



DEPARTMENT OF FINANCE AND PURCHASING

345 South Main Street
Harrisonburg, VA 22801

Table with 3 columns: ISSUE DATE, INVITATION TO BID NUMBER, FOR, DEPARTMENT, DATE/TIME OF CLOSING, CONTRACT ADMINISTRATOR.

MANDATORY PRE-BID MEETING TUESDAY, MAY 7, 2013 at 2:00 PM LOCAL TIME

Proposals - In accordance with the following and in compliance with all terms and conditions, unless otherwise noted, the undersigned offers and agrees, if the proposal is accepted, to furnish items or services for which prices are quoted, , delivered or furnished to designated points within the time specified.

NAME AND ADDRESS OF FIRM:

Telephone/Fax No.:

\_\_\_\_\_

\_\_\_\_\_

Federal Employer Identification # :

\_\_\_\_\_

\_\_\_\_\_

State Corporation Commission #:

\_\_\_\_\_

\_\_\_\_\_

E-mail:

Prompt Payment Discount: \_\_\_% for payment within \_\_\_days/net \_\_\_ days

By signing this proposal, Vendor(s) certifies, acknowledges, understands, and agrees to be bound by the conditions set forth in this ITB.

CHECK ONE: [ ] INDIVIDUAL [ ] PARTNERSHIP [ ] CORPORATION [ ] LLC

Vendor's Legally Authorized Signature

Date

Print Name

Title

Sealed proposals, subject to terms and conditions of this Request for Proposal will be received by the City of Harrisonburg Public Works Department, 320 E. Mosby Road, Harrisonburg, Virginia 22801 until the date/ time specified above for furnishing items or services delivered or furnished to specified destinations within the time specified or stipulated by the vendor(s).

The City does not discriminate against small and minority businesses or faith-based organizations.

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INVITATION TO BID  
AND  
PROJECT MANUAL

FOR

COLD IN-PLACE RECYCLING (CIR),  
REJUVENATION, AND  
PLANT MIX CONTRACT

CITY OF HARRISONBURG, VIRGINIA

DEPARTMENT OF PUBLIC WORKS

April 29, 2013

Prepared by

DEPARTMENT OF PUBLIC WORKS  
City of Harrisonburg  
320 East Mosby Rd  
Harrisonburg, Virginia 22801

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## INVITATION TO BID

**PROJECT:** Cold In-Place Recycling (CIR), Rejuvenation & Plant Mix  
City of Harrisonburg, Virginia

Bids on the referenced project will be received by the City of Harrisonburg in the office of the Director of Public Works, 320 E. Mosby Rd, Harrisonburg, Virginia, 22801 until 2:00 P.M., local prevailing time, Tuesday, May 21, 2013 and then publicly opened.

The project consists of the following:

Provision and Process to perform approximately 25,700 square yards of four (4) inch Cold In-Place (Pavement) Reclamation (CIR) utilizing approximately 31.0 tons of foamed liquid asphalt, 15.0 tons, of additional aggregate (if needed), 1290 gallons of fog sealer; 42,711 square yards of two (2) inch flexible pavement milling; 5,018 tons of two (2) inch 12.5D asphalt overlay and approximately 16,711 square yards of Rejuvenator Sealer with approximately 150 lbs. of crack sealer together with all required traffic control and other incidental items required to complete the work.

Bids may be withdrawn in accordance with the Code of Virginia Section 2.2-4330

Project will be awarded based on combination of unit prices, contractor qualifications, responsible bidders and contractor availability. Information provided in Section 00100 instructions to bidder will help determine a responsible bidder.

**OWNER:** City of Harrisonburg Public Works Dept., 320 E. Mosby Rd.,  
Harrisonburg, Virginia 22801

**DIRECTOR:** James Baker, Director of Public Works, City of Harrisonburg, 320 E.  
Mosby Rd., Harrisonburg, Virginia 22801  
Phone (540) 434-5928 Fax (540) 434-2695

**CONTRACT ADMINISTRATOR:** Kenny Knight, Street Superintendent, Public Works Dept., 320 E.  
Mosby Rd., Harrisonburg, Virginia 22801  
Phone (540) 434-5928 Fax (540) 434-2695

Bid documents consisting of project manual and with supplements are open to the public for inspection at the following locations:

City of Harrisonburg Department of Public Works, 320 East Mosby Rd.,  
Harrisonburg, Virginia 22801-3683

City of Harrisonburg, Office of Purchasing, 345 S. Main St., Room 201, Harrisonburg,  
Virginia 22801

Bid documents can be viewed at [www.harrisonburgva.gov/bids-proposals](http://www.harrisonburgva.gov/bids-proposals) and also at [www.eva.virginia.gov](http://www.eva.virginia.gov).

A mandatory pre-bid conference will be held on Tuesday May 7, 2013 in the conference room at the Department of Public Works, 320 E. Mosby Rd., Harrisonburg, Virginia 22801 at 2:00 P.M.

Bid security: Bids shall be accompanied by an acceptable bid bond in the amount of 5 percent of the base bid.

Bidders must be licensed as contractors in the Commonwealth of Virginia in accordance with Code of Virginia, Title 54, Chapter 11

The "Instructions to Bidders" Section of the contract manual is hereby made a part of this invitation to bid by reference.

City of Harrisonburg  
Director of Public Works  
James D. Baker  
320 E. Mosby Road  
Harrisonburg, Virginia 22801

**END OF INVITATION TO BID**

## **INSTRUCTIONS TO BIDDERS**

### **1. THE WORK**

Provision and Process to perform approximately 25,700 square yards of four (4) inch Cold In-Place (Pavement) Reclamation (CIR) utilizing approximately 31.0 tons of foamed liquid asphalt, 15.0 tons, of additional aggregate (if needed), 1290 gallons of fog sealer; 42,711 square yards of two (2) inch flexible pavement milling; 5,018 tons of two (2) inch 12.5D asphalt overlay and approximately 16,711 square yards of Rejuvenator Sealer with approximately 150 lbs. of crack sealer together with all required traffic control and other incidental items required to complete the work.

### **2. SECURING DOCUMENTS**

Copies of the proposed Contract Documents may be downloaded from the City's website at [www.harrisonburgva.gov/bids-proposals](http://www.harrisonburgva.gov/bids-proposals) and also at [www.eva.virginia.gov](http://www.eva.virginia.gov).

