

Project Manual For
Commonwealth Drive / Dominion Drive –
Sidewalks - Including Special Provision Copied
Notes, Supplemental Specifications, and Special
Provisions

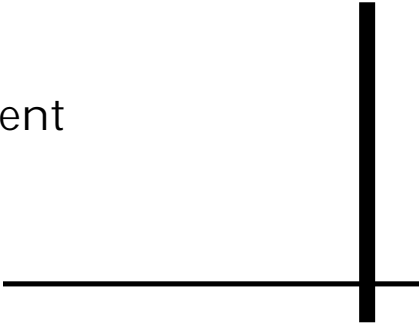
VDOT Proj #0852-002-R70 C501 , (UPC 113183)

Bid Document Dated:
October 31, 2025

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For:
County of Albemarle
Facilities Planning & Construction Division
Facilities & Environmental Services Department
401 McIntire Road
Charlottesville, Virginia 22902-4596



INVITATION FOR BIDS

Commonwealth Drive / Dominion Drive – Sidewalks
VDOT Proj. #0852-002-R70 C501 (UPC 113183)
IFB No. 2026-IFB-1012042

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**NOTICE OF
INVITATION FOR BIDS
2026-IFB-1012042**

Sealed bids are invited for the construction of sidewalk improvements along portions of Commonwealth Drive and Dominion Drive in Albemarle County. The project is generally described as approximately 3,278 linear feet of sidewalk, curb & gutter, storm drainage, concrete and asphalt paving and associated sitework.

Sealed bids will be received at the Albemarle County Procurement Office, Room 248, Albemarle County Office Building, 401 McIntire Road, Charlottesville, Virginia. The deadline for submitting bids is 2:00 P.M., as determined by the Purchasing Agent, on Thursday, December 4, 2025. The bids will be opened publicly and read aloud immediately following the receipt of bids. If the County of Albemarle is closed for business at the time scheduled for bid opening, for whatever reason, sealed bids will be accepted and opened on the next scheduled business day, at the originally scheduled time.

The estimated construction cost range for this project is \$1M-\$3M. A Bid Bond is required for any bid which exceeds \$100,000. The "Time for Completion" will be as detailed in the Bid Form.

Bids to be considered shall be received in a sealed envelope marked as follows: County of Albemarle, Procurement Office, Room 248, Albemarle County Office Building, 401 McIntire Road, Charlottesville, VA 22902 / Contract: **Commonwealth Drive / Dominion Drive - Sidewalks / IFB No. 2026-IFB-1012042.**

Procedures for submitting a bid, claiming an error, withdrawal of bids, and other pertinent information are contained in the Instructions to Bidders, which is part of the Invitation for Bids. Withdrawal due to error in bid shall be permitted in accord with Section 9 of the Instructions to Bidders and §2.2-4330A (i), Code of Virginia. The Owner reserves the right to reject any or all bids.

An In-Person pre-bid conference will be held at the Albemarle County Office Building, Room 246, located at 401 McIntire Road, Charlottesville, VA 22902, at 10:00 am on Thursday, November 13, 2025. **Attendance will be optional for those submitting a bid.**

The contract shall be awarded on a lump sum basis as follows: the Total Base Bid Amount.

Contractor registration in accordance with Title 54.1, Chapter 11, of the Code of Virginia, is required. See the Instructions to Bidders for additional qualification requirements.

The Invitation for Bids for the above project, including the drawings and the specifications prepared by Kimley-Horn Associates, Inc. and containing the information necessary for bidding, may be downloaded online from the Albemarle County Procurement web site at <https://www.albemarle.org/government/finance/procurement/solicitations>. Please note that Bidders are responsible for checking the Procurement web site and downloading any Addenda issued for this Bid.

The County of Albemarle does not discriminate on the basis of race, religion, color, sex, national origin, age or disability, or against faith-based organizations as defined under the Virginia Public Procurement Act on the basis of such organization's religious or charitable character.



Bid Receipt and Bid Reading Procedures
November 6, 2025
2026-IFB-1012042 – Commonwealth Drive / Dominion Drive – Sidewalks
(UPC 113183)

The following Albemarle County Purchasing Procedures shall be in effect:

1. Electronic bids may be submitted in .pdf format (Adobe), by submitting all required bid documents, and posted addenda, electronically by the stated due date and time, or as modified by an addendum hereto, through the Albemarle County Procurement Intake Form on the Albemarle County Procurement Solicitations Page: <https://www.albemarle.org/government/finance/procurement/solicitations>.

Or,

2. Paper bids, including all posted addenda, may be delivered to the County Office Building at 401 McIntire Road, Charlottesville, VA 22902. Bids will be received in a secure manner and will be stored in such manner as to keep them in a secure status.
 - A secure lock box will be available, at the exterior of the County Office Building, at the front Visitors Entrance, and will be labeled **Vendor/Contractor Bids or Proposals Only**. Bids shall be placed in this box, prior to the established due date and time for each solicitation. It is the Offeror's responsibility to ensure that bids are received prior to the established bid due date and time.
3. Electronic or Paper Bids will be received until 2:00 p.m. ET on Thursday December 4th 2025. Any further bids received will be ruled as late bids and will be retained un-opened. Late bids will not be considered. If you have any difficulty utilizing Electronic Procurement Intake Form, or the lockbox for paper submittal, please call the Purchasing Office, at 434- 296-5854.
4. Virtual Bid readings will be held at 2:30 p.m. ET on Thursday December 4th 2025. At the appointed time as noted below, the bids will be virtually read aloud by Purchasing personnel. Public attendance at the Bid Reading will be by virtual attendance through MS Teams Meeting.
5. The bids shall be examined for conformance of all requirements of the solicitation including required signature(s), acknowledgement of addenda, and presence of a bid bond with power of attorney, when required. At the conclusion of the reading of the bids, Procurement staff will complete the due diligence to examine bids for determination of complete responsiveness and vendor responsibility and additional information, including the bid tabulation, will be provided as it becomes available.
6. On Thursday December 4th 2025 at 2:30 p.m.ET, the Virtual Bid Reading may be attended through the following MS Teams Meeting link:

Microsoft Teams meeting

Join on your computer, mobile app or room device

[Join the meeting now](#)

Meeting ID: 244 303 171 130

Passcode: mK7Be339

INSTRUCTIONS TO BIDDERS

The Invitation For Bids (IFB) consists of the Notice, this Instructions to Bidders, the Bid Form, the Pre-Bid Question Form, the Construction Contract General Conditions, the Supplemental General Conditions (if any), the Special Conditions (if any), the Forms to be used, and the Scope of Work as described by the Plans and Specifications, other documents listed in the Specifications, and any addenda which may be issued, all of which request qualified bidders to submit competitive prices or bids for providing the described work on the project.

1. **CONDITIONS AT SITE OR STRUCTURE:** Bidders shall be responsible for ascertaining pertinent local conditions such as location, accessibility, general character of the site or building, and the character and extent of existing work within or adjacent to the site. Claims, as a result of failure to have done so, will not be considered by the Owner. See Section 7 of the General Conditions entitled “Conditions at Site.”

2. **EXPLANATIONS TO BIDDERS:** Bidders may not rely on any oral explanation in regard to the meaning of drawings and specifications or oral instructions given before the award of the contract. Discrepancies, omissions or doubts as to the meaning of drawings and specifications shall be communicated in writing to the Architect/Engineer for interpretation. Bidders must use the “Prebid Question Form” provided in the bid documents. Bidders must so act to assure that questions reach the Architect/Engineer at least seven (7) days prior to the time set for the receipt of bids to allow a sufficient time for an addendum to reach them before the submission of their bids. If an addendum is required for clarification or interpretation of the Bid Documents, the addendum will be issued not later than five (5) days prior to the date set for the receipt of bids except an addendum withdrawing the invitation for bid or one which includes postponement of the date set for the receipt of bids. Any interpretation made will be in the form of an addendum to the Invitation For Bids, which will be made available to all bidders, and its receipt shall be acknowledged, in writing, by the bidder on the Bid Form.

3. **TIME FOR COMPLETION:**
 - (a) “Time for Completion” shall be designated by the Owner on the Invitation for Bids or other pre-bid documents and shall mean the number of consecutive calendar days following the issuance of the Notice to Proceed which the Contractor has to substantially complete all Work required by the Contract. In some instances, the Time for Completion may be stated in the form of a Contract Completion Date based on a stipulated date of Notice to Proceed.

Unless otherwise specified, the Contractor shall achieve Final Completion within thirty (30) days after the date of Substantial Completion.

- (b) When the Notice to Proceed is issued, it will state a Contract Completion Date, which has been set by the Owner based on date of the Notice to Proceed and the Time for Completion.

- (c) The Contractor, in preparing and submitting his bid, is required to take into consideration normal weather conditions. No additional compensation will be paid to the Contractor because of adverse weather conditions; however, an extension of time for abnormal weather will be considered by the Owner as indicated in the General Conditions.

4. PREPARATION AND SUBMISSION OF BIDS:

- (a) Bids shall be submitted on the forms furnished, or copies thereof, and shall be signed in ink. Erasures or other changes in a bid must be explained or noted over the signature of the bidder. Bids containing any conditions, omissions, unexplained erasures, alterations or items not called for in the proposal, or irregularities of any kind, may be rejected by the Owner as being incomplete or nonresponsive.
- (b) Each bid must give the complete legal name and full business address of the bidder and be signed by the bidder, or the bidder's authorized representative, with his usual signature. Bids by partnerships must be signed in the partnership name by one of the general partners of the partnership or an authorized representative, followed by the designation/title of the person signing. Bids by corporations must be signed with the legal name of the corporation followed by the name of the state in which it is incorporated and by the signature and title of the person authorized to bind it in this matter. The name of each person signing shall be typed or printed below the signature. A signature on a bid by a person who identifies his title as "President," "Secretary," "Agent" or other designation without disclosing the principal firm, shall be held to be the bid of the individual signing. When requested by the Owner, satisfactory evidence of the authority of the officer signing on behalf of the corporation shall be furnished. Trade or fictitious names may be referenced by using "t/a ____" but bids shall be in the legal name of the person or entity submitting the bid.
- (c) Bids with the bid guarantee shall be enclosed in a sealed envelope which shall be marked and addressed as indicated by the advertisement. If a contract is for one hundred twenty thousand dollars (\$120,000) or more, or if the total value of all construction, removal, repair or improvements undertaken by the bidder within any twelve-month period is seven hundred fifty thousand dollars (\$750,000) or more, the bidder is required under Title 54.1, Chapter 11, Section 1100, Code of Virginia, as amended, to be licensed in Virginia as a "Class A Contractor." If a contract is for ten thousand dollars (\$10,000) or more, but less than one hundred twenty thousand dollars (\$120,000), or if the total value of all construction, removal, repair or improvements undertaken by the bidder within any twelve-month period is one hundred fifty thousand dollars (\$150,000) or more, but less than seven hundred fifty thousand dollars (\$750,000), the bidder is required to be licensed in Virginia as a "Class B Contractor."

If the bidder is not properly licensed in Virginia at the time the bid is submitted, or if the bidder fails to provide this information on his bid or fails to promptly provide said Contractor license number to the Owner in writing when requested to do so after the opening of bids, he shall be deemed to be in violation of Section 54.1-1115 of the Code of Virginia, as amended, and his bid will not be considered.

- (d) The Board for Contractors has interpreted its regulations to mean "a licensed Contractor can bid on a contract which contains work outside his license classification(s) as long as he subcontracts those items for which he is not qualified to licensed contractors with the appropriate License Classification and the work of the second party is incidental to the contract." Therefore, the Owner may, as a part of determining whether the bidder is "responsible," require the apparent low bidder

to submit a listing of his subcontractors along with the license number and classification or specialty of each.

- (e) The bidder must also place its Employer Identification Number (SSN or FEIN) in the space provided on the Bid Form.
- (f) Every bidder organized as a stock or nonstock corporation, limited liability company, business trust, or limited partnership or registered as a registered limited liability partnership must be authorized to transact business in the Commonwealth as a domestic or foreign business entity if so required by Title 13.1 or Title 50 of the Code of Virginia, as amended, or as otherwise required by law. Any bidder organized or authorized to transact business in the Commonwealth pursuant to Title 13.1 or Title 50 must include in its bid the identification number issued to it by the State Corporation Commission. Any bidder that is not required to be authorized to transact business in the Commonwealth as a foreign business entity under Title 13.1 or Title 50 or as otherwise required by law shall include in its bid or proposal a statement describing why the bidder or offeror is not required to be so authorized. A bidder required to be authorized to transact business in Virginia that fails to provide the required information shall not receive an award unless a waiver of this requirement and of any administrative policies and procedures established to implement Section 2.2-4311.2 of the Code of Virginia, as amended, is granted by the Owner.

If awarded the Contract, the bidder shall not allow its existence to lapse or its certificate of authority or registration to transact business in the Commonwealth, if so required under Title 13.1 or Title 50, to be revoked or cancelled at any time during the term of the Contract. Doing so shall be deemed to be a violation of Section 2.2-4311.2 and the bidder understands and agrees that the Owner may void the Contract if the bidder fails to comply with this provision.

5. **BID GUARANTEE:**

- (a) Any bid (including the Total Base Bid plus all Additive Bid Items) which exceeds one hundred thousand dollars (\$100,000) shall be accompanied by a Bid Bond payable to the Owner as obligee in an amount equal to five percent (5%) of the amount of the bid. A Bid Bond may be required for projects having bids of less than one hundred thousand dollars (\$100,000) if such requirement is stated in the Notice of Invitation for Bids. The Bid Bond must be issued by a surety company which is legally authorized by the Virginia State Corporation Commission to do fidelity and surety business in the Commonwealth of Virginia. **The bid bond shall identify the name and address of an attorney-in-fact who is appointed to act on behalf of the surety. The attorney-in-fact shall affix to the bond a certified and current copy of the power of attorney.** Such Bid Bond shall guarantee that the bidder will not withdraw his bid during the period of sixty (60) days following the opening of bids; that if his bid is accepted, he will enter into a formal contract with the Owner in accordance with the Contract Between Owner and Contractor included as a part of the IFB Documents; that he will submit a properly executed and authorized Standard Performance Bond and Standard Labor and Material Payment Bond on the forms included in the IFB documents; and that in the event of the withdrawal of said bid within said period, or failure to enter into said contract and give said bonds within ten (10) days after he has received notice of acceptance of his bid, or other forfeiture under the Bid Bond, the bidder shall be liable to the Owner for the difference between the amount specified in said bid and such larger amount for which the Owner may contract with another party to perform the work covered by said bid, up to the amount of the bid guarantee.

This amount represents the damage to the Owner on account of the default of the bidder in any particular hereof. See §2.2-4336 of the Code of Virginia.

- (b) See §2.2-4338 of the Code of Virginia for provisions allowing alternative forms of bid security in lieu of a Bid Bond.
- (c) The Bid Bonds or other bid security will be returned to all except the three lowest bidders after the formal opening of bids. The remaining Bid Bonds or bid security will be returned to the bidders after the Owner and the accepted bidder have executed the Contract and the Performance Bond and the Payment Bond have been approved by the Owner.
- (d) If the required Contract and bonds have not been executed within sixty (60) days after the date of the opening of the bids, then the bond or other bid security of any bidder will be returned upon his request, provided he has not been notified of the acceptance of his bid prior to the date of such request.

6. WITHDRAWAL OR MODIFICATION OF BIDS:

- (a) **WITHDRAWAL:** Bids may be withdrawn by written or telefaxed notice received from bidders prior to the deadline fixed for bid receipt. The bidder has sole responsibility to ensure that such notice is received by the Owner in the appropriate office designated in the Instructions to Bidders, and the Owner shall not be responsible for ensuring accurate or prompt delivery. A withdrawal must be signed by the person signing the sealed bid or by other individual(s) who is authorized to act on behalf of the bidder. Such authorization must be provided in writing at the time of withdrawal, and stated on the face of the withdrawal notice. Withdrawn bids may be resubmitted by the bidder up to the deadline fixed for bid receipt.
- (b) **MODIFICATION:** Bids may be modified only in the following manner. E-mail or telefaxed modifications are not acceptable. All modifications must be signed by the person signing the sealed bid or by an individual(s) who is authorized by him/her on the face of the bid. Written modifications may only be made on the bid form itself. Written modifications must be signed by the person making the modification. The modification must state specifically what is to be modified and by what amount or it must state the item to be modified and what the corrected amount should be. (e.g. “Deduct \$25,000 from Part A and from the Total Base Bid Amount”; or “Add \$23,456 to the Total Base Bid Amount”; or “Deduct \$15,650 from the Additive # 2 amount”). A modification to “Deduct \$25,000 from Part A” will only be applied to Part A and not to the Total Base Bid Amount). Unless otherwise specified by the Bidder in the modification, the modification will be applied to the TOTAL BASE BID AMOUNT shown on the Bid Form (e.g. a modification stating only “Deduct \$25,000” which is properly signed will be deducted from the Total Base Bid Amount shown on the Bid Form).

7. RECEIPT OF BIDS:

- (a) Bids will be received at or before the date and the hour and at the place stipulated in the Invitation for Bids as may be modified by subsequent Addenda.
- (b) It is the responsibility of the bidder to assure that his bid and any bid modifications are delivered to the place designated for receipt of bids by the date and hour (deadline) set for receipt of bids.

Therefore, it is the bidder's responsibility to take into account all factors which may impact on its bid deliverer/courier's ability to deliver the bid and to implement whatever actions are necessary to have the bid delivered to the proper bid receipt location prior to the bid receipt deadline. No bids or bid modifications submitted or offered after the date and hour designated for receipt of bids will be accepted or considered.

- (c) The Purchasing Agent is the Owner's representative designated to receive bids at the time and place noted in the IFB and to open the bids received at the appointed time.
- (d) The official time used for the receipt of responses is determined by reference to the clock designated by the Purchasing Agent. The Purchasing Agent shall determine when the Bid Receipt Deadline has arrived and shall announce that the Deadline has arrived and that no further bids or bid modifications will be accepted. All bids and bid modifications in the possession of the Purchasing Agent and his assistants at the time the announcement is completed are deemed to be timely, whether or not the bid envelope has been physically date/time stamped or otherwise marked by the time the Purchasing Agent makes the deadline announcement.

8. OPENING OF BIDS:

- (a) Bids will be opened at the time and place stated in the Invitation for Bids or as modified by subsequent Addenda, and their contents publicly announced. The Purchasing Agent shall decide when the specified time for bid opening has arrived. No responsibility will be attached to any officer or agent for the premature opening of a bid not properly addressed and identified.
- (b) The provisions of §2.2-4342 of the Code of Virginia shall be applicable to the inspections of bids received.

- 9. ERRORS IN BIDS:** A bidder may withdraw his bid from consideration if the price bid was substantially lower than the other bids due solely to a mistake therein, provided the bid was submitted in good faith, and the mistake was a clerical mistake as opposed to a judgment mistake, and was actually due to an unintentional arithmetic error or an unintentional omission of a quantity of work, labor or material made directly in the compilation of a bid, which unintentional arithmetic error or unintentional omission can be clearly shown by objective evidence drawn from inspection of original work papers, documents and materials used in the preparation of the bid sought to be withdrawn. The bidder shall give notice of a claim to withdraw a bid, in writing, and submit his original work papers, documents and materials used in the preparation of his bid, to the Purchasing Agent within two business days after the conclusion of the opening of bids. §2.2-4330(B)(1) of the Code of Virginia.

Failure of a bidder to give notice and submit his original work papers, documents and materials used in the preparation of his bid on or before the time, date and place required shall constitute a waiver by that bidder of his right to withdraw his bid due to a mistake.

No bid may be withdrawn under this section when the result would be the awarding of the Contract on another bid of the same bidder or of another bidder in which the ownership of the withdrawing bidder is more than five percent (5%).

No bidder who is permitted to withdraw a bid shall, for compensation, supply any material or labor to or perform any subcontract or other work agreement for the person or firm to whom the Contract is awarded

or otherwise benefit, directly or indirectly, from the performance of the project for which the withdrawn bid was submitted. The person or firm to whom the Contract was awarded and the withdrawing bidder are jointly liable to the Owner in an amount equal to any compensation paid to or for the benefit of the withdrawing bidder without such approval.

If a bid is withdrawn under authority of this section, the lowest remaining bid shall be deemed to be the low bidder on the project.

10. REJECTION OF BIDS: The Owner reserves the right to cancel the Invitation for Bids, to reject any and all bids at its sole discretion when such rejection is in the interest of the Owner, or to reject the bid of any bidder who is determined to be not responsive or not responsible. See §2.2-4319, Code of Virginia.

11. DETERMINATION OF RESPONSIBILITY:

Each bidder shall be prepared, if so requested by the Owner, to present evidence of his experience, qualifications and financial ability to carry out the terms of the Contract.

Prior to award of the Contract, an evaluation will be made to determine if the low bidder has the capability, in all respects, to perform fully the contract requirements and the moral and business integrity and reliability which will assure good faith performance, and who has been prequalified, if required. Factors to be evaluated may include, but are not limited to:

- (a) sufficient financial ability to perform the contract as evidenced by the bidder's ability to obtain payment and performance bonds from an acceptable surety;
- (b) appropriate experience to perform the Work described in the bid documents;
- (c) any judgments entered against the bidder, or any officers, directors, partners or owners for breach of a contract for construction;
- (d) any substantial noncompliance with the terms and conditions of prior construction contracts with a public body without good cause where the substantial noncompliance is documented; or
- (e) a conviction of the bidder or any officer, director, partner, project manager, procurement manager, chief financial officer, or owner in the last five years of a crime relating to governmental or nongovernmental construction or contracting;
- (f) any current debarment of the contractor, any officer, director or owner, from bidding or contracting by any public body of any state, any state agency, or any agency of the federal government.

The Owner reserves the right to disqualify or refuse to accept the bid of any bidder who has been convicted, or entered a plea of guilty or nolo contendere, in any federal or state court to any charge involving any unlawful, corrupt or collusive practice involving a public contract whether federal, state, or local, or who has been determined in any judicial proceeding to have violated any antitrust, bid-rigging or collusive practice statute in connection with any public contract, or against whom such formal criminal prosecution or other judicial proceeding has been initiated.

A bidder who, despite being the apparent low bidder, is determined not to be a responsible bidder shall be notified in writing in conformance with the procedures in §2.2-4359 of the Code of Virginia.

12. AWARD OF CONTRACT:

- (a) **Basis for Contract Award:** The Contract, if awarded, will be awarded to the lowest responsive and responsible bidder, if any, provided his bid is reasonable and it is in the best interest of the Owner to accept it and subject to the Owner's right to reject any and all bids and to waive informality in the bids and in the bidding. The Bid Form may contain a multi-part Base Bid and may contain Additive Bid Items. Determination of the lowest responsive bidder, if any, will be based on the Total Base Bid amount entered on the Bid Form including any properly submitted bid modifications plus as many Additive Bid Items taken in sequence as the Owner in its discretion chooses to Award. Where the sum of the values entered in the multiple parts do not agree with the Total Base Bid amount, the Total Base Bid amount entered on the Bid Form, including any properly submitted bid modifications, shall take precedence. In the event that the Total Base Bid from the lowest responsible bidder exceeds available funds, the Owner may negotiate the Total Base Bid amount with the apparent low bidder to obtain a contract price within available funds, pursuant to §2.2-4318 of the Code of Virginia and Section 12(c) herein.
- (b) **Informalities:** The Owner reserves the right to waive any informality in the bids when such waiver is in the interest of the Owner.
- (c) **Negotiation With Lowest Responsible Bidder:** If award of a contract to the lowest responsive and responsible bidder is precluded because of limitations on available funds, under the provisions of §2.2-4318 of the Code of Virginia (the Public Procurement Act), the Owner reserves the right to negotiate the Total Base Bid amount with the lowest responsive, responsible bidder to obtain a contract price within the available funds. This may involve changes in either the features or scope of the work included in the Base Bid. Such negotiations with the apparent low bidder may include reducing the quantity, quality, or other cost saving mechanisms involving items in the Total Base Bid. The Owner shall notify the lowest responsive and responsible bidder that such a situation exists and the Owner and bidder shall then conduct their negotiations in person, by mail, by telephone or by any means they find convenient. If an acceptable contract can be negotiated, the changes to the Invitation for Bid documents agreed upon in the negotiations shall be summarized in a "Post Bid Modification" and included in the contract. If an acceptable contract cannot be negotiated, the Owner shall terminate negotiations and reject all bids.
- (d) **Notice of Intent to Award or Notice of Award:** The Notice of Award or the Notice of Intent to Award will be posted on the Albemarle County Purchasing Office web site with the Invitation for Bid procurement documents (www.albemarle.org/purchasing). Any bidder or offeror who desires to protest the award or decision to award a contract shall submit the protest in writing to the Albemarle County Purchasing Agent no later than ten days after the posting of the Notice of Award or Notice of Intent to Award, whichever comes first (§ 2.2-4360).

13. **CONTRACT SECURITY:** For contracts of more than \$100,000, the Standard Performance Bond (Form AC-10) and the Standard Labor and Material Payment Bond (Form AC-10.1) shall be required, as specified in the Invitation for Bids documents. See the General Conditions and §2.2-4337 and §2.2-4338 of the Code of Virginia. The Owner reserves the right to require such bonds for contracts less than \$100,000. If the Owner so elects, the requirement shall be set forth in the Invitation for Bids. **The bonds shall identify the name and address of an attorney-in-fact who is appointed to act on behalf of the surety within the Commonwealth of Virginia. The attorney-in-fact shall affix to the bond a certified and current copy of the power of attorney.**

14. **CERTIFICATION:** The bidder, by his signature on the Bid Form, certifies that neither his organization nor any of its officers, directors, partners or owners is currently barred from bidding on contracts by the Commonwealth of Virginia, or any public body or agency of another state, or any agency of the federal government. See the statement “Disqualification of Contractors” in the Bid Form.
15. **ETHICS IN PUBLIC CONTRACTING:** The provisions, requirements and prohibitions as contained in Chapter 43, Article 6, §2.2-4367 et seq, Code of Virginia, pertaining to bidders, offerers, contractors, and subcontractors are applicable to this project.
16. **BUILDING PERMITS:** The Virginia Uniform Statewide Building Code shall apply to the Work and shall be administered by the local Building Official. The Building Permit will be obtained by the Contractor and paid for by the Owner. All other permits, local license fees, business fees, taxes, or similar assessments shall be obtained and paid for by the Contractor. See Section 25 of the General Conditions for utility connection fees and services.
17. **MINORITY UTILIZATION:** The County of Albemarle, Virginia, encourages the participation of minority businesses in public procurement activities. Towards that end, the Owner encourages firms to provide for the participation of minority owned businesses through partnerships, joint ventures, subcontracts, and other contractual opportunities.
18. **BID DOCUMENTS:** Bid Documents are the property of the Owner and are available electronically through the Albemarle County Purchasing Office web site at www.albemarle.org/purchasing. Bidders are responsible to check the Purchasing web site and download any Addenda issued for the bid. A deposit is not required for downloading of electronic documents through the web site. The bidder is responsible for the cost of printing any contract documents necessary for bidding. If awarded a contract, the Owner will provide the contractor with two sets of contract documents (i.e. full sized drawings and specifications) for use in the field and the contractor will be responsible for the cost of printing any additional contract documents that may be needed.
19. **GENERAL CONDITIONS:** The County of Albemarle Construction Contract General Conditions are incorporated in the bid documents. If the General Conditions are incorporated by reference, the bidder may obtain a copy of the current edition of the Construction Contract General Conditions at no cost by request to the County of Albemarle, Facilities & Environmental Services - Project Management Division, 401 McIntire Road, Charlottesville, Virginia 22902 (434-872-4501).
20. **PREBID CONFERENCE:** See the Invitation for Bids for requirements for a prebid conference and whether such conference is mandatory or optional.
21. **INSPECTION OF BID DOCUMENTS:** Copies of the Invitation for Bids documents including Plans and Specifications will, upon request, be made available for inspection at the Albemarle County Facilities & Environmental Services Department - Project Management Division, or the A/E’s office.
22. **DRUG-FREE WORKPLACE REQUIRED:** Bidders are reminded that §2.2-4312 of the Code of Virginia requires that during the performance of the contract resulting from this solicitation, the contractor agrees to (i) provide a drug-free workplace for the contractor’s employees; (ii) post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is

prohibited in the contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition; (iii) state in all solicitations or advertisements for employees placed by or on behalf of the contractor that the contractor maintains a drug-free workplace; and (iv) include the provisions of the foregoing clauses in every subcontract or purchase order of over \$10,000, so that the provisions will be binding upon each subcontractor or vendor.

For the purposes of this section, "drug-free workplace" means a site for the performance of work done in connection with a specific contract awarded to a contractor in accordance with this solicitation, the employees of whom are prohibited from engaging in the unlawful manufacture, sale, distribution, dispensation, possession or use of any controlled substance or marijuana during the performance of the contract.

- 23. CERTIFICATION OF CRIMES AGAINST CHILDREN:** Pursuant to Virginia Code §22.1-296.1(C), as a condition of awarding a contract for the provision of services that require the contractor or his employees to have direct contact with students on school property during regular school hours or during school-sponsored activities, the School Board requires the contractor to provide certification that all persons who will provide such services have not been convicted of a felony or any offense involving the sexual molestation or physical or sexual abuse or rape of a child. Any person making a materially false statement regarding any such offense shall be guilty of a Class 1 misdemeanor and, upon conviction, the fact of such conviction shall be grounds for the revocation of the contract to provide such services and, when relevant, the revocation of any license required to provide such services. This requirement does not apply to a contractor or his employees providing services to the School Board in an emergency or exceptional situation, such as when student health or safety is endangered or when repairs are needed on an urgent basis to ensure that school facilities are safe and habitable, when it is reasonably anticipated that the contractor or his employees will have no direct contact with students.

PREBID QUESTION FORM

(Use separate form for each question submitted.)

DATE: _____

**PROJECT: Commonwealth Drive – Dominion Drive – Sidewalks (UPC 113183)
2026-IFB-1012042**

The following question concerns Drawing Sheet (number)_____:

The following question concerns Specifications Section (number)_____, page _____, paragraph _____:

All responses to questions will be made by Addendum.

Questions submitted by: _____
Name Organization

Email Form To: County of Albemarle Purchasing – Christopher Beahm – cbeahm@albemarle.org
County of Albemarle Project Manager - Mike Stumbaugh - mstumbaugh@albemarle.org
A/E – Kimley-Horn – Brian McPeters – brian.mcpeters@kimley-horn.com

Or

Mail Form to: County of Albemarle
Office of Procurement
401 McIntire Road
Charlottesville, Virginia 22902-4596

And

Kimley-Horn Associates, Inc.
2035 Maywill Street, Suite 200
Richmond, Virginia 23230

BID FORM

DATE: _____

PROJECT TITLE: Commonwealth Drive / Dominion Drive – Sidewalks (UPC 113183)
IFB No. 2026-IFB-1012042

TO: County of Albemarle, Virginia, and/or
The School Board of Albemarle County, Virginia
Office of Procurement – Room 248
Albemarle County Office Building
401 McIntire Road
Charlottesville, VA 22902

In compliance with and subject to your Invitation for Bids and the documents therein specified, all of which are incorporated herein by reference, the undersigned bidder proposes to furnish all labor, equipment, and materials and perform all work necessary for construction of this project, in accordance with the Plans and Specifications dated October 31, 2025, and the Addenda noted below, as prepared by Kimley-Horn Associates, Inc. for the consideration of the following amount:

BASE BID (including the following parts but excluding work in Additive Bid Items):

PART A.

Lump sum price for construction of the sidewalk improvements along Commonwealth Drive and Dominion Drive (0852-002-R70 C501) including, but not limited to clearing, grading, storm sewer, underdrain, concrete sidewalk, concrete curb, erosion and sediment control, water line relocation, maintenance of traffic, asphalt paving, asphalt resurfacing, signage, pavement markings, and all appurtenances in accordance with the Plans and Specifications.

PART A = _____ Dollars (\$ _____)
(Amount shall be shown in both words and figures. In case of discrepancy, the amount shown in words shall govern.)

PART B. EXCAVATION OF ADDITIONAL UNSUITABLE MATERIAL

Excavation of unsuitable material, where authorized or directed, below or in addition to the levels required for the work in Part A, place geotextile fabric and backfill with compacted material per specifications. Unit price shall include proper disposal off-site of unsuitable material. (Price shall be per cubic yard.) Final amount shall be adjusted upward or downward based on actual quantity authorized. See VDOT 202 Road and Bridge Specifications Section 303 and attached SPCN for description, materials, procedures, measurement, and payment.

Estimated quantity of 190 cy @ \$ _____ per cy = _____

PART B = _____ Dollars (\$ _____)
(Amount shall be shown in both words and figures. In case of discrepancy, the amount shown in words shall govern.)

PART C. EXCAVATION OF ROCK MATERIAL

Excavation of ROCK material, where authorized or directed, and proper disposal off-site of excess material, complete per specifications. (Price per cubic yard.) Final amount shall be adjusted upward or downward based on actual quantity authorized.

Estimated quantity of 50 cy @ \$ _____ per cy = _____

PART C = _____ Dollars (\$ _____)

(Amount shall be shown in both words and figures. In case of discrepancy, the amount shown in words shall govern.)

PART D. EXCAVATION OF ROCK MATERIAL AT TRENCHES

Excavation of ROCK material, where authorized or directed, proper disposal off-site of excess material and backfill with compacted trench fill material per specifications. (Price per cubic yard.) Final amount shall be adjusted upward or downward based on actual quantity authorized.

Estimated quantity of 50 cy @ \$ _____ per cy = _____

PART D = _____ Dollars (\$ _____)

(Amount shall be shown in both words and figures. In case of discrepancy, the amount shown in words shall govern.)

TOTAL BASE BID AMOUNT (For PARTS A, B, C, and D) IS:

_____ Dollars (\$ _____)

(Amount shall be shown in both words and figures. In case of discrepancy, the amount shown in words shall govern.)

Contract award will be based on the **TOTAL BASE BID AMOUNT shown above** (including any properly submitted bid modifications) plus as many Additive Bid Items as the Owner in its discretion decides to award.

The undersigned understands that time is of the essence and agrees that the date for Substantial Completion of the entire project shall be on or before **November 11, 2026**, based on a Notice to Proceed authorizing Work to begin on-site on or before **Feb 02, 2026**, and Final Completion shall be achieved within 30 consecutive calendar days after the date of Substantial Completion as determined by the A/E.

* * * * *

Acknowledgment is made of receipt of the following Addenda:

If notice of acceptance of this bid is given to the undersigned within 90 days after the date of opening of bids, or any time thereafter before this bid is withdrawn, the undersigned will execute and deliver a contract in the prescribed form (County of Albemarle Contract Between Owner and Contractor, Form AC-9) within 10 days after the contract has been presented to him for signature. The required payment and performance bonds, on the forms prescribed, shall be delivered to the owner along with the signed Contract.

Immigration Reform and Control Act of 1986: The undersigned certifies that it does not and will not during the performance of the Contract for this project violate the provisions of the Federal Immigration Reform and Control Act of 1986, which prohibits employment of illegal aliens.

DISQUALIFICATION OF CONTRACTORS: By signing this bid or proposal, the undersigned certifies that this Bidder or any officer, director, partner or owner is not currently barred from bidding on contracts by any Agency of the Commonwealth of Virginia, or any public body or agency of another state, or any agency of the federal government, nor is this Bidder a subsidiary or affiliate of any firm/corporation that is currently barred from bidding on contracts by any of the same. We have attached an explanation of any previous disbarment(s) and copies of notice(s) of reinstatement(s).

CERTIFICATION OF NO COLLUSION: The undersigned does hereby certify in connection with the procurement and bid to which this Certification of No Collusion is incorporated that:

This bid is not the result of, or affected by, any act of collusion with another person engaged in the same line of business or commerce; nor is this bid the result of, or affected by, any act of fraud punishable under Article 1.1 of Chapter 12 of Title 18.2 of the Code of Virginia, 1950, as amended (18.2-498.1 et seq.).

The undersigned declares that they are fully authorized to sign the proposal on behalf of the firm listed and to all conditions and provisions thereof. The firm name given below is the true and complete name of the bidder and the bidder is legally qualified and licensed by the Commonwealth of Virginia, Department of Commerce, State Board for Contractors, to perform all Work included in the scope of the Contract.

Virginia License No. _____

Bidder _____
(Name of Firm)

Contractor Class _____

By _____
(Signature)

Valid Until _____

(Typed Name)

FEIN/SSN: _____

Title _____

If Partnership (List Partner's Names)

If Corporation, affix Corporate Seal & list
State of Incorporation

State: _____
(Affix Seal)

Business Address:

Telephone No.: _____

Fax No.: _____

Email: _____

STATE CORPORATION COMMISSION & REGISTERED AGENT FORM

Virginia State Corporation Commission (SCC) registration information.

Code of Virginia § 13.1-757. A foreign corporation may not transact business in the Commonwealth until it obtains a certificate of authority from the Commission.

The bidder:

<input type="checkbox"/>	is a corporation or other business entity with the following Virginia SCC identification number: _____ -OR-
<input type="checkbox"/>	is not a corporation, limited liability company, limited partnership, registered limited liability partnership, or business trust -OR-
<input type="checkbox"/>	<p>is not required to obtain a certificate of authority from the Virginia SCC, pursuant to <i>Virginia Code</i> § 13.1-757(B) because its sole contact(s) with the Commonwealth consist(s) of:</p> <ol style="list-style-type: none"> 1. <input type="checkbox"/> Maintaining, defending, or settling any proceeding; 2. <input type="checkbox"/> Holding meetings of the board of directors or shareholders or carrying on other activities concerning internal corporate affairs; 3. <input type="checkbox"/> Maintaining bank accounts; 4. <input type="checkbox"/> Maintaining offices or agencies for the transfer, exchange, and registration of the corporation's own securities or maintaining trustees or depositories with respect to those securities; 5. <input type="checkbox"/> Selling through independent contractors; 6. <input type="checkbox"/> Soliciting or obtaining orders, whether by mail or through employees or agents or otherwise, if the orders require acceptance outside this Commonwealth before they become contracts; 7. <input type="checkbox"/> Creating or acquiring indebtedness, deeds of trust, and security interests in real or personal property; 8. <input type="checkbox"/> Securing or collecting debts or enforcing deeds of trust and security interests in property securing the debts; 9. <input type="checkbox"/> Owning, without more, real or personal property; 10. <input type="checkbox"/> Conducting an isolated transaction that is completed within 30 days and that is not one in the course of repeated transactions of a like nature; 11. <input type="checkbox"/> For a period of less than 90 consecutive days, producing, directing, filming, crewing or acting in motion picture feature films, television series or commercials, or promotional films which are sent outside of the Commonwealth for processing, editing, marketing and distribution. The term "transacting business" as used in this subsection shall have no effect on personal jurisdiction under § 8.01-328.1; or 12. <input type="checkbox"/> Serving, without more, as a general partner of, or as a partner in a partnership which is a general partner of, a domestic or foreign limited partnership that does not otherwise transact business in the Commonwealth. 13. <input type="checkbox"/> Transacting business in interstate commerce.
<input type="checkbox"/>	is an out-of-state business entity that is including with this bid an opinion of legal counsel which accurately and completely discloses the undersigned bidder's current contacts with Virginia and describes why those contacts do not constitute the transaction of business in Virginia within the meaning of § 13.1-757 or other similar provisions in Titles 13.1 or 50 of the Code of Virginia. Attach opinion of legal counsel to this form.

Registered Agent Information

Please specify the Registered Agent who will accept service of process on your behalf.

Agent Name: _____

Physical Address (no Post Office Boxes):

I certify the accuracy of this information.

Signed: _____ Title: _____ Date: _____

OFFEROR DATA SHEET

Note: The following information is required as part of your response to this solicitation. Failure to complete and provide this sheet may result in finding your bid nonresponsive.

1. **Qualification:** The vendor must have the capability and capacity in all respects to satisfy fully all of the contractual requirements.

2. **Vendor's Primary Contact:**

Name: _____ Phone: _____

3. **Years in Business:** Indicate the length of time you have been in business providing this type of good or service:

_____ Years _____ Months

4. **Vendor Information:**

FIN or FEI Number: _____ If Company, Corporation, or Partnership

5. Indicate below a listing of at least four (4) recent projects, either educational or governmental, that your company has successfully completed with similar scope, cost and complexity, include the date of services and the name, address, and email address, and telephone number of the point of contact.

A.	Company: _____	Contact: _____
	Phone: _____	Email: _____
	Dates of Service: _____	\$ Value: _____

B.	Company: _____	Contact: _____
	Phone: _____	Email: _____
	Dates of Service: _____	\$ Value: _____

C.	Company: _____	Contact: _____
	Phone: _____	Email: _____
	Dates of Service: _____	\$ Value: _____

D.	Company: _____	Contact: _____
	Phone: _____	Email: _____
	Dates of Service: _____	\$ Value: _____

I certify the accuracy of this information.

Signed: _____ Title: _____ Date: _____

CHANGE ORDER PRICES***Base Bid***

Bids shall be LUMP SUM and shall include ALL WORK necessary to complete the project to the full intent of the plans and accompanying bid documents. The Lump Sum price provided by the bidder includes all material quantities required to perform the Base Bid Item 1 of the project. With the exception of Part B, Part C, and Part D in the Bid Form, material quantities will not be tracked and used as justification for payment during construction. Items include in Part B, Part C, and Part D of the Bid Form are intended to represent conditions expected to be encountered in the project. The quantities will be tracked, and the Owner will pay extra for or be provided a credit for the over-runs or under-runs of these items at the unit prices quoted herein.

In the event that a Change Order becomes necessary during the life of the project, the Contractor will be paid extra or shall credit the Owner, as the case may be, on the basis of the unit prices quoted herein; these quantities are not to be used for routine over-runs or under-runs, unless the change is so significant as to justify a Change Order as defined in Section 38. Prices shall include all overhead, profit, labor, materials, equipment and incidental work and shall be the sum total compensation payable or creditable for such items of work in place. These unit prices shall be good for the duration of the contract and will be utilized as defined in Section 38(a)(2).

Albemarle County reserves the right to reject an individual unit price included herein prior to award of the contract. Items listed below may or may not be on the bid plans. Unit prices shall be provided for each item, except those clearly labeled as not applicable (N/A). If a change order is required during construction that utilizes an item denoted as N/A or a unit price that is otherwise rejected, the price for that work will be determined based on Section 38. Bids may be deemed unresponsive if a unit price is not provided for every item listed on the bid form.

<u>Line No.</u>	<u>VDOT Spec No.</u>	<u>Item Description</u>	<u>Unit</u>	<u>Unit Price</u>
1	517	MOBILIZATION	LS	N/A
2	513	CONSTRUCTION SURVEYING (CONSTRUCTION)	LS	N/A
3	512	TEMPORARY SIGN	SF	\$
4	512	ALLAYING DUST	HR	\$
5	512	GROUP 2 CHANNELIZING DEVICES	DAY	\$
6	512	FLAGGER SERVICE	HR	\$
7	512	TYPE 3 BARRICADE 4'	EA	\$
8	512	TEMP. PVMT MRKG TY. D, CL. III, 4"	LF	\$
9	108	BASELINE PROGRESS SCHEDULE	LS	N/A
10	108	PROGRESS SCHEDULE UPDATES	EA	\$
11	301	CLEARING AND GRUBBING	LS	N/A
12	515	FLEX. PAVE. TIE-IN PLANING 0"-2"	SY	\$
13	515	FLEXIBLE PAVE.PLANING 0"-2"	SY	\$
14	315	ASPHALT CONCRETE TY. SM-9.5D CONST	TON	\$
15	315	ASPHALT CONCRETE TY. IM-19.0D CONST	TON	\$
16	308	AGGR. BASE MATL. TY. I NO. 21B	TON	\$
17	508	DEMO. OF PAVEMENT FLEXIBLE	SY	\$

18	315	NS SAW-CUT ASPH CONC	LF	\$
19	502	COMB. CURB & GUTTER, STD. CG-6	LF	\$
20	502	COMB. CURB & GUTTER, RAD. CG-6	LF	\$
21	502	CURB, STD. CG-2	LF	\$
22	502	CURB, RADIAL CG-2	LF	\$
23	502	ENTRANCE GUTTER CG-9D	SY	\$
24	504	HYDR. CEMENT CONC. SIDEWALK 4"	SY	\$
25	504	HYDR. CEMENT CONC. SIDEWALK 6"	SY	\$
26	504	HYDR. CEMENT CONC. SIDEWALK 7"	SY	\$
27	406	REINF. STEEL	LB	\$
28	504	CG-12 DETECTABLE WARNING SURFACE	SY	\$
29	510	RELOCATE EXISTING BENCH	EA	\$
30	504	HANDRAIL HR-1 TYPE I	LF	\$
31	302	DI-PRECAST TOP VARIOUS TYPES CONST	EA	\$
32	302	INLET PROTECTION TYPE A	EA	\$
33	302	INLET PROTECTION TYPE B	EA	\$
34	302	TEMP. SILT FENCE TYPE A	LF	\$
35	302	SILTATION CONTROL EXCAVATION	CY	\$
36	302	CHECK DAM ROCK TY. II	EA	\$
37	510	FIRE HYDRANT	EA	\$
38	510	RELOC. EXIST. METER ASSEMBLY & BOC	EA	\$
39	520	1" WATER SERVICE LINE	LF	\$
40	510	ADJUST EXIST. VALVE & BOX	EA	\$
41	510	NS ADJUST EXIST. - SAN. SEWER MANHOLE	EA	\$
42	520	6" DI WATER MAIN	LF	\$
43	701	SIGN PANEL	SF	\$
44	700	SIGN POST STP-1, 2", 14 GAUGE	LF	\$
45	700	SIGN POST STP-1, 2 1/2", 12 GAGE	LF	\$
46	700	CONC. SIGN FDN. STP-1 TY.A	EA	\$
47	700	REMOVE EXISTING 1 POST SIGN PANEL	EA	\$

48	700	REMOVE EXISTING 1 POST SIGN STRUCTURE	EA	\$
49	ATTD	RELOCATE EXISTING 1 POST GROUND MOUNTED SIGN PANE	EA	\$
50	704	TYPE B CLASS I PVMT LINE MRKG 4"	LF	\$
51	704	TYPE B CLASS I PVMT LINE MRKG 6"	LF	\$
52	704	TY.B CL.I PAVE. LINE MARK. 24"	LF	\$
53	704	PVMT.SYMB MRKG SGL TURN ARR. TY B CL I	EA	\$
54	704	PVMT SYMB MRKG (SHARED LANE) TY A , WHITE	EA	\$
55	303	REGULAR EXCAVATION	CY	\$
56	303	BORROW EXCAVATION	CY	\$
57	603	REGULAR SEED	LB	\$
58	603	OVERSEEDING	LB	\$
59	603	TEMPORARY SEED	LB	\$
60	603	TOPSOIL CLASS B 2"	ACRE	\$
61	302	LIME	TON	\$
62	603	FERTILIZER NITROGEN - N	LB	\$
63	603	FERTILIZER PHOSPHOROUS - P	LB	\$
64	603	FERTILIZER POTASSIUM - K	LB	\$
65	603	HYDRAULIC EROSION CONTROL PRODUCT TYPE 2	SY	\$
66	603	HYDRAULIC EROSION CONTROL PRODUCT TYPE 3	SY	\$

COUNTY OF ALBEMARLE



CONSTRUCTION CONTRACT GENERAL CONDITIONS

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1. DEFINITIONS

Whenever used in these Construction Contract General Conditions (“General Conditions”) or in the Contract Documents, the following terms have the meanings indicated, which are applicable to both the singular and plural and the male and female gender thereof:

Architect, Engineer, Architect/Engineer or A/E: The term used to designate the Architect and/or the Engineer that contracts with the Owner to provide the Architectural and Engineering services for the Project. The A/E is a separate contractor and not an agent of the Owner. The term includes any associates or consultants employed by the A/E to assist in providing the A/E services.

Beneficial Occupancy: The condition after Substantial Completion but prior to Final Completion of the Project at which time the Project, or portion thereof, is sufficiently complete and systems operational such that the Owner could, after obtaining necessary approvals and certificates, occupy and utilize the space for its intended use. Guarantees and warranties applicable to that portion of the Work begin on the date the Owner accepts the Project, or a portion thereof, for such Beneficial Occupancy, unless otherwise specified in the Supplemental General Conditions or by separate agreement.

Building Permit: See “Permit” below.

Change Order: A document (Form AC-11) issued on or after the effective date of the Contract Between Owner and Contractor (Form AC-9) which is agreed to by the Contractor and approved by the Owner, and which authorizes an addition, deletion or revision in the Work, including any adjustment in the Contract Price and/or the Contract Completion Date. A Change Order once signed by all parties, with the exception of a Unilateral Change Order that is only signed by the Owner, is incorporated into and becomes a part of the Contract.

Claim: A demand or assertion by one of the parties seeking, as a matter of right, adjustment 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. Claims must be made by written notice. The responsibility to substantiate claims shall rest with the party making the claim.

Code of Virginia: 1950 Code of Virginia as amended. Sections of the Code referred to herein are noted by §xx-xx.

Construction: The term used to include new construction, reconstruction, renovation, restoration, major repair, demolition and all similar work upon buildings and ancillary facilities, including any draining, dredging, excavation, grading or similar work upon real property.

Contract: The Contract Between Owner and Contractor, Form AC-9, hereinafter referred to as the Contract.

Contract Completion Date: The date by which the Work must be substantially complete. The Contract Completion Date is customarily established in the Notice To Proceed, based on the Time for Completion. In some instances, however, the Contract contains a mandatory Contract Completion Date, which shall be stated in the Invitation for Bid or Request for Proposal, as applicable.

Contract Documents: The Contract Between Owner and Contractor (Form AC-9) signed by the Owner and the Contractor and any documents expressly incorporated therein. Such incorporated documents customarily include the bid submitted by the Contractor, these General Conditions, any Supplemental General Conditions, any Special Conditions, the plans and the specifications, and all modifications, including addenda and subsequent Change Orders.

Contract Price: The total compensation payable to the Contractor for performing the Work, subject to modification by Change Order.

Contractor: The person with whom the Owner has entered into a contractual agreement to do the Work.

Date of Commencement: The date as indicated in the written Notice to Proceed or a date mutually agreed to between the Owner and Contractor in writing.

Day(s): Calendar day(s) unless otherwise noted.

Defective: An adjective which, when modifying the word Work, refers to Work that is unsatisfactory, faulty, deficient, does not conform to the Contract Documents or does not meet the requirements of inspections, standards, tests or approvals required by the Contract Documents, or Work that has been damaged prior to the A/E's recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion or Beneficial Occupancy).

Drawing: A page or sheet of the Plans which presents a graphic representation, usually drawn to scale, showing the technical information, design, location, and dimensions of various elements of the Work. The graphic representations include, but are not limited to, plan views, elevations, transverse and longitudinal sections, large and small scale sections and details, isometrics, diagrams, schedules, tables and/or pictures.

Emergency: Any unforeseen situation, combination of circumstances, or a resulting state that poses imminent danger to health, life or property.

Field Order: A written order issued by the A/E or Owner which clarifies or explains the plans or specifications, or any portion or detail thereof, without changing the design, the Contract Price, the Time for Completion or the Contract Completion Date.

Final Completion Date: The date of the Owner's acceptance of the Work from the Contractor upon confirmation from the Architect/Engineer and the Contractor that the Work is totally complete in accordance with Section 43(b).

Final Payment: The final payment that the Contractor receives pursuant to the applicable provisions of Section 36, except in the event no final payment is made due to termination of the Contract under either Sections 40 or 41. In the event of a termination for cause under Section 40, the Final Payment shall be when the termination became effective. In the event of a termination for convenience under Section 41, the Final Payment shall be either the payment of compensation for termination that the Contractor receives according to the provisions of Subsection 41, or the Owner's determination that no compensation for termination is due the Contractor under Subsection 41, as the case may be.

Float: The excess time included in a construction schedule to accommodate such items as inclement weather and associated delays, equipment failures, and other such unscheduled events. It is the

contingency time associated with a path or chain of activities and represents the amount of time by which the early finish date of an activity may be delayed without impacting the critical path and delaying the overall completion of the Project. Any difference in time between the Contractor's approved early completion date and the Contract Completion Date shall be considered a part of the Project float.

Float, Free: The time (in days) by which an activity may be delayed or lengthened without impacting upon the start day of any activity following in the chain.

Float, Total: The difference (in days) between the maximum time available within which to perform an activity and the duration of an activity. It represents the time by which an activity may be delayed or lengthened without impacting the Time for Completion or the Contract Completion Date.

Notice: All written notices, including demands, instructions, claims, approvals and disapprovals, required or authorized under the Contract Documents. Any written notice by either party to the Contract shall be sufficiently given by any one or combination of the following, whichever shall first occur: (1) delivered by hand to the last known business address of the person to whom the notice is due; (2) delivered by hand to the person's authorized agent, representative or officer wherever they may be found; or (3) enclosed in a postage prepaid envelope addressed to such last known business address and delivered to a United States Postal Service official or mailbox. Notice is effective upon such delivery. All notices to the Owner should be directed to the Project Manager.

Notices transmitted by Facsimile (Fax) or Email are acceptable for the Project. If faxed, Notices shall be transmitted to the Fax number listed in the Contract and shall have a designated space for the Fax Notice recipient to acknowledge his receipt by authorized signature and date. The Fax Notice with authorized signature acknowledging receipt shall be Faxed back to the sender. If emailed, Notices shall be transmitted to the email address listed in the Contract. The Email Notice recipient shall acknowledge receipt by emailing back to the sender and responding to the Emailed Notice. Notice shall be effective upon the date of acknowledgment of the Faxed or Emailed Notice or the date of delivery, whichever occurs first.

Notice to Proceed: A written notice given by the Owner to the Contractor (with a copy to A/E) fixing the date on which the Contract time will commence for the Contractor to begin the prosecution of the Work in accordance with the requirements of the Contract Documents. The Notice to Proceed will customarily identify a Contract Completion Date.

Owner: County of Albemarle, Virginia and/or The County School Board of Albemarle County, Virginia.

Permit: The term "permit" as used herein shall mean any and all permits required to comply with local, state, and federal codes or laws (including but not limited to building permit, erosion and sediment control permit, and any other permit required by state, federal, and local jurisdictions).

Person: This term includes any individual, corporation, partnership, association, company, business, trust, joint venture, or other legal entity.

Plans: The term used to describe the group or set of project-specific drawings and/or Architect/Engineer sketches which are included in the Contract Documents.

Project: The term used instead of the specific or proper assigned title of the entire undertaking which includes, but is not limited to, the “Work” described by the Contract Documents.

Project Inspector: One or more persons and/or firms employed by the Owner to inspect the Work for the Owner and/or to document and maintain records of activities at the Site to the extent required by the Owner. The scope of the Project Inspector’s authority with respect to the Contractor is limited to that indicated in Section 16(e) and (f).

Project Manager: The Project Manager as used herein shall be the Owner’s designated representative on the Project. The Project Manager shall be the person through whom the Owner generally conveys written decisions and notices. All notices due the Owner and all information required to be conveyed to the Owner shall be conveyed to the Project Manager. The Owner may change the Project Manager from time to time and may, in the event that the Project Manager is absent, disabled or otherwise temporarily unable to fulfill his duties, appoint an interim Project Manager.

Provide: Shall mean furnish and install ready for its intended use.

Schedule of Values: The schedule prepared by the Contractor and acceptable to the Owner which indicates the value of that portion of the Contract Price to be paid for each trade or major component of the Work.

Site: Shall mean the location at which the Work is performed or is to be performed.

Special Conditions: Provisions of a contract that are specific to the project under consideration and do not fall under General Conditions or Supplemental General Conditions.

Specifications: That part of the Contract Documents containing the written administrative requirements and the technical descriptions of materials, equipment, construction systems, standards, and workmanship which describe the proposed Work in sufficient detail and provide sufficient information for the Code Official to determine code compliance and for the Contractor to perform the Work. (The General Conditions, any Supplemental General Conditions, Special Conditions, various bidding information and instructions, and blank copies of various forms to be used during the execution of the Work are usually bound with the Specifications.)

Subcontractor: A person having a direct contract with Contractor or with any other Subcontractor for the performance of the Work. Subcontractor includes any person who provides on-site labor but does not include any person who only furnishes or supplies materials for the Project.

Submittals: All shop, fabrication, setting and installation drawings, diagrams, illustrations, schedules, samples, and other data required by the Contract Documents which are specifically prepared by or for the Contractor to illustrate some portion of the Work and all illustrations, brochures, standard schedules, performance charts, instructions, diagrams and other information prepared by a Supplier and submitted by the Contractor to illustrate material or equipment conformance of some portion of the Work with the requirements of the Contract Documents.

Substantial Completion: The condition when the Owner agrees that the Work, or a specific portion thereof, is sufficiently complete, in accordance with the Contract Documents, so that it can be utilized by the Owner for the purposes for which it was intended. The Owner at its sole discretion may, after

obtaining the necessary approvals and certificates, take Beneficial Occupancy at this time or choose to wait to occupy until after Final Completion is achieved.

Supplemental General Conditions: That part of the Contract Documents which amends or supplements the General Conditions.

Supplier: A manufacturer, fabricator, distributor, materialman or vendor who provides material for the Project but does not provide on-site labor.

Time for Completion: The number of consecutive calendar days following the issuance of the Notice to Proceed which the Contractor has to substantially complete all Work required by the Contract. When the Notice to Proceed is issued, it states a Contract Completion Date, which has been set by the Owner based on the Time for Completion.

Underground Facilities: All pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels or other such facilities or attachments, and any encasements containing such facilities which are or have been installed underground to furnish any of the following services or materials: electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, sewage and drainage removal, traffic or other control systems or water.

Unilateral Change Order: A Change Order from the Owner directing the Contractor to proceed with work within the scope of the contract which may be undefined or for which there is no agreement on the cost or time associated with the work.

Work: The services performed under this Contract including, but not limited to, furnishing labor, and furnishing and incorporating materials and equipment into the construction. The Work also includes the entire completed construction, or the various separately identifiable parts thereof, required to be provided under the Contract Documents or which may reasonably be expected to be provided as part of a complete, code compliant and functioning system for those systems depicted in the plans and specifications.

2. CONTRACT DOCUMENTS

- (a) The Contract Between Owner and Contractor (AC-9), the Standard Performance Bond (AC-10), the Standard Labor and Material Payment Bond (AC-10.1), the Schedule of Values and Certificate for Payment (AC-12), the Affidavit of Payments of Claims (AC-13), the Contractor's Certificate of Substantial Completion (AC-13.2a), and the Contractor's Certificate of Completion (AC-13.2) issued by the County of Albemarle are forms incorporated in these General Conditions by reference and are made a part hereof to the same extent as though fully set forth herein. They must be used by the Contractor for their respective purposes.
- (b) All time limits stated in the Contract Documents, including but not limited to the Time for Completion of the Work, are of the essence of the Contract.
- (c) The Contract Between Owner and Contractor shall be signed by the Owner and the Contractor in as many original counterparts as may be mutually agreed upon, each of which shall be considered an original.

- (d) Anything called for by one of the Contract Documents and not called for by the others shall be of like effect as if required or called for by all, except that a provision clearly designed to negate or alter a provision contained in one or more of the other Contract Documents shall have the intended effect. In the event of conflicts among the Contract Documents, the Contract Documents shall take precedence in the following order: the Contract Between Owner and Contractor; the Special Conditions; the Supplemental General Conditions; the General Conditions; the specifications with attachments; and the plans.
- (e) If any provision of this Contract shall be held invalid by any court of competent jurisdiction, such holding shall not invalidate any other provision.
- (f) All correspondence, invoices, memoranda, submittals and other documents related to this Project whether generated by the Owner, the A/E, the Contractor or others should be identified at the beginning of the document with the Project Title shown in the Contract. Additional identification such as a job number, purchase order number or such may also be shown at the Owner's option.

3. LAWS, REGULATIONS AND PERMITS

- (a) The Contractor shall comply with all laws, ordinances, rules, regulations and lawful orders of any public authority bearing on the performance of the Work and shall give all notices required thereby. The Contractor shall assure that all Subcontractors and tradesmen who perform Work on the project are properly licensed by the Department of Professional and Occupational Regulation as required by Title 54.1, Chapter 11, Articles 1 and 3, Code of Virginia, and by applicable regulations.
- (b) This Contract and all other contracts and subcontracts are subject to the provisions of Articles 3 and 5, Chapter 4, Title 40.1, Code of Virginia, relating to labor unions and the "right to work." The Contractor and its Subcontractors, whether residents or nonresidents of the Commonwealth, who perform any Work related to the Project shall comply with all of the said provisions.
- (c) IMMIGRATION REFORM AND CONTROL ACT OF 1986: By signing this Contract, the Contractor certifies that it does not and will not during the performance of this Contract violate the provisions of the Federal Immigration Reform and Control Act of 1986, which prohibits employment of illegal aliens.
- (d) The provisions of all rules and regulations governing safety as adopted by the Safety Codes Commission of the Commonwealth of Virginia and as issued by the Department of Labor and Industry under Title 40.1 of the Code of Virginia shall apply to all Work under this Contract. Inspectors from the Department of Labor and Industry shall be granted access to the Work for inspection without first obtaining a search or administrative warrant.
- (e) Building Permit: The Virginia Uniform Statewide Building Code applies to the Work and is administered by the local Building Official. The Building Permit will be obtained by the Contractor and paid for by the Owner. All other permits, local license fees, business fees, taxes, or similar assessments shall be obtained and paid for by the Contractor. See Section 25 for utility connection fees and services.

- (f) The Contractor shall include in each of its subcontracts a provision requiring each Subcontractor to include or otherwise be subject to the same payment and interest requirements in Subsections (a), (b), and (c) of Section 37 of these General Conditions with respect to each lower-tier Subcontractor and Supplier.
- (g) The Contractor, if not licensed as an asbestos abatement contractor in accordance with §54.1-514, Code of Virginia, shall have all asbestos-related Work performed by subcontractors who are duly licensed as asbestos contractors for the Work required.
- (h) Lead-Based Paint Activities: If the Contract Documents indicate that lead-based paint is present on existing materials, components, or surfaces, the Contractor shall conform to the following:
 - (1) The requirements set forth in 59 Federal Register 45,872 (September 2, 1994) Proposed Rule - Lead; Requirements for Lead-based Paint Activities (Proposed Rules) in selecting and performing the means, methods and procedures for performing the Work. This includes, but is not limited to, training of personnel, lead abatement, encapsulation of lead containing materials, removal and handling of lead containing materials, and methods of disposal. When the Final Rule, to be codified at 40 CFR 745, supersedes the Proposed Rule, the Contractor shall be responsible for conforming to the Final Rule, as of the effective date set forth therein.
 - (2) The requirements for employee protection contained in 29 CFR Part 1926, Subpart D, and the requirements for record-keeping contained in 29 CFR Part 1910.
 - (3) The Virginia Department of Labor and Industry's (DLI) Emergency Regulation published in the May 27, 1996 Virginia Register, requiring, among other things, that a permit be issued to the lead abatement contractor, or any subsequent regulation issued by DLI.
- (i) If the Contractor violates laws or regulations that govern the Project, the Contractor shall take prompt action to correct or abate such violation and shall indemnify and hold the Owner harmless against any fines and/or penalties that result from such violation. To the extent that such violation is the result of negligence or other actionable conduct of the Contractor, the Contractor shall indemnify and hold the Owner harmless against any third party claims, suits, awards, actions, causes of action or judgments, including but not limited to attorney's fees and costs incurred thereunder, that result from such violation.
- (j) Land Disturbance Activities: If the Work includes any land disturbing activities, the Contractor shall be responsible for obtaining an Albemarle County Land Disturbance Permit. The Contractor shall have an individual certified by the Department of Conservation and Recreation (DCR) as a Responsible Land Disturber (RLD) on the project site at all times during the construction project where land is being disturbed in accordance with §10.1-563, Code of Virginia.

