.A. above is to be included.
   g. The Bidder/Offeror is advised that liquidated damages will apply in the event the Contractor fails to comply in good faith with the provisions of the MBE program and pertinent Contract provisions.
2. Other Advertisement and Outreach Requirements
   a. To encourage greater MBE participation the staff of the school system should send out notices of potential projects to MBEs or solicit bids or proposals directly from minority business enterprise contractors that are certified.
   b. A copy of the solicitation notice, preferably electronically, shall be sent to GOMA at the same time the advertisement for the solicitation is released.
   c. Upon request for a specific project, the school system shall provide one set of drawings and specifications (and addenda when issued) to minority business enterprise associations recognized by GOMA. They will be available free of charge to be picked up at a location designated by the LEA. A review of the bid or proposal activity by an association's members may be initiated to justify continuation of this service.
   d. When a pre-bid or pre-proposal conference is held, the MBE Liaison or designated representative shall explain the MBE goal and subgoals, if applicable; the MBE provisions of the solicitation; the documentation required at the time of submission; its relationship to the responsiveness of the bidder or offeror; how to complete the required schedules, and additional information and supporting documentation that may be required after the bid or proposal opening. All contractors who attend the pre-bid or pre-proposal conference should receive a list or information explaining how to obtain a listing of certified MBE firms who could perform the work or have expressed an interest in performing the school construction work required for the specific project in the jurisdiction.
   e. The names of prime contractors obtaining drawings and specifications will be shared with certified MBEs and MBE associations, upon request.
   f. The MBE liaison, in conjunction with the procurement officer or project staff, should respond to all applicable questions and concerns relating to the project's MBE requirements completely and in a timely fashion to ensure that all potential contractors and subcontractors can compete effectively.
3. All Solicitation Documents Shall Include the Following:
   a. "Certified Minority Business Enterprises are encouraged to respond to this solicitation notice". "All contractors, including certified MBE firms, when submitting bids or proposals as prime contractors are required to attempt to achieve the MBE goal and subgoals, if applicable, established for the project from certified MBEs".
   b. "The contractor or supplier who provides materials, supplies, equipment and/or services for this construction project shall attempt to achieve the result that a minimum of __ percent of the total contract value is with certified Minority Business Enterprises, with a minimum of __ percent from certified African American-owned businesses, a minimum of __ percent from certified women-owned businesses, and the balance from any certified Minority Business Enterprises. All contractors, including certified MBE firms, when submitting bids or proposals as prime contractors, are required to attempt to achieve the MBE goal and subgoals, if applicable, from certified MBEs". Note: see 6.1.C. above for variations that may be required.
   f. The Bidder/Offeror is advised that liquidated damages will apply in the event the Contractor fails to comply in good faith with the provisions of the MBE program and pertinent Contract provisions.
   c. Each bid or offer submitted, including a submittal from a certified MBE in response to this solicitation, shall be accompanied by a completed Attachment A – MDOT Certified MBE Utilization and Fair Solicitation Affidavit and Attachment B - MBE Participation Schedule,.
      1) Attachment A shall be submitted with the sealed bid price or proposal at a place, date, and time specified in the solicitation document.
      2) As an alternative, and at the discretion of the school system, Attachments B could be submitted within a maximum of 30 minutes after the due time of the bid or proposal documents. Within that time (30 minutes) each bidder or offeror must submit Attachment B, in a separate sealed envelope. The sealed price envelopes from each bidder or offeror who submits both the sealed bid or proposal and the envelope with Attachment B will then be opened and reviewed and recorded as a viable submission. Any contractor that fails to submit the second envelope, with Attachment B, prior to the specified time allowed (30 minutes) after the submittal of the sealed bid or proposal will be deemed non-responsive and the sealed bid or proposal will not be opened or considered.
   d. The submittal of a completed and signed Attachment A – MDOT Certified MBE Utilization and Fair Solicitation Affidavit

indicates the bidder's or offeror's recognition and commitment to attempt to achieve the MBE goal and/or MBE subgoals, if applicable, for the specific project.

1) The bidder or offeror recognizes that their efforts made to initiate contact, to solicit, and to include MBE firms in this project will be reviewed carefully and evaluated based upon the actions taken by them prior to and up to 10 business days before the bid or proposal opening. Follow-up actions taken by the bidder or offeror within the 10 business days prior to the bid opening will also be considered.
2) Based upon this review and evaluation it will be determined, by the MBE liaison, procurement officer, or a designated person, if a good faith effort was made by the apparent low bidder or apparent successful offeror.

e. The bidder or offeror must check one of the two boxes on Attachment A, which relates to the level of MBE participation achieved for the project. The bidder's or offeror's signature indicates that in the event that they did not meet the MBE goal or subgoals, if applicable, that:
1) They are therefore requesting a waiver, and
2) Documentation of their good faith efforts will be provided to the school system staff within 10 business days of being notified that they are the apparent low bidder or apparent successful offeror.

f. The bidder or offeror must submit Attachment B (as and when described above), which lists and provides information related to each certified MBE firm that the bidder or offeror will utilize on this project. A completed and accurate Attachment B is required. All of the work specified to be performed by each MBE firm, MDOT certification number, minority type, and percentages must be correct.

g. Attachment B should be completed and submitted with all calculations utilizing the base bid or offer only. A revised Attachment B should be submitted by the successful bidder or offeror once a determination is made as to the acceptance and/or rejection of any alternates.

h. If a request for a waiver has been made, the appropriate box on Attachment A has been checked and the attachment signed, then the LEA should obtain and review the apparent low bidder's or successful offeror's supporting documentation of the good faith efforts to justify the granting of the waiver, prior to submitting the contract award for approval to the board of education.

i. The following documentation shall be considered as part of the contract, and shall be furnished by the apparent low bidder or successful offeror to the MBE Liaison or designated person, within ten (10) business days from notification that the firm is the apparent low bidder or successful offeror:
1) A completed and signed Attachment B (Revised) – MBE Participation Schedule and Attachment C – Outreach Efforts Compliance Statement and Attachment D - Subcontractor Project Participation Statement . One Attachment D MBE– Subcontractor Project Participation Statement shall be completed and signed by the prime contractor and each MBE firm listed on Attachment B (Revised) – MBE Participation Schedule.
2) Notification for purposes of this procedure means the earliest of the following methods of communication: orally in person, orally by telephone, orally by a telephone message, a faxed communication, a letter by date received or an electronic communication.
3) The ten (10) business days do not include the day the notification is received, weekends or holidays (State or Federal), but the material submitted must be received by the close of business on the tenth day.
4) The requirement to submit the above-listed documentation within the time frame specified will be considered by the IAC in its review of the request for contract award for the project. Failure to submit the required documentation within the time frame specified may result in a delay of the approval of the award of the contract, or the materials being returned without the approval of the award of the contract.

4. Waiver Procedures

a. If the apparent low bidder or successful offeror has determined that they are unable to meet the overall MBE goal or subgoals, if applicable, for the project at the time of submission of a bid or offer, they must check the box on Attachment A indicating the request for a waiver. The signature recognizes and acknowledges that a request for a waiver is being made. The apparent low bidder or successful offeror will therefore be required to submit information and substantiating documentation that will be reviewed to justify the granting of a waiver.

b. If the apparent low bidder or successful offeror is unable to achieve the overall MBE contract goal and/or the MBE subgoals, if applicable, from certified African American-owned businesses and/or from certified women-owned businesses, the apparent low bidder or successful offeror shall submit, within 10 business days from notification that the firm is the apparent low bidder or successful offeror, a completed Attachment C - Outreach Efforts Compliance Statement, Attachment D – Subcontractor Project Participation Statement (if applicable), Attachment E - Minority Subcontractor Unavailability Certificate, and Attachment F - MBE Waiver Documentation which shall include the following:
1) A detailed statement of the efforts made by the bidder or offeror to identify and select portions of the work proposed to be performed by subcontractors in order to increase the likelihood of achieving the stated goal;
2) A detailed statement of the efforts made by the bidder or offeror prior to and up to at least ten (10) business days before the bid or proposal opening to solicit minority business enterprises through written notices that describe the categories of work for which subcontracting is being solicited, the type of work to be performed and specific instructions on how to submit a bid or proposal;
3) Follow-up actions taken by the bidder or offeror within the 10 business days prior to the bid or proposal opening will also be considered.
4) A detailed statement of the bidder's or offeror's efforts to make personal contact with MBE firms identified for item (2) above;
5) A record of the name, address, telephone number and dates contacted for each MBE identified under items (2) and (3) above;
6) A description of the information provided to MBEs regarding the drawings, specifications and the anticipated time schedule for portions of the work to be performed;
7) Information on activities to assist minority business enterprises to fulfill bonding requirements or to obtain a waiver

of these requirements;

8) Information on activities to publicize contracting opportunities to minority business enterprises, attendance at pre-bid or pre-proposal meetings or other meetings scheduled by the MBE Liaison or designated representative; and

9) As to each MBE that placed a subcontract quotation or offer which the apparent low bidder or successful offeror considers not to be acceptable, a detailed statement of reasons for this conclusion.

c. In addition to any waiver documentation the apparent low bidder or successful offeror shall submit one completed Attachment D - Subcontractor Project Participation Statement for each MBE firm that will participate in the project consistent with the information previously provided at the time of the submission of Attachment B (Original) or the revised Attachment B (Revised), if alternates were accepted.

d. A waiver of an MBE contract goal or subgoal, if applicable, may be granted by the school system only upon receipt of Attachment C - Outreach Efforts Compliance Statement, Attachment D - Minority Subcontractors Unavailability Statement, and Attachment F -MBE Waiver Documentation as described above in items 1) through 9)

1) The MBE Liaison will review and accept or reject the minority business enterprise material that is submitted, and may obtain legal advice or assistance from their attorney.

2) The MBE waiver request may not be considered unless all of the documentation specified above has been submitted in a timely fashion by the apparent low bidder or successful offeror.

3) Assistance in the review of a request for a waiver (the documentation and justifications) may be requested from the PSCP and/or GOMA.

4) If a determination is made that the apparent low bidder or successful offeror did make a good faith effort, based upon a review of the documentation submitted, then the waiver must be granted. The award of contract shall then be made. The material and information submitted, including the LEA's review and analysis notes and conclusion, shall be retained in the project file.

5) If a determination is made that the apparent low bidder or successful offeror did not make a good faith effort, based upon a review of the documentation submitted, then the waiver should not be granted. The material and information submitted, including the LEA's review and analysis notes and conclusion, shall be retained in the project file. The award of contract shall then be made to the next lowest bidder or offeror, who meets the contractual requirements, including the MBE requirements.

6) When a waiver is requested, a copy of Attachment F - MBE Waiver Documentation, accepted and signed by a school system representative and with the reasons for the determination, shall be forwarded to GOMA and the PSCP within ten (10) business days after approval of the contract award by the board of education. Failure to submit the required documentation within the time frame specified may result in delayed approval of the award of contract by the IAC.

5. All Contracts Shall Include The Following:

a. "The contractor shall perform the contract in accordance with the representations made in Attachment A – MDOT Certified Minority Business Enterprise Utilization and Fair Solicitation Affidavit and Attachment B – MBE Participation Schedule submitted as part of the bid or proposal".

b. "Failure to perform the contract as specified and presented in the bid or proposal submission without prior written consent of the owner shall constitute a violation of a material term of the contract".

1) The contractor shall structure his/her operations for the performance of the contract to attempt to achieve the MBE goals as stated in the solicitation document.

2) The contractor agrees to use his/her best efforts to carry out these requirements consistent with the efficient and effective performance of the contract.

3) The contractor must ensure that all certified MBEs shall have the maximum practical opportunity to compete for additional subcontract work under the contract, even after the award of the contract.

4) The contractor shall submit monthly to the MBE Liaison or the school system's designated representative a report listing any unpaid invoices, over 30 days old, received from any certified MBE subcontractor, the amount of each invoice and the reason payment has not been made.

5) The contractor shall include in its agreements with its certified MBE subcontractors, a requirement that those subcontractors submit monthly to the MBE Liaison or appropriate representative a report that identifies the prime contract and lists all payments received from the contractor in the preceding 30 days, as well as any outstanding invoices, and the amount of those invoices.

6) The contractor shall cooperate in any reviews of the contractor's procedures and practices with respect to minority business enterprises, which the MBE Liaison, the PSCP, and/or GOMA may, from time to time, conduct.

7) The contractor shall maintain such records as are necessary to confirm compliance with its MBE participation obligations. These records must indicate the identity of certified minority and non-minority subcontractors employed on the contract, the type of work performed by each, and the actual dollar value of work performed. Subcontract agreements documenting the work performed by all MBE participants must be retained by the contractor and furnished to the MBE Liaison and or appropriate representative on request.

8) All records concerning MBE participation must be retained by the contractor for a period of five years after final completion of the contract, and will be available for inspection by the MBE Liaison, representatives from the PSCP and/or other designated official entities.

9) At the option of the MBE Liaison, or appropriate agency representative, upon completion of the contract and before final payment and/or release of retainage, the contractor shall submit a final report in affidavit form and under penalty of perjury, of all payments made to, or withheld from MBE subcontractors.

10) If at any time after submission of a bid or proposal and before execution of a contract, the apparent successful bidder or offeror determines that a certified MBE listed on Attachment B – MBE Participation Schedule has become or will become unavailable, then the apparent successful bidder or offeror shall immediately notify the procurement officer and provide such officer with a reason(s) why the change is requested. Any desired change

in Attachment B – MBE Participation Schedule shall be approved in advance by the procurement officer and shall indicate the contractor's efforts to substitute another certified MBE subcontractor to perform the work. Desired changes may occur only upon written approval by the LEA.

11) A business that presents itself as a minority business may participate in a project but the contract value may not be counted toward the MBE goal or subgoals, if applicable, until the business is certified by MDOT. If it is not certified at the time of contract award it may not be counted toward the goal or subgoals, if applicable, at that time. Only the funds paid after MDOT certification can be counted toward meeting the MBE goal or subgoals, if applicable. If a certified MBE fails to meet the standards specified in State Finance and Procurement Article.14-301.1, Annotated Code of Maryland, the payments made to the MBE can be recorded and counted under a contract entered into when the MBE was eligible and certified. Ineligibility of an MBE to participate in the MBE program may not be the sole cause of the termination of the MBE contractual relationship for the remainder of the term of the contract.

12) Contractors are encouraged to seek additional MBE participation in their contracts during the life of the project. Any additional MBE participation from certified MBEs should be reported to the MBE liaison prior to initiation and should be included in subsequent monthly requisitions for payment.

13) The contractor shall complete the Standard Monthly Contractor's Requisition for Payment (IAC/PSCP Form 306.4), specifically page 3 of 16, *Minority Business Enterprise Participation*, with each requisition submitted for payment. This submittal should accurately reflect the payments to be made that month to MBEs, and the cumulative total for the period specified. Any and all MBE firms that are identified on Attachment B should be included on page 3 of the first and all subsequent requisitions for payment. Any MBEs identified during the life of the project should be added as soon as the contractor engages them.

14) At the completion of the project the contractor shall prepare a written summary of the final certified MBE participation in the contract as compared to the proposed participation at the time of contract award. This should include the name of each certified MBE, the percentage and amount that was anticipated to be paid at the time of contract award, the percentage and amount actually paid, and an explanation of any differences that have occurred. Special attention should be given to any situations where the final payments to any MBE were below the level of commitment at the time of contract award. The summary shall be forwarded to the LEA with the final requisition. The LEA shall include this documentation with the submittal of the close-out paperwork to the PSCP.

c. Liquidated Damages – "All Contracts containing certified MBE participation goals shall contain a liquidated damages provision that applies if the contractor fails to comply with good faith with the provisions of State MBE laws or the pertinent terms of the procurement contract".

6. Projects Utilizing a Construction Manager Delivery Method

This section of the procedure has been prepared based upon the utilization of Construction Manager Agency method of delivery. If another alternative method of project delivery is being considered, then these procedures would need to be adapted in consultation with the PSCP before proceeding.

a. For projects that are being designed and solicited utilizing a Construction Manager Agency delivery method with multiple prime contracts, the school system can structure its procedures to attain the overall MBE goal and subgoals, if applicable, for the project as presented below:

b. The MBE liaison and other school system staff should work with the project's construction manager, cost estimator, and architect, along with any other individuals who could provide assistance, to determine the overall MBE utilization strategy for the work required, appropriate bid packages, and an appropriate overall MBE goal and subgoals, if applicable, for each specific bid or proposal package.

c. The overall MBE goal and subgoals, if applicable, for the project shall represent the aggregate of the individual goals and subgoals, if applicable, set for each bid or proposal package. **The overall goal for this project is 20%.**

d. In setting the specific goals and subgoals, if applicable, for each solicitation package consideration should be given to the potential for MBE participation to the maximum extent possible. The information and procedures provided in section 4.0 MBE Goal Setting Procedures should be consulted and followed for these types of projects.

e. Prior to submitting the construction documents for State review and authorization to solicit bids or proposals, the school system's representative will prepare a complete list of the individual solicitation packages and indicate the MBE goal and subgoals, if applicable, for each solicitation package. This would include the overall MBE goal and subgoals, if applicable, established in the solicitation documents, the estimated cost for each solicitation package, and the estimated MBE dollar amounts for each solicitation package. A copy of this list should be submitted with the construction documents. The list should be retained as a record by the school system for comparison to the actual contracts awarded with MBE participation, and the final actual MBE participation at the completion of the project.

f. Contractors submitting bids or proposals for solicitation packages that do not include a MBE goal and subgoals, if applicable, would not be required to submit any of the MBE schedules that are otherwise required nor would they be required to indicate that they are requesting a waiver. The school system representative would, however, request information from the contractor at the completion of the project to determine if any certified MBE firms had participated in the contract.

g. All other submittals of MBE materials and reporting requirements are applicable for the project, including the submittal of Attachments A and B as described in section 6.0. This includes the documentation for a request for a waiver, if applicable and appropriate.

7. Projects Utilizing an Indefinite Delivery/Indefinite Quantity (IDIQ) or Job Order Contracting (JOC) Method of Delivery

a. The solicitation should be prepared and the overall MBE goal and subgoals, if applicable, established based upon the type of work that is anticipated to be specified or performed under the contract and the availability of certified MBEs. This could include an analysis of the percentages of the different types of work, the estimated dollar value in the entire contract, and the availability of MBEs.

b. If an overall goal and subgoals, if applicable, are set the bidders or offerors would be required to submit Attachment A –

MDOT Certified Minority Business Enterprise Utilization and Fair Solicitation Affidavit in which they could indicate their anticipated MBE participation based upon the entire contract amount and the types of work specified. The award of contract can be made based upon their estimate of MBE participation since there is no specific task order or description of work to be performed and subcontractors have not been identified or engaged through any type of commitment or subcontract.

c. Since MBE participation is only anticipated in a general sense as an objective and specific contracts to MBEs have not been signed, then the contract award would not be included in any reporting to the PSCP or subsequent reporting to GOMA.

d. However, as the contract proceeds and individual task orders and/or purchase orders are issued, the contractor should submit Attachment B – MBE Participation Schedule for any and all projects or work where MBE subcontractors and/or suppliers might reasonably be utilized. Discussions between the contractor or offeror and the LEA as the task orders and/or purchase orders are being developed should address this aspect of the contract requirements.

e. Any MBE participation should be recorded by the MBE liaison and reported to the PSCP as the task orders and/or purchase orders are approved.

f. The contractor shall complete the Standard Monthly Contractor's Requisition for Payment (IAC/PSCP FORM 306.4), specifically page 3 of 16, *Minority Business Enterprise Participation*, with each requisition submitted for payment. This submittal should accurately reflect the payments to be made that month to MBE S, and the cumulative total for the period specified. Any and all MBE firms that are identified on Attachment B – MBE Participation Schedule should be included on page 3 of the first and all subsequent requisitions for payment. Any MBEs identified during the life of the project should be added as soon as the contractor engages them.

g. At the completion of the contract period or the full utilization of the contract's value a report should be prepared by the LEA MBE Liaison and submitted to the PSCP summarizing the MBE participation in each and all of the task orders or purchase orders issued under the contract. This should include the anticipated MBE participation prior to the issuance of the solicitation, the MBE participation anticipated at the time of contract award and the actual MBE participation at the completion of the contract. The summary shall be forwarded to the LEA with the final requisition. The LEA shall include this documentation with the submittal of the close-out paperwork to the PSCP.

8. Projects Utilizing the Design/Build Delivery Method

a. The solicitation is for both A/E services and the actual construction of a public school project. The solicitation should be prepared and the MBE goal and subgoals, if applicable, established for the construction work that is anticipated for the project. The goal setting procedures described in Section 4.0 above should be utilized for these types of projects.

b. The bidders or offerors should be required to submit Attachment A – MDOT Certified Minority Business Enterprise Utilization and Fair Solicitation Affidavit on which they would indicate their anticipated MBE participation based upon the construction work anticipated and their understanding of the MBE goal and subgoals, if applicable, the types of work involved, and the availability of certified MBEs for the project. Since there are no detailed plans or designs for the project and there are no contracts or subcontracts for the actual construction work there is no need to submit any other MBE schedules, at this time.

c. If the bidder, or offeror, who is to be awarded this contract has indicated that they do not anticipate achieving the overall MBE participation goal and subgoals, if applicable, for this project on Attachment A, then they are in effect requesting a waiver. They will be required to submit documentation at a later date to justify this request.

d. As the project proceeds through the design phase and the project is nearing the completion of the construction documents for submission to the State to review, the Design/Build Team (team) in consultation with LEA representatives should discuss the opportunities and potential for certified MBEs to participate in the project.

e. The team should begin to identify potential contractors and subcontractors, opportunities to segment the project, and MBEs that could participate in the project.

f. At a point in time that is approximately 30 days prior to the anticipated CD submission to the State; the team should complete and submit a revised Attachment B – MBE Participation Schedule to the LEA for their review and approval.

g. If the team had indicated on the Attachment A – MDOT Certified Minority Business Enterprise Utilization and Fair Solicitation Affidavit that they would meet the goals and the information on the revised Attachment B indicates that they did meet the goals then the team should proceed with the construction of the project.

h. If the team had indicated on the Attachment A that they did not anticipate meeting the overall MBE goal and subgoals, if applicable, or only a portion of the goal and subgoals, if applicable, then Attachment B – MBE Participation Schedule, Attachment C - Outreach Efforts Compliance Statement, Attachment E - Minority Subcontractors Unavailability Certificate, and Attachment F -MBE Waiver Documentation should be requested by the LEA. The team should, at this time, submit their documentation in support of the waiver requested.

i. The proposed MBE participation should be reviewed and a determination made as to whether the team has made a good faith effort to meet the MBE goals and subgoals, if applicable, established for the project and as stated on the Attachment A.

j. If a request for a waiver is made and approved, Attachment F - MBE Waiver Documentation should be signed by a school system representative and submitted to the PSCP and GOMA.

k. Since there was no MBE participation reported at the time of the award of the Design/Build contract, the LEA would submit the entire package of information, including all of the MBE related attachments to the PSCP within ten (10) days of the team being directed to proceed with the actual construction work.

l. All other submittals of MBE materials and reporting requirements are applicable for the project, as described above in Section 5.0.

7.0 RECORDS AND REPORTS

1. The MBE Liaison shall maintain such records as are necessary to confirm compliance with its Minority Business Enterprise Procedures and activities. The records shall be maintained until the project is audited by the PSCP. These records shall include by project:

a. The contractor report submitted at the completion of the project;
b. The identity of the minority contractors employed on the project;
c. The type of work performed;
d. The actual dollar value of the work, services, supplies or equipment; and
e. The MBE percentage of the total contract.

2. The MBE Liaison will maintain a record of all waivers approved for each project or solicitation package where the prime contractor was unable to achieve the established overall goal or subgoals, if applicable. The MBE Liaison will, however, report to the PSCP all MBE participation by MDOT certified firms who are prime contractors, subcontractors, suppliers, or otherwise making an economically viable contribution to each project. This information shall be reported to PSCP within ten (10) days after approval of the award of the contract by the board of education.
3. The LEA shall submit the "Certified Minority Business Enterprise Participation Standard Monthly Contractor's Requisition for Payment" (IAC/PSCP Form 306.4 page 3 of 16, located in the Administrative Procedures Guide), to the PSCP Director of Fiscal Services as part of the regular monthly request for payment for the project.
4. The LEA shall submit the "Close-Out Cost Summary" (IAC/PSCP Form 306.6 located in the Administrative Procedures Guide),, along with the "Certified Minority Business Enterprise Participation Standard Monthly Contractor's Requisition for Payment" (IAC/PSCP Form 306.4) to the PSCP Director of Fiscal Services within 180 days of completion of the project.
   a. All final MBE payments should be verified by the LEA MBE Liaison before submission to the PSCP.
5. Each quarter and at the end of each fiscal year end, the LEA will submit to the, PSCP Fiscal Services the monthly cumulative "Minority Business Enterprises Monthly Procurement Report GOMA MBE Forms 1 & 2" and maintain such records as are necessary to confirm compliance with its minority business enterprise procedures and activities.
6. Each fiscal year end, PSCP Fiscal Services will create an annual report "Minority Business Enterprises Monthly Procurement Report GOMA MBE Forms 1 & 2"and Reporting Form #3 – Annual MBE Procurement Report Database – providing an accounting of payments made to MBE prime and MBE subcontractors. The LEA shall maintain such records as are necessary to confirm compliance with its Minority Business Enterprise Procedures and activities. These reports will compare the overall MBE goal and subgoals, if applicable, for each specific project with the MBE participation anticipated at the time of contract award and the actual MBE participation at the completion of the project.

8.0 MONITORING

1. The LEA's procurement personnel or project staff shall verify that the certified MBE's listed in the MBE participation schedule are actually performing the work.
2. The LEA's procurement personnel or project staff shall ensure that MBE subcontractors are receiving compensation as set forth in MBE participation schedule by ensuring that the contractor submits monthly reports, listing any unpaid invoices over 30 days old received from any certified MBE subcontractor, the amount of each invoice, and the reason payment has not been made.
3. PSCP Fiscal Services will:
   a. Compile data on projects completed during the fiscal year;
   b. Confirm that all MBE subcontractors listed in Attachment B have received payment; and
   c. Maintain such records as are necessary to confirm compliance with its Minority Business Enterprise Procedures and activities.
3. The MBE Liaison and/or the PSCP will conduct reviews as deemed necessary to confirm compliance with the minority business enterprise participation requirements.
4. The MBE Liaison will maintain appropriate records, and shall assist the PSCP in on-site or post-audit reviews upon request.
5. Auditors from the PSCP will have access to and the ability to audit MBE participation for specific projects, information retained by the LEA, and/or submitted to the IAC in reports/forms filed by the LEA as referenced above.

9.0 MINORITY BUSINESS ENTERPRISE LIAISON

1. The Superintendent shall designate an individual to be identified as the MBE Liaison for the school system.
2. The MBE Liaison will be the contact person who will work with the PSCP and GOMA to implement the Minority Business Enterprise Program for the school system and the State of Maryland.
3. The Superintendent will immediately notify the PSCP if there is a change in the MBE Liaison for the school system.

New 60% Rule

Presented by GOSBA at 11/16/17 SPAG Meeting

Chapter 438, Laws of Maryland 2017 (SB309), Section 2

- Effective October 1, 2017
- Based on Federal Disadvantaged Business Enterprise (DBE) rules regarding counting supplies

Counting MBE Suppliers –How?

MBE Suppliers Crediting Classifications =

1. MBE Manufacturers
2. Furnish & Install
3. MBE Regular Dealers
4. MBE Brokers (not a manufacturer or regular dealer)

MANUFACTURERS

- If the materials or supplies are obtained from a MBE certified in the appropriate NAICS code(s) to provide products and services as a **manufacturer**, count 100 percent of the cost of the material or supplies toward MBE goals.

FURNISH & INSTALL

- If a vendor is a certified MBE supplier, wholesaler, and/or Regular Dealer certified in the proper NAICS code(s) is a manufacturer or wholesale merchant to **furnishes supplies** and **install materials** necessary for successful Contract completion, count 100 percent of the cost of the material, supplies and labor toward MBE goals.

Regular Dealer

- A regular dealer is defined in the statute as: a firm that owns, operates, or maintains a store, a warehouse, or other establishment in which the materials, supplies, articles, or equipment are of the general character described by the specifications required under the Contract are bought, kept in stock, or regularly sold or leased to the public in the usual course of business; and
- Does not include a packager, a broker, a manufacturer's representative, or any other person that arranges or expedites transactions.
- If the materials or supplies are purchased from an **MBE Regular Dealer**, count 60 percent of the material or supplies toward MBE goals.

Broker

- For materials or supplies purchased from a certified MBE that is neither a manufacturer nor a Regular Dealer, but rather a **broker**, count the entire amount of fees or commissions charged for assistance in the procurement of the material and supplies, fees, transportation charges for the delivery of materials and supplies required on a procurement, towards the MBE Contract goals, provided you determine the fees to be reasonable and not excessive as compared with fees customarily allowed for similar services. Do not count any portion of the cost of the materials and supplies themselves toward MBE goals.

Summary

- Supplies from MBE **manufacturer = Count 100%** of cost of materials towards project MBE goal
- Supplies from MBE manufacturer or Regular Dealer that **furnishes and installs = Count 100%** of cost of materials towards project MBE goal
- Supplies from MBE **Regular Dealer = Count 60%** of cost of materials towards project MBE goal
- Supplies from MBE **broker = Count only the fee or commission** the broker charges for the procurement counts towards the project MBE goal if you determine the fee to be reasonable and not excessive as compared with fees customarily allowed for similar services

Attachment D. Minority Business Enterprise (MBE) Forms

D-1A
MBE UTILIZATION AND FAIR SOLICITATION AFFIDAVIT
& MBE PARTICIPATION SCHEDULE

PART 1 - INSTRUCTIONS

PLEASE READ BEFORE COMPLETING THIS DOCUMENT

This form includes Instructions and the MBE Utilization and Fair Solicitation Affidavit & MBE Participation Schedule which must be submitted with the bid/proposal. If the bidder/offeror fails to accurately complete and submit this Affidavit and Schedule with the bid or proposal, the Procurement Officer shall deem the bid non-responsive or shall determine that the proposal is not reasonably susceptible of being selected for award unless the inaccuracy is determined to be the result of a minor irregularity that is waived or cured in accordance with COMAR 21.06.02.04.

1. Contractor shall structure its procedures for the performance of the work required in this Contract to attempt to achieve the minority business enterprise (MBE) subcontractor participation goal stated in the Invitation for Bids or Request for Proposals. Contractor agrees to exercise good faith efforts to carry out the requirements set forth in these Instructions, as authorized by the Code of Maryland Regulations (COMAR) 21.11.03.

2. MBE Goals and Subgoals: Please review the solicitation for information regarding the Contract's MBE overall participation goals and subgoals. After satisfying the requirements for any established subgoals, the Contractor is encouraged to use a diverse group of subcontractors and suppliers from the various MBE classifications to meet the remainder of the overall MBE participation goal.

3. MBE means a minority business enterprise that is certified by the Maryland Department of Transportation ("MDOT"). Only MBEs certified by MDOT may be counted for purposes of achieving the MBE participation goals. In order to be counted for purposes of achieving the MBE participation goals, the MBE firm, including a MBE prime, must be MDOT-certified for the services, materials or supplies that it is committed to perform on the MBE Participation Schedule. A firm whose MBE certification application is pending may not be counted.

4. Please refer to the MDOT MBE Directory at https://mbe.mdot.maryland.gov/directory/ to determine if a firm is certified with the appropriate North American Industry Classification System ("NAICS") Code **and** the product/services description (specific product that a firm is certified to provide or specific areas of work that a firm is certified to perform). For more general information about NAICS codes, please visit https://www.census.gov/eos/www/naics/. Only those specific products and/or services for which a firm is certified in the MDOT Directory can be used for purposes of achieving the MBE participation goals. **CAUTION:** If the firm's NAICS Code is in graduated status, such services/products may not be counted for purposes of achieving the MBE participation goals. A NAICS Code is in the graduated status if the term "Graduated" follows the Code in the MDOT MBE Directory.

5. **Guidelines Regarding MBE Prime Self-Performance.** Please note that when a certified MBE firm participates as a prime contractor on a Contract, a procurement agency may count the distinct, clearly defined portion of the work of the Contract that the certified MBE firm performs with its own workforce toward fulfilling up to, but no more than, fifty-percent (50%) of the overall

MBE participation goal, including up to one hundred percent (100%) of not more than one of the MBE participation subgoals, if any, established for the Contract.

- ✓ In order to receive credit for self-performance, an MBE prime must be certified in the appropriate NAICS code to do the work and must list its firm in the MBE Participation Schedule, including the certification category under which the MBE prime is self-performing and include information regarding the work it will self-perform.
- ✓ For the remaining portion of the overall goal and the remaining subgoals, the MBE prime must also identify on the MBE Participation Schedule the other certified MBE subcontractors used to meet those goals or request a waiver.
- ✓ These guidelines apply to the work performed by the MBE Prime that can be counted for purposes of meeting the MBE participation goals. These requirements do not affect the MBE Prime's ability to self-perform a greater portion of the work in excess of what is counted for purposes of meeting the MBE participation goals.
- ✓ Please note that the requirements to meet the MBE participation overall goal and subgoals are distinct and separate. If the contract has subgoals, regardless of MBE Prime's ability to self-perform up to 50% of the overall goal (including up to 100% of any subgoal), the MBE Prime must either commit to use other MBEs for each of any remaining subgoals or request a waiver. As set forth in Attachment 1-B Waiver Guidance, the MBE Prime's ability to self-perform certain portions of the work of the Contract will not be deemed a substitute for the good faith efforts to meet any remaining subgoal or the balance of the overall goal.
- ✓ In certain instances where the percentages allocated to MBE participation subgoals add up to more than 50% of the overall goal, the portion of self-performed work that an MBE Prime may count toward the overall goal may be limited to less than 50%. Please refer to the Governor's Office of Small Minority & Women Business Affairs' website for the MBE Prime Regulations Q&A for illustrative examples. http://www.goMDsmallbiz.maryland.gov/Documents/MBE_Toolkit/MBEPrimeRegulation_QA.pdf

6. Subject to items 1 through 5 above, when a certified MBE performs as a participant in a joint venture, a procurement agency may count a portion of the total dollar value of the Contract equal to the distinct, clearly-defined portion of the work of the Contract that the certified MBE performs with its own forces toward fulfilling the Contract goal, and not more than one of the Contract subgoals, if any.

7. The work performed by a certified MBE firm, including an MBE prime, can only be counted towards the MBE participation goal(s) if the MBE firm is performing a commercially useful function on the Contract. Please refer to COMAR 21.11.03.12-1 for more information regarding these requirements.

8. **Materials and Supplies: New Guidelines Regarding MBE Participation.**

   - ✓ Regular Dealer (generally identified as a wholesaler or supplier in the MDOT Directory): Up to 60% of the costs of materials and supplies provided by a certified MBE may be counted towards the MBE participation goal(s) if such MBE is a Regular Dealer of such materials and supplies. Regular Dealer is defined as a firm that owns, operates, or maintains a store, a warehouse, or any other establishment in which the materials, supplies, articles, or equipment are of the general character described by the specifications required under the contract and are bought, kept in stock, or regularly sold or leased to the

public in the usual course of business; and does not include a packager, a broker, a manufacturer's representative, or any other person that arranges or expedites transactions.

Example for illustrative purposes of applying the 60% rule:

Overall contract value: $2,000,000
Total value of supplies: $100,000

Calculate Percentage of Supplies to overall contract value: $100,000 divided by $2,000,000 = 5%

Apply 60% Rule - Total percentage of Supplies/Products 5% x 60% = 3%

***3%** would be counted towards achieving the MBE Participation Goal and Subgoal, if any, for the MBE supplier in this example.*

- ✓ Manufacturer: A certified MBE firm's participation may be counted in full if the MBE is certified in the appropriate NAICS code(s) to provide products and services as a manufacturer.

- ✓ Broker: With respect to materials or supplies purchased from a certified MBE that is neither a manufacturer nor a regular dealer, a unit may apply the entire amount of fees or commissions charged for assistance in the procurement of the materials and supplies, fees, or transportation charges for the delivery of materials and supplies required on a procurement toward the MBE contract goals, provided a unit determines the fees to be reasonable and not excessive as compared with fees customarily allowed for similar services. A unit may not apply any portion of the costs of the materials and supplies toward MBE goals.

- ✓ Furnish and Install and other Services: The participation of a certified MBE supplier, wholesaler, and/or regular dealer certified in the proper NAICS code(s) to furnish and install materials necessary for successful contract completion may be counted in full. Includes the participation of other MBE service providers in the proper NAICS code(s) may be counted in full.

9. **Dually certified firms**. An MBE that is certified in more than one subgroup category may only be counted toward goal fulfillment of ONE of those categories with regard to a particular contract.

   Example: A woman-owned Hispanic American (dually certified) firm may be used to fulfill the women-owned OR Hispanic American subgoal, but not both on the same contract.

10. CAUTION: The percentage of MBE participation, computed using the percentage amounts determined for all of the MBE firms listed in PART 3, MUST meet or exceed the MBE participation goal and subgoals (if applicable) as set forth in PART 2- for this solicitation. If a bidder/offeror is unable to meet the MBE participation goal or any subgoals (if applicable), then the bidder/offeror must request a waiver in PART 2 or the bid will be deemed not responsive, or the proposal not reasonably susceptible of being selected for award. You may wish to use the attached Goal/Subgoal Worksheet to assist in calculating the percentages and confirming that your commitment meets or exceeds the applicable MBE participation goal and subgoals (if any).

11. If you have any questions as to whether a firm is certified to perform the specific services or provide specific products, please contact MDOT's Office of Minority Business Enterprise at 1-

800-544-6056 or via email to mbe@mdot.state.md.us sufficiently prior to the submission due date.