### **3. BID FORM**

In order to receive consideration, submit sealed bids in accordance with the following:

- A. Submit sealed bids upon the forms provided (00300-1 thru 00300-5), properly signed and with all items filled out. Do not change the wording of the bid form, and do not add words to the bid form. Unauthorized conditions, limitations, or provisions attached to the bid will be cause for rejection of the bid. If alterations by erasure or interlineation are made for any reason, explain over such erasure or interlineation with a signed statement from the bidder.
- B. No telegraphic bid or telegraphic modification of a bid will be considered. Bids shall not be faxed or emailed. No bids received after the time fixed for receiving them will be considered. Late bids will be returned to the bidder unopened.
- C. Address bids to the Owner, and deliver to the address given in the advertisement to bid or before the day and hour set for opening the bids. Enclose each bid in a sealed envelope bearing the title of the Work, the name of the bidder, and the date and hour of the bid opening. Submit only the original signed copy of the bid. Only one bid copy required. It is the sole responsibility of the bidder to see that his bid is received on time.
- D. Provide supplemental information as required.
- E. Any costs incurred by bidders in preparing or submitting bids are the bidders' sole responsibility. The City will not reimburse any bidder for any costs incurred as a result of the preparation of the invitation to bid.

### **4. SUPPLEMENTAL INFORMATION REQUIRED**

For the purpose of evaluating bid submissions discussed in Item 9, AWARD OF CONTRACT, bidders shall submit the following information along with the Bid form:

- A. Copy of current VDOT job mix formulas for all mixes specified herein.
- B. Copy of VDOT approved certifications for asphalt plant and for all employees holding Technician and Weigh-person Certifications.
- C. Short or long form resumes for the following primary personnel:
  - 1. Plant Operator
  - 2. Materials Technician(s)
  - 3. Project Manager
  - 4. Traffic Control Manager
  - 5. Crew Supervisor
- D. List of at least three references for which Contractor performed similar work, within the last five years, at an annual total price of \$500,000 or greater. References shall include name, contact person, address, phone number and a description of project.
- E. List of major equipment available on a regular basis for mobilization on this project.
- F. Written narrative of Contractor's quality control program, to include specifics on material selection, lab testing, protection during transport and in-place testing.
- G. Statement on current and projected workload, including the ability to adjust schedules on minimal notice to account for utility adjustments, special events, additions to and deletions from schedule, adverse weather and other similar situations.
- H. The following documents fully completed and signed where appropriate are required for a responsive bid:
  - 1.) Signed Cover Sheet
  - 2.) Bid Forms
  - 3.) Contractors Certification
  - 4.) Affidavit of Non-Collusion
  - 5.) Agreement
  - 6.) SCC form
  - 7.) Bid Bond
  - 8.) Signed Addenda, if applicable

## 5. BONDS

- A. Bid Bond in the amount of 5% of the Total Bid, as stated in the Invitation to Bid, must accompany each bid. The successful bidder's security will not be returned until he has signed the Contract and has furnished the required Certificates of Insurance.

- B. The Owner reserves the right to retain the security of all bidders until the successful bidder enters into the Contract or until 60 days after bid opening, whichever is sooner. Other bid security will be returned as soon as practicable. If any bidder refuses to enter into a Contract, the Owner may retain his bid security as liquidated damages but not as a penalty.
- C. Prior to signing the Contract, the Owner will require the successful bidder to secure and post a Performance Bond, in the amount to 100% of the Contract Sum, and on the form provided therefor in the Project Manual. Such Bond shall be issued by a Surety acceptable to the Owner.

## 6. EXAMINATION OF DOCUMENTS AND SITE OF WORK

Before submitting a bid, each bidder shall examine the Drawings carefully, shall read the Specifications and all other proposed Contract Documents, and shall visit the site of the Work. Each bidder shall fully inform himself prior to bidding as to existing conditions and limitations under which the Work is to be performed, and shall include in his bid a sum to cover the cost of items necessary to perform the Work as set forth in the proposed Contract Documents. No allowance will be made to a bidder because of lack of such examination and knowledge. The submission of a bid will be considered as conclusive evidence that the bidder has made such examination.

## 7. BIDDER ELIGIBILITY

Bids will only be accepted from Contractors who are actively engaged in the type of construction of the item(s) called for in the bid. No proposal will be accepted from or contract awarded to any person, firm, or corporation that is in arrears or is in default to the City upon any debt or contract, or that is a defaulter, as surety or otherwise, upon any obligation to said City or had failed to perform faithfully any previous contract with the City. Where an installation or assembly is to be performed by a subcontractor, the bidder must name the subcontractor and list a phone an address for each. The City reserves the right to determine whether the named subcontractor is fit and capable to perform the required work.

Bidders are required under Chapter 11, Title 54, Code of Virginia, to show evidence of certificate of registration before bid may be received and considered.

Each bidder shall place on the outside of the envelope containing his bid and in his bid proposal over his signature his "Registered Virginia Contractor No. \_\_\_\_\_." All bidders shall complete a Certification that they are not currently barred from Bidding on Contracts by any agency of the Commonwealth of Virginia.

## 8. MODIFICATION AND WITHDRAWAL OF BIDS

- A. A bidder may modify or withdraw his bid, either personally or by written request, at any time prior to the scheduled time for opening bids.

- B. Except as provided in 2.2-4330 Code of Virginia, no bidder may withdraw his bid for a period of sixty calendar days after the date set for opening thereof, and bids shall be subject to acceptance by the Owner during this period.

## 9. AWARD OF CONTRACT

- A. Award will be made to the lowest responsive, responsible bidder whose bid complies with all the requirements prescribed.
  - 1. Quality control and testing program
  - 2. Availability/flexibility/workload
  - 3. Qualifications of company and individual assigned to project
  - 4. Previous experience/references
- B. The Owner may formally or informally interview any or all bidders in order to clarify information submitted with the bid or to obtain additional information determined necessary for proper evaluation.
- C. The Owner reserves the right to reject any and all bids and to waive informalities and minor irregularities in the bid forms received.