All construction activities involving land disturbances equal to or exceeding ten thousand (10,000) square feet must be covered by a Virginia Stormwater Management Program (VSMP) permit approved and issued by the County in accordance with the County of Albemarle's Water Protection Ordinance. The Owner is responsible for securing permit coverage for all applicable land disturbing activities performed, including within any easements that directly relate to the construction site activity. The Contractor shall sign a certification statement to comply with all conditions of the

permit, shall accept assignment as the responsible party prior to issuance of the Land Disturbance Permit, and shall sign all Responsible Land Disturber (RLD) forms.

The Contractor shall be responsible for securing permit coverage for support facilities that are not located within the project limits of disturbance. The Contractor shall be responsible for all costs to obtain permit coverage for all support facilities (both on-site and off-site) not included in the construction plans or contract documents for the project. The Owner will not be responsible for any inconvenience, delay, or loss experienced by the Contractor as a result of his failure to gain access to any support facility areas at the time contemplated.

- (k) Environmental Permitting: The Contractor shall sign a certification to comply with all conditions of any environmental permits required for the project (e.g. wetland or stream mitigation permit, floodplain development permit, etc.). The Contractor shall adhere to any time-of-year restriction conditions as required by state and federal permitting agencies. No in-stream work shall be permitted during in-stream time-of-year restrictions.
- (l) Virginia Department of Transportation (VDOT) Land Use Permit: The Contractor shall be responsible to obtain a VDOT Land Use Permit for projects requiring such permit. The Contractor shall be responsible for all costs associated with obtaining such permit.
- (m) The Contractor is responsible for ensuring that all permits required to perform the work are obtained and that all conditions of those permits are met throughout the duration of the project.

4. NONDISCRIMINATION

- (a) §2.2-4311 of the Code of Virginia shall be applicable. It provides as follows:

“1. During the performance of this Contract the Contractor agrees as follows:

- (a) The Contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, age, disability, or other basis prohibited by state law relating to discrimination in employment, except where there is a bona fide occupational qualification reasonably necessary to the normal operation of the Contractor. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.
- (b) The Contractor, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, will state that such Contractor is an equal opportunity employer.
- (c) Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section.

2. The Contractor will include the provisions of the foregoing paragraphs (a), (b) and c) in every subcontract or purchase order of over ten thousand dollars (\$10,000), so that the provisions will be binding upon each Subcontractor or vendor.”
- (b) Where applicable, the Virginians with Disabilities Act and the Federal Americans with Disabilities Act shall apply to the Contractor and all Subcontractors.

5. PROHIBITION OF ALCOHOL AND OTHER DRUGS

- (a) §2.2-4312 of the Code of Virginia shall be applicable. It provides as follows:

“During the performance of this contract, the contractor agrees to (i) provide a drug-free workplace for the contractor’s employees; (ii) post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in the contractor’s workplace and specifying the actions that will be taken against employees for violations of such prohibition; (iii) state in all solicitations or advertisements for employees placed by or on behalf of the contractor that the contractor maintains a drug-free workplace; and (iv) include the provisions of the foregoing clauses in every subcontract or purchase order of over \$10,000, so that the provisions will be binding upon each subcontractor or vendor. For the purposes of this section, “drug-free workplace” means a site for the performance of work done in connection with a specific contract awarded to a contractor in accordance with this chapter, the employees of whom are prohibited from engaging in the unlawful manufacture, sale, distribution, dispensation, possession or use of any controlled substance or marijuana during the performance of the contract.”

- (b) The Contractor shall also establish, maintain and enforce policies which prohibit the following acts by all Contractor, Subcontractor and Supplier personnel at the Site:
 1. the manufacture, distribution, dispensation, possession, or use of alcohol, marijuana or other drugs, except possession and medically prescribed use of prescription drugs; and
 2. the impairment of judgment or physical abilities due to the use of alcohol, marijuana or other drugs, including impairment from prescription drugs.

6. TIME FOR COMPLETION

- (a) The Time for Completion shall be designated by the Owner on the Invitation for Bids, Request for Proposals or other prebid/proposal documents. In some instances, the Time for Completion may be stated on the Invitation for Bids, Request for Proposals or other prebid/pre-proposal document in the form of a Contract Completion Date. The Work must be substantially completed by the Time for Completion or the Contract Completion Date. Unless otherwise specified, the Contractor shall achieve Final Completion within thirty (30) days after the date of Substantial Completion.
- (b) The Time for Completion shall be stated in the Contract Between Owner and Contractor and shall become a binding part of the Contract upon which the Owner may rely in planning the use of the

facilities to be constructed and for all other purposes. If the Contractor fails to substantially complete the Work within the Time for Completion or Contract Completion Date, as set forth in the Contract, he shall be subject to payment of actual damages incurred by the Owner or liquidated damages, if provided for in the Contract.

- (c) The Contractor, in submitting his bid, acknowledges that he has taken into consideration normal weather conditions. The listing below defines the monthly anticipated days of adverse weather for each month and is based upon NOAA climatological data for Charlottesville, Virginia. Adverse weather days shall be days of actual precipitation of 0.10 inch or greater.

Jan*	Feb*	Mar*	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec*
6	6	7	6	8	6	8	8	6	5	5	6

* In addition to the anticipated days of adverse weather noted above, the Contractor must include one day of adverse weather impact (snow, ice, mud) for each day of actual adverse weather during the months of January, February, March, and December.

The anticipated days provided above will constitute the baseline for adverse weather time evaluations.

For projects not involving buildings, throughout the portion of the contract from the date of Notice to Proceed until the project is substantially complete, actual adverse weather days are to be recorded by the Contractor and verified by the A/E each month.

For projects involving buildings, throughout the portion of the contract from the date of Notice to Proceed until the building is “dried in”, actual adverse weather days are to be recorded by the Contractor and verified by the Architect each month. The building shall be considered “dried in” when the exterior block walls or stud and sheathing walls are in place, and a temporary (or permanent) roof is in place. Upon determination by the Owner and Architect that the building is in fact dried in, requests for additional time due to weather delays will not be accepted for any work within the building footprint.

The total anticipated adverse weather days for the project shall be the sum of all the monthly days for each month from the date of Notice to Proceed until the project is substantially complete, or until the date the building is to be “dried in”, according to the Contractor’s schedule.

If the total number of actual adverse weather days plus adverse weather impact days exceeds the anticipated adverse weather days determined above, the excess days may be used as a basis to determine whether a Contractor is entitled to a time extension. The adverse weather must have prevented work for fifty percent (50%) or more of the Contractor’s work day and delayed work critical to the timely completion of the project.

The Contractor’s schedule must indicate the critical (path) work and must reflect the above anticipated adverse weather days for all weather dependent activities.

- (1) The extension requested must be supported by a delay in completion of the entire Project shown on the critical path of the accepted CPM Schedule or the approved bar graph schedule

required for the Project. Extensions will be granted only for delays in completion of the Project, not for that portion of any delay which consumes only “float” time.

- (2) A request for extension of time based on abnormal weather must be made in writing within ten (10) calendar days of the completion of the calendar month during which abnormal weather is claimed at the Site.
- (3) All of the evidence and data supporting the request (including both historical data and the recordings at the Site during the time of delay) must be furnished to the Owner before any consideration will be given to the request. That supporting data shall be submitted by the end of the calendar month following the month for which the request is made. Time extensions for adverse weather related days granted by the Owner will extend the Contract Completion Date but will not include additional compensation to the Contractor. Weather-related time extension(s) shall not be compensable.
- (d) The Contractor represents and agrees that he has taken into account in his bid the requirements of the bid documents, local conditions, availability of materials, equipment, and labor, and any other factors which may affect the performance of the Work. The Contractor agrees and warrants that he will achieve Substantial Completion of the Work to allow the Owner to have Beneficial Occupancy not later than the Time for Completion or Contract Completion Date. The Contractor agrees and warrants that he will achieve Final Completion of the Work (the entire completion of all Work, including “punch list” items), not later than the number of days as specified in the Contract Documents after achieving Substantial Completion.

7. CONDITIONS AT SITE

- (a) The Contractor and its Subcontractors shall have visited the Site prior to bidding or submitting a bid or proposal and are totally responsible for having ascertained pertinent local conditions such as location, accessibility and general character of the Site, and the character and extent of existing conditions, improvements and work within or adjacent to the Site. It is understood that the Contractor accepts conditions at the site as of the date of its bid or proposal and no allowances will be made after award for any future error or negligence by Contractor or Subcontractors. Claims, which result from the Contractor’s failure to do so, will be deemed waived.
- (b) If, in the performance of the Contract, hidden physical conditions of a building being modified are exposed revealing unusual or materially different conditions from those ordinarily encountered or inherent in work of this nature, or if subsurface or latent conditions at the Site are found which are materially different from those frequently present in the locality or from those indicated in the Contract Documents, the Contractor must report such conditions to the Owner and to the Architect/Engineer before the conditions are disturbed. Upon such notice, or upon his own observation of such conditions, the Architect/Engineer shall promptly propose such changes in the Contract Documents as he finds necessary to conform to the different conditions. Any change in the cost of the Work or additional time needed for completion must be requested pursuant to Sections 38 and/or 42 of these General Conditions.

- (c) If the Contractor, during the course of the Work, observes the existence of any material which he knows, should know, or has reason to believe is hazardous to human health, the Contractor shall promptly notify the Owner. The Owner will provide the Contractor with instructions regarding the disposition of the material. The Contractor shall not perform any Work involving the material or any Work causing the material to be less accessible prior to receipt of special instructions from the Owner.

8. CONTRACT SECURITY

- (a) For Contracts with a value exceeding one hundred thousand dollars (\$100,000), the Contractor shall deliver to the Owner or its designated representative, a Standard Performance Bond (Form AC-10) and a Standard Labor and Material Payment Bond (Form AC-10.1), each fully executed by the Contractor and one or more surety companies legally licensed to do business in Virginia and each in an amount equal to one hundred percent (100%) of the accepted bid. The bonds shall identify the name and address of an attorney-in-fact who is appointed to act on behalf of the surety within the Commonwealth of Virginia. The attorney-in-fact shall affix to the bond a certified and current copy of the power of attorney. If more than one Surety executes a bond, each shall be jointly and severally liable to the Owner for the entire amount of the bond. Sureties shall be selected by the Contractor, subject to approval by the Owner. No payment on the Contract shall be due and payable to the Contractor until the bonds have been approved by the Owner. The Standard Performance Bond and Standard Labor and Material Payment Bond will be held for one year after final acceptance of the Work or as described in the bond forms.
- (b) For the purposes of all Standard Labor and Material Payment Bonds entered into, the term “subcontractors” as used in §2.2-4337(A.2) of the Code of Virginia is interpreted to mean any contractors who participated in the prosecution of the Work undertaken by the Contractor (referred to in §2.2-4337(A.2) of the Code of Virginia as the “prime contractor”), whether such contractor had a direct contract with the Contractor (prime contractor) or whether there were one or more other intervening Subcontractors contractually positioned between it and the Contractor (prime contractor).
- (c) See §2.2-4338 of the Code of Virginia, for alternative forms of security for payment and/or performance bonds.
- (d) For contracts with a value of less than one hundred thousand dollars (\$100,000), the Contractor will not be required to provide a Standard Performance Bond and a Standard Labor and Material Payment Bond as described above unless the Invitation for Bid or Request for Proposal states that such bonds will be required.

9. SUBCONTRACTS

- (a) The Contractor shall, as soon as practicable after the signing of the Contract and prior to commencement of Work, notify the Owner and Architect/Engineer in writing of the names of all Subcontractors proposed for the Work and of such others as the Architect/Engineer may direct. Subcontractors whose names do not appear on the list must be approved by the Owner. Where the specifications establish qualifications or criteria for Subcontractors, manufacturers, or individuals

performing Work on the Project, the Contractor shall be responsible for ascertaining that those proposed meet the criteria or qualifications. The Contractor shall not employ any Subcontractor that the Owner may, within a reasonable time, object to as unsuitable. Neither the Owner nor the Architect/Engineer shall direct the Contractor to contract with any particular Subcontractor unless provided in the specifications or Invitation for Bids or Request for Proposal.

- (b) The Owner may select a particular Subcontractor for a certain part of the Work and designate on the Invitation for Bids or Request for Proposal that the Subcontractor shall be used for the part of the Work indicated and that the Subcontractor has agreed to perform the Work for the subcontract amount stipulated on the bid or proposal form. The Contractor shall include in his bid the amount stipulated by the Owner in the bid form. In such case, the Contractor shall be responsible for that Subcontractor and its work and all scheduling and coordination associated with the work. The Subcontractor shall be responsible to the Contractor for its work just as if the Contractor had selected the Subcontractor.
- (c) The Owner shall, on request, furnish to any Subcontractor, if practicable, the amounts of payments made to the Contractor, the Schedule of Values and Requests for Payment submitted by the Contractor and any other documentation submitted by the Contractor which would tend to show what amounts are due and payable by the Contractor to the Subcontractor.
- (d) The Contractor shall be fully responsible to the Owner for all acts and omissions of his agents and employees and all succeeding tiers of Subcontractors and Suppliers performing or furnishing any of the Work. Nothing in the Contract Documents shall create any contractual relationship between Owner or Architect/Engineer and any such Subcontractor, Supplier or other person or organization, nor shall it create any obligation on the part of Owner or Architect/Engineer to pay for or to see to the payment of any moneys due any such Subcontractor, Supplier or other person or organization, except as may otherwise be required by law.
- (e) The Contractor shall be fully responsible for his invitees at the Site and for those of his Subcontractors, Suppliers, and their employees, including any acts or omissions of such invitee.
- (f) The Contractor agrees that he alone is responsible for all dealings with his Subcontractors and Suppliers, and their subcontractors, employees and invitee, including, but not limited to, the Subcontractors' or Suppliers' claims, demands, actions, disputes and similar matters unless specifically provided otherwise by the Contract or by statute.

10. SEPARATE CONTRACTS

- (a) The Owner reserves the right to let other contracts in connection with the Project, the Work under which may proceed simultaneously with the execution of this Contract. The Contractor shall afford other separate contractors reasonable opportunity for the introduction and storage of their materials and the execution of their work. The Contractor shall cooperate with them and shall take all reasonable action to coordinate his Work with theirs. If the Owner has listed other separate contracts in the Invitation for Bids or Request for Proposal which it expects to proceed simultaneously with the Work of the Contractor, and has included the estimated timing of such other Contracts in the Invitation for Bids or Request for Proposal, the Contractor shall integrate the schedule of those separate contracts into his scheduling. The Contractor shall make every reasonable effort to assist

the Owner in maintaining the schedule for all separate contracts. If the work performed by the separate contractor is defective or performed so as to prevent or threaten to prevent the Contractor from carrying out his Work according to the Contract, the Contractor shall immediately notify the Owner and the Architect/Engineer upon discovering such conditions.

- (b) If a dispute arises between the Contractor and any separate contractor(s) as to their responsibility for cleaning up as required by Sections 31(c) and 31(d) of these General Conditions, the Owner may clean up and charge the cost thereof to the respective contractors in proportion to their responsibility. If a Contractor disputes the Owner's apportionment of clean-up costs, it shall be that contractor's burden to demonstrate and prove the correct apportionment.

11. CONTRACTOR'S AND SUBCONTRACTOR'S INSURANCE

A. General Requirements:

(a) Certificate of Insurance-General Contractor: Prior to execution of the Contract by the Owner, the Contractor shall provide written evidence (certificates of insurance) that he has obtained all the insurance required hereunder from an insurer authorized to do business in Virginia and such insurance has been approved by the Owner. Insurance providers must have an agent licensed to do business in Virginia. The Owner must be identified on the certificate(s) of insurance as an additional insured for all types of insurance coverage, except for workers' compensation and professional liability, and there shall be a statement provided on the certificate(s) confirming the Owner is named as an additional insured and so endorsed to the policy(ies). In the event of cancellation of this insurance, not less than thirty (30) days prior written notice must be sent to the Owner.

(b) Certificate of Insurance-Subcontractor: The Contractor shall not allow any Subcontractor to commence Work on his subcontract until the same types of insurance in an appropriate amount have been obtained by the Subcontractor and approved by the Contractor. The Owner shall have no responsibility to verify compliance by the Contractor, or its subcontractors or suppliers. Approval of insurance by the Owner shall not relieve or decrease the liability of the Contractor hereunder. In the event of cancellation of this insurance, not less than thirty (30) days prior written notice must be sent to the Owner.

B. Insurance Requirements: By signing and submitting a proposal under this solicitation, the offeror certifies that if awarded the contract, it will purchase and maintain, at its sole expense, and from a company or companies authorized to do business within the Commonwealth of Virginia, insurance policies containing the following types of coverages and minimum limits, protecting from claims which may arise out of or result from the Offerors's performance or non-performance of services under this Contract, or the performance or non-performance of services under this Contract by anyone directly or indirectly employed by the Offeror or for whose acts it may be liable. The Supplemental General Conditions detail the minimum amounts required for this solicitation.

- (a) Workers' Compensation to include Employer's Liability of an amount not less than \$100,000/\$500,000/\$100,000. Coverage is compulsory for employers of three or more employees, to include the employer. Businesses who hire subcontractors who will perform the same trade or are hired to fulfill contract requirements must include the subcontractor's employees when determining the total number of employees for workers compensation. A waiver of subrogation in favor of the County of Albemarle and its officers, employees, agents, and volunteers must be endorsed on the workers

compensation policy. Contractors who fail to notify the County of increases in the number of employees that change their workers' compensation requirements under the Code of Virginia during the course of the contract shall be in noncompliance with the contract. This policy shall specifically list Virginia as a covered state.

- (b) General Liability – of an amount not less than \$1,000,000 per occurrence/\$2,000,000 aggregate limit, and a per project aggregate limit of \$2,000,000.-CGL form CG 2010 11/85 edition or its equivalent is required to be endorsed to the commercial general liability policy. Commercial General Liability is to include bodily injury and property damage, personal injury, advertising injury, arising out of premises, operations, and products and completed operations. The County of Albemarle and its officers, employees, agents and volunteers must be named as additional insureds on a primary and non-contributory basis and be so endorsed on the policy. A waiver of subrogation in favor of Albemarle County Government is required on the commercial general liability policy.
- (c) Automobile Liability – of an amount not less than \$1,000,000 per accident. Coverage is to include hired, owned, non-owned, temporary, and leased vehicles. The County of Albemarle and its officers, employees, agents and volunteers must be named as additional insureds on a primary and non-contributory basis and be so endorsed on the auto policy. A waiver of subrogation naming the County of Albemarle and its officers, employees, agents and volunteers is also required on the commercial auto policy.
- (d) Umbrella or Excess Liability Coverage- of an amount not less than \$1,000,000. Must be follow form and go over the underlying general liability, commercial auto and employers liability policies. The County of Albemarle and its officers, employees, agents and volunteers must be named as additional insureds on a primary and non-contributory basis and be so endorsed on the Umbrella or Excess Liability policy. A waiver of subrogation naming the County of Albemarle and its officers, employees, agents and volunteers is also required on the commercial Umbrella or Excess Liability policy.
- (e) Environmental/pollution - of an amount not less than \$1,000,000. County of Albemarle and its officers, employees, agents and volunteers must be named as additional insureds on a primary and non-contributory basis and be so endorsed on the Environmental/pollution Liability policy. A waiver of subrogation naming the County of Albemarle and its officers, employees, agents and volunteers is also required on the commercial Environmental/pollution Liability policy.
- (f) Professional (E&O) Liability Insurance - of an amount not less than \$1,000,000
- (g) Cyber Liability - of an amount not less than \$1,000,000

All insurance coverage:

1. shall be issued by an insurance carrier authorized to do business within the Commonwealth of Virginia and rated A – VIII or better, by A. M. Best Company or equivalent rating from an alternate recognized ratings agency, and otherwise acceptable to the County;
2. shall be kept in force throughout performance of services;
3. shall be an occurrence based policy; professional liability may be claims made basis;
4. shall include completed operations coverage;
5. shall contain a cross liability or severability of interest clause or endorsement. Insurance covering the specified additional insured shall be primary and non-contributory, and all other insurance carried by the additional insureds shall be excess insurance;
6. where additional insured required, such policy shall not have a restriction on the limits of coverage provided to the County as an additional insured. The County shall be entitled to protection up to the full limits of the offerors’s policy regardless of the minimum requirements specified in the Contract.

Proof Of Insurance: Prior to performance of any services or delivery of goods, the Offeror shall (i) have all required insurance coverage in effect; (ii) the Offeror shall deliver to the County certificates of insurance for all lines of coverage. The Offeror shall be responsible that such coverage evidenced thereby shall not be substantially modified or canceled without 30 days prior written notice to the County; and (iii) the Offeror shall deliver to the County endorsements to the policies which require the County and its officials, officers, employees, agents and volunteers be named as “additional insured”. Policies which require this endorsement include: Commercial General Liability, Automobile Liability and, umbrella or excess liability coverage as detailed below. Such endorsements must be approved by the County, and (iv) upon the request of the County, provide any other documentation satisfactory to the County in its sole discretion, evidencing the required insurance coverage, including but not limited to a copy of the insurance policy and evidence of payment of policy premiums. The Offeror shall require each of its subcontractors and suppliers to have coverage per the requirements herein in effect, prior to the performance of any services by such subcontractors and suppliers. Further, the Offeror shall ensure that all Required Insurance coverages of its subcontractors and suppliers is and remains in effect during performance of their services on the Project and certifies by commencement of the Work that this insurance and that of subcontractors is in effect and meets the requirements set forth herein. The County shall have no responsibility to verify compliance by the Offeror or its subcontractors and suppliers.

Effect Of Insurance: Compliance with insurance requirements shall not relieve the Offeror of any responsibility to indemnify the County for any liability to the County, as specified in any other provision of this contract, and the County shall be entitled to pursue any remedy in law or equity if the Offeror fails to comply with the contractual provisions of this contract. Indemnity obligations specified elsewhere in this Contract shall not be negated or reduced by virtue of any insurance carrier's denial of insurance coverage for the occurrence or event which is the subject matter of the claim, or by any insurance carrier’s refusal to defend any named insured.

Waiver Of Subrogation: The Offeror agrees to release and discharge the County of Albemarle and its officers, employees, agents and volunteers of and from all liability to the Offeror, and to anyone claiming by, through or under the Offeror, by subrogation or otherwise, on account of any loss or damage to tools, machinery, equipment or other property, however caused.

Sovereign Immunity: Nothing contained herein shall affect, or shall be deemed to affect, a waiver of

the County's sovereign immunity under law.

Right to Revise or Reject: The County reserves the right, but not the obligation, to revise any insurance requirement not limited to limits, coverages and endorsements, or reject any insurance policies which fail to meet the criteria stated herein. Additionally, the County reserves the right, but not the obligation, to review and reject any insurer providing coverage due to its poor financial condition or failure to operate legally.

Umbrella or Excess Liability Coverage which includes premises/operations, product/completed operations, and has per-occurrence limits as detailed in the Supplemental General Conditions. This insurance shall name the County and its officials, officers, and employees and agents as "additional insureds" by **endorsement** to the Umbrella or Excess Liability policy. Such policy shall not have a restriction on the limits of coverage provided to the County of Albemarle as an additional insured. The County of Albemarle shall be entitled to protection up to the full limits of the Offeror's policy regardless of the minimum requirements specified in this contract.

Professional Liability Insurance: At its sole expense, and prior to commencing any activities under this Agreement, Offeror shall secure professional liability insurance, covering any damages caused by the negligent or wrongful acts or omissions of the Offeror, its employees and agents in the performance of this Agreement, with coverage in an amount as detailed in the Supplemental General Conditions ("Required Insurance"). Offeror shall maintain the Required Insurance in effect throughout the Term of this Agreement and for a period of three (3) years following final acceptance of the Project by the County. Upon execution of this Agreement, Offeror shall provide the County with a certificate of insurance, or other written documentation satisfactory to the County in its sole discretion, issued by Offeror's insurance company(ies), confirming the Required Insurance and the beginning and ending date(s) of Contractor's policy(ies). Upon receipt of any notice, verbal or written, that the Required Insurance is subject to cancellation, Offeror shall immediately (within one business day) notify the County. Offeror's failure to comply with any of the requirements of this Section shall constitute a material breach of this Agreement entitling the County to terminate this Agreement without notice to Offeror and without penalty to the County.

C. Installation Floater: if applicable, the Contractor is required to purchase an Installation Floater to cover their own property to be installed into a building. Coverage is provided for equipment and/or machinery being installed, renovated or repaired during the course of construction.

12. BUILDER'S RISK INSURANCE

(a) The Contractor, at his cost, shall obtain and maintain in the names of the Owner and the Contractor builder's risk insurance on a special causes of loss form, including the costs of excavations, backfills, foundations, underground utilities and site work (or fire, extended coverage, vandalism and malicious mischief insurance, if approved by the Owner) upon the entire structure or structures on which the Work of this Contract is to be done, and upon all material in or adjacent thereto which is intended for use thereon, to one hundred percent (100%) of the insurable value thereof. Such insurance may include a deductible provision if the Owner so provides in the Supplemental General Conditions, in which case the Contractor will be liable for such deductions, whenever a claim arises. The loss, if any, is to be made adjustable with and payable to the Owner, in accordance with its interests, as they may appear. The Owner, its officers, employees and its agents, shall be named as

loss payee in any policy of insurance issued. Written evidence of the insurance shall be filed with the Owner prior to execution of the Contract by the Owner. Insurance providers must be authorized to do business in Virginia and have an agent licensed to do business in Virginia. In the event of cancellation of this insurance, not less than thirty (30) days prior written notice must be sent to the Owner. A copy of the policy of insurance shall be given to the Owner upon demand.

- (b) Certain projects, such as renovations and interior modifications of existing buildings, may be covered by the Owner's insurance and may be excluded from the Builder's risk policy purchased by the contractor insurance required by this section. In those instances, the Supplemental General Conditions for the project shall expressly exclude the project from the requirements of Subsection 12(a).
- (c) Any insurance provided through the County of Albemarle, Virginia, for construction, additions or renovations will not extend to Contractor's nor Subcontractors' buildings, equipment, materials, tools or supplies unless these items are to become property of the Owner upon completion of the Project and the Owner has assumed responsibility for such items at the time of the loss.

13. TAXES, FEES AND ASSESSMENTS

The Contractor shall, without additional expense to the Owner, pay all applicable federal, state, and local taxes, fees, and assessments except the taxes, fees and assessments on the real property comprising the Site of the project. The Owner shall pay inspection fees to the local building official except for reinspection fees resulting from incomplete or defective work.

14. PATENTS

The Contractor shall obtain all licenses necessary to use any invention, article, appliance, process or technique of whatever kind and shall pay all royalties and license fees. The Contractor shall hold the Owner, its officers, agents and employees, harmless against any loss or liability for or on account of the infringement of any patent rights in connection with any invention, process, technique, article or appliance manufactured or used in the performance of the Contract, including its use by the Owner, unless such invention, process, technique, article or appliance is specifically named in the specifications or plans as acceptable for use in carrying out the Work. If, before using any invention, process, technique, article or appliance specifically named in the specifications or plans as acceptable for use in carrying out the Work, the Contractor has or acquires information that the same is covered by letters of patent making it necessary to secure the permission of the patentee, or other, for the use of the same, he shall promptly advise the Owner and the Architect/Engineer. The Owner may direct that some other invention, process, technique, article or appliance be used. Should the Contractor have reason to believe that the invention, process, technique, article or appliance so specified is an infringement of a patent, and fail to inform the Owner and the Architect/Engineer, he shall be responsible for any loss or liability due to the infringement.

15. ARCHITECT/ENGINEER'S STATUS

- (a) The Architect/Engineer shall have authority to endeavor to secure the faithful performance by Owner and Contractor of the Work under the Contract. He shall review the Contractor's Submittals for conformance to the requirements of the Contract Documents and return copies to the Contractor with appropriate notations. He shall interpret the requirements of the plans and specifications and issue Field Orders to the Contractor as may be required. He shall recommend to the Owner suspension of the Work (in whole or in part) whenever such suspension may be necessary to ensure the proper execution of the Contract. He shall have authority to reject, in writing, Work, including material, installation or workmanship, which does not conform to the requirements of the plans and specifications. He shall determine the progress and quality of the Work, subject to the right of the Owner to make an overriding decision to the contrary. Upon request by the Contractor, the Architect/Engineer shall confirm, in writing within ten (10) days, any oral order or determination made by him.
- (b) The Architect/Engineer shall have no authority to approve or order changes in the Work which alter the design concept or which call for an extension of time or a change in the Contract Price.
- (c) The Owner shall have the right, but not the duty, to countermand any decision of the Architect/Engineer and to follow or reject the advice of the Architect/Engineer, including but not limited to acceptance of the Work.
- (d) All orders from the Owner to the Contractor shall either be transmitted through the Architect/Engineer or communicated directly to the Contractor and the Architect/Engineer by the Owner.
- (e) Should the Owner choose to employ another or different Architect/Engineer, the status of the Architect/Engineer so employed shall be the same as that of the former Architect/Engineer.
- (f) The Architect/Engineer will provide to the Owner and the Contractor after each visit to the Site, a written report indicating the date, time of day, weather conditions and the names of the persons representing the Architect/Engineer who participated in the visit. The report will advise the Owner of any problems that were noted and shall compare the Architect/Engineer's observations of the actual progress of the Work with that reported by the Contractor. On the basis of his on-site observations as Architect/Engineer, he will make every reasonable effort to guard the Owner against defects and deficiencies in the Work of the Contractor. He shall have the authority to inspect the Work, to note and report Defective Work and deviations from the Contract Documents to the Owner, to reject same, and to recommend to the Owner the suspension of the Work when necessary to prevent Defective Work from proceeding or being covered.
- (g) The Architect/Engineer shall not be responsible for construction means, methods, techniques, sequences or procedures (other than those expressly specified in Contract Documents), or for safety precautions and programs in connection with the Work, and he shall not be responsible for the Contractor's failure to carry out the Contractor's own responsibilities.
- (h) The provisions of this section are included as information only to describe the relationship between the Owner, A/E, and Contractor. No failure of the A/E to act in accordance with this section shall relieve the Contractor from his obligations under the Contract or create any rights in favor of the Contractor.

16. INSPECTION

- (a) All material and workmanship shall be subject to inspection, examination and testing by the Owner, the Architect/Engineer, the Project Inspector, authorized inspectors and authorized independent testing entities at any and all times during manufacture and/or construction. The Architect/Engineer and the Owner shall have authority to reject defective material and workmanship and require its correction. Rejected workmanship shall be satisfactorily corrected and rejected material shall be satisfactorily replaced with proper material without charge therefor, and the Contractor shall promptly segregate and remove the rejected material from the Site. If the Contractor fails to proceed at once with replacement of rejected material and/or the correction of defective workmanship, the Owner may, by contract or otherwise, replace such material and/or correct such workmanship and charge the cost to the Contractor, or may terminate the right of the Contractor to proceed as provided in Section 40 of these General Conditions, the Contractor and surety being liable for any damage to the same extent as provided in Section 40 for termination thereunder.
- (b) Site inspections, tests conducted on Site or tests of materials gathered on Site, which the Contract requires to be performed by independent testing entities, shall be contracted and paid for by the Owner. The Contractor shall schedule all required tests, approvals and inspections of the Work or other work related to the Project. If items/areas to be inspected and/or tested are not ready for inspection when the testing agency/inspector arrives on-site at the pre-arranged time, the Contractor is responsible for all costs associated with inspection delays, including but not limited to reinspection fees. The Contractor shall give proper notice to all required parties of such tests, if feasible, so that the Owner and others may observe the tests at the normal place of testing. Unless otherwise required by the Contract Documents, required certificates of testing, approval or inspection shall be secured by the Contractor and promptly delivered to the Owner. Examples of such tests are the testing of cast-in-place concrete, foundation materials, soil compaction, pile installations, caisson bearings and steel framing connections. The Contractor shall promptly furnish, without additional charge, all reasonable facilities, labor and materials necessary and convenient for making such tests. Except as provided in (d) below, whenever such examination and testing finds defective materials, equipment or workmanship, the Contractor shall reimburse the Owner for the cost of reexamination and retesting. Although conducted by independent testing entities, the Owner will not contract and pay for tests or certifications of materials, manufactured products or assemblies which the Contract, codes, standards, etc., require to be tested and/or certified for compliance with industry standards such as Underwriters Laboratories, Factory Mutual or ASTM. If fees are charged for such tests and certifications, they shall be paid by the Contractor. The Contractor shall also pay for all inspections, tests, and certifications which the Contract specifically requires him to perform or to pay, together with any inspections and tests which he chooses to perform for his own purposes, but are not required by the Contract.
- (c) Where Work is related to or dependent on the Defective Work, the Contractor shall stop such related or dependent Work until the Defective Work or deficiency is corrected or an alternative solution is presented that is satisfactory to the Owner. Where Work is rejected because of defective material or workmanship, the Contractor shall stop like Work in other areas or locations on the Project until the matter is resolved and the Owner has approved corrective measures.
- (d) Should it be considered necessary or advisable by the Owner at any time before final acceptance of the entire Work to make an examination of any part of the Work already completed, by removing or tearing out portions of the Work, the Contractor shall on request promptly furnish all necessary

facilities, labor and material to expose the Work to be tested to the extent required. If such Work is found to be defective in any respect, due to the fault of the Contractor or his Subcontractors, the Contractor shall defray all the expenses of uncovering the Work, of examination and testing, and of satisfactory reconstruction. If, however, such Work is found to meet the requirements of the Contract, the actual cost of the Contractor's labor and material necessarily involved in uncovering the Work, the cost of examination and testing, and Contractor's cost of material and labor necessary for replacement including a markup of ten percent (10%) for overhead and profit shall be paid to the Contractor and he shall, in addition, if completion of the Work has been delayed thereby, be granted a suitable extension of time. Notwithstanding the foregoing, the Contractor shall be responsible for all costs and expenses in removing and replacing the Work if the Contractor had covered the Work prior to any inspection or test contrary to the instructions of the A/E, Owner or Project Inspector.

- (e) The Project Inspector has the right and the authority to:
- (1) Inspect all construction materials, equipment, and supplies for quality and for compliance with the Contract Documents and/or approved shop drawings and submittals;
 - (2) Inspect workmanship for compliance with the standards described in the Contract Documents;
 - (3) Observe and report on all tests and inspections performed by the Contractor;
 - (4) Recommend rejection of Work which does not conform to requirements of the Contract Documents;
 - (5) Keep a record of construction activities, tests, inspections, and reports;
 - (6) Attend all joint Site construction meetings and inspections held by the Owner and/or the A/E with the Contractor;
 - (7) Check materials and equipment, together with documentation related thereto, delivered for conformance with approved Submittals and the Contract;
 - (8) Check installations for proper workmanship and conformance with shop drawing and installation instructions;
 - (9) Assist in the review and verification of the Schedule of Values & Certificate for Payment, submitted by the Contractor each month;
 - (10) Do all things for or on behalf of the Owner as the Owner may subsequently direct in writing.
- (f) The Project Inspector has no authority to:
- (1) Authorize deviations from the Contract Documents;
 - (2) Enter into the area of responsibility of the Contractor's superintendent;
 - (3) Issue directions relative to any aspect of construction means, methods, techniques, sequences or procedures, or in regard to safety precautions and programs in connection with the Work;

- (4) Authorize or suggest that the Owner occupy the Project, in whole or in part; or
- (5) Issue a certificate for payment.
- (g) The duties of the Project Inspector are for the benefit of the Owner only and not for the Contractor. The Contractor may not rely upon any act, statement, or failure to act on the part of the Project Inspector, nor shall the failure of the Project Inspector to properly perform his duties in any way excuse Defective Work or otherwise improper performance of the Contract by the Contractor.

17. PROJECT MANAGEMENT AND SUPERVISION BY CONTRACTOR

- (a) The Contractor shall have a competent project manager or superintendent, satisfactory to the Architect/Engineer and the Owner, on the Site at all times during the progress of the Work. The Contractor shall submit for approval by the Owner and Architect/Engineer the resumes for the proposed project manager and superintendent within ten (10) days from Notice of Intent to Award Contract. The project manager and superintendent shall be familiar with and be able to read and understand the plans and specifications, and be capable of communicating orally and in writing with the Owner's project manager and/or inspectors and the Contractor's workers. The Contractor shall be responsible for all construction means, methods, techniques, sequences and procedures, for coordinating all portions of the Work under the Contract except where otherwise specified in the Contract Documents, and for all safety and worker health programs and practices. The Contractor shall notify the Owner, in writing, and obtain approval, of any proposed change in project manager or superintendent, including the reason therefor, prior to making such change.
- (b) The Contractor shall, at all times, enforce strict discipline and good order among the workers on the Project, and shall not employ on the Work, or contract with, any unfit person, anyone not skilled in the Work assigned to him, or anyone who will not work in harmony with those employed by the Contractor, the Subcontractors, the Owner or the Owner's separate contractors and their subcontractors.
- (c) The Owner may, in writing, require the Contractor to remove from the Site any employee or Subcontractor's employee the Owner deems to be incompetent, careless, not working in harmony with others on the Site, or otherwise objectionable, but the Owner shall have no obligation to do so.

18. CONSTRUCTION SUPERVISION, METHODS AND PROCEDURES

- (a) The Contractor shall be solely responsible for supervising and directing the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract. The Contractor shall be solely responsible for the means, methods, techniques, sequences and procedures of construction and for coordinating all portions of the Work under the Contract, except where otherwise specified in the Contract Documents. However, the Contractor shall not be responsible for the negligence of others in the design or selection of a specific means, method, technique, sequence or procedure of construction which is indicated in and required by the Contract. The Contractor is solely responsible to the Owner that the finished Work complies with the Contract Documents.

The Contractor shall be solely responsible for health and safety precautions and programs for workers and others in connection with the Work. No inspection by, knowledge on the part of, or acquiescence by the Architect or Engineer, the Project Inspector, the Owner, the Owner's employees and agents, or any other entity whatever shall relieve the Contractor from its sole responsibility for compliance with the requirements of the Contract or its sole responsibility for health and safety programs and precautions.

- (b) If a specific means, method, technique, sequence or procedure of construction is indicated in or required by the Contract Documents, the Contractor may furnish or utilize a substitute means, method, sequence, technique or procedure of construction acceptable to Architect/Engineer, subject to the Owner's right to disapprove. The Contractor must submit its written request for the substitution to the Architect/Engineer with sufficient information to allow the Architect/Engineer to determine that the substitute proposed is equivalent to that indicated or required by the Contract.
- (c) The divisions and sections of the Specifications and the identification of any drawings shall not control the Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

19. SCHEDULE OF THE WORK

- (a) **General:** The Contractor is responsible for the scheduling and sequencing of the Work, for coordinating the Work, for monitoring the progress of the Work, and for taking appropriate action to keep the Work on schedule. The Contractor may attempt to achieve Substantial Completion on or before the Time for Completion or the Contract Completion Date established by the Contract and receive payment in accordance with Section 36 for the Work completed each period. However, the date established by the Contract Documents as the deadline for achieving Substantial Completion must be used in all schedules as the date on which Substantial Completion will be achieved. The time (in days) between the Contractor's planned early completion and the contracted Time for Completion is part of the Project "Total Float" time and will be used as such. Extensions of time pursuant to Sections 38 and 42, damages for delay, and all other matters between the Owner and the Contractor will be determined using the contractually required Substantial Completion date, not an early Substantial Completion date planned by the Contractor.

Within two (2) weeks after the Contractor signs the Contract Between Owner and Contractor, unless otherwise extended by the Owner at the time of the signing, the Contractor shall prepare and submit to the Owner, with a copy to the Architect/Engineer, a preliminary bar graph milestone schedule for accomplishing the Work based upon the Time for Completion stated in the Contract. The preliminary bar graph schedule shall be in sufficient detail to show the sequencing of the various trades for each floor level, wing or work area. The Owner will notify the Contractor of its acceptance of or objections to the preliminary schedule within seven (7) days of receipt by the Owner. A fully complete Project schedule for accomplishing the Work must be submitted and approved by the Owner prior to making application for the first payment.

The Owner's failure to reject or its acceptance of any schedule, graph, chart, recovery schedule, updated schedule, plan of action, etc. shall not constitute a representation or warranty by the Owner, including but not limited to a representation or warranty that the schedule is feasible or practical nor

shall any such acceptance or failure to reject relieve the Contractor from sole responsibility for completing the Work within the time allowed.

No progress payments will be payable to the Contractor until after it has submitted a preliminary schedule which is acceptable to the Owner. Neither the second progress payment nor any subsequent payment shall be payable to the Contractor until it has submitted a fully complete Project schedule accepted by the Owner. Nor shall subsequent progress payments be payable to the Contractor unless and until he maintains the monthly bar graphs or status reports required by Section 19(e) herein or unless and until he provides any recovery schedule pursuant to Section 19(f) herein.

Failure to provide a satisfactory preliminary or fully complete Project schedule within the time limits stated above shall be a breach of contract for which the Owner may terminate the Contract in the manner provided in Section 40 of these General Conditions.

The fully complete Project schedule for accomplishing the Work shall be of the type set forth in subparagraph (1) or (2) below, as appropriate:

- (1) For Contracts with a price of \$500,000 or less, a bar graph schedule will satisfy the above requirement. The schedule shall indicate the estimated starting and completion dates for each major element of the work. See (b) below.
 - (2) For Contracts with a price over \$500,000, a Critical Path Method (CPM) schedule shall be utilized to control the planning and scheduling of the Work. The CPM schedule shall be the responsibility of the Contractor and shall be paid for by the Contractor. See (c) below.
- (b) **Bar Graph Schedule:** Where a bar graph schedule is required, it shall be time-scaled in weekly increments, shall indicate the estimated starting and completion dates for each major element of the Work by trade and by area, level, or zone, and shall schedule dates for all salient features, including but not limited to the placing of orders for materials, submission of shop drawings and other Submittals for approval, approval of shop drawings by Architect/Engineer, the manufacture and delivery of material, the testing and the installation of materials, supplies and equipment, and all Work activities to be performed by the Contractor.

The Contractor shall allow sufficient time in his schedule for adverse weather anticipated in Section 6 and for the A/E to conduct whatever associated reviews or inspections as may be required under the A/E's contract with the Owner. If the A/E and the Contractor are unable to agree as to what constitutes sufficient time, the Owner shall determine the appropriate duration for such Architect/Engineer activities. Each Work activity will be assigned a time estimate by the Contractor. One day shall be the smallest time unit used.

It is the Contractor's responsibility to submit a schedule that shows Substantial Completion of the Work by the Contract Time for Completion or the Contract Completion Date and any interim deadlines established by the Contract.

- (c) **CPM Schedule:** Where a CPM schedule is required, it shall be in the time-scaled precedence format using the Contractor's logic and time estimates. The CPM schedule shall be drawn or plotted with activities grouped or zoned by Work area or subcontract as opposed to a random (or scattered) format.

The CPM schedule shall be time-scaled on a weekly basis and shall be drawn or plotted at a level of detail and logic which will schedule all salient features of the Work, including not only the actual construction Work for each trade, but also the submission of shop drawings and other Submittals for approval, approval of shop drawings by Architect/Engineer, placing of orders for materials, the manufacture and delivery of materials, the testing and installation of materials and equipment, and all Work activities to be performed by the Contractor. Failure to include any element of Work required for the performance of this Contract shall not excuse the Contractor from completing all Work required within the Time for Completion, Contract Completion Date and any interim deadlines established by the Contract.

The Contractor shall allow sufficient time in his schedule for adverse weather anticipated in Section 6 and for the A/E to conduct whatever associated reviews or inspections as may be required under the A/E's contract with the Owner. If the A/E and the Contractor are unable to agree as to what constitutes sufficient time, the Owner shall determine the appropriate duration for such Architect/Engineer activities. Each Work activity will be assigned a time estimate by the Contractor. One day shall be the smallest time unit used.

It is the Contractor's responsibility to submit a schedule that shows Substantial Completion of the Work by the Contract Time for Completion or the Contract Completion Date and any interim deadlines established by the Contract.

When completed, the CPM schedule shall be submitted to the Architect/Engineer and the Owner for review. The CPM schedule will identify and describe each activity, state the duration of each activity, the calendar dates for the early and late start and the early and late finish of each activity, and clearly highlight all activities on the critical path. "Total float" and "free float" shall be indicated for all activities. Float time, whether "free float" or "total float" as defined in Section 1, shall not be considered for the exclusive use or benefit of either the Owner or the Contractor, but must be allocated in the best interest of completing the Work within the Time for Completion or the Contract Completion Date. Extensions to the Time for Completion or the Contract Completion Date, when granted by Change Order, will be granted only when equitable time adjustment exceeds the Total Float in the activity or path of activities affected by the change. The CPM schedule shall also show what part of the Contract Price (expressed in U.S. dollars) is attributable to each activity on the schedule, the sum of which for all activities shall equal the total Contract Price. The CPM schedule shall also show the planned workforce (crew size and number of crews) and the major pieces of equipment required for each activity on the schedule. When acceptable to the Owner and Architect/Engineer as to compliance with the requirements of this Section, but not as to logic, the schedule shall become the CPM schedule for the Project. Acceptance of the schedule by the Owner does not indicate agreement with nor responsibility for the proposed or actual duration of any activity shown on the accepted schedule.

- (d) **Progress of Work:** The Contractor shall commence and complete the work in accordance with the approved schedule. Contractor acknowledges that it may be required to perform Work out of the sequence originally planned to maintain progress on the project. Contractor acknowledges that it has anticipated certain reasonable delays and disruptions as part of the contract price. No additional reimbursement will be forthcoming for out of sequence work. Time is of the essence. If the Contractor fails to employ sufficient competent personnel as may be required to perform the Work or otherwise causes delays which result in the Contractor's failure to complete the Work in the given time, the Contractor will indemnify and hold the Owner harmless for any additional expenses or

damages (including, but not limited to, liquidated damages) arising out of such delay or inability to proceed with the Work. Liquidated Damages, if any, shall be referenced in the Supplemental General Conditions.

- (e) **Monthly Project Reports:** The Contractor shall review progress not less than each month, but as often as necessary to properly manage the Project and stay on schedule. The Contractor shall collect and preserve information on Change Orders, including extensions of time. The Contractor shall evaluate this information and update the latest accepted schedule as often as necessary to finish within the Contract Time for Completion or before the Contract Completion Date. The Contractor shall submit to the A/E along with his monthly request for payment a copy of the bar graph schedule annotated to show the current progress. For projects requiring a CPM schedule, the Contractor shall submit a monthly report of the status of all activities. The bar graph schedule or monthly status report submitted with each periodic request for payment shall show the Work completed to date in comparison with the Work scheduled for completion, including but not limited to the dates for the beginning and completion of the placing of orders; the manufacture, testing and installation of materials, supplies and equipment. The form shall be approved by the A/E and the Owner; however, a bar graph or a CPM schedule marked, colored or annotated to reflect the above will usually satisfy this requirement. If any elements of the Work are behind schedule, regardless of whether they may prevent the Work from being completed on time, the Contractor must indicate in writing in the report what measures he is taking and plans to take to bring each such element back on schedule and to ensure that the Time for Completion or Contract Completion Date is not exceeded.
- (f) **Progress Delay:** Should any of the following conditions exist, the Owner may require the Contractor to prepare, at no extra cost to the Owner, a plan of action and a recovery schedule for completing the Work by the Contract Time for Completion or the Contract Completion Date:
- (1) The Contractor' monthly progress report indicates delays that are, in the opinion of the A/E or the Owner, of sufficient magnitude that the Contractor's ability to complete the Work by the scheduled Time for Completion or the Contract Completion Date is brought into question;
 - (2) The CPM schedule sorted by early finish shows the Contractor to be thirty (30) or more days behind the critical path schedule at any time during construction up to thirty (30) days prior to scheduled Substantial Completion date;
 - (3) The Contractor desires to make changes in the logic (sequencing of Work) or the planned duration of future activities of the CPM schedule which, in the opinion of the Architect/Engineer or the Owner, are of a major nature.

The plan of action and recovery schedule, when required, shall explain and display how the Contractor intends to regain compliance with the current accepted, fully completed, Project CPM schedule, as updated by approved change orders.

The plan of action, when required, shall be submitted to the Owner for review within two (2) business days of the Contractor receiving the Owner's written demand. The recovery schedule, when required, shall be submitted to the Owner within five (5) calendar days of the Contractor's receiving the Owner's written demand.

If, in the opinion of the A/E or Owner, the recovery schedule is deemed insufficient, the Contractor, if directed by the Owner, will be required to remedy the schedule delay, without additional compensation, by one of the following manners:

- (1) Increased manpower by Contractor or its subcontractors;
 - (2) Increased number of shifts, including night and weekend work.
- (g) **Early Completion of Project:** The Contractor may attempt to achieve Substantial Completion on or before the Time for Completion or the Contract Completion Date. However, such planned early completion shall be for the Contractor's convenience only and shall not create any additional rights of the Contractor or obligations of the Owner under this Contract, nor shall it change the Time for Completion or the Contract Completion Date. The Contractor shall not be required to pay damages to the Owner because of its failure to achieve Substantial Completion by its planned earlier date. Likewise, the Owner shall not pay the Contractor any additional compensation for achieving Substantial Completion early nor will the Owner owe the Contractor any compensation should the Owner, its officers, employees, or agents cause the Contractor not to achieve Substantial Completion earlier than the date required by the Contract Documents.

If the Contractor seeks to change the Time for Completion or the Contract Completion Date to reflect an earlier completion date, he may request or propose such a change. The Owner may, but is not required to, accept such proposal. However, a change in the Time for Completion or the Contract Completion Date shall be accomplished only by Change Order. If the Contractor's proposal to change the Time for Completion or the Contract Completion Date is accepted, a Change Order will be issued stating that all references in the Contract, including these General Conditions, to the Time for Completion or the Contract Completion Date shall thereafter refer to the date as modified, and all rights and obligations, including the Contractor's liability for actual damages, delay damages and/or liquidated damages, shall be determined in relation to the date, as modified.

20. SCHEDULE OF VALUES AND CERTIFICATE FOR PAYMENT

- (a) Before submittal of the first partial payment request under the Contract, the Contractor shall prepare for review and approval of the Architect/Engineer and the Owner, a schedule of the estimated values listed by trades or by specification sections of the Work, totaling the Contract Price. Where the total project has multiple parts or phases, the Contractor shall prepare appropriate schedules of values to facilitate reviews and justifications for payments.

All requests for payment shall be made on the Schedule of Values and Certificate for Payment (Form AC-12) pages 1 and 2. Succeeding pages may be on the Form AC-12 continuation sheets or a computerized spreadsheet which is in the same format and which contains the same information.

- (b) If the Contractor requests, or intends to request, payment for materials stored in an approved and secure manner, the Schedule of Values must indicate the amount for labor and the amount for materials, and in a supplement thereto must include an itemized list of materials for that trade or Work section. The material breakdown shall be in sufficient detail to allow verification of the quantities required for the Project, the quantities delivered, the Work completed, and the quantities stored on or off Site. Refer to Section 36 of these General Conditions for additional requirements associated with stored materials and/or equipment.

- (c) The “Value of Work Completed” portion of the Form AC-12 shall be completed, the Contractor’s certification completed and signed, and the appropriate substantiating material attached to each Certificate for Payment (AC-12). Such substantiating material includes, but is not limited to, invoices for materials, delivery tickets, time sheets, payroll records, daily job logs/records, and similar materials which, in the opinion of the Owner and the A/E, are necessary or sufficient to justify payment of the amount requested.
- (d) The labor progress for any task or activity shall be calculated based upon the percentage of Work complete up to fifty percent (50%) of the completion of the task or activity. Thereafter, the evaluation of labor progress will be based upon the effort required to complete that task or activity. The material progress shall be calculated as the invoiced dollar cost of materials used in relationship to the amount estimated as necessary to complete a particular element of Work. When calculating material progress, credit shall be given for installed material as well as that stored on the Site and any material stored off Site which has been certified by the Architect/Engineer in accordance with Section 36 of these General Conditions.
- (e) Should Work included in previous Form AC-12 submittals, and for which payment has been made, subsequently be identified, by tests, inspection, or other means, as not acceptable or not conforming to Contract requirements, the “Value of Work Completed” portion of the first Form AC-12 submitted after such identification shall be modified to reduce the “completed” value of that Work by deleting the value of that which has been identified as not acceptable or nonconforming.
- (f) The Contractor shall not include Change Order work on the Form AC-12 until such time as the Contractor is in receipt of a fully executed Change Order from the Owner.

21. ACCESS TO WORK

The Architect/Engineer, the Owner, the Project Manager, the Owner’s inspectors and other testing personnel, inspectors from the Department of Labor and Industry, and others authorized by the Owner, shall have access to the Work at all times. The Contractor shall provide proper facilities for access and inspection.

22. SURVEYS AND LAYOUT

- (a) The Owner shall furnish the Contractor all necessary documents showing property lines and the location of existing buildings and improvements. The Contractor shall provide competent surveying and engineering services to execute the Work in accordance with the Contract and shall be responsible for the accuracy of these surveying and engineering services.
- (b) Such general reference points and benchmarks on the Site as will enable the Contractor to proceed with the Work will be established in the plans and specifications. If the Contractor finds that any previously established reference points have been lost or destroyed, he shall promptly notify the Architect/Engineer.

- (c) The Contractor shall protect and preserve the established benchmarks and monuments and shall make no changes in locations without written notice to the Architect/Engineer and the written approval from the Owner. Any of these which may be lost or destroyed or which require shifting because of necessary changes in grades or locations shall, subject to prior written approval of the Owner, be replaced and accurately located by the Contractor.

23. PLANS AND SPECIFICATIONS

- (a) The general character and scope of the Work are illustrated by the plans and the specifications. If the Contractor deems additional detail or information to be needed, he may request the same in writing from the Architect/Engineer. His request shall precisely state the detail or information needed and shall explain why it is needed. The Contractor shall also indicate a date when the requested information is required. The Architect/Engineer shall provide by Field Order such further detail and information as is necessary by the date required so long as the date indicated is reasonable. Any additional drawings and instructions supplied to the Contractor shall be consistent with the Contract Documents, shall be true developments thereof, and shall be so prepared that they can be reasonably interpreted as a part thereof. The Contractor shall carry out the Work in accordance with the additional detail drawings and instructions.
- (b) If the Contractor finds a contract error, or other discrepancy in the plans or specifications, he shall notify the Architect/Engineer in writing as soon as possible, but before proceeding with the affected Work. The Architect/Engineer shall issue a clarification by Field Order to the Contractor stating the correct requirements. If the Contractor deems the Field Order requires additional Work, he shall notify the A/E of such prior to proceeding with that Work and he shall submit a request for Change Order along with a detailed substantiating cost proposal thru the A/E to the Owner within ten (10) calendar days.
- (c) In case of differences between small and large scale drawings, the large scale drawings shall govern. Where on any of the drawings a portion of the Work is drawn out and the remainder is indicated in outline, the parts drawn out shall apply also to all other like portions of the Work.
- (d) Where the word “similar” appears on the drawings, it shall be interpreted in its general sense and not as meaning identical, and all details shall be worked out in relation to their location and their connection with other parts of the Work.
- (e) The specifications may be divided into several parts, or sections, for convenience only, since the entire specifications must be considered as a whole. The divisions of the specifications are not intended to control the Contractor in dividing the Work among Subcontractors or to limit the Work performed by any trade. The Contractor shall be solely responsible for the coordination of the trades, Subcontractors and vendors engaged in the Work.
- (f) Measurements or dimensions shown on the drawings for Site features, utilities and structures shall be verified at the Site by the Contractor. The Contractor shall not scale measurements or dimensions from the drawings. If there are discrepancies, the Architect/Engineer shall be consulted. If new Work is to connect to, match with or be provided in existing Work, the Contractor shall verify the actual existing conditions and necessary dimensions prior to ordering or fabrication.

- (g) **As-Built Drawings:** The Contractor shall maintain at the Site for the Owner one copy of all drawings, specifications, addenda, approved shop or setting drawings, Change Orders and other modifications (collectively referred to herein as “As-Built Drawings”) in good order and marked to record all changes as they occur during construction. These shall be available to the Architect/Engineer, the Owner, the Project Inspector, the Owner’s other inspectors and to the Owner’s testing personnel. The drawings shall be neatly and clearly marked in color during construction to record all variations made during construction. The representation of such variations shall include such supplementary notes, symbols, legends, and details as may be necessary to clearly show the as-built construction. These As-Built Drawings are to be a separate set of drawings from the set of drawings used by the Contractor’s superintendent or supervisor for every day management of the project.
- (h) **Record Drawings:** Upon completion of the Work and prior to the final inspection, the Contractor shall deliver to the Architect/Engineer, for review and preparation of the Record Drawings, one complete set of “As-Built Drawings” referred to in the preceding subsection.
- (i) **Close-out and Operations and Maintenance Documents:** Upon completion of the Work and prior to final payment, the Contractor shall deliver to the Architect/Engineer, two complete hard copy sets of the Close-out and Operations and Maintenance Documents as specified in the Project Manual Specifications. Additionally, the Contractor will provide two CDs or other acceptably formatted electronic copy of the abovementioned documents to accompany the hard copy versions. The electronic version will be organized with folders and appropriate hierarchy as to represent the hard copy versions. The documentation found on the electronic version will be in PDF format, or other acceptable format as directed by the Owner.

24. SUBMITTALS

- (a) The Contractor shall submit a listing of all Submittals required by the Architect/Engineer or which the Contractor identifies as necessary, fixing the dates for the submission of shop or setting drawings, samples and product data. The listing shall be in a format acceptable to the Architect/Engineer. The Contractor shall identify all Submittals with the Owner’s Project Title as required by Section 2(f). There will be no payments to the Contractor until a listing of all Submittals is submitted and approved by the Architect/Engineer and Owner.
- (b) Submittals shall be forwarded to the Architect/Engineer for approval if required by the specifications or if requested by the Architect/Engineer or the Owner. No part of the Work dealt with by a Submittal shall be fabricated by the Contractor, save at his own risk, until such approval has been given.
- (c) The Contractor shall furnish to the Architect/Engineer for approval the name of the manufacturer, the model number, and other identifying data and information respecting the performance, capacity, nature and rating of the machinery and mechanical and other equipment which the Contractor contemplates incorporating in the Work. When Submittals are required by this Contract for materials, the Contractor shall furnish full information concerning the material or articles which he contemplates incorporating in the Work. When required, samples shall be submitted for approval at the Contractor’s expense, with all shipping charges prepaid. Machinery, equipment, material and articles installed or used without required approval shall be at the risk of subsequent rejection.

- (d) The Owner prefers and encourages the Contractor to submit all shop drawings to the Architect/Engineer electronically. However, shop drawings may be submitted in the form of six (6) blue line or black line prints. Catalog cuts, product data and other non-reproducible literature, except certificates, shall be submitted in six (6) copies minimum, of which three (3) will be retained by the Architect/Engineer and the remainder will be returned to the Contractor.
- (e) The Owner prefers and encourages the Contractor to submit all Submittals to the Architect/Engineer electronically. Submittals shall be accompanied by a letter of transmittal which shall list the Project Title, the Submittals included, the specification section number applicable to each, and the date shown on each Submittal. Submittals shall be complete in every respect and bound in sets if not submitted electronically. Each Submittal shall be clearly marked to show each item, component and/or optional feature proposed to be incorporated into the Project. Cross reference to the plans or specifications as needed to identify the use for which the item or component is intended.
- (f) The Contractor shall check the Submittals for compliance with the requirements of the Contract Documents. The Contractor shall clearly note in writing any and all items which deviate from the requirements of the Contract Documents. Reasons for deviation shall be included with the Submittal. The Contractor shall be solely responsible for checking all dimensions and coordinating all materials and trades to ensure that the components or products proposed, individually or in combination, will fit in the space available and that they will be compatible with other components or products provided.
- (g) After checking each submittal, the Contractor shall stamp each sheet of the Submittal with the Contractor's review stamp. Data submitted in a bound volume or on one sheet printed on two sides, may be stamped on the front of the first sheet only. The Contractor's review stamp shall be worded as follows:

The equipment and material shown and marked in this submittal is that proposed to be incorporated into this Project, is in compliance with the Contract drawings and specifications unless otherwise shown in bold face type or lettering and listed on a page or pages headed "DEPARTURES FROM DRAWINGS AND SPECIFICATIONS", and can be installed in the allocated spaces.

Reviewed by _____ Date _____

The person signing the review stamp shall be the person designated in writing by the Contractor as having that authority. (A copy of such designation shall be forwarded to the A/E prior to or with the first Submittal.) The signature on the stamped review statement shall be handwritten in ink, or in the case of electronic submittals, electronically signed in accordance with § 59.1-479 et seq. of the Code of Virginia. Stamped signatures are not acceptable.

- (h) The Contractor shall forward all Submittals sufficiently in advance of construction requirements to allow reasonable time for checking, correcting, resubmitting and rechecking.
- (i) If a Submittal indicates a departure from the Contract requirements, the Architect/Engineer may reject the Submittal or, if he deems it to have merit, may recommend it to the Owner, who shall approve or reject it as the Owner, in its sole discretion, sees fit. The departure from the Contract

requirements shall be further authorized by a Change Order, if a reduction or increase in the Contract Price is appropriate.

- (j) The Architect/Engineer is responsible to the Owner, but not to the Contractor, to verify that the Submittals conform to the design concept and functional requirements of the plans and specifications, that the detailed design portrayed in shop drawings and proposed equipment and materials shown in Submittals are of the quality specified and will function properly, and that the Submittals comply with the Contract Documents.
- (k) The Work shall be in accordance with approved Submittals. Approval of the Contractor's Submittals by the A/E does not relieve the Contractor from responsibility of complying with the Contract and all drawings and specifications, except as changed by Change Order.
- (l) The plans and/or specifications may indicate that the Architect/Engineer designed or detailed a portion of the plans around a particular product (most commonly a piece of equipment). Should a different product be proposed by the Contractor and accepted, all modifications, rerouting, relocations and variations required for proper installation and coordination to comply with the design concept and requirements of the Contract Documents shall be the responsibility of the Contractor and shall be made at no extra cost to the Owner. If the plans were noted as designed or detailed around a particular product and/or if a product is named when a "brand name or equal" specification has been used, this is not intended to favor or preclude the use of other products pursuant to Section 26 of these General Conditions. Rather such design merely acknowledges the reality that in many instances the Architect/Engineer must have a basis to design and detail around for dimensions and characteristics of a product or system.
- (m) Additional Submittal requirements may be shown in the specifications.

25. FEES, SERVICES AND FACILITIES

- (a) The Contractor shall obtain all permits and pay for all fees and charges necessary for temporary access and public right-of-way blockage or use, for temporary connections to utilities and for the use of property (other than the Site) for storage of materials and other purposes unless otherwise specifically stated in the Contract Documents.
- (b) Certain projects such as renovations and interior modifications of existing buildings will usually have water and electric service to the building. In those instances, water and electric power, if required for the Work under the Contract, will be furnished by the Owner subject to reasonable use by the Contractor, only to the extent and capacity of present services. The Contractor shall be responsible for providing required connections, temporary wiring, piping, etc. to these services in a safe manner and in accordance with applicable codes. All temporary wire, pipe, etc. shall be removed before the Substantial Completion inspection. Acceptance by the Contractor of the use of Owner's water and electricity constitutes a release to the Owner of all claims and of all liability to the Contractor for whatever damages which may result from power and water outages or voltage variations.
- (c) The Owner shall pay any connection charges for permanent utility connections directly to the utility Supplier. The Contractor shall coordinate such connections with the utility Supplier.