Subgoals (if applicable)

Total African American MBE Participation:	_____%
Total Asian American MBE Participation:	_____%
Total Hispanic American MBE Participation:	_____%
Total Women-Owned MBE Participation:	_____%

Overall Goal

Total MBE Participation (include all categories):	_____%

PART 2 - MBE UTILIZATION AND FAIR SOLICITATION AFFIDAVIT & MBE PARTICIPATION SCHEDULE

This MBE Utilization and Fair Solicitation Affidavit and MBE Participation Schedule must be completed in its entirety and included with the bid/proposal. If the bidder/offeror fails to accurately complete and submit this Affidavit and Schedule with the bid or proposal as required, the Procurement Officer shall deem the bid non-responsive or shall determine that the proposal is not reasonably susceptible of being selected for award.

In connection with the bid/proposal submitted in response to Solicitation No. _____, I affirm the following:

1. **MBE Participation (PLEASE CHECK ONLY ONE)**

☐ I acknowledge and intend to meet IN FULL both the overall certified Minority Business Enterprise (MBE) participation goal of _____ percent and all of the following subgoals:

_____ percent for African American-owned MBE firms
_____ percent for Hispanic American-owned MBE firms
_____ percent for Asian American-owned MBE firms
_____ percent for Women-owned MBE firms

Therefore, I am not seeking a waiver pursuant to COMAR 21.11.03.11. I acknowledge that by checking the above box and agreeing to meet the stated goal and subgoal(s), if any, I **must** complete PART 3 - MBE Participation Schedule and Part 4 Signature Page in order to be considered for award.

OR

☐ After making good faith outreach efforts prior to making this submission, I conclude that I am unable to achieve the MBE participation goal and/or subgoals. I hereby request a waiver, in whole or in part, of the overall goal and/or subgoals I acknowledge that by checking this box and requesting a partial waiver of the stated goal and/or one or more of the stated subgoal(s) if any, I must complete Part 3, the MBE Participation Schedule and Part 4 Signature Page for the portion of the goal and/or subgoal(s) if any, for which I am not seeking a waiver, in order to be considered for award. I acknowledge that by checking this box and requesting a full waiver of the stated goal and the stated subgoal(s) if any, I must complete Part 4 Signature Page in order to be considered for award.

Additional MBE Documentation

I understand that if I am notified that I am the apparent awardee or as requested by the Procurement Officer, I must submit the following documentation within 10 working days of receiving notice of the potential award or from the date of conditional award (per COMAR 21.11.03.10), whichever is earlier:

(a) Good Faith Efforts Documentation to Support Waiver Request (Attachment D-1C)

(b) Outreach Efforts Compliance Statement (Attachment D-2);

(c) MBE Subcontractor/MBE Prime Project Participation Statement (Attachments D-3A and 3B);

(d) Any other documentation, including additional waiver documentation if applicable, required by the Procurement Officer to ascertain bidder or offeror responsibility in connection with the certified MBE participation goal and subgoals, if any.

I understand that if I fail to return each completed document within the required time, the Procurement Officer may determine that I am not responsible and therefore not eligible for contract award. If the contract has already been awarded, the award is voidable.

Information Provided to MBE firms

In the solicitation of subcontract quotations or offers, MBE firms were provided not less than the same information and amount of time to respond as were non-MBE firms.

PART 3 - MBE PARTICIPATION SCHEDULE

SET FORTH BELOW ARE THE (I) CERTIFIED MBES I INTEND TO USE, (II) THE PERCENTAGE OF THE TOTAL CONTRACT VALUE ALLOCATED TO EACH MBE FOR THIS PROJECT AND, (III) THE ITEMS OF WORK EACH MBE WILL PROVIDE UNDER THE CONTRACT. I HAVE CONFIRMED WITH THE MDOT DATABASE THAT THE MBE FIRMS IDENTIFIED BELOW (INCLUDING ANY SELF-PERFORMING MBE PRIME FIRMS) ARE PERFORMING WORK ACTIVITIES FOR WHICH THEY ARE MDOT-CERTIFIED.

Prime Contractor	Project Description	Project/Contract Number

LIST INFORMATION FOR EACH CERTIFIED MBE FIRM YOU AGREE TO USE TO ACHIEVE THE MBE PARTICIPATION GOAL AND SUBGOALS, IF ANY. MBE PRIMES: PLEASE COMPLETE BOTH SECTIONS A AND B BELOW.

SECTION A: For MBE Prime Contractors ONLY (including MBE Primes in a Joint Venture)

MBE Prime Firm Name:_____

MBE Certification Number: _____

(If dually certified, check only one box.)

☐ African American-Owned
☐ Hispanic American- Owned
☐ Asian American-Owned
☐ Women-Owned
☐ Other MBE Classification

NAICS code: _____

Percentage of total Contract Value to be performed with own forces and counted towards the MBE **overall participation goal** (up to 50% of the overall goal): _____% **Please refer to Item #8 in Part 1- Instructions of this document for new MBE participation guidelines regarding materials and supplies.**

Percentage of total Contract Value to be performed with own forces and counted towards the **subgoal**, if any, for my MBE classification (up to 100% of not more than one subgoal): _____%

☐ Supplier, wholesaler and/or regular dealer (count 60%)
☐ Manufacturer (count 100%)
☐ Broker (count reasonable fee/commission only)
☐ Furnish and Install and other Services (count 100%)

Complete the applicable prompt (select only one) from prompts A-C below that applies to the type of work your firm is self-performing to calculate amount to be counted towards achieving the MBE Participation Goal and Subgoal, if any.

A. Percentage amount of subcontract where the MBE Prime firm is being used for manufacturer, furnish and install, and/or services (excluding products / services from suppliers, wholesalers, regular dealers and brokers) **___%**

B. Percentage amount for items of work where the MBE Prime firm is being used as supplier, wholesaler, and/or regular dealer (60% Rule).
Total percentage of Supplies/Products **___**% x 60% = **___%**

C. Percentage amount of fee where the MBE Prime firm is being used as broker (count reasonable fee/commission only) **___ %**

Description of the work to be performed with MBE prime's own forces:
_____
_____

SECTION B: For all Contractors (including MBE Primes and MBE Primes in a Joint Venture)

MBE Firm Name:_____ MBE Certification Number: _____ (If dually certified, check only one box.) ☐ African American-Owned ☐ Hispanic American- Owned ☐ Asian American-Owned ☐ Women-Owned ☐ Other MBE Classification NAICS code: _____	**Please refer to Item #8 in Part 1- Instructions of this document for new MBE participation guidelines regarding materials and supplies.** ☐ Supplier, wholesaler and/or regular dealer (count 60%) ☐ Manufacturer (count 100%) ☐ Broker (count reasonable fee/commission only) ☐ Furnish and Install and other Services (count 100%) **Complete the applicable prompt (select only one) from prompts A-C below that applies to the type of work that the MBE firm named to the left will be performing to calculate the amount to be counted towards achieving the MBE Participation Goal and Subgoal, if any.** **A. Percentage of total contract amount where the MBE firm is being used for manufacturer, furnish and install, and/or services** (excluding products/services from suppliers, wholesalers, regular dealers and brokers) **___%** **B. Percentage of total contract amount for items of work where the MBE firm is being used as supplier, wholesaler, and/or regular dealer** (60% Rule)**)**. Total percentage of Supplies/Products ___% X 60% = **___%** **C. Percentage amount of fee where the MBE firm is being used as broker** (count reasonable fee/commission only) **___ %** Description of the work to be performed: _____ _____
MBE Firm Name:_____ MBE Certification Number: _____ (If dually certified, check only one box.) ☐ African American-Owned ☐ Hispanic American- Owned ☐ Asian American-Owned ☐ Women-Owned ☐ Other MBE Classification NAICS code: _____	**Please refer to Item #8 in Part 1- Instructions of this document for new MBE participation guidelines regarding materials and supplies.** ☐ Supplier, wholesaler and/or regular dealer (count 60%) ☐ Manufacturer (count 100%) ☐ Broker (count reasonable fee/commission only) ☐ Furnish and Install and other Services (count 100%) **Complete the applicable prompt (select only one) from prompts A-C below that applies to the type of work that the MBE Firm named to the left will be performing to calculate the amount to be counted towards achieving the MBE Participation Goal and Subgoal, if any.** **A. Percentage of total contract amount where the MBE firm is being used for manufacturer, furnish and install, and/or services** (excluding products/services from suppliers, wholesalers, regular dealers and brokers) **___%** **B. Percentage of total contract amount for items of work where the MBE firm is being used as supplier, wholesaler, and/or regular dealer** (60% Rule)**)**. Total percentage of Supplies/Products ___% X 60% = **___%** **C. Percentage amount of fee where the MBE firm is being used as broker** (count reasonable fee/commission only) **___ %** Description of the work to be performed: _____ _____

MBE Firm Name:_____ MBE Certification Number: _____ (If dually certified, check only one box.) ☐ African American-Owned ☐ Hispanic American- Owned ☐ Asian American-Owned ☐ Women-Owned ☐ Other MBE Classification NAICS code: _____	**Please refer to Item #8 in Part 1- Instructions of this document for new MBE participation guidelines regarding materials and supplies.** ☐ Supplier, wholesaler and/or regular dealer (count 60%) ☐ Manufacturer (count 100%) ☐ Broker (count reasonable fee/commission only) ☐ Furnish and Install and other Services (count 100%) **Complete the applicable prompt (select only one) from prompts A-C below that applies to the type of work that for the MBE firm named to the left will be performing to calculate the amount to be counted towards achieving the MBE Participation Goal and Subgoal, if any.** **A. Percentage of total contract amount where the MBE firm is being used for manufacturer, furnish and install, and/or services** (excluding products/services from suppliers, wholesalers, regular dealers and brokers) **___%** **B. Percentage of the total contract amount for items of work where the MBE firm is being used as supplier, wholesaler, and/or regular dealer** (60% Rule). Total percentage of Supplies/Products ___% X 60% = **___%** **C. Percentage amount of fee where the MBE firm is being used as broker** (count reasonable fee/commission only) **___ %** Description of the work to be performed: _____ _____
MBE Firm Name:_____ MBE Certification Number: _____ (If dually certified, check only one box.) ☐ African American-Owned ☐ Hispanic American- Owned ☐ Asian American-Owned ☐ Women-Owned ☐ Other MBE Classification NAICS code: _____	**Please refer to Item #8 in Part 1- Instructions of this document for new MBE participation guidelines regarding materials and supplies.** ☐ Supplier, wholesaler and/or regular dealer (count 60%) ☐ Manufacturer (count 100%) ☐ Broker (count reasonable fee/commission only) ☐ Furnish and Install and other Services (count 100%) **Complete the applicable prompt (select only one) from prompts A-C below that applies to the type of work that the MBE firm named to the left will be performing to calculate the amount to be counted towards achieving the MBE Participation Goal and Subgoal, if any.** **A. Percentage of total contract amount where the MBE firm is being used for manufacturer, furnish and install, and/or services** (excluding products/services from suppliers, wholesalers, regular dealers and brokers) **___%** **B. Percentage of total contract amount for items of work where the MBE firm is being used as supplier, wholesaler, and/or regular dealer** (60% Rule)**)**. Total percentage of Supplies/Products ___% X 60% = **___%** **C. Percentage amount of fee where the MBE firm is being used as broker___ %** Description of the work to be performed: _____ _____

CONTINUE ON SEPARATE PAGE IF NEEDED

PART 4 – SIGNATURE PAGE

To complete Affidavit committing to MBE(s) or requesting waiver, Bidder/Offeror must sign below:

I solemnly affirm under the penalties of perjury that: (i) I have reviewed the instructions for the MBE Utilization & Fair Solicitation Affidavit and MBE Schedule, and (ii) the information contained in the MBE Utilization & Fair Solicitation Affidavit and MBE Schedule is true to the best of my knowledge, information and belief.

_____	_____
Bidder/Offeror Name *(PLEASE PRINT OR TYPE)*	Signature of Authorized Representative
_____	_____
Address	Printed Name and Title
_____	_____
City, State and Zip Code	Date

SUBMIT THIS AFFIDAVIT WITH BID/PROPOSAL

D-1B WAIVER GUIDANCE

GUIDANCE FOR DOCUMENTING GOOD FAITH EFFORTS TO MEET MBE PARTICIPATION GOALS

In order to show that it has made good faith efforts to meet the Minority Business Enterprise (MBE) participation goal (including any MBE subgoals) on a contract, the Offeror must either (1) meet the MBE Goal(s) and document its commitments for participation of MBE Firms, or (2) when it does not meet the MBE Goal(s), document its Good Faith Efforts to meet the goal(s).

I. Definitions

MBE Goal(s) – "MBE Goal(s)" refers to the MBE participation goal and MBE participation subgoal(s).

Good Faith Efforts - The "Good Faith Efforts" requirement means that when requesting a waiver, the Offeror must demonstrate that it took all necessary and reasonable steps to achieve the MBE Goal(s), which, by their scope, intensity, and appropriateness to the objective, could reasonably be expected to obtain sufficient MBE participation, even if those steps were not fully successful. Whether the Offeror that requests a waiver made adequate good faith efforts will be determined by considering the quality, quantity, and intensity of the different kinds of efforts that the Offeror has made. The efforts employed by the Offeror should be those that one could reasonably expect the Offeror to take if the Offeror were actively and aggressively trying to obtain MBE participation sufficient to meet the MBE contract goal and subgoals. Mere *pro forma* efforts are not good faith efforts to meet the MBE contract requirements. The determination concerning the sufficiency of the Offeror's good faith efforts is a judgment call; meeting quantitative formulas is not required.

Identified Firms – "Identified Firms" means a list of the MBEs identified by the procuring agency during the goal setting process and listed in the procurement as available to perform the Identified Items of Work. It also may include additional MBEs identified by the Offeror as available to perform the Identified Items of Work, such as MBEs certified or granted an expansion of services after the procurement was issued. If the procurement does not include a list of Identified Firms, this term refers to all of the MBE Firms (if State-funded) the Offeror identified as available to perform the Identified Items of Work and should include all appropriately certified firms that are reasonably identifiable.

Identified Items of Work – "Identified Items of Work" means the Proposal items identified by the procuring agency during the goal setting process and listed in the procurement as possible items of work for performance by MBE Firms. It also may include additional portions of items of work the Offeror identified for performance by MBE Firms to increase the likelihood that the MBE Goal(s) will be achieved. If the procurement does not include a list of Identified Items of Work, this term refers to all of the items of work the Offeror identified as possible items of work for performance by MBE Firms and should include all reasonably identifiable work opportunities.

MBE Firms – "MBE Firms" refers to firms certified by the Maryland Department of Transportation ("MDOT") under COMAR 21.11.03. Only MDOT-certified MBE Firms can participate in the State's MBE Program.

II. Types of Actions Agency will Consider

The Offeror is responsible for making relevant portions of the work available to MBE subcontractors and suppliers and select those portions of the work or material needs consistent with the available MBE subcontractors and suppliers, so as to facilitate MBE participation. The following is a list of types of actions the procuring agency will consider as part of the Offeror's Good Faith Efforts when the Offeror fails to meet the MBE Goal(s). This list is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases.

A. Identify Proposal Items as Work for MBE Firms

1. Identified Items of Work in Procurements

   (a) Certain procurements will include a list of Proposal items identified during the goal setting process as possible work for performance by MBE Firms. If the procurement provides a list of Identified Items of Work, the Offeror shall make all reasonable efforts to solicit quotes from MBE Firms to perform that work.

   (b) Offerors may, and are encouraged to, select additional items of work to be performed by MBE Firms to increase the likelihood that the MBE Goal(s) will be achieved.

2. Identified Items of Work by Offerors

   (a) When the procurement does not include a list of Identified Items of Work or for additional Identified Items of Work, Offerors should reasonably identify sufficient items of work to be performed by MBE Firms.

(b) Where appropriate, Offerors should break out contract work items into economically feasible units to facilitate MBE participation, rather than perform these work items with their own forces. The ability or desire of a prime contractor to perform the work of a contract with its own organization does not relieve the Offeror of the responsibility to make Good Faith Efforts.

B. Identify MBE Firms to Solicit

1. MBE Firms Identified in Procurements

(a) Certain procurements will include a list of the MBE Firms identified during the goal setting process as available to perform the items of work. If the procurement provides a list of Identified MBE Firms, the Offeror shall make all reasonable efforts to solicit those MBE firms.

(b) Offerors may, and are encouraged to, search the MBE Directory to identify additional MBEs who may be available to perform the items of work, such as MBEs certified or granted an expansion of services after the solicitation was issued.

2. MBE Firms Identified by Offerors

(a) When the procurement does not include a list of Identified MBE Firms, Offerors should reasonably identify the MBE Firms that are available to perform the Identified Items of Work.

(b) Any MBE Firms identified as available by the Offeror should be certified to perform the Identified Items of Work.

C. Solicit MBEs

1. Solicit <u>all</u> Identified Firms for all Identified Items of Work by providing written notice. The Offeror should:

(a) provide the written solicitation at least 10 days prior to Proposal opening to allow sufficient time for the MBE Firms to respond;

(b) send the written solicitation by first-class mail, facsimile, or e-mail using contact information in the MBE Directory, unless the Offeror has a valid basis for using different contact information; and

(c) provide adequate information about the plans, specifications, anticipated time schedule for portions of the work to be performed by the MBE, and other requirements of the contract to assist MBE Firms in responding. (This information may be provided by including hard copies in the written solicitation or by <u>electronic means</u> as described in C.3 below.)

2. "<u>All</u>" Identified Firms includes the MBEs listed in the procurement and any MBE Firms you identify as potentially available to perform the Identified Items of Work, but it does not include MBE Firms who are no longer certified to perform the work as of the date the Offeror provides written solicitations.

3. "<u>Electronic Means</u>" includes, for example, information provided *via* a website or file transfer protocol (FTP) site containing the plans, specifications, and other requirements of the contract. If an interested MBE cannot access the information provided by electronic means, the Offeror must make the information available in a manner that is accessible to the interested MBE.

4. Follow up on initial written solicitations by contacting MBEs to determine if they are interested. The follow up contact may be made:

(a) by telephone using the contact information in the MBE Directory, unless the Offeror has a valid basis for using different contact information; or

(b) in writing *via* a method that differs from the method used for the initial written solicitation.

5. In addition to the written solicitation set forth in C.1 and the follow up required in C.4, use all other reasonable and available means to solicit the interest of MBE Firms certified to perform the work of the contract. Examples of other means include:

(a) attending any pre-Proposal meetings at which MBE Firms could be informed of contracting and subcontracting opportunities; and

(b) if recommended by the procurement, advertising with or effectively using the services of at least two minority focused entities or media, including trade associations, minority/women community organizations, minority/women contractors' groups, and local, state, and federal minority/women business assistance offices listed on the MDOT Office of Minority Business Enterprise website.

D. Negotiate with Interested MBE Firms

Offerors must negotiate in good faith with interested MBE Firms.

1. Evidence of negotiation includes, without limitation, the following:
   (a) the names, addresses, and telephone numbers of MBE Firms that were considered;
   (b) a description of the information provided regarding the plans and specifications for the work selected for subcontracting and the means used to provide that information; and
   (c) evidence as to why additional agreements could not be reached for MBE Firms to perform the work.
2. The Offeror using good business judgment would consider a number of factors in negotiating with subcontractors, including MBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration.
3. The fact that there may be some additional costs involved in finding and using MBE Firms is not in itself sufficient reason for the Offeror's failure to meet the contract MBE goal(s), as long as such costs are reasonable. Factors to take into consideration when determining whether an MBE Firm's quote is excessive or unreasonable include, without limitation, the following:
   (a) dollar difference between the MBE subcontractor's quote and the average of the other subcontractors' quotes received by the Offeror;
   (b) percentage difference between the MBE subcontractor's quote and the average of the other subcontractors' quotes received by the Offeror;
   (c) percentage that the MBE subcontractor's quote represents of the overall contract amount;
   (d) number of MBE firms that the Offeror solicited for that portion of the work;
   (e) whether the work described in the MBE and Non-MBE subcontractor quotes (or portions thereof) submitted for review is the same or comparable; and
   (f) number of quotes received by the Offeror for that portion of the work.
4. The above factors are not intended to be mandatory, exclusive, or exhaustive, and other evidence of an excessive or unreasonable price may be relevant.
5. The Offeror may not use its price for self-performing work as a basis for rejecting an MBE Firm's quote as excessive or unreasonable.
6. The "average of the other subcontractors' quotes received" by the Offeror refers to the average of the quotes received from all subcontractors. Offeror should attempt to receive quotes from at least three subcontractors, including one quote from an MBE and one quote from a Non-MBE.
7. The Offeror shall not reject an MBE Firm as unqualified without sound reasons based on a thorough investigation of the firm's capabilities. For each certified MBE that is rejected as unqualified or that placed a subcontract quotation or offer that the Offeror concludes is not acceptable, the Offeror must provide a written detailed statement listing the reasons for this conclusion. The Offeror also must document the steps taken to verify the capabilities of the MBE and Non-MBE Firms quoting similar work.
   (a) The factors to take into consideration when assessing the capabilities of an MBE Firm, include, but are not limited to the following: financial capability, physical capacity to perform, available personnel and equipment, existing workload, experience performing the type of work, conduct and performance in previous contracts, and ability to meet reasonable contract requirements.
   (b) The MBE Firm's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of Proposals in the efforts to meet the project goal.

E. Assisting Interested MBE Firms

When appropriate under the circumstances, the decision-maker will consider whether the Offeror Offeror made reasonable efforts to assist interested MBR Firms in obtaining:

1. The bonding, lines of credit, or insurance required by the procuring agency or the Offeror; and
2. Necessary equipment, supplies, materials, or related assistance or services.

III. Other Considerations

In making a determination of Good Faith Efforts the decision-maker may consider engineering estimates, catalogue prices, general market availability and availability of certified MBE Firms in the area in which the work is to be performed, other Proposals or offers and subcontract Proposals or offers substantiating significant variances between certified MBE and Non-MBE costs of participation, and their impact on the overall cost of the contract to the State and any other relevant factors.

The decision-maker may take into account whether the Offeror decided to self-perform subcontract work with its own forces, especially where the self-performed work is Identified Items of Work in the procurement. The decision-maker also may take into account the performance of other Offerors in meeting the contract. For example, when the apparent successful Offeror fails to meet the contract goal, but others meet it, this reasonably raises the question of whether, with additional reasonable efforts, the apparent successful Offeror could have met the goal. If the apparent successful Offeror fails to meet the goal, but meets or exceeds the average MBE participation obtained by other Offerors, this, when viewed in conjunction with other factors, could be evidence of the apparent successful Offeror having made Good Faith Efforts.

IV. Documenting Good Faith Efforts

At a minimum, the Offeror seeking a waiver of the MBE Goal(s) or a portion thereof must provide written documentation of its Good Faith Efforts, in accordance with COMAR 21.11.03.11, within 10 Business Days after receiving notice that it is the apparent awardee. The written documentation shall include the following:

A. Items of Work (Complete Good Faith Efforts Documentation Attachment D-1C, Part 1)

A detailed statement of the efforts made to select portions of the work proposed to be performed by certified MBE Firms in order to increase the likelihood of achieving the stated MBE Goal(s).

B. Outreach/Solicitation/Negotiation

1. The record of the Offeror's compliance with the outreach efforts prescribed by COMAR 21.11.03.09C(2)(a). **(Complete Outreach Efforts Compliance Statement - D-2)**.
2. A detailed statement of the efforts made to contact and negotiate with MBE Firms including:
   (a) the names, addresses, and telephone numbers of the MBE Firms who were contacted, with the dates and manner of contacts (letter, fax, e-mail, telephone, etc.) (**Complete Good Faith Efforts Attachment D-1C- Part 2, and submit letters, fax cover sheets, e-mails, etc. documenting solicitations**); and
   (b) a description of the information provided to MBE Firms regarding the plans, specifications, and anticipated time schedule for portions of the work to be performed and the means used to provide that information.

C. Rejected MBE Firms (Complete Good Faith Efforts Attachment D-1C, Part 3)

1. For each MBE Firm that the Offeror concludes is not acceptable or qualified, a detailed statement of the reasons for the Offeror's conclusion, including the steps taken to verify the capabilities of the MBE and Non-MBE Firms quoting similar work.
2. For each certified MBE Firm that the Offeror concludes has provided an excessive or unreasonable price, a detailed statement of the reasons for the Offeror's conclusion, including the quotes received from all MBE and Non-MBE firms proposing on the same or comparable work. **(Include copies of all quotes received.)**
3. A list of MBE Firms contacted but found to be unavailable. This list should be accompanied by an MBE Unavailability Certificate (see **D-1B - Exhibit A** to this Part 1) signed by the MBE contractor or a statement from the Offeror that the MBE contractor refused to sign the MBE Unavailability Certificate.

D. Other Documentation

1. Submit any other documentation requested by the Procurement Officer to ascertain the Offeror's Good Faith Efforts.
2. Submit any other documentation the Offeror believes will help the Procurement Officer ascertain its Good Faith Efforts.

D-1B - Exhibit A
MBE Subcontractor Unavailability Certificate

1. It is hereby certified that the firm of _____
(Name of Minority firm)

located at _____
(Number) (Street)

_____
(City) (State) (Zip)

was offered an opportunity to bid on Solicitation No. _____

in _____ County by _____
(Name of Prime Contractor's Firm)

****

2. _____ (Minority Firm), is either unavailable for the work/service or unable to prepare a Proposal for this project for the following reason(s):

_____

_____

_____

_____

****

_____

(Signature of Minority Firm's MBE Representative) (Title) (Date)

_____

(MDOT Certification #) (Telephone #)

****

3. To be completed by the prime contractor if Section 2 of this form is not completed by the minority firm.

To the best of my knowledge and belief, said Certified Minority Business Enterprise is either unavailable for the work/service for this project, is unable to prepare a Proposal, or did not respond to a request for a price Proposal and has not completed the above portion of this submittal.

_____

(Signature of Prime Contractor) (Title) (Date)

D-1C
GOOD FAITH EFFORTS DOCUMENTATION TO SUPPORT WAIVER REQUEST

PAGE __ OF ___

Prime Contractor:	**Project Description:**	**PROJECT/CONTRACT**
Offeror Company Name, Street Address, Phone		**Solicitation #:**

Parts 1, 2, and 3 must be included with this certificate along with all documents supporting your waiver request.

I affirm that I have reviewed **Attachment D-1B**, Waiver Guidance. I further affirm under penalties of perjury that the contents of Parts 1, 2, and 3 of this **Attachment D-1C** Good Faith Efforts Documentation Form are true to the best of my knowledge, information, and belief.

Company:

Company Name (please print or type)

By:

Signature of Authorized Representative

Printed Name:

Printed Name

Title:

Title

Date:

Date

Address:

Company Address

GOOD FAITH EFFORTS DOCUMENTATION TO SUPPORT WAIVER REQUEST

PART 1 – IDENTIFIED ITEMS OF WORK OFFEROR MADE AVAILABLE TO MBE FIRMS

PAGE __ OF ___

Prime Contractor:	**Project Description:**	**PROJECT/CONTRACT**
Offeror Company Name, Street Address, Phone		**Solicitation #:**

Identify those items of work that the Offeror made available to MBE Firms. This includes, where appropriate, those items the Offeror identified and determined to subdivide into economically feasible units to facilitate the MBE participation. For each item listed, show the anticipated percentage of the total contract amount. It is the Offeror's responsibility to demonstrate that sufficient work to meet the goal was made available to MBE Firms, and the total percentage of the items of work identified for MBE participation equals or exceeds the percentage MBE goal set for the procurement. Note: If the procurement includes a list of Proposal items identified during the goal setting process as possible items of work for performance by MBE Firms, the Offeror should make all of those items of work available to MBE Firms or explain why that item was not made available. If the Offeror selects additional items of work to make available to MBE Firms, those additional items should also be included below.

Identified Items of Work	**Was this work listed in the procurement?**	**Does Offeror normally self-perform this work?**	**Was this work made available to MBE Firms? If no, explain why not.**
	□ Yes □ No	□ Yes □ No	□ Yes □ No
	□ Yes □ No	□ Yes □ No	□ Yes □ No
	□ Yes □ No	□ Yes □ No	□ Yes □ No
	□ Yes □ No	□ Yes □ No	□ Yes □ No
	□ Yes □ No	□ Yes □ No	□ Yes □ No
	□ Yes □ No	□ Yes □ No	□ Yes □ No
	□ Yes □ No	□ Yes □ No	□ Yes □ No

☐ Please check if Additional Sheets are attached.

GOOD FAITH EFFORTS DOCUMENTATION TO SUPPORT WAIVER REQUEST

PART 2 – IDENTIFIED MBE FIRMS AND RECORD OF SOLICITATIONS

PAGE __ OF ___

Prime Contractor:	**Project Description:**	**PROJECT/CONTRACT**
Offeror Company Name, Street Address, Phone		**Solicitation #:**

Identify the MBE Firms solicited to provide quotes for the Identified Items of Work made available for MBE participation. Include the name of the MBE Firm solicited, items of work for which quotes were solicited, date and manner of initial and follow-up solicitations, whether the MBE provided a quote, and whether the MBE is being used to meet the MBE participation goal. MBE Firms used to meet the participation goal must be included on the MBE Participation Schedule. Note: If the procurement includes a list of the MBE Firms identified during the goal setting process as potentially available to perform the items of work, the Offeror should solicit all of those MBE Firms or explain why a specific MBE was not solicited. If the Offeror identifies additional MBE Firms who may be available to perform Identified Items of Work, those additional MBE Firms should also be included below. Copies of all written solicitations and documentation of follow-up calls to MBE Firms must be attached to this form. This list should be accompanied by a Minority Contractor Unavailability Certificate signed by the MBE contractor or a statement from the Offeror that the MBE contractor refused to sign the Minority Contractor Unavailability Certificate (**Attachment D-1B - Exhibit A**). If the Offeror used a Non-MBE or is self-performing the identified items of work, Part 4 must be completed.

Name of Identified MBE Firm & MBE Classification	**Describe Item of Work Solicited**	**Initial Solicitation Date & Method**	**Follow-up Solicitation Date & Method**	**Details for Follow-up Calls**	**Quote Rec'd**	**Quote Used**	**Reason Quote Rejected**
Firm Name: MBE Classification (Check only if requesting waiver of MBE subgoal.) ☐ African American-Owned ☐ Hispanic American- Owned ☐ Asian American-Owned ☐ Women-Owned ☐ Other MBE Classification _____		Date: □ Mail □ Facsimile □ E-mail	Date: □ Phone □ Mail □ Facsimile □ E-mail	Time of Call: Spoke with: _____ □ Left Message	□ Yes □ No	□ Yes □ No	□ Used Other MBE □ Used Non-MBE □ Self-performing
Firm Name: MBE Classification (Check only if requesting waiver of MBE subgoal.) ☐ African American-Owned ☐ Hispanic American- Owned ☐ Asian American-Owned ☐ Women-Owned ☐ Other MBE Classification _____		Date: □ Mail □ Facsimile □ E-mail	Date: □ Phone □ Mail □ Facsimile □ E-mail	Time of Call: Spoke with: _____ □ Left Message	□ Yes □ No	□ Yes □ No	□ Used Other MBE □ Used Non-MBE □ Self-performing

☐ Please check if Additional Sheets are attached.

GOOD FAITH EFFORTS DOCUMENTATION TO SUPPORT WAIVER REQUEST

PART 3 – ADDITIONAL INFORMATION REGARDING REJECTED MBE QUOTES

Prime Contractor:	**Project Description:**	**PROJECT/CONTRACT NUMBER:**
Offeror Company Name, Street Address, Phone		**Solicitation #:**

This form must be completed if Part 1 indicates that an MBE quote was rejected because the Offeror is using a Non-MBE or is self-performing the Identified Items of Work. Provide the Identified Items Work, indicate whether the work will be self-performed or performed by a Non-MBE, and if applicable, state the name of the Non-MBE. Also include the names of all MBE and Non-MBE Firms that provided a quote and the amount of each quote.

Describe Identified Items of Work Not Being Performed by MBE (Include spec/ section number from Proposal)	**Self-performing or Using Non-MBE (Provide name)**	**Amount of Non-MBE Quote**	**Name of Other Firms who Provided Quotes & Whether MBE or Non-MBE**	**Amount Quoted**	**Indicate Reason Why MBE Quote Rejected & Briefly Explain**
	□ Self-performing □ Using Non-MBE _____	$_____	_____ □ MBE □ Non-MBE	$_____	□ Price □ Capabilities □ Other
	□ Self-performing □ Using Non-MBE _____	$_____	_____ □ MBE □ Non-MBE	$_____	□ Price □ Capabilities □ Other
	□ Self-performing □ Using Non-MBE _____	$_____	_____ □ MBE □ Non-MBE	$_____	□ Price □ Capabilities □ Other
	□ Self-performing □ Using Non-MBE _____	$_____	_____ □ MBE □ Non-MBE	$_____	□ Price □ Capabilities □ Other
	□ Self-performing □ Using Non-MBE _____	$_____	_____ □ MBE □ Non-MBE	$_____	□ Price □ Capabilities □ Other
	□ Self-performing □ Using Non-MBE _____	$_____	_____ □ MBE □ Non-MBE	$_____	□ Price □ Capabilities □ Other

☐ Please check if Additional Sheets are attached.

D- 2
OUTREACH EFFORTS COMPLIANCE STATEMENT

Complete and submit this form within 10 Business Days of notification of apparent award or actual award, whichever is earlier.

In conjunction with the Proposal submitted in response to Solicitation No. _____, I state the following:

1. Offeror identified subcontracting opportunities in these specific work categories:

_____

_____

_____

2. Attached to this form are copies of written solicitations (with Proposal instructions) used to solicit certified MBE firms for these subcontract opportunities.

3. Offeror made the following attempts to personally contact the solicited MDOT-certified MBE firms:

_____

_____

_____

4. **Please Check One:**

□ This project does not involve bonding requirements.

□ Offeror assisted MDOT-certified MBE firms to fulfill or seek waiver of bonding requirements. (DESCRIBE EFFORTS):

_____

_____

_____

5. **Please Check One:**

_____ Offeror did attend the pre-Proposal conference.

_____ No pre -Proposal meeting/conference was held.

_____ Offeror did not attend the pre-Proposal conference.

PLEASE PRINT OR TYPE

Company:

Company Name (please print or type)

By:

Signature of Authorized Representative

Printed Name:

Printed Name

Title:

Title

Date:

Date

Address:

Company Address

D-3A
CERTIFED MBE SUBCONTRACTOR PARTICIPATION CERTIFICATION

INSTRUCTIONS:

PRIME CONTRACTOR: After completing SECTIONS A, B, and D, provide this form to ***each*** certified Minority Business Enterprise subcontractor (MBE) listed on the MBE Participation Schedule (Attachment D-1A) allowing sufficient time for the MBE to respond within the required timeframe.

CERTIFIED MBE SUBCONTRACTOR: Complete SECTION C to acknowledge and certify the information in SECTION A. Return the completed form directly to the Procurement Officer identified in SECTION D within 10 days after notice from the Prime Contractor of the State's intent to award the Contract. Provide a copy to the Prime Contractor.

IF THIS FORM IS NOT RETURNED WITHIN THE REQUIRED TIME, THE PROCUREMENT OFFICER MAY DETERMINE THAT THE PRIME CONTRACTOR IS NOT RESPONSIBLE AND THEREFORE NOT ELIGIBLE FOR CONTRACT AWARD.

SECTION A

Provided that (Prime Contractor) _____ is awarded the State contract in conjunction with Solicitation Number _____, (Prime Contractor) _____ intends to enter into a subcontract with (Certified MBE Subcontractor) _____ with MDOT Certification Number _____ committing to participation by (Certified MBE Subcontractor) _____ of at least $_____ which equals _____% of the Total Contract Value for the following products/services:

NAICS CODE	WORK ITEM, SPECIFICATION NUMBER, LINE ITEMS OR WORK CATEGORIES (IF APPLICABLE)	DESCRIPTION OF SPECIFIC PRODUCTS AND/OR SERVICES

The Contractor and certified MBE each acknowledge that, for purposes of determining the accuracy of the information provided herein, the Procurement Officer may request additional information, including, without limitation, copies of the subcontract agreements and quotes. The Contractor and certified MBE each solemnly affirms under the penalties of perjury that: (i) the information provided in this Certified MBE Subcontractor Participation Certification is true to the best of its knowledge, information and belief, and (ii) it has fully complied with the State Minority Business Enterprise law, State Finance and Procurement Article §14-308(a)(2), Annotated Code of Maryland which provides that, except as otherwise provided by law, a Contractor may not identify a certified MBE in a Bid/Proposal and:

(1) fail to request, receive, or otherwise obtain authorization from the MBE to identify the MBE in its Bid/Proposal;

(2) fail to notify the MBE before execution of the Contract of its inclusion of the Bid/Proposal;

(3) fail to use the MBE in the performance of the Contract; or

(4) pay the MBE solely for the use of its name in the Bid/Proposal.

SECTION B – Prime Contractor

Signature of Representative:

_____

Printed Name and Title:

_____

Prime Firm's Name: _____

Federal Identification Number: _____

Street Address, City, State, Zip Code:

_____

_____

Phone: _____

Date: _____

SECTION C – Certified MBE Subcontractor

Signature of Representative:

_____

Printed Name and Title:

_____

MBE Firm's Name: _____

Federal Identification Number: _____

Street Address, City, State, Zip Code:

_____

_____

Phone: _____

Date: _____

SECTION D

This completed form is due to the Procurement Officer on or before: _____

Solicitation #: _____ Solicitation Title: _____

Agency/Dept.: _____ Procurement Officer: _____

Phone: _____ Email: _____

Street Address, City, State, Zip Code:

_____

_____

D-3B
MBE PRIME PROJECT PARTICIPATION CERTIFICATION

Please complete and submit this form to attest to each specific item of work that your MBE firm has listed on the MBE Participation Schedule (Attachment D-1A) for purposes of meeting the MBE participation goals. This form must be submitted within 10 Business Days of notification of apparent award. If the Offeror fails to return this affidavit within the required time, the Procurement Officer may determine that Proposal is not susceptible of being selected for Contract award.