## 10. EXECUTION OF AGREEMENT

- A. The form of Agreement which the successful bidder will be required to execute is included in the Project Manual.
- B. The bidder to whom the Contract is awarded shall, within ten calendar days after notice of award and receipt of Agreement forms from the Owner, sign and deliver required copies to the Owner.
- C. At or prior to delivery of the signed Agreement, the bidder to whom the Contract is awarded shall deliver to the Owner those Certificates of Insurance required by the Contract Documents and such Performance Bond as required by the Owner.
- D. Bonds and Insurance documents shall be approved by the Owner before the successful bidder may proceed with the Work. Failure or refusal to provide Bonds or Insurance documents in a form satisfactory to the Owner shall subject the successful bidder to loss of time from the allowable construction period equal to the time of delay in furnishing the required material.

## 11. INTERPRETATION OF CONTRACT DOCUMENTS PRIOR TO BIDDING

If any person contemplating submitting a bid for the Work is in doubt as to the true meaning of any part of the proposed Contract Documents, or finds discrepancies or omissions from any part of the proposed Contract Documents, he may submit to the PROJECT MANAGER a written request for interpretation thereof no later than seven calendar days before bids will be opened. The person submitting the request shall be responsible for any other explanations or interpretations of the proposed Contract Documents. Pertinent questions will be posted as addend to the bid at

[www.harrisonburgva.gov/bids-proposals](http://www.harrisonburgva.gov/bids-proposals) and also at [www.eva.virginia.gov](http://www.eva.virginia.gov). No responses shall be sent directly to the requestor.

12. PRE-BID CONFERENCE

Prior to the scheduled bid opening, a mandatory Pre-Bid Conference will be held for the purpose of considering questions posed by bidders. The conference will be open to prime contractors and subcontract bidders. All questions and responses will be recorded and posted as addenda on the City's website at [www.harrisonburgva.gov/bids-proposals](http://www.harrisonburgva.gov/bids-proposals) and also at [www.eva.virginia.gov](http://www.eva.virginia.gov).

The Pre-Bid Conference will be held at 2:00 P.M. on Tuesday May 7, 2013 in the Conference Room, Department of Public Works, 320 E. Mosby Road Harrisonburg, Virginia 22801.

13. CONSTRUCTION TIME

The Agreement will include a stipulation that all work be completed on or before dates indicated on work schedule. The contractor is not to begin work until the receipt of the Owner's Notice to Proceed which will be effective upon receipt. All work shall be completed no later than the date stipulated.

14. CITY BUSINESS LICENSE

The successful Bidder shall obtain a City of Harrisonburg Business License before beginning work on this project.

15. INITIAL PAYMENT

The first payment by OWNER shall be made after July 1, 2013.

**END OF INSTRUCTIONS TO BIDDERS**

## BID FORM

James D. Baker  
Director of Public Works  
Department of Public Works  
320 East Mosby Road  
Harrisonburg, Virginia 22801

Gentlemen:

The undersigned, having visited and examined the site and having carefully studied the Project Manual for the City of Harrisonburg Cold In-Place Recycling, Rejuvenation & Plant Mix, hereby proposes to furnish all plant, labor, equipment, materials, and services and to perform all operations necessary to execute and complete the work required for the project in strict accordance with the project manual prepared by the Department of Public Works, dated April 29, 2013 together with addenda issued during bidding period and hereby acknowledged subject to the terms and conditions of the Agreement for the sum of \_\_\_\_\_ DOLLARS (\$ \_\_\_\_\_) Which shall be referred to hereinafter as the BID.

It is understood and agreed that the Owner, in protecting his best interest, reserves the right to:

Reject any and all bids, or waive any defects in favor of the City, or

Accept any bid at the bid price, whereupon the contractor shall furnish equipment and materials as specified.

A unit price is provided for each item listed below. The listed bid items contain all necessary costs required for completion of the work. It is understood that all quantities listed below are estimated quantities and the Owner reserves the right to raise, lower, or eliminate any quantity or item and in any case the unit prices shall be used in determining partial and final payment. It is further understood that these unit prices shall remain valid until January 1, 2014.

*\*This form MUST be completed and returned with your ITB submission documents.*

**BID FORM**

Item	Est. Quantity	Unit Price	Amount
*Asphalt Concrete Type SM-12.5D	5,018 Tons	\$	\$
4" Cold In-Place Pavement Reclamation (CIR)	25,700 SY	\$	\$
***Liquid Asphalt (Foamed)	31.0 Tons	\$	\$
****Additional Aggregate (if needed)	15.0 Tons	\$	\$
*****Fog Sealer	1290 Gallons	\$	\$
Flexible Pavement Planing 0" to 2"	42,711 SY	\$	\$
**Rejuvenator Sealer	16,711 SY	\$	\$
**Crack Sealer	150 Lb.	\$	\$
		<b>PROJECT TOTAL</b>	\$

- \* See Appendix "C" for Special Provisions for **Asphalt Material Price Adjustment**
- \*\* See Section 02610 for Rejuvenator Sealer and crack sealing provisions and specifications
- \*\*\* Based on an average of 2% of volume at 120 lbs/sy
- \*\*\*\* Based on 1% of volume per square yard
- \*\*\*\*\* Based on 0.05 gallons per square yard

Manhole Adjustments	Est. Quantity	Price
Manhole Adjustments by rebuild	9	\$
Valve Box adjustment by rebuild	6	\$
	<b>TOTAL PRICE</b>	\$

Note: Adjustment Rings furnished by city to be installed by contractor and costs to be included in the unit price per ton for plant mix.

Attached is the supplemental information required under Project Manual Section 00100-Instructions to Bidders, to be used in evaluating this bid.

***\*This form MUST be completed and returned with your ITB submission documents.***

**BID FORM**

We are properly equipped to execute work of the character and extent indicated by the bidding documents and so covered by this bid and will enter into agreement for the execution and completion of the work in accordance with the project manual and this bid; and we further agree that if awarded the contract, we will commence the work on the date stated in "Notice to Proceed" and prosecute the work and all obligations within the time specified.

Enclosed herewith is the following security, offered as evidence that the undersigned will enter into agreement for the execution and completion of the work in accordance with the drawings and project manual.

Bidder's Bond in the amount of 5% of the value of the Bid \$\_\_\_\_\_

Bond issued by\_\_\_\_\_

The undersigned further agrees that in case of failure on his part to execute the said agreement within the ten consecutive calendar days after written notice being given on the award of the contract, the monies payable by the securities accompanying this bid shall be paid to the City of Harrisonburg, Virginia as liquidated damages for such failure, otherwise, the securities accompanying this bid shall be returned to the undersigned.