- (d) It is understood that, except as otherwise specifically stated in the Contract Documents, the Contractor, either directly or through his Subcontractors, shall provide and pay for all material, labor, tools, equipment, water, light, power, telephone and other services or facilities of every nature whatsoever necessary to execute completely and deliver the Work within the Contract Time for Completion or before the Contract Completion Date.

26. EQUALS

- (a) **Brand names:** Unless otherwise stated in the specifications, the name of a certain brand, make or manufacturer denotes the characteristics, quality, workmanship, economy of operation and suitability for the intended purpose of the article desired, but does not restrict the Contractor to the specific brand, make, or manufacturer; it is set forth to convey to the Contractor the general style, type, character and quality of the article specified.
- (b) **Equal materials, equipment or assemblies:** Whenever in these Contract Documents, a particular brand, make of material, device or equipment is shown or specified, such brand, make of material, device or equipment shall be regarded merely as a standard. Any other brand, make or manufacturer of a product, assembly or equipment which in the opinion of the Architect/Engineer is the equal of that specified, considering quality, capabilities, workmanship, configuration, economy of operation, useful life, compatibility with design of the Work, and suitability for the intended purpose, will be accepted unless rejected by the Owner as not being equal.
- (c) **Substitute materials, equipment or assemblies:** The Contractor may propose to substitute a material, product, equipment, or assembly which deviates from the requirements of the Contract Documents but which the Contractor deems will perform the same function and have equal capabilities, service life, economy of operations, and suitability for the intended purpose. The proposal must include any cost differentials proposed. The Owner will have the A/E provide an initial evaluation of such proposed substitutes and provide a recommendation on acceptability and indicate the A/E's redesign fee to incorporate the substitution in the design. If the proposed substitute is acceptable to the Owner, a Change Order will be proposed to the Contractor to accept the substitute and to deduct the cost of the A/E redesign fee and the proposed cost savings from the Contract Price. The Owner shall have the right to limit or reject substitutions at its sole discretion.
- (d) The Contractor shall be responsible for making all changes in the Work necessary to adapt and accommodate any equal or substitute product which it uses. The necessary changes shall be made at the Contractor's expense.

27. AVAILABILITY OF MATERIALS

If a brand name, product, or model number included in the Contract Documents is not available on the present market, alternate equal products or model numbers may be proposed by the Contractor through the Architect/Engineer for approval by the Owner. A letter from the manufacturer or representative of the manufacturer that states the specified brand name product or model number is no longer available is required.

28. CONTRACTOR'S TITLE TO MATERIALS

No materials or supplies for the Work shall be purchased by the Contractor, or by any Subcontractor or Supplier, subject to any security interest, installment or sales contract or any other agreement or lien by which an interest is retained by the seller or is given to a secured party. The Contractor warrants that he has clear and good title to all materials and supplies which he uses in the Work or for which he accepts payment in whole or in part.

29. STANDARDS FOR MATERIALS INSTALLATION & WORKMANSHIP

- (a) Unless otherwise specifically provided in the Contract, all equipment, material, and accessories incorporated in the Work are to be new and in first class condition.
- (b) Unless specifically approved by the Owner or required by the Contract, the Contractor shall not incorporate into the Work any materials known by the industry to be hazardous to the health of building construction workers, maintenance workers, or occupants (for example asbestos or lead paint). If the Contractor becomes aware that a material required by the Contract contains asbestos or other hazardous materials, he shall notify the Owner and the Architect/Engineer immediately and shall take no further steps to acquire or install any such material without first obtaining Owner approval.
- (c) All workmanship shall be of the highest quality found in the building industry in every respect. All items of Work shall be done by craftsmen or tradesmen skilled in the particular task or activity to which they are assigned. In the acceptance or rejection of Work, no allowance will be made for lack of skill on the part of workmen. Poor or inferior workmanship (as determined by the Architect/Engineer, the Owner or other inspecting authorities) shall be removed and replaced at Contractor's expense such that the Work conforms to the highest quality standards of the trades concerned, or otherwise corrected to the satisfaction of the Architect/Engineer, the Owner, or other inspecting authority, as applicable.
- (d) Under the various sections of the plans or specifications, where specified items are supplied with the manufacturer's printed instructions, recommendations, or directions for installation, or where such instructions, recommendations, or directions are available, installation of the specified items shall be in strict accordance with the manufacturer's printed instructions unless those instructions contradict the plans or specifications, in which case the Architect/Engineer will be notified for an interpretation and decision.
- (e) Under the various sections of the plans or specifications, where reference is made to specific codes or standards governing the installation of specified items, installation shall in all cases be in strict accordance with the referenced codes and standards. Where no reference is made to specific codes or standards, installation shall conform to the generally recognized applicable standards for first-class installation of the specific item to be installed. Contractors are expected to be proficient and skilled in their respective trades and knowledgeable of the Codes and Standards of the National Fire Protection Association (NFPA), National Electric Code (NEC), Occupational Safety and Health Act (OSHA) and other codes and standards applicable to installations and associated work by his trade.

- (f) Where the manufacturer's printed instructions are not available for installation of specific items, where specific codes or standards are not referenced to govern the installation or specific items, or where there is uncertainty on the part of the Contractor concerning the installation procedures to be followed or the quality of workmanship to be maintained in the installation of specific items, the Contractor shall consult the Architect/Engineer for approval of the installation procedures or the specific standards governing the quality of workmanship the Contractor proposes to follow or maintain during the installation of the items in question.

- (g) During and/or at the completion of installation of any items, the tests designated in the plans or specifications necessary to assure proper and satisfactory functioning for its intended purpose shall be performed by the Contractor or by its Subcontractor responsible for the completed installation. All costs for such testing are to be included in the Contract Price. If required by the Contract Documents, the Contractor shall furnish prior to final inspection the manufacturers' certificates evidencing that products meet or exceed applicable performance, warranty and other requirements, and certificates that products have been properly installed and tested.

30. WARRANTY OF MATERIALS AND WORKMANSHIP

- (a) The Contractor warrants that, unless otherwise specified, all materials and equipment incorporated in the Work under the Contract shall be new, in first class condition, and in accordance with the Contract Documents. The Contractor further warrants that all workmanship shall be of the highest quality and in accordance with the Contract Documents and shall be performed by persons qualified at their respective trades.
- (b) Work not conforming to these warranties shall be considered defective.
- (c) This warranty of materials and workmanship is separate and independent from and in addition to any of the Contractor's other guarantees or obligations in the Contract or under Virginia law.

31. USE OF SITE AND REMOVAL OF DEBRIS

- (a) The Contractor shall:
 - (1) Perform the Work in such a manner as not to interrupt or interfere with the operation of any existing activity on, or in proximity to, the Site or with the Work of any other separate contractor;
 - (2) Store his apparatus, materials, supplies and equipment in such orderly fashion at the Site of the Work as will not unduly interfere with the progress of his Work or the work of any other separate contractor; and
 - (3) Place upon the Work or any part thereof only such loads as are consistent with the safety of that portion of the Work.
- (b) The Contractor expressly undertakes, either directly or through his Subcontractor(s), to effect all cutting, filling or patching of the Work required to make the same conform to the plans and specifications, and, except with the consent of the Architect/Engineer, not to cut or otherwise alter the Work of any other separate contractor. The Contractor shall not damage or endanger any portion of the Work or Site, including existing improvements, unless called for by the Contract.
- (c) The Contractor expressly undertakes, either directly or through his Subcontractor(s), to clean up frequently all refuse, rubbish, scrap materials and debris caused by his operations, to the end that at all times the Site shall present a neat, orderly and workmanlike appearance. No such refuse, rubbish, scrap material and debris shall be left within the completed Work nor buried on the building Site, but shall be removed from the Site and properly disposed of in a licensed landfill or otherwise as required by law.
- (d) The Contractor expressly undertakes, either directly or through his Subcontractor(s), before final payment or such prior time as the Owner may require, to remove all surplus material, false Work, temporary structures, including foundations thereof, plants of any description and debris of every nature resulting from his operations and to put the Site in a neat, orderly condition; to thoroughly clean and leave reasonably dust free all finished surfaces including all equipment, piping, etc., on the interior of all buildings included in the Contract; and to clean thoroughly all glass installed under the

Contract, including the removal of all paint and mortar splatters and other defacements. If the Contractor fails to clean up at the time required herein, the Owner may do so and charge the costs incurred thereby to the Contractor in accordance with Section 10(b) of these General Conditions.

- (e) The Contractor shall have, on-site, an employee certified by the Department of Conservation and Recreation as a Responsible Land Disturber who shall be responsible for the installation, inspection and maintenance of erosion control and stormwater management measures and devices. The Contractor shall prevent Site soil erosion, the runoff of silt and/or debris carrying water from the Site, and the blowing of debris off the Site in accordance with the applicable requirements and standards of the Contract, the County of Albemarle's Water Protection Ordinance, and any Virginia water protection ordinances/codes and/or stormwater regulations. This would include covering of dumpsters during periods of precipitation to prevent any runoff to the stormwater system.

32. TEMPORARY ROADS

Temporary roads, if required, shall be established and maintained until permanent roads are accepted, then removed and the area restored to the conditions required by the Contract Documents. Crushed rock, paving and other road materials from temporary roads shall not be left on the Site unless permission is received from the Owner to bury the same at a location and depth approved by the Owner or leave in place as installed.

33. SIGNS

The Contractor may, at his option and without cost to the Owner, erect signs acceptable to the Owner on the Site for the purpose of identifying and giving directions to the job. No signs shall be erected without prior approval of the Owner as to design and location. The Contractor shall pay all fees required by Albemarle County.

34. PROTECTION OF PERSONS AND PROPERTY

- (a) The Contractor expressly undertakes, both directly and through his Subcontractors, to take every reasonable precaution at all times for the protection of all persons and property which may come on the Site or be affected by the Contractor's Work.
- (b) The Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Any violation of these requirements or duties or any potential safety hazard that is brought to the attention of the Contractor by the Architect/Engineer, the Owner, or any other persons shall be immediately abated.
- (c) The provisions of all rules and regulations governing health and safety as adopted by the Safety Codes Commission of the Commonwealth of Virginia, issued by the Department of Labor and Industry under Title 40.1 of the Code of Virginia, shall apply to all Work under this Contract.

- (d) The Contractor shall continuously maintain adequate protection of all his Work from damage and shall protect the Owner's property from injury or loss arising in connection with this Contract. He shall make good any such damage, injury or loss, except as may be directly and solely due to errors in the Contract Documents or caused by agents or employees of the Owner. The Contractor shall adequately protect adjacent property to prevent any damage to it or loss of use and enjoyment by its owners. The Contractor shall provide and maintain all passageways, guard fences, lights and other facilities for protection as required by public authority, local conditions, or the Contract.
- (e) In an emergency affecting the health, safety or life of persons or of the Work, or of the adjoining property, the Contractor, without special instruction or authorization from the Architect/Engineer or the Owner, shall act, at his discretion, to prevent such threatened loss or injury. Also, should he, to prevent threatened loss or injury, be instructed or authorized to act by the Architect/Engineer or the Owner, he shall so act immediately, without appeal. Any additional compensation or extension of time claimed by the Contractor on account of any emergency work shall be determined as provided by Section 38 of these General Conditions.
- (f) When necessary for the proper protection of the Work, temporary heating, cooling, humidification, or de-humidification of a type approved by the Architect/Engineer must be provided by the Contractor, at the Contractor's expense, unless otherwise specified.

35. CLIMATIC CONDITIONS

The Contractor shall suspend activity on and protect any portion of the Work that may be subject to damage by climatic conditions, including but not limited to, protection from precipitation, wind (including securing material and equipment that could become airborne), and extreme temperatures.

36. PAYMENTS TO CONTRACTOR

- (a) Unless otherwise provided in the Contract, the Owner will make partial payments to the Contractor on the basis of a duly certified and approved Schedule of Values and Certificate for Payment, Form AC-12, showing the estimate of the Work performed during the preceding calendar month or work period, as recommended by the Architect/Engineer. When evaluating the Contractor's Form AC-12, the Architect/Engineer will consider the value of the Work in place, the value of approved and properly stored materials, the status of the Work on the critical path with regard to the Time for Completion, and the estimated value of the Work necessary to achieve Final Completion. The Architect/Engineer will schedule a monthly pay meeting. The Contractor will submit his monthly estimate of Work completed on Form AC-12 so that it is received by the Architect/Engineer and the Owner's Project Manager at least two work days prior to the date scheduled by the Architect/Engineer for the monthly pay meeting. The Owner will review the estimate with the Architect/Engineer and the Contractor at the monthly pay meeting, which shall be considered the receipt date, and may approve any or all of the estimate of Work for payment. In preparing estimates, the material delivered to the Site and preparatory Work done shall be taken into consideration, if properly documented as required by Section 20 of these General Conditions, or as may be required by the Architect/Engineer so that quantities may be verified. In addition to material delivered to the Site, material such as large pieces of equipment and items purchased specifically for the Project, but stored off the Site within the Commonwealth of Virginia, may be considered for payment, provided

all of the following are accomplished prior to the submission of the monthly payment request in which payment for such materials is requested:

- (1) The Contractor must notify the Owner in writing, at least ten (10) days prior to the submission of the payment request, through the Architect/Engineer, that specific items will be stored off Site in a designated, secured place within the Commonwealth of Virginia. The Schedule of Values must be detailed to indicate separately both the value of the material and the labor/installation for trades requesting payment for stored materials. By giving such notification and by requesting payment for material stored off Site, the Contractor warrants that the storage location is safe and suitable for the type of material stored and that the materials are identified as being the property of the Contractor, and agrees that loss of materials stored off the Site shall not relieve the Contractor of the obligation to timely furnish these types and quantities of materials for the Project and meet the Time for Completion or Contract Completion Date, subject to Section 42(b) of these General Conditions. If the storage location is more than 20 miles from the Site, the Contractor may be required to reimburse the Owner for the cost incurred for travel to the storage location to verify the Contractor's request for payment for materials stored off Site.
- (2) Such notification, as well as the payment request, shall:
 - (a) itemize the quantity of such materials and document with invoices showing the cost of said materials;
 - (b) indicate the identification markings used on the materials, which shall clearly reference the materials to the particular project;
 - (c) identify the specific location of the materials, which must be within reasonable proximity to the Site and within the Commonwealth of Virginia;
 - (d) include a letter from the Contractor's Surety which confirms that the Surety on the Performance Bond and the Labor and Material Payment Bond has been notified of the request for payment of materials stored off the Site and agrees that the materials are covered by the bond; and
 - (e) include a certificate of all-risk builder's risk insurance in an amount not less than the fair market value of the materials, which shall name the Owner and the Contractor as co-insured.
- (3) The Architect/Engineer shall indicate, in writing, to the Owner that Submittals for such materials have been reviewed and meet the requirements of the Contract Documents, that the stored materials meet the requirement of the plans and specifications, and that such materials conform to the approved Submittals. Should the A/E deem it necessary to visit the storage site to make such review, the Contractor shall bear the costs incurred therewith.
- (4) The Owner, through the Architect/Engineer, shall notify the Contractor in writing of its agreement to prepayment for materials.

- (5) The Contractor shall notify the Owner in writing, through the Architect/Engineer, when the materials are to be transferred to the Site and when the materials are received at the Site.
- (b) Payment will not be made for materials or equipment stored on or off the Site which are not scheduled for incorporation into the Work within the six months following submission of the request for payment, unless the Contractor has the prior consent of the Owner, which consent may be granted or withheld by the Owner in its discretion if, in the opinion of the Owner, it is not necessary to procure the materials more than six months in advance of use to assure their availability when needed.
- (c) In making such partial payments, five percent (5%) of each payment to the Contractor shall be retained until Final Completion and acceptance of all Work covered by the Contract, unless otherwise provided by any law, regulation or program of the federal government. Such retainage shall be held to assure faithful performance of the Contract and may also be used as a fund to deduct amounts due to or claimed by the Owner, including, but not limited to, payment to the Owner of all monies due for deductive change orders, credits, uncorrected Defective Work, interest, damages, and the like. (§2.2-4333 of the Code of Virginia)
- (d) All material and Work for which partial payments are made shall thereupon become the sole property of the Owner, but this provision shall not relieve the Contractor from the sole responsibility for all materials and Work, including those for which payment has been made, or for the restoration of any damaged materials or Work. Nor shall this provision serve as a waiver of the right of the Owner to require the fulfillment of all of the terms and conditions of the Contract.
- (e) The final payment, which shall include the retainage, less any amounts due to or claimed by the Owner, shall not become due until the Architect/Engineer and the Owner agree that Final Completion has been achieved and until the Contractor shall deliver to the Owner through the Architect/Engineer a Certificate of Completion by the Contractor (Form AC-13.2) and an Affidavit of Payment of Claims (Form AC-13), stating that all Subcontractors and Suppliers of either labor or materials have been paid all sums claimed by them for Work performed or materials furnished in connection with this Project less retainage. Amounts due the Owner which may be withheld from the final payment may include, but are not limited to, amounts due pursuant to Section 3(i), Section 16(a)-(d), Section 31(d), costs incurred to repair or replace Defective Work, costs incurred as a result of the Contractor's negligent acts or omissions or omissions of those for whom the Contractor is responsible, delay damages under Section 42(h), and any liquidated or actual damages. If all Subcontractors and Suppliers of labor and materials have not been paid the full amount claimed by them, the Contractor shall list each to which an agreed amount of money is due or which has a claim in dispute. With respect to all such Subcontractors and Suppliers, the Contractor shall provide to the Owner, along with the Affidavit of Payment of Claims (Form AC-13), an affidavit from each such Subcontractor and Supplier stating the amount of their subcontract or supply contract, the percentage of completion, the amounts paid to them by the Contractor and the dates of payment, the amount of money still due if any, any interest due the Subcontractor or Supplier pursuant to Section 37(b) below, and whether satisfactory arrangements have been made for the payment of said amounts. If no agreement can be reached between the Contractor and one or more Subcontractors or Suppliers as to the amounts owed to the Subcontractors or Suppliers, the Owner may, in its discretion, pay such portion of the monies due to the Contractor which is claimed by the Subcontractor or Supplier into a Virginia Court or Federal Court sitting in Virginia, in the manner provided by law. Said payment into court shall be deemed a payment to the Contractor. Nothing in this Section shall be construed as creating any obligation or contractor relationship between the Owner and any Subcontractor or Supplier, and the

Owner shall not be liable to any Subcontractor or Supplier on account of any failure or delay of the Owner in complying with the terms hereof.

- (f) Upon successful completion of the final inspection and all Work required by the Contract, including but not limited to the delivery of As-Built drawings, equipment manuals, written warranties, acceptance of the Work by the Owner and the delivery of the affidavits required in Section 36(e) of these General Conditions, the Architect/Engineer shall deliver the written Certificate of Completion by the Architect/Engineer (Form AC-13.1) to the Owner, with a copy to the Contractor, stating the entire amount of Work performed and compensation earned by the Contractor, including extra work and compensation therefor. The Owner may accept the Work for occupancy or use while asserting claims against the Contractor; disputing the amount of compensation due to the Contractor; disputing the quality of the Work, its completion, or its compliance with the Contract Documents; or any other reason.
- (g) Unless there is a dispute about the compensation due to the Contractor, Defective Work, quality of the Work, compliance with the Contract Documents, completion itself, claims by the Owner, other matters in contention between the parties, or unless monies are withheld pursuant to Albemarle County's Debt Setoff Program, within thirty (30) days after receipt and acceptance of the Schedule of Values and Certificate for Payment (Form AC-12) in proper form by the Architect/Engineer at the monthly pay meeting, which shall be considered the receipt date, the Owner shall pay to the Contractor the amount approved by the Architect/Engineer, less all prior payments and advances whatsoever to or for the account of the Contractor. In the case of final payment, the completed Affidavit of Payment of Claims (Form AC-13), the Certificate of Completion by the Contractor (Form AC-13.2) and the Certificate of Completion by the Architect/Engineer (Form AC-13.1) shall accompany the final Schedule of Values and Certificate for Payment (Form AC-12) which is forwarded to the Owner for payment. The date on which payment is due shall be referred to as the Payment Date. In the event of disputes, payment shall be mailed on or before the Payment Date for amounts and Work not in dispute, subject to any set offs claimed by the Owner, provided however, in instances where further appropriations are required by the County of Albemarle or where the issuance of further bonds is required, in which case, payment shall be made within thirty (30) days after the effective date of such appropriation or within thirty (30) days after the receipt of bond proceeds by the Owner. All prior estimates and payments including those relating to extra Work may be connected and adjusted in any payment and shall be corrected and adjusted in the final payment. In the event that any request for payment by the Contractor contains a defect or impropriety, the Owner shall notify the Contractor of any defect or impropriety which would prevent payment by the Payment Date, within five (5) days after receipt of the Schedule of Values and Certificate for Payment (Form AC-12) by the Owner from the Architect/Engineer.
- (h) Interest shall accrue on all amounts owed by the Owner to the Contractor which remain unpaid seven (7) days following the Payment Date. Said interest shall accrue at the discounted ninety-day U.S. Treasury bill rate as established by the Weekly Auction and as reported in the publication entitled The Wall Street Journal on the weekday following each such Weekly Auction. During the period of time when the amounts due to the Contractor remain unpaid following the seventh (7th) day after the Payment Date, the interest accruing shall fluctuate on a weekly basis and shall be that established by the immediately prior Weekly Auction. It shall be the responsibility of the Contractor to gather and substantiate the applicable weekly interest rates to the satisfaction of the Owner and to calculate to the satisfaction of the Owner the interest due. In no event shall the rate of interest charge exceed the rate of interest charged pursuant to §58.1-1812 of the Code of Virginia. No interest shall accrue on

retainage or when payment is delayed because of disagreement between the Owner and the Contractor regarding the quantity, quality or timeliness of the Work, including, but not limited to, compliance with Contract Documents or the accuracy of any Request for Payment received. This exception to the accrual of interest stated in the preceding sentence shall apply only to that portion of a delayed payment which is actually the subject of such a disagreement and shall apply only for the duration of such disagreement. Nothing contained herein shall be interpreted, however, to prevent the withholding of retainage to assure faithful performance of the Contract. These same provisions relating to payment of interest to the Contractor shall apply also to the computation and accrual of interest on any amounts due from the Contractor to the Owner for deductive change orders and to amounts due on any claims by the Owner. The date of mailing of any payment by the U.S. Mail is deemed to be the date of payment to the addressee.

- (i) The acceptance by the Contractor of the final payment shall be and operate as a release to the Owner of all claims by the Contractor, its Subcontractors and Suppliers, and of all liability to the Contractor whatever, including liability for all things done or furnished in connection with this Work, except for things done or furnished which are the subject of unresolved claims for which the Contractor has filed a timely written notice of intent, provided a claim is submitted no later than sixty (60) days after final payment. Acceptance of any interest payment by the Contractor shall be a release of the Owner from claims by the Contractor for late payment.
- (j) No certificate for payment issued by the Architect/Engineer, and no payment, final or otherwise, no certificate of completion, nor partial or entire use or occupancy of the Work by the Owner, shall be an acceptance of any Work or materials not in accordance with the Contract, nor shall the same relieve the Contractor of responsibility for faulty materials or Defective Work or operate to release the Contractor or his Surety from any obligation under the Contract, the Standard Performance Bond and the Standard Labor and Material Payment Bond.

37. PAYMENTS BY CONTRACTOR (§2.2-4354, Code of Virginia)

Under §2.2-4354, Code of Virginia, the Contractor is obligated to:

- a. This is a construction contract under the VPPA. Therefore, Contractor shall pay all subcontractors in the manner provided in Virginia Code Section 2.2-4354(1).
- b. Contractor shall pay all subcontractors in the manner provided in Virginia Code Section 2.2-4354(2-5).

38. CHANGES IN THE WORK

- (a) The Owner may at any time, by written order utilizing the County of Albemarle Change Order Form AC-11, and without notice to the sureties, make changes in the Work which are within the general scope of the contract except that no change will be made which will increase the total Contract Price to an amount more than twenty-five percent (25%) in excess of the original Contract Price without notice to sureties. The Owner, at its discretion, may require the Contractor to provide evidence of current surety coverage based on approved changes in the work that result in a change in the total contract amount. At the time of the Preconstruction Meeting described in Section 49(b), the Contractor and the Owner shall advise each other of their designees authorized to accept and/or

approve changes to the Contract Price and of any limits to each designee's authority. Should any designee or limits of authority change during the time this Contract is in effect, the Contractor or Owner shall give written notice to the other within seven (7) calendar days, utilizing the procedures set forth in these General Conditions. The Contractor agrees and understands that the authority of the Owner's designee is limited by Virginia Code §2.2-4309 and any other applicable statute.

If the Contractor claims that any instructions given to him by the Architect/Engineer or by the Owner, by drawings or otherwise, involve extra Work which increases the scope of the Contract, then, except in emergencies endangering life or property, he shall give the Architect/Engineer and the Owner written notice thereof before proceeding to execute the Work. Said notice shall be given promptly enough to avoid delaying the Work and in no instance later than fourteen (14) days after the receipt of such instructions. Should it not be immediately clear to the Contractor that the change involves extra Work outside the scope of the Contract, written notice shall be sufficient if given as soon as possible after such realization, but in no event later than fourteen (14) days after the start of such Work. If the Owner agrees, a Change Order shall be issued as provided herein, and any additional compensation shall be determined by one of the four (4) methods provided herein, as selected by the Owner. Except as otherwise specifically provided, no claims for extra Work shall be allowed unless timely notice, as required by this Section, is given by the Contractor and unless such Work is performed pursuant to written Change Order. In making any change, the charge or credit for the change shall be determined by one of the following methods as selected by the Owner:

- (1) **Fixed Price:** By a mutually agreed fixed amount change to the Contract Price and/or time allowed for completion of the Work. By using the Estimate for Change Order Forms GC-1, SC-1, and SS-1, respectively, the Change Order shall be substantiated by documentation itemizing the estimated quantities and actual costs of all labor, materials and equipment required as well as any markup used. The price change shall include the Contractor's overhead and profit. See Subsections (d) and (e) below.
- (2) **Unit Price:** By using unit prices and calculating the number of net units of Work in each part of the Work which is changed, either as the Work progresses or before Work on the change commences, and by then multiplying the calculated number of units by the applicable unit price set forth in the Contract or multiplying by a mutually agreed unit price if none was provided in the Contract. No additional percentage markup for overhead or profit shall be added to the unit prices.
- (3) **Unilateral:** If the Owner and Contractor are unable to agree that an item of Work or service constitutes a change, or that Contractor is entitled to additional compensation and/or an extension of time for such item of Work or service, the Contractor, upon receipt of a Unilateral Change Order, signed by the Owner, will promptly proceed with and expeditiously perform and/or supply the item of Work or service. If the parties are unable to agree on the amount of adjustment or schedule, the Owner will provide written notification to the Contractor of the adjustment the Owner considers appropriate. Such adjustment will be effective subject to Contractor's right to submit a claim as provided in Section 46. Any claim for an adjustment of compensation or schedule, or in opposition to an adjustment imposed by the Owner, will be submitted to the Owner in writing within seven (7) days of commencement of the event giving rise to such claim. The Contractor will submit to the Owner, in writing, the amount of the claim with supporting data within thirty (30) days of completion of the services or termination of the event for which it claims an adjustment.

- (4) **Cost Reimbursement (Time and Materials):** In order to allow performance of services to proceed in a timely manner, the Owner may issue a written order for the Contractor to proceed with a change for additional work or service in anticipation of subsequently negotiating an agreeable adjustment of the Contractor's compensation and/or schedule. Upon completion of the Work, the Contractor, by using Estimate for Change Order Forms GC-1, SC-1, and SS-1, respectively, will present to the Owner, an accurate, itemized account of the cost of the change in the Work, including, but not limited to, the costs of labor, materials, equipment, and supplies; and to annotate a copy of the Project schedule to accurately show the status of the Work at the time this initial written order is issued, to show the start and finish of the changed Work, and the status of the Work when the changed Work is completed.

Except as otherwise may be agreed to in writing by the Owner, such costs shall not exceed those prevailing for the trades or crafts, materials, and equipment in the locality of the Project, may include only those items listed as allowable in Subsection 38(e), and shall not include any of the costs listed as not allowable in Subsection 38(f). The Owner shall be permitted, on a daily basis, to verify such records and may require such additional records as are necessary to determine the cost of the change to the Work.

Within fourteen (14) days of the conclusion of such ordered Work, the Contractor and the Owner shall arrive at a cost for the Change Order Request, based on the records kept and the Contractor's allowance for overhead and profit as set forth in Subsections (d), (e) and (f) below, and such costs shall be incorporated into a Change Order. If agreement on the cost of the changed Work cannot be reached within the fourteen (14) days allotted, the Contractor may file a claim for the disputed amount as provided for in Section 46.

- (b) The Contractor shall review any Owner requested or directed change and shall respond in writing within fourteen (14) calendar days after receipt of the proposed change (or such other reasonable time as the Owner may direct), stating the effect of the proposed change upon his Work, including any increase or decrease in the Contract time and Price. The Contractor shall furnish to the Owner an itemized breakdown of the quantities and prices used in computing the proposed change in Contract Price.

The Owner shall review the Contractor's proposal and respond to the Contractor within thirty (30) days of receipt. If a change to the Contract Price and time for performance are agreed upon, both parties shall sign the Change Order. If the price and time are not agreed upon, the Owner may direct the Contractor to proceed under Subsection 38(a)(3) or 38(a)(4). Changes to the Contract time and/or Price shall be effective when signed by both parties, with the exception of a Unilateral Change Order that is only signed by the Owner.

- (c) In figuring changes, any instructions for measurement of quantities set forth in the Contract shall be followed.
- (d) The percentage for overhead and profit to be used in calculating both additive and deductive changes in the Work (other than changes covered by unit prices) shall not exceed the percentages for each category listed below. Said percentages for overhead and profit shall be applied only on the cost of the changed Work (i.e. difference in cost between original and revised Work):

- (1) If a Subcontractor does all or part of the changed Work, the Subcontractor's markup for overhead and profit on the Work it performs shall be a maximum of ten percent (10%). The Contractor's markup on the subcontractor's price shall be a maximum of ten percent (10%).
 - (2) If the Contractor does all or part of the changed Work, its markup for overhead and profit on the changed Work it performs shall be a maximum of ten percent (10%).
 - (3) If a Sub-subcontractor at any tier does all or part of the changed Work, the Sub-subcontractor's markup on that Work shall be a maximum of ten percent (10%). The markup of a sub-subcontractor's Work by the Contractor and all intervening tiers of Subcontractors shall not exceed a total of ten percent (10%).
 - (4) Where Work is deleted from the Contract prior to commencement of that Work without substitution of other similar Work, one hundred percent (100%) of the Contract Price attributable to that Work shall be deducted from the Contract Price including applicable overhead costs and profit. However, in the event that material Submittals have been approved and orders placed for said materials, a lesser amount, but in no case less than eighty percent (80%) of the Contract Price attributable to that Work, shall be deducted from the Contract Price. The credit to the Owner for reduced premiums on labor and material bonds and performance bonds shall in all cases be one hundred percent (100%).
- (e) Allowable costs for changes in the Work may include the following:
- (1) Labor costs for employees directly employed in the change in the Work, including actual salaries and wages plus the cost of payroll charges and fringe benefits and overtime premiums, if such premiums are explicitly authorized by the Owner. "Billable" or "loaded" labor or wage rates will not be accepted.
 - (2) Materials incorporated into the change to the Work, including costs of transportation and storage, if applicable. If applicable, all cash discounts shall accrue to the Contractor, unless the Owner deposits funds with the Contractor to make such payments, and all trade discounts, rebates, refunds, and returns from the sale of surplus materials shall accrue to the Owner.
 - (3) Equipment incorporated in the changed Work or equipment used directly in accomplishing the Work. If rented expressly for accomplishing the change in the Work, the cost shall be the rental rate according to the terms of the rental agreement, which the Owner shall have the right to approve. If owned by the Contractor, the costs shall be a reasonable price based upon the life expectancy of the equipment and the purchase price of the equipment. If applicable, transportation costs may be included.
 - (4) Costs of increases in premiums for the Standard Labor and Material Payment Bond and the Standard Performance Bond, provided coverage for the cost of the change in the Work results in such increased costs. At the Owner's request, the Contractor shall provide proof of his notification to the Surety of the change in the Work and of the Surety's agreement to include such change in its coverage. The cost of the increase in premium shall be an allowable cost but shall not be marked up.
 - (5) Contractor and Subcontractor overhead costs as set forth in Subsection (d) markups above.

- (6) If the change in the Work also changes the Time for Completion or Contract Completion Date by adding days to perform the Work, an itemized accounting of the following Site direct overhead expenses for the change to the time may be considered as allowable costs for compensation in addition to those shown above: The Site superintendent's prorata salary, temporary Site office trailer expense, and temporary Site utilities including basic telephone service, electricity, heat, water, and sanitary/toilet facilities. All other direct and indirect overhead expenses are considered covered by and included in the Subsection (d) markups above.
 - (7) Any other costs directly attributable to the change in the Work with the exception of those set forth below.
- (f) Allowable costs for changes in the Work shall not include the following:
- (1) Costs due to the negligence of the Contractor, any Subcontractor, Supplier, their employees or other persons for whom the Contractor is responsible, including, but not limited to, costs for the correction of Defective Work, for improper disposal of material, for equipment wrongly supplied, for delay in performing the Work, or for delay in obtaining materials or equipment.
 - (2) Home office expenses including payroll costs for the Contractor's officers, executives, administrators, project managers, accountants, counsel, engineers, timekeepers, estimators, clerks, and other similar administrative personnel employed by the Contractor, whether at the Site or in the Contractor's principal or branch office for general administration of the Work. These costs are deemed overhead included in the percentage markups allowable in Subsection (d) above.
 - (3) Home and field office expenses not itemized in Subsection 38(e)(6) above. Such items include, but are not limited to, expenses of Contractor's home and branch offices, Contractor's capital expenses, interest on Contractor's capital used for the Work, charges for delinquent payments, small tools, incidental job costs, meals, rent, utilities, telephone and office equipment, and other general overhead expenses.
- (g) All Change Orders must state that the Contract Time for Completion or Contract Completion Date is not changed or is either increased or decreased by a specific number of days. The old Time for Completion and, if changed, the new Time for Completion must be stated.

If the Contractor requests an extension to the Time for Completion or a later Contract Completion Date, he must provide written justification for the extension to the Architect/Engineer and to the Owner. The written justification must demonstrate an anticipated actual increase in the time required to complete the Work beyond that allowed by the Contract as adjusted by prior change orders or amendments to the Contract, not just an increase or decrease in the time needed to complete some portion of the total Work. When a CPM schedule is required by the Contract, no extension to the Time for Completion or Contract Completion Date shall be allowed unless, and then only to the extent that, the additional or changed Work increases the length of the critical path beyond the Time for Completion or Contract Completion Date. If approved, the increase in time required to complete the Work shall be added to the Time for Completion or Contract Completion Date.

The Owner may decrease, by Change Order, the Time for Completion or Contract Completion Date when an Owner-requested deletion from the Work results in a decrease in the actual time required to complete the Work as demonstrable on the Bar Graph Schedule or on the CPM Schedule, whichever is appropriate. The Contractor may submit a request to decrease, by Change Order, the Time for Completion or Contract Completion Date under the procedures and subject to the considerations set forth in Section 19(g). No request for such decrease shall be considered for approval unless the proposed shorter schedule is otherwise acceptable under Sections 19(b) or (c), whichever is applicable. The Change Order decreasing the Time for Completion or changing the Contract Completion Date must be signed by both the Owner and the Contractor.

With the exception of Change Orders under Subsection 38(a)(4), which shall arrive at a change to the Contract Price and any change to time using the procedures set forth therein, each Change Order shall include all time and monetary impacts of the change, whether the Change Order is considered alone or with all other changes during the course of the Project. Failure to include a change to time and Contract Price in Section 38(a)(1) or (2) Change Orders shall waive any change to the time and Contract Price unless the parties mutually agree in writing to postpone a determination of the change to time and price resulting from the Change Order. Such a determination may be postponed not more than forty-five (45) days to give the Contractor an opportunity to demonstrate a change in the time and price needed to complete the Work. During any such postponement, the Work shall proceed, unless the Owner agrees otherwise.

If at any time there is a delay in the critical path of the Work due to postponement, due to the Contractor's efforts to justify an extension of the time or an increase in the Contract Price, or due to the Contractor's refusal to proceed with any of the Work, pending agreement on a change in time or price, such delay and any Contractor costs resulting from it shall not serve as the basis for the extension of the Time for Completion or Contract Completion Date or for an increase in the Contract Price.

- (h) The acceptance by the Contractor of any payment made by the Owner under a Change Order shall be and operate as a release to the Owner of all claims by the Contractor and of all liability owing to the Contractor for all things done or furnished in connection with the Work described in the Change Order. The execution of any Change Order by the Owner shall not be an acceptance of any Work or materials not in accordance with the Contract Documents, nor shall it relieve the Contractor of responsibility for faulty materials or workmanship or operate to release the Contractor or his surety from any obligation arising under the Contract or the Standard Performance Bond or Standard Labor and Material Payment Bond.
- (i) Payments will not be made for any Work, labor or materials on a fixed price, unit price or Subsection 38(a)(4) basis until the Contractor has furnished the Owner documents, certified as true and correct by an authorized officer or agent of the Contractor, evidencing the cost of such Work, labor and materials. The Owner may require any or all of the following documentation to be provided by the Contractor:
 - (1) certified payroll records showing the name, classification, date, daily hours, total hours, rate, and extension for each laborer, foreman, supervisor or other worker;
 - (2) equipment type & model, dates, daily hours, total hours, rental rate or other specified rate, and extension for each unit of equipment;

- (3) invoices for materials showing quantities, prices, and extensions;
- (4) daily records of waste materials removed from the Site and/or fill materials imported to the Site;
- (5) certified measurements of over excavations, piling installed and similar work; and/or
- (6) transportation records for materials, including prices, loads, and extensions.

Requests for payment shall be accompanied and supported by invoices for all materials used and for all transportation charges claimed. If materials come from the Contractor's own stock, then an affidavit may be furnished, in lieu of invoices, certifying quantities, prices, etc. to support the actual cost.

39. CONTRACTOR'S RIGHT TO STOP WORK OR TERMINATE THE CONTRACT

If the Work should be stopped under an order of any court or other public authority for a period of ninety (90) days through no fault of the Contractor or anyone employed by him, or if the Owner should fail to pay to the Contractor within sixty (60) days any sum certified by the Architect/Engineer when no dispute exists as to the sum due or any provision of the Contract, then the Contractor may, upon ten (10) calendar days written notice to the Owner and the Architect/Engineer, stop Work or terminate the contract and recover from the Owner payment for the cost of the Work actually performed, together with overhead and profit thereon, but profit on the Work performed shall be recovered only to the extent that the Contractor can demonstrate that he would have had profit on the entire Contract if he had completed the Work. The Contractor may not receive profit or any other type of compensation for parts of the Work not performed. The Contractor may recover the reasonable cost of physically closing down the Site, but no other costs of termination. The Owner may offset any claims it may have against the Contractor against the amounts due to the Contractor. In no event shall termination of the Contract by the Contractor terminate the obligations of the Contractor's surety on its payment and performance bonds.

40. OWNER'S RIGHT TO STOP WORK OR TERMINATE THE CONTRACT FOR CAUSE

- (a) If the Contractor should be adjudged as bankrupt, or if he should make a general assignment for the benefit of his creditors, or if a receiver should be appointed on account of his insolvency, the Owner may stop work or terminate the Contract. If the Contractor should refuse or should repeatedly fail, except in cases for which extension of time is provided, to supply enough properly skilled workmen or proper materials and equipment, or if he should fail to make prompt payment to Subcontractors or Suppliers of material or labor, or if he should disregard laws, ordinances or the written instructions of the Architect/Engineer or the Owner, or otherwise be in substantial violation of any provision of the Contract, then the Owner may stop work or terminate the Contract.
- (b) Prior to termination of the Contract, the Owner shall give the Contractor and his surety ten (10) calendar days written notice pursuant to Section 1 ("Notice") of these General Conditions, during which the Contractor and/or his surety may rectify the basis for the notice. If rectified to the satisfaction of the Owner within said ten (10) days, the Owner may rescind its notice of termination. If not, the termination for cause shall become effective at the end of the ten (10) day notice period.

In the alternative, the Owner may, in writing, postpone the effective date of the termination for cause, at its sole discretion, if it should receive reassurances from the Contractor and/or its surety that the basis for the termination will be remedied in a time and manner which the Owner finds acceptable. If at any time after such postponement, the Owner determines that Contractor and/or its surety has not or is not likely to rectify the causes of termination in an acceptable manner or within the time allowed, then the Owner may immediately terminate the Contract for cause, without the necessity of further ten (10) day notice, by notifying the Contractor and his surety in writing of the termination. In no event shall termination for cause terminate the obligations of the Contractor's surety on its payment and performance bonds.

- (c) Upon termination of the Contract, the Owner shall take possession of the Site and of all materials, tools and equipment thereon and finish the Work by whatever method he may deem expedient. In such case the Contractor shall not be entitled to receive any further payment. If the expense of finishing the Work, including compensation for additional managerial and administrative services, shall exceed the unpaid balance of the Contract Price, the Contractor shall pay the difference to the Owner, together with any other expenses of terminating the Contract and having it completed by others.
- (d) If it should be judicially determined that the Owner improperly terminated this Contract for cause, then the termination shall be deemed to be a termination for the convenience of the Owner.
- (e) Termination of the Contract under this Section is in addition to and without prejudice to any other right or remedy of the Owner. Any actions by the Owner permitted herein shall not be deemed a waiver of any other right or remedy of the Owner under the Contract or under the law. The Owner may offset any claims it may have against the Contractor against the amounts due to the Contractor. The provisions of this Section shall survive termination of the Contract.

41. TERMINATION BY OWNER FOR CONVENIENCE

- (a) Owner may terminate this Contract, in whole or in part, at any time without cause upon giving the Contractor written notice of such termination pursuant to Section 1 ("Notice") of these General Conditions. Upon such termination, the Contractor shall immediately cease Work and remove from the Site all of its labor forces and such of its materials as Owner elects not to purchase or to assume in the manner hereinafter provided. Upon such termination, the Contractor shall take such steps as Owner may require to assign to the Owner the Contractor's interest in all Subcontracts and purchase orders designated by Owner. After all such steps have been taken to Owner's satisfaction, the Contractor shall receive as full compensation for termination and assignment the following:
 - (1) All amounts then otherwise due under the terms of this Contract;
 - (2) Amounts due for Work performed in accordance with the Contract subsequent to the latest approved Schedule of Values and Certificate for Payment (Form AC-12) through the date of termination;
 - (3) Reasonable compensation for the actual cost of demobilization incurred by the Contractor as a direct result of such termination. The Contractor shall not be entitled to any compensation or damages for lost profits or for any other type of contractual compensation or damages other

than those provided by the preceding sentence. Upon payment of the foregoing, Owner shall have no further obligations to Contractor of any nature.

- (b) In no event shall termination for the convenience of the Owner terminate the obligations of the Contractor's surety on its payment and performance bonds.

42. DAMAGES FOR DELAYS; EXTENSION OF TIME

- (a) If the Contractor is delayed at any time in the progress of the Work by any act or omission of the Owner, its agents or employees or any separate independent contractor of the Owner, and the act or omission is the result of or is necessitated by causes outside the Owner's control; or if the Contractor is delayed by strikes, fires, unusual delays in transportation or unavoidable casualties, or other causes outside the Owner's or Contractor's control, the Contractor shall give the Owner and Architect/Engineer written notice within five (5) days of the inception of the delay. The Owner shall extend the time for Substantial Completion or Final Completion, as the case may be, for the length of time that the Substantial Completion or Final Completion of the Work was actually delayed thereby, and the Contractor shall not be charged with liquidated or actual damages for delay during the period of such extension nor shall the Contractor be due compensation or damages of any kind, under any theory of law, as a result of such delay, the impact of such delay, or acceleration of Work as a result of such delay. In the event a CPM schedule is required by the Contract, no extension of the time allowed for Substantial Completion shall be granted unless the Contractor demonstrates a delay in the critical path of the approved CPM schedule or approved bar graph schedule.
- (b) If the Contractor is delayed at any time in the progress of the Work by any act or omission of the Owner, its agents or employees, due to causes within their control, or delayed by the Owner's separate, independent contractors, when such delay results from causes within the Owner's control, and the Contractor intends to seek additional compensation for damages, if any, caused by the delay, the Contractor shall inform the Owner and the Architect/Engineer immediately at the time of the occurrence giving rise to the delay by the fastest means available and shall give written notice no later than five (5) days after inception of the delay. The Contractor's notice to the Owner shall specify the nature of the delay claimed by the Contractor, the cause of the delay and the impact of the delay on the Contractor's Work schedule. The Owner shall then have five (5) days to respond to the Contractor's notice with a resolution, remedy or direction to alleviate the delay or with a notice rejecting the claim for delay alleged to be caused by the Owner or parties for whom the Owner is responsible. If the issue is not then resolved, the Contractor may submit a request for Change Order in accordance with Section 38 or submit a claim as provided for in Section 46. The Contractor shall only be entitled to additional compensation if the delay was unreasonable and was caused solely by acts or omissions of the Owner, its agents or employees, due to causes within their control, or was caused by the Owner's separate, independent contractor, when such delay resulted solely from causes within the Owner's control.
- (c) The Contractor shall not be entitled to an extension of the Time for Completion or Contract Completion Date or to any additional compensation for delays caused by acts or omissions of the Contractor due to causes within his control, including, but not limited to, delays resulting from Defective Work including workmanship and/or materials, from rejected work which must be corrected before dependent work can proceed, from Defective Work or rejected work for which

corrective action must be determined before like work can proceed, or from incomplete, incorrect or unacceptable submittals or samples.

- (d) No extension of time or additional compensation, if applicable, will be granted for any delay unless the claimed delay directly affects the critical path of the approved CPM schedule or the schedule shown on the approved bar graph schedule, whichever is applicable, and any float has been consumed. No extension of time or additional compensation shall be given for a delay if the Contractor failed to give notice in the manner and within the time prescribed in Subsections (a) or (b) above, whichever applies. Furthermore, no extension of time or additional compensation shall be given for any delay unless a claim therefor is made in writing to the Owner, with a copy to the Architect/Engineer, within twenty (20) days of the end of the delay. The claim shall state the cause of the delay, the number of days of extension requested and any compensation requested by the Contractor. The Contractor shall report the termination of the delay to the Owner and Architect/Engineer not less than ten (10) days after such termination. Failure to give notice of either the inception or the termination of the cause of delay or failure to present a claim for extension of time and/or monetary compensation within the times prescribed shall constitute a waiver of any claim for extension or additional compensation based upon that cause.
- (e) Requests for compensation for delays pursuant to Subsection (b) above must be substantiated by itemized data and records clearly showing that the Work delayed was on the critical path of the **approved** CPM schedule or on the sequence of Work on the **approved** bar graph schedule, as modified, and that the additional costs incurred by the Contractor are directly attributable to the delay in the Work claimed. Furthermore, compensation for delay shall be calculated from the contractual Time for Completion or Contract Completion Date, as adjusted by Change Order, and shall not be calculated based on any early completion planned or scheduled by the Contractor, unless a Change Order has been executed pursuant to Section 19(g) changing the Time for Completion or the Contract Completion Date to reflect such early completion. See Section 19 for procedures for the Contractor to follow if he plans early completion of the Work and wishes to request a Change Order reflecting the early completion date.

If there is an extension in the Time for Completion or the Contract Completion Date and if the Contractor is entitled to compensation under Subsection 42(b), and where there is no change in the Work, an itemized accounting of the following direct Site overhead expenses will be considered as allowable costs to be used in determining the compensation due the Contractor:

Site superintendent prorata salary, temporary Site office expense, temporary Site facilities, and temporary Site utilities including basic telephone service, electricity, heat, water, and sanitary/toilets. A ten percent (10%) markup of these expenses will be allowed to compensate the Contractor for home office and other direct or indirect overhead expenses.

- (f) If the Contractor submits a claim for delay damages pursuant to Subsection 42(b) above, the Contractor shall be liable to the Owner for a percentage of all costs incurred by the Owner in investigating, analyzing, negotiating and litigating the claim, which percentage shall be equal to the percentage of the Contractor's total delay claim that is determined through litigation to be false or to have no basis in law or in fact. (§2.2-4335(C), Code of Virginia.)

- (g) Any change in the Contract Time for Completion or Contract Completion Date shall be accomplished only by issuance of a Change Order.
- (h) If the Contractor fails to complete the Work within the Time for Completion or the Contract Completion Date, the Contractor shall be liable to the Owner in the amounts set forth in the Supplemental General Conditions, if any, not as a penalty, but as fixed, agreed and liquidated damages for delay until the Work is substantially or finally completed as the case may be. If liquidated damages are not so fixed in the Supplemental General Conditions, the Contractor shall be liable for any and all actual damages sustained as a result of delay. In addition to damages for delay, whether liquidated or actual, the Contractor shall also be liable for any and all actual damages sustained by the Owner as a result of any other breach of the Contract, including, but not limited to, Defective Work and abandonment of the Contract.
- (i) If liquidated damages are provided by the Supplemental General Conditions, the following provisions apply:
 - (1) If the Work is not substantially complete by the Time for Completion or Contract Completion Date, the Contractor shall owe to the Owner, not as a penalty but as Step One liquidated damages, the sum stated in the Supplemental General Conditions for Step One liquidated damages for each and every partial or total calendar day of delay in Substantial Completion.
 - (2) Once the Work is substantially complete, the accrual of Step One liquidated damages shall cease and the Contractor shall have thirty (30) calendar days, unless otherwise specified in the Contract Documents, in which to achieve Final Completion of the Work.
 - (3) If Final Completion of the Work is not achieved on or before the thirtieth (30th) calendar day, or the date specified in the Contract Documents, after Substantial Completion, and if the Owner has not granted any extension of time, the Contractor shall owe to the Owner, not as a penalty but as Step Two liquidated damages, the sum stated in the Supplemental General Conditions as Step Two liquidated damages for each and every partial or total calendar day of delay in Final Completion.

43. INSPECTION FOR SUBSTANTIAL COMPLETION & FINAL COMPLETION

- (a) The Contractor shall notify the Owner, in writing on the Certificate of Partial or Substantial Completion by the Contractor (Form AC-13.2a), of the date when the Work or designated portion thereof, will be, in his opinion, substantially complete and ready for inspection and testing to determine if it has reached Substantial Completion. The notice shall be given at least ten (10) days in advance of said date and shall be forwarded through the Architect/Engineer, who will attach his written endorsement as to whether or not he concurs with the Contractor's statement that the Work will be ready for inspection and testing on the date given. The Architect/Engineer's endorsement is a convenience to the Owner only and shall not relieve the Contractor of his responsibility in the matter nor shall the Architect/Engineer's endorsement be deemed to be evidence that the Work was substantially complete and ready for inspection and testing. Inspection and testing shall take place at a time(s) mutually agreeable to the Contractor, Owner and Architect/Engineer.

The inspection shall include a demonstration by the Contractor that all equipment, systems and operable components of the project function properly and in accordance with the Contract Documents. The Contractor shall furnish access for the inspection and testing as provided in Section 21 of these General Conditions. The inspection and testing shall determine whether Substantial Completion has been accomplished and shall result in a written list of unfinished Work and Defective Work, commonly referred to as a “punch list”, which must be finished and corrected to obtain Final Completion.

After successful completion of the testing and the Architect/Engineer determines that, in its opinion, the Work, either in whole or in part, is substantially complete, the Architect/Engineer shall notify the Owner, in writing on the Certificate of Partial or Substantial Completion by the Architect/Engineer (Form AC-13.1a), that the Work, or a specified portion thereof, is recommended to be declared substantially complete. The Owner shall notify the Contractor, in writing, of the date the Owner accepts the Work, or the specified portion thereof, as substantially complete or the Owner shall notify the Contractor of the deficiencies to be corrected or completed before such Work will be accepted as substantially complete.

- (b) The Contractor shall notify the Owner, in writing on the Certificate of Completion by the Contractor (Form AC-13.2), of the date when the Work has reached or will reach Final Completion and will be ready for final inspection and testing. The notice shall be given at least five (5) days in advance of said date and shall be forwarded through the Architect/Engineer, who will attach his endorsement as to whether or not he concurs in the Contractor’s statement that the Work will be ready for inspection and testing on the date given. That inspection and any necessary testing shall be conducted in the same manner as the inspection for Substantial Completion. When the Work is finally and totally complete, including the elimination of all defects, and the Owner has received all project close-out deliverables, the Work shall be finally accepted by the Owner and final payment shall be made in accordance with Section 36 of these General Conditions.
- (c) The Architect/Engineer shall conduct the inspections. The Owner may elect to have other persons of its choosing also participate in the inspections. If one or more Substantial or Final Completion reinspections are required, the Contractor shall reimburse the Owner for all costs of reinspection or, at the Owner’s option, the costs may be deducted from payments due to the Contractor.
- (d) A representative of the local Building Official will either be present at the Substantial and Final Completion inspections or otherwise inspect the completed Work and advise the Owner whether the Work meets the requirements of the applicable building code(s).
- (e) Approval of Work at or as a result of any inspection required herein shall not release the Contractor or his surety from responsibility for complying with the Contract.

44. GUARANTEE OF WORK

- (a) Except as otherwise specified, all Work shall be, and is hereby, guaranteed by the Contractor against defects resulting from the use of materials, equipment or workmanship, which are defective, inferior, or not in accordance with the terms of the Contract, for one (1) year from the date of Final Completion of the entire Project by the Owner. Equipment and facilities which have seasonal limitations on their operation (e.g. heating or air conditioning units) shall be guaranteed for one (1) full year from the

date of seasonally appropriate tests and acceptance, in writing, by the Owner. Where the Owner agrees to take Beneficial Occupancy of a portion or phase of the Work which has been determined to be substantially complete before the entire Work is finally completed, the guarantees for the materials, equipment and workmanship in that portion or phase shall begin on the date that the Owner takes Beneficial Occupancy, unless otherwise specified in the Supplemental General Conditions, Special Conditions, or by separate agreement.

- (b) Unless the Owner approves otherwise, the warranty period for new equipment shall begin with the contract substantial completion date, regardless of whether the Contractor has used said equipment in the performance, installation, or application of the Work.
- (c) If, within any guarantee period, Work which is not in accordance with the Contract, Defective Work, or inferior material, equipment or workmanship is noted by the Owner or Architect/Engineer which requires or renders necessary repairs or changes in connection with the guaranteed Work, the Contractor shall, promptly upon receipt of notice from the Owner, such notice being given not later than two weeks after the guarantee period expires, and without expense to the Owner:
 - (1) Place in satisfactory condition in every particular all of such guaranteed Work and correct all defects, inferior materials, equipment or workmanship therein;
 - (2) Make good all damage to the structure or Site or equipment or contents thereof, which, in the opinion of the Owner or the Architect/Engineer, is the result of the use of materials, equipment or workmanship which are inferior, defective or not in accordance with the terms of the Contract; and
 - (3) Make good any Work or materials or the equipment and contents of structures and/or Site disturbance that results from fulfilling the provisions of this Section.
- (d) In any case, when in fulfilling the requirements of the Contract and this guarantee or any other guaranty or warranty, the Contractor disturbs any work performed by a separate contractor, he shall restore such work to a condition satisfactory to the Architect/Engineer and Owner and guarantee such restored work to the same extent as if it was guaranteed under this Contract.
- (e) If the Contractor, after notice, fails to proceed promptly to comply with the terms of the guarantee as set forth in this Section, the Owner may have the defects or inferior materials, equipment or workmanship corrected and the Contractor and his surety shall be liable for all expense incurred.
- (f) All special warranties and guarantees applicable to definite parts of the Work that may be stipulated in or required by the Contract Documents shall be subject to the terms of this Section during the first year of the life of such special warranty or guarantee.
- (g) The guarantee of this Section shall be in addition to and not in lieu of all other warranties, express or implied, applicable to or arising from this Contract or by law.
- (h) Nothing contained in this Section shall be construed to establish a period of limitation with respect to any other obligation which the Contractor might have under the Contract Documents, including liability for Detective Work under Section 30. This Section relates only to the specific obligation of the Contractor as set forth in this Section to correct the Work and does not limit the time within which

his obligation to comply with the Contract Documents may be sought to be enforced, nor the time within which proceedings may be commenced to establish the Contractor's liability with respect to his other obligations under the Contract Documents.

- (i) In the event the Work of the Contractor is to be modified by another contractor, either before or after the Final Inspection provided by Section 43 of the General Conditions, the first Contractor shall remain responsible in all respects under this Section's Guarantee of Work and under any other warranties or guarantees, express or implied, applicable to or arising from this Contract or by law. However, the Contractor shall not be responsible for any defects in material or workmanship introduced by the contractor modifying his Work. The first Contractor and the contractor making the modifications shall each be solely responsible for his respective work. The contractor modifying the earlier Work shall be responsible for any damage to or defect introduced into the Work by his modification. If the first contractor claims that a subsequent contractor has introduced defects of materials and/or workmanship into his Work, it shall be the burden of the contractor making the claim to demonstrate clearly the nature and extent of such introduced defects and the other contractor's responsibility for those defects. Any contractor modifying the work of another shall have the same burden if he asserts that defects in his work were caused by the contractor whose work he is modifying.

45. ASSIGNMENTS OF CONTRACTUAL OBLIGATIONS

Neither party to the Contract shall assign the Contract in whole or any part without the written consent of the other, nor shall the Contractor assign any monies due or to become due to him hereunder, without the prior written consent of the Owner. No assignment shall relieve any party from its obligations under the Contract.

46. CONTRACTUAL CLAIMS AND DISPUTE RESOLUTION (§2.2-4363, Code of Virginia)

- (a) **Compliance.** Strict compliance with this procedure is a prerequisite to proceeding with a claim under this Agreement, and no action or statement by County representatives waives such compliance. All notices and communications required by this section must be in writing.
- (b) **Intent to submit claim.** Contractor must notify the Purchasing Agent of its intent to submit a claim, whether for money or other relief, at the time of the occurrence or at the beginning of the work upon which the claim is based, whichever comes first. “At the time of the occurrence or at the beginning of the work upon which the claim is based” means within 48 hours or, if good cause is shown, within 5 business days. “Occurrence” includes:
 - (1) The County transmits final payment; and
 - (2) A representative of the County states that the County will not pay a requested amount.
- (c) **Submission of claim.** Contractor must submit its claim no later than 60 days after it has notified the Purchasing Agent of its intent to file a claim. The claim must identify the time of the occurrence or the beginning of the work upon which the claim is based, state the basis for the claim, and identify with specificity the relief sought.
- (d) **Investigation of claim.** The Purchasing Agent shall investigate the claim. As part of the investigation, the purchasing agent may request that Contractor submit additional information, or appear before the Purchasing Agent, to support its claim. The period between such request and Contractor’s response tolls the time within which the Purchasing Agent must respond to the claim. Failure to provide the requested information constitutes noncompliance with this procedure.
- (e) **Purchasing Agent’s decision.** The Purchasing Agent shall render a decision within 30 days of receipt of Contractor’s claim, setting forth the reasons for such decision. If the Purchasing Agent does not render a decision within 30 days, the claim is considered denied. For good cause, the Purchasing Agent may notify Contractor that more time is required to render a decision.
- (f) **The Purchasing Agent may settle the claim.** If resolution of the claim requires that the County pay additional money or forgo goods or services that it is arguably owed, then the Purchasing Agent’s authority to settle the claim is limited to 25% of the value of the contract or \$50,000, whichever is greater.
- (g) **Institution of legal action.** If Contractor is not satisfied with the Purchasing Agent’s decision, or the Purchasing Agent does not render a decision, it may appeal to the Circuit Court of Albemarle County. Contractor’s appeal must comply with the Virginia Public Procurement Act and Title 15.2 of the Virginia Code.
- (h) **Amounts not in dispute.** Contractor’s notice of an intent to file a claim does not permit the County to withhold or delay payment of amounts that it does not dispute. Purchasing Agent’s non-response to a claim within the required time constitutes a dispute of amounts claimed.

47. ASBESTOS

- (a) This subsection applies to projects involving existing buildings where asbestos abatement is not a part of the Work, when the scope of the project has been reviewed and a comprehensive survey conducted by an individual licensed by the Virginia Department of Professional and Occupational Regulation to conduct building inspections for asbestos containing materials in buildings, and where the Owner has attempted to remove or encapsulate all asbestos containing material that may become friable or damaged during this Project.

Prior to commencement of Work, the results of the comprehensive survey or any other asbestos survey shall be made available to the Contractor, who shall be responsible for performing his Work so as not to disturb any remaining asbestos, encapsulated or otherwise, identified in such survey or surveys.

If the Contractor discovers or inadvertently disturbs any material that he knows, should have known or has reason to believe, may contain asbestos that has not been previously identified, was overlooked during the removal, was deemed not to be friable or was encapsulated, the Contractor shall stop Work in the area containing or suspected to contain the asbestos, secure the area, and notify the Owner and the Architect/Engineer immediately by telephone or in person with written notice as soon as possible. The Owner will have the suspect material sampled.

If the sample is positive and must be disturbed in the course of the Work, the Owner shall have the material repaired or removed and shall pay for the bulk sample analysis.

Except as provided in §11-4.1 of the Code of Virginia, if the material disturbed is not within the Contractor's authorized Work and/or Work area or under this Contract, the Contractor shall pay for all associated sampling and abatement Costs.

- (b) If asbestos abatement is included as a part of the Work, the Contractor shall assure that the asbestos abatement work is accomplished by those duly licensed as described in Section 3 of these General Conditions and in accordance with the specific requirements of the Contract and all applicable laws and regulations.
- (c) If asbestos abatement is included as part of the Work, the licensed asbestos Subcontractor shall obtain the insurance required under Section 11(e) of these General Conditions.

48. TRAINING, OPERATION AND MAINTENANCE OF EQUIPMENT

- (a) As a part of the Work, the Contractor in conjunction with his Subcontractors and Suppliers shall provide the Owner's operations and maintenance personnel with adequate instruction and training in the proper operation and maintenance of any equipment, systems, and related controls provided or altered in the Work. The training requirements may be further defined in the specifications.
- (b) The Contractor shall provide the Owner with a minimum of two (2) copies of operating, maintenance and parts manuals for all equipment and systems provided in the Work. Further specific requirements may be indicated in the specifications.

49. PROJECT MEETINGS

(a) The intention of this Section is that the Contractor, the Owner and the A/E have timely exchange of information and cooperate to accomplish the Work as required by the Contract Documents. The Contractor is responsible for managing the Work, obtaining approvals and requesting clarifications on a timely, reasonable basis. The Owner and its A/E are responsible for making a reasonable effort to provide timely responses to the Contractor.