Provided that _____ (Prime Contractor's Name) with Certification Number _____ is awarded the State contract in conjunction with Solicitation No. _____, such MBE Prime Contractor intends to perform with its own forces at least $_____ which equals to___% of the Total Contract Amount for performing the following goods and services for the Contract:

NAICS CODE	WORK ITEM, SPECIFICATION NUMBER, LINE ITEMS OR WORK CATEGORIES (IF APPLICABLE) For Construction Projects, General Conditions must be listed separately	DESCRIPTION OF SPECIFIC PRODUCTS AND/OR SERVICES	VALUE OF THE WORK

MBE Prime Contractor

Company: _____

Company Name (please print or type)

FEIN: _____

Federal Identification Number

Company Address: _____

_____

Phone: _____

Printed Name: _____

Title: _____

By: _____

Signature of Authorized Representative

Date: _____

D-4A
Minority Business Enterprise Participation
Prime Contractor Paid/Unpaid Invoice Report

Report #:	Contract #:
Reporting Period (Month/Year):	Contracting Unit:
Prime Contractor: Report is due to the MBE Liaison by the 10th of the month following the month the services were provided. **Note: Please number reports in sequence**	Contract Amount: MBE Subcontract Amt: Project Begin Date: Project End Date: Services Provided:

Prime Contractor:		Contact Person:	
Address:			
City:		State:	ZIP:
Phone:	FAX:	E-mail:	
MBE Subcontractor Name:		Contact Person:	
Phone:	FAX:	E-mail:	
Subcontractor Services Provided:			

List all payments made to MBE subcontractor named above during this reporting period:			**List dates and amounts of any outstanding invoices:**		
	Invoice #	**Amount**		**Invoice #**	**Amount**
1.			1.		
2.			2.		
3.			3.		
4.			4.		
Total Dollars Paid: $			**Total Dollars Unpaid: $**		

- If more than one MBE subcontractor is used for this contract, you must use separate **Attachment D-4A** forms. Information regarding payments that the MBE prime will use for purposes of meeting the MBE participation goals must be reported separately in **Attachment D-4B**.
- **Return one copy (hard or electronic) of this form to the following addresses (electronic copy with signature and date is preferred):**

Contract Monitor Name	Contracting Unit
Address	City, State Zip
Email	Phone Number
Signature (Required)	Date

D-4B
Minority Business Enterprise Participation
MBE Prime Contractor Report

MBE Prime Contractor:	Contract #:
Certification Number:	Contracting Unit:
Report #:	Contract Amount:
Reporting Period (Month/Year):	Total Value of the Work to the Self-Performed for purposes of Meeting the MBE participation goal/subgoals:
MBE Prime Contractor: Report is due to the MBE Liaison by the 10th of the month following the month the services were provided. **Note: Please number reports in sequence**	Project Begin Date:
	Project End Date:

Contact Person:			
Address:			
City:		State:	ZIP:
Phone:	FAX:	E-mail:	

Invoice Number	**Value of the Work**	**NAICS Code**	**Description of Specific Products and/or Services**

Return one copy (hard or electronic) of this form to the following addresses (electronic copy with signature and date is preferred):

Contract Monitor Name	Contracting Unit
Address	City, State Zip
Email	Phone Number
Signature (Required)	Date

D-5
Minority Business Enterprise Participation
MBE Subcontractor Paid/Unpaid Invoice Report

Report #:	Contract #:
Reporting Period (Month/Year):	Contracting Unit:
Report is due by the 10th of the month following the month the services were performed.	MBE Subcontract Amt:
	Project Begin Date:
	Project End Date:
	Services Provided:

MBE Subcontractor Name:					
MDOT Certification #:					
Contact Person:					
Address:					
City:			State:		ZIP:
Phone:	FAX:		E-mail:		
Subcontractor Services Provided:					
List all payments received from Prime Contractor during reporting period indicated above.			**List dates and amounts of any unpaid invoices over 30 days old.**		
	Invoice Amount	**Date**		**Invoice Amount**	**Date**
1.			1.		
2.			2.		
3.			3.		
4.			4.		
Total Dollars Paid: $			**Total Dollars Unpaid: $**		
Prime Contractor:			Contract Person:		

Return one copy of this form to the following addresses (electronic copy with signature and date is preferred):

Contract Monitor Name	Contracting Unit
Address	City, State Zip
Email	Phone Number
Signature (Required)	Date

DIVISION 0 - CONDITIONS OF THE CONTRACT

SECTION 00802 - FIRE/LIFE SAFETY CODES AGREEMENT

THE CONTRACTOR (S) SHALL COMPLY WITH ALL REQUIREMENTS OF THIS AGREEMENT THAT APPLY TO MCPS FACILITIES DURING THE CONSTRUCTION OUTLINED IN THIS SPECIFICATION.

MEMORANDUM OF UNDERSTANDING (MOU)
BETWEEN THE MONTGOMERY COUNTY PUBLIC SCHOOLS AND THE MONTGOMERY COUNTY FIRE AND RESCUE SERVICE

PROCEDURAL AGREEMENT BETWEEN THE MONTGOMERY COUNTY FIRE AND RESCUE SERVICE (MCFRS) AND THE MONTGOMERY COUNTY PUBLIC SCHOOLS (MCPS) FOR FIRE AND LIFE SAFETY CODE APPLICATION AND ENFORCEMENT IN THE MONTGOMERY COUNTY PUBLIC SCHOOLS.

The following is a summary of design and procedural agreements between the two agencies for effective Fire and Life Safety Code application and enforcement in Montgomery County Public Schools. This MOU is divided into the following categories:

- General Requirements – Applies to all types of projects
- Existing School Facilities – Applies to existing school facilities not under any construction activities
- Occupancy during Addition to/Renovations of Existing Facilities – Applies to types of construction projects where portions of the existing building are occupied and operational
- New School Construction – Applies to only new construction project; not occupied during construction
- Relocatable Classrooms – Applies to all new, existing, or relocated relocatable classrooms

A. General Requirements:

1. In special circumstances not covered in this Memorandum of Understanding, the MCFRS Fire Marshal and the director, Department of Facilities Management (the undersigning members of this agreement) may reach an agreement to resolve any issues on an individual, case-by-case basis.

2. The following requirements are considered minimal to provide for the safe occupancy of school facilities. It shall be the requirement that all new school facilities are completed prior to occupancy. It is recognized, however, that in some circumstances it may become necessary to provide for partial occupancy of an educational facility by either students or other MCPS personnel.

3. The following interim measures are intended to apply primarily for student occupied areas, however, it must be remembered that certain modifications will be required depending on specific circumstances, to provide for occupancy by staff and administrative personnel when students are not in the building.

4. Fire Watch

a. The fire watch service is to be provided when any fire protection system is not functioning.
b. Unless otherwise determined by the MCFRS Fire Marshal, a fire watch is initiated when the building's fire protection system is malfunctioning or is not functioning at all. The "average" elementary school requires 3-4 people, middle school requires 4-6 people, and high school requires 6-8 people (two fire watch personnel per floor) for all school types.
c. The fire watch team members should be assigned a two-way radio or other approved communication device for communication purposes. If a fire watch is established for after-school/work activities, the administrator should ensure that all fire watch team members have access to a phone in the event that they need to call 911 to report a fire emergency.
d. The fire watch team members must call in a report to the main office every 30 minutes and upon completing their walks. The reports must be recorded on a fire watch log (see Appendix 1) which is maintained at the school in the MCPS Fire Code Compliancy Binder.
e. As agreed upon by MCPS and MCFRS, the MCPS Fire Code Compliancy Binder contains twelve (12) Sections as follows:
    1. Weekly Inspection Report
    2. Monthly Sprinkler/Fire Alarm Inspection Report
    3. Annual Fire Alarm/Sprinkler Inspection Report
    4. Fire Evacuation Drills Log
    5. Contractor Service Log
    6. Fire Watch Records
    7. Impairment Plan Tag and Log
    8. Emergency Lighting Records
    9. Emergency Generator Records
    10. Private Hydrants
    11. Kitchen Suppression System
    12. Capacity Certificate(s) for Buildings
f. In the case where an Impairment Plan is implemented, follow the same fire watch procedures as outlined above. (see Appendix 2)

5. Existing Exhaust Hoods
    a. In some older, existing buildings with existing galvanized steel exhaust hoods, there are three (3) options to meet minimum code compliance:
        1. Install a new hood system.(Permit required)
        2. Weld the existing hood system.(Permit required)
        3. Provide a current, approved heat-resistant silicone sealant designed for use around foods.(Permit required)
    b. MCPS kitchens are mostly used for the re-heating of closed container foods, and produce no grease. MCPS is granted a waiver to conduct hood inspections annually versus the quarterly inspection required for commercial cooking facilities.

6. Exterior Exit Doors
    a. MCPS schools close during snow accumulation situations and will not reopen until all school sidewalks are safely cleared for pedestrian traffic. Permission is granted for non-installation of roof overhangs or heated slabs at secondary exterior egress doors and exit sidewalks. MCPS is to provide roof overhangs at all main school entrances.

7. Fire Extinguishers in Schools
   a. Fire extinguishers are required in the following locations in all schools in Montgomery County:
      1. Art Rooms
      2. Auto Shops
      3. Boiler Rooms
      4. Cafeteria Kitchens
      5. Family and Consumer Science Rooms
      6. Labs (science, tech ed, etc)
      7. Auditorium Stages
      8. All Purpose Room (APR) Stages
      9. Wood Shops
   b. All fire extinguishers will be approved by MCFRS secured and mounted to the wall away from students, and affixed with the proper inspection tag.

8. Fire Lanes
   a. All access lanes for fire and rescue equipment are to be code compliant (twenty (20) feet wide, a minimum of ten (10) feet away from the building, and paved to provide all-weather access).
   b. If "NO PARKING" traffic signs are installed in an arrangement acceptable to the Fire Marshal, curbs at fire lanes no longer need to be painted yellow.

9. HVAC Smoke Detection
   a. All contractors will follow code requirements and plan review comment on the proper installation and programming requirements for duct smoke detection.
   b. Duct detectors shall not initiate the fire alarm when activated, per National Fire Code.
   c. A supervisory signal will be sent out by the detector to the alarm panel to shut down the fans.

10. Latching of Doors
   a. By exception, classroom doors need to be self-latching but not self-closing for elementary schools only. Doors in smoke barriers are not required to latch. Exit stairway and fire-rated doors, except as noted previously, need to be self-closing and self-latching.
   b. Devices holding corridor smoke doors, and stairway doors open shall release upon the activation of the fire alarm or release upon the detection of smoke in proximity of the affected door as allowed by codes.
   c. Maglocks will be installed on all courtyard doors to remain unlocked during the school day and locked at all other times when the school is unoccupied.
   d. For all double doors in the mechanical, electrical, and storage rooms, a closure is required for operable leaf only (door with hardware side).

11. Manual Fire Alarms
   a. Pull stations may be omitted in certain locations when all normally occupied spaces are provided with a two-way communications system between such space and a constantly attended location. Pull stations will only be required at the following specific locations:

b. At the main entrance to assembly areas:
    - the all-purpose room,
    - the gymnasium,
    - the auditorium

c. At the most remote exit(s) from the main entrance.
d. At the boiler room.
e. At the main entrance to the school.
f. When the building changes use it will comply with code for the new use.

12. Smoke Detector Controlled Doors
    a. Smoke detectors used to control required corridor and stairway doors may initiate the fire alarm when activated, however this is not a requirement.
    b. The main purpose of these detectors, much like duct detectors, is to provide an operating action in the presence of smoke.
    c. Below is a list of options for smoke/fire door control when a smoke detector is activated:
        1. Local detection at a door closes *that* door with no fire alarm initiation. MCPS uses this option for elementary schools, so young students will not become trapped by all heavy cross-corridor doors closing at once.
        2. Local detection at a door closes *that* door and initiates the fire alarm
        3. Local detection at a door closes *all* doors but does not activate the alarm. MCPS uses this option for all secondary school doors.
        4. Local detection at a door closes *all doors and activates the alarm.*
    d. Any of the above options are allowed, as well as placing the detector on the verification mode as is the case with duct smoke detectors for fire alarm activation.
    e. Any smoke detector activated in a stairway must close *all* doors in that stairway.

13. Stoves in Buildings
    a. Elementary School Kitchens
        1. Existing Schools: The 1999 MCFRS-MCPS MOU allowed no exhaust hood over a two (2)-burner range if the building was completely sprinklered, due to the lack of grease producing cooking. Elementary schools reheat closed containers.
        2. New Schools: Any elementary school with open cooking, stovetop or cook top, will require a type 1 (one) exhaust hood with fuel shut-off and automatic extinguishing system, per NFPA 96.
    b. Secondary School Family and Consumer Science (FACS) Labs:
        1. Any FACS lab that is in a non-fully sprinklered building or has ducted exhaust hoods, must comply with NFPA 96.
        2. For FACS labs in fully sprinklered buildings, residential recirculating exhaust hood and sprinkler coverage is acceptable; no hood and no automatic extinguishing systems are required.
        3. Permission is granted to MCPS to use an approved wet chemical extinguishing system, only in the FACS rooms of sprinklered facilities. The power/fuel for the cooking equipment must be tied into the power source of the system, nozzles will need to be permanently secured to the hood, and the system must be tied into the building fire protection system and annunciate properly.
    c. Residential Stoves in Other Rooms

1. Residential stoves can only exist in staff lounges and PTA (Parent Teacher Association) rooms. They are considered to be unattended.
2. All unattended stoves must meet NFPA 96, with type 1 (one) exhaust hood, automatic fire extinguishing system, and automatic fuel shut-offs.

14. Visual Devices
    a. Retrofitting visual devices in existing schools is not required unless the control panel for the protection system is being replaced.

B. Existing School Facilities

1. A Fire and Life Safety Code information package will be provided to the Department of Facilities Management, Division of Construction, Department of School Safety and Security, and all school principals. Any changes to this information must be approved by the Office of the Fire Marshal.

2. MCFRS personnel will conduct annual fire code inspections normally between the months of September through June. A written copy of the inspection report will be given to the principal or facility representative who must forward this to the principal for prompt, appropriate resolution. The principal is responsible for placing a copy of the inspection report in the school's fire code compliancy binder. MCFRS is responsible for placing a copy of report in the designated MCPS drop box located at the MCFRS office for pick up by MCPS staff.

3. Imminent fire and life safety hazards (e.g., locked, chained exits, large accumulation of combustibles in exit ways, etc.) shall be corrected immediately in the presence of the Fire Marshal and a Department of Facilities Management representative (i.e., department director, safety supervisor).

4. Appropriate follow-up inspections shall be performed by MCFRS and MCPS.

5. If any existing fire protection system does not function for any reason, MCPS will initiate a fire watch until the fire protection system is in operation, as noted in section A4 of this agreement.

C. School Construction Projects

1. MCPS will invite the Fire Marshal to all pre-construction meetings.

2. Each June, MCPS will meet with the Fire Marshal to discuss upcoming school year openings for construction projects and the relocatable classrooms.

3. MCPS will invite the Fire Marshal to all School Opening Work Group (SOWG) meetings and will provide a copy of all meeting minutes to the Fire Marshal.

4. The MCPS director, Division of Construction (DOC) will designate one person as the point of communication for MCFRS for scheduling all Fire Marshal inspections for construction projects and relocatable classrooms.

5. General Contractors will be responsible for all re-inspection fees due to incompleteness of project. Fees are levied according to the Montgomery County Executive Regulations for Fire Codes.

D. Occupancy during Addition to/Renovations of Existing Facilities

1. Prior to initiation of any project at the planning/development stage, a conference shall be held with representatives of the following:
    a. Office of the Fire Marshal,
    b. Department of Facilities Management safety supervisor,
    c. Division of Construction,
    d. Department of School Safety and Security,
    e. School principal,
    f. Architect and contractor, if available.

2. No exit or its component shall be altered without prior written approval of the Office of the Fire Marshal.

3. MCFRS access to the building shall be maintained at all times. Consideration must be given to provide adequate parking for both school and construction personnel so that access for emergency vehicles will not be impeded.

4. The school principal, in cooperation with DOC personnel, the Department of Facilities Management safety supervisor, and Office of the Fire Marshal personnel, shall designate, in writing, an individual to be responsible for student safety prior to the commencement of the project. The designee shall determine on a daily basis, if appropriate levels of student safety are maintained in accordance with the Fire and Life Safety Code, and will take appropriate action for correction of any identified hazards.

5. During the Fire Marshal walkthrough inspection, a representative from the MCPS Division of Maintenance will attend and respond to any violations found in the existing, undisturbed portion of the building.

6. If any existing fire protection system does not function for any reason, the MCPS Division of Construction will deploy fire watch service until the fire protection system is in operation, as noted in section A4 of this agreement.

E. New School Construction

1. As an integral part of the construction permit plans review process, the Department of Permitting Services (DPS) will review all plans submittals for new school buildings and renovations to existing buildings to ensure compliance with applicable sections of the Fire and Life Safety Code. Areas requiring separation shall be identified during plans review, including, but not necessarily limited to, automatic fire sprinkler requirements, and fire protection systems. Comments generated by plan review must be addressed and/or corrected prior to an inspection by the MCFRS Fire Marshal.

2. Fire safety requirements for partial occupancy of school facilities under construction shall be in accordance with sections C through E of this agreement.

3. Inspection of school construction sites may occur at any time during construction to ensure compliance with the Fire and Life Safety Codes.

4. Imminent fire and life safety hazards shall be corrected while the Fire Marshal is on site. Copies of all fire code inspection reports shall be left with the construction superintendent. The construction superintendent must forward a copy of the inspection report to the MCPS Department of Facilities Management and Division of Construction. Serious hazards shall be referred to the Office of the Fire Marshal and the MCPS Department of Facilities Management safety supervisor.

5. After receipt of the inspection report, the director, Division of Construction, shall effect corrective action by responsible parties and notify the Office of the Fire Marshal and the MCPS Department of Facilities Management safety supervisor, by memorandum, of the action taken.

6. Appropriate follow-up inspections shall be performed by MCFRS.

F. Partial Occupancy of New Facilities under Construction

1. Requirements to allow stock furniture into facilities under construction.
    a. Automatic sprinkler protection inspected, tested, and in service.
    b. An all-weather access road to the building at all times.

2. Requirements to allow partial occupancy by teachers and staff.
    a. All life safety systems will be installed, tested and approved, including all egress components, ceiling tiles and corridor doors required by the code. If **the fire protection system** is not approved, a fire watch will be implemented per section A4 of this agreement.
    b. Automatic sprinkler protection inspected, tested, and in service.
    c. All-weather access road to the building.
    d. All required exits available and clearly marked, including stairs, hallway exterior exits, etc.
    e. Emergency lighting in place and operating.
    f. A smoke-proof and a one hour fire rated barrier shall be provided separating construction from occupied areas, per NFPA 241.

3. Requirements to allow partial occupancy by students.
    a. Automatic sprinkler protection inspected, tested, and in service.
    b. All-weather access road to the building.
    c. All required exits available and clearly marked, including stairs, hallway exterior exits, etc.
    d. Emergency lighting in place, and operating.
    e. A smoke-proof and a one hour fire rated barrier shall be provided separating construction from occupied areas, per NFPA 241.
    f. Complete fire protection system installed, tested, and in operation. If the fire protection system does not function, the MCPS Division of Construction will deploy fire watch service until the **fire protection system** is in operation, as noted in section A4 of this agreement. Fire watch is for existing fire alarms.
    g. All required smoke and/or fire doors, associated devices, and hardware, in place and operating.
    h. Required student egress including corridors, hallways, exit ways, and walkways leading from the exit ways, shall meet requirements of applicable codes and be fully completed prior to student occupancy.

i. On a daily basis, and prior to student occupancy, all combustible construction trash and debris shall be removed from the interior of the school. At no time is construction trash and debris permitted to accumulate on the occupied side.
j. Outside the facility, all combustible construction trash and debris shall be contained in an appropriate, closed container and periodically removed from the site on a regular basis.
k. Storage of combustible building supplies, compressed flammable gases, or other hazardous materials shall not be in the school building unless appropriately protected by fire separations and/or automatic extinguishing systems as required by the Fire and Life Safety Code.
l. Required utility services including telephone, electric power, and water service for fire protection shall be permanently installed and fully functional prior to occupancy.
m. During the normal school day when the building is occupied by students, no flammable/combustible application and no hot work (welding, pipe sweating, tar pots, etc.) is to be completed on the occupied side of the building. These activities may continue in the construction area per code requirements. No testing or initial start-ups of boilers, furnaces or other potentially hazardous equipment shall be permitted. This applies only to the construction side, as it is never allowed on the occupied side of the building.
n. Upon approval of the MCFRS Fire Marshal, some low risk construction activities, may be permitted in unoccupied spaces within the student occupied building without the need for the smoke barrier as called for in paragraph F3(e) of this section. These low risk construction activities include, but are not necessarily limited to, non-rated ceiling installation, painting using non-flammable materials, chalk and tackboard installation, cabinetry and hardware installation. Construction activities cannot obstruct or impede any exits, exit access, or exit discharge.
o. Storage of combustible material(s), construction shed(s), or trailer(s) shall not be permitted within thirty (30) feet of any school building.
p. All electrical wiring, with the exception of low voltage wiring for data, telephone, public address and security systems, in all occupied areas shall be completed in accordance with the National Electrical Code (NEC).

G. Relocatable Classrooms

1. All relocatable classrooms shall have two exits; one of which goes directly to the outside. In relocatable classrooms that are smaller than 1000 square feet, the second exit may be an approved "rescue/ventilation" window.

2. All relocatable classrooms shall have internal fire alarms. Any structure placed within thirty (30) feet of a relocatable classroom, including another relocatable classroom, or the school itself shall require that the alarm system be interconnected. This distance shall be measured from the two closest points including "covered" walkways.

3. Relocatable classrooms may be placed as close as twenty (20) feet to a sprinklered school building.

4. Covered walkways and relocatable classrooms shall not be required to be sprinklered.

5. Covered walkways from the existing building to the relocatables are provided only for elementary schools.

6. All work shall be completed and approved by the MCFRS Fire Marshal before the relocatable classroom is occupied. It is understood that occasionally the installation of a relocatable classroom is required on an emergency basis. In this case, the above criteria shall be met within thirty (30) days of installation.

7. If the public address system is not functioning in the relocatable classrooms, then a 2-way radio or another acceptable means of communication will be approved as a means of communication with the main school office.

8. If a new/existing fire protection system does not function for any reason, the MCPS Division of Construction will deploy fire watch service until the fire protection system is in operation, as noted in section A4 of this agreement.

ADOPTED:

Michael T. Love, Division Chief/Fire Marshal — August 1, 2008 (Date)
Montgomery County Fire and Rescue Service

Joseph J. Lavorgna, Acting Director, — August 1, 2008 (Date)
Department of Facilities Management
Montgomery County Public Schools

NOTE: This Memorandum of Understanding supersedes the Agreement of Understanding dated November 23, 1999 between Deputy Chief Theodore L. Jarboe, MCFRS and Richard G. Hawes, director, Department of Facilities Management.

APPENDIX 1

Department of Facilities Management
MONTGOMERY COUNTY PUBLIC SCHOOLS
Rockville, Maryland

Fire Watch Log for School Year_____

Name of School/Facility: _____

Address: _____

Principal/Director Name: _____ Phone Number: _____

Date	Location of the Area that was Checked	Time that the Area was Checked	Name of the Fire Watch Team Member	Comments

This log should be placed in the MCPS Fire Code Compliancy binder for review by the fire marshal.

(Rev 6.20.08)

Montgomery County Public Schools
Rockville, Maryland

Impairment Plan

Appendix to the Memorandum of Understanding (MOU) between Montgomery County Public Schools (MCPS) and Montgomery County Fire and Rescue Service (MCFRS)

The following impairment plan will be implemented in the event of system impairment to an existing school facility or new school facility in accordance with NFPA 25 as described below.

1. In accordance with *NFPA 25, Chapter 14: Impairments*, the following impairment plan provides minimum requirements for the following systems:
   a. Water-based fire protection system
   b. Fire alarm system
   c. HVAC system
   d. Electric system
2. This plan addresses measures to be taken during the impairment to minimize increased risks and limit the duration of the impairment.
3. This impairment plan includes unplanned and/or pre-planned impairments for existing school facilities and new school facilities.
4. Impairment is defined as an impairing or being impaired (damage, reduce, deteriorate, inoperable).

I. Impairment Coordinator
   A. A Division of Maintenance representative will be designated as an impairment coordinator for impairments involving systems to existing school facilities (non-construction projects).
   B. A Division of Construction representative will be designated as an impairment coordinator for impairments involving systems to Capital Improvement Projects (CIP) projects and relocatable classrooms.

II. Tag Impairment System
   A. The following tag illustration will be used during system(s) impairment:

Montgomery County Public Schools

REMOVED FROM SERVICE

Date:___/___/___ Time:___ am/pm

1.____ **Fire Alarm System** (Full____ Partial____)

2.____ **Water System** (sprinkler, standpipe, main, fire pumps, water storage tanks, fire hydrant, other _____)

3.____ **HVAC System** (Full____ Partial ____)

4.____ **Electrical System** (Full____ Partial____)

Name: _____

Title: _____

Signature: _____

School/Facility: _____

Address: _____

Phone Number of School/Facility: _____

EMERGENCY AFTER HOURS PHONE—MCPS Security Office: 301-279-3232

(This tag does not replace OSHA/MOSH required Lockout/Tag Out procedures)

B. The impairment tag will be posted at the system control valve/switch indicating which system, or part thereof, has been removed from service.

III. All pre-planned impairments will be authorized and coordinated through the designated impairment coordinator.

IV. Before authorization is given by the designated impairment coordinator, the following must be verified before authorization is given:

a. Extent and expected duration of the impairment
b. Areas or buildings involved have been inspected and the increased risks determined
c. Recommendations have been submitted to the director, Department of Facilities Management

d. When a fire protection system is out of service for more than 4 hours in a 24-hour period, the designated impairment coordinator will arrange for one or more of the following conditions:

1. Evacuation of the building or portion of the building affected by the system out of service.
2. An approved fire watch is implemented in accordance with the MOU; section A4, Fire Watch Procedures.

(Rev 06.20.08)

3. Establishment of a temporary water supply.
4. Establishment and implementation of an approved program to eliminate potential ignition sources and limit the amount of fuel available to the fire.

e. Depending on the use and occupancy of the building, it could be enough in some circumstances to stop certain processes in the building or to cut off the flow of fuel to some machines. In addition, "No Smoking" and "No Hot work" (cutting, grinding, or welding) will be strictly enforced while the system is out of service because these activities are responsible for many fire ignitions.
f. The Public Service Communications Center (PSCC) has been notified on the MCFRS non-emergency number 240-683-6520.
g. The alarm company, the director, Department of Facilities Management, and principal of the school, and other authorities having jurisdiction have been notified.
h. The area maintenance supervisor, Division of Maintenance, area building service supervisor, School Plant Operations, and safety supervisor, Department of Facilities Management have been notified.
i. A tag impairment system has been implemented (see section II, Tag Impairment System)
j. All necessary tools and materials have been assembled on the impairment site.

V. Emergency Impairments

A. Emergency impairments include but are not limited to system leakage, interruption of water supply, frozen or ruptured piping, and equipment failure.
B. When emergency impairments occur, emergency action will be taken to minimize potential injury and damage.
C. The designated impairment coordinator will implement the steps outlined in section IV of this document.

VI. Restoring Systems to Service

A. When all impaired equipment is restored to normal working order, the designated impairment coordinator will verify the following procedures have been implemented:
    1. Any necessary inspections and tests have been conducted to verify that affected systems are operational.
    2. The area maintenance supervisor, Division of Maintenance, area building service supervisor, School Plant Operations, and safety supervisor, Department of Facilities Management have been notified that protection/system has been restored.
    3. The PSCC has been advised that protection/system has been restored.
    4. The alarm company, the director, Department of Facilities Management and principal of the school, and other authorities having jurisdiction have been advised that protection/system is restored.
    5. The impairment tag (removed from service tag) has been removed from the restored equipment.
    6. The impairment log has been updated and returned to the MCPS fire code compliancy binder.

Montgomery County Public Schools

REMOVED FROM SERVICE

Date:___/___/___ Time:___ am/pm

1._____**Fire Alarm System** (Full____ Partial_____)

2._____ **Water System** (sprinkler, standpipe, main, fire pumps, water storage tanks, fire hydrant, other_____)

3._____**HVAC System** (Full____ Partial _____)

4._____**Electrical System** (Full_____ Partial_____)

Name: _____

Title: _____

Signature: _____

School/Facility: _____

Address: _____

Phone Number of School/Facility: _____

EMERGENCY AFTER HOURS PHONE: MCPS Security Office: 301-279-3232

(This tag does not replace OSHA/MOSH required Lockout/Tag Out procedures)

(Rev 06.20.08)

APPENDIX 4

Department of Facilities Management
MONTGOMERY COUNTY PUBLIC SCHOOLS
Rockville, Maryland

Impairment Tag (Removed from Service) Log for School Year _____

(Refer to the MCPS Impairment Plan for a full explanation of procedures)

Name of School/Facility: _____ Address: _____

Principal/Director Name: _____ Phone Number: _____

Upon removing the following items from service: Fire Alarm System, Water System (includes sprinklers, standpipe, main, fire pumps, water storage tanks, fire hydrant, other _____), HVAC System; or Electrical System, the following individuals must be notified immediately:

a. MCFRS Public Service Communications Center (PSCC) non-emergency number 240-683-6520.
b. The alarm company, the director, Department of Facilities Management the principal of the school, and other authorities having jurisdiction have been notified.
c. The area maintenance supervisor, Division of Maintenance; area building service supervisor, School Plant Operations; and safety supervisor, Department of Facilities Management have been notified.
d. A tag impairment system has been implemented (see Impairment Plan, Section II, Tag Impairment System) and all necessary tools and materials have been assembled on the impairment site.

DATE	Impairment Tag Number	Item Removed From Service	State Full or Partial Removal from Service	For Water System Only, State type of system and State Full or Partial Removal from Service	Location of the Item Removed From Service	Time the Item was Removed from Service	Time the Item was Returned to Service	Name of Worker on Duty At Time of Report	Time Notified MCFRS Officials	Time Notified PSCC and Alarm Co.

This log should be maintained in the MCPS Fire Code Compliancy binder for review by the fire marshal. (Rev 08.2018)

END OF SECTION
008020

SECTION 010110 - PROJECT REQUIREMENTS

PART 1 – GENERAL

1.1 Summary:

A. General: section pertains to provision for coordination and administration of the Project.

1.2 Special Requirements:

A. General: Drawings, General Conditions, applicable portions of Division 1, and the executed Agreement are a part of every Section as if written out in full.

B. Fire Protection: Provide and maintain an adequate number of hand fire extinguishers at convenient locations during construction. Avoid accumulations of flammable debris by removing rubbish promptly. Take other precautions necessary to prevent fire. Supervise closely the storage of paint materials and other combustible products.

C. Accident Prevention and Safety: Comply with applicable laws, ordinances, rules, regulations and orders of governing authorities having jurisdiction for safety of persons and property and protect them from damage, injury or loss. Erect and maintain, as required by conditions and progress of the Work, necessary safeguards for safety and protection, including fences, railings, barricades, lighting, posting of danger signs and warnings against hazards. Where prevention of construction accidents is not regulated by code or ordinances, comply with AGCA's "Manual of Accident Prevention in Construction." Contractor shall be solely responsible for initiating, maintaining and supervising safety precautions and programs in connection with the Project. Scaffolds shall be built in accordance with all requirements of local, state, and federal laws and regulations.

D. Review of the Contract Documents: Contractor shall carefully study and compare Contract Documents with existing conditions at Job Site and shall report in writing to Architect any error, inconsistency, or omission discovered or any materials, systems, procedures, or methods of construction, either shown or specified, which is felt to be incorrect, inadequate, obsolete, or unsuitable for the intended purpose, or to guarantee as specified. Contractor shall not proceed with any work in such areas until written instructions are received from Architect.

1. Before ordering any material or doing any Work, Contractor shall verify dimensions and check conditions in order to ensure that they properly reflect those of Contact Documents. Inconsistencies shall be brought to the immediate attention of the Construction Manager and Architect. In the event that discrepancies occur between ordered material and actual conditions, of which the Construction Manager and Architect was not notified beforehand, costs to correct such discrepancies shall be borne by Contractor.

E. Concealed Work: Before backfilling, placing concrete or performing other work which will conceal mechanical, plumbing, and electrical lines and items, concrete reinforcing, anchors and other items, secure inspection and approval by Owner's Representatives, Owner's inspectors, and inspectors of local Authorities having jurisdiction.

F. Conduct of Operations: During Contract, conduct operations at Job Site and at access to Site so as not to endanger, inconvenience or interfere with occupants of adjoining buildings or properties: this includes trucking operations and parking of workmen's vehicles.

1.3 Definition of Terms

A. General: In addition to definitions of various terms specified in the GENERAL CONDITIONS and section 014200 REFERENCE STANDARDS & DEFINITIONS and as set forth elsewhere in Contract Documents, the below listed terms shall, as used throughout Project Manual, be defined as specified below:

B. "Substantial Completion": The term "Substantial Completion" shall be defined as general completion of all Work required by Contract in its finished or operational condition, exclusive of all final touch ups, adjustments, or minor corrections. Completion of miscellaneous "punchlist" items may be carried on after Date of Substantial Completion in certain locations and under conditions which will not interfere with Owner's personnel and daily routine business operations conducted on Premises, as determined by Construction Manager and Architect.

C. The Words: "As directed," "as permitted," “as required," or words of like effect shall mean that the direction, permission, or requirements of Construction Manager and Architect is intended; and similarly, the words "approved," "acceptable," "satisfactory," or words of like import shall mean approved by or acceptable or satisfactory to Construction Manager or Architect, unless otherwise provided herein. The words "necessary," "suitable," "equal," or words of like import shall mean necessary, suitable, or equal in the opinion of the Architect.

D. "Contractor": Wherever in Specifications there appears a reference to Contractor or to subcontractor, or a reference to a contractor or supplier of a particular trade or for a particular type of work, such reference shall be, as between Owner and Contractor, regardless of language thereof, be deemed a reference to Contractor and shall not be construed as relieving Contractor from duty to perform the Work and other obligations provided for under Contract. Moreover, such references shall not be construed as an assumption by Owner of responsibility for relations between Contractor and his subcontractors or between various subcontractors or attempt on the part of Owner to deal directly with subcontractors, or to assign any particular portions of Work to any one subcontractor except as specifically set forth in Contract Documents, or a limit on the obligation of Contractor.

1.4 Cooperation with Governmental Agencies & Public Utilities:

A. General: Contractor shall be responsible for making necessary arrangements with governmental departments, public utilities, public carriers, service companies and corporations owning or controlling roadways, railways, water, sewer, gas, electrical, telephone, and telegraph facilities such as pavements, tracks, piping, wires, cables, conduits, poles, guys, etc., including incidental structures connected therewith, that are encountered in the Work in order that such items may be properly shored, supported, protected or relocated.

B. Give all Proper Notices: Comply with requirements of such parties in performance of Work, permit entrance of such parties on the Project in order that they may perform their necessary Work, and pay charges and fees made by such parties for this work, unless otherwise specified.

C. Scheduling: It is distinctly understood that Contractor will have no claim whatsoever against Owner for any delay caused him during construction of this Project due to work being done by such parties.

1.5 Coordination: Mechanical & Electrical:

A. Enclose wiring, conduit, ducts, heat piping, sprinkler piping, water piping, and other utility lines in habitable rooms and spaces and to completely conceal such lines from view except for utility rooms and vaults (mechanical equipment, elevator, i.e.) or other open areas, unless otherwise shown or scheduled.

1. Use adjacent masonry, gypsum wallboard, or other finish construction to form the enclosing chase or furring.

2. Enclose such utilities in the locations described or shown where furring, chases, or other enclosures are required, whether or not an enclosures is specifically shown.

B. Locate sprinkler heads, ceiling diffusers, lighting fixtures, grilles, speakers, and other similar items occurring in suspended exposed grid suspension ceiling systems centered in lay in panel in both directions or to fill a full ceiling grid module.

C. Coordination: Do not install ductwork, electric conduit, pull boxes, piping, and other mechanical and electrical items above suspended ceilings until Contractor has verified that there will be no interference between trades and that design requirements shown and/or specified for room construction, equipment, fixtures, and finishes can be maintained. Report to Construction Manager and Architect promptly, prior to construction, apparent interference or difficulties anticipated.

1.6 Contractor shall pay for all inspection and testing required by contract documents. Contractor must use testing agency that was used for Geotechnical Report. For other inspection and testing, acceptable agencies are limited to those firms listed in Section 014500, Part 1, Paragraph 2.1

END OF SECTION 010110

SECTION 011100 - SUMMARY OF WORK

PART 1 - GENERAL

1.1 Scope:

Summary:

A. Unless otherwise noted, Contractor shall provide and pay for labor, materials, equipment, tools, construction machinery, transportation, and other facilities and services necessary for proper execution and completion of Work required by Contract Documents.