This bid is subject to acceptance within a period of 60 days from this date.

Respectfully submitted,

\_\_\_\_\_  
Contractor

By\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Telephone\_\_\_\_\_

Date\_\_\_\_\_

Contractor's Virginia Registration Number\_\_\_\_\_

State Corporation Commission Number \_\_\_\_\_

*\*This form MUST be completed and returned with your ITB submission documents.*

**BID FORM  
CONTRACTOR'S CERTIFICATION**

This is to certify that I (we) are not currently barred from bidding on contracts by any agency of The Commonwealth of Virginia, nor am I (we) a part of any firm/corporation that is currently barred from bidding on contracts by any agency of The Commonwealth of Virginia.

(Seal)

\_\_\_\_\_  
(Contractor)

\_\_\_\_\_  
(Address)  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
(Attest)

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

*\*This form MUST be completed and returned with your ITB submission documents.*

**BID FORM**  
**CITY OF HARRISONBURG, VIRGINIA**  
**AFFIDAVIT AND INFORMATION REQUIRED OF BIDDERS**

Affidavit of non-collusion:

Under oath, I hereby affirm under penalty of perjury:

- (1) That I am the bidder or a partner of the bidder, or an officer or employee of the bidding corporation with authority to sign on its behalf;
- (2) That the attached bid or bids have been arrived at by the bidder and have been arrived at and submitted without collusion or any design to limit bidding or competition;
- (3) That the contents of the bid or bids have not been communicated to any person not an employee or agent of the bidder on any bid furnished with the bid or bids, and will not be communicated to any such person prior to the official opening of the bid or bids; and
- (4) That I have fully informed myself regarding the accuracy of the statements made in this affidavit.

Signed \_\_\_\_\_

Firm Name \_\_\_\_\_

CITY OF HARRISONBURG  
COMMONWEALTH OF VIRGINIA, to wit:

I, \_\_\_\_\_, a Notary Public, do certify that  
\_\_\_\_\_ whose name is signed to the foregoing has  
this date acknowledged the same before me in my City foresaid.

Given under my hand this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_. My commission  
expires \_\_\_\_\_.

\_\_\_\_\_  
Notary Public

*\*This form MUST be completed and returned with your ITB submission documents.*

**END OF BID FORM**

## AGREEMENT

This AGREEMENT is dated as of the \_\_\_\_\_ day of \_\_\_\_\_ in the year \_\_\_\_\_ and between the City of Harrisonburg, Virginia (hereinafter called Owner) and \_\_\_\_\_ (hereinafter called Contractor).

OWNER and CONTRACTOR, in consideration of the mutual covenants hereinafter set forth, agree as follows:

### Article 1. WORK

Provision and Process to perform approximately 25,700 square yards of four (4) inch Cold In-Place (Pavement) Reclamation (CIR) utilizing approximately 31.0 tons of foamed liquid asphalt, 15.0 tons, of additional aggregate (if needed), 1290 gallons of fog sealer; 42,711 square yards of two (2) inch flexible pavement milling; 5,018 tons of two (2) inch 12.5D asphalt overlay and approximately 16,711 square yards of Rejuvenator Sealer with approximately 150 lbs. of crack sealer together with all required traffic control and other incidental items required to complete the work.

CONTRACTOR shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

### Article 2. DIRECTOR OF PUBLIC WORKS

The Project Manual has been prepared by the Department of Public Works of the City of Harrisonburg. The Director of Public Works, Harrisonburg, Virginia is hereinafter called DIRECTOR and will assume all duties and responsibilities and will have the rights and authority assigned to DIRECTOR in the Contract Documents in connection with completion of the Work in accordance with the Contract Documents.

### Article 3. CONTRACT TIME

Contract Time shall be fixed completion dates for the various phases of work set out below:

1. All work on primary or major collector streets shall be performed and completed on or before August 16, 2013.
2. Cold In-Place Reclamation work shall be performed at night (7:00 pm to 6:00 am), unless instructed otherwise by the DIRECTOR .
3. Rejuvenation application shall be performed during the day and under peak drying conditions.

### Article 4. CONTRACT PRICE

OWNER shall pay CONTRACTOR for performance of the Work in accordance with the Contract Documents such amounts as required by the Contract Documents.

### Article 5. PAYMENT PROCEDURES

CONTRACTOR shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by DIRECTOR as provided in the General Conditions.

- 5.1. Progress Payments. OWNER shall make progress payments on account of the Contract Price on the basis of CONTRACTOR'S Applications for Payment as recommended by DIRECTOR, on or about the 15<sup>th</sup> day of each month during construction as provided below. All Progress Payments will be on the basis of the progress of the Work measured by the schedule of values established in Paragraph 2.9 of the General Conditions.
- 5.2. Retainage of 5% will be held on the total contract amount until final completion by the owner as outlined in Section 01700 of General Conditions.
- 5.3. Initial Payment. The first payment by OWNER shall be made after July 1, 2013.

#### Article 6. INTEREST

All monies not paid when due hereunder shall bear interest at maximum rated allowed by law at the place of the Project.

#### Article 7. CONTRACTOR'S REPRESENTATIONS

In order to induce OWNER to enter into this Agreement, CONTRACTOR makes the following representations:

- 7.1. CONTRACTOR has familiarized himself with the nature and extent of the Contract Documents, Work, locality, and with all local conditions, state and local laws, ordinances, rules and regulations that in any manner may affect cost, progress or performance of the Work.
- 7.2. CONTRACTOR has studied carefully all reports of investigations and tests of subsurface and latent physical conditions at the site or otherwise affecting cost, progress or performance of the Work which were relied upon by DIRECTOR in the preparation of the Drawings and Specifications and which have been identified in the Supplementary Conditions.
- 7.3. CONTRACTOR has made or caused to be made examinations, investigations and tests and studies of such reports and related data in addition to those referred to in Paragraph 7.2. as he deems necessary for the performance of the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents; and no additional examination, investigations, test, reports or similar data are or will be required by CONTRACTOR for such purposes.
- 7.4. CONTRACTOR has correlated the results of all such observations, examinations, investigations, tests, reports and data with the terms and conditions of the Contract Documents.