(b) **Preconstruction Meeting:**

Prior to the start of construction and no later than 15 calendar days after the Notice to Proceed, a "Preconstruction" meeting shall be held with attendees to include the Owner's Project Manager and Project Inspector, the Architect/Engineer's project manager and representatives of each design discipline involved in the Project, the Contractor's project manager and superintendent (and scheduler, if Contractor desires), and representatives of the Contractor's major Subcontractors. The purpose of the meeting is to clarify and discuss the specifics related to, but not limited to, the following:

- (1) Persons involved from each entity and their chain of authority including the names of persons authorized to sign Change Orders and any limits to their authority.
- (2) Names, addresses, telephone numbers, FAX numbers, and email addresses to be used for Requests for Information (RFI), Requests for Clarification (RFC), Requests for Proposals (RFP), shop drawings, submittals, and notices.
- (3) Contractor's proposed construction schedule and Owner's sequencing requirements, if any.
- (4) Schedule of Values and Certificate for Payment (Form AC-12) requirements and procedures.
- (5) Procedures for shop drawings, product data and Submittals.
- (6) Procedures for handling Field Orders and Change Order Form AC-11.
- (7) Procedures for Contractor's request for time extension, if any.
- (8) Construction Site requirements, procedures and clarifications to include:
 - Manner of conducting the Work presentation to be done by members of the project team, preferably Contractor's superintendent and project manager.
 - Site specialties such as dust and erosion control, stormwater management, project signs, clean up and housekeeping, temporary facilities, utilities, security, and traffic.
 - Safety.
 - Layout of the Work.
 - Quality control, testing, inspections and notices required.
 - Site visits by the A/E and others.
 - Owner's Project Inspector duties.
 - Running Punch List.
 - As-Built Drawings.

(9) Procedures and documentation of differing or unforeseen Site conditions.

(10) Monthly Pay Meeting.

(11) Project Close-Out requirements and procedures.

(12) Project records.

(c) **Monthly Pay Meeting:**

Section 36 establishes the requirement for a monthly pay meeting which will usually be held at or near the Site. In addition to Owner, A/E and Contractor representatives, the following representatives, at a minimum, should be available to attend portions of the meeting, as applicable or necessary:

- Owner's Project Inspector.
- Contractor's project superintendent.
- A/E representative of each discipline where Work was performed for the current pay request or where Work is projected to be performed in the coming month.
- A representative of each subcontractor who performed work included in the current pay request.
- A representative of each subcontractor who is projected to perform work in the coming month.

The following topics should be included, as a minimum, in the monthly pay meeting:

- (1) Observations of status, quality and workmanship of Work in progress.
- (2) Validation of the Schedule of Values and Certificate for payment.
- (3) Conformance with proposed construction schedule.
- (4) Outstanding Requests for Information, Requests for Clarification and Requests for Proposal.
- (5) Submittals with action pending.
- (6) Status of pending Change Orders.
- (7) Status of Running Punch List items.
- (8) Work proposed for coming pay period.
- (9) Discussions of any problems or potential problems which need attention.

(d) **Other Meetings:**

Requirements for other meetings, such as progress meetings, coordination meetings, preinstallation meetings and/or partnering meetings, may be included in the Contract Documents.

***** END OF GENERAL CONDITIONS *****

SUPPLEMENTAL GENERAL CONDITIONS

The COUNTY OF ALBEMARLE CONSTRUCTION CONTRACT GENERAL CONDITIONS (Revised November 2024) are modified and supplemented as hereinafter described.

1. Section 3 – LAWS AND REGULATIONS

Delete Paragraph (e).

2. Section 3 – LAWS AND REGULATIONS

Delete the second sentence of Paragraph (l) The VDOT Land Use Permit may be obtained at no cost to the County or Contractor. Replace the second sentence of Paragraph (l) with the following: “VDOT shall be listed as a Dual Obligee Rider on the Performance Bond to meet the VDOT Land Use permitting requirements.”

3. Section 11 CONTRACTOR’S AND SUBCONTRACTOR’S INSURANCE

At Section B. Insurance Requirements revise limits as follows:

(a) Worker’s Compensation: requires a minimum of **\$1,000,000**

(b) General Liability: requires a minimum of **\$1,000,000**

(c) Automobile Liability: requires a minimum of **\$1,000,000**

(d) Umbrella Liability: requires a minimum of **\$3,000,000 (for bids \$2,000,000 and over; otherwise \$1,000,000 for bids \$1,999,999 and under)**

(e) Environmental Pollution is not required by this solicitation.

(f) Professional Liability is not required by this solicitation.

(g) Cyber Liability is not required by this solicitation.

4. Section 12 – BUILDER’S RISK INSURANCE

Delete Paragraphs (a), (b) and (c). Builder’s Risk Insurance shall not be required for this contract.

5. Section 19 – SCHEDULE OF THE WORK

Delete Paragraphs (2) and (6) on subsection (a), (b), (c), (d), (e), and (f). For scheduling requirements see Special Conditions for this Project’s scheduling requirements.

6. Section 36 – PAYMENTS TO CONTRACTOR

This section shall be supplemented by removing Paragraph (c) in its entirety.

7. Section 36 – PAYMENTS TO CONTRACTOR

This section shall be supplemented by removing Paragraph (e) in its entirety and replacing it with the following:

(e) The final payment, less any amounts due to or claimed by the Owner, shall not become due until the Architect/Engineer and the Owner agree that Final Completion has been achieved and until the Contractor shall deliver to the Owner through the Architect/Engineer a Certificate of Completion by the Contractor (Form AC-13.2) and an Affidavit of Payment of Claims (Form AC-13), stating that all Subcontractors and Suppliers of either labor or materials have been paid all sums claimed by them for Work performed or materials furnished in connection with this Project. Amounts due the Owner which may be withheld from the final payment may include, but are not limited to, amounts due pursuant to Section 3 (i), Section 16 (a) – (d), Section 31 (d), costs incurred to repair or replace Defective Work, costs incurred as a result of the Contractor’s negligent acts or omissions or omissions

of those for whom the Contractor is responsible, delay damages under Section 42 (h), and any liquidated or actual damages. If all Subcontractors and Suppliers of labor and materials have not been paid the full amount claimed by them, the Contractor shall list each to which an agreed amount of money is due, or which has a claim in dispute. With respect to all such Subcontractors and Suppliers, the Contractor shall provide to the Owner, along with the Affidavit of Payment of Claims (Form AC-13), an affidavit from each such Subcontractor and Supplier stating the amount of their subcontract or supply contract, the percentage of completion, the amounts paid to them by the Contractor and the dates of payment, the amount of money still due, if any, any interest due the Subcontractor or Suppliers pursuant to Section 37 (b) below, and whether satisfactory arrangements have been made for the payment of said amounts. If no agreement can be reached between the Contractor and one or more Subcontractors or Suppliers as to the amount owed to the Subcontractors or Suppliers, the Owner may, in its discretion, pay such portion of the monies due to the Contractor which is claimed by the Subcontractor or Supplier into a Virginia Court or Federal Court sitting in Virginia, in the manner provided by law. Said payment into court shall be deemed a payment to the Contractor. Nothing in this Section shall be construed as creating any obligation or contractor relationship between the Owner and any Subcontractor or Supplier, and the Owner shall not be liable to any Subcontractor or Supplier on account of any failure or delay of the Owner in complying with the terms thereof.

- (k) Subject to the provisions of the General Conditions allowing for extension of time allowed for completion of the Work, if the work is not substantially completed by the specified date the Contractor shall owe to the Owner not as a penalty but, as actual and/or liquidated damages, the sum of **One Thousand and 00/100 Dollars (\$1,000.00)** per day for each and every calendar day for delay in substantial completion of the Work beyond the Substantial Completion date specified in the Notice to Proceed. Likewise, if the Work is not finally completed within 30 consecutive calendar days from date of Substantial Completion, the Contractor shall owe to the Owner, not as a penalty but as liquidated damages, the sum of **Five Hundred and 00/100 Dollars (\$500.00)** per day for each and every calendar day of delay in final completion of the Work.
- (l) The Owner may withhold from the monthly Progress Payment, the current value of the liquidated damages. Failure of the Owner to withhold liquidated damages during ongoing operations that have exceeded the Contract Completion Date is not a waiver of the Owner's entitlement to damages as set forth in the Contract Documents.
- (m) Final accounting of liquidated damages will be administered through a deduction in the final amount owed the Contractor.

SPECIAL CONDITIONS

ALBEMARLE COUNTY LOCAL GOVERNMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Requirements of the General Conditions of the Construction Contract and Supplemental General Conditions, apply to this Section.

1.2 WORKER STANDARDS OF CONDUCT AND DRESS

- A. Worker Standards of Conduct/Dress — Hard hats, safety shoes, appropriate shirts and pants and OSHA -required safety vests are to be worn at all times.
- B. Smoking is prohibited inside County Facilities. Smoking is only allowed in Owner-designated areas.
- C. There is to be no contact or harassment of any kind between workers and facility occupants. Only the Project Superintendent may contact the County staff, if necessary.
- D. Drugs, alcohol, firearms, and weapons of any kind are prohibited on County property or job site.
- E. Violence, swearing, lewd or disruptive behavior will not be tolerated. Any workers violating these standards of conduct shall be ordered off the job site by the Contractor or Owner and not allowed to return to any County project.
- F. Listening to headphones or radios is discouraged as it may produce a safety hazard by masking environmental sounds that need to be heard, especially on active construction sites where attention to moving equipment, heavy machinery, vehicle traffic, and safety warning signals may be compromised. It is the Contractor's responsibility to ensure that employees are not exposed to hazards. Any music or disruptive noise shall not be heard from any adjacent property at any time.
- G. Comply with all Commonwealth of Virginia and Federal safety and conduct regulations.

1.3 STORAGE, STAGING, TEMPORARY FACILITIES, AND/OR FIELD OFFICE

- A. Contractor's staging area, protective barriers, employee parking, and loading access shall be as approved by Owner.
- B. The Contractor may only park equipment, vehicles, and employee vehicles at the lay-down and staging areas to be acquired by the Contractor and approved by the Architect/Engineer and County. Contractors shall strictly enforce this requirement.
- C. The Contractor shall be responsible for locating and acquiring appropriate staging areas. Staging area locations must be approved by the County and Architect/Engineer. There will be no separate payment for rights or permits for the staging area. Contractor's field office, temporary construction yard, and related facilities shall comply with the requirements of the current County Code "18-5.1.18 Temporary Construction Headquarters and Temporary Construction Yards."
- D. Safe access to the designated areas adjacent to the construction area must be maintained at all times for pedestrians and maintenance vehicles. The job site shall be subject to safety inspections by the County safety compliance officer. OSHA standards apply to all aspects of job.
- E. The contractor's staging area and general construction site shall be kept neat and clean so that trash is removed daily, and grass cut weekly.
- F. Power and Water is not provided at the job site. Contractor shall provide a temporary toilet facility.

1.4 WORK HOURS AND SPECIAL REQUIREMENTS

- A. The Work Week shall begin on Monday at 7:00 a.m. and end on Saturday at 6:00 p.m. When the Contractor desires to perform work outside the Work Week, it shall request the Owner's permission at least 48 hours in advance of the time the Contractor proposes to perform the work. The Owner may refuse the Contractor permission to work outside the Work Week for

any reason including, but not limited to, the Owner's difficulty in making arrangements for proper inspection of the Work. Under normal circumstances the Contractor will not be permitted to work on holidays, as defined in the VDOT Road and Bridge Specifications Section 108, without written approval from the Owner.

The Owner reserves the right to require the Contractor to work outside of the Work Week in the interest of public safety or convenience. No claim for additional compensation shall be made by the Contractor when such occasions occur.

B. Allowable lane closure hours shall be from 8:00 a.m. to 4:00 p.m., Monday through Saturday, except Holidays and when approved by the Project Engineer and County Project Manager. Exceptions to these lane closure requirements shall require prior written authorization from the Engineer. Failure to restore all lanes of traffic by the time limits defined herein will be handled as follows:

1. The Contractor will not be allowed further lane closures until the reasons for the previous failure are evaluated.
2. A meeting with the Owner and VDOT shall be required prior to the next scheduled lane closure at which the Contractor must be able to provide assurances to the Engineer that adjustment have been made to eliminate the operational cause of failure to restore all lanes of traffic within the time limits herein.
3. Delays to the Contractor's schedule caused solely by the actions, lack thereof and/or by the Contractor's failure to restore all lanes of traffic shall not be considered for an extension of time.

C. Occupied area: Areas adjacent to the job site / work zone must remain accessible during construction for the parcel owners. Safe ingress and egress shall be provided to these areas at all times.

D. The County of Albemarle noise ordinance shall always be followed. See Code of Ordinances for the County of Albemarle at the following link:

https://library.municode.com/va/albemarle_county/codes/code_of_ordinances

1.5 STANDARDS AND REFERENCE DOCUMENTS

A. Construction of this project shall be in conformance with the latest revisions to the VDOT Road and Bridge Specifications dated 2020, VDOT Road and Bridge Standards dated 2016, and Revision 2 to the VDOT Work Area Protection Manual dated 2011, and the latest editions of the Virginia Stormwater Management Handbook, FHWA Manual on Uniform Traffic Control Devices (MUTCD), the Virginia Supplement to the MUTCD and the current edition of the Albemarle County Service Authority's Water & Sewer Specifications, and the Albemarle County Service Authority's Approved Products List, including all subsequent revision. In the event of conflict between any of these standards, specifications, or project drawings, the most stringent shall govern.

B. Notwithstanding any provision contained in the VDOT Special Provisions, when used in the VDOT Supplemental Specifications, Special Provisions, and Special Provision Copied Notes, or in any other provision contained or incorporated into this contract, the following terms shall have the following meanings: "DEPARTMENT" shall mean the Facilities Planning & Construction Division of Albemarle County Facilities & Environmental Services Department; "ENGINEER" shall mean the RESPONSIBLE CHARGE ENGINEER hired by Albemarle

County to perform construction administration services for this project; “INSPECTOR” shall mean the person hired by Albemarle County to inspect the Work performed and materials supplied by the Contractor; and “CONTRACT ENGINEER” shall mean the Albemarle County Purchasing Department. This provision explicitly supersedes the second paragraph of VDOT Special Provision (cn100-000051-03), VDOT Supplemental Specifications, Special Provisions and Special Provisions Copied Notes Revision.

1.6 UTILITY COORDINATION

- A. The location of existing sewers, water and gas pipes, conduits, and other structures across, along or under the area of the Work are not necessarily shown on the CONTRACT DOCUMENTS, and, if shown, the description, composition, location, depth, and dimensions of those structures may not be correct. The COUNTY shall not be responsible to the CONTRACTOR for any delays or extra costs incurred by the CONTRACTOR as a result of any discrepancy between the actual location of existing structures and the Contract Documents or as-built drawings. The CONTRACTOR shall dig such test holes as needed to locate existing underground structures. The CONTRACTOR shall dig such test holes only after giving 48 hours prior notice to the COUNTY and to the owner of the underground structure. Test holes shall be completed a minimum of ten (10) working days in advance of the work crossing over, near or adjacent to the existing utility. The CONTRACTOR shall report to the ENGINEER any conflicts found from such test holes within 24 hours of conducting the test hole work, so that the conflict can be resolved.

- B. Delays to the Contractor’s schedule caused solely by the actions or lack thereof by the utility companies involved shall not be considered for an extension of time in accordance with Section 42 of the General Conditions unless the Contractor can demonstrate that he cannot work in other areas of the project.

1.7 COORDINATION WITH IMPACTED PRIVATE PROPERTY OWNER

The Contractor shall notify the County and the Private Property Owner of any impacts to their property upon which work is to be performed at a minimum of two weeks in advance of commencing work.

1.8 REPORTS OF EXPLORATION AND TESTS OF SUBSURFACE CONDITIONS

- A. No geotechnical investigation has been performed for this project. If so desired, the Contractor (at his own expense) may make, prior to bidding, independent exploration, tests, and analyses. All applicable VDOT permits for work inside existing right of way must be secured by the Contractor for performance of exploratory investigations. In addition, the Owner must be notified in writing at least 2 business days prior to the Contractor making exploratory investigations involving digging or land disturbance.

1.9 LIQUIDATED DAMAGES

- A. Shall be in accordance with the Supplementary General Conditions.

1.10 MEETINGS, SCHEDULES AND PAYMENTS

- A. The Contractor shall attend job site meetings at intervals as necessary for work, as determined by Owner.

1.11 APPLICATION FOR PAYMENT AND PAYMENTS

- A. Prior to First Pay Application- Contractor shall submit:
 - a. Schedule of Values, Submittal List.

- B. Application for Payment and. Payments shall be delayed when project is not in compliance with any required permits and any related instructions given by Owner. Lack of Project Cleanliness may also delay payment.
- C. Retainage shall be -0%.
- D. Weather Days: shall be counted cumulatively for the project duration and agreed upon monthly in the pay meeting notes, never to shorten the duration of the project.

END OF SPECIAL CONDITIONS

CONTRACT #«Contract Number»
«Company»
 «Address 1»
 «Address 2»
 «City», «State» «Postal Code»
«corporate status, as confirmed by the SC»
(Contractor)

Project Name: «Project Name»
 Project Mgr: «Project Manager Name»
 A/E, if applicable: «Construction AE Person or Company»
 A/E contract #: «A/E Contract Number»

«Legal Entity»,
«Legal Entity Description»,
 401 McIntire Road
 Charlottesville, Virginia 22902
(«Legal Entity Short»)

This Agreement (“Agreement” or “Contract”) made and entered into on _____, between the Contractor as identified above and the «Legal Entity Short» (collectively, the Parties), hereby agree, in consideration of the mutual covenants and stipulations set forth below:

1. **Scope of Work:** The Contractor shall furnish all labor, equipment, and materials and perform all work for the project as described in the «Procurement Method» (IFB/RFP) Solicitation #«Solicitation Number» and the «Legal Entity Short»’s plans and specifications, including all work described in the Bid Form as Base Bid plus additives, (collectively, the Work) in strict accordance with the Contract Documents. In brief, the Contractor shall «Project Description».
2. **Incorporation of documents and Order of Precedence:** To the extent that they do not conflict with the terms of this Agreement, the following documents are incorporated by reference in their entirety:
 - the «Procurement Method» Solicitation #«Solicitation Number»;
 - the Bid Form submitted by the Contractor;
 - the County of Albemarle Construction Contract General Conditions, as included in the IFB;
 - the Supplemental General Conditions, if any;
 - the Special Conditions attached to the «Legal Entity Short»’s Invitation for Bids;
 - the «Legal Entity Short»’s Project Plans and Specifications dated «Solicitation Date»; and modifications shown as Addenda _____; and
 - the Project Manual dated «Construction Project Manual Date» (which may include some or all of the above documents).

In the event that a conflict or ambiguity exists or is created between this Agreement, the IFB, and/or the Contractor’s submitted Bid Form, the terms of this Agreement first and the IFB second, if necessary, shall govern and supersede any such conflicting or ambiguous terms. The Supplemental General Conditions shall thereafter take precedence over the General Conditions.

3. **Payment/Consideration Schedule:** In consideration of the Work to be performed by Contractor, as set forth in the section entitled, “Scope of Work,” the «Legal Entity Short» agrees to pay Contractor for completed and accepted work the total sum of _____ dollars (\$ _____) as calculated below:

Base bid:	\$ _____	
Additive 1:	\$ _____	for _____
Additive 2:	\$ _____	for _____
Total:	\$ _____	

4. Term: The Work shall be commenced on a date to be specified in a written order of the «Legal Entity Short» and shall be Substantially Completed within ___ calendar days. The Work shall be finally completed within ___ days after the date of Substantial Completion of the Work or no later than the date of Final Completion of _____, whichever is sooner. Time is of the essence.
5. Non-Appropriation: The continuation of the terms, conditions, and provisions of this Agreement beyond June 30 (the end of the «Legal Entity Short»'s fiscal year) of any year, is subject to its approval and ratification by the «Legal Entity Short» and appropriation by them of the necessary money to fund said contract for each succeeding year. If sufficient funds are not appropriated and budgeted in any fiscal year for payments due under this Agreement, the «Legal Entity Short» shall immediately notify Contractor, and this Agreement shall terminate on the last day of the fiscal year for which appropriations were received without penalty or expense to the «Legal Entity Short» of any kind whatsoever.
6. Preconditions to Obligation: The «Legal Entity Short» shall not be obligated to purchase or pay for goods, services, or materials under this Agreement unless the «Legal Entity Short» has ordered such goods, services, and/or materials and until the Contractor has delivered any ordered goods, services, and/or materials. The «Legal Entity Short» may increase or decrease quantities of ordered goods, services, and materials as required and in its discretion.
7. Faith-based Organizations: The «Legal Entity Short» does not discriminate against faith-based organizations in accordance with Code of Virginia §2.2-4343.1.
8. Nondiscrimination: Pursuant to Virginia Code §§ 2.2-4201 and 2.2-4311, during the performance of this Contract, Contractor agrees as follows:
 - A. Contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, age, disability, or any other basis prohibited by state law relating to discrimination in employment, except where there is a bona fide occupational qualification reasonably necessary to the normal operation of Contractor. Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this Nondiscrimination clause, including the names of all contracting agencies with which the Contractor has contracts over \$10,000;
 - B. Contractor will, in all solicitations or advertisements for employees placed by or on behalf of Contractor, state that Contractor is an equal opportunity employer;
 - C. Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section; and
 - D. Contractor shall include the provisions of the foregoing paragraphs A, B, and C in every subcontract or purchase order of over \$10,000, so that the provisions will be binding upon each subcontractor or vendor.
9. Drug-Free Workplace: Pursuant to Virginia Code Section § 2.2-4312, during the performance of this Contract, Contractor agrees to:
 - A. Provide a drug-free workplace for Contractor's employees.
 - B. Post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in Contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition.
 - C. State in all solicitations or advertisements for employees placed by or on behalf of Contractor that Contractor maintains a drug-free workplace.
 - D. Include the provisions of the foregoing clauses in every subcontract or purchase order over \$10,000, so that the provisions will be binding upon each subcontractor or vendor.

10. Compliance with Immigration Laws: Contractor does not and shall not during the performance of this Agreement knowingly employ an unauthorized alien as defined in the federal Immigration Reform and Control Act of 1986, pursuant to Virginia Code §2.2-4311.1.
11. Compliance with All Laws: Contractor shall comply with all federal, state, and local statutes, ordinances, and regulations now in effect or hereafter adopted, in the performance of scope of work set forth herein. Contractor represents that it possesses all necessary licenses and permits required to conduct its business and will acquire any additional licenses and permits necessary for performance of this Agreement prior to the initiation of work.
12. Business Entity Registration. Pursuant to Virginia Code § 2.2-4311.2, Contractor shall be registered and authorized to transact business in the Commonwealth as a domestic or foreign business entity if so required by Title 13.1 or Title 50 or as otherwise required by law. Contractor shall submit proof of a required registration to the «Legal Entity Short». Additionally, if required, Contractor shall not allow its existence to lapse or its certificate of authority or registration to transact business in the Commonwealth, if so required under Title 13.1 or Title 50 of the Code of Virginia, to be revoked or canceled at any time during the term of the Agreement.
13. Business License Requirement: If Contractor is a business located in Albemarle County, Virginia or at any time during the performance of this Agreement obtains situs for purposes of business license taxes, it shall be unlawful for such business to conduct or engage in such business, trade, or occupation without having first obtained the proper license from the Albemarle County Department of Finance. Contractor covenants that it has a business license where one is required to perform this Agreement.
14. Non-Assignment: All of the conditions and provisions in this Agreement shall extend to and bind the legal representatives, successors and assigns of the respective parties. Neither party to the Agreement shall assign or transfer their interest in the contract without the prior written consent of the other, which shall not be unreasonably withheld.
15. Audit: The Contractor shall maintain full and accurate records with respect to all matters covered under the Agreement including, without limitation, accounting records, written policies and procedures, time records, telephone records, reproduction cost records, travel and living expense records and any other supporting evidence necessary to substantiate charges related to the Agreement. Contractor's records shall be open to inspection and subject to audit and/or reproduction, during normal working hours by the «Legal Entity Short» and its employees, agents or authorized representatives to the extent necessary to adequately permit evaluation and verification of any invoices, payments, or claims submitted by Contractor pursuant to this Agreement. Such records subject to examination shall also include, without limitation, those allocations as they may apply to costs associated with the contract. The «Legal Entity Short»'s employees, agents, or authorized representatives shall have access to the Contractor's facilities, shall have access to all necessary records, and shall be provided adequate and appropriate work space, in order to conduct audits in compliance with this paragraph.
16. Termination with Cause: In the event that Contractor shall for any reason or through any cause be in default of the terms of this Agreement, the «Legal Entity Short» may give Contractor written notice of such default by certified mail/return receipt requested at the address set forth in Section 20 herein. Unless otherwise provided, Contractor shall have ten (10) days from the date such notice is mailed in which to cure the default. Upon failure of Contractor to cure the default, the «Legal Entity Short» may immediately cancel and terminate this Agreement as of the mailing date of the default notice. Upon termination, Contractor shall withdraw its personnel and equipment, cease performance of any further work under the Agreement, and turn over to the «Legal Entity Short» any work in process for which payment has been made. In the event of violations of law, safety or health standards and regulations, this Agreement may be immediately cancelled and terminated by the «Legal Entity Short», and provisions herein with respect to opportunity to cure default shall not be applicable.

17. Termination without Cause: The «Legal Entity Short» may at any time, and for any reason, terminate this Agreement by written notice to Contractor specifying the termination date, which shall be not less than thirty (30) days from the date such notice is mailed. In the event of such termination, Contractor shall be paid such amount as shall compensate Contractor for the work satisfactorily completed, and accepted by the «Legal Entity Short», at the time of termination. If the «Legal Entity Short» terminates this Agreement without cause, Contractor shall withdraw its personnel and equipment, cease performance of any further work under this Agreement, and turn over to the «Legal Entity Short» any work completed or in process for which payment has been made.
18. Choice of Laws and Venue: This Agreement shall be governed by the provisions hereof and by the laws of the Commonwealth of Virginia, excepting the law governing conflicts of laws. Disputes arising out of this Agreement shall be resolved in the courts of the Commonwealth of Virginia in and for Albemarle County.
19. Indemnification and Hold Harmless: Contractor hereby assumes the entire responsibility and liability for any and all damages to persons or property caused by or resulting from or arising out of any act or omission on the part of Contractor, its subcontractors, agents, or employees under or in connection with this Agreement or the performance or failure to perform any work required by this Agreement. Contractor shall indemnify and hold harmless the «Legal Entity Short» and its agents, volunteers, servants, employees, and officials from and against any and all claims, losses, or expenses, including reasonable attorney's fees and litigation expenses suffered by any indemnified party or entity as the result of claims or suits due to, arising out of or in connection with (a) any and all such damages, real or alleged, (b) the violation of any law applicable to this Agreement, and (c) the performance of the work by Contractor or those for whom Contractor is legally liable. Upon written demand by the «Legal Entity Short», Contractor shall assume and defend at Contractor's sole expense any and all such suits or defense of claims made against the «Legal Entity Short», its agents, volunteers, servants, employees, or officials.
20. Notices: All notices and requests required or permitted hereunder shall be sent by United States certified mail, return receipt requested, and to be effective, shall be postmarked not later than the final date for giving of such notice, or such notices may be sent by commercial messenger service, in which event, to be effective, such notices shall be delivered to a commercial messenger service not later than the final date for giving such notice. Alternatively, notice can be sent electronically to the parties and email addresses listed below.

Notices for the «Legal Entity Short» shall be addressed as follows:

«Legal Entity Short»
« Department Name», «Project Manager»
401 McIntire Road
Charlottesville, VA 22902
«Project Manager E-mail»

With a copy to:

«Purchasing Agent Name»
Chief Procurement Officer
401 McIntire Road; Suite 248
Charlottesville, VA 22902
«Purchasing Agent E-mail»

Notices for Contractor shall be addressed as follows:

«Company»
«Address1»; «Address2»
«City», «State» «PostalCode»
«Vendor Contact Email»

Such addresses may be changed at any time and from time to time with written notice given by either party to the other.

21. Entire Agreement: This Agreement and the documents incorporated by reference and included expressly as Exhibits to this Agreement constitute the entire agreement between the Parties. This Agreement supersedes all prior written or oral agreements or proposals between the parties, regarding the subject matter of this Agreement. This Agreement may not be modified except in a writing signed by both parties that is expressly stated to be an amendment hereto.
22. Independent Contractor: Contractor shall be at all times an independent contractor and, as such, shall have and maintain complete control over all of its employees and operations. Neither Contractor nor anyone employed by it shall be, represent, act, purport to act, or be deemed to be an agent, representative, employee or servant of the «Legal Entity Short». Nothing in this section shall be deemed to absolve or otherwise limit the Contractor's liability and responsibility to safely and correctly perform its duties under this Agreement.
23. Waiver: No failure of the «Legal Entity Short» to exercise any right or power given to it by law or by this Agreement or to insist upon strict compliance by Contractor with any of the provisions of this Agreement, and no custom or practice of the parties at variance with the terms hereof, shall constitute a waiver of the «Legal Entity Short»'s right to demand strict compliance with the terms of this Agreement.
24. Interpretation: Whenever the context hereof shall require, the singular shall include the plural, the plural the singular, and the use of any gender shall be applicable to all genders.
25. Severability: The provisions of this Agreement shall be deemed to be severable, and should any one or more of such provisions be declared or adjudged to be invalid or unenforceable, the remaining provisions shall be unaffected thereby and shall remain in full force and effect.
26. Contract Claims by Contractor: Prompt knowledge by the «Legal Entity Short» of an existing or impending claim for damages or other relief may alter the plans, scheduling, or other action of the «Legal Entity Short» and/or result in mitigation or elimination of the effects of the claim. Therefore, a written statement providing the «Legal Entity Short» with notice of the Contractor's intention to file a claim which (i) describes the act or omission by the «Legal Entity Short» or its agents that the Contractor contends caused it damages or entitles it to other relief; and (ii) provides a description of the nature and amount of the claim. Such written statement shall be submitted to the Purchasing Office of the Albemarle County Department of Finance within 20 days of the time of the occurrence or beginning of the work upon which the claim is based; provided, however, if such damage is deemed certain in the opinion of the Contractor to result from its acting on an order from the «Legal Entity Short», it shall immediately take written exception to the order. For purposes of this provision, "claim" shall include, without limitation, any request for an increase in the Agreement price or time and any request for equitable adjustment. Submission of a notice of claim as specified shall be mandatory, and failure to submit such notice shall be a conclusive waiver to such claim for damages or other relief by the Contractor. Neither an oral notice or statement, nor an untimely notice or statement will be sufficient to satisfy the requirements herein. The «Legal Entity Short» will review the claim and render a final decision in writing within thirty (30) days of receipt of Contractor's written request for a final decision. Such decision shall be final and binding to the fullest extent allowed by law.
27. Claims for Extra Compensation: If Contractor encounters work and services not included in this Agreement or any supplement thereto but which in the opinion of Contractor is necessary for the successful completion of the Agreement and requires extra compensation, Contractor shall, before it begins the work on which it bases its claim, promptly notify the Purchasing Office of the Albemarle County Department of Finance in writing of its intention to perform the work and to make claim for extra compensation. Notification by Contractor under the terms of this paragraph shall not be construed as proving the validity of the claim. No claim for extra compensation will be filed or considered unless notification is given as herein set forth. Upon notification, the «Legal Entity Short» shall promptly review any claim for extra compensation. If a claim is accepted by the «Legal Entity Short», it shall be paid as extra work under the terms of a supplemental agreement executed

by the parties *before such work is begun*. The amounts claimed as extra compensation by Contractor shall be separately itemized, become a part of the claim, and serve as documentation thereto. The amounts itemized shall be in sufficient detail to enable the «Legal Entity Short» to analyze the need for the extra work and the costs claimed for the work.

28. Payments to Subcontractors:

- a. This is a construction contract under the VPPA. Therefore, Contractor shall pay all subcontractors in the manner provided in Virginia Code Section 2.2-4354(1).
- b. Contractor shall pay all subcontractors in the manner provided in Virginia Code Section 2.2-4354(2-5).

29. Insurance: Contractor shall purchase and maintain, at its sole expense, and from a company or companies authorized to do business within the Commonwealth of Virginia, insurance policies protecting from claims which may arise out of or result from Contractor's performance or non-performance of services under this Contract or the performance or non-performance of services under this Contract by anyone directly or indirectly employed by Contractor or for whose acts it may be liable. Such policies shall remain in full force and effect at all times during the term of this Agreement and shall contain the types of coverages and minimum limits which are required by the Supplemental General Conditions, Special General Conditions, or General Conditions, which shall, for this provision "Insurance" only, take precedence (in order of precedence as listed here) over this Agreement and other documents incorporated by reference. A certificate of insurance conforming to the requirements of the Supplemental, Special, and General Conditions shall be submitted prior to the execution of this Agreement.

30. Payment/Performance Bonds: Contractor shall furnish to the «Legal Entity Short» a payment bond and a performance bond on forms provided by the «Legal Entity Short» in conformity with Virginia Code §§ 2.2-4337 and 2.2-4339 each payable to the «Legal Entity Short» and each in the sum of the Agreement amount. The performance bond shall be conditioned upon the faithful performance of the Agreement in strict conformity with the terms and conditions of the Agreement, and the payment bond shall be conditioned upon the prompt payment for all such material furnished or labor supplied or performed in the prosecution of the Work. Each of the bonds shall be executed by one or more surety companies selected by Contractor which are licensed and legally authorized to conduct the business of insurance, including surety, within the Commonwealth of Virginia. The performance and payment bonds shall be amended if necessary, as determined by the «Legal Entity Short», to reflect changes to the scope of the Work created by Change Orders and any amendments to this Agreement.

31. School Contractor Certification: Pursuant to Virginia Code § 22.1-296.1, Contractor certifies by his signature below that any and all persons who will provide services for or on behalf of the Contractor on public school property have not been convicted of a felony; any offense involving the sexual molestation, physical or sexual abuse or rape of a child; or any offense for which registration is required as defined in Virginia Code § 9.1-902. This Certification shall be binding throughout the contract term and that it will provide immediate notice to the «Legal Entity Short» of any event that renders this certification untrue.

Contractor hereby acknowledges that any person making a materially false statement regarding any such offense shall be guilty of a class 1 misdemeanor and, upon conviction, the fact of such conviction shall be grounds for the revocation of this Agreement and, when relevant, the revocation of any license required to provide such services.

CONTRACTOR'S ACCEPTANCE

«Company»

SIGNATURE

NAME

TITLE

DATE

«LEGAL ENTITY SHORT»'S ACCEPTANCE

«Legal Entity»

SIGNATURE

NAME **«Legal Entity Signee Name»**

TITLE **«Legal Entity Signee Title»**

DATE

POST BID MODIFICATION

DATE:

PROJECT TITLE:

IFB NO.:

OWNER:

CONTRACTOR:

As allowed by Section 12(c) of the Instructions to Bidders and by §2.2-4318, Code of Virginia, negotiations were conducted with the lowest responsive and responsible bidder, _____, hereinafter called the Contractor. The following clarifications, amendments, deletions, revisions, substitutions, and/or modifications to the Contract Documents were made along with corresponding adjustments in the Contractor’s bid amount for furnishing all labor and materials and performing all work necessary for construction of this project in accordance with the modified contract documents:

Item	AMOUNT
TOTAL	

END OF POST BID MODIFICATION

STANDARD PERFORMANCE BOND FOR CONSTRUCTION CONTRACTS

KNOW ALL BY THESE PRESENT: That _____, the Contractor (“Principal”) whose principal place of business is located at _____ and _____ (“Surety”) are held and firmly bound unto the County of Albemarle, Virginia, and/or The School Board of Albemarle County, Virginia, the Owner (“Obligee”) in the amount of _____ for the payment whereof Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS,

Principal has by written agreement dated _____, entered into a contract with Obligee for _____ which contract (the “Contract”) is by reference expressly made a part hereof;

NOW THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if the Principal shall promptly and faithfully perform said Contract in strict conformity with the plans, specifications and conditions of the Contract, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

Provided, that 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 Obligee of any extension of the time for the performance of the Contract, or any other alterations, extensions or forbearance on the part of either or both of the Obligee or the Principal to the other shall not in any way release the Principal and the Surety, or either of them, their heirs, executors, administrators, successors or assigns from their liability hereunder, notice to the Surety of any such alterations, extension, or forbearance being hereby waived.

No action shall be brought on this bond unless brought within one year after: (a) completion of the Contract and all Work thereunder, including expiration of all warranties and guarantees, or (b) discovery of the defect or breach of warranty or guarantee if the action be for such.

The Surety represents to the Principal and to the Obligee that it is legally authorized to do business in the Commonwealth of Virginia.

Signed and sealed this _____ day of _____.

PRINCIPAL

BY:

(Please sign above and print name below)

TITLE:

ADDRESS:

PHONE:

SURETY

BY:

(Please sign above and print name below)

ADDRESS:

PHONE:

BOND NO.:

ADDRESS OF SURETY'S HOME OFFICE:

STANDARD LABOR AND MATERIAL PAYMENT BOND

KNOW ALL BY THESE PRESENT: That _____, the Contractor (“Principal”) whose principal place of business is located at _____ and _____ (“Surety”) are held and firmly bound unto the County of Albemarle, Virginia, and/or The School Board of Albemarle County, Virginia, the Owner (“Obligee”) in the amount of _____ for the payment whereof Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS,

Principal has by written agreement dated _____, entered into a contract with Obligee for _____ which contract (the “Contract”) is by reference expressly made a part hereof;

NOW THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if the Principal shall promptly make payment to all claimants as hereinafter defined, for labor performed and material furnished in the prosecution of the Work provided for in the Contract, then this obligation shall be void; otherwise it shall remain in full force and effect, subject, however, to the following conditions.

The Principal and Surety, jointly and severally, hereby agree with Obligee as follows:

1. A claimant is defined as one having a direct contract with the Principal or with a subcontractor of the Principal for labor, material, or both for use in the performance of the Contract. A “subcontractor” of the Principal, for the purposes of this bond only, includes not only those subcontractors having a direct contractual relationship with the Principal, but also any other contractor who undertakes to participate in the Work which the Principal is to perform under the aforesaid Contract, whether there are one or more intervening subcontractors contractually positioned between it and the Principal (for example, a subcontractor). “Labor” and “material” shall include, but not be limited to, public utility services and reasonable rentals of equipment, but only for periods when the equipment rented is actually used at the work site.
2. Subject to the provisions of paragraph 3, any claimant who has performed labor or furnished material in accordance with the Contract documents in the prosecution of the Work provided in the Contract, who has not been paid in full therefor before the expiration of ninety (90) days after the day on which such claimant performed the last of such labor or furnished the last of such materials for which he claims payment, may bring an action on this bond to recover any amount due him for such labor or material, and may prosecute such action to final judgment

and have execution on the judgment. The Obligee need not be a party to such action and shall not be liable for the payment of any costs, fees or expenses of any such suit.

3. Any claimant who has a direct contractual relationship with any subcontractor of the Principal from whom the Principal has not required a subcontractor payment bond, but who has no contractual relationship, express or implied, with the Principal, may bring an action on this bond only if he has given written notice to the Principal within one hundred eighty (180) days from the day on which the claimant performed the last of the labor or furnished the last of the materials for which he claims payment, stating with substantial accuracy the amount claimed and the name of the person for whom the Work was performed or to whom the material was furnished. Notice to the Principal shall be served by registered or certified mail, postage prepaid, in an envelope addressed to the Principal at any place where his office is regularly maintained for the transaction of business. Claims for sums withheld as retainages with respect to labor performed or materials furnished shall not be subject to the time limitations stated in this paragraph 3.
4. No suit or action shall be commenced hereunder by any claimant;
 - a. Unless brought within one year after the day on which the person bringing such action last performed labor or last furnished or supplied materials, it being understood, however, that if any limitation embodied in this bond is prohibited by any law controlling the construction hereof, the limitation embodied within this bond shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.
 - b. Other than in a Virginia court of competent jurisdiction, with venue as provided by statute, or in the United States District Court for the district in which the project, or any part thereof is situated.
5. The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder.

Signed and sealed this _____ day of _____, _____.

PRINCIPAL

BY:

(Please sign above and print name below)

TITLE:

ADDRESS:

PHONE:

SURETY

BY:

(Please sign above and print name below)

ADDRESS:

PHONE:

BOND NO.:

ADDRESS OF SURETY'S HOME OFFICE:

GENERAL CONTRACTOR ESTIMATE FOR CHANGE ORDER

GC-1

IFB Number:
General Contractor:
Project:
Change Description:
Owner:
COR/PCO #:

GENERAL CONTRACTOR DIRECT COSTS											
Scope Description				Direct Labor				Direct Material		Direct Equipment	
Item No.	Description	Quantity	Qty Units	Direct Labor Hours Per Unit	Total Direct Labor Hours	Hourly Wage Rate, Excl. Taxes & Ins.	Total Labor Cost	Material Cost Per Unit	Total Material Cost	Equipment Cost Per Unit	Total Equipment Cost
A	B	C	D	E	F = C x E	G	H = F x G	I	J = C x I	K	L = C x K
1.01					0.00		\$0.00		\$0.00		\$0.00
1.02					0.00		\$0.00		\$0.00		\$0.00
1.03					0.00		\$0.00		\$0.00		\$0.00
1.04					0.00		\$0.00		\$0.00		\$0.00
1.05					0.00		\$0.00		\$0.00		\$0.00
1.06					0.00		\$0.00		\$0.00		\$0.00
1.07					0.00		\$0.00		\$0.00		\$0.00
1.08					0.00		\$0.00		\$0.00		\$0.00
1.09	Subtotal from Estimate Continuation Sheets						\$0.00		\$0.00		\$0.00
1.97	Subtotal (S/T) Direct Costs:					Subtotal Labor	\$0.00	Subtotal Mat'l	\$0.00	Subtotal Equip.	\$0.00
1.98	Taxes/Insurance: FICA, FUI, SUI, & Workmens' Comp. at 					% of Item 1.97H =	\$0.00	Sales Tax @ 5.3%	\$0.00	Sales Tax @ 5.3%	\$0.00
1.99	Total Direct Costs					Total Labor	\$0.00	Total Mat'l	\$0.00	Total Equip.	\$0.00

SUBCONTRACT COSTS		
Item No.	Subcontractor Name (List totals from attached SC-1 forms)	Total Cost
A	B	C
2.01		
2.02		
2.03		
2.04		
2.05		
2.06		
2.07		
2.08		
2.09		
2.99	Total Subcontract Costs	\$0.00

SUMMARY		
Item No.	Description	Total Cost
3.01	Total Direct Labor Cost	Item 1.99H \$0.00
3.02	Total Direct Material Cost	Item 1.99J \$0.00
3.03	Total Equipment Cost	Item 1.99L \$0.00
3.04	Subtotal	3.01+3.02+3.03 \$0.00
3.05	Overhead and Profit	* 10% x Item 3.04 \$0.00
3.06	Subtotal	3.04+3.05 \$0.00
3.07	Subcontractor Cost	Item 2.99 \$0.00
3.08	GC Markup on Subcontractors	** 10% x Item 3.07 \$0.00
3.09	Subtotal	3.06+3.07+3.08 \$0.00
3.10	Additional Bond Cost	
3.99	Total Change Order Cost	(3.09+3.10) \$0.00

Submitted By

Name: _____
 Signature: _____
 Title: _____
 Date: _____
 I have reviewed the costs proposed and find them to be reasonable (as proposed) (as marked).
 A/E Signature: _____

Note: Mark-up is capped in conformance with the provisions of Section 38(d) of the Construction Contract General Conditions.

*Limited to 10% on self-performed work.

**Limited to a total of 10%, shared (cumulative total) if multiple tier subs, on subcontracted work.

SUBCONTRACTOR ESTIMATE FOR CHANGE ORDER

SC-1

IFB Number:
 Project:
 Owner:

General Contractor:
 Subcontractor:
 Subcontractor Trade:
 COR/PCO #:

Change Description:

SUBCONTRACTOR DIRECT COSTS											
Scope Description				Direct Labor				Direct Material		Direct Equipment	
Item No.	Description	Quantity	Qty Units	Direct Labor Hours Per Unit	Total Direct Labor Labor Hours	Hourly Wage Rate, Excl. Taxes & Ins.	Total Labor Cost	Material Cost Per Unit	Total Material Cost	Equipment Cost Per Unit	Total Equipment Cost
A	B	C	D	E	F = C x E	G	H = F x G	I	J = C x I	K	L = C x K
1.01					0.00		\$0.00		\$0.00		\$0.00
1.02					0.00		\$0.00		\$0.00		\$0.00
1.03					0.00		\$0.00		\$0.00		\$0.00
1.04					0.00		\$0.00		\$0.00		\$0.00
1.05					0.00		\$0.00		\$0.00		\$0.00
1.06					0.00		\$0.00		\$0.00		\$0.00
1.07					0.00		\$0.00		\$0.00		\$0.00
1.08					0.00		\$0.00		\$0.00		\$0.00
1.09	Subtotal from Estimate Continuation Sheets						\$0.00		\$0.00		\$0.00
1.97	Subtotal (S/T) Direct Costs:					Subtotal Labor	\$0.00	Subtotal Mat'l	\$0.00	Subtotal Equip.	\$0.00
1.98	Taxes/Insurance:				FICA, FUI, SUI, & Workmens' Comp. at 	% of Item 1.97H:	\$0.00	Sales Tax @ 5.3%	\$0.00	Sales Tax @ 5.3%	\$0.00
1.99	Total Direct Costs					Total Labor	\$0.00	Total Mat'l	\$0.00	Total Equip.	\$0.00

SUB-SUBCONTRACT COSTS		
Item No.	Sub-Subcontractor Name (List totals from attached SS-1 forms)	Total Cost
A	B	C
2.01		
2.02		
2.03		
2.04		
2.05		
2.06		
2.99	Total Sub-Subcontract Costs	\$0.00

SUMMARY			
Item No.	Description		Total Cost
3.01	Total Direct Labor Cost	Item 1.99H	\$0.00
3.02	Total Direct Material Cost	Item 1.99J	\$0.00
3.03	Total Equipment Cost	Item 1.99L	\$0.00
3.04	Subtotal	3.01+3.02+3.03	\$0.00
3.05	Overhead and Profit	* 10% x Item 3.04	\$0.00
3.06	Total Subcontractor Cost	3.04+3.05	\$0.00
3.07	Sub-Subcontractor Cost **	Item 2.99	\$0.00
3.99	S/C Cost Report'd to GC ***	3.06+3.07	\$0.00

Submitted By

Name: _____
 Signature: _____
 Title: _____
 Date: _____

Note: Mark-up is capped in conformance with the provisions of Section 38(d) of the Construction Contract General Conditions.

* Limited to 10% on self-performed work.

** Limited to a total of 10%, shared (cumulative total) if multiple tier subs, on subcontracted work. Total mark-up on subcontracted work is calculated on the GC-1 form.

*** The subcontractor cost carried forward to GC-1 form does not include mark-up on sub-subcontractor costs. This mark-up is calculated on the GC-1 form. The GC and its subcontractors shall establish how the mark-up is to be distributed among the various subcontractors involved in the work.

SUB-SUBCONTRACTOR ESTIMATE FOR CHANGE ORDER

SS-1

IFB Number:
 Project:
 Owner:

General Contractor:
 Subcontractor:
 Sub-Subcontractor:
 Sub-Subcontractor Trade:
 COR/PCO #:

Change Description:

SUB-SUBCONTRACTOR DIRECT COSTS											
Scope Description				Direct Labor				Direct Material		Direct Equipment	
Item No.	Description	Quantity	Qty Units	Direct Labor Hours Per Unit	Total Direct Labor Labor Hours	Hourly Wage Rate, Excl. Taxes & Ins.	Total Labor Cost	Material Cost Per Unit	Total Material Cost	Equipment Cost Per Unit	Total Equipment Cost
A	B	C	D	E	F = C x E	G	H = F x G	I	J = C x I	K	L = C x K
1.01					0.00		\$0.00		\$0.00		\$0.00
1.02					0.00		\$0.00		\$0.00		\$0.00
1.03					0.00		\$0.00		\$0.00		\$0.00
1.04					0.00		\$0.00		\$0.00		\$0.00
1.05					0.00		\$0.00		\$0.00		\$0.00
1.06					0.00		\$0.00		\$0.00		\$0.00
1.07					0.00		\$0.00		\$0.00		\$0.00
1.08					0.00		\$0.00		\$0.00		\$0.00
1.09	Subtotal from Estimate Continuation Sheets						\$0.00		\$0.00		\$0.00
1.97	Subtotal (S/T) Direct Costs:					Subtotal Labor	\$0.00	Subtotal Mat'l	\$0.00	Subtotal Equip.	\$0.00
1.98	Taxes/Insurance: FICA, FUI, SUI, & Workmens' Comp. at 					% of Item 1.97H	\$0.00	Sales Tax @ 5.3%	\$0.00	Sales Tax @ 5.3%	\$0.00
1.99	Total Direct Costs					Total Labor	\$0.00	Total Mat'l	\$0.00	Total Equip.	\$0.00

SUMMARY		
Item No.	Description	Total Cost
3.01	Total Direct Labor Cost Item 1.99H	\$0.00
3.02	Total Direct Material Cost Item 1.99J	\$0.00
3.03	Total Equipment Cost Item 1.99L	\$0.00
3.04	Subtotal 3.01+3.02+3.03	\$0.00
3.05	Overhead and Profit * 10% x Item 3.04	\$0.00
3.99	Total Sub-Subcontractor	\$0.00

Submitted By

Name: _____

Signature: _____

Title: _____

Date: _____

Note: Mark-up is capped in conformance with the provisions of Section 38(d) of the Construction Contract General Conditions.
 *Limited to 10% on self-performed work.

FORM AC-12

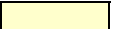
SCHEDULE OF VALUES and CERTIFICATE FOR PAYMENT

Before using this Excel form, please read the following:

Macro Security must be set to "Medium" !

Check the Excel macro security settings, by picking **Tools**, **Macro**, and **Security** from the main Excel menu. If macro security is set at "High" or "Very High", change it to "Medium" and then immediately close Excel. When Excel is reopened, the new macro security setting will take effect. If you get a message to "Enable" or "Disable" macros, pick "Enable". (Excel/Office 2007 users may need to save this as a "Macro-Enabled Worksheet".)

Users may ...

Users may add, edit, and delete data in the those cells which are highlighted in yellow. (e.g., )
Users may insert rows by using the **Insert New Row** button only!
Users may format cells (e.g., bold, underline, italic, font size, etc.)
Users may format rows (e.g., adjust the row height, etc.)

Users should not ...

Users should not modify these worksheets in any manner, other than as noted above !
Users should not "unprotect" these worksheets !
Users should not delete rows in these worksheets !
Users should not enter data directly into any cells which are not highlighted in yellow.

Doing any of the above "should not" actions can compromise the integrity of the AC-12 worksheet by overwriting or deleting data and/or formulas. It is not the responsibility of the County of Albemarle staff to help correct worksheets which have been corrupted by users not heeding the above warnings.

FORM AC-12 SCHEDULE OF VALUES and CERTIFICATE FOR PAYMENT

MAIN MENU and GENERAL INSTRUCTIONS

[Click here to read an important message before proceeding.](#)

Step

1. **Make a backup copy of this Excel file before proceeding to the next step.**

[Retainage questions, click here.](#)

2. **Enter project and contract information.**

3. **Prep the AC-12 form for new pay period.**

New users, please review the instructions below before completing Parts B & C.

4. **Complete AC-12, PART B.**

View Instructions

5. **Complete AC-12, PART C.**

View Instructions

6. **Review AC-12, PART A.**

7. **Print the AC-12.**

8. **Save each monthly submittal with a unique file name.**
(for example: Project 999-99999 Pay Request 1, Project 999-99999 Pay Request 2,)

9. **Sign and submit the AC-12.**

NEXT MONTH - Repeat Steps 1 through 9.

STEP 2 - Enter Project and Contract Information

A) Enter the following:

IFB/Contract Number:	
Project Title:	
Owner	County of Albemarle, Virginia and/or The County School Board of Albemarle County, Virginia
Location of Work:	
A/E Firm Name:	
Contractor Name:	
Contractor FEIN:	

(FEIN = Fed. Employer Identification Number)

Date Contract Executed

Month:	
Day:	
Year:	

NOTE: Once the above project and contract information have been entered, unless there are any changes, STEP 2 can be bypassed on future monthly updates.

B)

STEP 3 - Prepare the AC-12 for New Pay Period

WARNING: Run the Initialize Macro only once before beginning each new monthly pay request. See the explanation below.

Today is: 7/27/2022

A) **NOTE:** This form was last initialized on: 8/24/2007

B) Update the following data:

Pay Request Number:

For Pay Period Beginning:

For Pay Period Ending:

Pay Request Submittal Date:

Contractor Representative:

Retainage Percentage:

Retainage is initially set at the default value of 0%. With the Owner's PRE-APPROVAL, the retainage percentage may be adjusted. DO NOT ADJUST the retainage value UNTIL AFTER the INITIALIZE macro is run. For the final pay request, adjust this to 0%.

C)

Initializing Explained ---- what it does and how it works:

Initializing is designed to save the user considerable time and effort.

Initializing the AC-12 Form runs a macro (an automated procedure) which prepares the AC-12 for data entry for each new pay application. The macro copies all of the data from the "Current Value to Date" column to the "Previous Value to Date" column as shown in the example below.

This step must be done to compute the correct values for the current pay request.

Example:

	TOTAL VALUE	VALUE OF WORK COMPLETED			PERCENT COMPLETE
		PREVIOUS VALUE TO DATE	VALUE THIS REPORT	CURRENT VALUE TO DATE	
Before initializing:	\$ 100.00	\$ 20.00	\$ 10.00	\$ 30.00	30%
After initializing:	\$ 100.00	\$ 30.00	\$ -	\$ 30.00	30%
After updating %:	\$ 100.00	\$ 30.00	\$ 20.00	\$ 50.00	50%

Cells with a yellow background allow data input by the user.

Cells with a white background are calculated cells. These cells are "locked" to prevent the user from accidentally overwriting the embedded formulas.

- a** The **"Initialize"** macro copies all "Current Value to Date" entries to the "Previous Value to Date" column.
- b** After the initializing macro is run, you can now update the "Percent Complete" column to reflect new progress.
- c** After updating the "Percent Complete" column, the new "Current Value to Date" amount is calculated by a formula which multiplies the "Percent Complete" by the "Total Value".
- d** Another formula calculates the "Value This Report" amount by subtracting the "Previous Value to Date" amount from the "Current Value to Date" amount.

FORM AC-12	SCHEDULE OF VALUES and CERTIFICATE FOR PAYMENT	PAYMENT REQUEST NO.	1
PART A SUMMARY AND CERTIFICATION		PERIOD BEGINNING DATE:	01/00/1900
		PERIOD ENDING DATE:	01/00/1900



IFB NUMBER: 0
OWNER NAME: County of Albemarle, Virginia and/or The County School Board of Albemarle County, Virginia
PROJECT TITLE: 0

	TOTAL VALUE	VALUE OF WORK COMPLETED			PERCENT COMPLETE
		PREVIOUS VALUE TO DATE	VALUE THIS REPORT	CURRENT VALUE TO DATE	
	A	B	C	D = B + C	E = D / A
Original Contract Line Items (from AC-12, PART B)	\$ -	\$ -	\$ -	\$ -	0%
Approved Change Orders (from AC-12, PART C)	\$ -	\$ -	\$ -	\$ -	0%
ADJUSTED CONTRACT TOTAL	\$ -	\$ -	\$ -	\$ -	0%
Retainage <i>Retainage Percentage: 0%</i>		\$ -	\$ -	\$ -	
NET REQUISITION AMOUNT		\$ -	\$ -	\$ -	

Amount Requested

CONTRACTOR CERTIFICATION

The undersigned Contractor requests payment of that portion of the contract price shown on the last line of the foregoing Schedule of Values, and represents and warrants to the Owner that: (1) the data shown on the Schedule of Values is accurate and correct; (2) the Work covered by this Certificate has been completed in accordance with the Contract Documents; (3) all previous progress payments received from Owner on account of Work done under this Contract have been applied to discharge in full (except for allowable retainage) all obligations of Contractor incurred in connection with Work covered by prior Certificates for Payment (N/A for Payment No. 1) ; (4) title to all materials and equipment for which payment is requested in this Certificate, whether or not incorporated in said Work, will pass to Owner at time of payment free and clear of all liens, claims, security interests and encumbrances (except such materials and equipment which are covered by a Bond previously accepted by Owner).

FEIN #: 0

Contractor: 0

Date: January 0, 1900

By: _____
signature

Typed Name: 0

ARCHITECT/ENGINEER CERTIFICATION

This is to certify that, in accordance with the terms of a contract for IFB/Contract Number executed the day of , , by and between, the Contractor, and the County of Albemarle, Virginia and/or The County School Board of Albemarle County, Virginia, the Owner, for work at , there is due to the Contractor the amount of No Dollars and No Cents \$.00

Architect/Engineer:

By: _____
signature *printed name* *date*

OWNER ACTION

Recommended for Payment: _____
Project Manager Date

ITEM NO.	ITEM DESCRIPTION	TOTAL VALUE	VALUE OF WORK COMPLETED			PERCENT COMPLETE	NOTES / COMMENTS
			PREVIOUS VALUE TO DATE	VALUE THIS REPORT	CURRENT VALUE TO DATE		
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
	Do not insert rows below this point !	\$ -	\$ -	\$ -	\$ -	0%	
TOTAL ORIGINAL CONTRACT		\$ -	\$ -	\$ -	\$ -	0%	

CHNG ORD. NO.	ITEM DESCRIPTION	TOTAL VALUE	VALUE OF WORK COMPLETED			PERCENT COMPLETE	NOTES / COMMENTS
			PREVIOUS VALUE TO DATE	VALUE THIS REPORT	CURRENT VALUE TO DATE		
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
	Do not insert rows below this point !	\$ -	\$ -	\$ -	\$ -	0%	
TOTAL APPROVED CHANGE ORDERS		\$ -	\$ -	\$ -	\$ -	0%	

STEP 7 - Print the AC-12

PART B Instructions

The **ORIGINAL CONTRACT** line items (and progress for same) are entered in PART B of the AC-12 form.

Below is an example PART B with detailed instructions shown in red.

(Scroll down this page to view the step-by-step instructions.)

ITEM NO.	ITEM DESCRIPTION	TOTAL VALUE	VALUE OF WORK COMPLETED			PERCENT COMPLETE	NOTES / COMMENTS
			PREVIOUS VALUE TO DATE	VALUE THIS REPORT	CURRENT VALUE TO DATE		
1		\$ -	\$ -	\$ -	\$ -	0%	
<p style="color: red;">Enter a unique line item number for each line item. (Examples: 1, 2, 3..... 1A, 1B, 1C..... 100, 200, 300..... 100.1, 100.2, 100.3.)</p>							
1	EPDM Roofing	\$ -	\$ -	\$ -	\$ -	0%	
<p style="color: red;">Enter a line item description. (Line items must be broken out in a sufficient level of detail to allow Owner and A/E to assess progress.)</p>							
<p style="color: red;">If payment will be sought for material stored off-site, labor and material must be entered on separate lines.</p>							
100 L	Structural Steel - Installation	\$ -	\$ -	\$ -	\$ -	0%	
100 M	Structural Steel - Materials	\$ -	\$ -	\$ -	\$ -	0%	
<p style="color: red;">Enter the original contract value for each line item.</p>							
100 L	Structural Steel - Installation	\$ 5,675.00	\$ -	\$ -	\$ -	0%	
<p style="color: red;">Do not enter data in these three columns. (These values are computed by worksheet formulas.)</p>							
500	Pave Parking Lot A	\$ 30,000.00	\$ 5,000.00	\$ 10,000.00	\$ 15,000.00	50%	
<p style="color: red;">Enter the total progress (percent complete) for each line item.</p>							
500	Pave Parking Lot B	\$ 50,000.00	\$ 10,000.00	\$ 27,500.00	\$ 37,500.00	75%	
<p style="color: red;">Add notes or comments for a particular item if additional information/explanation is necessary or desired</p>							
500	Pave Parking Lot C	\$ 30,000.00	\$ 10,000.00	\$ 8,000.00	\$ 18,000.00	60%	PCO for time extension due to weather

CHNG ORD. NO.	ITEM DESCRIPTION	TOTAL VALUE	VALUE OF WORK COMPLETED			PERCENT COMPLETE	NOTES / COMMENTS
			PREVIOUS VALUE TO DATE	VALUE THIS REPORT	CURRENT VALUE TO DATE		

Enter the Change Order Number. (Examples: 1, 2, 3.....). Additional identifying numbers and/or letters may be added as shown in examples below as needed.

1a	ADDITIONAL LANDSCAPING - Additional trees and shrubs	\$ 6,000.00	\$ -	\$ -	\$ -	0%	
1b	ADDITIONAL LANDSCAPING - Extend irrigation system	\$ 4,000.00	\$ -	\$ -	\$ -	0%	

If necessary to provide more detail for a specific Change Order, use multiple lines for each component as needed.

3	EPDM Roofing	\$ -	\$ -	\$ -	\$ -	0%	
---	--------------	------	------	------	------	----	--

Enter a Change Order description. (Line items must be broken out in a sufficient level of detail to allow Owner and A/E to assess progress.)

AFFIDAVIT OF PAYMENT OF CLAIMS

By:

This day _____ personally appeared before me, _____, a Notary Public in and for the City/County of _____, _____ and, being by me first duly sworn, states that all subcontractors and suppliers of labor and materials have been paid all sums due them for work performed or materials furnished in the performance of the Contract between the County of Albemarle, Virginia, and/or The School Board of Albemarle County, Virginia, Owner, and _____, Contractor, dated _____, 20____, for the construction of _____, _____, or arrangements have been made by the Contractor satisfactory to such subcontractors and suppliers with respect to payments of such sums as may be due them by the Contractor.

(Contractor Name)

By: _____

Print Name: _____

Title: _____

ARCHITECT/ENGINEER'S CERTIFICATE OF SUBSTANTIAL COMPLETION

Date: _____

County of Albemarle, Virginia, and/or
The School Board of Albemarle County, Virginia
c/o Facilities & Environmental Services – Facilities Planning & Construction Division
401 McIntire Road
Charlottesville, Virginia 22902-4596

Project Title: _____

RFQ/Contract No.: _____

In accordance with the requirements of the Contract Between Owner and Architect/Engineer and based upon the knowledge gained in the performance of the architectural/engineering services provided in said Contract and the reports of the Owner's Inspection and Testing entities, the undersigned Architect/Engineer states that the following portions of the project named above are substantially complete in accordance with the requirements of the Contract Documents and are recommended for use of their intended purpose (*indicate portions which are ready for use and, if applicable, occupancy*):

All applicable tests, certificates and regulatory inspections required by the Contract Documents and any local, state or federal regulations have been performed with respect to the substantially completed portions of the project and the Owner has been provided with a copy of each report, except for the following:

A tentative list of unfinished Work and defective Work, referred to as the "punch list," is attached hereto. The list may not be all-inclusive, and the failure to include an item in it does not alter the responsibility of the Contractor to complete all the Work in accordance with the Contract Documents. The items in the tentative list shall be completed or corrected by the Contractor within _____ days of the above date of Substantial Completion.

(A/E Firm Name)

By: _____

Print Name: _____

Title: _____

Attachment: Punch List

CERTIFICATE OF FINAL COMPLETION BY ARCHITECT/ENGINEER

Date: _____

County of Albemarle, Virginia, and/or
The School Board of Albemarle County, Virginia
c/o Facilities & Environmental Services – Facilities Planning & Construction Division
401 McIntire Road
Charlottesville, Virginia 22902-4596

Project Title: _____

RFQ/Contract No.: _____

In accordance with the requirements of the Contract Between the Owner and the Architect/Engineer for Professional Services and based upon the knowledge gained in the performance of the services required in said Agreement, the undersigned hereby states that the above named project was fully completed in accordance with the requirements of the Contract Documents on _____ (Month) _____ (Day), _____ (Year).