B. Work of Contract can be summarized by reference to Contract, General Conditions, specification sections as listed in "Table of Contents" bound herewith, drawings as listed in "Schedule of Drawings" bound herewith, addenda and modifications to Contract Documents issued subsequent to the initial printing of the project specifications, and including but not necessarily limited to printed matter referenced by any of these. It is recognized that Work of Contract may be affected or influenced by governing regulations, natural phenomenon including weather conditions, and other forces outside Contract Documents.

C. The work includes removing items as shown on drawings and furnishing and installing new systems, including all associated wiring, conduit, disconnects, piping, controls, and appurtenances as required at the Montgomery County Public School (MCPS) facilities. The installation includes equipment, controls, sheet metal, piping, and general construction work that, when finished, shall be complete and coordinated, whole and ready for satisfactory service intended and accepted by MCPS and its representatives.

D. Installation must be performed in strict compliance with the latest local, state and federal regulations having authority. The Occupational Safety and Health Administration Hazard Communication Standards must be followed.

E. General Contractor shall include all costs to perform and document inspections, observations, surveys and measurements required to prepare complete and accurate As-Built Plans, provide required certifications and obtain approval thereof from Montgomery County Department of Permitting Services in its Bid.

1.2 Specification Explanation:

A. The Contractor shall coordinate and organize the entire work specified in all sections of the specifications so that duplications or omissions are eliminated.

B. Wherever the term “provide” is used, it shall mean, “furnish and install in place, complete in all details”.

C. Where any device or part of equipment is herein referred to in the singular number (such as “the unit”) such reference shall be deemed to apply to as many such devices as are required to complete the installation as shown on the drawings.

D. When the work specified necessitates relocating existing utilities, power, piping, ductwork or equipment, the Contractor shall perform all work and make all necessary changes to existing work as may be required to leave the entire complete work in a finished and workmanlike condition, to the entire satisfaction of the MCPS Project Coordinator, regardless of whether or not these changes are specifically called for by the specification or shown on the drawings. All work performed on existing power systems, piping systems, ductwork or equipment shall

be done in accordance with the applicable provisions of these specifications, including materials, insulation, painting, etc.

1.3 Drawings in General:

A. Drawings are diagrammatic and indicate the general arrangement of systems and work included in the contract.

B. The Contractor shall follow drawings in laying out work and check drawings of other trades to verify locations and spaces in which work will be performed. The general arrangement of piping shall be as shown on the contract drawings. Detailed drawings of proposed departures due to actual field conditions or other causes shall be submitted to the MCPS Project Coordinator for approval. The Contractor shall carefully examine all contract drawings and shall be responsible for the proper fitting of materials in each location as indicated without substantial alteration. The Contractor shall carefully investigate the site, structural, and finish conditions affecting the work and shall arrange such work accordingly, furnishing such fittings, transitions and accessories as may be required to meet such conditions.

C. If directed by MCPS Assigned representatives, the Contractor shall make reasonable modifications in the layout as needed to prevent conflict with work of other trades or for proper execution of the work.

PART 2 - PRODUCTS (not used)

PART 3 - EXECUTION

3.1 Execution of Work:

A. The Contractor shall examine the premises and observe the conditions under which the work will be done or other circumstances, which will affect the anticipated work. The Contractor shall carefully check in the field the existing conditions on site. No allowance will be made subsequently in this connection for any error or negligence on the Contractor’s part.

B. The Contractor shall coordinate the work and equipment of all trades involved with the project to assure a complete and satisfactory installation.

C. Work involving entering, connecting to, or interrupting services for, or in any way interfering with the normal activities taking place in the existing building or on facility grounds shall be coordinated with MCPS. The Contractor is advised that all work involving disrupting the use of utilities shall not be carried out until permission has been received from the building staff and the MCPS Project Coordinator. At least forty-eight (48) hours advance notice shall be given to MCPS before performing such work, unless directed otherwise by the MCPS Project Coordinator.

D. The Contractor is to take field measurements to insure new work fits within existing space where new work adjoins existing construction to remain. Coordinate existing condition measurements with dimensions show on drawings to ensure new work will fit without modifying existing construction to remain.

3.2 Installation of Equipment/Materials:

A. It is the intention of the specification and drawings to call for finished work, tested, and ready for operation.

B. All materials and apparatus required for the work shall be new, and shall be furnished, delivered, erected, connected and finished in every detail, and shall be so selected and arranged as to fit properly into the building spaces. When the exact material to be used is not specified a product of commercial quality will be furnished.

C. Where any specific material, process, method of construction or manufactured article is specified by name or by reference to the catalog number of a manufacturer, the specifications shall be used as a guide and are not intended to take precedence over the basic duty and performance specified or noted on the drawings. In all cases, the Contractor shall verify the duty specified with the specific characteristics of the equipment offered for approval.

D. Any apparatus, appliance, materials or work not shown on the drawings but mentioned in the specifications, or vice versa, or any incidental accessories necessary to make the work complete in all respects and ready for operation, even if not particularly specified, shall be furnished, delivered and installed by the Contractor.

E. Auxiliary piping, fittings, accessories, etc., or required for proper operation shall be furnished and completely installed.

F. Minor details not usually shown or specified, but necessary for proper installation and operation shall be included in the work.

G. In the absence of such written notice, it is mutually agreed that the Contractor has included the cost of all required items in the proposal and that the Contractor will be responsible for the approved satisfactory functioning of the entire system without further compensation.

3.3 Manner of Installation:

A. All piping shall be run with proper grade and the maintenance of proper clearances for access to all parts requiring servicing.

B. The Contractor shall determine the locations, sizes, etc., of all items required for the proper installation. The contractor shall furnish all supports, etc. required for the work and shall be responsible for their proper and permanent locations. Any additional angles, channels, blocks, etc. required for supporting the equipment, conduit, or piping shall be furnished and installed.

C. No waterproofing shall be cut for any purpose, except on written approval of the MCPS Project Coordinator.

D. It shall be the Contractor’s responsibility to see that all equipment such as valves and other apparatus or equipment as may require maintenance and operation are made easily accessible, regardless of the diagrammatic location shown on the drawings.

3.4 Housekeeping:

A. Fire protection during construction

1. Fire extinguishers suitable for fire hazards will be provided at convenient accessible locations during construction.

2. Provide each storage location with at least one approved portable fire extinguisher having a rating of not less than 20 - B:C.

a. Place portable extinguishers rated not less than 2A so that maximum travel distance to the nearest exit shall not exceed 100 feet.

3. Avoid accumulation of flammable debris and waste within the building and vicinity. Avoid large and unnecessary accumulations of combustible forms and form lumber. Keep lumber stacked in an orderly manner.

4. The Contractor will not store flammable or volatile liquids in the open or in small detached structures or trailers. Liquids having low flash points being used within the building must be stored only in approved safety cans. The Contractor shall supervise closely the storage of paint materials and other combustible finishing and cleaning products and not permit oily rags to be stored in closets or other tight permanent spaces.

5. Prohibit smoking on all MCPS property; violators will be dismissed from the site on the first offense.

6. No firearms, even if locked in a vehicle, are allowed on MCPS property.

7. Closely supervise welding and torch cutting operations near combustible materials with a fire watch.

8. Supervise locations and operation of temporary portable heating units and fuel.

9. Use only fire-resistant building paper, plastic sheet, and tarpaulins for temporary protection.

10. Do not store combustible material outdoors within 10 feet of a building or structure.

11. Do not use gasoline for cleaning within the building under any circumstances.

12. Take other precautions suitable for hazardous conditions at the site to prevent fire.

13. The Contractor is to provide temporary enclosures on the exterior to (1) secure the building at the end of each work day and (2) to protect the building from weather.

14. Provide temporary coverings of furniture, furnishings and/or equipment adjacent to construction operations.

B. Burning

1. Do not burn any trash or other material on site.

PART 4 – SCHEDULE OF DRAWINGS

4.1 Drawings indicating work to be performed under this Contract include:

LIST OF DRAWINGS

N/A

END OF SECTION

SECTION 012100 - ALLOWANCES

PART 1 – GENERAL

1.1 Summary:

A. A "Schedule of Allowances," showing amounts included in Contract Sum, is included in this section. Coordinate allowance to ensure that each section is completely integrated and interfaced. Requirements for allowances are shown and specified to extent established by date of Contract Documents; additional requirements will be established by Change Order. At earliest possible date, advise Architect/Engineer of date each final allowance selection must be completed. Submit proposals for allowance Work as directed and in manner specified for Change Orders. Indicate quantities, unit costs, total purchase amounts, taxes, delivery charges and trade discounts. Where requested, furnish a detailed breakdown of quantity survey. Contractor mark-up of overrun of allowance purchases will be permitted where purchase amount exceeds established allowance by more than 15%; otherwise, and except as otherwise indicated, amount of Change Order on each allowance will be the difference between purchase amount and allowance. Deliver excess materials of allowance Work to Owner's storage space, or dispose of by other means as directed. Designate in project construction schedule delivery dates for products and services specified under each allowance. Contingency allowances may be drawn upon in accordance with guidelines put forth in Article 7, Changes in the Work, of General Conditions.

1.2 Form of Payment:

A. Payment for allowance items shall be made regularly by Contractor to suppliers of allowance items as work progresses. Contractor shall invoice for allowance items through periodic applications for payment as Work progresses.

PART 2 - PRODUCTS (not used)

PART 3 - EXECUTION (not used)

PART 4 - SCHEDULE OF ALLOWANCES

4.1 Contractor shall include cash allowances for the following items. Listing is for convenience of Contractor only and shall not relieve Contractor and/or Subcontractor of responsibility of reading Contract Documents and including allowances specified or indicated.

END OF SECTION 012100

SECTION 012300 - ALTERNATES

PART 1 - GENERAL

1.1 Definition: An Alternate is Work as described in the Schedule of Alternates for certain construction activities defined in the Construction Documents that may be added to or deducted from the Work of the Contract if the Owner accepts the Alternate in the Contract award.

1.2 Coordination: Coordinate related Work and modify or adjust adjacent Work as necessary to ensure that Work affected by each Alternate is complete and fully integrated into the project at no additional cost to that proposed in the Bid.

1.3 Bidder originated Alternates or qualifying statements will not be considered. The Owner shall have the right to accept Alternates in any order or combination.

1.4 Specification Sections referenced in the Schedule contain requirements for materials and methods necessary to achieve Work described under each Alternate. Include as part of each Alternate, miscellaneous devices, accessories, and similar items incidental to or required for a complete installation whether or not mentioned as part of Alternate.

SCHEDULE OF ALTERNATES

None

PART 2 - PRODUCTS (not used)

PART 3 - EXECUTION (not used)

END OF SECTION 012300

SECTION 012500 - SUBSTITUTIONS

PART 1 - GENERAL

1.1 Summary:

A. Requests for product and material substitutions shall be received in writing by the Architect for approval a minimum of ten (10) calendar days prior to receipt of bids. Requests received after that time will not be considered.

1.2 Products not considered substitutions:

A. Revisions to Contract Documents requested by Owner or Architect.

B. Specified or listed product options and alternative construction methods indicated in Contract Documents.

C. Revisions to Contract Documents required to conform with governing regulations and orders issued by governing authorities.

PART 2 - PRODUCTS (not used)

PART 3 - EXECUTION

3.1 Requests for Substitutions:

A. Requests for substitution must be submitted in writing. Requests for substitution shall not be submitted by facsimile ("faxed") or e-mail.

B. Submit three (3) copies of "Request for Substitution" cover letter with the following information:

1. Project Name

2. Today's date

3. Firm/Manufacturer's name with street address and phone no.

4. Bid Date

5. Referenced section of project specifications

6. Proposed product

7. Brief description of proposed request for substitution listing any required changes to other parts of the Work necessary to accommodate proposed substitution.

8. Estimated savings or cost increase over specified product(s), including cost of changes to other parts of Work required to accommodate proposed substitution.

9. Impact on construction schedule

C. Submit separate cover letters for each "Request for Substitution."

D. Submit three (3) photocopies of referenced section of project specifications with paragraph by paragraph comparison of specified product and proposed substitution product listed on attached sheets of similar format.

E. Submit manufacturer's descriptive literature, copy of guarantee and recommended installation instructions for proposed substitution product.

F. Submit product samples if requested by Architect. Bidders shall contact Architect to determine if samples are required.

G. If requested by Architect as a means of determining whether or not a material or item submitted is equal to standards established by Contract Documents, Contractor shall submit data for both specified and proposed item or materials in the form of engineering data or calculations; results of tests conducted by independent testing laboratories; experience records of material or equipment used under conditions similar to that proposed in Project; any other means required by Architect to establish the fact that proposed item is equal to specified.

H. Furnishing of items listed above will be at expense of Contractor and without cost to Owner.

3.2 Evaluation:

A. Architect shall evaluate information submitted and recommend to Owner acceptance or rejection of request for substitution. Incomplete submittals will not be considered. Owner will make final decision. If proposed substitution is accepted, bidders will be notified by means of an Addendum to Contract. If a decision on a request for substitution cannot be made or obtained before receipt of bids, bidders must use product(s) specified.

3.3 Implementation

A. Contractor is responsible for identifying and implementing requirements, material process or otherwise, which are affected by permissible substitutions or deviations from products or assemblies described in Contract Documents to complete Work as described in Bidding and Contract Documents.

END OF SECTION 012500

SECTION 013100 – PROGRESS MEETINGS

PART 1 - GENERAL

1.1 Summary:

A. To enable orderly review during progress of Work, and to provide for systematic discussion of problems, Architect will conduct progress meetings throughout construction period.

1.2 Related Sections:

A. Documents affecting Work of this Section include, General Conditions, and Sections in Division 1.

B. Contractor's relationship with Subcontractors and material suppliers, and discussions relative thereto, are Contractor's responsibility and normally are not part of project meetings content.

1.3 Quality Assurance:

A. For those persons designated by Contractor to attend and participate in progress meetings, provide required authority to commit Contractor to solutions agreed upon in progress meetings.

1.4 Submittals:

A. Agenda items: To the maximum extent practicable, advise Architect at least 24 hours in advance of progress meetings regarding items to be added to agenda.

B. Minutes: Architect will compile minutes of each progress meeting, and will furnish copies to Contractor and Architect and required copies to Owner within seven (7) working days following date of each meeting.

PART 2 - PRODUCTS (not used)

PART 3 - EXECUTION

3.1 Meeting Schedule:

A. Except as noted below for Preconstruction Meeting, regularly scheduled progress meetings will be held every two weeks. Owner reserves right to schedule additional progress meetings as necessary to maintain progress of Work.

B. Coordinate as necessary to establish mutually acceptable schedule for meetings.

3.2 Meeting Location:

A. Architect will establish meeting location. To the maximum extent practicable, meetings will be held at project job site.

3.3 Preconstruction Meeting:

A. Preconstruction Meeting will be scheduled to be held within 15 working days after Owner has issued Notice to Proceed.

1. Provide attendance by authorized representatives of Contractor and major Subcontractors.

2. Architect will advise other interested parties, including engineers, consultants, and Owner, and request their attendance.

B. Minimum agenda: Data will be distributed and discussed on at least the following items.

1. Organizational arrangement of Contractor's forces and personnel, and those of Subcontractors, materials suppliers and Architect.

2. Channels and procedures for communication.

3. Construction schedule, including sequence of critical work.

4. Contract Documents, including distribution of required copies of original Documents and revisions.

5. Processing of Shop Drawings and other data submitted to Architect for review.

6. Processing of RFI’s, field decisions, and Change Orders.

7. Rules and regulations governing performance of Work; and

8. Procedures for safety and first aid, security, quality control, housekeeping, and related matters.

9. Contractor's requests for interpretation from Architect.

10. Other applicable items as requested or suggested by Contractor, Architect or Owner representatives.

3.4 Progress Meetings:

A. Attendance:

1. To maximum extent practicable, assign same person or persons to represent Contractor at progress meetings throughout progress of Work.

2. Subcontractors, materials suppliers, and others may be requested and required to attend progress meetings in which their aspect of Work is involved.

3. A copy of current construction schedule shall be posted at meeting location for review. Date of meetings shall be clearly identified on schedule.

B. Minimum agenda:

1. Review, revise as necessary, and approve minutes of previous meetings.

2. Review progress of Work since last meeting, including current construction schedule and status of submittals for approval.

3. Identify problems which impede planned progress.

4. Develop corrective measures and procedures to regain planned schedule.

5. Status of Shop Drawings.

6. Complete other current business.

7. Use of premises.

C. Revisions to minutes:

1. Unless published minutes are challenged in writing prior to next regularly scheduled progress meeting, they will be accepted as properly stating activities and decisions of meeting.

2. Persons challenging published minutes shall reproduce and distribute copies of challenge to all indicated recipients of particular set of minutes.

3. Challenge to minutes shall be settled as priority portion of "old business" at next regularly scheduled meeting.

END OF SECTION 013100

SECTION 013300 - SUBMITTALS

PART 1 - GENERAL

1.1 Summary:

A. Make submittals required by Contract Documents to Architect, and revise and resubmit as necessary to establish compliance with the specified requirements.

1.2 Related Sections:

A. Individual requirements for submittals may be described in Divisions 2 through 48 of these Specifications.

B. Maintain a record document set of approved submittal documents.

D. Submittals not required will not be reviewed by Architect.

E. Contractor may require Subcontractors to provide drawings, setting diagrams, and similar information to help coordinate the Work, but such data shall remain between the Contractor and Subcontractors and will not be reviewed by Architect.

1.3 Quality Assurance:

A. Certifications: Provide such certification as is required per pertinent sections of these specifications. A minimum of two originals and one copy of Certification shall be forwarded.

1.4 Coordination of submittals:

A. Prior to each submittal, carefully review and coordinate aspects of each item being submitted.

B. Verify that each item and submittal for it conform with the specified requirements.

C. Verify field measurements and conditions prior to submission.

D. By affixing Contractor's signature to each submittal, certify that coordination has been performed.

E. Each drawing submittal shall be certified by Contractor with the following stamp:

1. "This is to certify that specification requirements have been met and dimensions, conditions and quantities are verified as shown and/or corrected on these drawings."

Signed _____
Contractor

1.5 Submittals:

A. Make submittals of Product Data, Shop Drawings, Samples, and other items in accordance with the provisions of this Section.

PART 2 - PRODUCTS

2.1 Shop Drawings:

A. Upon signed release from the Contractor, Architect will make electronic copies of construction documents available for use as base sheet for providing coordinated Shop Drawings.

B. Scale and measurements: Make Shop Drawings accurately to a scale sufficiently large to show pertinent aspects of the item and its method of incorporation into Work.

C. Types of media required:

1. Submit Shop Drawings in the form of one original reproducible copy of each drawing plus six bond prints of each.

2. Unless absolutely necessary, the size of Shop Drawings shall not exceed 42" x 30". Provide space on Drawings for approval stamps and brief review comments.

3. Copies of architectural/engineering blueprints will not be accepted.

D. Review comments of the Architect will be shown on the reproducible drawing when it is returned to the Contractor. The Contractor may make and distribute such copies as are required for his purpose.

2.2 Product Data:

A. Manufacturers' data include catalogue cuts, technical descriptive brochures, performance charts, test reports, writing diagrams, details, specifications, and other printed information issued or provided by manufacturers. Data shall be submitted in not less than eight (8) copies each. Upon receipt, the Architect will review, stamp copies, and return to the Contractor. If resubmittal is necessary, repeat process until approval has been obtained.

B. Manufacturers' data for equipment includes materials, type, performance, characteristics, voltage, phase, capacity, and similar data. Provide wiring diagrams when applicable. Submittals shall indicate catalogue, model, and serial numbers representing specified equipment.

C. Where contents of submitted literature from manufacturers include data not pertinent to submittal, clearly show which portions of the contents is being submitted for review.

D. Provide material safety sheets to Owner for approval prior to releasing product for manufacture.

2.3 Samples:

A. Provide physical Samples of precise items proposed to be provided. Identify as described under "Identification of Submittals" below.

B. Number of Samples required:

1. Submit Samples in quantity which is required to be returned, plus one which will be retained by Architect.

2. By prearrangement in specific cases, a single Sample may be submitted for review and, when approved, be installed in Work at a location agreed upon by Architect.

C. Colors and Patterns: Unless the precise color and pattern is specifically called out in Contract Documents, and whenever a choice of color or pattern is available in the specified products, submit samples of accurate color and pattern, to Architect for selection.

2.4 Equipment Operating and Maintenance Data:

A. Provide Operating, Maintenance and Product data manuals as described in Section 017823 of these Specifications.

2.5 Utility Approvals:

A. Approval of utilities or other public authorities having jurisdiction shall be obtained and reflected on affected submittals.

PART 3 - EXECUTION

3.1 Deviations from Contract Documents:

A. Clearly mark deviations in a conspicuous manner indicating component and system variations, additions and deletions, revised equipment locations, construction detail variations, substitutions, and similar changes or deviations. Indicate headroom heights, ceiling heights, clearances, and other dimensions affected by proposed deviations. Variations from Contract Documents not brought to the attention of Architect shall be the sole responsibility of Contractor even though such submittal has been accepted.

3.2 Identification of Submittals:

A. Consecutively number submittals.

1. When material is resubmitted for any reason, transmit under a new letter of transmittal and with original transmittal number and letter designation beginning with "A".

2. Changes should be clearly designated as to revisions made. No consideration will be allowed for submittal revision labor made to coordinate revised, changed, adjusted details or extent.

B. Accompany each submittal and resubmittal with a letter of transmittal showing information required for identification and checking. Letter of transmittal should make reference to applicable drawing numbers, specification sections and submittal schedule item number to which each submittal applies.

C. On at least the first page of each submittal, and elsewhere as required for positive identification, show submittal number in which item was included.

D. Each submittal should indicate supplier/installer's name, phone number and specific location(s) of submitted product in project.

E. Maintain an accurate submittal log for duration of Work, showing current status of submittals at all times. Make submittal log available to Architect for review upon request. List submittals and resubmittals together.

3.3 Grouping of Submittals:

A. Unless otherwise specified, make submittals in groups containing associated items to ensure that information is available for checking each item when it is received.

1. Partial submittals unless approved in advance by Architect may be rejected as not complying with provisions of Contract.

2. Contractor may be held liable for delays so occasioned.

3.4 Timing of Submittals:

A. Contractor shall submit within thirty (30) calendar days of Contract award a submittal schedule listing items by number and dates of submittal, and lead time for each item with particular note of priority items to be reviewed. Submittals shall be submitted in an orderly sequence with priority items clearly identified.

B. A complete list of material and other required information in connection with mechanical and electrical Work of project (plumbing, heating, ventilating, air conditioning, electrical), as listed under respective mechanical and electrical Specification Sections, must be submitted within thirty (30) calendar days after date of Notice to Proceed; no consideration will be given to partial lists submitted from time to time.

C. Other submittals by Contractor should be made within 90 calendar days of Notice to Proceed and far enough in advance of scheduled dates for installation to provide time required for reviews.

D. Where Contractor has neglected to submit shop drawings on a timely basis or to place orders for materials and labor early enough to conform to materials and labor requirements, color schemes, etc., such failure shall not be deemed as legitimate cause for delay.

E. In scheduling, allow at least fourteen (14) working days for review by Architect following receipt of the submittal. The following submittals will, by their nature, require additional time for review which should be factored into the schedule.

1. Structural steel and joists

a. For buildings of such size that parts of building will be constructed in separate stages, submit drawings in same stages, in order of need.

2. Metal fabrications

3. Hollow metal, doors and finished hardware

4. Elevator

5. Sprinkler systems

6. Automatic temperature controls

7. Sound system

8. Lighting fixtures

9. Casework shop drawings

3.5 Architect's Review:

A. Review by Architect does not relieve the Contractor from responsibility for errors which may exist in submitted data.

B. Revisions:

1. Make revisions required by Architect.

2. If Contractor considers required revisions to be a change, notification shall be given to Architect as provided for in General Conditions.

3. Make only those revisions required to obtain approval by Architect.

C. Architect's approval:

1. Until approval has been given by Architect, materials or items shall not be fabricated or incorporated in Work. Architect's approval will be only general in nature and shall not be construed as permitting departure from Contract requirements, or as relieving Contractor of responsibility for any errors concerning details, dimensions, materials, etc. If drawings show variations from Contract requirements because of standard shop practice or for other reasons, Contractor shall describe such variation in letter of transmittal. If acceptable, Architect may approve variations, subject to proper adjustment in Contract price. If Contractor fails to describe such variation, Contractor shall not be relieved of responsibility for executing Work in accordance with Contract, even though such drawings have been approved.

2. Acceptance shall not be construed as a complete check but will indicate only that design, fabrication, and detailing is consistent with design intent and that errors and discrepancies observed when reviewed have been noted. Acceptance of a separate item shall not be interpreted as an approval of an assembly in which the item functions. The right is reserved by the Owner or Architect to require submission of additional detail, shop, erection or setting drawings and of any schedules for any part of Work, whether or not specifically mentioned in Project Specifications, where substitutions or modifications are proposed by Contractor, or where such information is essential to proper assembly, coordination or execution of Work under Contract.

3. Review and acceptance shall not relieve the Contractor from responsibility for errors in shop drawings or for proper coordination assembly of materials and equipment with other Work, nor from responsibility of furnishing materials and labor not indicated on approved shop drawings, but required by Contract Documents for completion of Work.

END OF SECTION 013300

SECTION 013400 - OWNER'S SCHEDULE

PART 1 - GENERAL

1.1 Related Documents:

A. Drawings and general provisions of the Contract, including Instructions to Bidders, General Conditions, and Division 1 Specifications Sections, apply to this section.

1.2 Summary:

A. This section includes the following Owner's Schedule Information.

B. Related Sections: Section 013300, "Submittals"

1.3 Contract Package Preliminary Timeline

A. The preliminary timeline included in this specification is a general guideline for Contractor's performance of a portion(s) of their Work. With the exception of substantial completion date(s), information shown is subject to revision.

1.4 Preliminary Owner's Schedule Coordination Meeting

A. A preliminary Owner's Schedule will be developed by Contractor showing major categories of construction for this Project. To ensure accuracy of the schedule and assist in coordination of site activities, a meeting will be held with Contractors, Architect/Consulting Engineers and Owner. Meeting will take place within thirty (30) days of award of Contract to gather specific start dates, duration times, and to eliminate potential schedule conflicts. Proposed sequencing, durations, dates, etc., shall be in concert with required substantial completion date(s) for Project.

1.5 Fully Developed Owner's Schedule/Acceptance

A. After incorporation of data received at preliminary Owner's Schedule coordination meeting, a final Owner's Schedule will be prepared and distributed to Contractors. Contractors shall, within ten (10) days of receipt, notify the General Contractor, in writing, via fax, and certified mail of any exceptions taken. In the absence of such notification, the schedule shall then constitute the final Owner's schedule to be used by General Contractor for managing Work of this Project, including, but not limited to, planning, organizing, and directing Work and reporting progress, until subsequently revised.

END OF SECTION 013400

SECTION 014200 - REFERENCE STANDARDS

PART 1 - GENERAL

1.1 Related Documents:

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

1.2 Definitions:

A. General: Basic contract definitions are included in Conditions of the Contract.

B. "Indicated": Refers to graphic representations, notes, or schedules on the Drawings, or other paragraphs or Schedules in the Specifications, and similar requirements in Contract Documents. Terms such as "shown," "noted," "scheduled," and "specified" are used to help reader locate reference. Location is not limited.

C. "Directed": Terms such as "directed," "requested," "authorized," "selected," "approved," "required," and "permitted" mean directed by Owner and Architect, requested by Owner and Architect, and similar phrases.

D. "Approved": When used in conjunction with Architect's action on Contractor's submittals, applications, and requests, is limited to Architect's duties and responsibilities as stated in Conditions of Contract.

E. "Regulations": Includes laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, as well as rules, conventions, and agreements within construction industry that control performance of Work.

F. "Furnish": Means supply, deliver to Project Site, and appropriately store ready for unpacking, assembly, installation, and similar operations.

G. "Install": Describes operations at Project Site including actual unloading, unpacking, assembly, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.

H. "Provide": Means to furnish and install, complete and ready for intended use.

I. "Installer": An installer is the Contractor or another entity engaged by Contractor, either as an employee, subcontractor, or contractor of lower tier, to perform a particular portion of construction such as installation, erection, application, or similar operations. Installers are required to be experienced in operations they are engaged to perform.

1. The term "experienced," when used with term "installer," means having a minimum of 5 previous projects similar in size and scope to this Project, being familiar with special requirements indicated, and having complied with requirements of authorities having jurisdiction.

2. Trades: Using terms such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to tradespersons of corresponding generic names.

3. Assigning Specialists: Certain Sections of Specifications require that specific construction activities shall be performed by specialists who are recognized experts in those operations. Specialists engaged for those activities, and their assignments are requirements over which Contractor has no option. However, ultimate responsibility for fulfilling contract requirements remains with Contractor.

a. This requirement shall not be interpreted to conflict with enforcing building codes and similar regulations governing Work. It is also not intended to interfere with local trade-union jurisdictional settlements and similar conventions.

J. "Project Site" is the space available to Contractor for performing construction activities, either exclusively or in conjunction, with others performing other work as part of Project. Extent of Project Site is shown on the Drawings and may or may not be identical with description of land on which Project is located.

K. "Testing Agencies": A testing agency is an independent entity engaged to perform specific inspections or tests, either at the Project Site or elsewhere, and to report on and, if required, to interpret results of those inspections or tests. A testing agency shall not have any relation with the Contractor, by either Ownership or share.

1.3 Specification Format and Content Explanation:

A. Specification Format: Specifications are organized into Divisions and Sections based on CSI's Master Format 2016's numbering system.

B. Specification Content: This Specification uses certain conventions regarding style of language and intended meaning of certain terms, words, and phrases when used in particular situations or circumstances. These conventions are explained as follows:

1. Abbreviated Language: Language used in Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be interpolated as the sense requires. Singular words will be interpreted as plural and plural words interpreted as singular where applicable as the context of Contract Documents indicates.

2. Streamlined Language: Specifications generally use imperative mood and streamlined language. Requirements expressed in imperative mood are to be performed by Contractor. At certain locations in Text, subjective language is used for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.

a. Words "shall be" are implied where a colon (:) is used within a sentence or phrase.

1.4 Industry Standards:

A. Applicability of Standards: Except where Contract Documents include more stringent requirements, applicable construction industry standards have same force and effect as if incorporated directly into Contract Documents to extent referenced. Such standards are made a part of Contract Documents by reference.

B. Publication Dates: Comply with standards in effect as of date of Contract Documents.

C. Conflicting Requirements: Where compliance with 2 or more standards is specified and standards establish different or conflicting requirements for minimum quantities or quality levels, comply with most stringent requirement. Refer to Architect before proceeding for a

decision on requirements that are different but apparently equal, and where it is uncertain which requirement is most stringent.

1. Minimum Quantity or Quality Levels: Quantity or quality level shown or specified shall be minimum acceptable. Actual installation may comply exactly with minimum quantity or quality specified, or it may exceed minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for context of requirements. Refer uncertainties to Architect for a decision before proceeding.

D. Copies of Standards: Each entity engaged in construction on Project is required to be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with Contract Documents.

1. Where copies of standards are needed to perform a required construction activity, Contractor shall obtain copies directly from publication source.

E. Abbreviations and Names: Trade association names and titles of general standards are frequently abbreviated. Where such acronyms or abbreviations are used in Specifications or other Contract Documents, they mean recognized names of trade associations, standards-generating organizations, authorities having jurisdiction, or other entities applicable to context of text provision. Refer to Gale Research Co.'s "Encyclopedia of Associations," available in most libraries.

F. Abbreviations and Names: Trade association names and titles of general standards are frequently abbreviated. The following acronyms or abbreviations, as referenced in Contract Documents, are defined to mean associated names. Names and addresses are subject to change and are believed, but are not assured, to be accurate and up-to-date as of date of Contract Documents.

AA	Aluminum Association 1525 Wilson Boulevard, Suite 600 Arlington, VA 22209 (703) 358-2960
AABC	Associated Air Balance Council 1518 K St., NW Washington, DC 20005 (202) 737-0202
AAMA	American Architectural Manufacturers Assoc. 1827 Walden Office Square, Suite 550 Schaumburg, IL 60173-4268 (847) 303-5664
AAN	American Association of Nurserymen 1250 Eye St., NW, Suite 500 Washington, DC 20005 (202) 789-2900
AASHTO	American Association of State Highway and Transportation Officials 444 North Capitol St., Suite 249 Washington, DC 20001 (202) 624-5800
AATCC	American Association of Textile Chemists and Colorists P.O. Box 12215 Research Triangle Park, NC 27709-2215 (919) 549-8141
ABMA	American Bearing Manufacturers Assoc. 2025 M Street, NW, Suite 800 Washington, DC 20036 (202) 367-1155

ACI	American Concrete Institute P.O. Box 9094 Farmington Hills, MI 48333-9094 (248) 848-3700
ACIL	American Council of Independent Laboratories 1629 K St., NW Washington, DC 20006 (202) 887-5872
ACPA	American Concrete Pipe Assoc. 222 W. Las Colinas Blvd., Suite 641 Irving, TX 75039-5423 (972) 506-7216
ADC	Air Diffusion Council 1901 N. Roselle Road, Suite 800 Schaumburg, IL 60195 (847) 706-6750
AFBMA	Anti-Friction Bearing Manufacturers Assoc. (Now ABMA)
AFPA	American Forest and Paper Assoc. 1111 Nineteenth Street, NW, Suite 800 Washington, DC 20036 (800) 878-8878
AGA	American Gas Association 400 N. Capitol Street, NW, Suite 450 Washington, DC 20001 (202) 842-7000
AHA	American Hardboard Assoc. (Now CPA)
AHAM	Association of Home Appliance Manufacturers 1111 Nineteenth Street, NW, Suite 402 Washington, DC 20036 (202) 872-5955
AI	Asphalt Institute 2696 Research Park Dr. Lexington, KY 40511-8480 (859) 288-4960
AIA	The American Institute of Architects 1735 New York Ave., NW Washington, DC 20006 (202) 626-7300
AIA	American Insurance Assoc. 1130 Connecticut Ave., NW, Suite 1000 Washington, DC 20036 (202) 828-7100
AIHA	American Industrial Hygiene Assoc. 2700 Prosperity Ave., Suite 250 Fairfax, VA 22031 (703) 849-8888
AISC	American Institute of Steel Construction One East Wacker Dr., Suite 700 Chicago, IL 60601-1802 (312) 670-2400
AISI	American Iron and Steel Institute 1140 Connecticut Avenue, NW, Suite 705 Washington, DC 20036 (202) 452-7100

AITC	American Institute of Timber Construction 7012 S. Revere Parkway, Suite 140 Centennial, CO 80112 (303) 792-9559
ALI	Associated Laboratories, Inc. c/o HOH Chemicals 500 S. Vermont St. Palatine, IL 60067 (708) 358-7400
ALSC	American Lumber Standards Committee P.O. Box 210 Germantown, MD 20875 (301) 972-1700
AMCA	Air Movement and Control Assoc. 30 W. University Dr. Arlington Heights, IL 60004-1893 (708) 394-0150
ANSI	American National Standards Institute 1819 L Street, NW, 6th Floor Washington, DC 20036 (202) 293-8020
AOAC	AOAC International 481 North Frederick Avenue, Suite 500 Gaithersburg, MD 20877-2417 (301) 924-7077
AOSA	Association of Official Seed Analysts 1763 E. University Blvd., Suite A Las Cruces, NM 88001 (505) 522-1437
APA	American Plywood Assoc. 7011 So. 19th Tacoma, WA 98466 (253) 565-6600
API	American Petroleum Institute 1220 L St., NW Washington, DC 20005 (202) 682-8000
ARI	Air-Conditioning and Refrigeration Institute 4100 N. Fairfax Dr., Suite 200 Arlington, VA 22203 (703) 524-8800
ARMA	Asphalt Roofing Manufacturers Assoc. 1156 Fifteenth Street, NW, Suite 900 Washington, DC 20005 (202) 207-0917
ASA	Acoustical Society of America 2 Huntington Quadrangle, Suite 1NO1 Melville, NY 11747-4502 (516) 576-2360
ASC	Adhesive and Sealant Council 7979 Old Georgetown Road, Suite 500 Bethesda, MD 20814 (301) 986-9700
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers 1791 Tullie Circle, NE Atlanta, GA 30329 (404) 636-8400

ASME	American Society of Mechanical Engineers 3 Park Avenue New York, NY 10016-5990 (212) 591-7722
ASPA	American Sod Producers Assoc. (now Turfgrass Producers International) 2 E. Main Street East Dundee, IL 60118 (847) 649-5555
ASPE	American Society of Plumbing Engineers 8614 Catalpa Avenue, Suite 1007 Chicago, IL 60656-1116 (773) 693-2773
ASSE	American Society of Sanitary Engineering 901 Canterbury, Suite A Westlake, OH 44145 (440) 835-3040
ASTM	ASTM-International 100 Barr Harbor Drive P.O. Box C700 West Conshohocken, PA 19428-2959 (610) 832-9585
ATIS	Alliance for Telecommunications Industry Solutions 1200 G St., NW, Suite 500 Washington, DC 20005 (202) 628-6380
AWCMA	American Window Covering Manufacturers Assoc. (Now WCMA)
AWI	Architectural Woodwork Institute 1952 Isaac Newton Square West Reston, VA 20190 (703) 733-0600
AWPA	American Wood Protection Association P.O. Box 361784 Birmingham, AL 35236-1784 (205) 733-4077
AWS	American Welding Society 550 LeJeune Rd., NW Miami, FL 33126 (305) 443-9353
AWWA	American Water Works Assoc. 6666 W. Quincy Ave. Denver, CO 80235 (303) 794-7711
BANC	Brick Association of North Carolina P.O. Box 13290 Greensboro, NC 27415-3290 (910) 273-5566
BHMA	Builders' Hardware Manufacturers Assoc. 355 Lexington Ave., 17th Floor New York, NY 10017 (212) 297-2122
BIA	Brick Industry Association 11490 Commerce Park Dr. Reston, VA 20191-1525 (703) 620-0010