- 7.5. CONTRACTOR has given DIRECTOR written notice of all conflicts, errors or discrepancies that he has discovered in the Contract Documents and the written resolution thereof by DIRECTOR is acceptable to CONTRACTOR.

#### Article 8. CONTRACT DOCUMENTS

The Contract Documents which comprises the entire agreement between OWNER and CONTRACTOR are attached to this Agreement, made a part hereof and consists of the following:

- 8.1. This Agreement.
- 8.2. Exhibits to this agreement, inclusive.
- 8.3. Performance and other Bonds.
- 8.4. Notice of Award.
- 8.5. General Conditions, inclusive.
- 8.6. Supplemental General Conditions, inclusive.
- 8.7. Specification, inclusive.
- 8.8. Standard Specifications
- 8.9. Addenda, inclusive.
- 8.10. Standard Drawings
- 8.11. CONTRACTOR'S Bid, inclusive.
- 8.12. Documentation submitted by CONTRACTOR prior to Notice of Award.
- 8.13. Any Modification, including Change Orders, duly delivered after execution of Agreement.
- 8.14. General Terms & Conditions for the City of Harrisonburg, inclusive.

There are no Contract Documents other than those listed above in this Article 8. The Contract Documents may only be altered, amended or repealed by a Modification as allowed in the General Conditions.

#### Article 9. MISCELLANEOUS

- 9.1 Terms used in this Agreement which are defined in Article 1 of the General Conditions shall have the meanings indicated in the General Conditions.
- 9.2 No assignment by a party hereto of any rights under or interests in the Contract

Documents will be binding on another party hereto with out the written consent of the party sought to be bound; and specifically but without limitation, monies that may become due and monies that are now due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

9.3 OWNER and CONTRACTOR each binds himself, his partners, successors, Assigns and legal representatives to the party hereto, his partners, successors, assigns and legal representatives in respect to all covenants, agreements and obligations contained in the Contract Documents.

Article 10. OTHER PROVISIONS

10.1. IN WITNESS WHEREOF, the parties hereto have signed this Agreement in duplicate. One counterpart each has been delivered to OWNER and CONTRACTOR. All portions of the Contract Documents have been signed or identified by OWNER and CONTRACTOR or by DIRECTOR on their behalf.

10.2. This Agreement may be extended, on an annual basis subject to criteria established in the Contract Documents.

This Agreement will be effective on \_\_\_\_\_, \_\_\_\_\_.

OWNER \_\_\_\_\_ CONTRACTOR \_\_\_\_\_

By \_\_\_\_\_ By \_\_\_\_\_

(CORPORATE SEAL)

(CORPORATE SEAL)

Attest \_\_\_\_\_ Attest \_\_\_\_\_

Address for giving notices

Address for giving notices

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(Attach evidence of authority to sign and resolution or other document authorizing execution of Agreement.)

License NO. \_\_\_\_\_

Agent for service of process

\_\_\_\_\_

*\*This form MUST be completed and returned with your ITB submission documents.*

**END OF AGREEMENT**

**CITY OF HARRISONBURG, VA  
NOTICE OF AWARD**

Date \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

Your Bid/Offer Dated \_\_\_\_\_

In Response To Bid/RFP # \_\_\_\_\_

To Furnish \_\_\_\_\_

During the Period \_\_\_\_\_

hereby is accepted at prices and terms stated, subject to all conditions and requirements of the solicitation, purchase specifications, warranties, performance bond and other stipulations, if any.

\_\_\_\_\_  
Kurt Hodgen, City Manager

OR

Anne Lewis, Assistant City Manager

For City of Harrisonburg, VA

**NOTICE TO PROCEED**

**DATE:** \_\_\_\_\_

**TO:** \_\_\_\_\_

**Re: City of Harrisonburg**

**PROJECT TITLE:** \_\_\_\_\_

**PROJECT NO:** \_\_\_\_\_

Gentlemen:

In accordance with the Contract Between the City of Harrisonburg and Contractor you are notified that the Time for Completion under the above Agreement will commence to run on \_\_\_\_\_, 20 \_\_\_\_\_. By that date, you are to start performing your obligations under the Contract Documents. In accordance with the Contract between Owner and Contractor, the Work shall be substantially completed within \_\_\_\_\_ calendar days from and after the said date, which is \_\_\_\_\_, 20\_\_\_\_\_.

Before you may start any Work at the site, the City of Harrisonburg requires that you deliver to the City the Certificates of Insurance which the Contractor is required to purchase and maintain in accordance with the Contract Documents.

\_\_\_\_\_  
(Owner)

BY \_\_\_\_\_  
(Authorized Signature)

\_\_\_\_\_  
(Typed Name & Title)

**GENERAL TERMS AND CONDITIONS  
FOR THE CITY OF HARRISONBURG, VA**

**PURCHASING AND CONTRACTING MANUAL:** This solicitation is subject to the provisions of The Purchasing and Contracting Policy Manual for the City of Harrisonburg (City) and any revisions thereto, which are hereby incorporated into this contract in their entirety. A copy of the manual is available for review at [www.Harrisonburgva.gov/bids](http://www.Harrisonburgva.gov/bids).

**APPLICABLE LAWS AND COURTS:** This solicitation and any resulting contract shall be governed in all respects by the laws of the Commonwealth of Virginia and any litigation with respect thereto shall be brought in the courts of the Commonwealth. The contractor shall comply with all applicable federal, state and local laws, rules and regulations.

**ANTI-DISCRIMINATION:** By submitting their (bids/proposals), (bidders/offerors) certify to the City that they will conform to the provisions of the Federal Civil Rights Act of 1964, as amended, as well as the Virginia Fair Employment Contracting Act of 1975, as amended, where applicable, the Virginians With Disabilities Act, the Americans With Disabilities Act and 2.2-4311 of the *Virginia Public Procurement Act*.

In every contract over \$10,000 the provisions below apply:

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 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 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 these requirements.

The contractor will include the provisions of 1. above in every subcontract or purchase order over \$10,000, so that the provisions will be binding upon each subcontractor or vendor.
2. The City does not discriminate against small and minority businesses or faith based organizations.