All applicable tests, certificates and regulatory inspections required by the Contract Documents and any local, state or federal regulations have been performed and the Owner has been provided with a copy of each report.

Final as-built drawings have been prepared by the Architect/Engineer and submitted to the Owner in accordance with the requirements of the Contract Documents. The Owner has been provided with a copy of all warranties and guarantees, including the starting date(s) of all warranties and guarantees, written and unwritten, required by the Contract Documents.

(A/E Firm Name)

By: _____

Print Name: _____

Title: _____

CERTIFICATE OF PARTIAL OR SUBSTANTIAL COMPLETION BY CONTRACTOR

Date: _____

County of Albemarle, Virginia, and/or
The School Board of Albemarle County, Virginia
c/o Facilities & Environmental Services – Facilities Planning & Construction Division
401 McIntire Road
Charlottesville, Virginia 22902-4596

Project Title: _____

RFQ/Contract No.: _____

In accordance with the requirements of the Agreement between the Owner and the Contractor, the undersigned Contractor hereby states that portions of the above named project are substantially completed in accordance with the requirements of the Contract Documents as modified by approved change orders. Those portions of the project now substantially complete are:

All applicable tests, certificates and regulatory inspections required by the Contract Documents and any local, state or federal regulations have been performed with respect to the substantially completed portions of the project and the Owner has been provided with a copy of each report.

As-built marked up prints of the substantially completed portions of the project have been provided to the Architect/Engineer as required by the Contract Documents.

The Owner has been provided with a copy of all warranties and guarantees, including the starting date(s) of all warranties and guarantees, written and unwritten, required by the Contract Documents with respect to the completed portions of the project, except as follows:

All training, operating instructions and maintenance manuals required by the Contract Documents have been provided to the Owner, except as follows:

This certificate does not constitute an acceptance of Work not in accordance with the Contract Documents nor is it a release of CONTRACTOR’S obligation to complete the Work in accordance with the Contract Documents.

(Contractor Name)

By: _____

Print Name: _____

Title: _____

CERTIFICATE OF FINAL COMPLETION BY CONTRACTOR

Date: _____

County of Albemarle, Virginia, and/or
The School Board of Albemarle County, Virginia
c/o Facilities & Environmental Services – Facilities Planning & Construction Division
401 McIntire Road
Charlottesville, Virginia 22902-4596

Project Title: _____

RFQ/Contract No.: _____

In accordance with the requirements of the Contract Between Owner and Contractor (Form AC-9) the undersigned Contractor hereby states that the above named project has been fully completed in accordance with the requirements of the Contract Documents as modified by approved change orders.

All applicable tests, certificates and regulatory inspections required by the Contract Documents and any local, state or federal regulations have been performed with respect to the completed project and the Owner has been provided with a copy of each report.

As-built marked up prints of the completed project have been provided to the Architect/Engineer as required by the Contract Documents.

The Owner has been provided with a copy of all warranties and guarantees, including the starting date(s) of all warranties and guarantees, written and unwritten, required by the Contract Documents.

All training, operating instructions and maintenance manuals required by the Contract Documents have been provided to the Owner.

(Contractor Name)

By: _____

Print Name: _____

Title: _____

Copy: Architect/Engineer

ALBEMARLE COUNTY SPECIAL PROVISION COPIED NOTES

CONTRACT PRICE

Bids shall be LUMP SUM and shall include ALL WORK necessary to complete the project to the full intent of the plans and accompanying bid documents. The Lump Sum price provided by the bidder includes all material quantities required to perform the project. With the exception of allowance items, material quantities will not be tracked and used as justification for payment during construction.

In the event that a Change Order becomes necessary during the life of the project, the Contractor will be paid extra or shall credit the Owner, as the case may be, on the basis of the unit prices quoted herein; these unit prices are not to be used for routine over-runs or under-runs, unless the change is so significant as to justify a Change Order. Prices shall include all overhead, profit, labor, materials, equipment and incidental work and shall be the sum total compensation payable or creditable for such items of work in place. These unit prices shall be good for the duration of the contract.

Albemarle County reserves the right to reject an individual unit price included herein prior to award of the contract. Items listed below may or may not be on the bid plans. Unit prices shall be provided for each item, except those clearly labeled as not applicable (N/A). If a change order is required during construction that utilizes an item denoted as N/A or a unit price that is otherwise rejected, the price for that work will be determined in accordance with the General Terms and Conditions of the Contract. Bids may be deemed unresponsive if a unit price is not provided for every item listed on the bid form.

PERMITS

The Contractor is responsible for ensuring that all permits required to perform the work are obtained and that all conditions of those permits are met throughout the duration of the project. Permits for this project that have been obtained by the COUNTY, will be obtained by the COUNTY, will be transferred to the CONTRACTOR and/ or must be obtained by the CONTRACTOR are identified in the below. Any other permits not identified below, but required to perform the work, will be the responsibility of the CONTRACTOR to obtain. Unless explicitly stated otherwise, all charges and expenses associated with obtaining permits or meeting the conditions of the permits shall be the responsibility of the CONTRACTOR. Any other permits not identified herein, but required to perform the work, will be the responsibility of the CONTRACTOR to obtain.

- A. County Land Disturbance Permit – A County Land Disturbance Permits shall be required for this project. The CONTRACTOR shall be responsible for obtaining an Albemarle County Land Disturbance Permit from the office of Community Development. In addition, the CONTRACTOR shall ensure that all operations shall be performed in a manner that minimizes erosion and sedimentation of the adjacent properties, street, and storm drainage systems. All work shall be performed in accordance with the latest edition of the Virginia Erosion and Sediment Control Handbook (VESCH) and the sequencing outlined in the plans. The Contractor shall have a DEQ Certified Responsible Land Disturber (RLD) on the project site at all times during the construction project where land is being disturbed. The RLD will be responsible for ensuring that all aspects of the VESCM are adhered to during this project.
- B. VDOT Land Use Permit - VDOT has informed the County that the CONTRACTOR (acting as the COUNTY's agent) will be required to obtain one (1) VDOT Land Use Permits (LUP). The Land Use Permit WILL NOT require separate bond(s). However, the chosen Contractor will be required to provide a dual obligee rider as identified in the Supplemental General Conditions. The VDOT Land Use Permit Fee(s) will be waived for the Land Use Permit. The Contractor WILL NOT need to include the cost of Land Use Permit(s) in their bid. However, the CONTRACTOR will be responsible for filing the Land Use Permit(s) as an agent of the COUNTY and work with VDOT to gain their acceptance and issuance of permit(s).

- C. VSMP Permit - A VSMP (Virginia Stormwater Management Program) permit is required for this project and will be obtained by the County. The Contractor will be required to sign a certification statement to comply with all conditions of the VSMP permit.

VDOT SPECIAL PROVISION COPIED NOTES

cn100-000051-05 **VDOT SUPPLEMENTAL SPECIFICATIONS (SSs), SPECIAL PROVISIONS (SPs) AND SPECIAL PROVISION COPIED NOTES (SPCNs)**

Where Virginia Department of Transportation (VDOT) Supplemental Specifications, Special Provisions and Special Provision Copied Notes are used in this contract, the references therein to “the Specifications” shall refer to the *Virginia Department of Transportation Road and Bridge Specifications*, dated 2020 and the Supplement thereto, dated 2022. References to the “Road and Bridge Standards” shall refer to the *Virginia Department of Transportation Road and Bridge Standards*, dated 2016 with revisions issued online as of the advertisement date for this project incorporated. References to the “Virginia Work Area Protection Manual” shall refer to the 2011 edition of the *Virginia Work Area Protection Manual with Revision Number 2.1* incorporated, dated November 1, 2020. References to the “MUTCD” shall refer to the 2009 edition of the *MUTCD with Revision Numbers 1 and 2* incorporated, dated May 2012; and the 2011 edition of the *Virginia Supplement to the MUTCD with Revision Number 1* dated September 30, 2013.

Where the terms “Department”, “Engineer”, “Contract Engineer”, “Construction Engineer”, Materials “Engineer”, and “Operations Engineer” appear in VDOT Supplemental Specifications, Special Provisions and Special Provision Copied Notes used in this contract and the VDOT publications that each references, the authority identified shall be according to the definitions in Section 101.02 of the *Virginia Department of Transportation Road and Bridge Specifications*, dated 2020. Authority identified otherwise for this particular project will be stated elsewhere in this contract.

VDOT Supplemental Specifications, Special Provisions and Special Provision Copied Notes used in this contract and the VDOT publications that each reference are intended to be complementary to the each other. In case of a discrepancy, the order of priority stated in Section 105.12 of the *Virginia Department of Transportation Road and Bridge Specifications*, dated 2020 shall apply.

VDOT Special Provision Copied Notes in this contract are designated with “(SPCN)” after the date of each document. VDOT Supplemental Specifications and Special Provision Copied Notes in this contract are designated as such above the title of each document.

The information at the top and left of each VDOT Special Provision Copied Note in this contract is file reference information for VDOT use only. The information in the upper left corner above the title of each VDOT Supplemental Specification and VDOT Special Provision in this contract is file reference information for VDOT use only.

7-1-22 (SPCN)

SECTION 105.01—NOTICE TO PROCEED — The Notice to Proceed date for this contract will be established by the County and will be on or before February 2, 2026.

10-26-20

cn105-000140-00 **SECTION 105.14—MAINTENANCE DURING CONSTRUCTION** of the Specifications is amended by the following:

Section 105.14(a)3 – Flagging Traffic is replaced with the following:

3. **Flagging Traffic:** Flaggers shall be able to communicate to the traveling public in English while performing the job duty as a flagger at the flagger station.

All flaggers shall possess a valid, current flagger certification card, be it a physical or electronic card, **at all times while performing flagging duties.**

Flaggers shall be certified by the VDOT Basic or Intermediate Work Zone Traffic Control Training course or by the ATSSA’s classroom Flagger Certification Program.

The following constitutes a valid flagger certification card:

- Cards issued by VDOT following completion of the Basic Work Zone course;
- Cards issued by VDOT following completion of the Intermediate Work Zone course;
- Cards issued by ATSSA following completion of a Flagger course;
- Cards issued by VDOT following completion of the Flagger-only course, provided the cards were issued on or before December 31, 2024, and have not yet reached the expiration date (two years after date of issuance).

Flaggers who fail to possess a valid, current, flagger certification card, or refuse to allow inspection of same upon request, shall be removed from the flagging site, and operations requiring flagging shall be suspended by the Engineer. Suspended operations requiring flagging may resume once a certified flagger arrives on-site to perform flagging duties in accordance with applicable requirements. Flaggers improperly performing duties may be subject to flagger certification revocation at the sole discretion of the Engineer.

12-20-24 (SPCN)

DRUG-FREE WORKPLACE– The Contractor shall:

- Provide a Drug-Free Workplace for the Contractor’s employees.
- Post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in the Contractor’s workplace and specifying the actions that will be taken against employees for violations of such prohibition.
- State in all solicitations or advertisements for employees placed by or on behalf of the Contractor that the Contractor maintains a Drug-Free Workplace.
- Include the provisions of the foregoing clauses in every Subcontract or purchase order of over \$10,000, so that the provisions will be binding upon each Subcontractor or vendor.

For the purposes of this provision, “Drug-Free Workplace” means a site for the performance of work done in connection with the Contract. The Contractor’s employees, and those of his Subcontractors, shall be prohibited from engaging in the unlawful manufacture, sale, distribution, dispensation, possession, or use of any controlled substance or marijuana during the performance of the Work.

7-3-19 (SPCN)

SECTION 108.06(b) LIQUIDATED DAMAGES of the Specifications is replaced by the following:

All work for this Contract shall be completed and accepted on or before the time limit established in the Contract. In the event the Contractor fails to complete the work by the time limit, liquidated damages, representing the estimated additional cost of administration, engineering, supervision, inspection and other expenses will be charged against the Contractor in the amount of one thousand one hundred dollars (\$1,100.00) for each calendar day beyond the time limit, including Sundays and Holidays, in which the Contract remains in an incomplete state.

10-26-20

SECTION 303 EARTHWORK, SUBSECTION 303.06 MEASUREMENT AND PAYMENT is amended to add the following:

Regular excavation will be measured in cubic yards. Such cost shall consider excavation work as unclassified and shall include the necessary cost to excavate all soil types as necessary to accommodate the work. The cost for regular excavation shall include regular excavation; excavation and hauling of on-site and/or borrow material; placing of approved fill material; constructing embankments; hauling and disposing of surplus and unsuitable material; shaping; compaction; sloping; and dressing.

Rock Excavation will be measured in cubic yards. Such cost shall cover the excavation of rock encountered during regular excavation of areas above subgrade. The cost for rock excavation shall include excavation and proper disposal off-site of excess material. The Contractor’s Part C bid shall assume that all of the Rock Excavation quantity in the bid form will be realized during the length of the contract. Consideration for time extensions due to additional Rock Excavation shall only be considered after the Part C quantity is exceeded.

Rock Excavation in Pipe Trenches will be measured in cubic yards. Such cost shall cover the excavation of rock encountered during incidental excavation associated with the installation of storm sewer or water line pipe below the roadway subgrade. The cost for rock excavation in pipe trenches shall include excavation and proper disposal off-site of excess material. The Contractor’s Part D bid shall

assume that all of the Rock Excavation in Pipe Trenches quantity in the bid form will be realized during the length of the contract. Consideration for time extensions due to additional Rock Excavation in Pipe Trenches shall only be considered after the Part D quantity is exceeded.

Undercut Excavation will be measured in cubic yards and be measured below the areas of excavation required to reach the roadway subgrade. Such cost shall include the excavation, removal, and off-site disposal of unsuitable material, the placement of geotextile fabric, and placement of backfill with compacted material. The Contractor's Part B bid shall assume that all of the Undercut Excavation quantity in the bid form will be realized during the length of the contract. Consideration for time extensions due to additional Undercut Excavation shall only be considered after the Part B quantity is exceeded.

<u>Pay Item</u>	<u>Pay Unit</u>
REGULAR EXCAVATION	CUBIC YARD
ROCK EXCAVATION	CUBIC YARD
ROCK EXCAVATION IN PIPE TRENCHES	CUBIC YARD
UNDERCUT EXCAVATION	CUBIC YARD

10-28-2020 (SPCN)

CONTRACTOR SEXUAL HARASSMENT POLICY – If the contractor employs more than five employees, the contractor shall (i) provide annual training on the contractor's sexual harassment policy to all supervisors and employees providing services in the Commonwealth, except such supervisors or employees that are required to complete sexual harassment training provided by the Department of Human Resource Management, and (ii) post the contractor's sexual harassment policy in (a) a conspicuous public place in each building located in the Commonwealth that the contractor owns or leases for business purposes and (b) the contractor's employee handbook.

The contractor shall include the above paragraph in every subcontract or purchase order over \$10,000, so that this requirement shall be binding upon each subcontractor or vendor.

6-5-20 (SPCN)

CONTRACTOR MAINTENANCE OF TEMPORARY MARKINGS – The second, third, and fourth paragraphs of Section 512.03(k)3 of the Specifications will also apply to Sections 512.03(k)1 and 512.03(k)2 of the Specifications.

6-13-17 (SPCN)

SS109-002020-01

May 1, 2023

VIRGINIA DEPARTMENT OF TRANSPORTATION
2020 ROAD AND BRIDGE SUPPLEMENTAL SPECIFICATIONS
SECTION 109—MEASUREMENT AND PAYMENT

SECTION 109—MEASUREMENT AND PAYMENT of the Specifications is amended as follows:

SECTION 109.08—Partial Payments is replaced in its entirety with the following:

(a) **General**

Partial payments will be based on a monthly progress estimate consisting of approximate quantities and value of work performed as determined by the Engineer. When the method of measurement for a Contract item is in units of each or lump sum, the value of work accomplished for partial payment will be determined on a pro rata basis. Partial payments will be made once each month for the work performed in accordance with the Contract requirements. The Contractor will be given the opportunity to review the monthly progress estimate prior to each partial payment. Upon final acceptance, one last monthly estimate will be prepared and any additional payment due will be vouchered for payment.

The monthly progress estimates will be prepared in accordance with the following schedule:

1. **Contractor companies whose name begins with the letter A through F:** The monthly progress estimate will be prepared on the 4th day of each month, beginning on the first 4th day following the date of the Contract execution, and on the same day of the succeeding months as the work progresses.
2. **Contractor companies whose name begins with the letter G through P:** The monthly progress estimate will be prepared on the 11th day of each month, beginning on the first 11th day following the date of the Contract execution, and on the same day of the succeeding months as the work progresses.
3. **Contractor companies whose name begins with the letter Q through Z:** The monthly progress estimate will be prepared on the 20th day of each month, beginning on the first 20th day following the date of the Contract execution, and on the same day of the succeeding months as the work progresses.

For contracts without a payment bond, the Contractor shall submit to the Engineer a letter from each materials supplier and subcontractor involved stating that the Contractor has paid or made satisfactory arrangements for settling all bills for materials and subcontracted work that was paid on the previous month's progress estimate. The Department will use the source of supply letter and approved subletting request to verify that certifications have been received for work that was paid on the previous monthly estimate. The Contractor shall furnish these and other certificates as are required as a prerequisite to the issuance of payment for the current monthly estimate.

The Department may withhold the payment of any partial or final estimate voucher or any sum(s) thereof from such vouchers if the Contractor fails to make payment promptly to all persons supplying equipment, tools, or materials; or for any labor he uses in the prosecution of the Contract work.

Unless otherwise provided under the terms of the Contract, interest shall accrue at the rate of one percent per month.

Contractors doing business as an individual must provide their social security numbers; proprietorships, partnerships, and corporations must provide their federal employer identification numbers.

(b) Payment to Subcontractors

Payment to subcontractors shall be in accordance with the provisions of Code of Virginia § 2.2- 4354 and § 2.2-4355 as follows.

1. Department has paid Contractor for Subcontractor's Work.

Upon the Department's payment to the Contractor for the subcontractor's portion of the work as shown on the monthly progress estimate and the receipt of payment by the Contractor for such work, the Contractor shall make compensation in full to the subcontractor. For the purposes of this Section, payment of the subcontractor's portion of the Work shall mean that payment has been issued for that portion of the Work that was identified on the monthly progress estimate for which the subcontractor has performed service.

The Contractor shall take one of the following two actions within 7 days after receipt of payment from the Department for the subcontractor's portion of the Work as shown on the monthly progress estimate:

- a. Pay the subcontractor for the proportionate share of the total payment received from the agency attributable to the Work performed by the subcontractor; or
- b. Notify the Department and subcontractor, in writing, of his intention to withhold all or a part of the subcontractor's payment along with the reason for nonpayment.

In the event payment is not made as required, the Contractor shall pay interest at the rate of one percent per month, unless otherwise provided in the Contract, to the subcontractor on all amounts that remain unpaid after 7 days, except for the amounts withheld as provided in this Section.

2. Department has not paid Contractor for Subcontractor's Work.

In the event that the Contractor has not received payment from the Department for work performed by a subcontractor under the Contract, the Contractor is liable for the entire amount owed to such subcontractor and shall pay such subcontractor within 60 days of the receipt of an invoice following satisfactory completion of the work for which the subcontractor has invoiced. The Contractor shall not be liable for amounts otherwise reducible due to the subcontractor's noncompliance with the terms of the Contract. However, in the event that the Contractor withholds all or part of the amount invoiced by the subcontractor under the terms of the Contract, the Contractor shall notify the subcontractor within 50 days of the receipt of such invoice, in writing, of his intention to withhold all or part of subcontractor's payment with the reason for nonpayment, specifically identifying the contractual noncompliance, the dollar amount being withheld, and the lower-tier subcontractor responsible for the contractual noncompliance. Payment by the party contracting with the Contractor shall not be a condition precedent to payment to any lower-tier subcontractor, regardless of the Contractor receiving payment for amounts owed to them. Any contrary provisions shall be unenforceable.

3. Nothing in this Section shall be construed to (i) apply to or prohibit the inclusion of any retainage provisions in a construction contract or (ii) apply to contracts awarded solely for

professional services as that term is defined in Code of Virginia § 2.2-4301 where the Department is contracting directly with an architectural and engineering firm.

4. The Contractor shall include in each of its subcontracts provisions requiring each subcontractor to include or otherwise be subject to the same payment and interest requirements with respect to each lower tier subcontractor.
5. If the Contractor fails to make payment to the subcontractor within the time frames specified herein, the subcontractor shall notify the Engineer and the Contractor's bonding company in writing. The Contractor's bonding company shall be responsible for insuring payment in accordance with this Section and Section 107.01.

(c) Retainage

If the Engineer determines the Contractor's progress is unsatisfactory according to Section 108.03 or other applicable Contract documents, the Engineer will send a notice of unsatisfactory progress to the Contractor advising him of such determination. This notification will also advise the Contractor that five percent retainage of the monthly progress estimate is being withheld and will continue to be withheld for each month the Contractor's actual progress is determined to be unsatisfactory.

When the Engineer determines that the Contractor's progress is satisfactory in accordance with these requirements, the 5 percent retainage previously withheld because of unsatisfactory progress will be released in the next monthly progress estimate, and the remaining monthly progress estimates will be paid in full provided the Contractor's progress continues to be satisfactory.

SS211-002020-03

March 18, 2024

VIRGINIA DEPARTEMENT OF TRANSPORTATION
2020 ROAD AND BRIDGE SUPPLEMENTAL SPECIFICATIONS
SECTION 211 – ASPHALT CONCRETE

SECTION 211 – ASPHALT CONCRETE of the Specifications is amended as follows:

Section 211.01 – Description is replaced with the following:

Asphalt concrete shall consist of a combination of mineral aggregate and asphalt binder mixed mechanically in a plant specifically designed for such purpose.

An equivalent single-axle load (ESAL) will be established by the Engineer, and SUPERPAVE mix types may be specified as one of the types listed as follows:

Mix Type ¹	Equivalent Single-Axle Load (ESAL) Range (millions)	Minimum Asphalt Performance Grade (PG) ²	Nominal Maximum Aggregate Size ³
SM-4.75A	0 to 3	64S-16	No. 4
SM-4.75D	3 to 10	64H-16	No. 4
SM-4.75E	3 to 10	64E-22	No. 4
SM-9.0A	0 to 3	64S-16	3/8 in
SM-9.0D	3 to 10	64H-16	3/8 in
SM-9.0E	Above 10	64E-22	3/8 in
SM-9.5A	0 to 3	64S-16	3/8 in
SM-9.5D	3 to 10	64H-16	3/8 in
SM-9.5E	Above 10	64E-22	3/8 in
SM-12.5A	0 to 3	64S-16	1/2 in
SM-12.5D	3 to 10	64H-16	1/2 in
SM-12.5E	Above 10	64E-22	1/2 in
IM-19.0A	Less than 10	64S-16	3/4 in
IM-19.0D	10 to 20	64H-16	3/4 in
IM-19.0E	20 and above	64E-22	3/4 in
BM-25.0	All ranges	64H-16	1 in

¹SM = Surface Mixture; IM = Intermediate Mixture; BM = Base Mixture

²**Minimum Asphalt Performance Grade (PG)** is defined as the minimum binder performance grade for the job mix formulas as determined by AASHTO T170 or AASHTO M332.

³**Nominal Maximum Aggregate Size** is defined as one sieve size larger than the first sieve to retain more than 10 percent aggregate.

Asphalt concrete shall conform to the requirements for the mix type designated on the plans or elsewhere in the Contract for use.

At the Contractor's option, an approved Warm Mix Asphalt (WMA) additive or process may be used to produce the asphalt concrete mix type designated.

Table II-12A – Standard Deviation is renamed **Aggregate Properties** and is replaced with the following:

TABLE II-12A
Aggregate Properties

Mix Type	Coarse Aggregate Properties			Fine Aggregate Properties	
	CAA		ASTM D4791	SE	FAA
	1 fractured face	2 fractured faces	F & E (5:1) % by weight		
SM-4.75A				40% min	40% min
SM-4.75D				45% min	45% min
SM-4.75E				45% min	45% min
SM-9.0 A	85% min.	80% min.	10% max. ¹	40% min.	40% min.
SM-9.0 D	85% min.	80% min.	10% max. ¹	45% min.	45% min.
SM-9.0 E	95% min.	90% min.	10% max. ¹	45% min.	45% min.
SM-9.5 A	85% min.	80% min.	10% max. ¹	45% min.	45% min.
SM-9.5 D	85% min.	80% min.	10% max. ¹	45% min.	45% min.
SM-9.5 E	95% min.	90% min.	10% max. ¹	45% min.	45% min.
SM-12.5 A	85% min.	80% min.	10% max. ¹	45% min.	45% min.
SM-12.5 D	85% min.	80% min.	10% max. ¹	45% min.	45% min.
SM-12.5 E	95% min.	90% min.	10% max. ¹	45% min.	45% min.
IM-19.0 A	85% min.	80% min.	10% max. ¹	45% min.	45% min.
IM-19.0 D	95% min.	90% min.	10% max. ¹	45% min.	45% min.
IM-19.0 E	95% min.	90% min.	10% max. ¹	45% min.	45% min.
BM-25.0	80% min.	75% min.	10% max. ¹	45% min.	45% min.

¹10 percent measured at 5:1 on maximum to minimum dimensions

Table II-13 – Asphalt Concrete Mixtures: Design Range is replaced with the following:

TABLE II-13
Asphalt Concrete Mixtures: Design Range

Mix Type	Percentage by Weight Passing Square Mesh Sieves											
	1 1/2 in	1 in	3/4 in	1/2 in	3/8 in	No. 4	No. 8	No. 16	No. 30	No. 50	No. 200	
SM-4.75 A,D,E				100 ¹	95-100	90-100			30-55			6-13
SM-9.0 A,D,E				100 ¹	90-100	90	47-67					2-10
SM-9.5 A,D,E				100 ¹	90-100	58-80	38-67			23		2-10
SM-12.5 A,D,E			100	95-100	90	58-80	34-50			23		2-10
IM-19.0 A,D,E		100	90-100	90	--	--	28-49					2-8
BM-25.0	100	90-100	90	--	--	--	19-38					1-7
C (Curb Mix)				100	92-100	70-75	50-60		28-36	15-20		7-9

¹A production tolerance of 1% will be applied to this sieve regardless of the number of tests in the lot.

Table II-14 – Mix Design Criteria is replaced with the following:

TABLE II-14
Mix Design Criteria

Mix Type	VTM (%) Production	VFA (%) Design	VFA (%) Production	Min. VMA (%)	Fines/Asphalt Ratio	No. of Gyrations N Design
SM4.75A ^{2,4}	3.0-6.0	70-75	70-80	16.5	1.0-2.0	50
SM4.75D ^{2,4}	3.0-6.0	70-75	70-80	16.5	1.0-2.0	50
SM4.75E ^{2,4}	3.0-6.0	70-75	70-80	16.5	1.0-2.0	50
SM-9.0A ^{1,2}	2.0-5.0	75-80	70-85	17.0	0.6-1.3	50
SM-9.0D ^{1,2}	2.0-5.0	75-80	70-85	17.0	0.6-1.3	50
SM-9.0E ^{1,2}	2.0-5.0	75-80	70-85	17.0	0.6-1.3	50
SM-9.5A ^{1,2}	2.0-5.0	75-80	70-85	16.0	0.7-1.3	50
SM-9.5D ^{1,2}	2.0-5.0	75-80	70-85	16.0	0.7-1.3	50
SM-9.5E ^{1,2}	2.0-5.0	75-80	70-85	16.0	0.7-1.3	50
SM-12.5A ^{1,2}	2.0-5.0	73-79	68-84	15.0	0.7-1.3	50
SM-12.5D ^{1,2}	2.0-5.0	73-79	68-84	15.0	0.7-1.3	50
SM-12.5E ^{1,2}	2.0-5.0	73-79	68-84	15.0	0.7-1.3	50
IM-19.0A ^{1,2}	2.0-5.0	69-76	64-83	14.0	0.6-1.3	50
IM-19.0D ^{1,2}	2.0-5.0	69-76	64-83	14.0	0.6-1.3	50
IM-19.0E ^{1,2}	2.0-5.0	69-76	64-83	14.0	0.6-1.3	50
BM-25.0 ^{2,3}	0.5-3.5	67-87	67-92	12.0	0.6-1.3	50

¹Binder content should be selected at 4.0% air voids for A and D mixes, 3.5% air voids for E mix.

²Fines-asphalt ratio is based on effective binder content.

³Base mix shall be designed at 2.0% air voids. BM-25.0 shall have a minimum binder content of 4.6% unless otherwise approved by the Engineer.

⁴Binder content shall be selected at 5.0 percent air voids.

Table II-14A- Recommended Performance Grade of Asphalt Cement is replaced with the following:

Mix Type	Percentage of Reclaimed Asphalt Pavement (RAP) in Mix		
	%RAP ≤ 25.0%	25.0% < %RAP ≤ 30%	25.0% < %RAP ≤ 35%
SM-4.75A, SM-9.0A, SM-9.5A, SM-12.5A	PG 64S-22	PG 64S-22	
SM-4.75D, SM-9.0D, SM-9.5D, SM-12.5D	PG 64H-22	PG 64S-22	
IM-19.0A	PG 64S-22	PG 64S-22	
IM-19.0D	PG 64H-22	PG 64S-22	
BM-25.0	PG 64H-22		PG 64S-22

211.02—Materials (h)- is replaced with the following

(h) An antistripping additive shall be used in all asphalt mixes. Additives may be hydrated lime or a chemical additive from the Materials Division Approved List No. 7 or a combination of both. When using an approved chemical additive, it shall be added at a rate of not less than 0.30 percent by weight of the total asphalt content of the mixture unless otherwise indicated on the Department's Approved List No. 7.

211.02—Materials (m)- is replaced with the following

(m) Warm Mix Asphalt (WMA) additives or processes shall be approved by the Department prior to use and shall be obtained from the Department's Approved List No. 66. When using an approved chemical additive, it shall be added at a rate of not less than 0.50 percent by weight of the total asphalt content of the mixture unless otherwise indicated on the Department's Approved List No.66.

Section 211.03(d)8 – For surface mixes is replaced with the following:

For surface mixes, permeability test data shall be submitted in accordance with VTM-120 using either single point verification or the regression method for each surface mix having a different gradation. The specimen height shall be one inch for SM-4.75 mix types. If the average of the permeability results from the single point verification method exceeds 150×10^{-5} cm/sec, or if the regression method predicts a permeability exceeding 150×10^{-5} cm/sec at 7.5% voids, the Contractor shall redesign the mixture to produce a permeability number less than 150×10^{-5} cm/sec.

Section 211.04(a) – Types SM-9.0A, SM-9.0D, SM-9.0E, SM-9.5A, SM-9.5D, SM-9.5E, SM-12.5A, SM-12.5D, and SM-12.5E asphalt concrete is renamed **Types SM-4.75A, SM-4.75D, SM-4.75E, SM-9.0A, SM-9.0D, SM-9.0E, SM-9.5A, SM-9.5D, SM-9.5E, SM-12.5A, SM-12.5D, and SM-12.5E asphalt concrete** and replaced with the following:

Types SM-4.75A, SM-4.75D, SM-4.75E, SM-9.0A, SM-9.0D, SM-9.0E, SM-9.5A, SM-9.5D, SM-9.5E, SM-12.5A, SM-12.5D, and SM-12.5E asphalt concrete shall consist of crushed stone, crushed slag, or crushed gravel and fine aggregate; slag or stone screenings; or a combination thereof combined with asphalt binder.

For all surface mixes, except where otherwise noted, no more than 5% of the aggregate retained on the No. 4 sieve and no more than 20% of the total aggregate may be polish-susceptible. At the discretion of the Engineer, SM-9.5AL or SM-12.5AL may be specified and polish susceptible aggregates may be used (without percentage limits).

Unless Type C (curb mix) is specified in the Contract, SM-9.0, SM-9.5, and SM-12.5 mix types are acceptable for use in the construction of asphalt curbing.

Section 211.04(e) – Type SM-9.5, SM-12.5, IM-19.0 and BM-25.0 asphalt concrete is renamed **Type SM-4.75, SM-9.5, SM-12.5, IM-19.0 and BM-25.0 asphalt concrete** and amended to replace the first paragraph with the following:

Type SM-4.75, SM-9.0, SM-9.5, SM-12.5, IM-19.0 and BM-25.0 asphalt concrete may be designated E (polymer modified), or stabilized (S). Asphalt concrete mixtures with the E designation may not be stabilized.

Table II-15 – Process Tolerance is replaced with the following:

**TABLE II-15
Process Tolerance**

Tolerance on Each Laboratory Sieve and Binder Content: Percent Plus and Minus													
No. Tests	Top Size ¹	1 ½”	1”	¾”	½”	3/8”	No. 4	No. 8	No. 16	No. 30	No. 50	No. 200	A.C.
1	0.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	6.0	5.0	2.0	.60
2	0.0	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	4.3	3.6	1.4	0.43
3	0.0	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	3.3	2.8	1.1	0.33
4	0.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.0	2.5	1.0	0.30
5	0.0	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	2.7	2.2	0.9	0.27
6	0.0	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	2.4	2.0	0.8	0.24
7	0.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.3	1.9	0.8	0.23
8	0.0	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.1	1.8	0.7	0.21
12	0.0	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	1.7	1.4	0.6	0.17

¹Defined as the sieve that has 100% passing as defined in Table II-13.

Section 211.08 – Acceptance is amended by replacing the sixth paragraph with the following:

Binder content will be measured as extractable binder or weight after ignition. The Contractor shall submit a copy of burn tickets from an ignition oven to the Engineer and all the original tickets shall be available upon Engineer’s request. The Engineer shall be notified within 24 hours from testing of a report edit if the date and time on a ticket do not match information submitted in PLAID. Original tickets shall be

maintained on file by the Contractor for a period of 5 years or until final acceptance of the applicable contract, whichever is greater.

Section 211.09 – Adjustment System is amended by replacing the first paragraph and following table with the following:

If a lot of material does not conform to the acceptance requirements of Section 211.08, the Department will determine adjustment points as follows:

**Adjustment Points for Each 1% the Gradation Is Outside the
Process Tolerance Permitted In Table II-15**

Sieve Size	(Applied in 0.1% increments)
1 1/2 in	1
1 in	1
3/4 in	1
1/2 in	1
3/8 in	1
No. 4	1
No. 8	1
No. 16	1
No. 30	2
No. 50	2
No. 200	3

SS220-002020-01

August 28, 2020

**VIRGINIA DEPARTMENT OF TRANSPORTATION
2020 ROAD AND BRIDGE SUPPLEMENTAL SPECIFICATIONS
SECTION 220 – CONCRETE CURING MATERIALS**

SECTION 220 – CONCRETE CURING MATERIALS of the Specifications is amended as follows:

Section 220.02(a) – Waterproof paper is replaced with the following:

Waterproof paper shall conform to ASTM C171. One side shall be composed of white, light-reflecting paper.

Section 220.02(b) – PE film is replaced with the following:

PE film shall conform to ASTM C171 except that its nominal thickness shall be 3.0 mils. The thickness at any point shall be at least 2.5 mils.

Section 220.02(c) – Burlap and PE film is replaced with the following:

Burlap and PE film may be used in combination. They shall be bonded securely so that they cannot be easily separated in a dry or saturated condition. White PE film shall conform to the reflectance requirements of ASTM C171. Burlap shall conform to Section 220.02(f). The combination product shall have a total weight of 11 ounces per square yard with 11 threads of burlap per inch.

Section 220.02(f) – Burlap is inserted as follows:

Burlap used by itself shall conform to AASHTO M 182, Class 3, except the weight of each sample may vary by 10%. Acceptance shall be based on the average weight of all samples submitted according to AASHTO M 182, Table 3. If any individual sample is outside the 10% tolerance, the lot will be rejected.

SS223-002020-02

April 4, 2023

VIRGINIA DEPARTMENT OF TRANSPORTATION
2020 ROAD AND BRIDGE SUPPLEMENTAL SPECIFICATIONS**SECTION 223 – STEEL REINFORCEMENT****SECTION 223 – STEEL REINFORCEMENT** of the Specifications is amended as follows:**SECTION 223.02(a) – Reinforcement** is replaced as follows:

1. **Deformed bars** shall conform to ASTM A615, Grade 40 or 60; or ASTM A706, Grade 60. Longitudinal bars for continuous reinforced hydraulic cement concrete pavement shall be Grade 60.
2. **Plain bars** shall conform to ASTM A615, Grade 40 or 60; or ASTM A706, Grade 60, deformation waived. When used as a dowel, material may be a plain bar conforming to the requirements of ASTM A615, Grade 40 or 60, or a plain dowel conforming to the requirements of ASTM A709, Grade 36; or ASTM A706, Grade 60.
3. **Welded wire fabric** shall conform to ASTM A1064. When used in continuously reinforced hydraulic cement concrete pavement wire fabric shall be deformed, furnished in flat sheets, and shall conform to ASTM A1064, Grade 70.
4. **Structural steel** shall conform to Section 226.
5. **Bar mats** shall conform to ASTM A184.
6. **Spiral wire** shall conform to AASHTO M32 or ASTM A1064.
7. Wire mesh for use in gabions shall be made of galvanized steel wire at least 0.105 inch, 12 gage, in diameter. The tensile strength of the wire shall be at least 60,000 pounds per square inch. Wire mesh shall be galvanized in accordance with ASTM A641, Class 3. When PVC coating is specified, it shall be at least 0.015 inch in thickness and shall be black.

Wire shall be welded to form rectangular openings or twisted to form hexagonal openings of uniform size. The linear dimension of the openings shall be not more than 4 1/2 inches. The area of the opening shall be not more than 9 square inches. The unit shall be nonraveling. Nonraveling is defined as the ability to resist pulling apart at any of the twists or connections forming the mesh when a single wire strand in a section is cut.

SS234-002020-01

May 6, 2022

VIRGINIA DEPARTMENT OF TRANSPORTATION
2020 ROAD AND BRIDGE SUPPLEMENTAL SPECIFICATIONS
SECTION 234 – GLASS BEADS AND RETROREFLECTIVE OPTICS

SECTION 234 – GLASS BEADS FOR REFLECTORIZING TRAFFIC MARKINGS of the Specifications is replaced as follows:

SECTION 234 – GLASS BEADS AND RETROREFLECTIVE OPTICS

234.01 – Description

This specification covers glass beads and retroreflective optics applied on the surface or incorporated into traffic-marking materials so as to produce a retroreflective surface.

234.02 – Detail Requirements

Glass beads and retroreflective optics shall be supplied from a supplier listed on Materials Approval List No. 76.

The Contractor shall provide a written certification that each batch of glass beads or retroreflective optics used in or on VDOT pavement markings meets VDOT specifications and does not exceed the AASHTO M 247 maximum concentration limits for Lead and Arsenic.

- (a) **Glass beads** shall have a composition designed to be highly resistant to traffic wear and weather. Materials other than glass will be allowed if the pavement marking product was tested on the NTPEP test deck with the alternative bead material.

Glass beads shall have a Refractive Index of 1.50-1.79 when tested as per AASHTO T 346.

Glass beads shall conform to AASHTO M 247, except that at least 80 percent of the beads shall be round when tested in accordance with ASTM D 1155, Procedure B.

- (b) **Retroreflective Optics** shall have a concentration designed to be highly resistant to traffic wear and weather. Retroreflective Optics shall be composed of glass beads, ceramic materials, or a combination of glass beads or ceramic materials affixed to a glass bead core.

Retroreflective Optics shall have a Refractive Index of 1.8 or higher when tested as per AASHTO T 346.

SS235-002020-01 May 6, 2022

VIRGINIA DEPARTMENT OF TRANSPORTATION
2020 ROAD AND BRIDGE SUPPLEMENTAL SPECIFICATIONS
SECTION 235 – RETROREFLECTORS

SECTION 235 – RETROREFLECTORS of the Specifications is deleted and replaced as follows:

235.01 – Description

Retroreflectors are retroreflective surfaces that redirect the vehicle headlights back to the driver to delineate the road. The retroreflective surface may consist of a plastic prismatic reflector or retroreflective sheeting. Retroreflectors are used with:

- Pavement Markers (Permanent and Temporary)
- Delineators (Guardrail, Barrier, Flexible Post, Road Edge)

Pavement markers and Delineators shall be approved by reviewing performance data from one or both of the following test programs:

- (a) AASHTO's National Transportation Product Evaluation Program (AASHTO/NTPEP). Test data values used for approval may be based upon the data generated per the applicable NTPEP Work Plan.
- (b) VDOT Test Facility – VDOT may elect to evaluate performance from their own test facility.

235.02 – Detail Requirements

(a) Inlaid Pavement Markers – Holders for inlaid pavement markers shall be made of polycarbonate plastic nominally 4.75 inches wide excluding breakaway tabs, and shall be able to hold retroreflectors from the Department's Approved List 22 under Inlaid Pavement Markers. The top of the retroreflector shall be 1/8 inch below the pavement surface when installed with the breakaway positioning tabs resting on the pavement surface.

Retroreflectors for inlaid pavement markers shall have a nominal width of 4 inches excluding the holders.

- (b) Pavement Markers (Temporary) – Refer to VTM-70 for testing and approval
- (c) Pavement Markers (Permanent) – Refer to VTM-70 for testing and approval
- (d) Delineators – Refer to VTM-70 for testing and approval
- (e) Aluminum panels for delineators shall be at least 0.064 inch thick conforming to ASTM B-209, alloy 5052.

SS246-002020-02

May 6, 2022

VIRGINIA DEPARTMENT OF TRANSPORTATION
2020 ROAD AND BRIDGE SUPPLEMENTAL SPECIFICATIONS
SECTION 246 – PAVEMENT MARKING

SECTION 246 – PAVEMENT MARKING of the Specifications is amended as follows:

Section 246.02 – Detail Requirements is amended to replace the fifth through seventh paragraphs with the following:

Pavement marking materials shall produce a retroreflective line, message, legend or symbol of specified thickness, width or design in accordance with the MUTCD and Contract requirements.

Pavement marking material shall have the pigment, glass beads, retroreflective optics, and filler well dispersed in the resin, and shall be free from skins, dirt, and foreign objects.

Glass beads and retroreflective optics shall conform to Section 234.

Section 246.02(a) – Approval of Pavement Markings is amended to replace the second paragraph of the second bullet with the following:

When pavement markings are installed on the NTPEP test deck or the VDOT facility, the material's thickness, beads/retroreflective optics, and formulation shall be documented to ensure the equivalent thickness, beads/retroreflective optics and formulation are installed on VDOT roadways following approval.

Section 246.02(b) – Certifications is replaced with the following:

The pavement marking material manufacturer shall certify each batch or lot of material supplied and installed is the same product (thickness, retroreflective optics package and formulation) that was tested and approved on the AASHTO/NTPEP or VDOT test facility in accordance with the Materials Division, Manual of Instructions for Certification I and II Materials. The certification shall include the NTPEP test number from the Materials Division's Approved Products List. The Contractor shall retain the manufacturer's certifications.

Section 246.02(c) – Warranty Requirements is amended to replace the first paragraph with the following:

Pavement marking products shall carry the warranties as supplied by the manufacturer of the individual marking types (classes) for the specific timeframes per type and class and the material requirements for retroreflectivity, durability, color, luminance (Y%), and adhesion as referenced herein. Warranties shall be those commercially supplied or those unique to the Commonwealth in the case of certain products, such as Type B, Class VI preformed pavement marking tape as detailed herein. Manufacturers' warranties shall be obtained by the Contractor and assigned to the Department in writing prior to final acceptance. Warranty periods shall begin on the date of receipt at the project as verified by delivery tickets signed by the Engineer.

Section 246.03(a) – Paint Pavement Marking Materials (Type A) is renamed Section 246.03(a) – Conventional or Cold Weather Paint Marking Materials (Type A, Class I) and amended to replace the first paragraph with the following:

Type A, Class I paint material shall be a fast-drying, waterborne, nonleaded, acrylic or modified acrylic resin paint suitable for use on both asphalt and hydraulic cement concrete pavement surfaces and shall be selected from the Materials Division's Approved Products List No. 20. Type A, Class I material shall be designed to be applied at approximately 15 mils wet film thickness in conjunction with AASHTO M 247 Type I beads as per Section 234 of the Specifications.

Type A, Class I cold weather paint shall be capable of being both applied and remaining fully adhered to the surface at temperatures below 40 °F.

Section 246.03(a)1e – IR Scan from NTPEP is replaced with the following:

- e. IR Scan from NTPEP.

Section 246.03(b) – High Build Paint Marking Materials (Type A, Class II) is added as follows:

Type A, Class II Paint material shall be a fast-drying, waterborne, nonleaded, acrylic or modified acrylic resin paint suitable for use on both asphalt and hydraulic cement concrete pavement surfaces and shall be selected from the Materials Division’s Approved Products List No. 20. Type A, Class II material shall be designed to be applied at approximately 27 mils wet film thickness.

1. Initial Approval - Maintained retroreflectivity, color (including luminance), and durability shall conform to the following requirements after the material has been installed on the test deck for 1 year:
 - a. Maintained Retroreflectivity: The photometric quantity to be measured is the coefficient of retroreflected luminance (R_L) in accordance with ASTM E1710 for 30-meter geometry. R_L shall be expressed in millicandelas per square foot per foot-candle when measured in the skipline or centerline areas:

Coefficient of Retroreflected Luminance (R _L) (mcd/ft ² /fc) Paint		
Color	Initial	1 Year In-Service
White	300	125
Yellow	225	100

- b. Day and Nighttime Color and Luminance (Y%): Measured according to ASTM D6628.
- c. Durability: Paint shall have a durability rating of at least 8 when determined in the wheel path area when tested in accordance with the NTPEP Work Plan.
- d. Skid Resistance: The initial skid resistance shall be at least 45 BPN when tested according to ASTM E303, if available.
- e. IR Scan from NTPEP.

2. Batch Testing

Paint batch testing shall be performed by the Department on samples obtained from the point of manufacture or from the field in accordance with the Materials Division’s Manual of Instructions. The test results shall be compared against NTPEP lab test results and the Specifications. Testing shall be performed to determine the following physical requirements and properties:

- a. Solids, (% weight) according to ASTM D2369: Acceptable range from NTPEP results (+/- 2%).
- b. Pigment (% weight) according to ASTM D3723: Acceptable range from NTPEP results (+/- 2%).
- c. Density (wt/gal.) according to ASTM D1475: Acceptable range from NTPEP results (+/-0.3 lbs/gal).
- d. Viscosity (KU) according to ASTM D562: Acceptable range from NTPEP results (+/-5KU).

- e. Contrast Ratio according to ASTM D2805 (2°,D 65): Paint shall show a dry hiding quality that will give a contrast ratio of at least 0.96 at (15 mil) wet film thickness.
- f. Day Color, Luminance (Y%) - (without Drop-on Beads):

Color testing results shall conform to the chromaticity coordinate limits that follow. Color determination for paint materials will be made without drop-on beads at least 24 hours after application in accordance with ASTM D6628.

Day Color, Chromaticity Coordinates (Without Drop-on Beads), High Build Paint									
	x	y	x	y	x	y	x	y	Y%
White	0.355	0.355	0.305	0.305	0.285	0.325	0.335	0.375	80.0 Min
Yellow	0.493	0.473	0.518	0.464	0.486	0.428	0.469	0.452	50.0-
w									60.0

- g. Settling properties: Settling shall be no less than a rating of 8 when tested in accordance with the NTPEP Work Plan.
- h. Freeze-thaw and heat stability: Paint shall show no coagulation or change in viscosity greater than +/- 5 KU when tested in accordance with the NTPEP Work Plan.
- i. Water resistance: Paint shall show no blistering, peeling, wrinkling, softening, or loss of adhesion when tested in accordance with the NTPEP Work Plan.
- j. VOC: The VOC content shall be no greater than 150 grams/liter when tested in accordance with EPA Method 24.
- k. Flash point: Paint shall have a flash point of at least 201 degrees F when tested in accordance with ASTM D93, Pensky-Martens Closed Cup.
- l. Infrared (IR) Scan: Shall match IR scan from NTPEP.

Section 246.03(b) – Thermoplastic Marking Materials (Type B, Class I) is renumbered as 246.03(c) and replaced as follows:

Thermoplastic material shall be suitable for use on asphalt and hydraulic cement concrete pavement surfaces and shall be selected from the Materials Division’s Approved Products List No. 43.

The binder shall be either alkyd or hydrocarbon based. If an alkyd thermoplastic is used, the binder shall consist of synthetic resins, at least one of which is solid at room temperature, and high-boiling plasticizers. At least one-half of the binder composition shall be a maleic-modified glycerol ester of resin and shall be at least 10 percent by weight of the entire material formulation.

Thermoplastic marking materials shall be capable of application at pavement surface temperatures of 50 degrees Fahrenheit and above on all asphalt and hydraulic cement concrete pavement surfaces. Thermoplastic material shall be capable of successfully fusing to itself and previously applied thermoplastic pavement markings.

- 1. Initial Approval - Maintained retroreflectivity, color, luminance (Y%), and durability shall conform to the following requirements after the material has been installed on the test deck for 1 year:
 - a. Maintained Retroreflectivity: The photometric quantity to be measured is the coefficient of retroreflected luminance (R_L) in accordance with ASTM E1710 for 30-meter geometry when measured in the skip line area.

Coefficient of Retroreflected Luminance (RL) (mcd/ft ² /fc) Thermoplastic		
Color	Initial	1 Year In-Service
White	300	250
Yellow	250	200

- b. Day and Nighttime Color and Luminance (Y%): According to ASTM D6628
- c. Durability: Thermoplastic shall have a durability rating of at least 8 as determined in the wheel path area when tested in accordance with the NTPEP Work Plan.
- d. Skid Resistance: The initial skid resistance shall be at least 45 BPN when tested per ASTM E303, if available.

2. Batch Testing:

Thermoplastic batch testing will be performed by the Department on samples obtained from the point of manufacture or from the field in accordance with the Materials Division’s Manual of Instructions. The tests results will be compared against the following specifications and requirements:

- a. Glass Bead (% Weight) according to ASTM D4451 Pigment and 82.0% Max
- b. Bead Content (% Weight) according to AASHTO T 250 and ASTM D4797 Intermix Glass 30.0% Min
- c. white thermoplastic according to ASTM D1394 or equivalent method TiO2 (%) for 10.0% Min
- d. according to AASHTO T 250/ASTM D4451 Binder (%) 18.0% Min
- e. Carbonate and Inert Fillers Calcium 42.0 % Max
- f. Luminance (Y%) (Without Drop-on Beads): Color testing results shall conform to the chromaticity coordinate limits that follow. Color determination for thermoplastic materials will be made without drop-on beads after cooling in accordance with AASHTO T 250 and ASTM D6628. Day Color,

Day Color, Chromaticity Coordinates (Without Drop-on Beads), Thermoplastic									
	x	y	x	y	x	y	x	y	Y%
White	0.355	0.355	0.305	0.305	0.285	0.325	0.335	0.375	80.0 Min
Yellow	0.499	0.466	0.545	0.455	0.518	0.432	0.485	0.454	40.0-60.0
w									

- g. Nighttime Yellow Color (with Drop-on Beads): The initial nighttime color of yellow thermoplastic pavement marking material shall conform to the following CIE chromaticity coordinate requirements when tested in accordance with ASTM D6628 and VTM-111:.

Night Time Color, Chromaticity Coordinates (with Drop-on Beads)
--

Thermoplastic								
Color	1		2		3		4	
	x	y	x	y	x	y	x	y
Yellow	0.486	0.439	0.520	0.480	0.560	0.440	0.498	0.426

- h. Water absorption: Materials shall not have more than 0.5 percent retained water by weight when tested in accordance with ASTM D570, Procedure A.
- i. Softening point: Materials shall have a softening point of at least 194 degrees F as determined in accordance with ASTM E28.
- j. Specific gravity: The specific gravity of the thermoplastic compound at 77 degrees F shall be from 1.7 to 2.2.
- k. Impact resistance: The impact resistance shall be at least 10 inch-pounds at 77 degrees F after the material has been heated for 4 hours at 400 degrees F and cast into bars of 1-inch cross-sectional area, 3 inches long, and placed with 1 inch extending above the vise in a cantilever beam, Izod-type tester conforming to ASTM D256 using the 25 inch-pound scale.
- l. No-Track Time: Material shall set to bear traffic in not more than 2 minutes when the road temperature is 50 degrees F or above.
- m. Intermixed Glass beads: Glass beads shall conform to Section 234.
- n. Flashpoint: The material flashpoint shall be no less than 500 degrees F when tested in accordance with ASTM D92.

Section 246.03(c) Preformed Thermoplastic Pavement Marking Material (Type B, Class II) is renumbered as 246.03(d).

Section 246.03(d)1 Initial approval is amended to replace the first paragraph with the following:

Maintained retroreflectivity, color, luminance (Y%), and durability shall conform to the following requirements after the material has been installed on the test deck for 1 year:

Section 246.03(d) Epoxy-Resin Pavement Marking Material (Type B, Class III) is renumbered as 246.03(e).

Section 246.03(e)1 Initial approval is amended to replace the first paragraph with the following:

Maintained retroreflectivity, color, luminance (Y%), and durability shall conform to the following requirements after the material has been installed on the test deck for 1 year:

Section 246.03(e) Polyurea Pavement Marking Material (Type B, Class VII) is renumbered as 246.03(f).

Section 246.03(f)1 Initial approval is amended to replace the first paragraph with the following:

Maintained retroreflectivity, color, luminance (Y%), and durability shall conform to the following requirements after the material has been installed on the test deck for 1 year:

Section 246.03(f) Permanent, Plastic-Backed, Preformed Tapes (Type B, Class IV and Type B, Class VI) is renumbered as 246.03(g).

Section 246.03(g)1 Initial approval is amended to replace the first paragraph with the following:

Maintained retroreflectivity, color, luminance (Y%), durability, and adhesion shall conform to the following requirements after the material has been installed on the test deck for 1 year:

Section 246.03(g) – Temporary Pavement Marking Materials is renumbered as 246.03(h) and replaced with the following:

Temporary Pavement Marking Materials other than paint shall consist of Type D, Class III, removable, wet reflective tape and Type E removable black, non-reflective tape. Determination of conformance will include, but not be limited to, the evaluation of test data from AASHTO's NTPEP or other VDOT Test Facilities.

1. Wet Reflective, Removable Tape (Type D, Class III):

Wet reflective, removable tape shall be a durable, retro-reflective pliant material consisting of a mixture of polymeric materials, pigments, and glass beads (reflective optics) evenly distributed throughout its cross-sectional area and embedded into the surface. This tape shall be suitable for use on both asphalt and hydraulic cement concrete surfaces and shall be selected from the Department's Approved List 17.

a. Initial Approval - Maintained retroreflectivity (dry and wet), color, luminance (Y%), and adhesive bond rating shall conform to the following requirements after the material has been installed on the test deck for 90 days:

(1) Maintained Dry Retroreflectivity: The dry photometric quantity to be measured is the coefficient of retroreflected luminance (R_L) in accordance with ASTM E1710 for 30-meter geometry when measured in the skip line or centerline areas.

Coefficient of Retroreflected Luminance (R_L) (mcd/ft²/fc) Dry Retro Removable Tape-Type D, Class III

Color	Initial	90 Days In-Service
White	250	150
Yellow	200	100

(2) Maintained Wet Retroreflectivity: The wet photometric quantity to be measured is the coefficient of retroreflected luminance (R_L) in accordance with VTM 124 (Visual Evaluation or ASTM E2177, Recovery Method) when measured in the skip line or centerline areas.

Coefficient of Retroreflected Luminance (R_L) (mcd/ft²/fc) Wet Retro Removable Tape-Type D, Class III

Color	Initial	90 Days In-Service
White	150	100
Yellow	125	75

(3) Day and Nighttime Color and Luminance (Y%): According to ASTM D6628.

(4) Adhesive Bond Rating: The average adhesive bond rating (from transverse and longitudinal lines) shall be 3 or higher according the NTPEP Work Plan.

- (5) Skid Resistance: The initial skid resistance shall be at least 45 BPN when tested according to ASTM E303, if available.
- (6) Thickness: Per the manufacturer's recommendation.
- (7) Adhesion: No line shall be displaced, torn or missing.

b. Batch Testing:

Wet reflective, removable tape batch testing will be performed by the Department on samples obtained from the point of manufacture or from the field in accordance with the Materials Division's Manual of Instructions. Test results shall be compared against the following specifications and requirements:

- (1) Retroreflectivity: Refer to initial requirements
- (2) Day and Night Color and Luminance: Refer to initial requirements
- (3) Thickness: Refer to initial requirements
- (4) Width: The width shall be no less than the nominal width and no greater than 1/8" of the nominal width.
- (5) Length: The length shall be no less than the length stated on the manufacturer's packaging.
- (6) Skid Resistance: Refer to initial requirements.

2. Removable Black, Non-Reflective Tape (Type E):

Removable black, non-reflective tape shall be a durable, pliant material consisting of a mixture of polymeric materials, pigments and a friction material evenly distributed throughout its cross-sectional area and embedded into the surface. Removable black, non-reflective tape shall be suitable for use on asphalt concrete pavement surfaces, and shall be selected from the Department's Approved List 17.

- a. Initial Approval - Maintained adhesive bond rating shall conform to the following requirements after the material has been installed on the test deck for 90 days:
 - (1) Adhesive Bond Rating: The average adhesive bond rating (from transverse and longitudinal lines) shall be 3 or higher according to the NTPEP Work Plan.
 - (2) Skid Resistance: The initial skid resistance shall be at least 45 BPN when tested according to ASTM E303, if available.
 - (3) Thickness: Per the manufacturer's recommendation.
 - (4) Adhesion: No line shall be displaced, be torn or missing.

b. Batch Testing

Black removable, non-reflective tape batch testing will be performed by the Department on samples obtained from the point of manufacture or from the field in accordance with

the Materials Division's Manual of Instructions. Test results shall be compared against the following specifications:

- (1) Skid Resistance: Refer to initial requirements
- (2) Thickness: Refer to initial requirements
- (3) Width: The width shall be no less than the nominal width and no greater than 1/8" of the nominal width.
- (4) Length: The length shall be no less than the length stated on the manufacturer's packaging.

SS305-002020-02

December 20,2023

VIRGINIA DEPARTMENT OF TRANSPORTATION
2020 ROAD AND BRIDGE SUPPLEMENTAL SPECIFICATIONS
SECTION 305 – SUBGRADE AND SHOULDERS

Section 305.03(a)1 – Subgrade consisting of material in place is replaced with the following:

1. **Subgrade consisting of material in place:** The subgrade area shall be scarified to a depth of 6 inches for a distance of 2 feet beyond the proposed edges of the pavement on each side. If sandy or other soil is encountered that will not compact readily, clay or other suitable material may be added or water applied in such quantity and within the allowable moisture content specified herein as will permit compaction of the subgrade. Subgrade material shall be compacted at optimum moisture, within ± 20 percent of optimum. The density of the subgrade when compared to the theoretical maximum density as determined in accordance with VTM-1 or VTM-12 shall conform to the following:

% Retained on No. 4 Sieve	Min. % Density
0-50	100
51-60	95
61-70	90

Percentages of material shall be reported to the nearest whole number.

Field density determination will be performed with a portable nuclear density gauge as specified in VTM-10, or by other approved methods as directed by the Engineer.

The Contractor shall then shape and check the subgrade to ensure a typical cross section and uniform grade prior to placement of any subsequent courses. If the subgrade becomes eroded or distorted prior to placement of material for subsequent courses, the Contractor shall scarify, reshape, and recompact it in accordance with the original requirements.

At the time of placing material for subsequent courses, the Contractor shall compact the subgrade to the required density, free from mud and frost, and to a condition that will permit compaction of subsequent courses without distortion.

The Contractor shall remove material from the unstable area and contaminated aggregate if the approved subgrade becomes unstable after placement of the subbase or base course and becomes mixed with the aggregate therein. The area shall then be backfilled and compacted, and the subsequent course thereon reconstructed.

Section 305.03(e) – Shoulders is replaced with the following:

Shoulders: Aggregate shoulder material shall be placed in accordance with the applicable specifications governing the type of material or construction being used and shall be compacted at optimum moisture, within ± 2 percentage points of optimum. Except when aggregate material No. 18 is used, the density of the aggregate shoulder material, when compared to the theoretical maximum density as determined in accordance with VTM-1, shall conform to the following:

% Retained on No. 4 Sieve	Min. % Density
0-50	100
51-60	95
61-70	90

Percentages of material will be reported to the nearest whole number. The above density requirements may be reduced by 5% per VTM-10 when using the portable nuclear density gauge in direct transmission mode.

When aggregate material No. 18 is used, the density, when compared to the theoretical maximum density, shall be not less than 90 percent or more than 95 percent.

Field density determination will be performed with a portable nuclear density gauge as specified in VTM-10, or by other approved methods as directed by the Engineer. When the total thickness of the layer for aggregate shoulder material being constructed is less than 4 inches, the minimum density requirement may not be enforced. For such cases, the aggregate shoulder should be compacted with three or more passes of a heavy-duty vibratory roller (e.g., a 10-ton smooth drum roller) or as approved by the Engineer. The aggregate shoulder should be compacted until it is apparent that no further densification can be obtained.

When it is determined by the Engineer that operating a roller/compactor on the shoulder material is a rollover hazard, the compaction requirements can be waived by the Engineer.

Aggregate in the guardrail section of fills, 1 foot from the roadway side of the guardrail face to the outside of the shoulder, shall be compacted until a density of at least 90 percent of the theoretical maximum density has been obtained. The asphalt mixture in this area shall be sealed immediately after the hot mixture is spread. Rolling of the asphalt mixture shall continue until roller marks are eliminated.

Stabilized and paved shoulders shall be constructed in accordance with the applicable specifications for pavement stabilization. If the aggregate shoulder material becomes overconsolidated prior to final finishing, it shall be scarified for the approximate depth, reshaped, and recompact to conform to the specified grade and cross section.

Shoulders shall be constructed simultaneously with nonrigid types of base or surface courses other than asphalt concrete or in advance of the base or surface course so as to prevent spreading of base or surface materials. The area of shoulders 12 inches adjacent to the pavement shall be rolled simultaneously with the course being deposited.

Where base or surface courses are being constructed under traffic and are more than 1 inch in depth, shoulder material adjacent thereto shall be placed within 72 hours after placement of the base or surface course.

SS308-002020-01

July 13, 2021

VIRGINIA DEPARTMENT OF TRANSPORTATION
2020 ROAD AND BRIDGE SUPPLEMENTAL SPECIFICATIONS
SECTION 308 – SUBBASE COURSE

SECTION 308 – SUBBASE COURSE of the Specifications is amended as follows:

Section 308.03 – Procedures is replaced by the following:

Prior to placement of the subbase course, the subgrade shall be constructed in accordance with Section 304 and Section 305 as applicable.

Subbase material shall be mixed in an approved central mixing plant of the pugmill or other mechanical type in accordance with Section 208.05. The Contractor shall place the mixed material on the subgrade by means of an approved aggregate spreader. The Engineer will not require the use of such spreader when the material is being applied solely for the temporary maintenance of traffic or where the width of the course shown on the plans is transitional and impracticable to place with a spreader box.

The Contractor shall spread and compact the material in two or more layers of approximately equal thickness where the required thickness is more than 6 inches. The compacted thickness of any one layer shall be not more than 6 inches, however the Engineer may approve increasing the compacted depth of a single layer of the subbase course to 10 inches when vibrating or other approved types of special compacting equipment are used.