BIFMA	The Business and Institutional Furniture Manufacturer's Association 2680 Horizon Dr., SE, Suite A1 Grand Rapids, MI 49546-7500 (616) 285-3963
CAGI	Compressed Air and Gas Institute 1300 Sumner Ave. Cleveland, OH 44115-2851 (216) 241-7333
CAUS	Color Association of the United States 315 West 39th Street, Studio 507 New York, NY 10018 (212) 947-7774
CBHF	State of California, Dept. of Consumer Affairs Bureau of Home Furnishings and Thermal Insulation 3485 Orange Grove Ave. North Highland, CA 95660-5595 (916) 574-2041
CBM	Certified Ballast Manufacturers Assoc. 1422 Euclid Ave., Suite 402 Cleveland, OH 44115-2851 (216) 241-0711
CCC	Carpet Cushion Council P.O. Box 546 Riverside, CT 06878 (203) 637-1312
CDA	Copper Development Association Inc. 260 Madison Avenue New York, NY 10016 (212) 251-7200
CFFA	Chemical Fabrics & Film Association, Inc. 1300 Sumner Ave. Cleveland, OH 44115-2851 (216) 241-7333
CGA	Compressed Gas Assoc. 4221 Walney Road, 5th Floor Chantilly, VA 20151-2923 (703) 788-2700
CISCA	Ceiling and Interior Systems Construction Assoc. 1500 Lincoln Highway, Suite 202 St. Charles, IL 60174 (630) 584-1919
CISPI	Cast Iron Soil Pipe Institute 5959 Shallowford Rd., Suite 419 Chattanooga, TN 37421 (423) 892-0137
CPA	Composite Panel Assoc. 18922 Premiere Court Gaithersburg, MD 20879-1574 (301) 670-0604
CRI	Carpet and Rug Institute P.O. Box 2048 Dalton, GA 30722 (706) 278-3176
CRSI	Concrete Reinforcing Steel Institute 933 N. Plum Grove Rd. Schaumburg, IL 60173 (847) 517-1200

CSI	The Construction Specification Institute 99 Canal Center Plaza, Suite 300 Alexandria, VA 22314 (800) 689-2900
CTIOA	Ceramic Tile Institute of America 12061 West Jefferson Blvd. Culver City, CA 90230 (310) 574-7800
DHI	Door and Hardware Institute 14150 Newbrook Dr., Suite 200 Chantilly, VA 20151 (703) 222-2010
DIPRA	Ductile Iron Pipe Research Assoc. 245 Riverchase Parkway East, Suite O Birmingham, AL 35244 (205) 402-8700
ECSA	Exchange Carriers Standards Assoc. (Now ATIS)
EIA	Electronic Industries Assoc. 2001 Pennsylvania Ave., NW Washington, DC 20006-1813 (202) 457-4900
EIMA	EIFS Industry Manufacturers Assoc. 3000 Corporate Center Dr., Suite 270 Marrow, GA 30260 (770) 968-7945
EJMA	Expansion Joint Manufacturers Assoc. 25 N. Broadway Tarrytown, NY 10591 (914) 332-0040
ETL	ETL Testing Laboratories, Inc. P.O. Box 2040 3933 Route 11, Industrial Park Cortland, NY 13045 (607) 753-6711
FCI	Fluid Controls Institute 1300 Sumner Avenue Cleveland, OH 44115 (216) 241-7333
FCIB	Floor Covering Installation Board 310 Holiday Ave. Dalton, GA 30720 (706) 226-5488
FGMA	Flat Glass Marketing Assoc. (Now GANA)
FM	Factory Mutual 1301 Atwood Avenue P.O. Box 7500 Johnston, RI 02919 (401) 275-3000
FTI	Facing Tile Institute P.O. Box 8880 Canton, OH 44711 (216) 488-1211

GA	Gypsum Association 810 First St., NE, Suite 510 Washington, DC 20002 (202) 289-5440
GANA	Glass Association of North America 2945 SW Wanamaker Drive, Suite A Topeka, KS 66614-5321 (785) 271-0208
HEI	Heat Exchange Institute 1300 Sumner Ave. Cleveland, OH 44115-2851 (216) 241-7333
HI	Hydronics Institute P.O. Box 218 35 Russo Place Berkeley Heights, NJ 07922 (908) 464-8200
HI	Hydraulic Institute 9 Sylvan Way Parsippany, NJ 07054-3802 (973) 267-9700
HMA	Hardwood Manufacturers Assoc. 400 Penn Center Blvd., Suite 530 Pittsburgh, PA 15235 (800) 373-9663
HPVA	Hardwood Plywood and Veneer Assoc. P.O. Box 2789 Reston, VA 20195 (703) 435-2900
IBD	Institute of Business Designers 341 Merchandise Mart Chicago, IL 60654 (312) 467-1950
ICEA	Insulated Cable Engineers Association, Inc. P.O. Box 1568 Carrollton, GA 30112
IEC	International Electrotechnical Commission (Available from ANSI) 1819 L Street, NW, 6th Floor Washington, DC 20036 (202) 293-8020
IEEE	Institute of Electrical and Electronic Engineers 3 Park Avenue, 17th Floor New York, NY 10016-5997 (212) 419-7900
IESNA	Illuminating Engineering Society of North America 120 Wall Street, Floor 17 New York, NY 10005 (212) 248-5000
IGCC	Insulating Glass Certification Council P.O. Box 9 Henderson Harbor, NY 13651 (315) 646-2234
ILI	Indiana Limestone Institute of America 400 Stone City Bank Building Bedford, IN 47421 (812) 275-4426

IMSA	International Municipal Signal Assoc. 165 E. Union St. Newark, NY 14513 (315) 331-2182
IRI	Industrial Risk Insurers P.O. Box 5010 85 Woodland St. Hartford, CT 06102-5010 (203) 520-7300
ISA	Instrument Society of America P.O. Box 12277 67 Alexander Dr. Research Triangle Park, NC 27709 (919) 549-8411
KCMA	Kitchen Cabinet Manufacturers Assoc. 1899 Preston White Dr. Reston, VA 20191-5435 (703) 264-1690
LIA	Lead Industries Association, Inc. 13 Main Street Sparta, NJ 07871 (973) 726-5323
LPI	Lightning Protection Institute P.O. Box 6336, Suite E St. Joseph, MO 64506 (800) 488-6864
MBMA	Metal Building Manufacturer's Assoc. 1300 Sumner Ave. Cleveland, OH 44115-2851 (216) 241-7333
MCAA	Mechanical Contractors Association of America 1385 Piccard Dr. Rockville, MD 20850-4329 (301) 869-5800
MFMA	Maple Flooring Manufacturers Assoc. 60 Revere Dr., Suite 500 Northbrook, IL 60062 (847) 480-9138
MIA	Marble Institute of America 28901 Clemens Road, Suite 100 Westlake, OH 44145 (440) 250-9222
ML/SFA	Metal Lath/Steel Framing Assoc. (A Division of the National Association of Architectural Metal Manufacturers) 8 South Michigan Ave., Suite 1000 Chicago, IL 60603 (312) 332-0405
MSS	Manufacturers Standardization Society of the Valve and Fittings Industry 127 Park St., NE Vienna, VA 22180 (703) 281-6613
NAA	National Arborist Assoc. (Now TCIA)

NAAMM	National Association of Architectural Metal Manufacturers 8 South Michigan Ave., Suite 1000 Chicago, IL 60603 (312) 332-0405
NAIMA	North American Insulation Manufacturers Assoc. 44 Canal Center Plaza, Suite 310 Alexandria, VA 22314 (703) 684-0084
NAPA	National Asphalt Pavement Assoc. NAPA Building 5100 Forbes Blvd. Lanham, MD 20706-4413 (888) 468-6499
NAPF	National Association of Plastic Fabricators (Now DLPA)
NBGQA	National Building Granite Quarries Assoc. 1220 L Street, NW, Suite 100-167 Washington, DC 20005 (800) 557-2848
NBHA	National Builders Hardware Assoc. (Now DHI)
NCMA	National Concrete Masonry Assoc. 13750 Sunrise Valley Drive Herndon, VA 20171-4662 (703) 713-1900
NCPI	National Clay Pipe Institute P.O. Box 759 Lake Geneva, WI 53147 (262) 248-9094
NCRPM	National Council on Radiation Protection and Measurements 7910 Woodmont Ave., Suite 400 Bethesda, MD 20814 (301) 657-2652
NCSPA	National Corrugated Steel Pipe Association 13140 Coit Road, Suite 320, LB 120 Dallas, TX 75240-6737 (972) 850-1907
NEC	National Electrical Code (from NFPA)
NECA	National Electrical Contractors Assoc. 3 Bethesda Metro Center, Suite 1100 Bethesda, MD 20814 (301) 657-3110
NEII	National Elevator Industry, Inc. 1677 County Route 64 P.O. Box 838 Salem, NY 12865-0838 (518) 854-3100
NEMA	National Electrical Manufacturers Assoc. 1300 North 17th Street, Suite 1752 Rosslyn, VA 22209 (703) 841-3200
NETA	International Electrical Testing Assoc. P.O. Box 687 Morrison, CO 80465 (303) 697-8441

NFPA	National Fire Protection Assoc. One Batterymarch Park Quincy, MA 02169-7471 (617) 770-3000 (800) 344-3555
NFPA	National Forest Products Assoc. (Now AFPA)
NHLA	National Hardwood Lumber Assoc. 6830 Raleigh-LaGrange Road Memphis, TN 38184-0518 (901) 377-1818
NKCA	National Kitchen Cabinet Assoc. (Now KCMA)
NLGA	National Lumber Grades Authority 406 - First Capital Place 960 Quayside Drive New Westminster, B.C. V3M 6G2 (604) 624-2393
NOFMA	National Oak Flooring Manufacturers Assoc. P.O. Box 3009 Memphis, TN 38173-0009 (901) 526-5016
NPA	National Particleboard Assoc. 18928 Premiere Ct. Gaithersburg, MD 20879 (301) 670-0604
NPCA	National Paint and Coatings Assoc. 1500 Rhode Island Ave., NW Washington, DC 20005 (202) 462-6272
NRCA	National Roofing Contractors Assoc. 10255 W. Higgins Rd., Suite 600 Rosemont, IL 60018-5607 (847) 299-9070
NSF	National Sanitation Foundation P.O. Box 130140 789 N. Dixboro Road Ann Arbor, MI 48113-0140 (734) 769-8010
NSSEA	National School Supply and Equipment Assoc. 8380 Colesville Rd., Suite 250 Silver Spring, MD 20910 (301) 495-0240
NTMA	National Terrazzo and Mosaic Assoc. 201 North Maple, Suite 208 Purcellville, VA 20132 (540) 751-0930
NWMA	National Woodwork Manufacturers Assoc. (Now WDMA)
PATMI	Power Actuated Tool Manufacturers' Institute, Inc. 1603 Boone's Lick Road St. Charles, MO 63301 (636) 947-6610
PCA	Portland Cement Assoc. 5420 Old Orchard Rd. Skokie, IL 60077 (847) 966-6200

PCI	Precast/Prestressed Concrete Institute 209 W. Jackson Blvd. Chicago, IL 60606-6938 (312) 786-0300
PDI	Plumbing and Drainage Institute 800 Turnpike Street, Suite 300 North Andover, MA 01845 (978) 557-0720
PEI	Porcelain Enamel Institute P.O. Box 920220 Norcross, GA 30010 (770) 281-8980
RFCI	Resilient Floor Covering Institute 401 East Jefferson Street, Suite 102 Rockville, MD 20850 (301) 340-8580
RIS	Redwood Inspection Service 405 Enfrente Dr., Suite 200 Novato, CA 94949 (415) 382-0662
RMA	Rubber Manufacturers Assoc. 1400 K St., NW, Suite 900 Washington, DC 20005 (202) 682-4800
SDI	Steel Deck Institute P.O. Box 25 Fox River Grove, IL 60021 (847) 458-4647
SDI	Steel Door Institute 30200 Detroit Rd. Cleveland, OH 44145 (440) 889-0010
SGCC	Safety Glazing Certification Council P.O. Box 730 Sackets Harbor, NY 13685 (315) 646-2234
SHLMA	Southern Hardwood Lumber Manufacturers Assoc. (Now HMA)
SIGMA	Sealed Insulating Glass Manufacturers Assoc. 401 N. Michigan Ave., Suite 2400 Chicago, IL 60611 (312) 644-6610
SJI	Steel Joist Institute 3127 Mr. Joe White Avenue Myrtle Beach, SC 29577-6760 (843) 626-1995
SMA	Screen Manufacturers Assoc. 3950 Lake Shore Dr., Suite 502-A Chicago, IL 60613-3431 (312) 525-2644
SMACNA	Sheet Metal and Air Conditioning Contractors National Assoc. 4201 Lafayette Center Dr. Chantilly, VA 20151-1209 (703) 803-2980

SPC	The Society for Protective Coatings 40 24th Street, 6th Floor Pittsburgh, PA 15222-4656 (412) 281-2331
SPIB	Southern Pine Inspection Bureau 4709 Scenic Highway Pensacola, FL 32504 (850) 434-2611
SPRI	Single Ply Roofing Institute 77 Rumford Ave., Suite 3B Waltham, MA 02453 (781) 647-7026
SSPMA	Sump and Sewage Pump Manufacturers Assoc. P.O. Box 647 Northbrook, IL 60065 (847) 559-9233
STI	Steel Tank Institute 570 Oakwood Rd. Lake Zurich, IL 60047 (847) 438-8265
SWI	Steel Window Institute 1300 Sumner Ave. Cleveland, OH 44115-2851 (216) 241-7333
SWPA	Submersible Wastewater Pump Assoc. 1866 Sheridan Road, Suite 201 Highland Park, IL 60035-2545 (847) 681-1868
TCNA	Tile Council of North America 100 Clemson Research Blvd. Anderson, SC 29625 (864) 646-8453
TCIA	Tree Care Industry Association 3 Perimeter Road, Unit 1 Manchester, NH 03103 (603) 314-5380
TIMA	Thermal Insulation Manufacturers Assoc. (Now NAIMA)
TPI	Truss Plate Institute 583 D'Onofrio Dr., Suite 200 Madison, WI 53719 (608) 833-5900
UL	Underwriters Laboratories 333 Pfingsten Rd. Northbrook, IL 60062 (847) 272-8800
UNI	Uni-Bel PVC Pipe Assoc. 2655 Villa Creek Dr., Suite 155 Dallas, TX 75234 (972) 243-3902
USP	U.S. Pharmacopoeial Convention 12601 Twinbrook Parkway Rockville, MD 20852 (301) 881-0666
WA	Wallcoverings Assoc. 401 N. Michigan Ave. Chicago, IL 60611-4267 (312) 644-6610

WCLIB	West Coast Lumber Inspection Bureau P.O. Box 23145 Portland, OR 97281 (503) 639-0651
WCMA	Window Covering Manufacturers Assoc. 355 Lexington Ave., 17th Floor New York, NY 10017 (212) 297-2122
WDMA	Window and Dorr Manufacturers Association 1400 E. Touhy Avenue, Suite 470 Des Plaines, IL 60018-3337 (847) 223-2301
WIC	Woodwork Institute of California P.O. Box 980247 West Sacramento, CA 95798 (916) 372-9943
WLPDIA	Western Lath, Plaster, Drywall Industries Assoc. (Formerly California Lath & Plaster Assoc.) 8635 Navajo Rd. San Diego, CA 92119 (619) 229-8307
WRI	Wire Reinforcement Institute 942 Main Street, Suite 300 Hartford, CT 06103 (800) 542-4974
WSC	Water Systems Council 1101 30th Street, NW, Suite 500 Washington, DC 20007 (202) 625-4387
WSFI	Wood and Synthetic Flooring Institute 4415 W. Harrison St., Suite 242-C Hillside, IL 60162 (708) 449-2933
WWPA	Western Wood Products Assoc. Yeon Building 522 SW 5th Ave. Portland, OR 97204-2122 (503) 224-3930
WWPA	Woven Wire Products Assoc. 1641 E. Higgins Lake Drive Roscommon, MI 48653 (517) 821-6621

G. Federal Government Agencies: Names and titles of federal government standard- or Specification-producing agencies are often abbreviated. The following acronyms or abbreviations referenced in Contract Documents indicate names of standard- or Specification-producing agencies of federal government. Names and addresses are subject to change and are believed, but are not assured, to be accurate and up-to-date as of date of Contract Documents.

CE	Corps of Engineers U.S. Army Corps of Engineers Headquarters 441 G Street, NW Washington, DC 20314 (202) 761-1024

CFR	Code of Federal Regulations (Available from the Government Printing Office) 732 N. Capitol Street, NW Washington, DC 20401 (202) 512-0000 (Material is usually first published in the "Federal Register")
CPSC	Consumer Product Safety Commission 4330 East-West Highway Bethesda, MD 20814-4408 (800) 638-2772
CS	Commercial Standard (U.S. Department of Commerce) Government Printing Office 432 N. Capitol Street, NW Washington, DC 20401 (202) 512-0000
DOC	Department of Commerce 1401 Constitution Ave., NW Washington, DC 20230 (202) 482-2000
DOT	Department of Transportation 400 Seventh St., SW Washington, DC 20590 (202) 366-4000
EPA	Environmental Protection Agency 1200 Pennsylvania Ave., NW Washington, DC 20460 (202) 272-0167
FAA	Federal Aviation Administration (U.S. Department of Transportation) 800 Independence Ave., SW Washington, DC 20591 (866) 835-5322
FCC	Federal Communications Commission 445 12th Street, SW Washington, DC 20554 (888) 225-5322
FDA	Food and Drug Administration 5600 Fishers Lane Rockville, MD 20857 (888) 463-6332
FHA	Federal Housing Administration (U.S. Department of Housing and Urban Development) 451 Seventh St., SW Washington, DC 20410 (202) 708-1122
FS	Federal Specification (from GSA) Specifications Unit (WFSIS) 7th and D St., SW Washington, DC 20407 (202) 708-9205
GSA	General Services Administration F St. and 18th St., NW Washington, DC 20405 (202) 708-5082

MIL	Military Standardization Documents (U.S. Department of Defense) Naval Publications and Forms Center 5801 Tabor Ave. Philadelphia, PA 19120
NIST	National Institute of Standards and Technology (U.S. Department of Commerce) Gaithersburg, MD 20899 (301) 975-2000
OSHA	Occupational Safety and Health Administration (U.S. Department of Labor) 200 Constitution Ave., NW Washington, DC 20210 (202) 219-6091
PS	Product Standard of NBS (U.S. Department of Commerce) Government Printing Office 432 N. Capitol Street, NW Washington, DC 20401 (202) 512-0000
REA	Rural Electrification Administration (U.S. Department of Agriculture) 14th St. and Independence Ave., SW Washington, DC 20250 (202) 447-2791
USDA	U.S. Department of Agriculture 1400 Independence Ave. Washington, DC 20250 (202) 720-2791
USPS	U.S. Postal Service 475 L'Enfant Plaza, SW Washington, DC 20260-0010 (202) 268-2000

1.5 Governing Regulations and Authorities:

A. Copies of Regulations: Obtain copies of following regulations and retain at Project Site to be available for reference by parties who have a reasonable need.

1.6 Submittals:

A. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established in conjunction with compliance with standards and regulations bearing upon performance of Work.

PART 2 - PRODUCTS (not used)

PART 3 - EXECUTION (not used)

END OF SECTION 014200

SECTION 014500 - QUALITY CONTROL

PART 1 - GENERAL

1.1 Summary:

A Comply with Section 502 CONSTRUCTION MATERIAL MANAGEMENT of the 2012 International Green Construction Code (IgCC) regarding storage and handling of materials and construction phase moisture control.

B. Independent testing, inspection and quality control services for evaluation of material, methods and workmanship for concrete work, steel work, compaction and backfilling, and bituminous concrete. At Contractor's option, one or more agencies may be used for quality control services with the exception of Geotechnical firm that provided Subsurface Exploration Data must be used for Earthwork Inspection and Testing.

C. Contractor shall retain services of acceptable independent agencies for testing required by specifications and pay costs related thereto.

1.2 Related Sections:

A Drawings and general provisions of Contract, including General Conditions and other Division-1 Specification sections, apply to work of this section.

1.3 Construction Material Management

A. Comply with IgCC Section 502.1.1. Materials Stored and handled onsite during construction phases shall comply with the applicable manufacturer's printed instructions. Where manufacturer's printed instruction are not available, approved standards or guidelines shall be followed.

B. Comply with IgCC Section 502.1.2. Porous of fibrous materials and other materials subject to moisture damage shall be protected from moisture during the construction phase. Material damaged by moisture or that are visibly colonized by fungi either prior to delivery or during the construction phase shall be cleaned and dried or, where damage cannot be corrected by such means, shall be removed and replaced.

1.4 Concrete Quality Control Testing During Construction:

A Concrete Testing Laboratory: Contractor shall employ testing laboratories to conduct tests and inspections, interpret results and evaluate for compliance with Contract Documents and report findings to Architect, Owner, Contractor and Structural Engineer.

B. Sampling and testing for quality control during placement of concrete shall include the following, as directed by Architect.

1. Sampling Fresh Concrete: ASTM C 172, except modified for slump to comply with ASTM C 94.

a. Slump: ASTM C 143; one test for each concrete load at point of discharge; and one test for each set of compressive strength test specimens.

b. Air Content: ASTM C 143, volumetric method for lightweight or normal weight concrete; ASTM C 231 pressure for normal weight concrete; one for each set of compressive strength test specimens.

c. Concrete Temperature: Test hourly when air temperature is 40° Fahrenheit and below, and when 80° Fahrenheit and above; and each time a set of compression test specimens are made.

d. Compression Test Specimen: ASTM C 31; one set of 4 standard cylinders for each compressive strength test, unless otherwise directed. Mold and store cylinders for laboratory cured test specimens. Secure samples in accordance with ASTM C 172.

e. Compressive Strength Tests: ASTM C 39; one set for each day's pour, or for each 100 cu. yds. or fraction thereof, of each concrete class placed in any one day or for each 5,000 sq. ft. of surface area placed; 2 specimens tested at 7 days; 2 specimens tested at 28 days.

f. When frequency of testing will provide less than 5 strength tests for a given class of concrete, conduct testing from at least 5 randomly selected batches or from each batch if fewer than 5 are used.

g. Strength level of concrete will be considered satisfactory if averages of sets of three consecutive strength test results equal or exceed specified compressive strength, and no individual strength test result falls below specified compressive strength by more than 500 psi.

2. Test results shall be reported in writing to Architect (2 copies); and Contractor, Owner, and Local Building Department (1 copy each). Reports of compressive strength tests shall contain the project identification, name of Contractor, name of concrete supplier, truck number and batch number, date of concrete placement, name of concrete testing service and certifying Engineer, concrete type and class, ambient and concrete temperatures, location of concrete batch in structure, design compressive strength at 28 days, concrete mix proportions and materials; slump and air test results, compressive breaking strength and type of break for both 7-day tests and 28-day tests.

3. Test Evaluation: Concrete cylinder tests shall be evaluated by Architect in accordance with ACI 318 and ACI 214.

4. Additional Tests: Testing service shall make additional tests of in-place concrete when test results indicate specified concrete strengths and other characteristics have not been attained in structure, as directed by Architect. Testing service may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C 142, or by other methods as directed. Contractor shall pay for tests conducted, and additional testing as may be required, when unacceptable concrete is verified.

5. In event that additional coring tests do not show strength required or as determined by load tests made in accordance with ACI 318, and if tests indicate necessity, defective parts shall be removed and replaced, or shall be reinforced as directed by Architect at Contractor's expense, including expense of tests. If tests indicate structure adequately meets requirements of Contract Documents, test results of defective cylinders shall be waived.

C. Contractor's Responsibility: Contractor shall observe daily work of testing laboratory in field and laboratory and shall report all known deviations to approved standards to Architect within 24 hours. Failure to so notify Architect in event of deviations shall not waive the Contractor's approval of subsequent test results.

D. Curing Box: Contractor shall construct an insulated curing box to cure concrete cylinders and maintain required temperatures. Construct each box large enough to store a minimum of 18 cylinders.

1.5 Structural Steel and Steel Joist Quality control During Construction:

A. Inspection Agency: Contractor shall employ an independent testing and inspection agency having a registered Professional Engineer licensed in State of Maryland on its staff to inspect high strength bolted connections, welded connections, to perform tests and prepare test reports. This firm shall provide a qualified project inspector who shall work under direct supervision of registered Professional Engineer and who shall be approved in advance by Owner, Local Building Department and be acceptable to Architect.

1. Testing agency shall conduct and interpret tests and state in each report whether test specimens comply with requirements, and specifically state deviations there from.

2. Testing agency may inspect structural steel and steel joist at plant before shipment; however, Owner or Architect reserve right, at any time before final acceptance, to reject material not complying with specified requirements.

B. Testing agency shall have access to places where structural steel Work and steel joist Work is being fabricated or produced so that required inspection and testing can be accomplished.

C. Contractor shall correct deficiencies in structural steel and steel joist Work which inspections and laboratory test reports indicate not to be in compliance with requirements.

D. Testing agency shall perform additional tests, at Contractor's expense, as may be necessary to reconfirm any non-compliance of original Work, and as may be necessary to show compliance of corrected Work.

E. Minimum Testing Requirements:

1. Shop Bolted Connections: Inspect or test in accordance with AISC specifications for structural steel.

2. Shop Welding: Inspect and test during fabrication of structural steel and steel joist assemblies as follows:

a. Certify welders and conduct inspections and tests as required. Record types and locations of defects found in Work. Record work required and performed to correct deficiencies.

b. Perform visual inspection of all welds.

c. Perform tests of suspected defective welds as follows: Inspection procedures listed are to be used at testing agency's option.

(1) Liquid Penetrant Inspection: ASTM E 165.

(2) Magnetic Particle Inspection: ASTM E 109; performed on root pass and on finished weld. Cracks or zones of incomplete fusion or penetration not acceptable.

(3) Radiographic Inspection: ASTM E 94 and ASTM E 142: minimum quality level "2-2T".

(4) Ultrasonic Inspection: ASTM E 164.

F. Field Bolted Connections: Inspect in accordance with AISC and SJI specifications.

G. Field Welding: Inspect and test during erection of structural steel, steel joist and metal decking as follows:

1. Certify welders and conduct inspections and tests as required. Record types and locations of defects found in Work. Record Work required and performed to correct deficiencies.

2. Perform visual inspection of all welds.

3. Perform tests of suspected defective welds and of all moment connection welds as follows: Inspection procedures listed are to be used at testing agency's option.

a. Liquid Penetrant Inspection: ASTM E 165.

b. Magnetic Particle Inspection: ASTM 109; performed on root pass and on finished weld. Cracks or zones of incomplete fusion or penetration not acceptable.

c. Radiographic Inspection: ASTM E 94 and ASTM E 142; minimum quality level "2-2T".

d. Ultrasonic Inspection: ASTM E 164.

1.6 Backfilling and Compaction Quality Control During Construction:

A. Contractor will employ an independent testing and inspection agency to conduct tests and inspections, interpret them, evaluate results for compliance with specifications and report findings to Architect, Owner, Contractor, Civil Engineer and Structural Engineer as their interests may appear.

B. Quality Control Testing During Construction: Testing agency shall inspect and approve subgrades and fill layers before further Work is performed.

1. Perform field density tests in accordance with ASTM D 1556 (sand cone method) or ASTM D 2922 (nuclear method-shallow depth), as applicable.

2. Footing Subgrade: For each stratum of soil on which footings will be placed, conduct at least one test to verify required design bearing pressure. Subsequent verification and approval of each footing subgrade may be based on a visual comparison of each subgrade with related tested strata, when acceptable to Architect.

3. Paved Areas and Building Slab Subgrade: Make at least one field density test of subgrade for every 1500 sq. ft. of paved area or building slab, but in no case less than three (3) tests. In each compacted layer of embankment fill, make one field density test for every 1000 sq. ft. of overlaying building slab or paved area, but in no case less than three (3) tests. Augment field density test with observation of fill stability using Proofroll by loaded 20-wheel truck.

C. If in opinion of Architect, based on testing service reports and inspection, subgrade or fills which have been placed are below specified density, provide additional reworking, compaction and testing at no additional expense.

1.7 Concrete and Bituminous Concrete Paving Quality Control During Construction:

A. Contractor will employ an independent testing and inspection agency to conduct tests and inspections, interpret them, evaluate results for compliance with specifications and report findings to Architect, Owner, Contractor and Civil Engineer as their interests may appear.

B. General: Test in-place concrete and asphalt concrete paving courses for compliance with requirements for thickness and surface smoothness.

C. Thickness: In-place compacted thickness of asphalt concrete paving will not be acceptable if exceeding following allowable variation from required thickness:

Base Course: 1/2", plus or minus.
Surface Course: 1/4", plus or minus.

D. Surface Smoothness: Test finished surface of each asphalt concrete course for smoothness, using 10' straightedge applied parallel with, and at right angles to centerline of paved area. Surfaces will not be acceptable if exceeding the following tolerances for smoothness:

Base Course Surface: 1/4".
Wearing Course Surface: 3/16".

E. Check surface areas at intervals as directed by Owner and Architect.

F. Contractor shall repair or remove and replace unacceptable paving as directed by Owner and Architect.

1.8 Masonry Mortar and Grout Quality Control During Construction:

A. Masonry Mortar: The designated testing agency shall sample and test mortars in accordance with property specifications of ASTM C 270 and evaluate in accordance with ASTM C780. At least one test for each 5000 square feet of wall area or portion thereof.

B. Masonry Grout: Designated testing agency shall sample and test masonry grout in accordance with ASTM C 1019 for each 5,000 square feet of masonry wall surface.

1.9 Typical Classroom Mock-up for Approval of Finishes:

A. Contractor shall designate one classroom to establish a standard for finishes for the balance of the project. Finishes in this classroom must be approved by the Owner and Architect prior to the commencement of finishes in the balance of the building for the following items:

1. Block fill – 1st and 2nd coat
2. Floor tile/cove base
3. Painting – 1st and 2nd coat
4. Casework
5. Ceilings/lighting
6. White/Tack boards
7. Window treatments
8. Ductwork hung and insulated
9. Sprinkler System
10. Floor waxing
11. Fire alarm
12. Switches and plugs with cover plates

PART 2 - PRODUCTS

2.1 Acceptable Inspection and Testing Agencies:

A. Hillis-Carnes Engineering Associates

B. Engineering Consulting Services, Ltd.

C. Geotech Engineers, Inc.

D. Kim Engineering, Inc.

E. PSI

F. KCI

G. CTI Consultants, Inc.

H. Giles Engineering Associates, Inc.

I. Specialized Engineering

J. Froehling & Robertson, Inc.

K. Triad Engineering, Inc.

PART 3 - EXECUTION

3.1 Inspection and Testing Reports

A. Copies of inspection and testing reports shall be submitted to Architect (2 copies), Contractor, Owner, Structural Engineer and Civil Engineer (1 copy each).

B. Reports shall be clearly and neatly typed (handwritten reports will not be accepted) and shall contain pertinent project information for each type of test. Submit samples of each report form for approval.

END OF SECTION 014500

SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 Summary:

A. Provide temporary facilities and controls needed for Work including:

1. Temporary utilities such as heat, water, electricity, and telephone;

2. Field Offices and Sheds;

3. Sanitary facilities;

4. Enclosures such as tarpaulins, barricades, and canopies;

5. Temporary fencing of construction site;

6. Project sign;

7. Housekeeping;

8. Temporary fire protection;

9. Rodents;

1.2 Related Sections:

A. Documents affecting Work of this Section include General Conditions, and Sections in Division 1 of these Specifications.

B. Except that equipment furnished by subcontractors shall comply with requirements of pertinent safety regulations, such equipment normally furnished by individual trades in execution of their own portions of Work is not part of this Section.

C. Permanent installation and hookup of the various utility lines are described in other Sections.

PART 2 - PRODUCTS

2.1 Utilities:

A. Cold Weather Protection and Temporary Heat:

1. At Contractor's expense cold weather protection, temporary heat and fuel, and powered ventilation will be provided as necessary to carry on Work during inclement weather, to protect Work and materials against injury from dampness and cold, to dry out building and to provide suitable conditions for installation and curing of materials until final acceptance. Equipment for heating shall be U.L. approved and shall have automatic temperature controls.

2. Refer to requirements in other sections of specifications for temperatures to be provided and maintained for installation and curing under various trades. Method of heating and type of fuel and equipment used shall be subject to approval by Owner, subject to all code requirements and approved by Owner's or Contractor's insurance company. Open flame type heaters are not permitted after building is enclosed.

Permanent heating system for building shall be used to provide temporary heating, as hereinafter specified.

3. Heating requirements during construction are divided into "Cold Weather Protection" and "Temporary Heat".

4. Contractor shall maintain service for occupied areas and equipment in use.

B. Cold Weather Protection:

1. Cold Weather Protection shall be required from start of Project up to the time when the Work is entirely closed in and the heating apparatus is in permanent position, ready for operation on a temporary basis, by Contractor. Work shall include protection of Work exposed to elements against adverse dampness and cold, by covering, enclosing, and heating materials and Work under construction, and providing suitable working conditions for trades employed on Work. Cold weather protection shall be provided by Contractor at expense.

C. Temporary Heat:

1. Temporary heat shall include period when heating is required from time Work is entirely closed in and heating apparatus is in permanent position and ready for operation, until building and equipment is accepted by Owner.

2. Temporary heating may be provided from permanent heating system when necessary to prevent freezing within building, to dry out building and to provide suitable working conditions for installation and curing of materials. A temperature of not less than 50 degrees F. nor more than maximum design temperatures shall be maintained throughout entire building. Heat during non-working hours shall be provided when required by status of Work.

3. Contract Price shall include cost of necessary labor and operating personnel required to operate heating system and provide temporary heat. Cost of fuel and electric power for operating system shall be borne by Contractor.

D. Use of permanent heating equipment:

1. Installation of permanent heating equipment shall be done as soon as possible. If permanent electric service is not yet available, Contractor shall install temporary service of proper characteristics for operation of heating plant. Temporary connections, controls and other arrangements shall be installed to permit most effective use of heating system, or parts thereof. Contractor shall be responsible for use of permanent heating system for purposes described and shall pay costs in connection therewith. Use shall not relieve Contractor of responsibility to turn over system to Owner in perfect condition on completion of project, nor shall it shorten stipulated guarantee period. Every effort shall be made to protect permanent heating equipment from damage by dust and airborne particles.

E. Temporary Water Service:

1. Temporary water (New facilities):

a. Contractor shall make the necessary arrangements to provide water required during construction period. Contractor shall have new water service set up in their name. Water bills for project shall be paid by Contractor for period from beginning of Work until building is occupied by Owner. When date is established that Owner assumes responsibility for account, Contractor shall notify utility company and arrange to have meter read and account transferred to Owner. Contractor is responsible for charges incurred until account has

been properly transferred. Any costs for reading or transferring account shall be borne by Contractor.

2. Temporary water (Renovation and/or additions where facility is vacated):

a. Contractor may use existing service and meter. Within 15 calendar days of Notice to Proceed, Contractor shall have meter read and account transferred to its name. Contractor shall pay water bills until Owner accepts building or agrees to assume responsibility for water bills. When date is established that Owner assumes responsibility for account, Contractor shall notify utility company and arrange to have meter read and account transferred to Owner. Contractor is responsible for charges incurred until account has been properly transferred. Costs for reading or transferring account shall be borne by Contractor.

3. Temporary water (Renovation and/or addition where facility remains occupied by Owner):

a. Owner shall provide and pay utility bills. Contractor shall be responsible for extensions as necessary for the completion of Contract and to maintain service in occupied areas.

F. Temporary Electric Service:

1. Temporary electric (New Facilities):

a. Contractor shall make necessary arrangements and provide temporary electric service and lighting required during entire construction period. Account will be set up in Contractor's name. Metered cost of electricity used shall be borne by Contractor for period from beginning of Work until building is occupied by Owner. When date is established that Owner assumes responsibility for account, Contractor shall notify utility company and arrange to have meter read and account transferred to Owner. Contractor is responsible for charges incurred until account has been properly transferred. Costs for reading or transferring account shall be borne by Contractor.

b. Electric service shall be of sufficient capacity and characteristics to supply proper current for various types of construction tools, motors, welding machines, lights, heating plant, air conditioning system, pumps, and other Work required. Necessary temporary wiring, panel boards, outlets, switches, lamps, fuses, controls and accessories, shall be provided. A sufficient number of electric outlets shall be provided; locate outlets so that 50 ft. long extension cords will reach Work requiring light or power. Temporary light shall be based on one 200-watt lamp for each 1000 square feet of floor area, with adequate lighting in stair wells and corridors. Materials used for temporary service shall not be used in permanent system unless specific approval is given by Architect/Engineer.

2. Temporary electric (Additions and renovation projects where facility is vacated):

a. Existing electrical service and meter may remain. Within 15 calendar days of Notice to Proceed, Contractor shall have meter read and account transferred to its name. Metered cost of electricity used shall be borne by Contractor for period from beginning of Work until building is occupied by Owner. When date is established that Owner assumes responsibility for account, Contractor shall notify utility company and arrange to have meter read and account transferred to Owner. Contractor is responsible for charges incurred until account has been properly transferred. Costs for reading or transferring account shall be borne by Contractor.

3. Temporary electric (Additions and renovation projects where Owner continues to occupy facility):

a. Owner shall make existing service available and pay for electricity used. Contractor shall be responsible for necessary extensions and temporary lines required to complete Contract. Contractor shall maintain service for occupied areas and equipment in use.