**ETHICS IN PUBLIC CONTRACTING:** By submitting their (bids/proposals), (bidders/offerors) certify that their (bids/proposals) are made without collusion or fraud and that they have not offered or received any kickbacks or inducements from any other (bidder/offeror), supplier, manufacturer or subcontractor in connection with their (bid/proposal), and that they have not conferred on any public employee having official responsibility for this procurement transaction any payment, loan, subscription, advance, deposit of money, services or anything of more than nominal value, present or promised, unless consideration of substantially equal or greater value was exchanged.

**IMMIGRATION REFORM AND CONTROL ACT OF 1986:** By submitting their (bids/proposals), (bidders/offerors) certify that they do not and will not during the performance of this contract employ illegal alien workers or otherwise violate the provisions of the federal Immigration Reform and Control Act of 1986.

**DEBARMENT STATUS:** By submitting their (bids/proposals), (bidders/offerors) certify that they are not currently debarred by the Commonwealth of Virginia from submitting bids or proposals on contracts for the type of goods and/or services covered by this solicitation, nor are they an agent of any person or entity that is currently so debarred.

**ANTITRUST:** By entering into a contract, the contractor conveys, sells, assigns, and transfers to the City all rights, title and interest in and to all causes of action it may now have or hereafter acquire under the antitrust laws of the United States and the Commonwealth of Virginia, relating to the particular goods or services purchased or acquired by the City under said contract.

**MANDATORY USE OF CITY FORM AND TERMS AND CONDITIONS FOR IFBs AND RFPs**

1. (For Invitation For Bids(ITB):) Failure to submit a bid on the form provided, (if provided) shall be a cause for rejection of the bid. Modification of or additions to any portion of the Invitation for Bids may be cause for rejection of the bid; however, the City reserves the right to decide, on a case by case basis, in its sole discretion, whether to reject such a bid as nonresponsive. As a precondition to its acceptance, the City may, in its sole discretion, request that the bidder withdraw or modify nonresponsive portions of a bid which do not affect quality, quantity, price, or delivery. No modification of or addition to the provisions of the contract shall be effective unless reduced to writing and signed by the parties.
2. (For Request For Proposals(RFP):) Failure to submit a proposal on the form provided, (if provided) shall be a cause for rejection of the bid. Modification of or additions to the General Terms and Conditions of the solicitation may be cause for rejection of the proposal; however, the City reserves the right to decide, on a case by case basis, in its sole discretion, whether to reject such a proposal.

**REVISIONS TO THE OFFICIAL ITB/RFP:** No offeror shall modify, revise, edit or make any unauthorized change(s) to the original Official Invitation to Bid (ITB) or Official Request for Proposal (RFP). The Official solicitation document and the Addenda(s) are the documents posted on the City of Harrisonburg's web site and/or authorized by the City of Harrisonburg's Purchasing Agent. Any such violation as stated above may result in rejection of the ITB/RFP response. In addition, violations may result in the debarment of the offeror by the City of Harrisonburg.

**CLARIFICATION OF TERMS:** If any prospective (bidder/offeror) has questions about the specifications or other solicitation documents, the prospective (bidder/offeror) should contact the person whose name appears on the face of the solicitation no later than five working days before the due date. Any revisions to the solicitation will be made only by addendum issued by the buyer.

**PAYMENT:**

1. To Prime Contractor:

- a. Invoices for items ordered, delivered and accepted shall be submitted by the contractor directly to the payment address shown on the purchase order/contract. All invoices shall show the purchase order number; social security number (for individual contractors) or the federal employer identification number (for proprietorships, partnerships, and corporations).
  - b. Any payment terms requiring payment in less than 30 days will be regarded as requiring payment 30 days after invoice or delivery, whichever occurs last. This shall not affect offers of discounts for payment in less than 30 days, however.
  - c. All goods or services provided under this contract or purchase order, that are to be paid for with public funds, shall be billed by the contractor at the contract price.
  - d. The following shall be deemed to be the date of payment: the date of postmark in all cases where payment is made by mail, or the date of offset when offset proceedings have been instituted as authorized under the Virginia Debt Collection Act.
  - e. Individual contractors shall provide their social security numbers, and proprietors , partnerships, and corporations shall provide the City with a federal employer identification number, prior to receiving any payment from the City.
  - f. **Unreasonable Charges.** Under certain emergency procurements and for most time and material purchases, final job costs cannot be accurately determined at the time orders are placed. In such cases, contractors should be put on notice that final payment in full is contingent on a determination of reasonableness with respect to all invoiced charges. Charges which appear to be unreasonable will be researched and challenged, and that portion of the invoice held in abeyance until a settlement can be reached. Upon determining that invoiced as to those charges which it considers unreasonable and the basis for the determination. A contractor may not institute legal action unless a settlement cannot be reached within thirty (30) days of notification. The provisions of this section do not relieve the City of its prompt payment obligations with respect to those charges which are not in dispute (*Code of Virginia, 2.2.4363*).
2. To Subcontractors:
- a. A contractor awarded a contract under this solicitation is hereby obligated:
    - (1) To pay the subcontractor(s) within seven (7) days of the contractor's receipt of payment from the City for the proportionate share of the payment received for work performed by the subcontractor(s) under the contract; or
    - (2) To notify the City and the subcontractor(s), in writing, of the contractor's intention to withhold payment and the reason.
  - b. The contractor is obligated to pay the subcontractor(s) interest at the rate of one percent per month (unless otherwise provided under the terms of the contract) on all amounts owed by the contractor that remain unpaid seven (7) days following receipt of payment from the City, except for amounts withheld as stated in (2) above. The date of mailing of any payment by U. S. Mail is deemed to be payment to the addressee. These provisions apply to each sub-tier contractor performing under the primary contract. A contractor's obligation to pay an interest charge to a subcontractor may not be construed to be an obligation of the City.

**PRECEDENCE OF TERMS:** General Terms and Conditions shall apply in all instances. In the event there is a conflict between any of the other General Terms and Conditions and any Special Terms and Conditions in this solicitation, the Special Terms and Conditions shall apply.

**QUALIFICATIONS OF (BIDDERS/OFFERORS):** The City may make such reasonable investigations as deemed proper and necessary to determine the ability of the (bidder/offeror) to perform the services/furnish the goods and the (bidder/offeror) shall furnish to the City all such information and data for this purpose as may be requested. The City reserves the right to inspect (bidder's/offeror's) physical facilities prior to award to satisfy questions regarding the (bidder's/offeror's) capabilities. The City further reserves the right to reject any (bid/ proposal) if the evidence submitted by, or investigations of, such (bidder/offeror) fails to satisfy the City that such (bidder/offeror) is properly qualified to carry out the obligations of the contract and to provide the services and/or furnish the goods contemplated therein.