Each layer of subbase course shall be compacted at optimum moisture, within ± 2 percentage points of optimum. The density of each layer of subbase aggregate material, when compared to the theoretical maximum density as determined in accordance with VTM-1, shall conform to the following:

% Material Retained on No. 4 Sieve	Min. % Density
0-50	100
51-60	95
61-70	90

Percentages shall be reported to the nearest whole number. The above density requirements may be reduced by 5% per VTM-10 when using the portable nuclear density gauge in direct transmission mode.

The Department will perform field density determinations with a portable nuclear density gauge using the density control strip as specified in Section 304 and VTM-10, or by other approved methods as directed by the Engineer.

The Contractor shall scarify, reshape, and recompact the surface of the subbase if it becomes uneven or distorted and sets up in that condition. If the subbase when compacted and shaped shows a deficiency in thickness or if depressions occur in the surface, the Contractor shall scarify such sections at his own expense before additional material is added.

SS309-002020-01

July 13, 2021

VIRGINIA DEPARTMENT OF TRANSPORTATION
2020 ROAD AND BRIDGE SUPPLEMENTAL SPECIFICATIONS
SECTION 309 – AGGREGATE BASE COURSE

SECTION 309 – AGGREGATE BASE COURSE of the Specifications is amended as follows:

Section 309.05 – Density Requirements is replaced by the following:

The Contractor shall spread and compact the material in two or more layers of approximately equal thickness where the required thickness is more than 6 inches. The compacted thickness of any one layer shall be not more than 6 inches, however the Engineer may approve increasing the compacted depth of a single layer of the base course to 10 inches when vibrating or other approved types of special compacting equipment are used.

The Contractor shall compact each layer at optimum moisture within ± 2 percentage points of optimum after mixing and shaping. The density of each layer of base aggregate material, when compared to the theoretical maximum density as determined in accordance with VTM-1, shall conform to the following:

% Material Retained on No. 4 Sieve	Min. % Density
0-50	100
51-60	95
61-70	90

Percentages shall be reported to the nearest whole number. The above density requirements may be reduced by 5% per VTM-10 when using the portable nuclear density gauge in direct transmission mode.

The base course will be tested in place for depth and density. The Department will perform field density determinations with a portable nuclear density gauge using the density control strip as specified in Section 304 and VTM-10, or by other approved methods as directed by the Engineer.

The Contractor shall maintain the surface of each layer during the compaction operations in a manner such that a uniform texture is produced and the aggregates are firmly keyed. The Contractor shall uniformly apply water over the base materials during compaction in the amount necessary to obtain proper density.

Irregularities in the surface shall be corrected by scarifying, remixing, reshaping, and recompacting until a smooth surface is secured. The surface shall thereafter be protected against the loss of fine materials by the addition of moisture, when necessary, and shall be maintained in a satisfactory and smooth condition until accepted by the Engineer.

The Engineer will base acceptance of the aggregate base course for depth on the requirements of Section 308.

SS315-002020-05

May 27, 2025

VIRGINIA DEPARTMENT OF TRANSPORTATION
2020 ROAD AND BRIDGE SUPPLEMENTAL SPECIFICATIONS
SECTION 315 – ASPHALT CONCRETE PLACEMENT

SECTION 315 – ASPHALT CONCRETE PLACEMENT of the Specifications is replaced with the following:

315.01 – Description

This work shall consist of constructing one or more courses of asphalt concrete on a prepared foundation in accordance with these Specifications and within the specified tolerances for the lines, grades, thicknesses, and cross sections shown on the Plans or established by the Engineer. At the Contractor's option, the asphalt concrete may be produced using a warm-mix additive or warm-mix process approved by the Department. When used, the temperature placement limitations for Warm Mix Asphalt (WMA) shall apply.

This work shall also consist of constructing asphalt concrete curb and rumble strips in accordance with these Specifications, plan details, and the Standard Drawings.

315.02 – Materials

- (a) **Asphalt concrete** shall conform to Section 211. The Contractor shall alter the design if SUPERPAVE design densities begin to exceed 98% of the Theoretical Maximum Density (TMD) during construction.
- (b) **Asphalt for tack coat** shall conform to Section 210 and shall be applied according to Section 310.
- (c) **Asphalt for prime coat** shall conform to Section 210 and shall be applied according to Section 311.
- (d) **Curb backup material** shall be asphalt concrete conforming to any surface or intermediate mixture listed in Tables II-13 and II-14.
- (e) **Liquid asphalt coating (emulsion) for rumble strips** shall conform to Section 210. The Contractor shall use CSS-1h or CQS-1h asphalt emulsions for centerline rumble strips. The CSS-1h or CQS-1h liquid asphalt may be diluted by up to 30% at the emulsion manufacturer's facility.

315.03 – Equipment

- (a) **Hauling Equipment:** Trucks used for hauling asphalt concrete shall have structurally sound, tight, clean, smooth metal or other non-absorptive, inert material bodies equipped with a positive locking metal tailgate. Surfaces in contact with asphalt concrete shall be given a thin coat of aliphatic hydrocarbon invert emulsion release agent (nonpuddling), a lime solution, or other release agent materials on the Department's Approved List 8. The beds of dump trucks shall be raised to remove excess release agent prior to loading except when a nonpuddling release agent is used. Only a nonpuddling agent shall be used in truck beds that do not dump. Each Contractor truck used for hauling asphalt concrete shall be equipped with a tarpaulin or other type of cover acceptable to the Engineer that shall protect the material from moisture and foreign matter and prevent the rapid loss of heat during transportation.

- (b) **Asphalt Pavers:** The asphalt paver shall be designed and recommended by the Manufacturer for the type of asphalt concrete to be placed and shall be operated in accordance with the Manufacturer's recommendations. The Contractor shall readily have and maintain on the project site any written recommendations from the Manufacturer of the material relative to handling and placing of the asphalt concrete. In the absence of the Manufacturer's recommendations, the recommendations of the National Asphalt Pavement Association shall be followed. The paver shall be capable of producing a smooth uniform texture, dense joints, and a smooth riding surface even when screed extensions are used.
- (c) **Rollers:** Rollers shall be steel wheel, static or vibratory, or pneumatic tire rollers and shall be capable of reversing without backlash. The Contractor shall operate rollers at speeds slow enough to avoid displacement of the material. The number and weight of rollers shall be sufficient to compact the asphalt concrete to the required density while it is still in a workable condition. The Engineer will not allow the use of equipment that results in excessive crushing of aggregate or marring of the pavement surface. If the Contractor's equipment mars the surface of the pavement during construction to the extent that imperfections cannot satisfactorily be corrected or produces permanent blemishes, the Engineer will require the Contractor to discontinue the use of that particular equipment and replace that equipment with satisfactory units.
- (d) **Rotary Saw:** The Contractor shall supply a gasoline-powered rotary saw with a carbide blade for cutting test samples from the pavement. The Contractor shall provide gasoline, oil, additional carbide blades, and maintenance for the rotary saw. The Contractor shall cool the pavement prior to sawing the sample. As an alternative, the Contractor may furnish the necessary equipment for coring and testing 4-inch core samples in accordance with VTM-22.
- (e) **Material Transfer Vehicle (MTV):** When required in the Contract, the Contractor shall furnish a self-propelled MTV storage unit capable of receiving material from trucks, storing the material, and transferring the material from the unit to a paver hopper insert via a conveyor system. The paver hopper insert and unit shall have a combined minimum storage capacity of 15 tons. The storage unit or paver hopper insert shall be able to remix the material in order to produce a uniform, non-segregated mix having a uniform temperature prior to placing the asphalt concrete on the roadway surface.

315.04 – Placement Limitations

The Contractor shall not place asphalt concrete when weather or surface conditions are such that the material cannot be properly handled, finished, or compacted. The surface upon which asphalt concrete is to be placed shall be free of standing water, dirt, and mud and the base temperature shall conform to the following:

(a) Asphalt Concrete Produced with Warm Mix Asphalt Additives or Processes:

The Contractor shall note on the delivery ticket that the load is Warm Mix Asphalt.

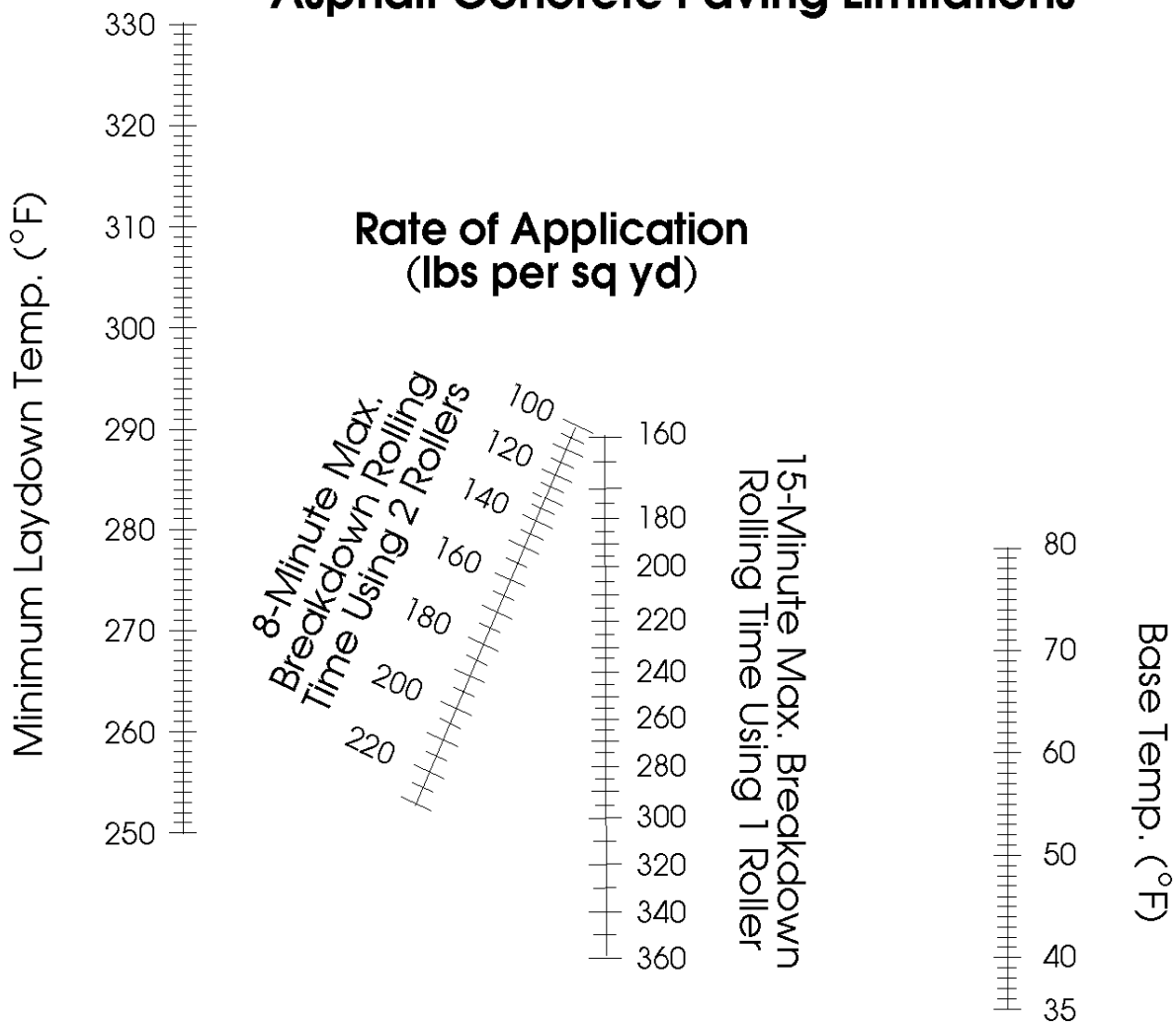
1. **When the base temperature is 40⁰ F and above:** The Engineer will permit lay-down at any temperature below the maximum limits given in Section 211.08.
2. **When the mixture temperature is below 200⁰ F:** The Contractor will not be allowed to place the material.

(b) Asphalt Concrete Produced without Warm Mix Asphalt Additives or Processes:

1. **When the base temperature is above 80° F:** The Engineer will allow laydown at any temperature conforming to the limits specified in Section 211.
2. **When the base temperature is between 40°F and 80°F:** The Contractor shall use Table III-2 to determine the minimum laydown temperature of the asphalt concrete. At no time shall the base temperature for base (BM) and intermediate (IM) mixes be less than 40°F. At no time shall the laydown temperature for BM and IM mixes be less than 250°F.

**TABLE III-2
Cold Weather Paving Limitations**

Asphalt Concrete Paving Limitations



The minimum base and laydown temperatures for surface mixes (SM) shall never be less than the following:

PG Binder/Mix Designation	Percentage of Reclaimed Asphalt Pavement (RAP) Added to Mix	Minimum Base Temperature	Minimum Placement Temperature
PG 64S-22 (A)	≤25%	40°F	250°F
PG 64S-22 (A)	>25%	50°F ²	270°F ²
PG 64H-22 (D)	≤30%	50°F ²	270°F ²
PG 64E-22 (E)	≤15%	50°F ²	290°F ²
PG 64S-22 (S)	≤30%	50°F ²	290°F ²

3. **When the laydown temperature is between 301⁰ F and 325⁰ F:** The number of compaction rollers shall be the same number as those required for 300⁰ F.

Intermediate and base courses that are placed at rates of application that exceed the application rates shown in Table III-2 shall conform to the requirements for the maximum application rate shown for 8-minute and 15-minute compaction rolling as per number of rollers used.

If the Contractor is unable to complete the compaction rolling within the applicable 8-minute or 15-minute period, the Engineer will either require the placing of the asphalt concrete to cease until sufficient rollers are used or other corrective action be taken to complete the compaction rolling within the specified time period.

The Contractor shall complete compaction rolling prior to the mat cooling down to 175⁰ F. Finish rolling may be performed at a lower mat temperature.

The Contractor shall not place the final asphalt concrete finish course until temporary pavement markings will no longer be required.

(c) **SM-4.75 Mixtures Placement:**

1. The minimum placement temperature shall be 290°F regardless of WMA use.
2. The minimum ambient and base temperature shall be 50°F. The Contractor shall employ a MTV during the placement of SM-4.75 mixtures when either the ambient or base temperature is between 50°F and 60°F.

315.05 – Procedures

- (a) **Base Course:** The Contractor shall prepare the subgrade or subbase as specified in Section 305. The Contractor shall grade and compact the course to the required profile upon which the asphalt concrete is to be placed, including the area that will support the paving equipment.
- (b) **Conditioning Existing Surface:** The surface on which the asphalt concrete is to be placed shall be prepared in accordance with the applicable Specifications and shall be graded and compacted to the required profile and cross section.

When specified in the Contract, before placement of asphalt concrete, the Contractor shall seal longitudinal and transverse joints and cracks by the application of an approved crack sealing material in accordance with Section 322.

1. **Priming and Tacking:** The Contractor shall paint contact surfaces of curbing, gutters, manholes, and other structures projecting into or abutting the pavement and cold joints of asphalt with a thick, uniform coating of asphalt prior to placing the asphalt concrete.

The Contractor shall apply an asphalt tack or prime coat conforming to the applicable requirements of Section 311 or Section 310 and as specified below. Liquid asphalt classified as cutbacks or emulsions shall be applied ahead of the paving operations, and the time interval between applying and placing the asphalt concrete shall be sufficient to ensure a tacky residue has formed to provide maximum adhesion of the asphalt concrete to the base. The Contractor shall not place asphalt concrete on tack or prime coats that have been damaged by traffic or contaminated by foreign material. Traffic shall be excluded from such sections.

- a. **Priming aggregate base or subbase:** The Engineer will not require priming with asphalt material on aggregate subbase or base material prior to the placement of asphalt concrete base, intermediate or surface layers unless otherwise specified in the Contract.
- b. **Tacking:** Tack at joints, and adjacent to curbs, gutters, or other appurtenances shall be applied with a hand wand or with spray bar at the rate of 0.2 gallon per square yard. At joints, the tack applied by the hand wand or a spray bar shall be 2 feet in width with 4 to 6 inches protruding beyond the joint for the first pass. Tack for the adjacent pass shall completely cover the vertical face of the pavement mat edge so that slight puddling of tack occurs at the joint, and extend a minimum of 1 foot into the lane to be paved. Milled faces that are to remain in place shall be tacked in the same way for the adjacent pass. Use of tack at the vertical faces of longitudinal joints will not be required when paving is performed in echelon.

The tack coat shall be eliminated on asphalt saturated (rich) sections or those that have been repaired by the extensive use of asphalt patching mixtures when directed by the Engineer.

Tack shall not be required atop asphalt stabilized open-graded material drainage layers.

Tack shall be applied between the existing asphalt surface and each asphalt course placed thereafter.

2. **Removing depressions and elevating curves:** Where irregularities in the existing surface will result in a course more than 3 inches in thickness after compaction, the Contractor shall bring the surface to a uniform profile by patching with asphalt concrete and thoroughly tamping or rolling the patched area until it conforms with the surrounding surface. The asphalt concrete used shall be the same as that specified for the course to be placed.

When the Contractor elects to conduct operations to eliminate depressions, elevate curves, and place the surface course simultaneously, the Contractor shall furnish such additional spreading and compacting equipment as required to maintain the proper interval between the operations.

- (c) **Placing and Finishing:** The Contractor shall not place asphalt concrete until the Engineer approves the surface upon which it shall be placed.

The Contractor's equipment and placement operations shall properly control the pavement width and horizontal alignment. The Contractor shall use an asphalt paver sized to distribute asphalt concrete over the widest pavement width practicable. Wherever practicable, and when the capacity of sustained production and delivery is such that more than one paver can be successfully and continuously operated, pavers shall be used in echelon to place the wearing course in adjacent lanes. Crossovers, as well as areas containing manholes or other obstacles that prohibit the practical use of

mechanical spreading and finishing equipment may be constructed using hand tools. However, the Contractor shall exercise care to obtain the required thickness, jointing, compaction, and surface smoothness in such areas.

The longitudinal joint in one layer shall offset that in the layer immediately below by approximately 6 inches or more. The joint in the wearing surface shall be offset 6 inches to 12 inches from the centerline of the pavement if the roadway comprises two traffic lanes. The joint shall be offset approximately 6 inches from the lane lines if the roadway is more than two lanes in width. The longitudinal joint shall be uniform in appearance. If the offset for the longitudinal joint varies from a straight line more than 2 inches in 50 feet on tangent alignment, or from a true arc more than 2 inches in 50 feet on curved alignment, the Contractor shall seal the joint using a water-proof sealer at no cost to the Department. The Contractor shall recommend a sealant and installation procedure to the Engineer for approval before proceeding. If the offset for the longitudinal joint varies from a straight line more than 3 inches in 50 feet on tangent alignment, or from a true arc more than 3 inches in 50 feet on curved alignment, the Engineer may reject the paving. The Engineer will not require offsetting layers when adjoining lanes are paved in echelon and the rolling of both lanes occurs within 15 minutes after laydown.

The Contractor shall have a certified Asphalt Field Level II Technician present during all paving operations. Immediately after placement and screeding, the surface and edges of each layer shall be inspected by the Asphalt Field Level II Technician to ensure compliance with the asphalt concrete placement requirements and be straightedged to verify uniformity and smoothness. The Asphalt Field Level II Technician shall make any corrections to the placement operations, if necessary, prior to compaction. The finished pavement shall be uniform and free of irregularities. If irregularities, including but not limited to segregation or flushing, are identified during the paving operation, the Contractor shall immediately notify the Engineer and address the irregularities with corrective action. If the irregularities continue, the Contractor shall cease the paving operation and not resume until corrective measures have been approved by the Department. When irregularities are noted, the limits of the finished mat shall be determined by the Engineer. The limits of the deficient area of the finished mat shall be removed and replaced at no cost to the Department.

The Contractor's Asphalt Field Level II Technician shall be present during all density testing.

Asphalt concrete placement shall be as continuous as possible and shall be scheduled such that the interruption occurring at the completion of each day's work shall not detrimentally affect the partially completed work. Material that cannot be spread and finished in daylight shall not be dispatched from the plant unless the Engineer approves the use of artificial lighting. When paving is performed at night, the Contractor shall provide sufficient light to properly perform and thoroughly inspect every phase of the operation. Such phases include cleaning planed surfaces, applying tack, paving, compacting, and testing. Lighting shall be provided and positioned so as to not create a blinding hazard to the traveling public.

The Contractor shall ensure that the roller does not pass over the end of freshly placed material during the compaction of asphalt concrete except when a transverse construction joint is to be formed. Edges of pavement shall be finished true and uniform.

Asphalt concrete SUPERPAVE pavement courses shall be placed in layers not exceeding five times the Nominal Maximum Aggregate Size (NMAS) in the surface asphalt concrete, and not exceeding six times the NMAS in the intermediate and base asphalt concrete. The maximum thickness may be reduced if the mixture cannot be adequately placed in a single lift and compacted to the required uniform density and smoothness. The minimum thickness for a pavement course shall be no less than 3 times the NMAS of the asphalt concrete. The NMAS for each mix shall be defined as one sieve size larger than the first sieve to retain more than 10% aggregate as shown in the design range

specified in Section 211.03, Table II-13. The Contractor may place base courses in irregularly shaped areas of pavement such as transitions, turn lanes, crossovers, and entrances in a single lift.

The Contractor shall square up overlays in excess of 220 pounds per square yard or lanes with a milled depth greater than 2 inches prior to opening to traffic.

The Contractor shall cut drainage outlets through the shoulder at locations the Engineer designates, excluding curb and gutter sections, on the milled roadway areas that are to be opened to traffic. Plan and prosecute the milling operation to avoid trapping water on the roadway and restore drainage outlets to original grade once paving operations are completed, unless otherwise directed by the Engineer. The cost for cutting and restoring the drainage slots in the roadway shoulder shall be included in the price bid for other items of work.

The Contractor shall plan and prosecute a schedule of operations so that milled roadways shall be overlaid with asphalt concrete as soon as possible. In no instance shall the time lapse exceed 14 days after the milling operations, unless otherwise specified in Section 515 or other provisions in the contract. The Contractor shall keep milled areas of the roadway free of irregularities and obstructions that may create a hazard or annoyance to traffic in accordance with Section 104.

The Contractor shall use a short ski or shoe to match the grade of the newly overlaid adjacent travel lane on primary, interstate, and designated secondary routes. Unless otherwise directed by the Engineer, a 24-foot minimum automatic grade control ski shall be used on asphalt concrete on divided highways, with the exception of overlays that are less than full width and the first course of asphalt concrete base over aggregate subbases. Care shall be exercised when working along curb and gutter sections to provide a uniform grade and joint.

The Contractor shall construct the final riding surface to tie into the existing surface by an approved method, which shall include the cutting of a notch into the existing pavement. In addition to notching, the Contractor may use an asphalt concrete mix design containing a fine-graded mix to achieve a smooth transition from the new asphalt concrete overlay to the existing pavement, with the approval of the Engineer. The material shall be of a type to ensure that raveling will not occur. The cost for constructing tie-ins in the asphalt concrete overlay shall be included in the asphalt concrete contract unit price.

Prior to application of tack coat and commencement of paving operations if, in the opinion of the Engineer, the existing pavement surface condition may detrimentally affect or prevent the bond of the new overlay, the Contractor shall clean the existing pavement surface of all accumulated dust, mud, or other debris. At no point shall soil, aggregate, or other potential bond breaker material be stored on the pavement surface, unless otherwise approved by the Engineer. If the Contractor wishes to stockpile materials on the pavement surface, the Contractor shall provide documentation to the Engineer for approval on the means and methods that will be used to ensure it will not detrimentally affect or prevent the bond of the next pavement layer. This includes all base, intermediate and surface layers.

The Contractor shall ensure the surface remains clean until commencement of, and during, paving operations. The cost for cleaning and surface preparation shall be included in the asphalt concrete contract unit price.

The Contractor shall employ a Material Transfer Vehicle (MTV) during the placement of surface mixes (SM) on all Interstate routes. If equipment within the paving train breaks down, paving shall be discontinued once the material on-site has been placed and no more material shall be shipped from the asphalt plant.

When required in the Contract, an MTV shall be used during the placement of designated asphalt concrete on full lane width applications.

- (d) **Compacting:** Immediately after the asphalt concrete is placed, struck off, and surface irregularities are corrected, the material shall be thoroughly and uniformly compacted by rolling. Rolling shall be a continuous process, insofar as practicable, and all parts of the pavement shall receive uniform compaction.

The asphalt surface shall be rolled when the asphalt concrete is in the proper condition. Rolling shall not cause undue displacement, cracking, or shoving of the placed mixture.

The Contractor shall use the number, weight, and type of rollers sufficient to obtain the required compaction while the material is in a workable condition. The sequence of rolling operations and the selection of roller types shall provide the specified density.

Rolling shall begin at the sides of the placement and proceed longitudinally parallel with the center of the pavement, each pass overlapping at least 6 inches, gradually progressing to the crown of the pavement. When abutting a previously placed lane, rolling shall begin at the outside unconfined side and proceed toward the previously placed lane. On superelevated curves, rolling shall begin at the low side and proceed to the high side by overlapping longitudinal passes parallel with the centerline.

The Contractor shall correct displacements occurring as a result of reversing the direction of a roller or other causes at once by the use of rakes or lutes and the addition of fresh mixture when required. Care shall be taken in rolling not to displace or distort the line and grade of the edges of the asphalt concrete. Edges of finished asphalt pavement surfaces shall be true curves or tangents. The Contractor shall correct irregularities in such areas.

The Contractor shall keep the wheels/drums of the rollers properly moistened with water, water mixed with a very small quantity of detergent or other Engineer approved material to prevent adhesion of the mixture to the rollers. The Engineer will not allow the use or presence of excess liquid on the rollers.

The Contractor shall thoroughly compact the mixture along forms, curbs, headers, walls, and other places not accessible to rollers with hot hand tampers, smoothing irons, or mechanical tampers. On depressed areas, a trench roller or cleated compression strips may be used under the roller to ensure proper compression.

For SM-4.75 mixes, breakdown rolling shall be accomplished with steel wheel rollers with a minimum weight of 10 tons. SM-4.75 mixes shall receive at least three breakdown roller passes before intermediate and finish rolling.

The Contractor shall protect the surface of the compacted course until the material has cooled sufficiently to support normal traffic without marring.

- (e) **Density** will be determined in accordance with Method A, Section 315.05 (e) 1.b (1) for all Interstate and Limited Access routes, for primary and secondary routes with an ADT of at least 2,000 and at least 20 feet in width, and for intermediate and base asphalt concrete placed in layers exceeding 4 inches. Method B, Section 315.05 (e) 1.b (2), will be used for all other routes. Also, for any (1) asphalt concrete overlays placed directly on surface treatment roadways and (2) asphalt concrete placed at an application rate less than 125 pounds per square yard, based on 110 pounds per square yard per inch, on any surface: in these situations, Method B will be used instead of Method A.

Control Strip procedures shall be the same for both Methods A and B, and shall be in accordance with Section 315.05(e)1a. The Contractor shall have a certified Asphalt Field Technician II perform all density testing. Density shall be determined with a thin-lift nuclear gauge conforming to VTM-81 or

from the testing of plugs or cores taken from the roadway where the material was placed. per the applicable subsection of these specifications.

1. Standard Operations (not Small Quantity): Density test locations shall be marked and labeled in accordance with VTM-76. When acceptance testing is performed with a nuclear gauge, the Contractor shall have had the gauge calibrated within the previous 12 months by an approved calibration service. In addition, the Contractor shall maintain documentation of such calibration service for the 12-month period from the date of the calibration service. The required density of the compacted course shall not be less than 98.0% or more than 102.0% of the target control strip density.

The Engineer will divide the project into “control strips” and “test sections” for the purpose of defining areas represented by each series of tests.

- a. **Control Strip:** Control strips shall be constructed on surface, intermediate, and base courses, in accordance with these Specifications and VTM-76. Control strips shall be used to establish the roller pattern, and also for establishing the targets for control strip density testing under Method B acceptance

The required density of the compacted course shall not be less than 98.0% or more than 102.0 % of the target control strip.

The term *control strip density* is defined as the average of 10 determinations selected at stratified random locations within the control strip.

The Contractor shall construct one control strip at the beginning of work on each roadway and shoulder course and on each lift of each course. The Engineer will require the Contractor to construct an additional control strip whenever a change is made in the type or source of materials; whenever a significant change occurs in the composition of the material being placed from the same source; or when there is a failing test strip. During the evaluation of the initial control strip, the Contractor may continue paving operations, however, paving and production shall be discontinued during construction and evaluation of any additional control strips. If two consecutive control strips fail, subsequent paving operations shall not begin or shall cease until the Contractor recommends correctives actions to the Engineer and the Engineer approves the Contractor proceeding with the corrective action(s). If the Contractor and the Engineer mutually agree that the required density cannot be obtained because of the condition of the existing pavement structure, the target control strip density shall be determined from the roller pattern that achieves the optimum density and this target control strip density shall be used on the remainder of the roadway that exhibits similar pavement conditions.

Either the Engineer or the Contractor may initiate the construction of an additional control strip at any time.

The length of the control strip shall be approximately 300 feet and the width shall not be less than 6 feet. On the first day of construction or beginning of a new course, the control strip shall be started between 500 and 1,000 feet from the beginning of the paving operation. The Contractor shall construct the control strip using the same paving, rolling equipment, procedures, and thickness as shall be used for the remainder of the course being placed.

The Contractor's Asphalt Field Level II Technician shall take one reading at each of 10 stratified random locations. No determination shall be made within 12 inches of the edge of any application width for surface and intermediate mixes or within 18 inches of the edge of any application width for base mixes. The average of these 10 determinations shall be the control strip density recorded to the nearest 0.1 pound per cubic foot. The minimum control strip density shall be determined in accordance with VTM-76.

The control strip shall be considered a lot. If the control strip density conforms to the requirements of 92.5% of TMD for surface and intermediate mixes, and 94.0% for base mix, as shown in Table III-3, the Engineer will consider the control strip to be acceptable.

If the Control Strip density is less than 92.5% for SM and IM Mixes, and 94.0% for BM Mixes, the Control Strip will not be considered acceptable by the Department for the purposes of establishing the roller pattern. However, the material will be allowed to stay in place at a reduced payment, as shown in Table III-3, provided that the Control Strip density is not less than 88.0% for SM and IM Mixes and 89.5% for BM Mixes. For Control Strips with density below 88.0% for SM and IM Mixes, and below 89.5% for BM Mixes, the Engineer may either: (1) Direct the Contractor to remove the material at no additional cost to the Department and replace the Control Strip; or (2) offer the Contractor a reduced payment. That reduced payment will continue to be set at 75%, unless modified by the Engineer. Only one reduced-pay control strip will be allowed.

TABLE III-3 and Payment Requirement

Control Strip Requirement		and Payment	
SM	IM Mixes	BM	Mixes
% TMD	% of Payment	% TMD	% of Payment
Greater than 96.5	95	Greater than 98.0	95
92.5– 96.5	100	94.0-98.0	100
90.0-92.4	90	91.5-93.9	90
88.0-89.9	80	89.5-91.4,	80
Less than 88.0	Removal ¹	Less than 89.5	Removal ¹

1. Tonnage shall be removed from the roadway at no cost to the Department. Alternatively, at the Engineer’s discretion, the material may remain in place at 75%, as noted in the paragraph above.

Once an acceptable control strip has been established, the roller pattern shall be adopted; also, for Method B acceptance routes the control strip density shall become the target density.

If the Engineer determines that the control strip requirements of 92.5% of TMD for surface and intermediate mix, and 94.0% for base mix cannot be met due to in-situ pavement conditions, Method ‘B’ will be used for acceptance and payment and density adjustments will be waived.

- b. **Test section (lot):** For the purposes of both Contractor quality control and determining acceptance, the Engineer will consider each day’s production as a lot unless the paving length is less than 3,000 linear feet or more than 7,500 linear feet, regardless of the method of acceptance (Method A or B). When paving is less than 3,000 feet, that day’s production will be combined with the previous day’s production or added to the next day’s production to create a lot as described below.

The standard size of a lot will be 5,000 linear feet (five 1,000 foot sublots) of any paver pass 6 feet or greater for the thickness of the course. If the Engineer approves, the lot size may be increased to 7,500 linear foot lots with five 1,500 foot sublots when the Contractor’s normal

daily production exceeds 7,000 feet. Pavers traveling in echelon will be considered as two paver passes. When a partial lot occurs at the end of a day's production or upon completion of the project, the lot size will be redefined as follows:

- If the partial lot contains one or two sublots, the sublots will be added to the previous lot.
- If the partial lot contains three or four sublots, the partial lot will be redefined to be an entire lot.

The Contractor's Asphalt Field Level II Technician shall test each lot for density by taking a nuclear density gauge reading from two random test sites selected by the Engineer within each subplot. When saw plugs or cores are used to determine acceptance, a single test site will be selected by the Engineer. Test sites will not be located within 12 inches of the edge of any application width for surface and intermediate mixes or within 18 inches of the edge of any application width for base mixes.

The Engineer will compare the average of the subplot nuclear density measurements to the target nuclear density, or for plugs and cores, to the target percent of theoretical maximum density achieved on the control strip to determine the acceptability of the lot. Once the average density of the lot has been determined, the Engineer will not allow the Contractor to provide additional compaction to raise the average density. The Contractor shall immediately notify the Engineer and institute corrective action if two consecutive sublots produce density results less than 98% or more than 102% of the target control strip density.

Density testing for acceptance will not be performed on areas too thin or irregular to test accurately, such as open-graded friction courses, and wedge-and-leveling courses. Areas that are difficult to compact due to subgrade support or space limitations, including but not limited to crossovers and gore areas, will be placed in accordance with Section 315.05(e)2.

For purposes of density determination, acceptance, and payment, Main Pavement is defined to include travel lanes, shoulders 6 feet or greater, turn lanes, ramps, and acceleration and deceleration lanes.

Longitudinal joints shall also be tested for density using a nuclear density gauge at each test site in the subplot. For surface and intermediate mixes, the edge of the gauge shall be placed within 4 inches of the joint. For base mixes, the edge of the gauge shall be placed within 6 inches of the joint. The Contractor shall not place the gauge over top of the joint. The joint density value shall be recorded. The Contractor shall report to the Engineer and institute corrective action if a single longitudinal joint density reading is less than 95% of the target control strip density. The Contractor shall furnish the test data developed during the day's paving to the Engineer by the end of the day's operations. The Engineer will not use the values obtained from the joint readings in payment calculation.

(1) Method 'A' (plugs or cores)

Density shall be determined from the testing of plugs or cores taken from the roadway where the mixture was placed. Any pay adjustment will only be applied to Main Pavement.

The Contractor's Asphalt Field Level II Technician shall perform acceptance testing for density for each subplot by obtaining one plug, defined as a sawed 4-inch by 4-inch specimen, or one 4-inch-diameter core, at a single random test site selected by the Engineer. More than one plug or core shall be taken if the original sample is damaged.

The sub-lot site shall be marked as described in VTM-76. The bulk specific gravity of the plugs or cores shall be determined in accordance with VTM-6. The density of the plugs or cores shall be determined in accordance with VTM-22, except that the daily Rice values obtained by the Contractor for the material will be used for calculating percent density (instead of using the 5-day running average as noted in VTM-22).

Plugs or cores shall be taken from the pavement during the paving shift and bulked in the presence of the Engineer unless otherwise approved. The Department reserves the right to have the plugs or cores bulked on the project site. In the event of any uncertainty around the bulking procedures or results, the Department further reserves the right to re-bulk the samples. The Contractor will have the right to witness the re-bulking. The Contractor will be responsible for maintaining the cores until approved for disposal by the Department.

The Contractor shall number subplot test sites sequentially per lot, mark these on the pavement, fill plug or core holes with the paving mixture, and compact prior to the completion of each day of production.

The Contractor shall clean and straighten any irregular edges before filling and compacting. Liquid tack material shall be applied so it visibly covers all plug or core hole surfaces (sides, bottom, etc.). Asphalt concrete mixture available on the same day of paving, or other permanent patching material as approved by the Engineer, shall be placed into the plug or core hole and compacted with a 10-pound weighted hand tool or greater compactive effort with rollers or other equipment available on-site and approved by the Engineer.

The tonnage of each lot for the pay adjustment will be based on the lot's width and length and the mixture application rate as designated in the Contract or as revised by the Engineer. Payment will be made in accordance with Table III-4A.

III-4A

TABLE
Method A Lot Densities
Payment Schedule

for

SM		BM	
and	IM Mixes	Mixes	
% TMD	% of Payment	%TMD	% Payment
Greater than 96.5	95	Greater than 98.0	95
92.5– 96.5	100	94.0-98.0	100
90.0-92.4	90	91.5-93.9	90
88.0-89.9	80	89.5-91.4	80
Less than 88.0	Removal	Less than 89.5	Removal

1. Tonnage shall be removed from the roadway at no additional cost to the Department.

If a minimum of 80% of each test section lot's core/plug samples is no lower than 92.5% of TMD for SM and IM mixes, and 94.0% of TMD for BM mix, and the lot average results in 100% payment, then the Engineer will increase the unit bid price for the asphalt concrete by 5%. No increase will be applied if core/plug samples are cut outside of the paving shift unless otherwise approved by the Engineer; any applicable density pay reduction from Table III-4A may still apply.

If any subplot(s) are lower than 88.0% of TMD for SM and IM mixes, then those sublots shall not be paid and shall be removed from the roadway at no cost to the Department. If the lot average is below 88.0% of TMD then that entire test section shall not be paid and shall be removed from the roadway at no cost to the Department.

If any subplot(s) are lower than 89.5% of TMD for BM mixes, then those sublots shall not be paid and shall be removed from the roadway at no cost to the Department. If the lot average is below 89.5% of TMD that entire test section shall not be paid and shall be removed from the roadway at no cost to the Department.

(2) Method 'B' (nuclear gauge)

Density shall be determined with a thin-lift nuclear gauge conforming to VTM-81. Any pay adjustment will only be applied to Main Pavement.

The Contractor's Asphalt Field Level II Technician shall test each lot for density by taking a nuclear density gauge reading from two random test sites selected by the Engineer within each subplot. Test sites will not be located within 12 inches of the edge of any application width for surface and intermediate mixes or within 18 inches of the edge of any application width for base mixes.

The tonnage of each lot for the pay adjustment will be based on the lot's width and length and the mixture application rate as designated in the Contract or as revised by the Engineer. Payment will be made in accordance with the requirements of Table III-4B.

TABLE III-4B

Payment Schedule for Method B Lot Densities

% of Target Control Strip Density	% of Payment
Greater than 102.0	95
98.0 to 102.0	100
97.0 to less than 98.0	95
96.0 to less than 97.0	90
95.0 to less than 96.0	75

Less than 95.0

Removal¹

1. If any lot produces density results less than 95.0% of Target, and (%of Target Control Strip Density x % TMD control strip cores) ≤ 88%TMD, then that lot shall not be paid and it shall be removed from the roadway at no cost to the Department.

(3) Verification, Sampling, and Testing (VST)

The Engineer at any time on any project may perform lot density verification testing regardless of whether Method A or B is being used for density acceptance. Lot density verification is performed by testing plugs or cores. The Contractor shall be responsible for taking plugs or cores for testing. The Engineer will perform verification testing of the plugs or cores.

On surface, intermediate, and base mixes, the Contractor shall take two plugs or cores per VST lot at locations selected by the Engineer. If the Engineer determines the density of the plugs or cores does not conform to the requirements for the lot in question or the same payment percentage determined by the Contractor’s testing for that lot, then the Contractor may request additional sampling to be invoked. The Contractor shall take one additional plug or core from the remaining sublots. Payment for that lot, based on the results of the initial two plugs or cores or referee procedure, will be in accordance with Table III-4A for Method A on the basis of the percentage of the theoretical maximum density or Table III-4B for Method B on the basis of the percentage of the control strip bulk density achieved.

2. **Small Quantities: Surface, intermediate, and base courses** not having a sufficient quantity of material to perform a roller pattern and control strip, and unique sections defined on the Plans or within the Contract that are 3500 feet or less and at least 6 feet in width shall be compacted to a minimum density of 92.5% as determined in accordance with VTM-22. The Contractor shall be responsible for cutting cores or sawing plugs for testing by the Department. One plug or core shall be obtained within the first 500 feet of small quantity paving and every 1000 feet thereafter for testing by the Department. Plug or core locations shall be randomly selected by the Engineer. If the density is determined to be less than the minimum, the Engineer will make payment in accordance with Table III-5.

**TABLE III-5
Payment Schedule for Surface, Intermediate and Base Courses (Not sufficient quantity to perform density roller pattern and control strip)**

% TMD	% of Payment
Greater than or equal to 92.5	100
90.0-92.4	90
88.0-89.9	80
Less than 88.0	Removal ¹

1. If any lot produces density results less than 88% TMD, that lot shall not be paid, and it shall be removed at no cost to the Department.

Any section in which asphalt concrete (e.g., SM-9.0) is being placed at an application rate of less than 125 pounds per square yard (based on 110 pounds per square yard per inch) that does not have a sufficient quantity of material for a roller pattern and control strip shall be compacted by

rolling a minimum of three passes with a minimum 8-ton roller. The Engineer will not require density testing.

For asphalt patching or paving widths narrower than 6 feet in width, the minimum density of 91.5% of the maximum theoretical density will be determined in accordance with VTM-22. The Contractor is responsible for cutting cores or sawing plugs. One set of cores or plugs shall be obtained within the first 20 tons of material and every 100 tons thereafter for testing by the Contractor or the Department. The Engineer will randomly select plug or core locations. If the density is less than the 91.5%, payment will be made on the tonnage within the 20 or 100 ton lot in accordance with Table III-6.

**TABLE III-6
Payment Schedule for Surface, Intermediate and Base Courses
(Asphalt Patching)**

% TMD	% of Payment
Greater than or equal to 91.5	100
90.0-91.4	95
88.1-89.9	90
Less than or equal to 88.0	Removal ¹

1. If any lot produces density results less than 88% TMD, that lot shall not be paid, and it shall be removed at no cost to the Department.

- (f) **Joints:** Transverse joints shall be formed by cutting back on the previous run to expose the full depth of the course. A coat of asphalt shall be applied to contact surfaces of transverse joints just before additional material is placed against the previously rolled material.

Joints adjacent to curbs, gutters, or adjoining pavement shall be formed by hand placing sufficient material to fill any space left uncovered by the paver. The joint shall then be set up with rakes or lutes to a height sufficient to receive full compression under the rollers.

- (g) **Rumble Strips:** This work shall consist of constructing rumble strips or rumble stripes on mainline shoulders or centerlines of highways by cutting concave depressions into existing asphalt concrete surfaces as shown on the Standards Drawings and as directed by the Engineer. Rumble stripes are defined as edgeline or centerline rumble strips with permanent longitudinal pavement markings subsequently installed within the rumble strip grooves.

Rumble strips and rumble stripes shall be installed in accordance with the RS-Series Standard Drawings. The Contractor shall demonstrate to the Engineer the ability to achieve the desired surface regarding alignment, consistency, and conformity with these Specifications and the Standard Drawings before beginning production work on mainline shoulders or centerlines. The test site shall be approximately 25 feet longitudinally at a location mutually agreed upon by the Contractor and Engineer.

Pavement markings for rumble stripes shall be applied after the grooves have been cut. The grooves shall be thoroughly cleaned and the surface prepared before pavement marking application, in accordance with the Standard Drawings and Section 704. Overspray of pavement marking materials shall not extend more than one inch beyond the lateral position of the pavement marking line shown in the RS-Series Standard Drawings.

Rumble strips shall not be installed on shoulders of bridge decks, in acceleration or deceleration lanes, on surface drainage structures, or in other areas identified by the Engineer.

Waste material resulting from the operation shall be removed from the paved surface and shall be disposed of in accordance with Section 106.04.

- (h) **Saw-Cut Asphalt Pavement:** This work shall consist of saw-cutting the existing asphalt pavement to a depth as shown on the plans or as directed by the Engineer.
- (i) **Coating designed surface cuts:** Designed Surface Cuts are roadway features installed by cutting or grinding into a road surface, for example, rumble strips, rumble stripes, and plastic inlaid marker grooves.

Designed Surface Cuts shall be coated with liquid asphalt coating (emulsion) when the Designed Surface Cuts are being cut into an existing asphalt surface (i.e. more than one year since placement); when new Designed Surface Cuts are being cut into the pavement surface in conjunction with a surface treatment, latex emulsion, or slurry seal pavement operation; or when the proposed plant mix surface is less than one inch deep.

Liquid asphalt coating (emulsion) shall not be used when Designed Surface Cuts are being cut into new pavement, or being cut in conjunction with asphalt concrete paving operations where the proposed plant mix surface is one inch or greater in depth.

When liquid asphalt coating (emulsion) is required, the Contractor shall coat the entire rumble strip area with the liquid asphalt coating (emulsion) using a pressure distributor following the cutting and cleaning of the depressions of waste material. For rumble strips installed on the shoulder, the approximate application rate shall be 0.1 gallons per square yard. For centerline rumble stripes and plastic inlaid marker grooves, the approximate application rate shall be 0.05 gallons per square yard. The application temperature shall be between 160^o F and 180^o F. For shoulder rumble strips and plastic inlaid marker grooves, overspray shall not extend more than 2 inches beyond the width of the cut depressions and shall not come in contact with pavement markings.

If liquid asphalt coating (emulsion) is applied before installation of the plastic inlaid marker, then the bottom of the plunge cut shall be protected during liquid asphalt coating (emulsion) application so as to avoid inhibiting the ability of the marker epoxy to bond to the bottom of the plunge cut. If the liquid asphalt coating (emulsion) is applied after the plastic inlaid marker has been installed, then the retroreflector shall be protected during the liquid asphalt coating (emulsion) application to prevent the coating material from dirtying or damaging the retroreflector, with the protection removed after the coating has been completed.

315.06 – Pavement Samples

The Contractor shall cut samples from the compacted pavement for depth and density testing. Samples shall be taken for the full depth of the course at the locations selected by the Engineer. The removed pavement shall be replaced with new mixture and refinished. No additional compensation will be allowed for furnishing test samples and reconstructing areas from which they were taken.

315.07—Pavement Tolerances

- (a) **Surface Tolerance:** The Engineer will test the pavement surface by using a 10-foot straight-edge. The variation of the surface from the testing edge of the straightedge between any two contacts with the surface shall not be more than 1/4 inch. The Contractor shall correct humps and depressions exceeding the specified tolerance or the defective work shall be removed and replaced with new material.
- (b) **Finished Grade Tolerance:** Finished grade elevations shall be within ± 0.04 foot of the elevations indicated in the Plans after placement of the final pavement layer unless otherwise specified, provided the actual cross slope does not vary more than 0.20% from the design cross slope indicated in the Plans, and the Plan depth thickness conforms to the thickness tolerances specified herein.

If the Engineer determines that either the finished grade elevations or cross slope exceed the specified tolerances, the Contractor shall submit a corrective action plan to the Engineer for approval.

- (c) **Thickness Tolerance:** The thickness of the base course will be determined by the measurement of cores as described in VTM-32.

Acceptance of asphalt concrete base course for depth will be based on the mean result of measurements of samples taken from each lot of material placed. A lot of material is defined as the quantity being tested for acceptance except that the maximum lot size will be 1 mile of 24-foot-width base course.

A lot will be considered acceptable for depth if the mean result of the tests is within the following tolerance of the Plan depth for the number of tests taken:

Plan Depth (IN)	1 test (IN)	2 tests (IN)	3 tests (IN)	4 tests (IN)
≤ 4	0.6	0.5	0.4	0.3
$>4" \leq 8$	0.9	0.7	0.5	0.4
$>8" \leq 12$	1	0.9	0.7	0.5
>12	1.2	1	0.8	0.6

If an individual depth test exceeds the one test tolerance for the specified Plan depth, the Engineer will exclude that portion of the lot represented by the test from the lot. If an individual test result indicates that the depth of material represented by the test is more than the tolerance for one test, the Contractor will not be paid for that material in excess of the tolerance throughout the length and width represented by the test. If an individual test result indicates that the depth of the material represented by the test is deficient by more than the one test tolerance for the Plan depth, the Contractor shall correct the base course represented by the test as specified hereinafter.

If the mean depth, based on two or more tests, of a lot of material is excessive (more than the Plan depth specified in the Contract), the Engineer will not pay the Contractor for any material in excess of the tolerance throughout the length and width of the lots represented by the tests.

If the mean depth, based on two or more tests, of a lot of material is deficient (less than the Plan depth specified in the Contract) by more than the allowable tolerance, the Contractor will be paid for the quantity of material that has been placed in the lot. Any required corrective action will be determined by the Engineer.

For excessive depth base courses, the rate of deduction from the tonnage allowed for payment as base course will be calculated at a weight of 115 pounds per square yard per inch of depth in excess of the tolerance. For sections of base course that are deficient in depth by more than the one test tolerance and less than 2.5 times the one test tolerance, the Contractor shall furnish and place material specified for the subsequent course to bring the base course depth within the tolerance. This material will be measured on the basis of tonnage actually placed, determined from weigh tickets, and

will be paid for at the Contract unit price for the base course material. Such material shall be placed in a separate course. If the deficiency is more than 2.5 times the one test tolerance, the Contractor shall furnish and place base course material to bring the base course thickness within the tolerance. Corrections for deficient base course depth shall be made in a manner to provide a finished pavement that is smooth and uniform. Sections requiring significant grade adjustments which have been previously identified and documented by the Engineer as being outside of the control of the Contractor will be exempt from deduction or corrective action.

When the Contract provides for the construction or reconstruction of the entire pavement structure, the surface and intermediate courses shall be placed at the rate of application shown on the Plans within an allowable tolerance of $\pm 5\%$ of the specified application rate for application rates of 100 pounds per square yard or greater and within 5 pounds per square yard for application rates of less than 100 pounds per square yard. The Engineer will deduct the amount of material exceeding the allowable tolerance from the quantities eligible for payment.

When the Contract provides for the placement of surface or intermediate courses over existing pavement, over pavements constructed between combination curb and gutter, or in the construction or reconstruction of shoulders, such courses shall be placed at the approximate rate of application as shown on the Plans. However, the specified rate of application shall be altered where necessary to produce the required riding quality.

315.08 – Measurement and Payment

Asphalt concrete base will be measured in tons and will be paid for at the Contract unit price per ton. This price shall include preparing and shaping the subgrade or subbase, constructing and finishing shoulders and ditches, and removing and replacing unstable subgrade or subbase.

Asphalt concrete will be measured in tons and will be paid for at the Contract unit price per ton. Net weight information shall be furnished with each load of material delivered in accordance with Section 211. Batch weights will not be permitted as a method of measurement unless the Contractor's plant is equipped in accordance with Section 211, in which case the cumulative weight of the batches will be used for payment.

Asphalt binder used in the asphalt concrete mixtures, when a pay item, will be measured in tons in accordance with Section 109.01 except that transporting vehicles shall be tare weighed prior to each load. The weight will be adjusted in accordance with the percentage of asphalt binder indicated by laboratory extractions.

Tack coat, when a pay item, will be measured and paid for in accordance with Section 310 of the Specifications. When not a pay item, it shall be included in the price for other appropriate pay items.

Asphalt curb backup material will be measured in tons and will be paid for at the contract unit price per ton. This price shall include placing, tamping, and compacting.

Liquid Asphalt Cement, when a pay item, will be measured in tons in accordance with Section 109.01 except that transporting vehicles shall be tare weighed before each load. When used in the asphalt concrete, the weight will be adjusted in accordance with the percentage of asphalt binder indicated by laboratory ignition ovens.

Warm Mix Asphalt (WMA) additive or process will not be measured for separate payment, the cost of which, shall be included in the Contract unit prices of other appropriate items.

Rumble strips will be measured in linear feet and will be paid for at the Contract unit price per linear foot of mainline pavement or shoulder where the rumble strips are actually placed and accepted, excluding the test site. This distance will be measured longitudinally along the center line of pavement (for mainline) or

edge of pavement (for shoulders) with deductions for bridge decks, acceleration and deceleration lanes, surface drainage structures, and other sections where the rumble strips were not installed. This price shall include installing, cleaning up debris and disposing of waste material. The test site will not be measured for payment but shall be included in the unit price for rumble strip.

Liquid asphalt coating will be measured in square yards and will be paid for at the Contract square yard price. This price shall include cleaning Designed Surface Cuts before application of the coating, furnishing and applying coating, and protection of all retroreflectors.

Saw-cut asphalt concrete pavement will be measured in linear feet for the depth specified and will be paid for at the Contract unit price per linear foot, which price shall be full compensation for saw-cutting the asphalt pavement to the depth specified, cleaning up debris and disposal of waste material.

These prices for asphalt shall also include heat stabilization additive(s), furnishing samples, and maintaining traffic.

Patching will be paid for at the Contract unit price for the various items used unless a reconditioning item is included in the Contract.

Payment will be made under:

Pay Item	Pay Unit
Asphalt concrete base course (Type)	Ton
Asphalt concrete (Type)	Ton
Asphalt concrete curb backup material	Ton
Liquid asphalt binder	Ton
Liquid asphalt coating	Square yard
Rumble Strip (Standard)	Linear foot
Saw-cut asphalt concrete (depth)	Linear foot

SS512-002020-03

July 1, 2022

VIRGINIA DEPARTMENT OF TRANSPORTATION
2020 ROAD AND BRIDGE SUPPLEMENTAL SPECIFICATIONS
SECTION 512 – MAINTAINING TRAFFIC

SECTION 512 – MAINTAINING TRAFFIC of the Specifications is amended as follows:

Section 512.02(f) – Temporary (Construction) signs is replaced with the following:

Temporary (Construction) signs shall have retroreflective sign sheeting in accordance with Sections 247 and 701.

Sign substrates for rigid temporary signs and temporary overlay panels shall be fabricated of either aluminum at least 0.080-inches thick, conforming to Section 229.02(a); 0.4-inch-thick corrugated polypropylene; 0.4-inch-thick corrugated polyethylene plastic; or 0.079-inch-thick aluminum/plastic laminate as approved by the Engineer. Sign substrates shall be smooth, flat, and free of metal burrs or splinters.

Sign substrate materials for signs mounted on drums, Type 3 barricades, and portable sign stands shall be as specified below and shall be the same material that was used when the device was approved in accordance with National Cooperative Highway Research Program (NCHRP) Report 350 or MASH.

Sign Substrates for Type 3 Barricades and Portable Sign Stands

Rollup sign

0.4 inch thick corrugated polypropylene or polyethylene plastic

0.079 inch thick aluminum/plastic laminate

Sign Substrates for Drums

0.4 inch thick corrugated polypropylene or polyethylene plastic

Section 512.03 – Procedures is amended by replacing the sixth and seventh paragraphs with the following:

The Contractor shall correct ineffective or unacceptable work zone traffic control devices immediately unless allowed otherwise by the Contract.

The color of Automated Flagger Assistance Device trailers, arrow board trailers, portable traffic control signal trailers, ITS trailer equipment, and portable changeable message sign trailers and sign frames shall be either Virginia highway orange (DuPont Color No. LF74279 AT or color equivalent) or federal yellow. The back traffic facing trailer frame, where the signal and brake lights are located, shall be fully covered with 2 inch high retroreflective sheeting conforming to Section 247.02(c). The sheeting shall have alternating 11 inch wide vertical red stripes and 7 inch wide vertical white stripes.

The Contractor shall locate, remove, and dispose of all existing asphalt-embedded Snowplowable Raised Pavement Marker (SRPM) castings which lie within a travel lane that has been shifted during construction for three months or longer. The cavity left by the removal of the existing marker shall be cleaned of debris, filled with an approved mix design for resurfacing or material found on the Department's Approved List 78, and compacted before shifting traffic.

Section 512.03(a) – Temporary Signs is replaced with the following:

Temporary Signs: The Contractor shall furnish, install, remove, relocate, and maintain temporary signs and sign panels necessary for prosecution of the work which shall include but not be limited to, maintenance of traffic, off project detour signs, and begin and end of road work signs for construction, maintenance, permit, utility, and incident management activities. Installation shall be in accordance with Section 701. The Contractor shall also furnish and install those signs not listed in the *VWAPM*, the *MUTCD*, or the Contract (such as “Turn Lane Open with arrow” and “Grooved Pavement Ahead”) that may be required by the Engineer.

Signs shall be fabricated in accordance with the *MUTCD*, *VWAPM*, the FHWA Standard Highway Signs and Markings book (including its Supplement), and the Virginia Standard Highway Signs book. If the Contractor proposes a sign message not included in the Plans, *VWAPM*, or *MUTCD*, then the Contractor shall submit a sign fabrication detail to the Engineer for approval before fabrication. The sign fabrication detail shall include sign size, legend, font, legend dimensions, radius, border, margins, sheeting type, and colors.

The Contractor shall relocate, cover, uncover, remove, and reinstall existing signs that conflict with the signs needed for maintenance of traffic. Covering of existing signs shall be accomplished in accordance with Section 701.03(d).

The Contractor shall ensure an unrestricted view of sign messages. The Contractor shall furnish and install flags for temporary signs, as directed by the Engineer; however flags will not be required for use on portable sign supports.

Sign location, lateral placement, and mounting height shall conform to the *VWAPM*, the *MUTCD*, the Contract, and as directed by the Engineer. The Contractor shall furnish all sign supports and hardware for use with temporary signs.

When the sign sequence is not provided in the plans, either by illustration or reference to a typical traffic control figure in the *VWAPM*, the Contractor shall submit a sketch of his proposed sign sequencing and positioning to the Engineer for approval before installation.

Temporary signs shall be mounted using wooden post supports, square tube sign post supports, or portable sign stands, except where noted otherwise on the Plans. Portable sign stands shall not be used longer than three consecutive days (72 continuous hours). Wooden and square tube post installations shall be in accordance with Standard Drawing WSP-1.

Portable sign stands manufactured on or before December 31, 2019 may be used if they are in good working condition, conform to NCHRP Report 350 Test Level 3 or MASH, and are a product shown on the Traffic Control Device Pre-Approval list. Portable sign stands manufactured after December 31, 2019 shall conform to MASH and shall be a product shown on the Department's Approved List for MASH Approved Products. The Contractor shall submit a certification letter stating the brands and models of portable sign stands to be used along with a copy of the certification letters indicating compliance with NCHRP Report 350 Test Level 3 or MASH. Portable sign stands shall support a 20 square foot sign in sustained winds of 50 mph or wind gusts of passing vehicles without tipping over, walking, or rotating more than ± 5 degrees about its vertical axis.

Portable sign stands shall include decals, stenciling, or some other durable marking system that indicates the manufacturer and model number of the stands. Such marking shall be of sufficient size so it is clearly legible to a person in a standing position.

The Contractor shall erect, maintain, move, and be responsible for the security of sign panels and shall ensure an unrestricted view of sign messages for the safety of traffic.

Section 512.03(g)2b(1) – Drums is replaced with the following:

Drums shall be round or partially round; made from plastic; have a minimum height of 36 inches; have a cross-sectional width no less than 18 inches in any direction; have a closed top; and shall conform to the VWAPM. Drums shall be designed to allow for separation of ballast and drum upon vehicular impact but not from wind and vacuum created by passing vehicles. The base of the unit height shall not exceed 5 inches. Two-piece drums may have a flared drum foundation, a collar not exceeding 5 inches in height and be of suitable shape and weight to provide stable support. One-piece drums that comply with these requirements may be used.

The Contractor shall furnish and install signs (Stop, Chevron, keep Right, etc.) for drums when directed by Engineer. Signs used on drums shall be tested for conformance with NCHRP 350, Test Level 3, and/or MASH requirements and shall be made of the same material used in the test. The Contractor may use other materials allowed by the FHWA acceptance letter when approved by the Engineer.

Section 512.03(g)2b(3) – Direction indicator barricades is deleted.**Section 512.03(h) –Traffic Barrier Service** is replaced with the following:

Traffic Barrier Service shall be of sufficient length to provide anchorage and protection of traffic and personnel in work areas.

The Contractor shall begin continuous progressive prosecution of the work protected by the barrier once the barrier is in place until its completion. If the Contractor ceases to continuously prosecute such work, the Engineer may cause the Contractor to discontinue operations in other areas on the project and concentrate work efforts behind the traffic barrier service until that work is completed. The Contractor shall remove the traffic barrier service when the Engineer determines work is completed to the extent that traffic barrier service is no longer required.

While performing work activities, workers and equipment shall remain behind the protection of the traffic barrier service except as approved by the Engineer. Work outside traffic barrier service protection shall only proceed under the protection and direction of approved traffic control devices or flagger service to safeguard workers and traffic in advance of and at the point the traffic barrier service is opened for ingress or egress adjacent to the travel lane. The Engineer will not permit any equipment extending into an open travel lane.

Barrier openings for access to the work area may be provided only along tangent sections or along curved sections on the inside of traffic and shall be limited to the minimum length required for equipment access. The Contractor shall delineate and maintain normal pavement alignment at the barrier opening with Type D pavement marking.

At ingress openings, the exposed end of the barrier service shall be provided with a temporary impact attenuator approved by the Engineer. At egress openings, the exposed end shall be transitioned at a rate that complies with the VWAPM. For speeds below 30 mph, the transition flare rate shall be the same as that indicated for 30 mph. An impact attenuator will not be required at the exposed end of egress openings in barrier service provided the deflection angle between the pavement edge and the ends of the barrier service openings is 20 degrees or more.

Repairs to traffic barrier service shall match existing barrier so that positive connections can be maintained.

Delineators and barrier panels shall have reflectorized sheeting conforming to Section 247, shall be from the Department's Approved List 23, and shall be installed on traffic barrier service in accordance with the VWAPM.

The Contractor shall maintain the structural integrity of the barrier and its alignment while it is in use and shall maintain any associated warning lights, barrier delineators, barrier panels, and other devices in functional, clean and visible conditions at all times.

1. **Guardrail barrier service and terminal treatments** shall be installed in accordance with Section 505 except that the offset distance shall be as specified by the Engineer. The Contractor may be permitted to reuse guardrail or its hardware used for traffic barrier service guardrail for permanent installation provided the guardrail material is acceptable to the Engineer and conforms to Section 505 and the Standard Drawings for such guardrail. Marred galvanized surfaces shall be repaired in accordance with Section 233. Terminal treatments shall be permanently identified with a device specific Manufacturers' identification number by stamping or marking with a durable weather resistant material in accordance with § 33.2-274.1 of the Code of Virginia.
2. **Traffic barrier service** (concrete or longitudinal steel) shall be installed in accordance with the Plans and Standard Drawings or as directed by the Engineer, who will design according to Appendix A of the VWAPM. When traffic barrier ends at guardrail, fixed object attachment methods for construction zone shall be used to connect the barrier to the guardrail. Installation shall include additional guardrail posts and attachments as required. The traffic barrier, at a minimum, shall be tapered with the end of the barrier located behind the adjacent guardrail post in accordance with the VWAPM. Barrier connections shall be snug to prevent motion between sections.

Traffic barrier service used as a parapet shall be anchored as shown on the Plans or Section 500 of the Standard Drawings. Anchor holes in bridge decks shall be drilled with a rotary impact drill or other approved equipment that will limit damage to the deck. Anchor holes shall be located to avoid cutting reinforcing steel. Upon removal of the parapet, anchor holes shall be cleaned and filled with Type EP-4 or EP-5 epoxy mortar conforming to Section 243.

The Department will not permit the use of concrete traffic barrier service for permanent installations on bridge structures.

Traffic barrier service sections manufactured on or before December 31, 2019 and successfully tested to NCHRP 350 or MASH 2009 may be used until December 31, 2029, if they are in good working condition, and are a product shown on the Department's Approved Lists for NCHRP-350 or MASH Approved Products. Traffic barrier service sections manufactured after December 31, 2019, and all products in use after December 31, 2029, shall conform to MASH 2016 or its successor, and shall be from the Department's Approved List for Provisionally Approved MASH Products. All traffic barrier service runs shall be interlocking barrier of the same design or type.