G. Temporary Telephone Service:

1. At Contractor's expense, a jobsite telephone to which Owner and Architect and their representatives may have free use and access during working hours while making calls in regard to Project shall be installed and maintained. Calls, including long distance calls within Washington metropolitan area, shall be at expense of Contractor. At all times, Contractor shall maintain a separate dedicated line with a facsimile machine.

2. If applicable, at Contractor's expense, a dedicated telephone line for Building Automation System (BAS) during construction shall be installed and maintained. Line shall be extended to location of BAS Building Controller. This line shall be used for dial-in purposes only, and therefore, will not require long-distance service. This line shall be installed and active at least 30 days prior to start-up of any mechanical equipment. Coordinate installation time and location with BAS (Division 25).

2.2 Field Offices and Sheds:

A. Field Offices:

1. Contractor shall provide and maintain a suitable temporary field office at project site for its own and representatives of Owner and Architect. Office shall be provided with adequate heat, air conditioning for progress meetings, a ventilating fan, electric lighting, telephone, file rack for storage of drawings, counter top for drawings references, storage shelves, a table, and seating for a minimum of 18 persons, in addition to furnishings required by Contractor. Locate one 10" outdoor type thermometer outside door. Locate office at location approved by Architect. Temporary electric and telephone connections to field office will be made by Contractor. In vacated renovation projects, existing building space may be considered for these needs, but is not guaranteed.

B. Owner's Field Offices:

1. Provide a reasonably new, insulated and weather tight, prefabricated, or mobile temporary office, for Owner's exclusive use.

2. For this Project, office shall be approximately 10-feet by 40-feet, and shall be similar to Williams Scotsman Mobile, divide approximately 1/3: 2/3.

3. Provide lockable entrance(s) with dual locks, operable windows covered with security bars or expanded metal, a serviceable finish, and ADA compliant access steps and handrails. Office shall include one 4-foot tack board, first aid kit, outdoor/indoor recording thermometer), and two telephone lines.

4. Provide and maintain adequate heat, air conditioning, fluorescent lighting, electrical receptacles, and four (4) modular telephone jacks (one at each desk surface and one at sloped plan review table connected to one outside line and one outside line and jack for connection to a facsimile transceiver), located by Owner. Telephone service to Owner's field office shall be paid by Contractor.

5. Office equipment shall include three telephones (one desk type with speaker, one wall type with a 15-foot cord, and one cordless phone), one plain paper facsimile/copy machine, and one answering/voice mail machine with remote message retrieval and service or service contracts. Furnish a rolling/adjustable drafting stool, sloped plan table (min. 36-inches deep and 8-feet long) with extra light, one swing-arm plan storage rack with ten hangers, one locking 4-drawer (legal size) file cabinet, and four rolling chairs. Equipment, except file cabinets, shall become Contractor's property at Final Completion. File cabinet will become property of Owner.

6. Provide maintenance of Owner's temporary office including weekly cleaning and sewage disposal. Phone hookup and long distance service and bills and supplies for facsimile/copy machine shall be paid by Contractor.

7. If it becomes necessary during the progress of construction to relocate Owner's field office and toilet facility, notify the Owner's representative, at minimum, 10-days prior to planned move, and complete move with associated re-connections at Contractor's expense within 48-hours.

C. Sheds:

1. Contractor shall provide and maintain such additional offices, storage sheds and other temporary buildings or trailers on project site as required for its own use. Locations of sheds and trailers shall be approved by Owner and Architect. In vacated renovation projects, existing building space may be considered for these needs, but is not guaranteed.

2.3 Sanitary Facilities:

A. Temporary Toilets (New project and renovations and/or addition where facility is vacated):

1. Contractor shall provide and maintain an adequate number of approved prefabricated temporary toilets with proper enclosures as necessary for use of workmen. Keep toilets clean and comply with applicable health and sanitary regulations.

2. When ready, Contractor shall designate certain new toilet facilities in building to be used by workmen. Contractor shall be responsible for seeing that use does not interfere with construction and shall keep facilities in clean and sanitary condition.

B. Temporary Toilets (Vacated renovations projects):

1. Contractor may use existing fixtures provided they are properly maintained and acceptable to Owner.

2.4 Enclosures:

A. Provide and maintain for duration of construction scaffolds, tarpaulins, canopies, warning signs, steps, platforms, bridges, egress doors and other temporary construction necessary for proper completion of Work in compliance with pertinent safety and other regulations. Security, emergency egress, fire alarm and suppression systems shall remain operational in occupied areas.

2.5 Temporary Fencing:

A. Provide and maintain for duration of construction a temporary fence of design, type and extent needed to prevent entry onto Work site including areas and portions thereof by unauthorized persons.

2.6 Temporary Signs:

A. Prior to start of construction, secure from Architect at Architect's office two of Architect's standard signs. Mount at the job site where directed by Architect.

B. Upon completion of the Work, demount Architect's signs and return them to Architect's office.

C. Except as otherwise specifically approved by Architect, do not permit other signs or advertising on job site.

2.7 Housekeeping:

A. Fire protection during construction:

1. Fire extinguishers suitable for fire hazards will be provided at convenient accessible locations during construction.

2. Provide each storage location with at least one approved portable fire extinguisher having a rating of not less than 20 - B:C.

a. Place portable extinguishers rated not less than 2A so that maximum travel distance to the nearest exit shall not exceed 100 feet.

3. Avoid accumulation of flammable debris and waste within building and vicinity. Avoid large and unnecessary accumulations of combustible forms and form lumber. Keep lumber stacked in an orderly manner.

4. Contractor will not store flammable or volatile liquids in open or in small detached structures or trailers. Liquids having low flash points being used within building must be stored only in approved safety cans. Contractor shall supervise closely storage of paint materials and other combustible finishing and cleaning products and not permit oily rags to be stored in closets or other tight permanent spaces.

5. Prohibit smoking in vicinity of hazardous operations and locations. Post suitable "No Smoking" signs in these areas.

6. Closely supervise welding and torch cutting operations near combustible materials with a fire watch.

7. Supervise locations and operation of temporary portable heating units and fuel.

8. Use only fire-resistant building paper, plastic sheet, and tarpaulins for temporary protection.

9. Do not store combustible material outdoors within 10 feet of a building or structure.

10. Do not use gasoline for cleaning within building under any circumstances.

11. Take other precautions suitable for hazardous conditions at the site to prevent fire.

B. Burning

1. Do not burn any trash or other material on site.

2.8 Temporary Fire Protection:

A. Procedural Agreement between Department of Fire and Rescue Services and Montgomery County Board of Education for effective fire and life safety code application and enforcement

in Montgomery County Public Schools is incorporated in these Specifications by reference. Those requirements which pertain to Contractor's Work shall be incorporated into this Contract.

2.9 Rodents

A. General: In addition to specific rodent control measures specified below, take necessary precautionary measure to keep job site free from rodents during construction operations. Food scraps and other debris attractive to rodents shall be put in containers and disposed of at tend of each working day. Upon Substantial Completion, deliver a rodent pest free Project to the Owner.

B. Prior to the start of construction, establish and maintain a rodent extermination program using recognized rodent control measures in compliance with Montgomery County Health Department regulations.

PART 3 – EXECUTION

3.1 Maintenance and Removal:

A. Maintain temporary facilities and controls as long as needed for safe and proper completion of Work.

B. Remove such temporary facilities and controls as rapidly as progress of Work will permit, or as directed by Owner or Architect.

END OF SECTION 015000

SECTION 017123 - FIELD ENGINEERING

PART 1 - GENERAL

1.1 Summary:

A. Provide field engineering services as required for proper completion of the Work including:

1. Locate and set property lines and corners using a licensed Maryland land surveyor. Permanent corner markers shall be installed where they do not already exist.

2. Perform stake outs and elevation checks required for construction using a licensed Maryland land surveyor. Surveyor shall verify adequacy of bench marks before starting construction.

3. Before the start of building construction, Contractor shall have a licensed Maryland land surveyor locate and stake building corners, driveway entrances, driveways, parking areas and playfields. If there are discrepancies between the actual layout and project site plan, they shall be brought to the attention of the Architect and resolved before Work proceeds. A building and site stake out drawing stamped and signed by the land surveyor may be submitted in lieu of this preliminary stake out. Contractor shall meet with Architect on site to verify stake outs prior to building construction.

4. After the corners of the exterior walls have been started, Contractor shall obtain a wall check survey certificate made by a licensed Maryland land surveyor. This survey shall show the accurate location of the building with reference to property lines.

5. After the first sections of slab-on-grade have been placed in the school building, the Contractor shall have a licensed Maryland land surveyor verify and record the finish floor elevation on the wall check survey.

6. At the end of the project, the Contractor shall have a licensed Maryland land surveyor prepare an as-built survey showing accurate locations of building corners, configuration of paved areas and sidewalks, location of electric transformer, fencing, lighting, trees, site walls and backstops in relation to property lines.

1.2 Related Sections:

A. Documents affecting work of this Section include, General Conditions, and Sections in Division 1.

B. Additional requirements for field engineering also may be described in other Sections of these Specifications.

1.3 Quality Assurance:

A. Use adequate quantities of skilled workers who are thoroughly trained and experienced in necessary crafts and who are completely familiar with specified requirements and methods needed for proper performance of Work.

1.4 Submittals:

A. Comply with pertinent provisions of Section 013300 "SUBMITTALS PROCEDURES".

B. Upon request of Architect, submit:

1. Data demonstrating qualifications of persons proposed to be engaged for field engineering services.

2. Documentation verifying accuracy of field engineering work.

3. Certification, signed by Contractor's retained field engineer, certifying that elevations and locations of improvements are in conformance with requirements of Contract Documents.

PART 2 - PRODUCTS (not used)

PART 3 - EXECUTION

3.1 Reference Points

A. In addition to procedures directed by Contractor for proper performance of Contractor's responsibilities:

1. Locate and protect control points before starting Work on site.

2. Preserve permanent reference points during process of Work.

3. Do not change or relocate reference points or items of Work without specific approval from Architect.

4. Promptly advise Architect when a reference point is lost or destroyed, or requires relocation.

a. Upon direction of Architect, require field engineer to replace reference stakes or markers.

b. Locate such replacements according to original survey control.

END OF SECTION 017123

SECTION 017329 - CUTTING AND PATCHING

PART 1 - GENERAL

1.1 Summary:

A. General requirements pertaining to cutting, fitting and patching of Work required to:

1. Make several parts fit properly;

2. Uncover Work to provide for installing, inspecting, or both, of ill-timed Work;

3. Remove and replace Work not conforming to requirements of Contract Documents

4. Remove and replace defective Work.

5. Remove and patch existing construction to accommodate completion of contract Work.

1.2 Related Sections:

A. Documents affecting Work of Section include General Conditions, and Sections in Division 1 of these Specifications.

B. In addition to other specified requirements, upon Architect's request, uncover Work to provide for inspection by Architect of covered Work, and remove samples of installed materials for testing, to verify conformance with Contract Documents.

C. Do not cut or alter Work performed under separate contracts without Owner's written permission.

1.3 Quality Assurance:

A. Use adequate quantities of skilled Workers who are thoroughly trained and experienced in necessary crafts who are completely familiar with specified requirements and methods needed for proper performance of Work.

B. Avoid unnecessary or excessive cutting. Where cutting of a finished surface is required, make cuts neatly along true lines so they will be concealed by finished Work and where they will be least conspicuous.

1.4 Submittals:

A. Request for Architect's consent:

1. Prior to cutting which effects structural safety, submit a written request to the Architect for permission to proceed with cutting. Also obtain written approval from the authority having jurisdiction, if required by local building code.

2. Should conditions of Work, or schedule, indicate a required change of materials or methods for cutting and patching, so notify Architect and secure Architect’s written permission and required Change Order or Construction Change Directive prior to proceeding.

B. Notices to Architect:

1. Prior to cutting and patching performed pursuant to Architect's instructions, submit cost estimate to Architect. Secure Architect's approval of cost estimates and type of reimbursement before proceeding with cutting and patching.

2. Submit written notice to Architect designating when Work will be uncovered, to provide for Architect's observation.

PART 2 - PRODUCTS

2.1 Replacement of Items

A. For replacement of items removed, use materials complying with pertinent Sections of these Specifications and closely matching the aesthetic value of existing material.

PART 3 - EXECUTION

3.1 Payment for Costs:

A. Owner will reimburse Contractor for cutting and patching performed pursuant to a written Change Order, after claim for such reimbursement is approved by Architect. Contractor shall perform other cutting and patching needed to comply with Contract Documents at no additional cost to Owner.

B. Payment of costs for cutting and patching performed due to ill-timed or defective Work will be at no additional cost to Owner.

3.2 Surface Conditions:

A. Inspection:

1. Inspect existing conditions, including elements subject to movement or damage during cutting, excavating, patching and backfilling.

2. After uncovering the Work, inspect conditions affecting installation of new Work.

B. Discrepancies:

1. If uncovered conditions are not as anticipated, immediately notify Architect and secure needed directions.

2. Do not proceed until unsatisfactory conditions are corrected.

3.3 Preparation Prior to Cutting:

A. Provide required protection including, but not necessarily limited to, shoring, bracing, and support to maintain structural integrity of Work.

3.4 Performance:

A. Contractor shall be responsible for any cutting, fitting and patching that may be required to complete Work except as otherwise specifically provided in Contract Documents. Contractor shall not endanger any Work of any other Contractor except with written consent of Architect.

B. Perform fitting and adjusting of products to provide finished installation complying with specified tolerances and finishes.

3.5 Cleanup:

A. Remove all debris, rubbish, and materials resulting from cutting and patching operations. Transport materials and legally dispose of off site.

END OF SECTION 017329

SECTION 017400 - CLEANING

PART 1 - GENERAL

1.1 Summary:

A. Throughout construction period, maintain buildings and site in a standard of cleanliness as described in this Section.

1.2 Related Sections:

A. Documents affecting work of this Section include Article 3.15 and 6.3 of General Conditions and Sections in Division 1 of these Specifications.

B. In addition to standards described in this Section, comply with requirements for cleaning as described in pertinent other Sections of these Specifications.

1.3 Quality Assurance:

A. Conduct daily inspection, and more often if necessary, to verify that requirements for cleanliness are being met.

B. In addition to standards described in this Section, comply with pertinent requirements of governmental agencies having jurisdiction.

PART 2 - PRODUCTS

2.1 Cleaning Material and Equipment:

A. Provide required personnel, equipment, and materials needed to maintain specified standard of cleanliness.

2.2 Compatibility:

A. Use only cleaning materials and equipment which are compatible with surface being cleaned, as recommended by manufacturer of material.

PART 3 - EXECUTION

3.1 Progress Cleaning:

A. General:

1. Retain stored materials in an orderly arrangement allowing maximum access, not impeding traffic or drainage, and providing required protection of materials.

2. Do not allow accumulation of scrap, debris, waste materials, and other items not required for construction.

3. At least twice each month, and more often if necessary, completely remove scrap, debris, and waste materials from job site.

4. Provide adequate storage for items awaiting removal from job site, observing requirements for fire protection and protection of ecology.

B. Site:

1. Daily, and more often if necessary, inspect site and pick up scrap, debris, and waste materials. Remove such items for their storage.

2. Weekly, and more often if necessary, inspect arrangements of materials stored on site. Restack, tidy or otherwise service arrangements to meet requirements.

3. Maintain site in neat and orderly condition.

4. Keep grass and other herbage cut to a maximum height of six inches (6") over entire project site.

C. Structures:

1. Weekly, and more often if necessary, inspect structures and pick up scrap, debris, and waste materials. Remove such items to place designated for their storage.

2. Weekly, and more often if necessary, sweep interior spaces clean.

a. "Clean," for purpose of this subparagraph, shall be interpreted as meaning free from dust and other material capable of being removed by use of reasonable effort and a hand-held broom.

3. As required preparatory to installation of succeeding materials, clean structures or pertinent portions thereof to degree of cleanliness recommended by manufacturer of succeeding material, using equipment and materials required to achieve necessary cleanliness.

4. Following installation of finish floor materials, clean finish floor daily (and more often if necessary) at times while work is being performed in space in which finish materials are installed.

a. "Clean," for purpose of this subparagraph, shall be interpreted as meaning free from foreign material which, in the opinion of Architect, may be injurious to finish floor material.

D. Waste Disposal:

1. Dispose of waste at legal disposal area away from site.

2. Burning or burying of rubbish and waste materials on site is not permitted.

3. Store volatile waste in accordance with applicable codes and regulations and remove from site daily. Disposal of volatile fluid wastes (such as mineral spirits, oil or paint thinner) in storm or sanitary sewer systems or into streams or waterways will not be permitted.

3.2 Final Cleaning

A. "Clean," for purpose of this Section, and except as may be specifically provided otherwise, shall be interpreted as meaning level of cleanliness generally provided by skilled cleaners using commercial quality building maintenance equipment and materials.

B. Prior to completion of Work, remove from job site tools, surplus materials, equipment, scrap, debris, and waste. Conduct final progress cleaning as specified above.

C. Site:

1. Unless otherwise specifically directed by Owner or Architect, broom clean paved areas on site and public paved areas adjacent to site.

2. Completely remove resultant debris.

D. Structures:

1. Exterior:

a. Visually inspect exterior surfaces and remove traces of soil, waste materials, smudges, and other foreign matter.

b. Remove traces of splashed materials from adjacent surfaces.

c. If necessary to achieve a uniform degree of cleanliness, hose down exterior of structure.

d. In event of stubborn stains not removable with water, Architect may require light sandblasting or other cleaning at no additional cost to Owner.

2. Interior:

a. Visually inspect interior surfaces and remove traces of soil, waste materials, smudges, and other foreign matter.

b. Remove traces of splashed material from adjacent surfaces.

c. Remove paint drippings, spots, stains, and dirt from finished surfaces; then, wash.

d. Glass: Remove excess glazing compound and paint. Wash, polish, or squeegee dry to remove visible streaks. Exterior windows should be cleaned after completion of sodding or seeding.

e. Ceramic Tile:

(1) Wall Tile: Remove spots, dirt, and paint; then, wash.

(2) Floor Tile: Remove spots, dirt and paint; then, machine strip and rinse with neutral cleaner.

f. Floors: Refer to specific flooring sections for finishes and procedures.

g. Cabinetwork: Vacuum/dust interior and exterior surfaces.

h. Aluminum: Remove temporary protective covering and clean and polish.

E. Schedule final cleaning as approved by Owner and Architect to enable Owner to accept completely clean Work.

3.3 Cleaning During Owner's Occupancy

A. Should Owner occupy Work or any portion thereof prior to its completion by Contractor and acceptance by Owner, responsibilities for interim and final cleaning shall be as determined by Architect in accordance with General Conditions of Contract.

END OF SECTION 017400

SECTION 017419 - CONSTRUCTION WASTE MANAGEMENT

PART 1 - GENERAL

1.1 Summary:

A. Contractor and Subcontractors shall minimize creation of construction waste on job site and shall minimize waste sent to landfills.

B. Compost, recycle, or salvage a minimum of 75 percent by weight of total project site-clearing and construction debris, including the following:

1. Land-clearing debris, including organic and inorganic material
2. Asphalt paving
3. Concrete and concrete pavers
4. Bricks and brick pavers
5. Concrete Masonry Units (CMUs)
6. Ferrous and non-ferrous metals
7. Clean, untreated, unpainted dimensional wood, free of nails or other fasteners (wood pallets may be acceptable with paint and/or fasteners)
8. Plywood, OSB, and particleboard
9. Plastics
10. Roofing materials
11. Glass
12. Gypsum board (unpainted)
13. Carpet and pad
14. Leftover paint (kept in its original container)
15. Light bulbs and tubes
16. Beverage containers (plastic, glass and metal)
17. Corrugated cardboard
18. Mixed paper

1.2 Related sections:

A. Division 31 Section "Earthwork" for site clearing requirements.

1.3 References:

A. “Maryland Recycles” website: http://www.mdrecycles.org/.

B. Maryland Commercial Recycling Specialist (410) 333-3066.

1.4 Submittals:

A. Prior to any waste removal, submit for approval a detailed Construction Waste Management Plan as outlined in this Section, including but not limited to the following:

1. Analysis of estimated job-site waste to be generated, including types and quantities of compostable, recyclable and salvageable materials.

2. Description of means and methods to achieve the 75 percent diversion requirement for compostable, recyclable and salvageable materials.

3. Identification of recycling contractors proposed for use in project, locations accepting construction waste materials or entities providing related services by referencing “Maryland Recycles” website or by contacting Maryland Commercial Recycling Specialist, as listed in this Section.

B. Waste Management Progress Reports: Submit monthly, including the following information:

1. Project title, name of party completing report, and dates of period covered by report.

2. Amount (by weight) of Project waste material landfilled and identity of landfill(s).

3. For each material composted, recycled or salvaged from the Project, provide the following:

a. Amount (by weight)

b. Date(s) removed from job site

c. Receiving party

d. Disposal Cost: Bin rental and facility fees

e. Transportation Cost: Hauling

f. Money paid or received for recycled or salvaged material.

g. Brief description of what was done with material

C. Final Waste Management Report: At completion of construction submit comprehensive tracking log. Include the following information in addition to details stated above.

1. Overall Disposal Costs

2. Overall Transportation Costs

3. Total money paid or received for recycled or salvaged material.

4. Include legible copies of on-site logs, manifests, weight tickets, and receipts.

PART 2 - PRODUCTS (not used)

PART 3 - EXECUTION

3.1 Waste Management Plan Implementation, General:

A. Inform trades regarding construction and land clearing waste recycling requirements relevant to their work. Provide on-site instruction of appropriate separation, handling and recycling methods for construction personnel.

B. Designate at least one specific area for separation of material for salvage and recycling. Keep recycling and waste bin areas neat and clean and clearly marked.

C. Maintain an on-site log, which includes required reporting information for each load of materials removed from site.

D. Separate, store and dispose of hazardous wastes separately and in accordance with local regulations. Do not handle, separate, store, salvage, or recycle hazardous materials with other materials.

E. Coordinate work of recycling, composting and salvaging waste haulers with other trades.

END OF SECTION 017419

SECTION 017700 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 Summary:

A. Provide an orderly and efficient transfer of completed Work to Owner.

1.2 Related Sections:

A. Documents affecting Work of this Section include General Conditions, and Sections in Division 1 of these Specifications.

B. Activities relative to Contract closeout are described in Articles 3 and 9 of General Conditions.

C. "Substantial Completion" is defined in Paragraph 9.8.1 of General Conditions.

1.3 Quality Assurance:

A. Prior to requesting inspection by Architect, use adequate means to assure that Work is completed in accordance with specified requirements and is ready for requested inspection.

PART 2 - PRODUCTS (not used)

PART 3 - EXECUTION

3.1 Substantial Completion:

A. Prepare and submit list required by first sentence of Paragraph 9.8.2 of General Conditions.

B. Within reasonable time after receipt of list, Architect will inspect to determine status of completion.

C. Should Architect determine that Work is not substantially complete:

1. Architect will promptly so notify Contractor, in writing, giving reasons therefore.

2. Contractor shall remedy deficiencies and notify Architect for reinspection within seven (7) working days.

3. Architect will reinspect Work.

4. If Architect determines Work is still not complete Contractor shall remedy deficiencies within seven (7) working days and notify Architect for reinspection. Contractor shall be required to reimburse Architect for additional inspection services.

D. When Architect concurs that Work is substantially complete:

1. Architect will prepare a "Certificate of Substantial Completion," on AIA form G704, accompanied by Contractor's list of items to be completed or corrected, as verified by Architect.

2. Architect will submit Certificate to Owner and to Contractor for their written acceptance of the responsibilities assigned to them in Certificate.

E. Prior to issuance of Certificate of Substantial Completion, the following actions must be performed:

1. Resolution of Contractor's Punch List items to satisfaction of Owner and Architect.

2. Inspection of fire suppression systems by State Fire Marshall's office and Insurance Rating Bureau, including correction of any cited deficiencies.

3. Fully operate, test and adjust heating, ventilating and air conditioning (HVAC) systems and components, including air balance and noise level testing, and correct deficiencies, anomalies and deviations from Contract Documents and manufacturers' recommendations.

4. Fully operate, test and adjust electrical systems as necessary to comply with applicable codes and requirements of electric service utility.

5. Provide on-site demonstrations, and operating and maintenance instructions to Owner's personnel for all mechanical and electrical systems. Make operating and maintenance manuals available at this time. Demonstrations shall be recorded by Contractor and 3 – DVD's turned over to Owner.

6. Notify applicable utility companies to terminate temporary services.

7. Secure occupancy permits from permitting authorities.

8. Obtain applicable Health Department inspections and permits.

9. Deliver warranties to Owner.

10. Remove debris and trash from project site.

11. Final county approval and close out of stormwater management and sediment control permits are required before contract completion is achieved for stormwater management Work.

3.2 Final Completion:

A. Prepare and submit notice required by first sentence of Paragraph 9.10.1 of General Conditions.

B. Verify that Work is complete including, but not necessarily limited to, items mentioned in Paragraph 9.10.2 of General Conditions.

C. Certify that:

1. Contract Documents have been reviewed;

2. Work has been inspected for compliance with Contract Documents;

3. Work has been completed in accordance with Contract Documents;

4. Equipment and systems have been tested as required, and are operational;

5. Work is completed and ready for final inspection.

D. Architect will make an inspection to verify status of completion.

E. Should Architect determine that Work is incomplete or defective:

1. Architect will promptly so notify Contractor, in writing, listing incomplete or defective Work.

2. Contractor shall remedy deficiencies and notify Architect when ready for reinspection within seven (7) working days.

F. When Architect determines that Work is acceptable under Contract Documents, will request Contractor to make closeout submittals.

3.3 Closeout submittals include:

A. Project Record Documents described in Section 017839 of these Specifications;

B. Operation and maintenance data for items so listed in pertinent Sections of these Specifications, and for other items when so directed by Architect; and video record of demonstrations. Operations and maintenance manuals should show the applicable warranty dates.

C. Warranties and bonds;

D. Keys and keying schedule;

E. Spare parts and materials extra stock;

F. Evidence of compliance with requirements of governmental agencies having jurisdiction including, but not necessarily limited to:

1. Certificates of Inspection.

2. Certificates of Occupancy.

G. Certificates of Insurance for products and completed operations.

H. Evidence of payment and release of liens, in duplicate;

I. List of subcontractors, service organizations, and principal vendors, including names, addresses, and telephone numbers where they can be reached for emergency service at all times including nights, weekends, and holidays.

3.4 Final adjustment of accounts:

A. Submit a final statement of accounting to Architect, showing adjustments to Contract Sum.

B. If required, Architect will prepare a final Change Order showing adjustments to Contract Sum which were not made previously by Change Orders.

3.5 Instruction:

A. Instruct Owner's personnel in proper operation and maintenance of systems, equipment, and similar items which were provided as part of Work.

3.6 Warranties and Bonds:

ONE YEAR PERIOD IS FOR CORRECTION OF WORKS; IT IS NOT THE WARANTY OR GUARANTEE.

A. Paragraph is cross referenced in Section 017836 Paragraph 3.3 End of Warranty Inspection:

B. Contractor shall arrange to meet with Architect and Owner within 30 calendar days prior to specified end of guarantee period for purpose of assimilating a list of items which require correction under specific guarantees.

1. Should Contractor be unable or fail to schedule such a meeting, guarantees shall be automatically extended until such time as meeting takes place and Contractor shall be fully responsible for correcting such deficiencies as if they occurred under original guarantee period.

END OF SECTION 017700

SECTION 017823 - OPERATING, MAINTENANCE AND PRODUCT DATA

PART 1 - GENERAL

1.1 Summary:

A. To aid continued instruction of operation and maintenance personnel, and to provide a positive source of information regarding the products incorporated into Work, furnish and deliver the described in this Section and in pertinent other Sections of Specifications.

1.2 Related Sections:

A. Documents affecting Work of this Section include General Conditions, Supplementary Conditions, and Sections in Division 1 of Specifications.

B. Required contents of submittals also may be amplified in pertinent other Sections of these Specifications.

1.3 Quality Assurance:

A. In preparing data required by this Section, use only personnel who are thoroughly trained and experienced in operation and maintenance of described items, completely familiar with requirements of this Section, and skilled in technical writing to extent needed for communicating essential data.

1.4 Submittals:

A. Comply with pertinent provisions of Section 013300 "Submittals".

B. Submit one copy of completed data in final form at time of Substantial Completion inspection. Copy will be returned after final inspection or acceptance, with comments.

C. Submit three (3) copies of approved data in final form ten (10) working days before Final Application for Payment.

PART 2 - PRODUCTS

2.1 Where instruction Manuals are required to be submitted under other Sections of Specifications, prepare in accordance with provisions of this Section.

2.2 Format:

A. Size: 8-1/2 inches x 11 inches

B. Paper: White bond, at least 20 lb weight

C. Text: Neatly written or printed at maximum of 12 cpi.

D. Drawings: 11 inches in height preferable; bind in with text; foldout acceptable but fold to fit within Manual and provide a drawing pocket inside rear cover or bind in with text.

E. Flysheets: Separate each portion of Manual with neatly prepared flysheets briefly describing contents of ensuing portion; flysheets may be in color.

F. Binding: Use commercial quality 3-ring binders with durable and cleanable plastic covers. Maximum ring size will be 2 inches. When multiple binders are used, correlate data into related consistent groupings.

G. Measurements: Provide measurements in U.S. standard units such as feet-and-inches, lbs, and cfm; where items may be expected to be measured within ten years in accordance with metric formulae, provide additional measurements in "International System of Units" (SI).

H. Digital Media: Provide one copy of Information in manual as scanned digital format as specified in Section 017839 "Project Record Documents".

I. Provide front and back covers for each Manual, using durable material approved by Owner and Architect, and clearly identified on or through cover with at least following information:

OPERATING AND MAINTENANCE INSTRUCTIONS
(
(name and address of Work)
(
(name of Contractor)
(
(general name of this Manual)
(
(space for approval signatures of)
(Architect)
(and approval data)

J. Contents: Include the following:

1. Neatly typewritten index near front of Manual, giving immediate information as to location within Manual of emergency information regarding installation.

2. List of all Contractors, Subcontractors and suppliers with complete name of firm, subsidiary, etc.; address, telephone number, and principal contact person.

3. Complete instructions regarding operation and maintenance of mechanical and electrical systems equipment involved including lubrication, disassembly, and reassembly.

4. Complete nomenclature of mechanical and electrical system parts and equipment.

5. Complete nomenclature and part number of replaceable parts, name and address of nearest vendor, and other data pertinent to procurement procedures.

6. Complete operating, maintenance, cleaning and product data for every finish material and product contained in finished project, including the following:

a. Architectural Woodwork

b. Roofing

c. Skylights

d. Windows & Doors

e. Finish Hardware

f. Glazing

g. Tile

h. Resilient Flooring

i. Carpeting

j. Gymnasium Flooring

k. Gymnasium Equipment

l. Painting

m. Wall Coverings

n. Acoustical Treatment

o. Whiteboards & Tackboards

p. Folding Partitions

q. Operable Walls

r. Identifying Devices

s. Stage Curtains

t. Food Service Equipment

u. Storage Shelving

v. Sealants

w. Projection Screens

x. Elevator

y. Lavatory Accessories

z. Cabinets and Storage

aa. Venetian Blinds and Shades

bb. Cyclorama Curtain

cc. Planting Material manual as specified

7. Copy of guarantees and warranties issued.

8. Manufacturers' bulletins, cuts, and descriptive data, where pertinent, clearly indicating the precise items included in this installation and deleting, or otherwise clearly indicating, manufacturers' data with which this installation is not concerned.

9. Exact size of glass, type of coatings and tint for each window for re-glazing requirements.

10. Color Schedules.

11. Complete report of air and water balancing.

12. Such other data as required in pertinent Sections of Specifications.

PART 3 - EXECUTION

3.1 Preliminary:

A. Prepare a preliminary draft of each proposed Manual.

B. Show general arrangement, nature of contents in each portion, probable number and size of drawings, and proposed method of binding, covering and digital format.

C. Secure Architect's approval prior to proceeding.

3.2 Final:

A. Complete Manuals in strict accordance with approved preliminary drafts and Architect's review comments.

3.3 Revisions:

A. Following indoctrination and instruction of operation and maintenance personnel, review proposed revisions of Manual with Construction Manager and Architect.

B. If Contractor is required by Architect to revise previously approved Manuals, compensation will be made as provided for under "Changes" in General Conditions.

END OF SECTION 017823

SECTION 017836 - WARRANTIES AND BONDS

PART 1 - GENERAL

1.1 Summary:

A. Compile specified warranties, bonds, and maintenance contracts and submit to Architect. Warranties will commence no earlier than date of Substantial Completion.

1.2 Related Sections:

A. Documents affecting Work of this Section include General Conditions, other Sections of Division 1 and detailed requirements documented in each respective section of Divisions 2 through 48 of Specifications.

B. Certifications and other commitments and other agreements for continuing services to Owner as specified elsewhere in Contract Documents.

1.3 Definitions:

A. Standard product warranties are preprinted written warranties published by individual manufacturers for particular products and are specifically endorsed by manufacturer to Owner.

B. Special warranties are written warranties required by or incorporated in Contract Documents, either to extend time limits provided by standard warranties or to provide greater rights for Owner.

1.4 Quality Assurance:

A. Use adequate care and diligence to thoroughly review Contract Documents to identify detailed requirements relating to warranties and bonds.

B. Verify that each item required for this submittal conforms with specified requirements.

1.5 Submittals:

A. Comply with pertinent provisions of Section 013300 "Submittals" and Part 3 below.

PART 2 - PRODUCTS

2.1 Description of Warranty Requirements

A. In addition to standard and special warranties described in Divisions 2 through 48, Contractor shall warrant Work included in this project, for a minimum period of one (1) year following acceptance of a Certificate of Substantial Completion by Owner, to cover performance, materials, workmanship and compliance with Contract Documents.

B. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of warranty on Work that incorporates products, nor do they relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with Contractor.

C. Related Damages and Losses: When correcting warranted Work that has failed, remove and replace other Work that has been damaged as a result of such failure or that must be removed and replaced to provide access for correction of warranted Work.

D. Reinstatement of Warranty: When Work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate warranty by written endorsement. Reinstated warranty shall be equal to original warranty with an equitable adjustment for depreciation.

E. Replacement Cost: Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of Contract Documents. Contractor is responsible for cost of replacing or rebuilding defective Work regardless of whether Owner has benefited from use of Work through a portion of its anticipated useful service life.

F. Owner's Recourse: Written warranties made to Owner are in addition to implied warranties, and shall not limit duties, obligations, rights and remedies otherwise available under law, nor shall warranty periods be interpreted as limitations on time in which Owner can enforce such other duties, obligations, rights, or remedies.

1. Rejection of Warranties: Owner reserves right to reject warranties and to limit selections to products with warranties not in conflict with requirements of Contract Documents.

G. Owner reserves right to refuse to accept Work for Project where a special warranty, certification, or similar commitment is required on such Work or part of Work, until evidence is presented that entities required to countersign such commitments are willing to do so.

PART 3 - EXECUTION

3.1 Warranties and Bonds:

A. Assemble warranties bonds and service and maintenance contracts, executed by each respective manufacturer, supplier and contractor.

B. Submit written warranties to Architect prior to date established for Substantial Completion. If Certificate of Substantial Completion designates a commencement date for warranties other than date of Substantial Completion, or a designated portion of Work, submit written warranties upon request of Architect.

C. When a designated portion of Work is completed and occupied or used by Owner, by separate agreement with Contractor during construction period, submit properly executed warranties to Architect within fifteen days of completion of that designated portion of Work.

D. When a special warranty is required to be executed by Contractor, or Contractor and a subcontractor, supplier or manufacturer, prepare a written document that contains appropriate terms and identification, ready for execution by required parties. Submit a draft to Owner through Architect for approval prior to final execution.

3.2 Form of Submittals:

A. At Final Completion compile two copies of each required warranty and bond properly executed by Contractor, subcontractor, supplier, or manufacturer. Organize warranty documents into an orderly sequence based on table of contents of Project Manual.

B. Bind warranties and bonds in heavy-duty, commercial quality, durable 3-ring vinyl covered loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2 inch X 1 inch paper.

C. Provide heavy paper dividers with celluloid covered tabs for each separate warranty. Mark tab to identify product or installation. Provide a typed description of product or installation, including name of product, and name, address and telephone number of installer.

D. Identify each binder on the front and the spine with typed or printed title "WARRANTIES AND BONDS," Project title or name, and name of Contractor.

E. When operating and maintenance manuals are required for warranted construction, provide additional copies of each required warranty, as necessary, for inclusion in each required manual.

F. Digital Media: Provide one copy scanned digital format as specified in Section 017839 "Project Record Documents" Subparagraph 3.2-D-5.

Schedule: Provide warranties and bonds on products and installations as per individual section.

A.	Trees & Shrubs	Section 329000 - Landscaping - 1 year
B.	Roofing System	Section 075113 - Built-Up Asphalt Roofing - 20 years
C.	Metal Roof Flashing	Section 076000 - Flashing - 5 years
D.	Wood Doors	Section 081416 - Flush Wood Doors - Life of Installation
E.	Entrance Components	Section 084000 - Entrances & Storefronts - 5 years
F.	Entrance Finish	Section 084000 - Entrances & Storefronts - 20 years
G.	Entrance Glass	Section 084000 - Entrances & Storefronts - 10 years
H.	Windows	Section 085113 - Aluminum Windows - 2 years
I.	Window Finish	Section 085113 - Aluminum Windows - 10 years
J.	Window Glass	Section 085113 - Aluminum Windows - 5 years, 10 years dual seal
K.	Window Installation	Section 085113 - Aluminum Windows - 3 years
L.	Resilient Flooring	Section 096500 - Stair Tread Nosings - 2 years
M.	Carpeting	Section 096800 - Carpet - 10 years, Lifetime static
N.	Porcelain Enamel Whiteboards	Section 101116 - Visual Display Boards - 50 years
O.	Mirrors	Section 102800 - Toilet and Bath Accessories - 5 years
P.	Blinds replacement	Section 122000 - Window Treatment - 10 years, 2 year labor
Q.	Mechanical	Section 230000 - General Requirements: Entire Mechanical, Plumbing, HVAC & Sprinkler Systems - 2 years, 3 years for system leakage, A/C Compressor - 5 years.