**TESTING AND INSPECTION:** The City reserves the right to conduct any test/inspection it may deem advisable to assure goods and services conform to the specifications.

**ASSIGNMENT OF CONTRACT:** A contract shall not be assignable by the contractor in whole or in part without the written consent of the City.

**CHANGES TO THE CONTRACT:** Changes can be made to the contract in any of the following ways:

1. The parties may agree in writing to modify the scope of the contract. An increase or decrease in the price of the contract resulting from such modification shall be agreed to by the parties as a part of their written agreement to modify the scope of the contract.
2. The Purchasing Agent or City delegated agent may order changes within the general scope of the contract at any time by written notice to the contractor. Changes within the scope of the contract include, but are not limited to, things such as services to be performed, the method of packing or shipment, and the place of delivery or installation. The contractor shall comply with the notice upon receipt. The contractor shall be compensated for any additional costs incurred as the result of such order and shall give the City a credit for any savings.

**DEFAULT:** In case of failure to deliver goods or services in accordance with the contract terms and conditions, the City, after due oral or written notice, may procure them from other sources and hold the contractor responsible for any resulting additional purchase and administrative costs. This remedy shall be in addition to any other remedies, which the City may have.

**CANCELLATION OF THE CONTRACT:** The City may terminate any agreement resulting from this solicitation at any time, for any reason or for no reason, upon thirty days advance written notice to the Contractor. In the event of such termination the Contractor shall be compensated for services and work performed prior to termination.

**TAXES:** Sales to the City of Harrisonburg are normally exempt from State sales tax. State sales and use tax certificates of exemption, Form ST-12, will be issued upon request.

**(NOT NORMALLY REQUIRED FOR SERVICE CONTRACTS)**

**USE OF BRAND NAMES:** Unless otherwise provided in this solicitation, the name of a certain brand, make or manufacturer does not restrict (bidders/offerors) to the specific brand, make or manufacturer named, but conveys the general style, type, character, and quality of the article desired. Any article which the public body, in its sole discretion, determines to be the equal of that specified, considering quality, workmanship, economy of operation, and suitability for the purpose intended, shall be accepted. The (bidder/offeror) is responsible to clearly and

specifically identify the product being offered and to provide sufficient descriptive literature, catalog cuts and technical detail to enable the City to determine if the product offered meets the requirements of the solicitation. This is required even if offering the exact brand, make or manufacturer specified. Normally in competitive sealed bidding only the information furnished with the bid will be considered in the evaluation. Failure to furnish adequate data for evaluation purposes may result in declaring a bid nonresponsive. Unless the (bidder/offeror) clearly indicates in its (bid/proposal) that the product offered is an “equal” product, such (bid/proposal) will be considered to offer the brand name product referenced in the solicitation.(**NOT NORMALLY REQUIRED FOR SERVICE CONTRACTS**)

**TRANSPORTATION AND PACKAGING:** By submitting their (bids/proposals), all (bidders/offerors) certify and warrant that the price offered for FOB destination includes only the actual freight rate costs at the lowest and best rate and is based upon the actual weight of the goods to be shipped. Except as otherwise specified herein, standard commercial packaging, packing and shipping containers shall be used. All shipping containers shall be legibly marked or labeled on the outside with purchase order number, commodity description, and quantity.(**NOT NORMALLY REQUIRED FOR SERVICE CONTRACTS**)

**INSURANCE:** By signing and submitting a bid or proposal under this solicitation, the bidder or offeror certifies that if awarded the contract, it will have insurance coverages per the solicitation document at the time the contract is awarded. For construction contracts, if any subcontractors are involved, the subcontractor will have workers’ compensation insurance in accordance with 2.2-4332 and 65.2-800 et seq. of the *Code of Virginia*. The bidder or offeror further certifies that the contractor and any subcontractors will maintain these insurance coverages during the entire term of the contract and that all insurance coverages will be provided by insurance companies authorized to sell insurance in Virginia by the Virginia State Corporation Commission. (**NOT NORMALLY REQUIRED FOR GOODS CONTRACTS. INSURANCE IS REQUIRED WHEN WORK IS TO BE PERFORMED ON CITY OWNED OR LEASED FACILITIES OR PROPERTY.**)

**AVAILABILITY OF FUNDS:** Agreements are made subject to the appropriation of funds by the Harrisonburg City Council and are null and void in the event of non-appropriation by the City Council. Non-appropriation of funds shall not be deemed a cancellation and shall terminate this agreement without recourse and with no liability on the part of the City.

**SELECTION PROCESS/AWARD:** Upon the award or the announcement of the decision to award a contract as a result of this solicitation, the department will publicly post such notice for a minimum of ten (10) days, or will notify all responsive bidders/offerors.

**BID/PROPOSAL ACCEPTANCE PERIOD:** Any bid/proposal resulting from this solicitation shall be valid for (30) days. At the end of the (30) days the bid/proposal may be withdrawn at the written request of the Bidder/Offeror. If the bid or proposal is not withdrawn at that time it remains in effect until an award is made or the solicitation is canceled.

**EXCUSABLE DELAY:** The City shall not be in default of any failure in performance of this agreement in accordance with its terms if such failure arises out of causes beyond its reasonable control and without the fault of or negligence of the City. Such causes may include, but are not restricted to acts of God or the public enemy, fires, flood, epidemics, quarantine restrictions,

strikes, freight embargoes, and usually severe weather, but in every case the failure to perform must be beyond the reasonable control and without the fault or negligence of the City.

**DRUG-FREE WORKPLACE:** 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.

**SAFETY and OSHA STANDARDS:** All parties performing services for the City shall comply with all Occupational Safety and Health Administration (OSHA), State Occupational Health Standards, and any other applicable rules and regulations. All parties shall be held responsible for the training, supervision, and safety of their employees. Any unsafe acts or hazardous conditions that may cause injury or damage to any persons or property within and around the work site areas under this contract shall be remedied per the regulatory agency's guidelines.

**PERMITS AND FEES:** All proposals submitted shall have included in price the cost of any business or professional licenses, permits or fees required by the City of Harrisonburg or the Commonwealth of Virginia. The offeror must have all necessary licenses to perform the services in Virginia and, if practicing as a corporation, be authorized to do business in the Commonwealth of VA.