The Contractor shall visually inspect all traffic barrier service shipped to a project before placing it in use. Concrete barrier sections shall be structurally sound with no concrete missing along the top, bottom, sides, or end sections of the barrier; no through cracks; and no exposed rebar. The Contractor shall promptly remove any traffic barrier service found by the Contractor or Engineer to be unacceptable due to inadequate structural integrity or functionality and replace the concrete barrier service at no cost to the Department.

Concrete barrier service shall be cleaned or coated sufficiently to afford good visibility and uniformity of appearance.

The Engineer will review and must approve the layout and anchorage method for job specific applications before the barrier is authorized for installation.

With the approval of the Engineer, the Contractor may use additional traffic barriers for his convenience but at his own expense.

Section 512.03(i) – Impact Attenuator Service is replaced with the following:

Impact Attenuator Service: The Contractor shall install impact attenuator service at locations shown on the Plans or designated by the Engineer. An object marker for temporary impact attenuator shall be installed on the attenuator according to the details shown in the Standard Drawings. The object marker for impact attenuator service shall have reflective sheeting conforming to Section 247 featuring alternating diagonal black and orange 3 inch stripes sloping downward at an angle of 45 degrees in the direction vehicular traffic is to pass. Impact attenuators shall be permanently identified with a device specific Manufacturers' identification number by stamping or marking with a durable weather resistant material in accordance with § 33.2-274.1 of the Code of Virginia.

Impact Attenuator Service not shown on the Plans may be used at the request of the Contractor for the Contractor's convenience at the Contractor's expense.

All impact attenuator service shall be reviewed and approved by the State Location and Design Engineer before installation.

Impact Attenuators manufactured on or before December 31, 2019 and successfully tested to NCHRP 350 or the MASH 2009 may continue to be used until December 31, 2029. Impact Attenuators manufactured after December 31, 2019 shall meet MASH 2016 and shall be from the Department's Approved List for Provisionally Approved MASH Products.

Section 512.03(j)2c – Equipment is replaced with the following:

12 inch aluminum or polycarbonate traffic signal head sections with backplates mounted in the vertical display arrangement. Signal head sections may be mounted in the horizontal display arrangement when approved by the Engineer. Signal head sections and backplates shall conform to Section 238.

Section 512.03(k) – Temporary (Construction) Pavement Markings is replaced with the following:

Temporary (Construction) Pavement Markings shall be installed at locations shown on the Plans, the *VWAPM*, and as directed by the Engineer. Temporary pavement markings shall conform to Section 704 and be selected from the Department's Approved List 17. Temporary pavement markings are classified as Type A or B (temporary markings), Type D, Class III (removable tape), Type E (non-reflective black removable tape), and Flexible Temporary Pavement Markers (FTPMs).

The Contractor shall install temporary pavement markings in accordance with the manufacturer's recommendations, except that if the manufacturer's recommendation for material thickness and quantity of beads is less than that used when the material was tested by the NTPEP, the minimum product application rates shall conform to the NTPEP approved test rates for the specific marking. The Contractor shall furnish a copy of the manufacturer's installation recommendations, including the NTPEP data for product thickness and glass bead quantities to the Engineer.

The Contractor shall maintain the temporary pavement markings and shall correct any deficient markings by reapplying markings as directed or needed. The Department considers deficient any temporary pavement markings that provide inadequate guidance to motorists due to inadequate retroreflectivity, color qualities, or adherence to the pavement. The Engineer will make a visual nighttime inspection of all temporary pavement markings to identify areas where markings have inadequate retroreflectivity. Other deficient qualities may be identified by visual inspection at any time.

Markings that no longer adhere to the pavement, and may cause guidance problems for motorists, or are inadequately retroreflective as determined by the Engineer shall be replaced by the Contractor, with the following exceptions:

- Reapplication of skip line temporary pavement markings is not required unless the pavement marking does not adhere or inadequate retroreflectivity qualities are present for at least two consecutive skip lines.
- Reapplication of centerline (except skip lines) or edge line temporary pavement markings is not required unless the pavement marking does not adhere or inadequate retroreflectivity qualities are present for a continuous section of at least 70 feet.
- Reapplication of transverse markings is not required unless the pavement marking does not adhere or inadequate retroreflectivity qualities are present for a continuous section of at least 3 feet.

The Contractor may take retroreflectivity readings to counter visual observations by the Engineer as the basis for replacement of temporary pavement markings. These measurements shall be taken within 48 hours after the Contractor has been notified of the visual determination by the Engineer of deficient markings. The Engineer will grant additional time to the Contractor when inclement weather prevents accurate measurement of the temporary pavement markings.

The Contractor shall brush any form of debris from the marking before taking the retroreflectivity readings. Retroreflectivity measurements shall be taken in the presence of the Engineer using Contractor furnished equipment conforming to ASTM E1710. A copy of the operating instructions for the reflectometer shall be furnished to the Engineer before taking the measurements. The Contractor shall calibrate and operate the equipment in accordance with the manufacturer's instructions. The photometric quantity to be measured is the coefficient of retroreflected luminance (R_L), which shall be expressed as millicandelas per square foot per footcandle (mcd/sf/ftc). Measurements shall be taken at three random locations within each area of markings that are suspected of being inadequately retroreflective. When the length of the questionable visually inspected area is greater than 1 mile, the Contractor shall take measurements at three locations per mile segment or portion thereof. Measurements for all lines shall be taken in the middle of the line horizontally. Measurements for skip lines shall be taken in the middle of their length. Measurements for transverse lines shall be taken outside of the wheel path locations. The Engineer will designate the locations along the line segments where the measurements shall be taken. The Contractor shall make a log of the measurements and their locations and provide a copy to the Engineer. When the average of the three readings for an area is below 100 mcd/sf/ftc, the Contractor shall reapply the markings as indicated.

Temporary (construction) pavement markings found in need of reapplication in accordance with these requirements shall be reappplied by the Contractor at no additional cost to the Department, with the following exceptions:

- Type D markings that have been under traffic for more than 180 days and requires reapplication will be paid for at the contract unit price when reappplied, unless the manufacturer's warranty coverage is still applicable.
- Markings damaged by the Department's snow removal or other maintenance and construction operations will be paid for at the contract unit price.

Deficient temporary pavement markings shall be replaced in the time specified in Section 704 for the maximum duration of unmarked roads.

Eradication for reapplication of Type A or B pavement markings is not required if allowed by the marking manufacturer, if the existing marking is well adhered and the total thickness of the existing and reapplied marking combined will not exceed 40 mils. If not well adhered, 90 percent of the existing markings shall be eradicated before reinstallation of the markings.

Existing Type D markings that are deficient (no longer retaining sufficient retroreflectivity) shall be removed before reapplication of new Type D, Class III markings.

1. **Temporary Type A or B pavement markings** shall be used where the roadway is to be resurfaced before changes in the traffic pattern or where pavement is to be demolished and traffic patterns will not change before demolition.
2. **Type D, Class III pavement markings** shall be used on final roadway surfaces or in areas where traffic patterns are subject to change before pavement is resurfaced, unless otherwise specified in the Contract.

On non-final pavement surfaces, the Contractor may install Type A or B pavement markings when the surface temperature of the pavement is below the manufacturer's minimum application temperature for a Type D pavement marking. In such cases, the Contractor shall select a Type A or B product known to perform the best under those temperature conditions. When a Type A or B pavement marking is used instead of a Type D pavement marking due to the surface temperature being below the manufacturer's minimum application temperature, the Contractor will be paid at the contract unit price for Type D pavement marking. This shall include the Type A or B marking and any necessary eradication of the Type A or B pavement marking.

3. **Type D, Class III contrast pavement markings** shall be used for all longitudinal temporary pavement markings on bridge decks and hydraulic cement concrete riding surfaces if all of the following are met:
 - The road has a speed limit of 45 MPH or greater.
 - The hydraulic cement concrete riding surface in question is at least 200 feet in length.
 - The temporary markings are planned for at least 30 days of use.

Type D, Class III contrast markings are not required for any markings that are parallel to and within one foot of existing guardrail or other longitudinal barrier.

4. **Type E pavement markings** shall be used to cover existing markings in accordance with paragraph (I) herein.
5. **Flexible Temporary Pavement Markers (FTPMS)** may be used to simulate a temporary pavement marking line on the final surface, as an interim measure until the permanent pavement marking can be installed. FTPMS shall not be used in substitution for lines slated to be in place for more than 30 days.

FTPMS shall conform to Section 235 and shall consist of products from the Department's Approved List 22. All FTPM's shall be new product. FTPMS are suitable for use up to one year after the date of manufacture when stored in accordance with the manufacturer's recommendations.

FTPMS shall include a removable material covering the reflective lens to protect the lens from being obscured or damaged during the paving operation.

FTPMS spacing shall be as follows:

- When simulating solid lines, the FTPMS shall be placed every 20 feet.
- When simulating double lines, pairs of side-by-side FTPMS shall be placed every 20 feet.
- When simulating broken lines with a 10-foot-skip/30-foot-gap pattern, 3 FTPMS shall be used per skip (5 feet between each FTPMS), with a 30-foot gap between simulated skips.
- When simulating dotted lines with a 3-foot skip/9-foot-gap pattern, 2 FTPMS shall be used per skip (3 feet between the two FTPMS), with a 9-foot gap between simulated skips.

FTPMS shall not be used to simulate transverse lines, symbol/message markings, or dotted lines with 2-foot dot/6-foot-gap pattern.

The color of FTPMS units and their reflective surfaces shall be the same color (white or yellow) as the temporary pavement markings they are being used in substitution for.

FTPMS shall be installed at the same locations that permanent pavement markings will be installed.

For surface treatment, slurry seal or latex emulsion treatment operations, the appropriate FTPMS with protective covering shall be installed before placing the new treatment. The lens protective covering shall be kept in place during the final surface placement to protect the lens from being obscured or damaged by the paving operation. Upon completion of surface treatment, slurry seal or latex emulsion treatment placement, the Contractor shall remove the protective covering from the reflective lens of the FTPMS before leaving the work site. Failure to remove such covering shall result in the non-payment for that portion type (skip or solid) of temporary pavement marking.

For plant mix operations, the appropriate FTPMS shall be installed on the newly-placed pavement after the pavement is thoroughly compacted and has cooled to the FTPMS manufacturer's recommended temperature for installation.

The Contractor shall maintain the FTPMS until the permanent pavement markings are installed. Damaged or missing FTPMS shall be replaced within 24 hours of discovery at the Contractor's expense with new FTPMS of the same manufacturing type, color and model. No more than one FTPMS may be damaged or missing out of every skip line or dotted line simulated segment. No two consecutive FTPMS may be damaged or missing on a simulated solid line or double line application, and no more than 30% of the FTPMS may be damaged or missing on any measured 100-foot segment of simulated solid line.

Once applied, FTPMS will be considered for a single use. If a FTPMS requires replacement before installation of permanent pavement markings, it shall be properly disposed of and replaced with a new FTPMS at no additional cost to the Department.

FTPMS shall be removed and properly disposed of when permanent pavement markings are installed. Used FTPMS removed from the pavement, including all containers, packaging, damaged FTPMS's and all other miscellaneous items of waste, shall be appropriately disposed of in accordance with Section 106.04.

Section 512.03(I) – Eradicating Pavement Markings is replaced with the following:

Eradicating Pavement Markings: Markings that may conflict with desired traffic movement, as determined by the Engineer, shall be eradicated as soon as practicable: either immediately before the shifting of traffic or immediately thereafter and before the conclusion of the workday during which the traffic shift is made. Work shall be done in accordance with Section 704 except as noted herein.

The Contractor shall perform eradication by grinding, blasting, or a combination thereof. Blasting may be performed using water blasting, sand blasting, hydroblasting (combination of sand and water), or shot blasting. Water blasting and hydroblasting shall be done with equipment that includes a vacuum recovery system and capability to adjust the water pressure.

The Contractor may submit other methods for eradication for the Engineer's approval; however, the Department will not permit obscuring existing pavement markings with black paint or asphalt as a substitute for removal or obliteration. The Contractor shall minimize roadway surface damage when performing the eradication. The Contractor shall repair the pavement if eradication of pavement markings results in damage to or deterioration of the roadway presenting unsafe conditions for motorcyclists, bicyclists, or other road users. Pavement repair, when required, shall be performed using a method approved by the Engineer.

The Contractor shall ensure workers are protected in accordance with Section 107.17 when eradicating pavement markings.

The Contractor shall vacuum or collect the eradication residue (removed markings, debris, and water) during and immediately after the eradication operation. Dust shall be collected during the entire operation. The Contractor shall ensure that no debris enters inlets or waterways.

Eradication residue from the removal of any pavement markings is considered to be a nonhazardous waste material and shall be disposed of in a properly permitted waste disposal facility in accordance with applicable state and federal laws and regulations. The Department does not require Contractor testing of the eradication residue for the eight Resource Conservation Recovery Act metals.

When markings are removed for lane shifts, transitions, or other areas or conditions required in the VWAPM, 100% of the pavement marking shall be removed.

Type E pavement markings may be used to cover existing markings instead of eradication on asphalt concrete surfaces. The Contractor shall use this material to cover markings as indicated in the Plans or as directed by the Engineer. Type E pavement marking shall be applied in accordance with the manufacturer's recommendations. Type E markings shall not be adhered to the pavement for more than 120 days. Type E markings shall not be used on HCC surfaces or bridge decks.

When eradicating symbols and messages, the entire theoretical box bounding the outermost limits of the markings shall be uniformly eradicated.

Eradication of 24" lines shall be considered nonlinear marking eradication.

Section 512.03(m) – Temporary Pavement Markers is renamed **Temporary Raised Pavement Markers** replaced with the following:

Temporary Raised Pavement Markers shall be installed with temporary pavement markings where required by the VWAPM and where directed by the Engineer. Temporary raised pavement markers shall not be used with Type E markings.

Temporary raised pavement markers shall be installed at the spacing required by the VWAPM, and as shown on Standard Drawing PM-8. The Contractor may install two one-way markers instead of each two-way marker at no additional cost to the Department.

Temporary raised pavement markers shall be installed with a hot applied bitumen adhesive, except epoxy may be used on hydraulic cement concrete roadways and non-final surfaces of asphalt concrete roadways. Pavement damage caused by removing markers shall be repaired in kind by the Contractor at no additional cost to the Department.

The Contractor shall replace damaged, ineffective, or missing temporary raised pavement markers upon notification by the Engineer at no additional cost to the Department. Markers damaged by the Department's snow removal operations or other maintenance and construction operations, however, will be paid for at the contract unit price.

Section 512.03(p) – Temporary Pavement Message and Symbol Markings is replaced with the following:

Temporary Pavement Message and Symbol Markings shall be the color, shape, and size required by the MUTCD, Standard Drawing PM-10, and the Plans. The Contractor shall install message and symbol markings in accordance with MUTCD, Section 704, the VWAPM, and the Standard Drawings.

Temporary pavement message and symbol markings shall be installed and maintained using the material specified on the Plans in accordance with Section 512.03(k).

Pavement message/symbol markings shall be installed at locations shown on the Plans and at locations designated by the Engineer.

Temporary pavement message markings shall be maintained in accordance with Section 512.03(k). Retroreflective measurements conforming to Section 512.03(k) shall be taken out of the wheel path locations. The pavement message/symbol marking shall be replaced when the average of the three readings for the symbol/message is below 100 mcd/sf/ft.

Section 512.03(q) – Type 3 Barricades is replaced as follows:

Type 3 Barricades: Type 3 barricades shall conform to NCHRP Report 350, Test Level 3, or MASH. Type 3 barricades shall be selected from those shown on the Department's Traffic Control Device Pre-Approval List. The Contractor shall provide a certification letter stating the brands and models of Type 3 barricades from the list proposed for the project. Instead of using Type 3 barricades on the listing, the Contractor may use other brands and models, if he submits a copy of the FHWA acceptance letter indicating the proposed substitutes complies with Test Level 3 of NCHRP Report 350 or MASH before use.

Type 3 Barricades shall be installed and ballasted in accordance with the VWAPM.

Section 512.03(r) – Truck-mounted or trailer mounted attenuators is replaced as follows:

Truck-mounted or trailer-mounted attenuators (TMAs): Truck-mounted and trailer-mounted attenuators manufactured on or prior to December 31, 2019 may be used if they are in good working condition, conform to Test Level 3 of NCHRP Report 350 or MASH, and are a product shown on the Department's Approved Lists for NCHRP-350 or MASH Approved Products. TMAs manufactured after December 31, 2019 shall conform to MASH Test Level 3 and shall be a product shown on the Department's Approved List for MASH Approved Products.

The Contractor shall submit catalog cuts/brochures of the TMA and a copy of the certification letter documenting NCHRP 350/MASH compliance of the specific TMA before their use on the project. TMAs shall be permanently identified with a device-specific manufacturers' identification number by stamping or marking with a durable weather resistant material in accordance with § 33.2-274.1 of the Code of Virginia.

The weight of the support vehicle shall be as recommended by the manufacturer of the Truck/Trailer-mounted attenuator. The Contractor shall provide a copy of the manufacturer's recommendations to the Engineer, a copy of the original weigh ticket for the support vehicle, and a self-certification letter stating the support vehicle has not been altered since the original weight ticket was issued. The weigh ticket shall contain adequate information to identify the ticket with the applicable support vehicle. A copy of the self-certification and weigh ticket shall be available in the support vehicle at all times and upon request.

Additional weight may be added to the support vehicle to achieve the range recommended by the manufacturer of the Truck/Trailer-mounted attenuator provided the total weight is properly balanced without overloading any one axle and is within the Gross Vehicle Weight Recommendation of the support vehicle. The added weight shall be securely attached to the support vehicle to prevent movement during an impact or movement of the vehicle. The additional weight and attachment method shall be self-certified by the Contractor and a copy of the self-certification letter shall be with the support vehicle at all times or a final stage manufacturer's certification sticker may be placed on the inside door of the altered vehicle.

The Truck/Trailer-mounted attenuator shall be no less than 72 inches wide and no more than 96 inches wide. There shall be no additional devices such as signs, lights, and flag holders attached to the Truck/Trailer-mounted attenuator except those that were tested on the Truck/Trailer-mounted attenuator and provided by the manufacturer of the Truck/Trailer-mounted attenuator.

The support vehicle shall have at least one vehicle warning light functioning while in operation in accordance with the VWAPM. When allowed by the VWAPM, an electronic arrow operated in the caution mode may be used with the vehicle warning light. When installing and removing lane closures on a multilane roadway as well as when performing mobile operations, the support vehicle shall be equipped with both vehicle warning lights and an arrow board.

The support vehicle shall be operated and parked in accordance with the manufacturer's recommendations.

Limitations: Traffic control devices shall not be installed from or removed to the Truck/Trailer-mounted attenuator support vehicle. When the Truck/Trailer-mounted attenuator is deployed there shall be no unsecured material in the bed of the support vehicle except the additional secured weight or truck-mounted devices such as an arrow board, a changeable message sign, or truck mounted signs. There shall also be no additional devices such as signs, lights, and flag holders attached to the Truck/Trailer-mounted attenuator except those that were tested on the Truck/Trailer-mounted attenuator and provided by the manufacturer of the Truck/Trailer-mounted attenuator.

If the Truck/Trailer-mounted attenuator is impacted, resulting in damage that causes the unit to be ineffective, all work requiring the use of the Truck/Trailer-mounted attenuator shall cease until such time that repairs can be made or the Contractor provides another acceptable unit.

Section 512.03(s) – Portable Changeable Message Signs is amended to replace the second and third paragraphs with the following:

The sign shall be capable of sequentially displaying at least 2 phases of 3 lines of text each with appropriate controls for selection of messages and variable off-on times. Trailer-mounted PCMS shall be capable of displaying 3 lines of 8-character 18-inch text in a single phase, and vehicle-mounted PCMS shall be capable of displaying 3 lines of 8-character 10-inch text in a single phase. Each character module shall at a minimum use a five wide by seven high pixel matrix. The message shall be composed from keyboard entries.

Access to PCMS control mechanisms shall be physically locked at all times when deployed to deter message tampering.

The message shall be legible in any lighting condition. Motorists should be able to read the entire PCMS message twice while traveling at the posted speed.

The sign panel support shall provide for an acceptable roadway viewing height that shall be at least 7 feet from bottom of sign to crown of road.

Section 512.03(w) – Portable Temporary Rumble Strips (PTRS) is replaced as follows:

Portable Temporary Rumble Strip (PTRS):

A PTRS may be made of rubber or recycled rubber. It shall have a recessed, raised or grooved design to prevent movement and hydroplaning. PTRS color shall be in accordance with the VWAPM.

A PTRS shall consist of interlocking or hinged segments of equal length that prevent separation when in use. The combined overall usable length of the PTRS shall be between 10 feet 9 inches and 11 feet. The width of the PTRS shall be 12 to 13 inches. PTRS shall be between 5/8 inch and 1.0 inch in height. The weight of each roadway strip shall be between 100 and 120 pounds. The leading and departing edge taper shall be between 12 and 15 degrees.

Each roadway length of the PTRS shall have either a minimum of one cutout handle in the end of the rumble strip, or an interlocking segment which can be used as a handle for easy deployment or removal.

The manufacturer of the PTRS shall provide a signed affidavit that states the PTRS is able to withstand being run over by an 80,000 pound vehicle and retain its original placement with minor incidental movement of 6 inches or less during an 8 hour deployment. Incidental movement of the PTRS shall be parallel with other rumble strips in an array but shall not move so that its placement compromises the performance and safety of the other rumble strips, workers or the traveling public.

The PTRS shall be installed in accordance with manufacturers installation instructions, without the use of adhesives or fasteners.

PTRS Placement shall be in accordance with the VWAPM.

Section 512.04 – Measurement and Payment is amended to replace the 13th paragraph with the following:

Impact attenuator service will be measured in units of each and will be paid for at the Contract each price for the type specified. This price shall include installing, maintaining, and removing

impact attenuator and object marker. Impact attenuators used with barrier openings for equipment access will not be measured for separate payment but the cost thereof shall be included with other appropriate items. When impact attenuator service is moved to a new location, as directed or approved by the Engineer, the relocated terminal will be measured for separate payment. Payment for impact attenuator service will not be made until the work behind the corresponding barrier service is actively pursued.

Section 512.04 – Measurement and Payment is amended to replace the 16th paragraph with the following:

Temporary pavement markings will be measured in linear feet and will be paid for at the contract linear foot price for the type, class and width specified. This price shall include marking materials, glass beads, adhesive, preparing the surface, maintaining, removing removable markings when no longer required, inspections, and testing.

If the Contractor uses FTPMs to simulate the temporary pavement marking, they will be measured in linear feet and paid for at the linear foot price for the temporary marking material being simulated. That measurement shall represent all FTPMs required for that simulated line marking. No additional payment will be made if the Contractor elects to remove FTPMs and install other temporary pavement markings. This cost shall include furnishing, installing and maintaining the FTPMs, removable covers, surface preparation, quality control tests, daily log, guarding devices, removal, and disposal.

Section 512.04 – Measurement and Payment is amended to replace the 21st paragraph with the following:

Eradication of existing nonlinear pavement markings will be measured in square feet based on a theoretical box defined by the outermost limits of the nonlinear pavement markings as defined in Standard Drawing PM-10. Nonlinear pavement markings shall include but not be limited to, arrows, images, symbols, and messages. Eradication of existing nonlinear pavement markings will be paid for at the contract unit price per square foot. This price shall include removing nonlinear pavement markings, cleanup, and disposing of residue.

Section 512.04 – Measurement and Payment is amended to replace the 30th paragraph with the following:

Portable Temporary Rumble Strip (PTRS) Array will be measured in Days per array and will be paid for at the Contract Day price. An Array shall consist of three rumble strips. This price shall include installing, maintaining, removing devices when no longer required, and relocating throughout the day.

Section 512.04 – Measurement and Payment is amended by revising the Pay Item Table as follows:

The following pay items are removed:

Pay Item	Pay Unit
Portable temporary rumble strip	Each

The following pay items are inserted:

Pay Item	Pay Unit
Portable temporary rumble strip array	Day

SS704-002020-02

May 6, 2022

VIRGINIA DEPARTMENT OF TRANSPORTATION
2020 ROAD AND BRIDGE SUPPLEMENTAL SPECIFICATIONS
SECTION 704 – PAVEMENT MARKINGS AND MARKERS

SECTION 704 – PAVEMENT MARKINGS AND MARKERS of the Specifications is amended as follows:

Section 704.02 – Materials is amended to replace the first paragraph with the following:

For Type B, Class VI pavement marking materials that are to be applied to latex emulsion or slurry seal surfaces, the selected Type B, Class VI manufacturer shall be a manufacturer that approves and warrants their product for application on that type of surface.

Section 704.03 – Procedures is amended to replace the second paragraph with the following:

The Contractor shall have a certified Pavement Marking Technician present during all temporary pavement marking, permanent pavement marking, and pavement marker operations, except Flexible Temporary Pavement Marker (FTPM) installation.

Section 704.03 – Procedures is amended to replace the fourth through tenth paragraph with the following:

If the Contractor cannot have permanent pavement markings installed within the time limits specified, the Contractor shall install and maintain temporary pavement markings within the same time limits at no additional cost to the Department until the permanent pavement markings can be installed. Installation, maintenance, and removal or eradication of temporary pavement markings shall be according to Section 512.

The Contractor may mark the locations of proposed permanent markings on the roadway by installing premarking materials. Premarkings may be accomplished by installing removable tape, chalk, or lumber crayons, except pavement markings such as stop lines, crosswalks, messages, hatching, etc., shall be premarked using chalk or lumber crayons. Premarkings for yellow markings may be white or yellow. Premarkings for other colors shall be white.

When tape is used as a premarking material, premarking shall consist of 4- inch by 4-inch-maximum squares or 4-inch-maximum diameter circles spaced at 100-foot minimum intervals in tangent sections and 50-foot minimum intervals in curved sections. At locations where the pavement marking will switch colors (e.g., gore marking) the ends of the markings may be premarked regardless of the spacing.

When the Contractor uses chalk or lumber crayon as a premarking, the entire length of the proposed pavement marking may be premarked.

Premarkings shall be installed so their installation will not affect the adhesion of the permanent pavement markings. When removable tape is used as the premarking material and the lateral location of such premarkings to location of the final pavement markings exceeds 6 inches, the tape shall be removed at no additional cost to the Department.

The Contractor shall exercise caution and protect the public from damage while performing pavement marking operations. The Contractor shall be responsible for the complete preparation of the pavement surface, including, but not limited to, removing dust, dirt, loose particles, oily residues, curing compounds, concrete laitance, residues from eradication, and other foreign matter immediately before installing pavement markings. The pavement surface shall be clean and dry at the time of pavement marking installation and shall be tested in accordance with VTM 94 before permanent installation, with the VTM 94 test results noted on Form C-85. The

Contractor shall provide the equipment indicated in VTM 94 that are needed to perform the moisture test before application.

Section 704.03 – Procedures is amended by replacing the thirteenth paragraph with the following:

Non-truck mounted equipment shall be regulated to allow for calibration of the amount and type of material applied.

Section 704.03 – Procedures is amended to replace the eighteenth paragraph with the following:

Glass beads and retroreflective optics shall be applied at the rate specified herein or as specified in the Department's Approved List for the specific pavement marking product. Beads and optics shall be evenly distributed over the entire lateral and longitudinal surface of the marking. The Contractor shall apply beads to the surface of liquid markings with a bead dispenser attached to the applicator that shall uniformly dispense beads simultaneously on and into the just-applied marking. The bead dispenser shall be equipped with a cut-off control synchronized with the applied marking material cut off control so that the beads are applied totally on the marking. Beads shall be applied while the liquid marking is still fluid, resulting in approximately 60% embedment in the marking's surface. Beads installed on crosswalks and stop lines on roadways with curbs only (no gutter) may be hand applied for two feet at the end of each line next to the curb with 100 percent of the beads embedded 50% to 60% into the marking's surface.

Section 704.03(a)1 – Type A markings is replaced with the following:

Type A markings shall be applied in accordance with the manufacturer's installation instructions. When applying atop existing pavement markings, the existing marking shall first be swept or eradicated to the extent necessary to ensure that the surface of the existing marking is clean, chalk free (not powdery), and well adhered.

Glass beads for Type A, Class I markings shall be AASHTO M 247 Type 1 Beads applied at a minimum rate of 6 pounds per gallon of paint

Retroreflective optics for Type A, Class II markings shall be applied as noted in the Department's Approved List 20 for the selected pavement marking product.

The Contractor may substitute Type A, Class I cold weather paint (traffic paint designed for application at temperatures below 40 °F) for Type A, Class I conventional paint at no additional cost to the Department. Cold weather paint shall be from the Department's Approved List 20.

Section 704.03(a)2 – Type B markings is amended to replace the third paragraph with the following:

Non-truck mounted equipment for application of thermoplastic material shall include an extrude die with a burner, temperature controller, agitator, and mechanical bead applicator to allow for the correct amount of material to be applied.

Section 704.03(a)2a – Thermoplastic (Class I) is amended to replace the fourth through sixth paragraphs with the following:

Thermoplastic shall not be applied over existing pavement markings of materials other than paint or thermoplastic, unless the existing marking is 90 percent worn away or eradicated. When applying thermoplastic over existing paint or thermoplastic, the existing marking shall first be swept or eradicated to the extent necessary to ensure that the surface of the existing marking is clean, chalk free (not powdery), and well adhered.

Thermoplastic marking material shall be applied at thickness of 90 mils (\pm 5 mils) above the riding surface, whether dense or open graded surface.

Glass beads and retroreflective optics shall be surface applied at the rate of 10 pounds per 100 square feet unless specified otherwise on the Materials Division's Approved Products List 43 for the specific thermoplastic product.

Section 704.03(a)2b – Preformed thermoplastic (Class II) is amended to replace the first and second paragraphs with the following:

Preformed thermoplastic (Class II) material shall be installed in accordance with the manufacturer's installation instructions. A primer or sealer manufactured by or recommended by the preformed thermoplastic manufacturer shall be applied to all hydraulic cement concrete surfaces and to asphalt concrete surfaces in accordance with the manufacturer's installation instructions.

Preformed thermoplastic shall not be applied over existing pavement markings of materials other than paint or thermoplastic, unless the existing marking is 90 percent worn away or eradicated. When applying preformed thermoplastic over existing paint or thermoplastic, the existing marking shall first be swept or eradicated to the extent necessary to ensure the surface of the existing marking is clean, chalk free (not powdery), and well adhered.

Permanent transverse rumble strips shall be applied using two strips of white Type B, Class II material. The bottom strip shall be 250 mils thick and 4 inches wide, and the top strip shall be 125 mils thick and 2 inches wide (centered atop the bottom strip), unless noted otherwise in the plans. Transverse rumble strips shall be installed in arrays as per the Standard Drawings and the plans.

Section 704.03(b) – Pavement messages and symbols markings is amended to replace the second paragraph with the following:

Surface temperature at time of application shall be in accordance with manufacturer's installation instructions. If the installation instructions do not specify minimum surface temperature, then the markings shall not be installed unless the surface temperature at time of application is 50°F or higher. Surface temperature requirements shall not be considered met if the temperature is forecasted to drop below the minimum within two hours of application. The Contractor may heat the pavement for a short duration to dry the pavement surface and bring the surface temperature to within the allowable temperatures for pavement marking installation, at no extra cost to the Department. Heat torch temperatures shall not exceed 300°F. The Contractor shall monitor pavement temperature to ensure it does not rise above 120°F at any time. Any damage to the pavement shall be promptly repaired at no extra cost to the Department.

Message and symbol markings include, but shall not be limited to, those detailed in Standard Drawing PM-10.

The sizes and shapes of symbols and characters shall match the size and shape specified in Standard Drawing PM-10 or elsewhere in the Contract. Hand-drawn or "stick" symbols or characters will not be allowed.

Table VII-3 is replaced with the following:

**TABLE VII-3
Pavement Markings**

Type	Class	Name	Film Thickness (mils)	Pavement Surface	Application Limitations	Appr. List No.
A	I	Conventional or Cold-Weather Traffic Paint	15 ± 1 when wet	AC HCC	May be applied directly after paving operations	20
A	II	High Build Traffic Paint	25 ± 2 when wet	AC HCC	May be applied directly after paving operations	20
B	I	Thermoplastic Alkyd	90 ± 5	AC HCC	May be applied directly after paving operations	43
	I	Thermoplastic Hydrocarbon	90 ± 5 when dry	AC HCC	Do not apply less than 30 days after paving operations	43
	II	Preformed Thermoplastic	120-130	AC HCC	Manufacturers installation instructions	73
	III	Epoxy resin	20 ± 1 when wet	AC HCC	Manufacturers installation instructions	75
	IV	Plastic-backed preformed Tape	60 - 120	AC HCC	Manufacturer's installation instructions	17
	VI	Patterned preformed Tape	20 min ¹ 65 min ²	AC HCC	(Note 4)	17
	VII	Polyurea	20 ± 1	AC HCC	Manufacturer's installation instructions	74
D	III	Wet Reflective Removable tape	(Note 3)	AC HCC	Temporary pavement marking	17
E		Removable black tape (Non-Reflective)	(Note 3)	AC	Temporary pavement marking for covering existing markings	17

¹Thinnest portion of the tape's cross section.

²Thickest portion of the tape's cross section.

³In accordance with manufacturer's installation instructions.

⁴In accordance with the manufacturer's installation instructions, except that Type B, Class VI markings on new plant mix asphalt surfaces shall be inlaid into the freshly installed asphalt surface and not surface-applied.

Section 704.03(d)1 – Snowplowable raised pavement markers is renamed **Section 704.03(d)1 – Inlaid Pavement Markers** and replaced as follows:

Inlaid Pavement Markers shall be installed with retroreflectors with front-side and back-side colors as per Standard Drawing PM-8.

The Contractor shall not install markers on existing bridge decks. Inlaid Pavement Markers shall be installed on new bridge decks where required by the Plans.

Inlaid Pavement Markers shall be placed in relation to pavement joints and cracks as follows:

- In existing Asphalt Concrete pavement, new or existing Hydraulic Cement Concrete pavement, and bridge decks, the edge of the groove shall be at least 2 inches from pavement joints and cracks, ensuring that the finished line of markers is straight in accordance with the tolerance for pavement markings specified in Section 704.03 of the Specifications. Offset from the longitudinal joint shall take precedence over straightness of the line of markers.
- In new Hydraulic Cement Concrete pavement or when installed in conjunction with new latex modified microsurfacing or slurry seal treatments, the edge of the groove shall be at least 2 inches from all longitudinal and transverse surface course pavement joints and 1 inch maximum off alignment from the corresponding pavement marking line. The finished line of markers shall be straight in accordance with the tolerance for pavement markings specified in Section 704.03 of the Specifications. Straightness of the line of markers and alignment with the corresponding pavement marking line takes precedence over offset from the surface course joint.

Retroreflectors shall be affixed to holders, using an adhesive from the Department's Approved List 22 (Inlaid Pavement Markers) prior to installation.

Inlaid Pavement Markers shall be installed as per Standard Drawing PM-8.

Tapered grooves and plunge cuts shall be cut using diamond blades that can accurately control the groove dimensions, resulting in smooth uniform tapers and smooth groove bottoms and ensuring the pavement does not tear or ravel. The Contractor shall remove all dirt, grease, oil, loose or unsound layers, and any other material from the groove which would reduce the bond of the adhesive. Pavement surfaces shall be maintained in a clean and dry condition until the marker is placed.

Holders shall be installed in the same shift as grooving.

The epoxy adhesive shall be thoroughly mixed until it is uniform in color, and applied in accordance with the manufacturer's installation instructions. The Contractor shall partially fill the plunge cut with sufficient epoxy adhesive such that the epoxy adhesive bed area is equal to the bottom area of the holder. The Contractor shall then set the holder in the epoxy adhesive such that the breakaway tabs are resting on the road surface, the holder is centered in the cut, and then fill in additional epoxy adhesive if necessary so the entire perimeter of the holder is completely surrounded in epoxy, with the epoxy level with the edge of the holder in accordance with the manufacturer instructions.

The Contractor shall remove all adhesive and foreign matter from the face of the retroreflector or replace the retroreflector if adhesive and foreign matter cannot be removed. The marker shall be replaced if it is not properly positioned and adhered in the plunge cut.

Section 704.03(d)2 – Raised Pavement Markers is renamed **Nonplowable Raised Pavement Markers** and is replaced with the following:

Nonplowable raised pavement markers shall be bonded to the surface in accordance with the manufacturer's installation instructions. The bonding material shall be from the Department's Approved List 22 for the specific marker.

Section 704.04 – Measurement and Payment is amended to replace the fifth paragraph with the following:

Pavement markers will be measured in units of each for the type specified and will be paid for at the contract unit price per each. This price shall include surface preparation, furnishing, installing, prismatic retroreflectors, pavement cutting, adhesive, holders, quality control tests, and daily log.

Section 704.04—Measurement and Payment is amended by revising the Pay Item Table as follows:

The following pay items are removed:

Pay Item	Pay Unit
Pavement message marking (Message)	Each or Linear Foot

The following pay items are inserted:

Pay Item	Pay Unit
Pavement message marking (Message, Type or class material)	Each or Linear Foot

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
SECTION 107.15 USE OF SMALL BUSINESSES (SWAM PROGRAM)

June 7, 2021

SECTION 107 – LEGAL REQUIREMENTS of the Specifications is amended as follows:

Section 107.15 – Use of Small, Women-Owned, and Minority-Owned Businesses (SWaMs), is replaced in its entirety with the following:

Section 107.15 – Use of Small Businesses, Including Small Women-Owned, Small Minority-Owned, and Small Service Disabled Veteran-Owned Businesses (SWaM Program)

(a) **SWaM Program**

In accordance with applicable rules, regulations, and laws, it is the policy of the Department that small businesses, including those owned by women, minorities, and service disabled veterans (SWaMs) shall have the maximum opportunity to participate in the performance of the Contract. The Contractor is encouraged to seek out and to take necessary and reasonable steps to provide SWaMs with the maximum opportunity possible to compete for and perform work as subcontractors and suppliers on the Contract.

For the purposes of VDOT's SWaM Program, SWaMs are small businesses certified by the Department of Small-Business and Supplier Diversity (DSBSD) and defined in Virginia Code § 2.2-1604 and § 2.2-4310 as: (i) small, (ii) any subcategory of small, (iii) small women-owned, (iv) small minority-owned, and (v) small service disabled veteran-owned. For the purpose of this SWaM Program, performance of the Contract shall include, but not be limited to, furnishing labor, materials, supplies, equipment, and services; and leasing equipment or, where applicable, any combination thereof.

By bidding on, and by accepting and executing this Contract on the basis of that bid, the Contractor agrees to assume these contractual obligations. The Contractor shall carry out applicable requirements of this SWaM Program in the award, administration, and performance of this Contract. Failure by the Contractor to carry out these requirements is a material breach of this Contract, which may result in the termination of this Contract or other such remedy, as VDOT deems appropriate, which may include, but is not limited to: (1) withholding monthly progress payments; (2) assessing sanctions; (3) liquidated damages; and/or (4) disqualifying the contractor from future bidding.

(b) **SWaM Certification**

The only subcontractors eligible to perform work on a state funded contract and receive SWaM goal credit are SWaMs certified by DSBSD. Additionally, SWaM businesses must be certified in a NIGP code applicable to the kind of work the businesses would perform on the Contract to receive credit toward the SWaM goal. A directory listing of certified SWaM businesses can be obtained from the DSBSD website, www.sbsd.virginia.gov.

In support of the SWaM Program, VDOT has a service that easily locates SWaM certified businesses that are near a job site using an interactive map that can be accessed using the following link: [VDOT's SWaM Patrol - Path to 42](#).

(c) SWaM Program-Related Certifications Made by Bidders/Contractors

By bidding on, and by accepting and executing the Contract on the basis of that bid, the Bidder/Contractor certifies to each of the following SWaM Program-related conditions and assurances:

1. Under penalty of perjury and other applicable penal law that it has complied with the SWaM Program requirements in submitting the bid, and shall comply fully with these requirements in the bidding, award, and execution of the Contract.
2. To ensure that SWaMs have been given full and fair opportunity to participate in the performance of the Contract, the Contractor certifies that all reasonable steps were, and will be, taken to ensure that SWaMs had, and will have, an opportunity to compete for and perform work on the Contract.
3. As a Bidder, good faith efforts were made to obtain SWaM participation in the proposed Contract at or above the goal for SWaM participation established by the Department. If necessary, it has submitted as a part of its bid true, accurate, complete, and detailed documentation of the good faith efforts it performed to meet the Contract goal for SWaM participation. The Bidder, by signing and submitting its bid, certifies the SWaM participation information submitted within the stated time thereafter is true, correct, and complete, and that the information provided includes the names of all SWaMs that will participate in the contract, the specific line items that each listed SWaM will perform, and the creditable dollar amounts of the participation of each listed SWaM. The specific line item must reference the VDOT line number and item number contained in the Proposal.
4. The Bidder further certifies, by signing its bid, it has committed to use each SWaM listed for the specific work item shown to meet the Contract goal for SWaM participation. Award of the Contract will be conditioned upon meeting these requirements and other applicable requirements in the Contract. By signing the bid, the Bidder certifies on work that it proposes to sublet, it has made good faith efforts to seek out and consider SWaMs as potential subcontractors.
5. The Contractor shall make good faith efforts to utilize SWaMs to perform work designated to be performed by SWaMs at or above the amount or percentage of the dollar value specified in the Contract. Further, the Contractor understands it shall not unilaterally terminate, substitute for, or replace any SWaM that was designated in the executed Contract in whole or in part with another SWaM, any non-SWaM, or with the Contractor's own forces or those of an affiliate of the Contractor without the prior written consent of the Department as set out within this provision.
6. The Contractor shall designate and make known to the Department a liaison officer who is assigned the responsibility of administering and promoting an active and inclusive SWaM Program as required by this Special Provision. The designation and identity of this officer need be submitted only once by the Contractor during any 12-month period at the preconstruction conference for the first contract the Contractor has been awarded during that reporting period.
7. Each SWaM participating in the Contract shall fully perform the designated work items with the SWaM's own forces and equipment under the SWaM's direct supervision, control, and management. Where a contract exists and where the Contractor, SWaM, or any other subcontractor retained by the Contractor has failed to comply with the SWaM Program requirements on that contract, VDOT has the authority and discretion to determine the extent to which the SWaM Contract requirements have not been met, and will assess against the Contractor any remedies available at law or provided in the Contract in the event of such a Contract breach.

8. In the event a bond surety assumes the completion of work, if for any reason the Department has terminated the Contractor, the surety shall be obligated to meet the same SWaM Program Contract terms and requirements as were required of the original Contractor in accordance with this Special Provision.

(d) **Compliance Procedures**

In addition to procedures applicable to subcontractors in general, the following procedures shall apply for SWaM Program compliance purposes.

1. **Contract Goal, Good Faith Efforts Specified.** The Contract will only be awarded to a Bidder who makes good faith efforts to meet the SWaM goal. A Bidder has made good faith efforts if the Bidder does the following:

A. The Bidder completes and submits as a part of the Bid:

- (1) **Form C-111S, Minimum SWaM Requirements**, documenting its small business subcontracting plan to attain SWaM participation equal to or greater than the SWaM goal established for the project. Form C-111S may be submitted electronically or may be faxed to the Department, but in no case shall the Bidder's Form C-111S be received later than 10:00 a.m. the next business day after the date and time stated in the bid proposal for the receipt of bids. Contractors who are SWaMs are deemed to have met all the compliance procedures.

Where the award of a contract for services is made to a SWaM Contractor and the Contractor intends to subcontract work as part of its performance under this Contract, the Contractor shall submit Form C-111S and comply with the subcontracting procedures.

- (2) **Form C-48, Subcontractor/Supplier Solicitation and Utilization**, representing its solicitation of subcontractors/suppliers, whether the listed businesses are SWaMs or non-SWaMs, and utilization or non-utilization of the businesses listed for performance of work on the Contract. Form C-48 may be submitted electronically or may be faxed to the Department, but the Bidder's Form C-48 must be received within 10 business days after the bid opening.
- (3) **Form C-31, Subletting Request**, identifying proposed subcontractors, proposed items and amounts proposed to be sublet, and whether subcontractors are SWaM certified. For each subcontractor not identified at the time of bid, a Form C-31 shall be submitted to the Department electronically or by fax prior to the subcontractor beginning work.

Failure of the Bidder to submit these Forms in the time frame specified may be cause for rejection of the bid in accordance with this SWaM Program and the Specifications.

- B. If the Bidder is not able to meet the SWaM goal, the Bidder must submit Form C-111S exhibiting the SWaM participation it commits to attain as a part of its bid documents within the time required above. The Bidder shall then submit **Form C-49S, SWaM Good Faith Efforts Documentation**, electronically or by fax, within 2 business days after the bid opening.
- C. The lowest responsive and responsible Bidder must submit its properly executed Form C-112S within 3 business days after the bids are opened. SWaMs bidding as prime contractors are not required to submit Form C-112S. Contractors who are SWaMs are deemed to have met all the compliance procedures.

- D. If, after review of the apparent lowest bid, the Department determines the SWaM goal or other requirements have not been met, the apparent lowest successful Bidder must submit Form C-49S which must be received by the State Contract Engineer within 2 business days after official notification of such failure to meet the aforementioned SWaM requirements.
- E. The procurement of the Contract shall be conducted in accordance with small business enhancement terms set forth in this SWaM Program for small businesses certified by DSBSD.

Forms C-31, C-48, C-49S, C-61, C-111S, and C-112S can be obtained from the VDOT website at: <http://vdotforms.vdot.virginia.gov/>.

2. **Good Faith Efforts Described**

Good faith efforts means all necessary and reasonable steps that the Bidder/Contractor took to achieve the SWaM goal or comply with the requirements of this SWaM Program which, by their scope, intensity, and appropriateness to the objective, can reasonably be expected to obtain or fulfill the requirement.

In order to award a contract to a Bidder who has failed to meet the SWaM goal, or otherwise evaluate whether the Contractor has complied with the requirements of the SWaM Program, VDOT will determine if the Bidder/Contractor made adequate good faith efforts, and if given all relevant circumstances, those efforts were made actively and aggressively to meet the SWaM goal. Efforts to obtain SWaM participation are not good faith efforts if they could not reasonably be expected to produce a level of SWaM participation sufficient to meet the SWaM goal.

Good faith efforts may be determined through use of the following list of the types of actions the Bidder/Contractor may take to obtain SWaM participation. This is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts of similar intent may be relevant in appropriate cases:

- A. Soliciting SWaM participation through reasonable and available means, such as but not limited to, attending pre-bid meetings, advertising, and sending written notices to SWaMs who have the capability to perform the work of the Contract. Examples include: (i) advertising the opportunity to bid in at least one daily/weekly/monthly newspaper of general circulation or on the internet with supporting documentation, including copies of the advertisement; (ii) telephoning SWaMs as shown by a completely documented telephone log, including the date and time called, contact person, or voice mail status; or (iii) emailing SWaMs as shown by copies of the email and responses. The Bidder/Contractor shall solicit this interest no less than five (5) business days before the bids are due so that the solicited SWaMs have enough time to reasonably respond to the solicitation. The Bidder/Contractor shall determine with certainty if the SWaMs are interested by taking reasonable steps to follow up initial solicitations as evidenced by documenting such efforts as requested on Form C-49S.
- B. Selecting portions of the work to be performed by SWaMs in order to increase the likelihood that the SWaM goal will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate SWaM participation, even when the Contractor might otherwise prefer to completely perform all portions of this work in its entirety or use its own forces.

- C. Providing interested SWaMs with adequate information about the Plans, Specifications, and requirements of the Contract in a timely manner, which will assist the SWaMs in responding to a solicitation.
- D. Negotiating for participation in good faith with interested SWaMs.
 - (1) Evidence of such negotiation shall include the names, addresses, and telephone numbers of SWaMs that were considered; dates SWaMs were contacted; a description of the information provided regarding the Plans, Specifications, and requirements of the Contract for the work selected for subcontracting; and, if insufficient SWaM participation seems likely, evidence as to why additional agreements could not be reached for SWaMs to perform the work.
 - (2) A Bidder/Contractor using good business judgment should consider a number of factors in negotiating with subcontractors, including SWaM subcontractors, and should take a firm's price, qualifications, and capabilities, as well as contract goals, into consideration. However, the fact that there may be some additional costs involved in finding and using SWaMs is not sufficient reason for a Bidder's/Contractor's failure to meet the Contract goal for SWaM participation, as long as such costs are reasonable and comparable to costs customarily appropriate to the type of work under consideration. Also, the ability or desire of a Bidder/Contractor to perform the work on the Contract with its own organization does not relieve the Bidder/Contractor of the responsibility to make diligent good faith efforts. Bidders/Contractors are not, however, required to accept higher quotes from SWaMs if the Bidder can show price difference to be excessive, unreasonable, or greater than would normally be expected by industry standards.
- E. A Bidder/Contractor cannot reject a SWaM as being unqualified without sound reasons based on a thorough investigation of the SWaM's capabilities. The SWaM's standing within its industry, membership in specific groups, organizations, associations, and political or social affiliations, and union versus non-union employee status are not legitimate causes for the rejection or non-solicitation of bids in the Bidder's efforts to meet the project goal for SWaM participation.
- F. Making efforts to assist interested SWaMs in obtaining necessary equipment, supplies, materials, or related assistance or services subject to the restrictions contained in these provisions.
- G. Effectively using the services of appropriate personnel from the Department and from (i) DSBSD, (ii) available community organizations, (iii) contractors' groups, (iv) local, state, and Federal business assistance offices, (v) the Virginia Department of Veterans; and (vi) other organizations as allowed on a case-by-case basis; to provide assistance in the recruitment and utilization of qualified SWaMs.

(e) Documentation and Administrative Reconsideration of Good Faith Efforts

- 1. **During Bidding:** As described in Section 107.15(d)(1), where a Bidder fails to meet the SWaM goal, the Bidder must submit Form C-49S documenting its good faith efforts made to meet the SWaM goal within 2 business days after notification of such failure. The means of transmittal and the risk for timely receipt of this information shall be the responsibility of the Bidder. The Bidder shall attach additional pages to the certification, if necessary, in order to fully document specific good faith efforts made to obtain the SWaM goal.
 - A. A Bid may be found non-responsive where the Bidder has failed to submit the required documentation in the time and manner specified.

- B. Before awarding a contract or renewing a renewable contract with the Contractor, the Department will review the Contractor's record of compliance with its small business subcontracting plan requirements in Form C-111S submitted on past contracts. The failure to meet satisfactorily the designated small business subcontracting procurement plan requirements shall be considered in the prospective award or renewal of a contract in accordance with applicable rules, regulations, and laws, and Section 102.08
- C. If the lowest Bidder's Bid is rejected the Department may award the Contract to the next lowest Bidder, re-advertise the Proposal at a later date, or proceed otherwise as determined by the Department.

2. **Administrative Reconsideration.**

Where the Department determines that the apparent low Bidder has failed or appears to have failed to meet the requirements of Section 107.15(d)(1) and has failed to adequately document that it made a good faith effort to obtain sufficient SWaM participation to meet the SWaM goal, the Department will notify the Bidder and provide the opportunity for the Bidder to request administrative reconsideration before the Department rejects that bid as non-responsive. The Bidder may submit a request for reconsideration in writing to the State Contract Engineer within 5 business days of receipt of notification by the Department and shall be given the opportunity to discuss the issue and present its evidence to the Administrative Reconsideration Panel (Panel), either in person or by telephone or video conference as the Panel chooses. The Panel will be made up of VDOT Division Administrators or their designees, none of whom took part in the initial determination that the Bid is non-responsive. After presentation by the Bidder, the Panel shall notify the Bidder in writing of its decision and explain the basis for finding that the Bid is or is not responsive.

If the Panel determines the Bidder failed to meet the requirements of the SWaM goal and has failed to make adequate good faith efforts to achieve the level of SWaM participation as specified in the Proposal, the Bidder's Bid will be rejected.

If the Panel determines sufficient documented evidence was presented to demonstrate that the apparent low Bidder made reasonable good faith efforts, the Department will award the Contract and reduce the SWaM requirement to the Bidder's actual commitment shown in their Form C-111S at the time of its Bid. The Contractor is still encouraged to seek additional SWaM participation during the life of the Contract.

(f) **SWaM Participation for Contract Goal Credit**

SWaM participation on the Contract will count toward meeting the SWaM goal in accordance with the following criteria:

1. Cost-plus subcontracts will not be considered to be in accordance with normal industry practice and will not normally be allowed for credit.
2. The applicable percentage of the total dollar value of the subcontract awarded to the SWaM will be counted toward meeting the SWaM goal in accordance with Section 107.15(c) for the value of the work, materials, equipment, supplies, or services that are actually performed or provided by the SWaM itself or subcontracted by the SWaM to other SWaMs.
3. When a SWaM performs work as a participant in a joint venture with a non-SWaM, the Contractor may count toward the SWaM goal only that portion of the total dollar value of the Contract equal to the distinctly defined portion of the Work that the SWaM has performed with the SWaM's own forces or in accordance with the provisions of this Section. The Department shall be contacted in advance regarding any joint venture involving both a SWaM and a non-SWaM to coordinate Department review and approval of the joint venture's organizational

structure and proposed operation where the Contractor seeks to claim the SWaM's credit toward the SWaM goal.

4. When a SWaM subcontracts part of the work of the Contract to another business, the value of that subcontracted work may be counted toward the SWaM goal only if the SWaM's subcontractor is a certified SWaM. Work that a SWaM subcontracts to either a non-SWaM or to a non-certified SWaM will not count toward the SWaM goal. The cost of supplies and equipment a SWaM subcontractor purchases or leases from the Contractor or the Contractor's affiliates will not count toward the Contract goal for SWaM participation.
5. A Contractor may not count the participation of a SWaM Subcontractor toward the Contractor's final compliance with the SWaM goal obligations until the amount being counted has actually been paid to the SWaM.

(g) Performing a Commercially Useful Function (CUF)

No credit toward the SWaM goal will be allowed for Contract payments or expenditures to a SWaM firm if that SWaM firm does not perform a CUF on the Contract. A SWaM performs a CUF when the SWaM is solely responsible for execution of a distinct element of the Work and the SWaM actually performs, manages, and supervises the work involved with the firm's own forces or in accordance with the provisions of Section 107.15(f). To perform a CUF the SWaM alone shall be responsible and bear the risk for the material and supplies used on the Contract, selecting a supplier or dealer from those available, negotiating price, determining quality and quantity, ordering the material and supplies, installing those materials with the SWaM's own forces and equipment where applicable, and paying for those materials and supplies itself. Whether the SWaM is performing a CUF will be determined based on the amount of work subcontracted, and whether the amount the SWaM is to be paid under the Contract shall be commensurate with the work the SWaM actually performs and the SWaM credit claimed for the SWaM's performance.

1. **Monitoring CUF Performance:** It shall be the Contractor's responsibility to ensure that all SWaMs selected for subcontract work on the Contract, for which he seeks to claim credit toward the SWaM goal, perform a CUF. Further, the Contractor is responsible for and shall ensure that each SWaM fully performs the SWaM's designated tasks with the SWaM's own forces and equipment under the SWaM's own direct supervision and management or in accordance with the provisions of Section 107.15(f). For the purposes of this provision the SWaM's equipment will mean either equipment directly owned by the SWaM as evidenced by title, bill of sale or other such documentation, or leased by the SWaM, and over which the SWaM has control as evidenced by the leasing agreement from a firm not owned in whole or part by the Contractor or an affiliate of the Contractor under the Contract.

The Department will monitor the Contractor's SWaM involvement during the performance of the Contract. However, the Department is under no obligation to warn the Contractor that a SWaM's participation will not count toward the goal.

2. **SWaMs Must Perform a Useful and Necessary Role in Contract Completion:** A SWaM does not perform a CUF if the SWaM's role is limited to that of an extra participant in a transaction, contract, or project through which funds are passed in order to obtain the appearance of SWaM participation. In determining whether a SWaM is such an extra participant, VDOT will examine similar transactions, particularly those in which SWaMs do not participate.
3. **SWaMs Must Perform The Contract Work With Their Own Workforces:** If a SWaM does not perform and exercise responsibility for at least 30% of the total cost of the SWaM's contract with the SWaM's own work force, or the SWaM subcontracts a greater portion of the work of a contract than would be expected on the basis of normal industry practice for the

type of work involved, the Department will presume that the SWaM is not performing a CUF and such participation will not be counted toward the SWaM goal. When a SWaM is presumed not to be performing a CUF, the SWaM may present evidence to rebut this presumption. The Department may determine that the SWaM is performing a CUF given the type of work involved and normal industry practices.

4. **VDOT Makes Final Determination On Whether a CUF Is Performed:** VDOT has the final authority to determine whether a SWaM firm has performed a CUF. To determine whether a SWaM is performing or has performed a CUF, VDOT will evaluate the amount of work subcontracted by that SWaM or performed by other firms and the extent of the involvement of other firms' forces and equipment. Any SWaM work performed by the Contractor or by employees or equipment of the Contractor shall be subject to disallowance under the SWaM Program, unless the independent validity and need for such an arrangement and work is demonstrated.
5. **Factors Used to determine if a SWaM Trucking Firm is performing a CUF:**
 - A. To perform a CUF the SWaM trucking firm shall be completely responsible for the management and supervision of the entire trucking operation for which the SWaM is responsible by subcontract on a particular contract. There shall not be a contrived arrangement, including, but not limited to, any arrangement that would not customarily and legally exist under regular construction project subcontracting practices for the purpose of meeting the SWaM goal.
 - B. The SWaM must own and operate at least one fully licensed, insured, and operational truck used in the performance of the Contract work. This does not include a supervisor's pickup truck or a similar vehicle that is not suitable for and customarily used in hauling the necessary materials or supplies.
 - C. The SWaM receives full credit for the total reasonable amount the SWaM is paid for the transportation services provided on the Contract using trucks the SWaM owns, insures, and operates using drivers that the SWaM employs and manages.
 - D. The SWaM may lease trucks from another certified SWaM firm, including from an owner-operator who is certified as a SWaM. The SWaM firm that leases trucks from another SWaM will receive credit for the total fair market value actually paid for transportation services the lessee SWaM firm provides on the Contract.
 - E. The SWaM may also lease trucks from a non-SWaM firm, including an owner-operator. The SWaM who leases trucks from a non-SWaM is entitled to credit for the total value of the transportation services provided by non-SWaM leased trucks equipped with drivers, not to exceed the value of transportation services on the Contract provided by SWaM-owned trucks or leased trucks with SWaM employee drivers. For additional participation by non-SWaM lessees, the SWaM will only receive credit for the fee or commission it receives as a result of the lease arrangement.

Example: SWaM Firm X uses two (2) of its own trucks on a contract. The firm leases two (2) trucks from SWaM Firm Y and six (6) trucks equipped with drivers from non-SWaM Firm Z. SWaM credit would be awarded for the total transportation services provided by SWaM Firm X and SWaM Firm Y, and may also be awarded for the total value of transportation services by four (4) of the six (6) trucks provided by non-SWaM Firm Z. In all, full SWaM credit would be allowed for the participation of eight trucks.

With respect to the other two trucks provided by non-SWaM Firm Z, SWaM credit could be awarded only for the fees or commissions pertaining to those trucks that SWaM Firm X receives as a result of the lease with non-SWaM Firm Z.

- F. The SWaM may lease trucks without drivers from a non-SWaM truck leasing company. If the SWaM leases trucks from a non-SWaM truck leasing company and uses its own employees as drivers, it is entitled to credit for the total value of these hauling services.

Example: SWaM Firm X uses two of its own trucks on a contract. It leases two additional trucks from non-SWaM Firm Z. Firm X uses its own employees to drive the trucks leased from Firm Z. SWaM credit would be awarded for the total value of the transportation services provided by all four trucks.

- G. For purposes of this section, the lease must indicate that the SWaM firm leasing the truck has exclusive use of and control over the truck. This will not preclude the leased truck from working for others during the term of the lease with the consent of the SWaM, provided the lease gives the SWaM absolute priority for and control over the use of the leased truck. Leased trucks must display the name and identification number of the SWaM firm that has leased the truck at all times during the life of the lease.

(h) Verification of SWaM Participation

1. During the Contract

Within 14 days after contract execution, the Contractor shall submit to the Engineer, with a copy to the District Civil Rights Office (DCRO), a fully executed Subcontract for each SWaM used to claim credit in accordance with the requirements stated on Form C-112S. The Subcontract shall be executed by both parties stating the work to be performed, the details or specifics concerning such work, and the price which will be paid to the SWaM. In lieu of subcontracts, purchase orders may be submitted for haulers, suppliers, and manufacturers. Such purchase orders must contain, at least, the following information: authorized signatures of both parties; description of the scope of work to include contract item numbers, quantities, and prices; and required contract provisions.

Within 14 days after contract execution, the Contractor shall submit to the Department a fully executed Form C-61 showing the name(s) and certification numbers of the SWaMs who will perform work to be reported as said participation credit. Each month during the Project, the Contractor shall furnish information relative to all SWaM involvement on the project using Form C-61. The District Civil Rights Office (DCRO) will monitor good faith effort documentation monthly to determine progress being made toward meeting the SWaM goal established for the Contract based on the Form C-61 that the Contractor submits during the monthly reporting periods after notice to proceed.

The Department reserves the right to request proof of payment via copies of cancelled checks with appropriate identifying notations. Failure to provide Form C-61 to the DCRO within 5 business days after the reporting period may result in delay of approval of the Contractor's monthly progress estimate for payment. The names and certification numbers of SWaM businesses provided by the Contractor on the various forms indicated in this Special Provision shall be exactly as shown on the DSBSD's latest list of certified SWaMs. Signatures on all forms indicated herein shall be those of authorized representatives of the Contractor as shown on Form C-32 or Form C-32A, or authorized by letter from the Contractor.

The Contractor shall submit to the Engineer its progress schedule with a copy to the DCRO, as required by Section 108.03 or other such specific contract scheduling specification that may include contractual milestones, i.e., monthly or VDOT requested updates. The Contractor shall include a narrative of applicable SWaM activities relative to work activities of the Contractor's progress schedule, including the approximate start times and durations of all

SWaM participation to be claimed for credit that shall result in full achievement of the SWaM goal required in the Contract.

If the Contractor plans to use SWaMs who have not been previously documented with the Contractor's Bid and for which the Contractor desires to claim credit toward the SWaM goal, before the SWaM begins work the Contractor shall be responsible for a revised Form C-111S showing the names and certification numbers of any current SWaMs.

The Contractor shall obtain the prior approval of the Department for any assistance it may provide to the SWaM beyond its existing resources in executing its commitment to the work in accordance with the requirements listed in Section 107.15(d). If the Contractor is aware of any assistance beyond a SWaM's existing resources that the Contractor, or another subcontractor, may be contemplating or may deem necessary and that have not been previously approved, the Contractor shall submit a new or revised narrative statement for VDOT's approval prior to assistance being rendered.