3.3 Each warranty shall include a provision to allow for extension at Contractor's expense if end of warranty inspection is not scheduled before end of warranty period. See Section 017700 "Closeout Procedures", Paragraph 3.6. Provision shall also apply to site inspection/acceptance meeting and associated plantings, see Section 329000.

END OF SECTION 017836

SECTION 017839 - PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 Summary:

A. Throughout progress of Work, maintain an accurate record of changes in Contract Documents.

B. Upon completion of Work, transfer recorded changes to a set of Final Project Record Documents.

1.2 Related Sections:

A. Documents affecting Work of this Section include General Conditions and Sections in Division 1 of these Specifications.

B. Other requirements affecting Project Record Documents may appear in pertinent other Sections of these Specifications.

1.3 Quality Assurance:

A. Delegate responsibility for maintenance of Record Documents to one person on Contractor's staff as approved by Architect.

B. Accuracy of records:

1. Thoroughly coordinate changes within Record Documents, making adequate and proper entries on each page of Specifications and each sheet of Drawings and other Documents where such entry is required to show change properly.

2. Accuracy of records shall be such that a future search for items shown in Contract Documents may rely reasonably on information obtained from Project Record Documents.

3. Make entries within 72 hours after receipt of information that change has occurred.

C. Product Handling:

1. Maintain Job Set of Record Documents completely protected from deterioration and from loss and damage until completion of Work and transfer of recorded data to final Project Record Documents.

2. In event of loss of recorded data, use means necessary to again secure data to Architect's approval.

3. Such means shall include, if necessary in opinion of Architect, removal and replacement of concealing materials.

4. In such case, provide replacements to standards originally required by Contract Documents.

1.4 Submittals:

A. Comply with pertinent provisions of Section 013300.

B. Architect's approval of current status of Project Record Documents will be a prerequisite to Architect's approval of requests for progress payment and request for final payment under Contract.

C. Prior to submitting each request for progress payment, secure Architect's approval of current status of Project Record Documents.

D. Prior to submitting request for final payment, submit final Project Record Documents to Architect and secure approval.

PART 2 - PRODUCTS

2.1 Job Set:

A. Promptly following receipt of Owner's Notice to Proceed, secure from Architect at no charge to Contractor one complete conforming set of Documents comprising Contract.

2.2 Final Project Record Documents:

A. The purpose of Final Project Record Documents is to provide factual information regarding aspects of Work, both concealed and visible, to enable future modifications of Work to proceed without lengthy and expensive site measurement, investigation, and examination. The document set shall include:

1. Final Record Drawings: At a time nearing completion of Work, transfer information from Job Set to Final Record Drawings.

2. Specifications: At a time nearing completion of Work prepare Specification Sections received from Architect with revisions and addenda added.

3. Submittal Set: At a time nearing completion of Work, as per Section 013300, prepare approved submittal documents for review including revisions if any.

a. Collect approved submittal documents and prepare an index including following information:

1) Specification Section

2) Date approved

3) Submittal number

4) Brief description

b. Index shall be organized per Specification Section.

PART 3 - EXECUTION

3.1 Job Set:

A. Immediately upon receipt of conforming set described above, identify each Document with title, "RECORD DOCUMENTS - JOB SET."

B. Preservation:

1. Consider number of occasions upon which Job Set must be taken out for new entries and for examination, and conditions under which these activities will be performed, devise a suitable method for protecting Job Set for approval of Architect.

2. Do not use Job Set for any purpose except entry of new data and for review by Architect, until start of transfer of data to Final Project Record Documents.

3. Maintain Job Set at site of Work as that site is designated by Architect.

C. Making entries on Drawings:

1. Using an erasable colored pencil (not ink or indelible pencil), clearly describe change by graphic line and note as required.

2. Date entries.

3. Call attention to entry by a "cloud" drawn around area or areas affected.

4. In event of overlapping changes, use different colors for overlapping changes.

D. Make entries in pertinent other Documents as approved by Architect.

E. Conversion of schematic layouts:

1. In some cases on Drawings, arrangements of conduits, circuits, piping, ducts, and similar items, are shown schematically and are not intended to portray precise physical layout.

a. Final physical arrangement is determined by Contractor, subject to Architect's approval.

b. However, design of future modifications of facility may require accurate information as to final physical layout of items which are shown only schematically on Drawings.

2. Show on Job Set of Record Drawings, by dimension accurate to within one inch, the centerline of each run of items such as are described in subparagraph 3.1-E-1 above.

a. Clearly identify item by accurate note such as "cast iron drain," "galv. water," etc.

b. Show, by symbol or note, vertical location of item ("under slab," "in ceiling plenum," "exposed," etc).

c. Make identification sufficiently descriptive that it may be related reliably to Specifications.

3. Architect may waive requirements for conversion of schematic layouts where, in Architect's judgment, conversion serves no useful purpose. However, do not rely upon waivers being issued except as specifically issued in writing by Architect.

3.2 Final Project Record Documents:

A. Approval of recorded data prior to transfer:

1. Following receipt of transparencies described above, and prior to start of transfer of recorded data thereto, secure Architect's approval of recorded data.

2. Make required revisions.

B. Transfer of data to Drawings:

1. Carefully transfer change data shown on Job Set of Record Drawings to corresponding final record drawings, coordinating changes as required.

2. Clearly indicate at each affected detail and other Drawing a full description of changes made during construction, and actual location of items described above.

3. Call attention to each entry by drawing a "cloud" around area or areas affected.

4. Make changes neatly, consistently, and with proper media to assure longevity and clear reproduction.

C. Transfer of data to other Documents:

1. If Documents other than Drawings have been kept clean during progress of Work, and if entries thereon have been orderly to approval of Architect, Job Set of those Documents other than Drawings will be accepted as final Record Documents.

2. If any such Document is not approved by Architect, secure a new copy of that Document from Architect at Architect's usual charge for reproduction and handling, and carefully transfer change data to new copy to approval of Architect.

D. Review and submittal:

1. Submit completed set of Final Project Record Documents to Architect as described above.

2. Participate in review meetings as required.

3. Make required changes and deliver Final Project Record Documents to Architect within 30 calendar days of substantial completion.

4. Submittal of Final Project Record Documents shall be in following formats:

a. Final record drawings: One copy final record drawings in bond paper, and two in scanned digital format. The original pre-scanned documents shall be black print on bond paper.

b. Specifications: One copy 20 lb bond white paper and scanned digital format.

c. Submittal documents: Scanned digital format.

d. O & M manual – Two copies 2016. bond white paper and two copies in scanned digital format.

e. Mechanical video demonstration: three copies in DVD format.

5. Scanned digital formats shall comply with following:

   a. For drawings:

      1) File type: TIFF Version 6.0 with LZW Compression

      2) Automatic despeckling at 7 pixel settings, unless other settings provide better legibility with prior approval by MCPS.

      3) Deskewing, cropping and rotation (landscape view optimum right angles)

      4) Attended scanning with maximized readability adjustments performed per sheet.

   b. For specifications, submittals, and operating, maintenance and product data:

      1) File type: PDF version 1.7 (ISO 32000-1:2008) compatible with Adobe Acrobat 8.0 or higher

      2) Invert to be upright.

   c. Scanned images are to be stored in CD ROM disk (ISO 9660). Provide two copies.

   d. Prior to scanning, provide sample image of a typical sheet for approval by MCPS. Scanning service shall notify MCPS, Division of Design and Construction of any probable illegible scans. Final file name format to be approved by MCPS, Division of Design and Construction. For quantity, Contractor shall assume total number of Contract Drawings plus 10%. The final acceptable quality of scans shall be at the discretion of MCPS. It is intended that information on scans be legible.

   e. Electronic directory structure shall include root directory with school name and subdirectories as follows:

      1) school name\drawings\ (each drawing shall be a separate file and file name shall be named to match sheet number -with sheet title - i.e. C1 Site Plan.)

      2) school name\specifications\ (entire specification shall be a single PDF file with a table of contents included with bookmarks to each specification section)

      3) school name\submittals\ (all submittals shall be a single PDF file with a table of contents included with bookmarks to each specification section and individual submittal)

      4) school name\om_manual\ (entire O&M manual shall be a single PDF file with a table of contents included with bookmarks to each specification section)

   f. Organize specifications, submittals, and O&M manual documents as follows:

      (1) Specifications - set up with a table of contents in same order as CSI master format using specification section number and name in table of contents. (ie. Section 085113 - Aluminum Windows).

(2) Submittals - set up with a table of contents in same order as CSI master format using specification section number, title of submittal, and submittal number in table of contents. (ie. Section 085113 - Aluminum Windows - Submittal No. 1).

(3) O&M Manuals - set up with a table of contents in same order as CSI master format using specification section number and title of item described in table of contents. Also, list name of subcontractor (ie Section 085113 - Aluminum Windows - Frames, Subcontractor "Great Window Co.").

E. Retention Reduction:

1. Retention reduction from 5 percent will not be made until all of Record Documents have been received.

F. Changes Subsequent to Acceptance:

1. Changes to the Record Documents, including those resulting from Work performed under Warranty shall be provided in a Supplemental Submission. Contractor has no responsibility for recording changes in Work subsequent to Final Completion.

END OF SECTION 017839

SECTION 018119 - INDOOR AIR QUALITY MANAGEMENT

PART 1 – GENERAL

1.1 Summary:

A. Construction activities shall be controlled to avoid causing detectable odor, visible and/or respirable dust, and other air pollutants at levels known to present a risk of illness in occupied school areas; or in areas that will be occupied after construction is complete.

B. Throughout duration of this project, contractor shall perform the Work required by contract documents without negatively affecting Indoor Air Quality (IAQ) in occupied areas. (Even in a new construction project, punch-list items may be performed after building is occupied.) Work shall be performed with special care, planning, and quality control to avoid disruption or interference with normal facility and educational operations; and to protect health and safety of students, MCPS staff, and general public.

1.2 References:

A. Sheet Metal and Air Conditioning-Construction Managers National Association (SMACNA) IAQ Guidelines for Occupied Buildings Under Construction, Chapter 3 "Control Measures."

B. Sheet Metal and Air Conditioning-Construction Managers National Association (SMACNA) Duct Cleanliness for New Construction Guidelines.

C. ASHRAE Standard 52.2-1992: "Method of Testing General Ventilation Air Cleaning Devices for Removal Efficiency by Particle Size."

D. South Coast Air Quality Management District (SCAQMD) Rule #1168: "Adhesive and Sealant -Applications," including most recent amendments

E. Bay Area Air Quality Management District (BAAQMD) Regulation 8, Rule 51 "Adhesive and Sealant Products."

F. Green Seal (GS) Standard GS-11 "Paints"

G. Carpet and Rug Institute (CRI) "Green Label" IAQ Testing Program for Carpet, Cushion and Adhesive.

1.3 Submittals:

A. IAQ Control Plan:

1. At least two weeks before initiating Work on each major project phase, contractor shall submit eight (8) copies of an IAQ Control Plan and an HVAC Protection Plan which must be approved by MCPS. Submittals shall include following:

a. Listing of products and equipment to be used, including MSDS Sheets where applicable. Listing shall also include requirements for Maryland Chemical Information List, (CIL).

b. Description of dusts, odors, fumes, or potentially harmful pollutants which could be released by work activities.

c. Description of potential pathways by which pollutants could migrate from work areas.

d. Description of approved barriers planned between work areas and occupied space.

e. Listing of work activities scheduled after normal school hours to avoid occupant exposure.

f. Justification for activities which are proposed to be conducted during normal school hours (for occupied schools).

g. Procedures for daily cleaning and waste disposal.

h. Schedule for final cleaning and ventilation of finished areas prior to occupancy.

Compliance must be demonstrated with applicable sections of this specification. Requirements which are not applicable should be explained (e.g., a small-scale job which may be completed overnight when an area is unoccupied and cleaned before next school day may not need a barrier).

2. An onsite meeting shall be held with MCPS officials to review IAQ controls and HVAC protection.

B. Document duct testing and cleaning:

1. Submit for approval twenty (20) digital photographs of construction indoor air quality management measures as discussed in SMACNA "IAQ Guidelines for Occupied Buildings Under Construction," including protection of mechanical system and on-site storage of installed absorptive materials.

C. List temporary usage of building mechanical systems:

1. Submit product data of filtration media used during construction and installed immediately prior to occupancy with Minimum Efficiency Reporting Value (MERV), as determined by ASHRAE 52.2-1999, values highlighted. Data must include manufacturer’s name and model number.

D. Submit all meeting minutes, checklists, worksheets, notifications and deficiency or resolution logs related to the project IAQ issues.

1. Construction indoor air quality management plans and implementation shall be discussed at the following meetings:

a. Work-initiation conference

b. Pre-installation conferences

c. Progress meetings

d. Coordination meetings

e. Owner’s meetings

PART 2 – PRODUCTS

2.1 Air Filtration Media:

A. Minimum Efficiency Reporting Value (MERV) as determined by ASHRAE 52.2-1999:

1. MERV-8 for filtration media used at each return air grill if used during construction.

2. MERV-8 or better, dependent upon equipment and designed static pressure limitations for filtration media installed at the end of construction.

2.2 Cleaning Products and Equipment:

A. Least toxic and lowest-emitting practical spot removers and cleaning agents shall be used for each given application. Chemical products to be used shall already have been approved prior to use in occupied school facilities.

B. High Efficiency Particulate Air (HEPA) – filter equipped vacuum cleaners shall be used for final cleaning.

C. Adhesives applied within the building waterproofing envelope shall comply with VOC Content limits, as expressed in grams per liter, less water and exempt compounds, of South Coast Air Quality Management District (SCAQMD) Rule 1168 “Adhesive and Sealant Applications,” amended January 7, 2005, or more stringent levels, as follows:

1. Indoor Carpet & Pad Adhesives: 50

2. Wood Flooring Adhesive: 100

3. Rubber Floor Adhesives: 60

4. Subfloor Adhesives: 50

5. Ceramic Tile Adhesives: 65

6. VCT and Asphalt Tile (& Linoleum) Adhesives: 50

7. Dry Wall and Panel Adhesives: 50

8. Cove Base Adhesives: 50

9. Multipurpose Construction Adhesives: 70

10. Structural Glazing Adhesives: 100

11. PVC Welding: 510

12. CPVC Welding: 490

13. ABS Welding: 325

14. Plastic Cement Welding: 250

15. Adhesive Primer for Plastic: 550

16. Contact Adhesive: 80

17. Special Purpose Contact Adhesive: 250

18. Structural Wood Member Adhesive: 140

19. Metal to metal substrates: 30

20. Plastic foam substrate: 50

21. Porous substrate except wood: 50

22. Wood substrate: 30

23. Fiberglass substrate: 80

24. All Other Welding & Installation Adhesives: 250

D. Aerosol Adhesives applied within building waterproofing envelope shall comply with the VOC Content limits, as expressed in percentage of VOCs by weight, of Green Seal (GS) Standard GS-36 “Commercial Adhesives,” October 19, 2000 as follows:

1. General Purpose Mist Spray: 65% VOCs by weight
2. General Purpose Web Spray: 55% VOCs by weight
3. Special Purpose Aerosol Adhesives (all types): 70% VOCs by weight

E. Sealants applied within building waterproofing envelope shall comply with VOC Content limits, as expressed in grams per liter, less water and exempt compounds, of SCAQMD Rule 1168 “Adhesive and Sealant Applications,” amended January 7, 2005, as follows:

1. Architectural Sealants: 250
2. Non-membrane Roof: 300
3. Single-Ply Roof Membrane: 450
4. Other: 420

F. Sealant primers applied within building waterproofing envelope shall comply with VOC Content limits, as expressed in grams per liter, less water and exempt compounds, of SCAQMD Rule 1168 “Adhesive and Sealant Applications”, amended January 7, 2005, as follows:

1. Architectural, Nonporous: 250
2. Architectural, Porous: 775
3. Other: 750

G. Paints and coatings applied within building waterproofing envelope shall comply with the following VOC Content limits as expressed in grams per liter, less water and exempt compounds, of Standard GS-11 “Paints”. First Edition, May 20, 1993; Standard GC-03 “Anti-Corrosive Paints”, Second Edition, January 7, 1997; and SCAQMD Rule #1113 “Architectural Coatings”, January 1, 2004 as follows:

1. Flat: 50
2. Non-flat: 150
3. Anti-corrosive & anti-rust: 250
4. Clear Wood Finishes, Varnish: 350
5. Clear Wood Finishes, Lacquer: 550
6. Floor Coatings: 100
7. Shellac, Clear: 730
8. Shellac, Pigmented: 550
9. Waterproofing Sealer: 250

10. Sanding Sealer: 275

11. Sealers, Other: 200

12. Stains: 250

13. Graphic Arts Coatings: 500

H. Carpets shall meet testing and product requirements of the Carpet & Rug Institute Green Label Plus program.

I. Carpet cushion shall meet testing and product requirements of the Carpet & Rug Institute Green Label program.

J. Permanently installed composite wood and agrifiber products shall contain no added urea-formaldehyde.

K. Laminating adhesives used in composite wood and agrifiber product assemblies, shop-applied and applied on-site, shall contain no added urea-formaldehyde.

L. Ceiling and Wall Systems (gypsum board, insulation, acoustical ceiling systems and wall coverings) shall comply with the California Department of Health Services Standard Practice for The Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers, including 2004 Addenda.

PART 3 – EXECUTION

3.1 HVAC Protection:

A. If permanent HVAC is used during construction, filtration media with a MERV of 8 must be used at each return air grill, as determined by ASHRAE 52.2-1999, and HVAC systems, equipment and pathways shall be dust and particulate free at time of substantial completion of that phase of construction in accordance with SMACNA “IAQ Guidelines for Occupied Buildings Under Construction.”

B. Replace filters during construction as necessary to protect equipment and indoor air quality. Inspection of filters shall be conducted and/or replaced based on loading of filter.

C. HVAC supply and return ductwork, registers and equipment shall be kept clean, free of dust, debris, moisture, gaseous and microbial contamination during storage, handling installation and punch-out.

D. After each phase of construction, install new filtration media throughout the HVAC system. Filtration media shall have a MERV of 8 or better, dependant upon equipment and designed static pressure limitations, as determined by ASHRAE 52.2-1999.

3.2 Source Control:

A. Comply with the Product specifications, including SCAQMD, BAAQMD, Green Seal and CRI standards referenced herein, for Low-Emitting Materials (LEED IEQ Credit 4) in specific Product Specifications, including but not limited to those contained within following categories:

1. Miscellaneous Carpentry

2. Interior Architectural Woodwork

3. Through-Penetration Firestop Systems

4. Joint Sealants

5. Ceramic Tile

6. Resilient Floor Tile

7. Resilient Wall Base and Accessories

8. Carpet

9. Acoustical Wall Panels

10. Interior Painting

11. Mechanical General Provisions

12. Basic Piping Materials and Methods

13. Firestopping for Mechanical Work

14. Ducts

B. Adhesives not specified in above sections shall comply with current VOC Content limits, as expressed in grams per liter, of SCAQMD Rule 1168 “Adhesive and Sealant Applications,” amended October 3, 2003, as follows:

1. Indoor Carpet & Pad Adhesives: 50

2. Wood Flooring Adhesive: 100

3. Rubber Floor Adhesives: 60

4. Subfloor Adhesives: 50

5. Ceramic Tile Adhesives: 65

6. VCT and Asphalt Tile (& Linoleum) Adhesives: 50

7. Dry Wall and Panel Adhesives: 50

8. Cove Base Adhesives: 50

9. Multipurpose Construction Adhesives: 70

10. PVC Welding: 510

11. CPVC Welding: 490

12. ABS Welding: 400

13. Plastic Cement Welding: 350

14. Adhesive Primer for Plastic: 650

15. Other Welding & Installation Adhesives: 250

16. Metal to Metal Substrate: 30

17. Plastic Foam Substrates: 120

18. Porous Substrate except wood: 120

19. Wood Substrate: 30

20. Fiberglass Substrate: 200

C. Prohibit smoking on MCPS property and near doors, windows and intakes.

D. Provide direct exhaust to exterior during installation of strong emitting materials, including touch-up activities if applicable. Keep exhaust away from intakes and occupied spaces.

E. Protect “absorptive” materials (which are woven, fibrous or porous in nature, such as carpet, ceiling tiles, insulation, and fabrics) from exposure to dust, debris and moisture contamination during product delivery, storage and handling from construction, demolition and punch-out activities.

F. “Bake-out” or “super-heating” of spaces to accelerate the release of gaseous emissions is not permitted.

G. Provide adequate ventilation of packaged dry products prior to installations. Remove from package and place in a secure, dry, well-ventilated space, free from contaminant sources and residues. Provide a temperature range of 60 degrees F minimum to 90 degree maximum continuously during ventilation period. Do not ventilate within limits of Work unless otherwise approved by Architect.

3.3 Control Measures:

A. Conduct construction activities with potential odor or dust impacts on occupied areas behind barriers or after hours. Other IAQ control measures available include use of low emitting products, equipment, or procedures, isolation of work (barriers, proper pressurization, or scheduling), and housekeeping.

B. Work adjacent to occupied school areas shall be separated by barriers which prevent penetration of dust and odors. Vertical barriers shall extend from floor to metal deck sealing penetrations. Once spaces within building become occupied, work areas must remain under negative pressure. Emergency exit doors shall be self-closing and weather-stripped. Construction shall include 2 in. x 4 in. wood stud fames and 5/8 in. sheetrock (joints sealed). Floor-to-floor penetrations shall also be sealed.

C. Work activities in occupied buildings presenting a potential health hazard shall be conducted after normal school hours. Roofing, indoor cutting of steel, concrete, or masonry, vehicles powered by internal combustion engines which are operated inside the building, removal of asbestos-containing material, welding, and other activities producing significant dust, odors or fumes shall be conducted after hours unless contractor can demonstrate that controls will maintain acceptable IAQ in occupied areas.

D. Construction areas shall be maintained under negative pressure in relation to occupied areas where practical. This may be accomplished by supplying outside air to occupied side or exhausting air from construction side. Exhaust air at a rate at least 10 percent greater than the rate of supply. Do not exhaust air where it can be drawn back into occupied spaces.

E. Temporarily seal the building, including air intakes and exhaust vents, and any other building openings, when dust-generating or strong-emitting construction products or procedures are used on exterior of the building.

F. Openings created to outside of building shall be enclosed after each work shift to protect building interior from moisture.

G. Construction-related noise shall not cause noise levels to exceed 65 dBA in occupied school areas.

H. Corridors through occupied areas shall not be used for project storage or for transportation of materials, equipment, trash, or debris.

I. Contractors shall prevent workers from entering occupied school areas.

J. Clean work area daily to prevent the accumulation of dust or debris.

K. Store waste in enclosed waste containers as needed to prevent release of dust and odor.

L. Transport trash, debris, carts, equipment, materials or supplies to and work areas without entering occupied school areas.

M. Take immediate measures to dry any area where flooding, water leakage, or condensation occurs.

N. Mold growth must be remediated following procedures approved by MCPS.

O. Contractor shall be responsible for providing adequate manpower, equipment, and materials at appropriate times (including nights and weekends) to meet the requirements of this section and project schedule milestone dates.

P. If MCPS or its designated representative determines that Contractor is violating this IAQ specification or endangering school occupants, Contractor must cease operations until corrective actions are taken.

3.4 Housekeeping:

A. Suppress dust during construction and/or demolition activities with wetting agents or sweeping compounds.

B. Broom clean and vacuum floors to keep dust from accumulating during construction and/or demolition.

C. Ensure that food and food packaging are not left on jobsite.

D. Give preference to low-toxic pest control chemicals, if needed.

E. Final cleaning shall be detailed and shall use a HEPA-filter vacuum throughout.

F. Remove spills or excess application of solvent-containing products as soon as possible. Use low-emitting cleaning agents described under “Cleaning Products and Equipment” Article 2.2.

G. Keep work areas as dry as possible. Replace any absorptive material that is exposed to moisture longer than four hours.

3.5 Scheduling:

A. If protection measures as described above cannot be ensured for “absorptive” materials during storage, do not store these material on-site.

B. Provide a minimum of forty-eight hours of continuous ventilation after final installation of all construction material and prior to occupancy.

END OF SECTION 018119

SECTION 018119 – INDOOR AIR QUALITY MANAGEMENT - APPENDIX

Background Information to Contractors Regarding Indoor Air Quality

1. What pollutants are associated with renovation?

   During the course of major building renovation, a wide variety of odors, dusts, and other pollutants can be released. Projects produce an ever-changing mix of emissions as the work progresses. In general, construction sites have three basic sources of air pollutants:

   A. Demolition Dust. This is generated as old building materials are cleared.

   B. Construction Equipment. Emissions may occur from motor vehicles, compressors, welding, cutting, soldering, etc.

   C. Construction Products. Wet products involved with roofing, painting, adhesives, and solvent use may contribute to odors. Some of the more significant sources have involved concrete cutting, roofing, operation of construction vehicles in or near the building, and solvent use.

   D. Construction activity can indirectly impact air quality in several ways:

      1. Disruption of HVAC systems can adversely affect ventilation, comfort, moisture control, and pressurization as well as contributing to airborne dust.

      2. Interference with drain systems could allow sewer gas in the building.

      3. Damage to natural gas or steam piping could release contaminants.

      4. Temporary building openings or drainage modifications may cause water damage during precipitation events leading to mold growth.

      5. Construction demands interfere with normal building cleaning and maintenance.

2. How can pollutants move through a school?

   Construction emissions become problematic only when they migrate into occupied areas. In this regard, understanding and controlling potential pathways of contaminant movement are essential to maintaining indoor or air quality. Critical factors to consider include:

   - Return Air Systems. Contaminants may be drawn into air intakes, return grilles or plenums, or mechanical room equipment and then distributed throughout HVAC zones.
   - Relative Pressurization. Pollutants tend to move into areas of negative pressure (e.g., drawn toward exhaust fans, higher building elevations). Openings between building areas or between floors must be sealed to prevent such pollutant migration.
   - Tracking. Dust and odors may be spread into occupied areas on construction personnel or by equipment.

   Although the generation of odor and dust is inevitable at construction sites, exposure of building occupants depends on the following:

   - location of emissions in relation to occupied areas
   - time of emissions in relation to building occupancy
   - effectiveness of source controls
   - effectiveness of pathway controls

   Through proper planning and control, no odor or dust should be detected in occupied areas.

3. How can construction pollutants affect school occupants?

Excessive exposure to construction site pollutants may be associated with a variety of acute health complaints including mucous membrane irritation, allergic reactions, asphyxiation, and non-specific symptoms such as headache or nausea. Since each of these conditions could be caused by factors other than construction emissions, detailed diagnostic procedures (both medical and environmental) are needed to establish actual causation. In any large population, a small number of hypersensitive individuals may be present who may react to construction pollutants at levels much lower than other occupants. Although potential carcinogens may be present in some construction emissions, exposure is generally very brief and the risk thus negligible. Isolating building occupants from all dusts and odors generated by construction is usually the control strategy of choice.

Occupants of buildings under construction may also express concerns regarding discomfort, nuisance conditions, and perceptions of health effects. Construction process may disrupt HVAC operation, resulting in thermal discomfort. Nuisance conditions may also be observed such as odors, stains, and dust, which do not present a direct health threat. Construction process often places building occupants under stress where they may attribute health concerns to IAQ, which may, in fact, be unrelated.

4. What options are available to control construction-related pollutants?

Measures available to maintain IAQ during construction include:

- protect HVAC systems
- substitute lower-emitting products
- modify equipment operation
- change work practices
- add local exhaust
- cover sources of dust or odor
- depressurize work area
- pressurize occupied space
- erect barriers
- seal penetrations
- relocate pollutant sources
- temporarily seal outside air intakes
- enhance housekeeping
- schedule heavy work for after-hours

When implementing site controls, consider the following:

- Barriers should provide complete isolation with no penetrations or gaps and doors remaining closed when the building is occupied.
- Seal other potential pathways to occupied areas such as floor-to-floor pipe penetrations and nearby HVAC intakes.
- Conduct activities with heavy dust or odor emissions during occupied periods under negative pressure (portable exhaust fans in work area and/or positive pressure in occupied area).
- Schedule activities which still may have a health impact for non-occupied periods.
- Enhance dust control by limiting dust tracking from both outside and inside areas and ensuring custodial personnel, procedures, and scheduling are sufficient to maintain a clean building.

END OF SECTION 018119
APPENDIX

SECTION 019100 – COMMISSIONING

PART 1 – GENERAL

1.1 Section Includes:

A. Commissioning requirements common to all Sections

B. Systems and equipment start-up and functional performance testing

C. Validation of proper and thorough installation of systems and equipment

D. Equipment performance verification

E. Documentation of tests, procedures, and installations

F. Coordination and requirements of training events

G. Management of Record Construction Documentation

H. Sequencing

1.2 General Description:

A. Commissioning (Cx) is process of ensuring that building systems are installed and perform interactively according to design intent; that systems are efficient and cost effective and meet Owner's operational needs; that installation is adequately documented; and that Operators are adequately trained. It serves as a tool to minimize post-occupancy operational problems. It establishes testing and communication protocols in an effort to advance building systems from installation to full dynamic operation and optimization.

B. Commissioning Authority shall work with Contractor and Design Engineer to direct and oversee Cx process and perform functional performance testing.

C. Commissioning Plan outlines commissioning process. It is part of Contract Documents and stipulates all but Contractor responsibilities.

D. This Section and other Sections of specification details Contractor's responsibilities relative to Cx process. It expands on Cx Plan, which covers roles and responsibilities of all Parties. It also indicates details of Functional Performance Testing (FPT) in which Contractor must participate.

1.3 Scope:

A. Section covers elements, requirements, procedures, and protocols common across all Divisions of Work. Requirements specific to individual Sections are generally specified in technical specification as well as in Sections Mechanical System Commissioning and Building Automation Systems Commissioning.

B. Specific systems to be commissioned are indicated in following Divisions of Specification:

1. Divisions 02 – 48: Conformance to following provisions of Cx requirements is required under Division 01 and this Section:

a. Operation & Maintenance Manual preparation and maintenance;

b. Record Document preparation and maintenance.

2. Division 23 - Requirements for Cx are specified in Section 230800 as well as in individual Div 23 Sections.

1.4 Related Sections and Documents:

A. Commissioning Plan: Cx Plan shall be considered a part of Contract Documents and outlines many of responsibilities, procedures and tasks throughout Cx process. It encompasses entire Cx process including design phase tasks prior to construction. It also describes Functional Performance Tests that will be performed during Acceptance Phase.

B. Section 019150 – Functional Performance Testing Procedures: Provides 'generic' functional performance testing procedures to illustrate level-of-effort expected during acceptance testing.

C. Individual Specification Sections: Individual sections stipulate installation, start-up, warranty, O&M documentation, and training requirements for system or device specified in Section.

D. Section 230800 – Commissioning: Details commissioning procedures specific to Division 23 work.

E. Section 230800 – Mechanical Systems Commissioning: Details commissioning procedures specific to Division 23 Work.

1.5 Definitions and Abbreviations:

A. Acceptance Phase: Phase of project when facility and its systems and equipment are inspected, tested, verified, and documented; and when most of Functional Performance Testing and formal training occurs. This will generally occur after Construction Phase is complete (start-up and checks have been accomplished). Acceptance Phase typically begins with Substantial Completion and ends with Functional Completion.

B. Action Item (AI**)**: Any issue that requires a response, completion, corrective or additional work, or any other action. Examples include a Request for Information (RFI), a work directive, a clarification request, a to-do item, an identified deficiency, or any other like item. Action Items must be categorized as appropriate.

C. Action List: List that is maintained and updated by Cx authority that includes action items that relate to Cx activities.

D. A/E: General reference to Architect/Engineer lead-design entity.

E. ASHRAE: American Society of Heating, Refrigerating, and Air Conditioning Engineers.

F. Building Automation System (BAS): Computer-based control or automation system.

G. Contractor: As used herein, 'Contractor' is a general reference to installing Party and can therefore refer to Contractor, subcontractors, or vendors as inferred by its usage.

H. Construction Manager (CM**)**: Party retained by Owner to represent Owner and make decisions on Owner's behalf throughout design and construction process.

I. Construction Phase: Phase of project during which facility is constructed and/or systems and equipment are installed and started. Contractor and subcontractors complete installation, complete start-up documentation, submit O&M information, establish trends, and perform any other applicable requirements to get systems started. Contractor and vendors may also conduct equipment specific training. Construction Phase will generally end upon completed start-up and TAB of systems and equipment.

J. Contract Documents: Documents governing responsibilities and relationships between parties involved in design and construction of this project including (but not necessarily limited to):

1. Agreements/Contracts;

2. Construction Plans and Drawings;

3. Specifications;

4. Addenda;

5. Change Orders;

6. Cx Plan.

K. Construction Documents: Refers generally to Contract Documents that dictate details of installation (all but item a. above).

L. Commissioning (Cx): Process of ensuring that building systems perform interactively according to design intent, systems are efficient and cost effective and meet Owner's operational needs.

M. Commissioning Authority (CA): Party retained by Owner who will oversee Cx process, develop and stipulate many of Cx requirements, manage Cx process, and ensure and validate that systems and equipment are designed, installed and tested to meet Owner's requirements.

N. Commissioning Coordinator (CxC): Individual within each of various parties that is designated POC for that party relative to Cx activities.

O. Commissioning Specifications ('Cx Specs'): Includes separate Cx specification sections and Cx-related subsections of other specifications. Contractor requirements relating to Cx should be conveyed within Cx Specs. Cx Specs should be referenced but not duplicated within Cx Plan (which is designed to govern non-Contractor-related issues).

P. Commissioning Team (CxT): Group of parties involved in commissioning process for any given system. Cx Team will include a core group involved with systems. This core group will typically include CA,[CM's Cx Coordinator (CMCxC)], [Owner's Cx Coordinator (O/O-CxC)] and Constractor's Cx Coordinator (C-CxC). On any given system, Cx Team will also include Cx Coordinator for Contractor(s) responsible for system or equipment.

Q. Deficiency: A condition in installation or function of a component, piece of equipment or system that is not in compliance with Contract Documents (that is, does not perform properly or is not complying with design intent).

R. Factory Authorized Representative: An individual fully trained on equipment and certified by manufacturer to perform respective task.

S. Factory Testing: Testing of equipment off-site at manufacturer's facility may be witnessed by members of project team.

T. Functional Completion: A milestone that marks completion of Acceptance Phase and successful completion of FPTs by CA.

U. Functional Performance Testing (FPT): Detailed and thorough testing of building systems and interactions with building components and other building systems.

V. IAQ: Indoor Air Quality

W. *O&M Documentation*: Refers to Contractor-developed documentation designed to address needs of facilities personnel and customized for context of specific facility and installation. Foundation of *O&M Documentation* is manufacturer's literature (including 'O&M Manuals',

parts lists, troubleshooting guides, etc.) as well as Contractor-developed instructions for start-up and shut-down, sequences, and other installation-specific information.

X. O&M Manuals: Term shall be reserved for referencing manufacturer-published O&M documents, which generally has no information specific to facility. Specifications should strive for this information to be submitted in electronic form whenever possible.

Y. Opposite Season: Season opposite that when majority of testing occurs.

Z. Party: Individual, company or entity. Refer to Cx Plan for specific names and definitions.

AA. Point of Contact (POC): General reference to key individual within each party.

BB. Preliminary Service: Systems/equipment are being used by occupants although final adjusting, balancing, and functional performance testing is on-going.

CC. Pre-Test: Preliminary testing accomplished during a scheduled system outage to verify system functionality prior to placing system/equipment into preliminary service.

DD. Project Phases: Phases of project include Construction Phase, Acceptance Phase, and Warranty Phase.

EE. Project Officer (PO): Individual or entity directly employed by Owner who is in charge of design and construction coordination for project. Alternately, Owner may employ a separate CM to perform this function.

FF. RFI: Request for Information

GG. Scheduled Outage: A period of time, scheduled by Owner, in which system is out-of service or not to be used by occupants.

HH. Start-Up: Refers to quality control process whereby Contractor verifies proper installation of a device or piece of equipment, executes manufacturer's starting procedures, completes Start-Up Checklist, energizes device, verifies that it is in proper working order and ready for dynamic testing, and completes Start-Up Tests.

II. Start-Up Checklist Item: List of items to inspect to verify proper installation of equipment or systems by Contractor. Checklist items simply require a 'Yes/No' or 'OK/Not' response. These include primarily static inspections and procedures to prepare equipment or system for initial operation (e.g., belt tension, oil levels OK, labels affixed, gages in place, sensors calibrated, etc.). Start-Up Checklist items are one component of Start-Up Procedures (Other is Start-Up Tests).

JJ. Start-Up Procedures: Refers to combination of Start-Up Checklists and Start-Up Tests. Start-Up Procedures are typically performed by Contractor with or without a formal Cx process. Contractor documents start-up process by completing and submitting Start-Up Procedures.

KK. Start-Up Test: Test that may be involved with equipment start-up. It differs from a checklist item in that it requires more than a binary response - an observation, measurement, or sequence of events must be documented. Start-Up Tests are one component of Start-Up Procedures (Other is Start-Up Checklists).

LL. TAB: Can refer to the test, adjust, and balance process or Testing, Adjusting, and Balancing Contractor.

MM. Testing Agency: Independent agency typically retained by Contractor to perform specialized testing of systems or equipment (most commonly electrical). Testing Agency shall be qualified and equipped to perform testing and shall submit appropriate qualifications.

NN. Trending: Monitoring and recording a history of parameters typically using building automation system.

OO. Warranty Phase: Includes early occupancy of building and can continue through Warranty Period and at least into opposite season from when it was initially tested.

1.6 References:

A. ASHRAE Guideline 0-2005, “The Commissioning Process" and 1.1-2007, “HVAC & R Technical Requirements for Commissioning Process”.

B. ASHRAE Guideline 4-1993, “Preparation of operating and Maintenance Documentation for Building Systems”

C. NEBB - Procedural Standards for Building Systems Commissioning

1.7 Documentation:

A. Contractor shall provide to Commissioning Authority following:

1. Shop Drawings and Data: One hard copy [and one electronic copy] of Shop Drawings and product data related to systems or equipment to be commissioned. Commissioning Authority shall review and incorporate comments via Design Engineer.

2. Draft Start-Up Procedures: Contractor shall develop Start-up Procedures for applicable equipment and systems along with manufacturer’s application, installation and start-up procedures. CA will initially provide to Contractor generic Start-up Checklists, content of which must be reviewed by Contractor and supplemented with manufacturer-specific requirements and Contractor’s own internal quality assurance procedures and checks. CA will review draft and recommend approval.

3. Factory Test Reports: Contractor shall provide any factory testing documentation or certified test reports required by specifications. These shall be provided prior to Acceptance Phase.

4. Schedule Updates: Issue periodic updates to construction schedule. Provide to CA at least every two weeks. Contractor shall use schedule to notify Cx team of scheduled start-up and training activities.

5. Action Item Response: Respond to Action Items to which Cx team members assign Contractor responsibility.

6. Field Testing Agency Reports. Provide documentation of Work of independent testing agencies required by specification. These shall be provided prior to Acceptance Phase.

7. Completed Start-Up Procedures: Completed Start-Up Procedure documentation for applicable equipment and systems. CA will review prior to FPT.

8. Equipment Warrantees: Provide prior to start of Acceptance Phase.

9. Installation, Operation and Maintenance Manuals: Provide O&M Documentation content per requirements of Cx Plan, and Division 1 requirements. Submit at least one month prior to beginning of Acceptance Phase.

B. Record Drawings: Contractor shall maintain at site an updated set of record or ‘As-Built’ documents reflecting actual installed conditions and approved changes and modifications to Contract Documents. Contractor shall provide access to CA to review As-Built and Record Drawings. Provide Record Drawings in accordance with Division 1 and Cx Plan.

1.8 Commissioning Sequencing and Scheduling:

A. Contractor shall incorporate Cx Precedent Schedule into construction schedule. Contractor shall collaborate with CA to determine impacts of project phasing as applicable. Contractor shall include tasks for systems in construction schedule. Examples of enumerated tasks include:

1. Contractor preparation of draft Start-Up Procedures

2. Testing Agency activities

3. Documentation of Start-Up Procedures for equipment and systems

4. TAB of applicable system

5. Training Events

6. Acceptance Testing

7. Occupant or Regulatory Agency testing or approval process

B. Contractor shall completely install, thoroughly inspect, start-up, test, adjust, and balance systems and equipment. Activities shall be documented per specified procedures and progress tracked on construction schedule. Contractor shall notify A/E, Owner, and CA in writing that systems are complete and ready for verification and functional performance testing. Notification shall be accompanied by a schedule showing coordinated start date and task duration and currently open precedent requirements.

C. Contractor shall notify CA at least 14 days in advance of any tests, start-ups, or training. CA shall witness selected tests and start-ups. Notification shall be accompanied by a schedule showing coordinated start date and task duration and currently open precedent requirements.

1.9 Coordination Management Protocols:

A. Coordination responsibilities and management protocols relative to Cx are initially defined in Cx Plan but will be refined and documented in Construction Phase Cx Kick-Off meeting. Contractor shall have input in protocols and all parties will commit to scheduling obligations. CA will record and distribute.

1.10 Contractor Responsibilities:

A. Construction Phase: Commissioning-related responsibilities of Contractor (and their subcontractors) during Construction Phase:

1. Include Cx requirements in price and plan for work.

2. Designate a Cx Coordinator (CxC) from each major subcontractor with activities related to commissioning. These Cx Coordinators are to be primary contacts for Cx activities.

3. Attend Construction Phase Cx Kick Off Meeting. Cx Coordinator and Project Manager from each major subcontractor shall attend at a minimum.

4. Cx Coordinator shall attend all Cx progress meetings unless otherwise agreed to by CA.

5. Remedy any deficiencies identified throughout construction.

6. Prepare and submit required draft Start-Up Procedures and submit along with manufacturer’s application, installation and start-up information.

7. TAB shall submit sample balancing forms for approval prior to starting work.

8. Schedule and coordinate Cx efforts into construction schedule. Incorporate precedent diagram provided by CA into construction schedule. Indicate at a minimum tasks enumerated on precedent diagram for systems.

9. Coordinate Work of subcontractors, vendors, manufacturers, and Testing Agencies provided with bid, and ensure they are informed of and are adhering to requirements of Cx process specified throughout contract documents.

10. Provide assistance to CA in preparation of specific Functional Performance Test (FPT) procedures. Contractors, subcontractors and vendors shall review test procedures to ensure feasibility, safety and equipment protection and provide necessary written alarm limits to be used during tests. Damage caused to equipment performed in accordance with approved procedures will be responsibility of Contractor.

11. Thoroughly complete and inspect installation of systems and equipment as detailed throughout Contract Documents, as required by reference or industry standards, and as specifically indicated elsewhere in this section.

12. Start-up, and test/adjust/balance systems and equipment prior to functional performance testing by CA. Start-Up Procedures shall be in accordance with Contract Documents, reference or industry standards, and Part I of this Section.

13. Provide skilled technicians qualified to perform Work required.

14. Provide factory-trained and authorized technicians where required by Contract Documents.

15. Record Start-up Procedures on start-up procedure forms and certify that systems and equipment have been started and or tested in accordance with requirements specified above. Each task or item shall be indicated with Party actually performing task or procedure.

16. Tag equipment that is started with individual's name and date.

17. Demonstrate operation of systems as specified.

18. Certify that systems have been installed and are operating per Contract Documents prior to Acceptance Testing.

19. Maintain an updated set of Record Documentation as required by Contract Documents.

20. Copy CA on indicated documentation.

21. Conduct and document Equipment and Systems Training events as required by applicable sections of Specifications pertaining to each piece of equipment or system.

B. Acceptance Phase: Commissioning-related responsibilities of Contractor (and their subcontractors) during Acceptance Phase:

1. Assist CA in functional performance testing. Assistance will generally include following:

   a. Manipulate systems and equipment to facilitate testing (as dictated in Section 019150 and Cx Plan; in some cases this will entail only an initial sample).

b. Provide any specialized instrumentation necessary for functional performance testing.

c. Manipulate BAS and other control systems to facilitate functional performance testing (as dictated Section 019150 and Cx Plan; in some cases this will entail only an initial sample).

2. Correct any Work not in accordance with Contract Documents.

3. Participate in Training Events relative to use of O&M information and PM program.

4. Maintain Record Documents, and update and resubmit it after Functional Completion.

5. Compensate CA for additional site time incurred due to incompleteness of systems or equipment at time of Functional Performance Testing.

C. Warranty Phase: Commissioning-related responsibilities of Contractor (and their subcontractors) during Warranty Phase:

1. Provide warranty service;

2. Participate as required in opposite season testing;

3. Correct any deficiencies identified throughout Warranty Phase;

4. Update record documentation to reflect any changes made throughout Warranty Phase and resubmit final Record Drawings at close of Warranty period.

1.11 Equipment Supplier Responsibilities:

A. Construction Phase: Commissioning-related responsibilities of Equipment Supplier (and their subcontractors) during Construction Phase:

1. Provide shop drawings and product data in hard copy and electronic format.

2. Provide manufacturer's application, installation and start-up instructions within 30 days of shop drawing/product data approval.

3. Where factory-authorized start-up is specified, coordinate and participate in specified commissioning process and document start-up on appropriate forms.

4. Review and approve Functional Test Procedures affecting supplied equipment.

5. Provide spare parts and materials as required by Specifications.

6. Provide special tools as required by Specifications.

7. Provide warranties.

B. Acceptance Phase: Commissioning-related responsibilities of Equipment Supplier (and their subcontractors) during Acceptance Phase:

1. Participate in any Functional Testing Procedures required.

2. Consult on issues identified relative to supplied equipment.

C. Warranty Phase: Commissioning-related responsibilities of Equipment Supplier (and their subcontractors) during Warranty Phase:

1. Provide any warranty service required to supplied equipment as applicable with agreement with Contractor.

2. Provide technical support to Owner's facilities personnel.

1.12 Start-up Procedures and Documentation:

A. Purpose: Cx process requires that normal quality control processes involved with preparing systems and equipment for operation are performed to a high standard of care and are thoroughly documented. Required commissioning-related Start-Up Procedures involve nothing additional than that which would be done for any good installation. These procedures shall be performed to installed systems and equipment and no sampling strategy is used for start-up process. Cx process requires all parties to collaborate to establish optimal standard of care for starting systems and equipment. After procedures are established, Contractor performs them and documents them with Start-up Procedures that are developed by joint effort of Contractor and CA.

B. Creation of Start-up Procedures: Start-up Procedures (consisting of checklists and tests as above) for each type of equipment and system shall be submitted to CA for approval prior to start-up. Appropriate subcontractors or vendors shall design forms, meeting requirements of Contract Documents. Forms shall be developed for equipment being installed for this project and as such indicate project-specific values, settings, targets, acceptance criteria, and other parameters as appropriate. 'Generic' Start-Up Procedure forms available from CA may be used as examples.

C. 'Generic' Start-Up Procedures: Refer to Section 230800 for generic Start-up Procedures for a variety of mechanical and electrical systems. Content of these Start-Up Procedures shall provide minimally acceptable content.

D. Content of Start-Up Procedures: Start-Up Procedures for each item of equipment or system generally includes following:

1. Project-specific designation, location and service.

2. Indication of Party performing and documenting Start-Up Procedure.

3. Clear explanation of inspection, test, measurement, and outcome with a Pass/Fail indication and a record of measure parameters.

4. Include a checklist item indicating that all O&M instructions, Warranties, and Record Documents have been completed and submitted.

5. Include a Start-up Checklist item indicating that proper maintenance clearances have been maintained.

6. Include a Start-up Checklist item indicating that special tools and/or spare tools required for normal operation and maintenance were turned over to Owner.

7. Include Start-up Checklist item indicating that required dependent or prerequisite equipment and systems were previously started successfully.

E. Manufacturer's Requirements: Start-up Procedures shall incorporate manufacturer specified procedures. As applicable, include acceptance criteria specified therein. Manufacturer's start-up and checkout procedures shall be submitted to CA along with Contractor's draft Start-Up Procedure.

F. Related Sections and Contract Documents: Refer to technical specifications and commissioning-related Sections for additional information.

G. CA Review: CA shall review draft Start-Up Procedures and request any additional information required to meet Cx criteria. CA will also review and spot-check procedures during Functional Performance Testing.

H. Completion: Individual executing start-up must complete Start-Up Procedure for equipment and acknowledge acceptability with indication of who did associated task. Systems shall be started per approved procedures and no sampling strategy shall be used. Completed Start-up Procedures for pieces of equipment shall be submitted to CA prior to any associated Functional Performance Testing. Outstanding items shall be clearly indicated and an associated Action Item must be entered to track resolution.

1.13 Functional Performance Testing:

A. Objective of Functional Performance Testing is to demonstrate that each system is operating according to Contract Documents. Functional Performance Testing facilitates bringing systems from a state of Substantial Completion to full dynamic operation. Additionally, during testing process, areas of deficient performance are identified and corrected, improving operation and functioning of systems.

B. Logistics and procedures involved in Functional Performance Testing are outlined below and in Section 019150.

1.14 Deficiencies Identified During Functional Testing:

A. Non-Conformance: Non-conformance deficiencies identified during Functional Performance Testing shall be resolved as follows:

1. CA will record results of functional test in project database. Deficiencies or non-conformance issues shall be noted as Action Items and reported to Owner.

2. Corrections of identified minor deficiencies may be made during tests at discretion of CA. In such cases, deficiency and associated resolution will be documented in database.

3. Every effort will be made by CA to expedite testing process and minimize unnecessary delays, while not compromising integrity of procedures.

4. As tests progress and a deficiency is identified, CA will discuss issue with executing Contractor.

a. When there is no dispute on deficiency and Contractor accepts responsibility to correct it:

1) CA shall document deficiency along with Contractor’s response and intentions, and proceed to another test or sequence. A copy/email of deficiency shall be generated and provided to Contractor and CA. Contractor corrects deficiency, completes Action Item response certifying that issue is resolved and /or equipment is ready to be retested, and sends it back to CA.

2) CA reschedules test and test is repeated.

b. If there is a dispute about a deficiency, regarding whether it is a deficiency and/or who is responsible:

1) Deficiency shall be documented as an Action Item with Contractor’s response and Owner will be notified. Owner will track this issue under construction contract dispute resolution provisions.

2) Final interpretive authority is with A/E. Final acceptance authority is with Owner.

3) CA documents resolution to Action Item.

4) Once interpretation and resolution have been decided, appropriate party corrects deficiency, and responds to Action Item indicating completion. CA reschedules test and test is repeated until satisfactory performance is achieved. CA then closes Action Item.

B. Cost of Retesting: Cost for CA to retest a Start-up or Functional Performance Test shall be paid by Contractor responsible for deficiency. Owner shall pay CA directly and back charge responsible Contractor.

C. Failure Due to Manufacturer's Defects. If 10% or three, whichever is greater, of identical pieces of equipment fail to perform to Contract Documents (mechanically or substantively) due to manufacturing defect, identical units may be considered unacceptable by Owner. (For purposes of defining 'identical equipment' for this Section, size or capacity alone does not constitute a difference.) In case of failure due to manufacturer's defects, Contractor shall provide Owner with following:

1. Manufacturer's response in writing as to cause of failure and proposed resolution.

2. Manufacturer shall implement proposed resolution on a representative sample of product.

3. Owner will determine whether a replacement of all identical units or a repair is acceptable.

4. Upon acceptance, manufacturer shall replace or repair all identical items at their expense and shall extend warranty accordingly (if original equipment warranty had begun).

5. Manufacturer shall pay costs of all retesting necessitated by failure.

PART 2 - PRODUCTS

2.1 Instrumentation:

A. General: Testing equipment used in commissioning process shall be of sufficient quality and accuracy to test and/or measure system performance within tolerances specified. Equipment shall be calibrated according to manufacturer's recommended intervals. Calibration tags shall be affixed or certificates readily available.

B. Standard Testing Instrumentation: Standard testing instrumentation normally used for performance assessment and diagnosis will be provided by CA. Refer to Section 230800 for a list of applicable test equipment.

C. Special Tools: Special equipment, tools and instruments (only available from a vendor, and specific to a piece of equipment) that are required for testing equipment in accordance with Contract Documents shall be included in base bid price to Contractor and left on site for Owner.

PART 3 - EXECUTION

3.1 Start-up Standard of Care:

A. Procedures that establish a minimum Standard-of-Care for start-up, check out and testing of applicable equipment are specified in individual technical specifications as well as Section 230800. Contractor shall apply Standard-of-Care and document per Cx requirements.

3.2 Functional Performance Test Execution:

A. Functional Performance Testing procedures are specified in Section 019150. Contractor shall participate in development and approval of testing procedures, as well as participate as required in initial sample of tests as indicated herein.

END OF SECTION 019100

SECTION 019150 - FUNCTIONAL PERFORMANCE TESTING (FPT) PROCEDURES

PART 1 – GENERAL

1.1 Section includes:

A. Functional Performance Testing of Systems: Functional Performance Testing (FPT) process, procedures, and requirements. It is intended to illustrate (i) Contractor's requirements for assisting Commissioning Authority (CA) with Functional Performance Testing of systems, and (ii) to demonstrate level at which systems and equipment will be tested prior to being deemed 'Acceptable' to Owner.

B. CA will prepare itemized and detailed testing plans and procedures that:

1. Specify individual tests and procedures that meet general requirements of Cx plan and commissioning process;

2. Serve to document and record testing procedures and results of tests.

C. Contractor shall provide technical input to CA as needed during development of final project FPTs.

D. Acceptance criteria

E. Example (referred to herein as 'generic') FPTs are provided as illustration to Contractor of level of detail to which FPTs will be conducted.

1.2 Related Documents:

A. Commissioning Plan: Cx Plan is part of Contract Documents and outlines many responsibilities, procedures and tasks throughout Cx process. It encompasses entire Cx process including phases prior to construction and roles of parties. It also describes Functional Performance Tests that will be performed during Acceptance Phase.

B. Section 019100: Specifies general facility commissioning procedures common across all Divisions and the Contractor's responsibilities for the commissioning process.

C. Division 25 – Building Automation Systems Commissioning: Details commissioning procedures specific to Building Automation System.

D. Section 230800 – Commissioning: Details commissioning procedures specific to Division 23 work.

E. Individual Specification Sections: Individual sections stipulate installation, start-up, warranty, O&M documentation, and training requirements for system or device specified in Section.

1.3 Definitions and Abbreviations

A. Refer to Section 019100.

1.4 Functional Performance Testing:

A. Objectives and Scope:

1. Objective of functional performance testing is to demonstrate that each system is operating according to documented design intent and Contract Documents. Functional

testing facilitates bringing systems from a state of substantial completion to full dynamic operation. Additionally, during testing process, areas of deficient performance are identified by CA and corrected by responsible Contractor, improving operation and functioning of systems.

2. Each system shall be operated through modes of operation (seasonal, occupied, unoccupied, warm-up, cool-down, part- and full-load) where there is a specified system response. Verifying each sequence in sequences of operation is required. Proper responses to such modes and conditions as power failure, freeze condition, low oil pressure, no flow, equipment failure, etc. shall also be tested.

B. Development of Test Procedures**:** CA shall develop specific test procedures and forms to verify and document proper operation of each piece of equipment and system. Prior to execution, CA shall provide a copy of initial test procedures to Contractor who shall review tests for feasibility, safety, equipment and warranty protection, and scope. CA will also submit tests to A/E for review.

1. Contractor shall review FPTs in detail.

2. CA shall review Owner-contracted testing, factory testing, or required Owner acceptance tests for which CA is not responsible to oversee. Review shall include content, scope, and documentation format, and shall determine what further testing or format changes may be required. Redundancy of testing shall be minimized.

3. Purpose of any given specific FPT is to verify and document compliance with stated criteria of acceptance.

C. Scheduling: After Contractors notification that systems are ready for initial testing and submittal and review of required submittals has occurred, Owner shall schedule testing. To extent practical, tests shall be scheduled to allow efficient and contiguous testing of inter-related systems and equipment.

1. Phasing: Non-interdependent segments of project testing can be phased. Phasing shall be determined based on schedule for Owner Occupancy by area. Schedule and planning shall allow adequate time for functional performance testing prior to building occupancy.

D. Participation: CA will direct Functional Performance Tests after Start-Up Procedure documentation of systems and equipment has been reviewed and accepted. Conceptual procedures for functional performance testing are outlined elsewhere in this Section. CA will execute FPTs unless otherwise specified. Contractor shall assist as described above with manipulation of systems or equipment, provision of supporting equipment or materials (lifts, ladders, specialty test equipment, safety equipment), and immediate remediation of minor identified deficiencies whenever possible. Required participation is outlined in generic FPTs provided elsewhere in this Section.

1. Required participating parties shall be indicated with individual FPT. Typically, multiple parties are required for any given test, yet participation for any given party is only required for respective portion of test for which party is responsible. For instance, controls contractor does not have to be present for capacity testing of an air handler, only control-related portion of test. In many cases, maximum required time in hours is indicated in parenthesis for given test. Time is typically **per unit** system unless indicated otherwise (i.e.: 1 hr per air handler tested). If no time is indicated, participation is required throughout entire test.

2. Frequently, on multiple samples where a given party does not directly conduct test, participation of that party will only be required for an initial quantity of systems/equipment. Whenever practical and at discretion of CA, CA will continue with remaining portion of sample without assistance from Contractor. In this case, time

requirement will be indicated as a total. However, Contractor is allowed to be present at their option for any or all FPTs conducted.

3. It is required that parties be available on-site throughout testing of given system for which they are required participants. Therefore, time for which they are not directly involved can be spent performing or work (typically addressing identified punch list items or failed tests).

4. No party involved with project is prohibited from participation in or witnessing of tests. Contractor may elect to witness tests on systems even if involvement is not directly required (for instance, controls contractor involvement is sometimes required on first few of a sample and not on entire sample).

5. CA will endeavor to coordinate effectively with individual Contractors throughout FPT and minimize required involvement.

E. Detailed Test Procedures and Contractor Review: CA will prepare detailed and itemized testing procedures to define and document FPT. These will be developed during Construction Phase and completed during Acceptance Phase. CA shall submit these procedures to Contractor for review. Contractor shall indicate required limitations, safety procedures, maximum thresholds, and other parameters during FPT development. (Contractor shall be responsible for any damage to equipment caused by functional performance testing done per procedures and within limitations of approved procedures.)

F. Completeness: Systems must be completed and ready for FPT. Start up, factory authorized field testing, independent testing agency tests, and TAB procedures must be complete and control systems must be tested and started for respective system or component.

G. Test Documentation: CA will conduct tests, and/or witness tests as applicable. CA will record test results on forms developed for testing. CA will 'Pass' or 'Fail' testing and record date and time of test. Deficiencies shall clearly be indicated when test is failed. When related testing is completed successfully, CA shall recommend acceptance of system or component.

H. Deficiencies and Re-Testing: When deficiencies are identified during testing, depending on extent or magnitude, they can be corrected during test and testing can continue to successful completion. More significant deficiencies will require failure of test and re-testing. Deficiencies of this magnitude will result in an Action Item on Action List and resolution is responsibility of the Contractor. (Resolution of deficiency will not subsequently be tracked by CA via Action List.) Tests shall be repeated until successful completion. Refer to more specific provisions below.

I. Sampling: Some types of identical equipment (such as terminal devices) will be tested using a sampling strategy. Sample percentage is indicated in generic FPT provided elsewhere in this Section.

J. Max Failure Limit and Sample Percentages:

1. A Maximum Failure Limit is indicated along with Sampling Percentages. Max Failure Limit indicates maximum percentage of tested devices that may have test that fails before an entirely new sample must be tested. This is based on concept that if many failures occur, it is a result of inadequate start-up by Contractor. When maximum number of failures is reached, testing on that sample will be terminated and re-testing will be scheduled.

2. If no Max Failure Limit is indicated, tested samples must pass (Max Failure Limit 0%).

3. Where sample tests involve multiple systems (i.e., checking strainers on different hydronic systems) Maximum Failure Limit will apply per system.

4. Responsible Contractors shall pay CA cost of that sample test, and redo start-up/TAB for applicable devices/systems.

5. Work necessitated by sample failures shall be at no cost to Owner.

K. Opposite Season Testing: Testing procedures shall be repeated as necessary during appropriate seasons. Opposite Season testing will be required where scheduling prohibits thorough testing of all modes of operation. Air handler and central heating system testing for heating-related modes of operation and control loops shall be tested during outside air temperatures below 35 degrees F.

L. Approval. CA passes each test and subsequently recommends approval to Owner who reviews and approves FPT.

1.5 Coordination Between Testing Parties:

A. Factory Start-Ups: For many systems and equipment, Factory Start-Ups are specified. Factory Start-Ups will be reviewed and checked during functional performance testing. Costs associated with Factory Start-Ups are included with bid unless otherwise noted. In general, Contractor shall make notification of when Factory Start-Ups are occurring and coordinate these with witnessing parties. CA and CxT members may witness Factory Start-Ups at their discretion. Aspects of functional performance testing accomplished during Factory Start-Ups may be accomplished and approved by CA if they meet intent of FPT.

B. Independent Testing Agencies: For systems where Independent Testing Agencies are specified, cost of this testing is included with bid unless otherwise noted. Much of testing performed by these independent agencies will cover aspects required in Start-Up Procedures and functional performance tests.

1. Contractor and testing agencies shall coordinate with CA so that CA can witness testing and approve applicable aspects of FPTs.

2. CA may in some cases independently spot-check work of testing agencies if tests were not witnessed. However, it is not the intent for CA to re-accomplish testing by others that is specified in construction specifications. For instance, much of testing requirements for electrical systems will be performed by independent electrical testing agency provided under bid. CA shall witness indicated sample of testing and record results in record of functional performance tests.

3. Contractor is responsible for coordinating efforts of testing agency with that of Cx process. Documentation shall be contiguous and seamless and duplication should be avoided. Testing agencies shall complete documentation of Cx process as required.

1.6 FPT Acceptance Criteria:

A. Acceptance Criteria shall be as follows unless more specifically indicated within individual tests. CA may exercise professional judgment to relax requirements and pass tests and recommend approval when appropriate.

1. Capacity and/or equipment performance will generally be as specified ±5 percent.

2. Efficiency where specifically indicated in documents will be ±5 percent. When inferred from manufacturer's catalogue data, criteria will be ±10 percent.

3. Balancing-related criteria will be ±5 percent for water and ±10 percent for air.

4. Accuracy/repeatability on sensing devices will be as specified for device. CA and TAB will use calibrated gages for independent validation and use judgment in passing or

failing devices. In many cases, coordination of multiple related sensors is more important than absolute accuracy.

5. Loop response and setpoint deviation criteria will be as specified in Section 230800.

6. HVAC sequence-related criteria will be as explicitly specified in documents and as interpreted by CA. Code required sequencing shall be per applicable code.

7. System sequences shall be as required by approved shop drawings.

8. Air Pressurization: As indicated in contract documents. If not indicated in documents, then it shall be as indicated in most current version of ASHRAE Handbooks for applicable occupancy. Smoke/shaft pressurization shall be as required by NFPA to maintain maximum door opening forces and to restrict passage of smoke.

PART 2 - PRODUCTS

2.1 Instrumentation:

A. General: Testing equipment shall be of sufficient quality and accuracy to test and/or measure system performance with tolerances specified. Equipment shall be calibrated according to manufacturer's recommended intervals. Calibration tags shall be affixed or certificates readily available.

B. Standard Testing Instrumentation: Standard instrumentation normally used for performance assessment and diagnosis will be provided by CA. These include:

1. Electronic Manometer (for Air and Flow Hood)

2. Electronic Manometer (for Water)

3. Temperature Instruments and Gages

4. Humidity Instrument and Gage

5. CO^2 Instrument

6. Electronic Multimeter

7. Receptacle Tester

8. Tachometer

9. Belt Tensioner

10. Ultrasonic Flow Meter

C. Special Tools: Special equipment, tools and instruments (only available from vendor, specific to a piece of equipment) required for testing equipment, according to these Contract Documents shall be included in base bid price to Contractor and provided to Owner.

PART 3 – EXECUTION

3.1 Prerequisites:

A. Equipment, components, and devices applicable to FPT must be started and Start-Up must be documented and passed. This includes completion of Start-Up Procedures, pressure testing of equipment, duct, piping; flushing/cleaning of applicable systems; completed labeling and identification; completed insulation of applicable systems; and/or requirements for placing system into dynamic operation.

B. Unless specifically agreed to by Owner and CA, support systems shall be complete prior to FPT. For instance, an air handler will require that:

1. Electrical system serving it is completed and tested;

2. Hydroid systems serving it have been pressure tested, flushed, and functional performance tested;

3. Balancing has been accomplished on air and water sides;

4. Control systems have been started and calibrated.

C. CA shall determine optimal sequence of testing.

3.2 Required Parties for Testing:

A. Required participating parties shall be as indicated with individual FPT. Typically, multiple parties are required for any given test, yet participation for any given party is only required for respective portion of test for which party is responsible. For instance, BAC does not have to be present for capacity testing of an air handler, only control-related portion of test.

B. In many cases, maximum required time in hours is indicated in parenthesis for any given test. Time is typically **per unit** system unless indicated otherwise (i.e.: 1 hr per air handler tested). If no time is indicated, participation is required throughout entire test.

3.3 Common Elements for Systems:

A. Required submittal documentation shall be present and located convenient to testing area. Validate that required documentation has been submitted and is per contract requirements.

B. Contractor shall provide completed Start-Up Procedures at time of testing. CA shall review Start-Up Procedure documentation and spot-check at beginning of FPT.

C. Contractor shall demonstrate that access is sufficient to perform required maintenance.

D. BAS trends shall have been established as required in documents. These shall generally be reviewed prior to or during FPT.

E. Dynamic systems powered by electricity shall be tested to simulate a power outage to ensure proper sequencing. Those on emergency power or uninterruptible power shall be tested on all sources.

F. Capacities and adjusted/balanced conditions as applicable shall be subject to check.

G. Sequencing Verification: Modes of operation and actions shall be verified for equipment/system samples.

H. System and equipment configurations shall be compared against contract documents.

I. Verify Modes (such as heating and cooling) are coordinated and do not overlap or ‘fight’.

J. Adjusted, balanced, controlled systems shall be assessed to determine optimal setting for system as applicable. Optimal settings should be determined to establish reliable, efficient, safe and stable operation.

K. BAS or Local Panel Dynamic Graphics: Graphic displays for components, systems, and areas required to be represented by a graphic shall be checked for adequacy and accuracy. Furthermore, when setpoints or parameters are required to be adjustable, CA shall verify that they can be adjusted directly from graphic screen.

L. Emergency power tests for mechanical systems will be conducted in concert with testing of emergency power systems. Mechanical contractor shall be available for power outage test to test mechanical systems under a power outage. This is in addition to requirements specified for mechanical system.

3.4 TAB Verification of Mechanical Systems:

A. CA shall review TAB reports.

B. CA will select up to 10 percent of readings from balancing reports and require balancing contractor to spot-check. Maximum failure rate for this sample is 10 percent and system shall be re-balanced and re-documented if this rate is exceeded. Readings selected by CA may include supply air diffuser readings (both minimum and maximum readings for VAV boxes), main and branch supply duct traverse readings, outside/return air flow readings, exhaust air flow readings, water flow readings, amp readings, and water pressure drop readings through coils, heat exchangers, and or hydronic elements. For readings, a deviation of more than 10 percent between verification reading and reported data shall be considered as failing FPT. Readings that fail FPT shall require re-balancing.

C. Participants (review of failed tests) shall include: CA, Owner, and TAB. Budget – 4 hours.

3.5 Building Power Outage Test:

A. Participants shall include: CA, EC, CM, Owner, BAC, and MC. Budget - 4 hours total.

B. Aspects of other functional performance tests will be done in concert with this test. Coordinate this test only after systems are ready for power outage tests.

C. Simulate potential combinations of power outages reasonably possible.

1. Simulate prolonged outage, at least 2 hours by opening main feeders.

2. Simulate momentary outage by opening and closing main breakers as quickly as possible.

D. While normal power is disconnected, survey facility for safe conditions and system operation as applicable.

E. Return to normal power.

3.6 Air Handling Unit:

A. Participants shall include: CA, MC (2), TAB (4), and BAC (8). (Hours indicated are for first of each AHU type for parties)

B. Sample: 50-75 percent, Max Failure Limit: 10 percent

C. CA shall review Start-Up Procedures and TAB reports.

D. Verify automatic start/stop of fan and open/close of outdoor air damper.

E. Manipulate control device to obtain maximum cooling and heating. Measure temperatures to determine capacity.

F. Weather permitting, cause applicable modes of operation using false loading where practical. Check proper sequence for switching modes and proper operation within a mode.

G. Check calibration of control devices and for stable control response and component performance including cooling coils, heating coils, economizer cycles, and others. Ensure proper coordination of control loops and that no fighting or energy wastes result.

H. Check for free and adequate flow of AC condensate.

I. Ensure minimum required ventilation rates are maintained across full range of control (where applicable).

J. Test interfaces with fire alarm system and smoke control sequences.

K. Verify interlocks with exhaust fans where applicable.

L. Test proof alarming where applicable.

M. Test operation of applicable safeties including smoke detection, duct humidity, and others. Check AHU component status in each event.

N. Check system status and operation in Off, Unoccupied, and Occupied modes of operation. Validate proper start up and shut down sequences.

O. Simulate power outage and ensure automatic and orderly restart.

3.7 Fan Coil Unit:

A. Participants shall include: CA, MC, TAB, and BAC. Budget 1 hour for first unit.

B. Sample: 5 units or 20 percent, Max Failure Limit: 1 unit or 10 percent

C. CA shall review Start-Up Procedures and TAB reports.

D. Verify automatic start/stop of fan and open/close of outdoor air damper.

E. Start heating and cooling system; manipulate control device to obtain maximum cooling and heating. Measure temperatures and pressures to determine capacity.

F. Wear permitting; cause applicable modes of operation using false loading where practical. Check proper sequence for switching modes and proper operation within a mode.

G. Check calibration of control devices and for stable control response.

H. Check for free and adequate flow of AC condensate.

I. Simulate power outage and ensure automatic and orderly restart.

J. Verify changeover for two pipe systems.

3.8 Miscellaneous Terminal Unit:

A. Participants shall include: CA, MC, TAB, and BAC. Budget 1 hour for first unit of each type.

B. Sample: 5 units or 20%, Max Failure Limit: 1 unit or 10 percent

C. CA shall review Start-Up Procedures and TAB reports.

D. Verify automatic start/stop of fan and open/close of outdoor air damper as applicable.

E. Start heating and cooling system; manipulate control device to obtain maximum cooling and heating. Measure temperatures and pressures to determine capacity.

F. Wear permitting cause applicable modes of operation using false loading where practical. Check proper sequence for switching modes and proper operation within a mode.

G. Check calibration of control devices and for stable control response.

H. Check for free and adequate flow of AC condensate as applicable.

I. Simulate power outage and ensure automatic and orderly restart.

J. Verify changeover for two pipe systems as applicable.

3.9 Heat Recovery Wheels:

A. Participants shall include: CA, MC (4), TAB (4), and BAC (4).

B. Sample: 100 percent

C. CA shall check Start-Up Procedure.

D. Inspect installation visually for proper rotation and seal and undamaged media.

E. Check cross contamination and re-entrainment testing results are done under applicable section.

F. Check full sensible and latent recovery efficiency at peak summer conditions.

G. With different wear conditions, check mode of control. In winter, check discharge loop control and make sure sensors are calibrated and that heating does not overshoot and require cooling. In mild conditions, ensure minimum rotation/recovery. In summer conditions, ensure maximum recovery.

H. Measure purge air and leakage flow to ensure it is less than or equal to rating.

I. Check frost protection override control loop.

J. Test operation during power outage in context of associated air handler.

3.10 Fan/Air System:

A. Participants shall include: CA, MC, TAB, and BAC.

B. Sample: 5 units or 20 percent, Max Failure Limit: 1 unit or 10 percent

C. CA shall review Start-Up Procedures and TAB reports.

D. Verify start/stop control sequences.

E. Check capacity of fan at maximum conditions.

F. Cause applicable modes of operation using false loading where practical. Check proper sequence for switching modes and proper operation within a mode.

G. Verify interlocks with exhaust fans where applicable.

H. Test interfaces with fire alarm system and smoke control sequences.

I. Test proof alarming where applicable.

J. Simulate power outage and ensure automatic and orderly restart.

3.11 Building Automation System:

A. Participants shall include: CA and controls contractor (Time is typically included in individual systems. However an additional 8 hrs shall be for workstation and administrative aspects.)

B. Refer also to Section 230800 for BAS Commissioning requirements.

C. CA shall review Start-Up Procedure.

D. Controls system sampling will typically correspond to sampling rate of a system or piece of equipment. These sampling rates are indicated above for respective item.

E. Operate equipment and subsystems through specified modes of control and sequences of operation including full and part load conditions, and emergency conditions.

F. Verify that equipment operates in accordance with design intent and approved control diagrams. This shall include checking operation of dampers, valves, smoke detectors; high and low limit controls, of a sample of 25 percent of components with a maximum failure limit of 10 percent.

G. Analog Input (AI) Sensors: (at a sample of 50 percent of inputs on sampled devices (see above for device samples) with a maximum failure rate of 10 percent). Spot-check AI sensors (space temperature sensors, outside, return, and mixed air temperature sensors, discharge air temperature sensors, chilled water and hot water temperature sensors, and humidity sensors, air and water differential pressure sensors, airflow monitoring stations, etc.) for acceptable accuracy (which is generally as specified for device).

H. Analog Outputs - Valves, Dampers and Actuators: (at a sample of 50 percent of inputs on sampled devices (see above for device samples) with a maximum failure rate of 10 percent) Ensure that valves, dampers and actuators close-off or seal against maximum pressure differential. Ensure that actuators stroke throughout correct range (correlated with programmed range) under operations pressures anticipated and that petitioners are set correctly where applicable.

I. Establish trends of control system points for a minimum of a two week period prior to and throughout Acceptance period. Trends shall be analyzed to identify any control problems, lack of capacity, control loops fighting or unstable or operational anomalies.

J. Automatic Switches: Spot-check (at a sample of 50 percent of inputs on sampled devices (see above for device samples) with a maximum failure rate of 10 percent) operation of automatic switches (pressure switches, current switches, flow switches, and others) to ensure that they are adjusted to proper make and break settings.

K. Verify standalone functionality of controllers. Generally disconnect LAN communication wiring and ensure that controller functions properly and that loss of communication is acknowledged by interface. Restore communications and ensure an orderly restoration to normal control.

L. Verify that BAS interface; BAS software, graphics and functions are in accordance with design intent and approved control diagrams.

M. Check dial-in communications where applicable to ensure functionality.

END OF SECTION