2. **SWaM Non-Performance.** If a SWaM, through no fault of the Contractor, is unable or unwilling to fulfill their agreement with the Contractor, the Contractor shall immediately notify the Department in writing and provide all relevant facts. If a Contractor intends to terminate or relieve a SWaM of the responsibility to perform work under their subcontract, the Contractor is required to comply with termination provisions below.
3. **Contractor Non-Compliance.**

If the Contractor fails to conform to the schedule of SWaM participation as shown on the progress schedule, fails to meet the SWaM participation goals for each month of the Contract as shown on the progress schedule, or at any point at which it is clearly evident that the remaining dollar value of allowable credit for performing work is insufficient to obtain the scheduled participation, and the Contractor has not taken the actions required when a SWaM is unwilling or unable to perform, the Contractor may be disqualified from bidding as provided in Section 107.15(i) for a period up to 60 days, or until such time as conformance with the schedule of SWaM participation is achieved or until the preceding actions are taken. Disqualification may be avoided if the Contractor can show: (1) the SWaM is unable or unwilling to complete their portion of the Work, and the Contractor shows reasonable good faith effort to fulfill the SWaM requirement otherwise; or (2) the Department has eliminated or delayed work which the Contractor, as shown on the progress schedule, had planned to sublet to a SWaM.

If the Contractor fails to comply with correctly completing and submitting any of the required documentation required by this provision within the specified time frames, the Department will withhold payment of the monthly progress estimate until such time as the required submissions are received by the Department. Where such failures to provide required submittals or documentation are repeated the Department may disqualify the Contractor and any prime contractual affiliates, as in the case of a joint venture, from bidding as a prime Contractor, or participating as a subcontractor on VDOT projects until such submissions are received in accordance with Section 107.15(i).

4. **Contract Changes.** During construction there may be changes in the Work necessary for the satisfactory completion of the Project. The SWaM goal applicable to the Contract includes change orders that have more than a minimal impact on the overall Contract amount or the expected SWaM participation. The Contractor should closely monitor changes in the Work to verify if they will impact work to be performed by SWaMs.

A. Increases in Contract Amount

To meet the SWaM goal as applied to a change order increasing the overall Contract

amount, the Contractor must make good faith efforts to obtain additional SWaM participation to meet the SWaM goal on the increase in the overall Contract amount. The Contractor could meet this obligation either by obtaining the additional work from SWaM subcontractors or suppliers or by documenting good faith efforts to do so.

For example, if a project has a 10% SWaM participation goal, and during the project the Department issues a change order that will add \$500,000 to the overall Contract amount, the 10% goal applies to this additional \$500,000. To meet the SWaM goal as applied to the Change Order, the Contractor would have to make good faith efforts to obtain an additional \$50,000 in SWaM participation.

If after making a good faith effort the Contractor cannot obtain additional SWaM participation sufficient to meet the increased SWaM goal, the Contractor shall document its good faith efforts by submitting a revised Form C-111S exhibiting the SWaM participation it commits to attain. The Contractor shall also submit a revised Form C-49S. If the Department determines that these Forms demonstrate that the Contractor made reasonable good faith efforts, the Department will reduce the SWaM goal to the Contractor's actual commitment shown in the revised Form C-111S. The Contractor is still encouraged to seek additional SWaM participation during the life of the Contract.

The Contractor may notify the Department if it believes that a Change Order has such a minimal impact on the overall Contract amount or the expected SWaM participation that it would not be sensible to apply the goal to the Change Order. The Department will determine whether it is necessary to apply the SWaM goal to the Change Order.

B. Decreases in Amount of SWaM Work

If changes in the Work eliminate or decrease the amount of work designated to be performed by SWaM(s), the Contractor must follow the procedures in Section 107.15(l)(2)(D), and must make good faith efforts to meet the SWaM goal by finding additional work for SWaMs to perform or finding additional SWaMs to perform work under the Contract to the extent needed to meet the SWaM goal.

5. Documentation Required for Semi-Final Payment

On those projects nearing completion, the Contractor must submit Form C-61 marked "Semi-Final" to the DCRO within 20 days after the submission of the last regular monthly progress estimate. The form must include each SWaM used on the Contract work and the work performed by each SWaM. The form shall include the actual dollar amount paid to each SWaM for the accepted creditable work on the Contract. The form shall be certified under penalty of perjury, or other applicable law, to be accurate and complete. The Department will use this certification and other information available to determine applicable SWaM credit allowed to date by the Department and the extent to which the SWaMs were fully paid for that work. The Contractor shall acknowledge by the act of filing the form that the information is supplied to obtain SWaM credit, and that Contractor has complied with the requirements of the SWaM Program. A letter of certification, signed by both the Contractor and appropriate SWaMs will accompany the form, indicating the amount, including any retainage, if present, that remains to be paid to the SWaMs.

6. Documentation Required for Final Payment

On those projects that are complete, the Contractor shall submit a Form C-61 marked "Final Report" to the DCRO, within 60 days after final acceptance of the Project. The form must include each SWaM used on the Contract and the work performed by each SWaM. The form shall include the actual dollar amount paid to each SWaM for the creditable work on the Contract. The Department may delay final payment until the Contractor provides the required

documentation or complies with its small business subcontracting plan in Form C111S.

Before final payment is made, the Department will use this form and other information available to confirm that the Contractor has certified compliance with the Contract's small business subcontracting plan shown in Form C111S, and determine if the Contractor has satisfied the SWaM goal percentage specified in the Contract and the extent to which credit was allowed. The Contractor shall acknowledge by the act of signing and filing the form that the information is supplied to obtain SWaM credit, and that Contractor has complied with the requirements of the SWaM Program.

If there are any variances between the Contractor's required small business subcontracting plan in Form C111S and the actual participation, the Contractor shall provide a written explanation to the Department in the final Form C-61. The written explanation shall be kept with the Contract file and made available upon request. The Contractor's written explanation must substantiate that the variance: (i) was due solely to quantitative underruns, elimination of items subcontracted to SWaMs, or circumstances beyond their control; and (ii) all feasible means have been used to obtain the required participation. The State Contract Engineer upon evaluation of such written explanation will make a determination whether or not the Contractor has met the requirements of the Contract in accordance Section 107.15(i). If the determination is that the Contractor failed to meet the SWaM goal or otherwise comply with the requirements of this SWaM Program, the Contractor may be disqualified from bidding as provided in Section 107.15(i).

(i) Disqualification of Contractor

Contractors may be disqualified from bidding for failure to comply with this SWaM Program. Disqualification means the suspension or revocation of the Contractor's prequalification privileges. The disqualification of the Contractor will also result in the disqualification of each member when the Contractor is a joint venture, and any affiliate of the Contractor that has essentially the same operational management or draws from the same labor resource pool. Disqualification, for the purpose of this SWaM Program, means that the Contractor, the members of the joint venture when applicable, and its affiliates, will retain their prequalification status, but will be restricted from bidding as a prime contractor, or performing work as a subcontractor on VDOT projects for the specified period of time if the State Contract Engineer determines that such work could adversely affect other work under contract to VDOT.

Before disqualification as provided herein, the Contractor may submit documentation to the State Contract Engineer to substantiate that the failure was due solely to quantitative underruns, elimination of items subcontracted to SWaMs, or to circumstances beyond their control, and that all feasible means have been used to obtain the required participation.

The State Contract Engineer upon evaluation of such documentation shall make a determination whether or not the Contractor has met the requirements of the Contract. Before the issuance of a written determination of disqualification, the State Contract Engineer shall (i) notify the Contractor in writing of the results of the evaluation, (ii) disclose the factual support for the determination, and (iii) allow the Contractor an opportunity to inspect any documents that relate to the determination, if so requested by the Contractor within 5 business days after receipt of the notice.

Within 10 business days after receipt of the notice, the Contractor may submit rebuttal information challenging the evaluation. The State Contract Engineer shall issue the written determination of disqualification based on all information in the possession of the Department, including any rebuttal information, within 5 business days of the date the State Contract Engineer received such rebuttal information.

If the State Contract Engineer determines that the Contractor should be disqualified, the decision shall be administratively final unless the Contractor requests an appearance before the

Administrative Reconsideration Panel to establish that all feasible means were used to meet such participation requirements. If the Administrative Reconsideration Panel's evaluation reveals that the Contractor should not be disqualified, the Department shall cancel the proposed disqualification action. If the evaluation reveals that the Contractor should be disqualified, the Administrative Reconsideration Panel shall so notify the Contractor. The notice shall state the basis for the determination. The decision of the Administrative Reconsideration Panel shall be final and conclusive unless the Contractor appeals the decision within 10 calendar days after receipt of the notice by instituting a legal action as provided in Virginia Code § [2.2-4364](#).

If the decision is made to disqualify the Contractor as described herein, the disqualification period will begin upon the Contractor's failure to request an appearance before the Administrative Reconsideration Panel or instituting a legal action within the designated time frame or upon the Administrative Reconsideration Panel's or a court's decision to affirm the disqualification, as applicable.

As used above, "all feasible means" refers to reasonable good faith efforts to obtain sufficient SWaM participation to meet the SWaM goal as specified in Section 107.15(d)(2).

(j) **Miscellaneous SWaM Program Requirements**

1. **Loss of SWaM Eligibility:** When a SWaM has been removed from eligibility as a certified SWaM, the following actions will be taken:
 - A. When a Contractor has made a commitment to use a Subcontractor that is not currently SWaM certified, thereby making the Contractor ineligible to receive SWaM participation credit for work performed, and a Subcontract has not been executed, the ineligible Subcontractor does not count toward either the SWaM goal or overall goal. The Contractor shall meet the SWaM goal with a Subcontractor that is eligible to receive SWaM credit for work performed, or must demonstrate to the State Contract Engineer that it has made good faith efforts to do so.
 - B. When a Contractor has executed a Subcontract with a certified SWaM before official notification of the SWaM's loss of eligibility, the Contractor may continue to use the subcontractor on the Contract and shall continue to receive SWaM credit toward its SWaM goal for the subcontractor's work.
 - C. When the Department has executed a prime contract with a SWaM that is certified at the time of contract execution but that is later ruled ineligible, the portion of the ineligible contractor's performance on the contract before the Department has issued the notice of its ineligibility shall count toward the SWaM goal.
2. **Termination of SWaM:** If a SWaM that the Contractor committed to use to meet the SWaM goal fails, refuses, or is unable to complete their work on the Contract for any reason, the Contractor shall promptly notify the Department. The Contractor shall not terminate, substitute or replace that SWaM without providing the notices and obtaining the Department's prior written consent in accordance with this section. This includes, but is not limited to, instances in which the Contractor seeks to perform work originally designated for a SWaM with its own forces or those of an affiliate, a non-SWaM, or with another SWaM. Unless the Contractor obtains the Department's prior written consent the Contractor shall utilize the specific SWaMs listed in its Form C-111S to perform the work and supply the materials for which each is listed, and the Contractor shall not be entitled to any payment for work or material unless it is performed or supplied by the listed SWaM.
 - A. Written consent from the Department for terminating the performance of any SWaM shall be granted only when the Contractor can demonstrate that it has good cause to do so. For purposes of this section, good cause includes the following circumstances:

- (1) The listed SWaM fails or refuses to execute a written contract.
- (2) The listed SWaM fails or refuses to perform the work of its subcontract in a way consistent with normal industry standards. Provided, however, that good cause does not exist if the failure or refusal of the SWaM to perform its work on the Subcontract results from the bad faith or discriminatory action of the Contractor.
- (3) The listed SWaM fails or refuses to meet the Contractor's reasonable, nondiscriminatory bond requirements.
- (4) The listed SWaM becomes bankrupt, insolvent, or exhibits credit unworthiness.
- (5) The listed SWaM is ineligible to work on public works projects because of suspension, debarment, disqualification, lack of prequalification, or applicable state law.
- (6) The Department has determined that the listed SWaM is not a responsible contractor.
- (7) The listed SWaM voluntarily withdraws from the project and provides to the Department written notice of its withdrawal.
- (8) The listed SWaM is ineligible to receive SWaM credit for the type of work required.
- (9) A SWaM owner dies or becomes disabled with the result that the listed SWaM is unable to complete its work on the Contract.
- (10) Other documented good cause that the Department determines compels the termination of the SWaM. Provided, that good cause does not exist if the Contractor seeks to terminate a SWaM it relied upon to obtain the Contract so that the Contractor can self-perform the work for which the SWaM was engaged or so that the Contractor can substitute another SWaM or non-SWaM contractor after contract award.

The Department's written consent by to terminate any SWaM shall concurrently constitute written consent to substitute or replace the terminated SWaM with another SWaM. Consent to terminate a SWaM shall not be based on the Contractor's ability to negotiate a more advantageous contract with another subcontractor whether that subcontractor is, or is not, a certified SWaM.

- B. All Contractor requests to terminate, substitute, or replace a certified SWaM shall be in writing, and shall include the following information:
- (1) The date the Contractor determined the SWaM to be unwilling, unable, or ineligible to perform.
 - (2) The projected date that the Contractor shall require a substitution or replacement SWaM to commence work if consent is granted to the request.
 - (3) A brief statement of facts describing and citing specific actions or inaction by the SWaM giving rise to the Contractor's assertion that the SWaM is unwilling, unable, or ineligible to perform.
 - (4) A brief statement of the affected SWaM's capacity and ability to perform the work as determined by the Contractor.

- (5) A brief statement of facts regarding actions taken by the Contractor which are believed to constitute good faith efforts toward enabling the SWaM to perform.
- (6) The current percentage of work completed on each bid item by the SWaM.
- (7) The total dollar amount currently paid per bid item for work performed by the SWaM.
- (8) The total dollar amount per bid item remaining to be paid to the SWaM for work completed, but for which the SWaM has not received payment, and with which the Contractor has no dispute.
- (9) The total dollar amount per bid item remaining to be paid to the SWaM for work completed, but for which the SWaM has not received payment, and over which the Contractor and the SWaM have a dispute.

C. Contractor's Written Notice to SWaM of Pending Request to Terminate and Substitute with another SWaM.

Before transmitting its request to terminate and substitute a SWaM to the Department, the Contractor shall send a written notice of its intent to terminate or substitute to the affected SWaM, with a copy sent to the DCRO. The affected SWaM may submit a response letter to the DCRO within 5 business days of receiving the notice to terminate from the Contractor. The affected SWaM shall explain its position concerning performance on the committed work, and the reasons, if any, why it objects to the proposed termination of its Subcontract and why the Department should not approve the Contractor's action. The Department will consider both the Contractor's request and the SWaM's response and explanation before approving the Contractor's termination and substitution request, or determining if any action should be taken against the Contractor.

If, after making its best efforts to deliver a copy of the "request to terminate and substitute" letter, the Contractor is unsuccessful in notifying the affected SWaM, the Department will verify that the affected SWaM is unable or unwilling to continue the contract. The Department will immediately approve the Contractor's request for a substitution.

D. Proposed Substitution With Another Certified SWaM

Upon termination of a SWaM, or when a SWaM fails to complete its work on the Contract for any reason, the Contractor shall use reasonable good faith efforts to replace the terminated SWaM. These good faith efforts shall be directed at finding another SWaM to perform at least the same amount of work under the Contract as the original SWaM, to the extent needed to meet the SWaM goal. The termination of such SWaM shall not relieve the Contractor of its obligations pursuant to this section, and the unpaid portion of the terminated SWaM's contract will not be counted toward the SWaM goal.

When a SWaM substitution is necessary, the Contractor shall submit an amended Form C-111S with the name of another SWaM, the proposed work to be performed by that, and the dollar amount of the work to replace the unfulfilled portion of the work of the originally committed SWaM. The Contractor shall furnish all pertinent information including the Contract I.D. number, project number, bid item, item description, bid unit and bid quantity, unit price, and total price. In addition, the Contractor shall submit documentation for the requested substitute SWaM as described in this section of this Special Provision.

Should the Contractor be unable to find another SWaM to perform at least the same amount of work under the Contract as the terminated SWaM, the Contractor shall provide written documentation of its good faith efforts made to do so to VDOT within 7 days,

which may be extended for an additional 7 days if necessary at the Contractor's request. The Department will review the quality, thoroughness, and intensity of those efforts. Efforts that are viewed by VDOT as merely superficial or pro-forma will not be considered good faith efforts to meet the Contract goal for SWaM participation. The Contractor must document the steps taken that demonstrated its good faith efforts to obtain participation as set forth in Section 107.15(d)2. The Department will provide a written determination to the Contractor stating whether or not good faith efforts have been demonstrated.

Should the Contractor fail to submit the documentation and information as required any work performed by the substitute SWaM will not be counted toward the SWaM goal.

(k) Suspected Evidence of Criminal Conduct

Failure of a Bidder, Contractor, or Subcontractor to comply with the Specifications and the SWaM Program wherein there appears to be evidence of criminal, false, fraudulent, or dishonest conduct shall be considered a violation of the Virginia Governmental Frauds Act, punishable as allowed by the Code of Virginia for a Class 6 Felony, and the Virginia Fraud Against Taxpayers Act, subject to the civil penalties allowed by the Code of Virginia, and referred to the Attorney General for the Commonwealth of Virginia for investigation and, if warranted, prosecution.

[SP102-000120-00 \[formerly SP102-010100-00\]](#)

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
NON-DISCRIMINATION IN EMPLOYMENT AND CONTRACTING PRACTICES

January 10, 2017

I. Description

This Special Provision implements Executive Order 61, ensuring equal opportunity and access for all Virginians in state contracting and public services.

II. Non-Discrimination

The Contractor shall maintain a non-discrimination policy, which prohibits discrimination by the Contractor on the basis of race, sex, color, national origin, religion, sexual orientation, gender identity, age, political affiliation, disability, or veteran status. This policy shall be followed in all employment practices, subcontracting practices, and delivery of goods or services. The Contractor shall also include this requirement in all subcontracts valued over \$10,000.

III. Measurement and Payment

Conformance with this Special Provision will not be measured for individual payment, and will be considered incidental to the Work.

SP108-000110-01

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
PROGRESS SCHEDULES FOR CATEGORY II PROJECTS

March 21, 2022

Section 103.06(e) Progress Schedule of the Specifications is deleted and replaced by this provision.

Section 108.03 Progress Schedule of the Specifications is deleted and replaced by this provision.

I. General Requirements

The Contractor shall develop and maintain a Progress Schedule for the entire duration of the Project, which shall be used by all involved parties to plan and execute all work required to complete the Project. The Progress Schedule will be used by the Department to monitor the project, assess progress, and evaluate the effects of time-related issues on the project. Unless specifically stated otherwise, 'days' shall be understood as calendar days.

At the Pre-Construction Conference, in accordance with Section 105.02 or as mutually agreed upon by the Engineer and the Contractor, the Contractor shall attend a Scheduling Conference with the Engineer to discuss the Contractor's overall plan to accomplish the Work. The Contractor shall also discuss its detail work plan for the initial ninety (90) days; as well as project specific requirements and other key issues that are expected to impact the Progress Schedule or are necessary for the preparation, maintenance, and submittal of the Progress Schedule.

II. Progress Schedule Submissions

Unless otherwise directed in writing by the Engineer, the Contractor shall prepare, maintain, and submit a Progress Schedule in accordance with the following requirements:

1. Preliminary Progress Schedule

Within fifteen (15) days of the Contract execution date or within seven (7) days prior to beginning work, whichever occurs first, the Contractor shall submit to the Engineer for review and acceptance a Preliminary Progress Schedule. At its discretion, the Contractor may submit a complete detailed Baseline Progress Schedule for the entire project in lieu of the Preliminary Progress Schedule. Until the Baseline Progress Schedule is accepted by the Engineer, the Contractor shall update and submit the Preliminary Progress Schedule monthly, within seven (7) days of the estimate date or as approved by the Engineer. The Preliminary Progress Schedule will be used by the Department to monitor the Project and assess progress. The Preliminary Progress Schedule submission shall consist of the following:

- A. **Preliminary Schedule** – A logic driven Preliminary Schedule, which shall include at a minimum the detailed activities depicting the planned sequence and dates for all work planned during the first ninety (90) days, including as applicable project milestones, work to be performed by sub-contractors, the Department, and third parties. It shall also include summary-level activities for each element of work scheduled beyond the first ninety (90) days. The initial Preliminary Schedule shall be prepared and submitted in the form of a Baseline Schedule as defined herein. Upon acceptance, the Preliminary Schedule shall be updated monthly to show the actual progress of work completed to date and the current plan for accomplishing the remaining work as of the estimate date. The updated Preliminary

Schedule shall be prepared and submitted in the form of an Update Schedule as defined herein.

- B. **Preliminary Schedule Narrative** – A Preliminary Schedule Narrative describing the Contractor’s overall plan to accomplish the entire scope of Work and the detailed plan for work planned during the initial ninety (90) days. The Preliminary Schedule Narrative shall be prepared and submitted in the form of a Baseline Schedule Narrative as defined herein. Upon acceptance, the Preliminary Schedule Narrative shall be updated monthly to reflect the actual progress of work completed to date and the current plan for accomplishing the remaining work as of the Data Date; as well as any deviations from the original plan. It shall be prepared and submitted in the form of an Update Schedule Narrative as defined herein.

2. Baseline Progress Schedule

Within thirty (30) days of the Contract execution date, the Contractor shall submit to the Engineer for review and acceptance, a Baseline Progress Schedule representing the Contractor’s original complete detailed plan to accomplish the entire scope of the Project according to the Contract. Upon acceptance by the Engineer, the Baseline Progress Schedule shall replace the Preliminary Progress Schedule and shall become the Schedule of Record (SOR). The Baseline Progress Schedule submission shall consist of:

- A. **Baseline Schedule** – A logic driven Baseline Schedule depicting all detailed activities required to complete the entire scope of the Project, including as applicable, work to be performed by subcontractors, the Department, and other involved parties. The Baseline Schedule shall incorporate the latest accepted Preliminary Schedule, and shall be prepared and submitted according to the following requirements:
- (1) **Software**: The Baseline Schedule shall be prepared using Primavera P6 scheduling software and submitted in the “.xer” file format.
 - (2) **Project ID and Name**: The Project ID and Name for each submission shall be unique and defined as follows:
 - (a) The Project ID shall be defined using the Contract ID as a prefix followed by a short ID indicating the specific version of the schedule (e.g., PS01, BS, BSR1). For example, Preliminary Schedule (C000XXXXXXXX_PS01, C000XXXXXXXX_PS02, etc.), Baseline Schedule (C000XXXXXXXX_BS, C000XXXXXXXX_BSR1, etc.).
 - (b) The Project Name shall reflect the Project Description as shown in the Contract, appended to indicate the specific version of the schedule (e.g., Route 10 Over I-95 Bridge Replacement Baseline Schedule).
 - (3) **Software Settings**: The Contractor shall specify the software properties and settings as follows:
 - (a) Specify “Active” as the Project Status in the Project Details General tab.
 - (b) Specify the Must Finish By date in the Project Details Dates tab using a date matching the Completion Date as defined in the Contract or as subsequently adjusted by Change Order.
 - (c) Specify “Fixed Duration & Units” as the Duration Type for all activities.
 - (d) Specify “Physical” as the Percent Complete Type for all activities.

- (e) Specify “Reset Remaining Duration and Units to Original” in the Project Details Calculation tab.
 - (f) Activity Unit of Time Duration Format shall be set to “Day”, with no decimals.
 - (g) Activity Date Format shall be set to “MM-DD-YY” (e.g., 12-01-21) format for displaying activity dates.
- (4) Work Breakdown Structure (WBS): The Baseline Schedule shall be organized using a logical Project Work Breakdown Structure (WBS). The Work shall be broken down to an appropriate level of WBS nodes and sub-nodes to allow for a hierarchical grouping and summarization of related activities required to complete each phase, feature, deliverable, or work package, as appropriate. Each WBS element shall be defined using a short alpha-numeric WBS Code and a WBS Name describing the WBS element. At a minimum, the WBS shall include as applicable:
- (a) Level 1: “Milestones” node for all Contract and other key milestones; “Preliminary” node for all pre-construction activities; and “Construction” node for all construction activities.
 - (b) Level 2: Under the “Preliminary” node, Level 2 “Submittals”, “VDOT Review”, “Materials” sub-nodes for all initial activities such as submittals, VDOT reviews, long lead materials, etc. Under the “Construction” node, Level 2 “General/Start-up”, “Phase” or “Feature of Work”, and “Close-out” sub-nodes, as applicable.
 - (c) Level 3: Under the “Phase” or “Feature of Work” node, Level 3 sub-nodes for “Sub-features” or “Location” for all associated construction activities, as applicable.
- (5) Level of Details: The Baseline Schedule shall include sufficient activities to ensure adequate planning of the Project and to allow for accurate monitoring and evaluation of progress. The Work shall be broken down into discrete activities to an appropriate level of detail to allow for:
- (a) Identification of work by the responsible party; as well as the type, amount, and specific location of work the activity represents.
 - (b) Identification of work required to ensure timely completion of all Contract milestones and time-related requirements
 - (c) Accurate documentation of actual performance and progress of Work.
 - (d) Accurate evaluation of the effect of changes and delays to the Work.
 - (e) Accurate assessment of resource requirements of the Contractor and the Department.
 - (f) Coordinate the Work of the Department, other contractors, and third parties (e.g., government agencies and authorities, permitting authorities).
- (6) Activity Definition: Activities shall be discrete and shall be defined as follows:
- (a) Each activity shall be defined using a unique Activity ID which shall remain unchanged throughout the duration of the Project. If an activity is deleted in a subsequent submission, the corresponding Activity ID shall not be used for any other activity.

- (b) Each activity shall be defined using an Activity Name to indicate the type of work, phase (or stage), and specific location in which the work occurs, as applicable (e.g., Drive Steel Piles - Phase 1 - Abut A). For each 'Level of Effort' activity, the Activity Name shall include "(LOE)". Also, for work to be performed by the Department or other contractors, and third parties, the Activity Name shall include "VDOT" or the name of the corresponding responsible party.
 - (c) Activity durations shall be defined in whole days based on the assigned calendar. For activities such as "Concrete Cure Time", that are not restricted by a standard working calendar, activity durations shall be expressed in terms of calendar days. Activity durations shall be limited to twenty (20) work days, unless otherwise accepted by the Engineer. Longer durations may be allowed as approved by the Engineer for certain administrative, level of effort, or procurement activities that are typically performed over longer periods of time.
- (7) Calendars: Each activity shall be assigned an appropriate calendar to establish the planned work days per week; and any non-work days for holidays, weather days, or other restrictions, as applicable. Once the Baseline Schedule is accepted, any changes to calendars shall be identified and explained in the accompanying Schedule Narrative. At a minimum, the Project calendars shall be defined and assigned as follows:
- (a) Activity calendars shall be defined and assigned using Project-level calendars. Use of global calendars or project calendars with links to the global base calendars is not allowed and shall be cause for rejecting the schedule.
 - (b) A "7-Day Calendar" (i.e., 7 days per week with no Holidays) shall be defined and assigned to all activities that are not restricted by weekends, holidays, or other non-work days.
 - (c) A "5-Day Standard Calendar" (i.e., 5 days per week with Holidays) shall be defined and assigned to all regular activities that are not restricted by weather or other time of year or seasonal restrictions.
 - (d) A "5-Day Weather Calendar" (i.e., 5 days per week with Holidays and weather days) shall be defined and assigned to all activities that are affected by weather.
 - (e) A "5-Day Winter Calendar" (i.e., 5 days per week with Holidays, weather days, and winter period, as applicable) shall be defined and assigned to all activities that are affected by winter weather restrictions.
 - (f) A "5-Day TOYR Calendar" (i.e., 5 days per week with Holidays, weather days, and TOYR, as applicable) shall be defined and assigned to all activities that are affected by specified time of year restrictions (TOYR).
 - (g) Regardless of the actual or planned working hours per day, all calendars shall be based on a standard 8 work hours/day, with the same daily start and finish times.
- (8) Activity Codes: Activity codes shall be defined and assigned to the individual activities to allow for filtering, grouping, and sorting of activities by Responsibility, Phase, Stage, Feature, Work Type, Location, SIA, Change Order, DBE, and other major work categories, as applicable. Activity codes shall be assigned using Project-level activity codes. Use of global activity codes is not allowed and shall be cause for rejecting the schedule.

- (9) Network Logic: The Baseline Schedule shall be calculated using the Critical Path Method (CPM). Logic relationships shall be assigned based on the Precedence Diagram Method (PDM) to establish relationships between the activities and the sequence in which the Contractor plans to accomplish the Work. Logic relationships shall be assigned as follows:
- (a) Activity relationship types shall be limited to finish-to-start (FS), start-to-start (SS), and finish-to-finish (FF).
 - (b) All activities, except the first activity shall be assigned at least one predecessor relationship and all activities, except the last activity shall be assigned at least one successor relationship.
 - (c) If an activity is assigned as a predecessor with a start-to-start (SS) relationship, then the activity must also be assigned as a predecessor to another related activity with a finish-to-start (FS) or finish-to-finish (FF) relationship, as applicable.
 - (d) The Contractor shall avoid the use of redundant logic relationships when possible. The Contractor shall provide an explanation of the reason for redundant logic upon the request of the Engineer.
 - (e) The use of lag shall be prohibited unless approved by the Engineer. The Contractor shall remove any lag and replace with an activity upon the request of the Engineer. When lags are used, the Contractor shall provide an explanation for use of the lags in the Schedule Narrative.
- (10) Constraints: Use of Constraints shall be limited to milestones specified in the Contract, unless approved by the Engineer. Constraints shall be applied as follows:
- (a) For Contracts that include a specified milestone that restricts the start date of an activity, the activity shall be constrained with a “Start On or Before” or “Start On or After” constraint, as applicable, with the date specified in the Contract.
 - (b) For Contracts that include a specified milestone that establishes a completion date deadline such as Interim Completion or Substantial Completion, the Contract milestone activity shall be constrained with a “Finish On or Before” constraint, with the date specified in the Contract.
 - (c) Constraints such as “Start On” or “Finish On” that delays the start or finish date of an activity to the specified date as allowed by network logic, or “Mandatory Start” or “Mandatory Finish” that violate network logic are prohibited.
- (11) Primavera P6 Software Schedule Options Settings: The Contractor shall calculate the Project Schedule (i.e., F9 in P6) to ensure all changes have been incorporated before submission to the Engineer. The Contractor shall apply the following Primavera P6 software Schedule Options settings when scheduling the Project Schedule:
- (a) Unmark the ‘Make open-ended activities critical’ checkbox.
 - (b) Unmark the ‘Use Expected Finish Dates’ checkbox. Expected finish dates are prohibited.
 - (c) Unmark the ‘Level resources during scheduling’ checkbox. The use of resource-leveling to determine sequence, order, or timing of the activities is not allowed and shall be cause for rejecting the schedule.

- (d) Specify 'Retained Logic' for scheduling progressed activities.
- (e) Specify 'Longest Path' to define critical activities.
- (f) Specify 'Finish Float = Late Finish – Early Finish' to compute Total Float.
- (g) Specify 'Predecessor Activity Calendar' as the calendar for scheduling relationship lags.

(12) **Progress As-built Information:** The Baseline Schedule shall reflect the current status of the Project and all known information at the time of submission. The Baseline Schedule shall include any progress as-built information showing actual dates for all completed and on-going activities, as of the Data Date, as applicable. The Baseline Schedule shall be calculated using a Data Date as follows:

- (a) If the Baseline Schedule includes progress as-built information, then the Data Date shall be within three (3) days of the date of submission.
- (b) If the Baseline Schedule does not include progress as-built information, then the Data Date shall be the Contract execution date or the planned start date of the first activity, whichever is earlier.

B. Baseline Schedule Narrative – A Baseline Schedule Narrative describing the Contractor's overall plan to accomplish the Work. The Baseline Schedule Narrative shall be the basis for the Baseline Schedule and shall provide the following supporting information, as applicable:

- (1) **Milestones:** Current status of the Project milestones including, as applicable Contract milestones and other key events such as major traffic switches.
- (2) **Work By Others:** Work to be performed by the Department and other involved parties (e.g., utilities), including activities requiring coordination; and a description of when the work must be performed to avoid impacts to the Work.
- (3) **Overall Sequence of Work:** Explanation of the proposed overall sequence of Work, including where the Work will begin and how the Work and crews will flow through the Project.
- (4) **Project Critical Path:** Description of the project critical path indicating the series of operations that are expected to drive the completion date of the project. A listing of the Project Schedule critical path activities will not be accepted as a substitute.
- (5) **Scheduling Assumptions:** Scheduling assumptions including, the general procedures and anticipated daily production rates for accomplishing major operations that are expected to drive the schedule.
- (6) **Lags:** Identification of all logic relationships with Lag and an explanation of the reason for each Lag.
- (7) **Constraints:** Identification of all schedule Constraints used in the Baseline Schedule and an explanation of the reason for each Constraint.
- (8) **Calendars:** Description of the project calendar(s) used in the Baseline Schedule, identifying the Calendar and the proposed number of work days per week, number of shifts per day, and number of hours per day. Also, the anticipated number of non-working days per month shall be identified for each calendar with considerations, as applicable,

for holidays, normal adverse weather conditions; as well as seasonal or other known or specified restrictions (i.e. traffic, local events, environmental, permits, utility, etc.).

- (9) **Resource Plan:** The Contractor's resource plan indicating the number and type of crews, crew make-up, and major equipment needed to accomplish the Work as planned. The resource plan shall also explain how the Contractor plans on meeting the resource requirements as reflected on the Baseline Schedule.
- (10) **DBE Participation:** Log of the applicable DBE participation activities in the schedule and the DBE firms performing the work for which the Contractor intends to claim credit for attaining the DBE goal required in the Contract. The list shall indicate the start/finish dates and durations of the DBE participation activities.
- (11) **Issues and Concerns:** Any known or foreseeable issues or concerns that are currently affecting or anticipated to affect the schedule. Also, describe how the issues will affect the schedule and any actions taken or needed to avoid or mitigate the impact.

C. Baseline Progress Earnings Schedule – A Baseline Progress Earnings Schedule showing the anticipated monthly earnings for the entire Project. The Baseline Progress Earnings Schedule submission shall be prepared using the VDOT Form C-13C as follows:

- (1) The Breakdown of Contract Items form shall be completed to show the bid items and costs associated with each Major Work Category.
- (2) The C-13C (Baseline) form shall be completed to show all required information and the monthly anticipated earnings for each Major Work Category.
- (3) The C-13C (Update) form shall be completed to show the current Projected Completion Date, Current Estimate Date, and actual monthly earnings, and anticipated earnings for each Major Work Category as of the Current Estimate Date.
- (4) The Controls Chart Data form shall be completed to show the Actual Monthly Earnings for each estimate date, as of the Current Estimate Date.

3. Update Progress Schedule

After the Baseline Progress Schedule is accepted, on a monthly basis thereafter, and within seven (7) days after the estimate date, the Contractor shall submit an Update Progress Schedule submission to the Engineer for review and acceptance. The Update Progress Schedule submission shall represent the current status of the Project and the Contractor's current plan to complete the remaining Work. The Update Progress Schedule submission shall consist of:

A. Update Schedule – An Update Schedule, which shall be based on a copy of the most recent accepted Project Schedule and shall be prepared according to the following:

- (1) The Project ID and Name for each submission shall be unique and defined as follows:
 - (a) The Project ID shall be updated to indicate the specific Update Schedule version (e.g., C000XXXXXXXX_U01, C000XXXXXXXX_U01R1, C000XXXXXXXX_U02).
 - (b) The Project Name shall be updated to indicate the specific version of the schedule (e.g., Route 10 Over I-95 Bridge Replacement Update Schedule #1).

- (2) All activities completed prior to the Data Date shall be updated to show actual start and actual finish dates. And all on-going activities shall be updated to show actual start dates and remaining duration to indicate the amount of time required to complete the remaining work as of the Data Date. Actual dates on or after the Data Date are prohibited.
 - (3) Activity percent complete for on-going activities shall be based on cost of work completed as of the Data Date relative to the total cost of work planned.
 - (4) All schedule related changes requested or approved by the Engineer shall be incorporated into the Update Schedule, including as applicable, added or deleted work, changes to Contract Milestones, changes in sequence of work, changes in duration, changes to Contract Amount, and other time-related changes.
 - (5) Activity logic shall be modified as necessary to correct out-of-sequence progress for on-going and remaining activities to reflect the Contractor's current plan for completing the remaining Work.
 - (6) The Update Schedule shall be calculated using a Data Date of either the 4th, 11th, or 20th of the month, based on the Contractor's estimate date as defined in Section 109.08(a) – Partial Payments, of the Specifications.
- B. Update Schedule Narrative –** An Update Schedule Narrative describing the current status of the project, deviations from scheduled performance, and changes in Contractor's work plan, and the current work plan for accomplishing the remaining work as of the Data Date. The Schedule Update Narrative shall include a description of:
- (1) Milestones: The current status of scheduled Milestone dates, including a description of any deviations from the last accepted Project Schedule and the Contract. The Contractor shall provide an explanation for any Milestone that is scheduled to occur later than the date specified in the Contract and any actions taken or proposed to correct the delay.
 - (2) Progress % Complete: The current status of the Project in terms of earnings relative to the SOR, based on the Progress Earnings Schedule. If progress is falling behind, provide an explanation for the progress deficiency and any actions taken or proposed to correct the deficiency.
 - (3) Work Performed Last Period: The work performed during the last update period and any deviations from the work scheduled. A listing of the Project Schedule activities will not be accepted as a substitute.
 - (4) Changes in Work Plan: Any major changes in the Contractor's work plan in terms of sequence of construction, shifts, means and methods, manpower, or equipment.
 - (5) Changes to Schedule: Any non-progress changes made to the Project Schedule since the previous submission including, changes requested or approved by Engineer. Also, any justification why changes requested by the Engineer should not be accomplished. A Claim Digger report or Schedule Comparison report will not be accepted as a substitute.
 - (6) Project Critical Path: The critical path work and any deviations from the previous submission. A listing of the Project Schedule critical path activities will not be accepted as a substitute.
 - (7) Days Lost Last Period: Number of days lost during the last update period, including activities affected and how the activities were affected; as well as any impacts on the

critical path or project milestones. Also, describe any actions taken or proposed to mitigate any resulting delays.

- (8) DBE Participation: Log of the applicable DBE participation activities in the schedule and the DBE firms performing the work for which the Contractor intends to claim credit for attaining the DBE goal required in the Contract. The list shall indicate the start/finish dates and durations of the DBE participation activities.
- (9) Pending Contract Issues: The status of pending issues such as access, permits, conflicts with other related or adjacent work, Change Orders, time extension requests, etc.
- (10) Issues and Concerns: Any issues encountered during the last update period that are currently affecting the Project Schedule or other Project concerns that are anticipated to affect the schedule, including an explanation of any corrective actions taken or required to mitigate or avoid the effects.
- (11) Work Planned Next Period: Work planned for the next update period, including any actions needed or expected performance by the Department or other involved parties (e.g., utilities) to avoid impacts to the Work.

C. **Update Progress Earnings Schedule** – An Update Progress Earnings Schedule showing the actual progress earnings to date and the projected earnings for the remaining periods, as of the Data Date. The Update Progress Earnings Schedule shall be prepared as follows:

- (1) The C-13C (Baseline) form shall be updated to show the current Projected Completion Date based on the current Update Schedule.
- (2) The C-13C (Update) form shall be completed to show the current Projected Completion Date, Current Estimate Date, and actual monthly earnings, and anticipated earnings for each Major Work Category as of the Current Estimate Date.
- (3) The Controls Chart Data form shall be completed to show the Actual Monthly Earnings for each estimate date to date, as of the Current Estimate Date.

4. **Revised Baseline Progress Schedule**

The Contractor shall submit a Revised Baseline Progress Schedule as determined by the Engineer. The Engineer may determine that a Revised Baseline Progress Schedule is required when:

- A. The Engineer determines that the Work is being performed significantly different from the SOR; or the Engineer approves changes to the Contract that significantly impacts the Project Schedule or causes a major shift in the anticipated progress earnings. In which case, the Engineer will issue a written notice to the Contractor to submit a Revised Baseline Progress Schedule. The Contractor shall respond in writing within seven (7) days, either agreeing to comply with the Engineer's request or providing justification why the request should not be accomplished.
- B. The Contractor proposes to perform the Work significantly different from the SOR. In which case, the Contractor shall notify the Engineer in writing at least 14 days prior to performing the Work. The Contractor's notice shall describe the proposed changes and potential impact on the Project Schedule. The Engineer will respond in writing within seven (7) days of the Contractor's notice, either agreeing with the Contractor's proposed revisions or providing reasons why the requested revisions should not be accomplished.

If the Engineer requests a Revised Baseline Progress Schedule or accepts the Contractor's proposed revisions, the Contractor shall submit a Revised Baseline Progress Schedule in lieu of the subsequent required Update Progress Schedule submission or as requested by the Engineer.

If the Engineer does not accept the Contractor's proposed revisions, the Contractor shall not incorporate the proposed revisions into the Project Schedule. In which case, the Contractor shall proceed under the previously accepted Progress Schedule and the current SOR shall remain.

The Revised Baseline Progress Schedule shall be prepared and submitted in the form of a Baseline Progress Schedule, according to Section II.2 above; however, it shall reflect the current status of the Project as of the submittal date, any approved changes in the Work, and the proposed plan for completing the remaining Work. The Revised Baseline Progress Schedule submission shall consist of:

A. **Revised Baseline Schedule** – A Revised Baseline Schedule, which shall be based on the most recent accepted Project Schedule. The Revised Baseline Schedule shall be prepared according to Section II.2.A above and as follows:

- (1) The Project ID and Name for each submission shall be unique and defined as follows:
 - (a) The Project ID shall be updated to indicate the specific Update Schedule version being submitted as a Revised Baseline (RB) (e.g., C000XXXXXXXX_U06RB, C000XXXXXXXX_U20RB).
 - (b) The Project Name shall be updated to indicate the specific version of the schedule (e.g., Route 10 Over I-95 Bridge Replacement Update Schedule #6/Revised Baseline).
- (2) All activities completed prior to the Data Date shall be updated to show actual start and actual finish dates. And all on-going activities as of the Data Date shall be updated to show actual start dates and remaining duration to indicate the amount of time required to complete the remaining work. Actual dates beyond the Data Date are prohibited.
- (3) Activity percent complete for on-going activities shall be based on cost of work completed as of the Data Date relative to the total cost of work planned.
- (4) All schedule related changes requested or approved by the Engineer shall be incorporated into the Revised Baseline Schedule, including as applicable, added or deleted work, changes in sequence of work, changes in duration, approved SIA; and changes to the Contract Amount, Contract Milestones, Completion Date, and other time-related requirements.
- (5) Activity logic shall be modified as necessary to correct out-of-sequence progress for on-going and remaining activities to reflect the Contractor's current plan for completing the remaining Work.
- (6) The Revised Baseline Schedule shall be calculated using a Data Date of either the 4th, 11th, or 20th of the month, based on the Contractor's estimate date as defined in Section 109.08(a) – Partial Payments, of the Specifications, or as approved by the Engineer.

B. **Revised Baseline Schedule Narrative** – A Revised Baseline Schedule Narrative, which shall be the basis for the Revised Project Schedule. The Revised Baseline Schedule Narrative shall be prepared according to Section II.2.B above; however, it shall reflect the current status of the project as of the submittal date, approved changes in the Work, and the proposed plan for completing the remaining Work.

C. **Revised Baseline Progress Earnings Schedule** – A Revised Baseline Progress Earnings Schedule showing the actual earnings to date and anticipated earnings for the remaining Work. The Revised Baseline Progress Earnings Schedule shall be prepared and submitted according to Section II.2.C above, and as follows:

- (1) The C-13C (Baseline) form shall be adjusted accordingly to show the current Contract Dates and Amount.
- (2) The C-13C (Baseline) form shall be completed to show the actual monthly earnings and anticipated earnings for each Major Work Category as of the Current Estimate Date.
- (3) The C-13C (Update) form shall be completed to show the current Completion Date and actual monthly earnings and anticipated earnings for each Major Work Category as of the Current Estimate Date.
- (4) The Controls Chart Data form shall be completed to show the Actual Monthly Earnings for each estimate date to date, as of the Current Estimate Date.

5. **Final As-built Schedule**

Within 30 days after Final Acceptance and as a requirement for Final Payment, the Contractor shall submit a Final As-built Schedule. The Final As-built Schedule shall be submitted as the final Update Schedule according to Section II.3.A above, showing the actual start and finish dates for all activities in the Project Schedule. The Contractor shall certify in writing that the Final As-built Schedule accurately reflects the dates on which all activities contained in the Project Schedule were actually performed.

6. **Early Completion Incentive Duration** – For Contracts that include an incentivized provision for completing a portion of the Work before a specified milestone date or all of the Work before the Completion Date, the Contractor may insert an “Early Completion Date” milestone activity to indicate its intent to complete the Work early. In which case, the Contractor may insert an “Early Completion Incentive Duration” activity between the proposed “Early Completion Date” milestone activity and the Contract completion milestone activity. The incentive duration shall be specified in calendar days, which shall not exceed the maximum allowable incentive days at any time. The incentive duration shall be adjusted accordingly each Update Schedule to reflect any slippage or contraction of the Project Schedule.

7. **Use of Total Float** – Total float shall be considered a project property that is shared amongst all activities on the network. Total float shall be calculated relative to the Completion Date or a related Contract milestone, as applicable. The Contractor may submit a Progress Schedule showing completion of a portion of the Work before a specified milestone date or all of the Work before the Completion Date. If this occurs, any total float available in the Project Schedule, at any time, shall belong to the Project. It shall be understood that total float is not for the exclusive use or benefit of either the Department or the Contractor and that either party has the right to full use of any available total float. Until such time that all available total float is depleted, total float shall be used responsibly on a first come first serve basis for the benefit of the Project. Changes to the Project Schedule at any time for the purpose of manipulating float is prohibited, with the exception of adjustments to incentive duration activities for Contracts with incentive provisions for early completion, as defined herein. Negative total float will not be allowed in the Preliminary Schedule, Baseline Schedule, or Revised Baseline Schedule.

8. **Progress Schedule Submittal Format and Reports**

Unless otherwise approved in writing by the Engineer, the Contractor shall submit for each Preliminary Schedule, Baseline Schedule, Update Schedule, or Revised Baseline Schedule submission, the following submittal items and reports, in the formats specified below:

- A. **File Naming Convention** – Each electronic submittal file shall have a unique file name using a file naming convention that identifies the file by the Contract ID (e.g., C000XXXXXXX), version of Progress Schedule (e.g., PS1, BS, BSR1, U01, U04RB), type of submission (e.g., Preliminary Schedule, Baseline Schedule Narrative, Form C-13C), and Data Date of the submission. For example: C000XXXXXXX_PS1_Preliminary Schedule_04-01-21.xer.
- B. **Transmittal Email** – An electronic mail to the Engineer, identifying which Progress Schedule is being submitted for review and what submittal items are included.
- C. **Project Schedule** – For each submission of the Project Schedule, the Contractor shall submit:
- (1) A backup copy of the working schedule in Primavera P6 “.xer” file format.
 - (2) A copy of the “Schedule Log” in “.pdf” file format.
 - (3) A time-scaled bar-chart plot of the “Complete Detailed Schedule” in “.pdf” file format, showing for each activity, Activity ID, Activity Name, Original Duration, Start, Finish, Activity % Complete, Remaining Duration, and Total Float.
 - (4) A time-scaled bar-chart plot of the “Critical Path Schedule” in “.pdf” file format, showing for each critical path activity, Activity ID, Activity Name, Original Duration, Start, Finish, Activity % Complete, Remaining Duration, and Total Float.
 - (5) A tabular “Predecessor and Successor Report (PSR)” in “.pdf” file format showing the predecessors and successors for each activity. The PSR shall be sorted by WBS and in ascending order by Activity ID and shall show for each activity.
 - (a) Activity ID and Activity Name.
 - (b) Original Duration and Remaining Duration.
 - (c) Early Start, Early Finish, Late Start, Late Finish.
 - (d) Free Float, Total Float, and Critical (“Yes” or “No”).
 - (e) For each Predecessor/Successor activity, show the Activity ID, Activity Name, Relationship Type, Lag, Free Float, Total Float, Driving (“Yes” or “No”), and Critical (“Yes” or “No”).
- D. **Schedule Narrative** – For each submission of the Project Schedule, the Contractor shall submit a file copy of the “Project Schedule Narrative” in “.pdf” format.
- E. **Progress Earnings Schedule** – For each submission of the Project Schedule, the Contractor shall submit a Progress Earnings Schedule report as follows:
- (1) A copy of the “Progress Earnings Schedule (Form C-13C)” in “.xlsm” file format.
 - (2) Copies of the “Monthly Progress Earnings Schedule” and “S-Curve” in “.pdf” file format.

III. Review and Acceptance

The Engineer will review each Progress Schedule submission for acceptance and will respond within fourteen (14) days of receipt of the Contractor's complete submittal. The Engineer will determine acceptance or rejection based on conformance with this specification and other requirements of the Contract and will respond as follows:

1. **Accepted, No Exceptions** – When the submission is complete and in full compliance with this specification and other requirements of the Contract, the Engineer will respond to the Contractor with a notice indicating the submission is “Accepted, No Exceptions”.
2. **Accepted As Noted** – When the submission is complete and generally in compliance with this specification and other requirements of the Contract, but contains minor flaws or exceptions, the Engineer will respond to the Contractor with a notice indicating the submission is “Accepted As Noted”. In which case, the Contractor shall make the necessary corrections in the next required Progress Schedule submission to address the Engineer's comments or provide justifications in the narrative why the corrections should not be made.
3. **Rejected, As Noted** – When the submission is incomplete or not in compliance with this specification or other requirements of the Contract, the Engineer will respond to the Contractor with a notice indicating the submission is “Rejected, As Noted”. The Progress Schedule submission will be immediately rejected and returned by the Engineer for the following reasons:
 - A. Failure to include all required reports and submittal items.
 - B. Failure to calculate the Project Schedule using the correct Data Date.
 - C. Primavera P6 software settings are different from those specified in the Contract.
 - D. The Schedule Log shows use of prohibited constraints.
 - E. The Schedule Log shows activity without predecessors or successors with exception of the first and last activities.
 - F. Repeated failure to correct out-of-sequence activities.
 - G. The Schedule Log shows Actual Dates > Data Date.
 - H. The Schedule Log shows Milestone Activities with invalid relationships.
 - I. Failure to respond to the Engineer's review comments from the previous submission.

If the submission is rejected and returned by the Engineer, the Contractor shall make the necessary corrections to address the Engineer's comments and resubmit the Progress Schedule within seven (7) days of receipt of the Engineer's response.

When the Engineer determines that a meeting with the Contractor is necessary to discuss proposed changes to the schedule or to resolve issues concerning acceptance of the Progress Schedule submission, the Contractor shall meet with the Engineer as requested.

If the Contractor or Engineer discovers an error after the Engineer has accepted a Progress Schedule, the Contractor shall correct the error in the next required submission.

The Engineer's acceptance of a Progress Schedule submission does not attest to the validity of the Project Schedule, sequencing, logic, duration, or assumptions on which the schedule is based. Acceptance by the Engineer does not transfer any of the Contractor's responsibilities to the Department. Failure of the Contractor to include in the Project Schedule any element of work required

by the Contract for timely completion will not excuse the Contractor from completing the Work within the Contract specified Milestone(s) or the Contract time limit, as applicable.

Upon acceptance by the Engineer, the Baseline Progress Schedule or a subsequent Revised Baseline Progress Schedule will be established as the Project "Schedule of Record (SOR)". The SOR is the latest agreed upon and only Project Baseline with which all parties will plan and execute all work required to complete the Project; and against which progress of the Project and the Contractor's performance will be assessed.

IV. Failure to Comply with Progress Schedule Submission Requirements

The Engineer may delay approval of the monthly progress estimate for failure to submit an acceptable Progress Schedule on time and as required. Payments withheld for violation of the schedule requirements will be included in the next progress estimate following the Contractor's submission of an acceptable Progress Schedule. However, no payments will be made for monthly Update Progress Schedule pay items for late submissions. Any delays resulting from payment withholding due to the Contractor's failure to provide an acceptable Progress Schedule will not be considered just cause for extension of the Contract time limit or for additional compensation.

V. Delays and Schedule Impact Analysis (SIA)

The Contractor shall promptly notify the Engineer when it discovers or encounters any changes to the Work or conditions that are expected to impact the Project Schedule. In the event of an excusable delay that extends the completion date of the Project or a Contract milestone, as applicable, beyond the Contract specified date, for which the Contractor is seeking an extension of time, the Contractor shall promptly submit a request for an adjustment to the Contract in accordance with Section 108.04 of the Specifications. Unless directed otherwise in writing by the Engineer, the Contractor shall submit along with its request for an adjustment to the Contract, a Schedule Impact Analysis (SIA) in accordance with the following:

1. Prospective SIA for Anticipated Impacts Due to Directed or Authorized Changes

The Engineer may issue a written request to the Contractor for proposed additions, deletions, or other changes to the Work in accordance with Section 104 of the Specifications. If this occurs and the Contractor is seeking an extension of time, the Contractor shall submit a Prospective SIA within seven (7) days after receipt of the Engineer's request and prior to proceeding with the changed work, unless directed otherwise in writing by the Engineer. The Prospective SIA submission shall consist of the following:

- A. **Prospective SIA Schedule** – The Prospective SIA Schedule shall reflect all known information at the time of analysis and shall be prepared and submitted as follows.
 - (1) A Pre-impact SIA Schedule shall be prepared by updating a copy of the latest accepted Project Schedule in place prior to the proposed change with progress only through the date before the proposed change.
 - (2) An Impacted SIA Schedule shall be prepared by inserting a fragnet (fragmentary network) of the detail activities representing the added or changed Work into a copy of the Pre-impact SIA Schedule. The added activities shall be linked to other related and affected activities accordingly.
 - (3) The Prospective SIA Schedule submission shall include a bar-chart schedule layout showing the added activities, related and affected activities, critical path activities, and any affected Contract milestones. It shall also show a graphical comparison between the Impacted SIA Schedule and Pre-impact SIA Schedule and variances in activity duration, start dates, and finish dates.

- (4) The Prospective SIA Schedule submission shall include “.pdf” copies and electronic backup copies of the Pre-impact and Impacted SIA Schedules in the “.xer” file format.

B. Prospective SIA Narrative – The Prospective SIA Narrative shall describe:

- (1) The proposed changes to the Work and timeline of events associated with the changes.
- (2) Any changes made to the Project Schedule and current status of the Project prior to the proposed change as reflected on the Pre-impact SIA Schedule.
- (3) The changes made to the Pre-impact SIA Schedule including, added or deleted activities, affected activities and how the activities are expected to be affected.
- (4) Any shifts to the Critical Path and overall impact to related Contract milestones or the Project Completion Date as reflected on the Impacted SIA Schedule.
- (5) Any actions taken or proposed to mitigate or avoid the potential impact.

2. Retrospective SIA for Impacts Due to Unforeseen Changes and Delays

In the event of an excusable delay resulting from unforeseen changes to the Work or conditions, for which the Contractor is seeking a time extension, the Contractor shall submit along with its request for time extension, a Retrospective SIA within fourteen (14) days after the end date of the delay event, unless directed otherwise in writing by the Engineer. The Retrospective SIA submission shall consist of the following:

A. Retrospective SIA Schedules – The Retrospective SIA Schedules shall include all accepted monthly Update Schedules immediately before, during, and after the delay event and shall consider all known information as of the time of analysis. If there are update periods with missing Update Schedules or Update Schedules returned with a notice of “Rejected, As Noted”, the Contractor shall prepare acceptable Update Schedules with progress only for the missing periods using the previous accepted Update Schedule accordingly. If there are Update Schedules returned with a notice of “Accepted As Noted”, the Contractor shall modify the Update Schedules accordingly to address the Engineer’s comments. The Retrospective SIA shall be prepared and submitted as follows:

- (1) Each accepted monthly Update Schedule submitted during the period of occurrence of the delay event shall be compared against the accepted Update Schedule for the previous update period, to identify any variances between actual and planned performance for the work performed during each update period.
- (2) Each SIA Schedule shall show the activities performed during last update period, including any activities added to the SIA Schedule to identify delay events; as well as the Project Critical Path activities. The SIA Schedule layout shall show:
 - (a) For each activity, Original Duration, Start, Finish, Criticality, and Total Float. It shall also show the previous Update Schedule Start, Finish; and the Start, Finish, and Duration variances relative to the **previous Update Schedule**.
 - (b) A bar-chart plot showing a graphical comparison between the SIA Schedule and previous Update Schedule
- (3) If there are Update Schedules with schedule changes that negatively impacts the schedule, the analysis shall be split to determine the impact due to the changes and

impact due to progress separately by updating a copy of the previous Update Schedule with progress alone.

- (4) Any related impact resulting from projected delays due to calendar restrictions such as winter weather or TOYR shall be deferred until after the delays have actually occurred.
- (5) The Retrospective SIA Schedule submission shall include “.pdf” copies and electronic backup copies of the SIA Schedules in the “.xer” file format.

B. Retrospective SIA Narrative – The Retrospective SIA Narrative shall describe:

- (1) The changes to the Work or conditions or delay events, including explanation of who is responsible and why the delay is excusable.
- (2) Timeline of events associated with the delay, including all actions and waiting times.
- (3) For each update period, identify the SIA Schedule and previous Update Schedule and:
 - (a) Any changes made to the SIA Schedule, including activities added to identify delay events, deleted activities, affected activities and how the activities were affected.
 - (b) The controlling critical path activity and any causal link to the delay event.
 - (c) Any shifts to the Critical Path, Milestone, or the Project Completion Date.
- (4) Any actions taken or proposed to mitigate the impact.
- (5) A summary of any incremental time gains or losses in the Milestones, or the Project Completion Date for each update period.

The Engineer will review the Contractor’s request and SIA and will respond within 14 days of submittal. The Contractor must adhere to the notice of a change, request for time extension, and SIA submission requirements; as well Section 105.19 of the Specifications to preserve their rights to file a claim. The Contractor’s notice of a change, a subsequent meeting with the Engineer, or submittal of a request for modification of the Contract as defined herein, shall not constitute a notice of intent to file a claim as required by Section 105.19. *No part of this provision is intended to alter, replace, or supersede Section 105.19 of the Specifications.*

VI. Monitoring the Work and Assessing Progress

The Engineer will monitor and assess progress of the Work regularly relative to the SOR to identify deviations from the Contractor’s scheduled performance and to determine if progress is satisfactory according to the following:

1. Progress and Coordination Meetings

Once the Work is underway and until the Project is completed, the Contractor shall keep the Engineer up-to-date on the short-term work plan on a regular basis, including any changes in the work plan or issues that may impact the schedule, as follows:

- A. Weekly Progress Meetings –** Unless directed otherwise by the Engineer, the Contractor’s personnel (i.e., Project Manager, Superintendent, Field Supervisor) shall on a weekly basis meet with the Engineer on a day and time as mutually agreed upon. The meeting shall be held to discuss the current progress of Work and any work planned for the upcoming two (2) weeks, including work by the Department and others; as well as any on-going or upcoming

issues that are anticipated to impact the schedule. At the weekly progress meeting and until all Work is completed, the Contractor shall furnish in Bar Chart format, a detailed Two-Week Look-Ahead (TWLA) Schedule to the Engineer. The TWLA Schedule shall depict in a greater level of detail, the daily operations, showing actual dates for work performed since the last TWLA Schedule submission and planned dates for work to be performed in the upcoming two (2) weeks. The daily operations included in the TWLA Schedule shall specifically reference the applicable Activity IDs in the Project Schedule. The TWLA Schedule may be prepared using a computer software or by hand.

- B. **Monthly Progress Meetings** – Unless directed otherwise by the Engineer, the Contractor shall attend a monthly progress meeting with the Engineer on a day as mutually agreed upon. At the progress meeting the Contractor shall furnish a 60-day Look-ahead Schedule Report and shall be prepared to discuss the current status of the Project, work performed during the last period, on-going work, and work planned for the following sixty (60) days; as well as any issues that are currently impacting the schedule or anticipated to impact the schedule. The 60-day Look-ahead Schedule shall be based on the Contractor's current Update Schedule, showing actual dates for work performed during the last update period and planned dates for work to be performed in the upcoming sixty (60) days.

2. **Progress Evaluation and Unsatisfactory Performance**

- A. **Progress Deficiency and Schedule Slippage** – The Engineer will assess the current status of the Work each month, based on the monthly Update Progress Schedule submission, and relative to the SOR. The Contractor's actual progress may be considered unsatisfactory, as determined by the Engineer, if any of the following conditions occur:

- (1) The Actual Progress Percent Complete for Work completed to date, based on the current estimate, falls behind the Baseline Cumulative Progress Percent Complete by more than ten (10) percent, relative to the SOR.
- (2) A Contract milestone or the Project Completion Date is currently projected to complete more than twenty-one (21) days after the date specified in the Contract, as applicable.

- B. **Notice of Unsatisfactory Performance** – When the Engineer determines that actual progress of the Work is unsatisfactory, the Engineer will issue a written notice of unsatisfactory performance to the Contractor. The Engineer will also advise the Contractor that five (5) percent retainage of the monthly progress estimate is being withheld and will continue to be withheld as described in Section 109.08(c), for each month the Contractor's actual progress is remains unsatisfactory. Within fourteen (14) days from the date of receipt of the Engineer's notice, the Contractor shall respond by submitting a written statement describing any actions taken or proposed by the Contractor to correct the progress deficiency. If the Contractor's response includes a proposed recovery plan, the current Project Schedule shall be modified accordingly to reflect the Contractor's proposed recovery plan. The Contractor may submit to the Engineer a written explanation along with supporting documentation to establish that such delinquency is attributable to conditions beyond its control. If the Engineer accepts the Contractor's recovery plan, the modified Project Schedule showing the recovery plan will be considered the current Update Schedule and will not replace the SOR.

If the Contractor fails to respond within the time required, or the response is unacceptable, its prequalification status may be changed as provided in Section 102.01 of the Specifications, and the Contractor may be temporarily disqualified from bidding on contracts with the Department as provided in Section 102.08, if progress remains unsatisfactory at the time of preparation of the next monthly progress estimate. The Engineer may delay these actions when a Contract time extension is under consideration.

VII. Measurement and Payment

Baseline Progress Schedule will be measured and paid for at the Contract Lump Sum price. This price shall include all work associated with the preparation and submission of the Preliminary Progress Schedule and the Baseline Progress Schedule and will be paid as follows:

1. Twenty-five (25) percent of the Contract Lump Sum price will be paid upon acceptance of the Preliminary Progress Schedule submission. No separate measurement and payment will be made for preparation and submission of updates to the Preliminary Progress Schedule. All costs associated with updating and submitting the updated Preliminary Progress Schedule shall be considered incidental.
2. Seventy-five (75) percent of the Contract Lump Sum price will be made upon acceptance of the Baseline Progress Schedule submission.
3. All costs associated with attendance of the Scheduling Conference and other Baseline Progress Schedule related meetings shall be considered incidental.

Progress Schedule Update will be measured in units of each and paid for at the Contract each price. This price shall include all costs associated with the preparation and submission of the Update Progress Schedule, Revised Baseline Progress Schedule, Final As-built Schedule, and SIA and will be paid as follows:

1. Progress payments of one each (1 EA) at the Contract each price will be made upon acceptance of the Update Progress Schedule, Revised Baseline Progress Schedule, and Final As-built Schedule submission. Progress payments will not be made for Progress Schedule Updates submitted for any time in excess of the time limit established in the Contract as extended in accordance with Section 108.04.
2. No separate measurement and payment will be made for preparation and submission of the SIA or for attendance of related meetings. All costs associated with the SIA shall be considered incidental.
3. No separate measurement and payment will be made for attendance of progress meetings or other Update Progress Schedule related meetings. All costs associated with attendance of the scheduling meetings shall be considered incidental.

Payment will be made under:

Pay Item	Pay Unit
Baseline Progress Schedule	Lump sum
Progress Schedule Updates	Each