**COOPERATIVE PROCUREMENT:** This procurement is being conducted on behalf of other public bodies, in accordance with 2.2-4304 (A) of the Code of VA. The successful bidder has the option to provide these same items (services), except architectural and engineering services, at the same prices, awarded as a result of this solicitation to any public body within the Commonwealth of Virginia. If any other Public body decides to use the final contract, the contractor(s) must deal directly with that public body concerning the placement of orders, issuance of the purchase orders, contractual disputes, invoicing and payment. Failure to extend a contract to any public body will have no effect on consideration of your bid.

**STATE CORPORATION COMMISSION IDENTIFICATION NUMBER:** Pursuant to Code of VA 2.2-4311.2 subsection B, a bidder or offeror organized or authorized to transact business in the Commonwealth pursuant to Title 13.1 or Title 50 is required to include in its bid or proposal the identification number issued to it by the State Corporation Commission (SCC). Any bidder or offeror 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 is required to include in its bid or proposal a statement describing why the bidder or offeror is not required to be so authorized. Link to the SCC site is <http://www.scc.virginia.gov>.

**The City does not discriminate against small and minority businesses or faith-based organizations.**

**END OF GENERAL TERMS & CONDITIONS**



## SUPPLEMENTARY CONDITIONS

### 1. SUPPLEMENTS

1.01 These Supplementary Conditions amend or supplement the “Standard General Conditions of the Construction Contract” NSPE/ACEC Document 1910-8, 1990 and other provisions of the Contract Documents to the extent indicated. All provisions which are so amended or supplemental remain in full force and effect. In cases where conflicts exist between the Standard General Conditions and these Supplementary Conditions, these Supplementary Conditions shall govern the Contract.

### 2. DEFINITIONS

2.01 The following definitions and abbreviations shall apply to this Project.

- A. Furnish: Purchase and deliver to the Work Site all items specified.
- B. Install: Incorporate into the Work equipment and materials furnished either by others or by the Contractor.
- C. Provide: Furnish and install as defined above all equipment as specified.
- D. AWWA: American Water Works Association.
- E. ASTM: American Society for Testing and Materials.
- F. ACI: American Concrete Institute.
- G. AWS: American Welding Society.
- H. OSHA: Occupational Safety Health Act.
- I. AREA: American Railway Engineering Association.
- J. Standard Specifications (Std. Specs.): Roadway and Storm drainage – Virginia Department of Transportation Road and Bridge Specifications, most current edition. Water and Sanitary Sewer – City of Harrisonburg Design and Construction Standards Manual, most current edition.
- K. Standard Drawings: Roadway and Storm drainage – Virginia Department of Transportation Road and Bridge Specifications, most current edition. Water and Sanitary Sewer – City of Harrisonburg Design and Construction Standards Manual, most current edition.
- L. FS: Federal Specifications
- M. Director: The Director as defined and referred to in the Contract Documents is the City Director of Public Works of the City of Harrisonburg, Virginia.

N. VDOT: Virginia Department of Transportation

O. Contract Documents: Add the following to the definition on Page 13 – Also includes Standard Specifications and Standard Drawings.

3. BONDS

3.01 Add the following Article 5, Paragraph 5.1.1.:

A. The CONTRACTOR shall secure and provide all bonds called for in the General Conditions and Instructions to Bidders. All bonds shall be written by sureties or insurance companies licensed to do business in the Commonwealth of Virginia.

4. INSURANCE

4.01 The CONTRACTOR shall purchase and maintain the insurance covered by the General Terms and Conditions for the City of Harrisonburg, VA, in at least the following amounts: Standard General Liability combined single limit policy in the amount of \$1 million for bodily injury and property damage.

Primary Auto Liability policy in the amount of \$1 million.

If any subcontractors are involved, the subcontractors will have same workers' compensation and same liability insurance as the prime contractor. The provider further certifies that they or any subcontractors will maintain these insurance coverages during the entire term of the contract

4.02 Excess Liability coverage shall be provided by CONTRACTOR with a minimum limit of \$1Million.

4.03 CONTRACTOR'S Workers' Compensation Insurance as required by Federal, State, and Municipal laws for the protection of all CONTRACTOR'S employees working on or in connection with the Project, including broad form all states and voluntary compensation coverage and employers' liability coverage.

4.04 An "all risk" type installation floater shall be provided by the CONTRACTOR to Cover materials and supplies when being installed. Such policy shall be written with a sufficiently large limit to cover the total value of materials furnished under the Contract. The installation floater shall be written for the benefit of the OWNER, the CONTRACTOR, and the Subcontractors, as the interests may appear.

4.05 The CONTRACTOR shall require his insurance agent to certify on an insurance certificate that the insurance coverage specified by these supplementary conditions is fully in effect, both in scope and amount. If insurance coverage is effected with more than one company, the individual certificates shall identify the items of insurance which the individual companies cover. The insurance certificate shall contain a provision that coverage afforded under the policies will not be canceled or materially changed unless at

least thirty (30) days prior written notice has been given to the OWNER and DIRECTOR.

4.06 All insurance shall be written by insurance companies licensed to do business in the Commonwealth of Virginia.

4.07 The General Liability policy shall name the City of Harrisonburg, Virginia, it's officers, agents and employees as additional insured's. This coverage shall be reflected on the Certificates of Insurance. The City also request a copy of the actual Endorsement showing the City has been listed as an Additional Insured.

5. DUTIES, RESPONSIBILITIES AND LIMITATIONS OF THE AUTHORITY OF RESIDENT PROJECT REPRESENTATIVE

5.01 Add the following to Article 9, Paragraph 9.8

A. Resident project representative is the OWNER'S field agent, will act as directed by and under the supervision of the OWNER. Resident project representative's dealings in matters pertaining to the on-site work shall in general be only with CONTRACTOR, and dealings with subcontractors shall only be through or with the full knowledge of CONTRACTOR.

B. Duties and responsibilities: Resident project representative will:

1. Schedules: Review the progress schedule, schedule or shop drawings submissions and schedule of values prepared by CONTRACTOR.
2. Conferences: Attend preconstruction conferences. Arrange a schedule of progress meetings and other job conferences as required and notify those expected to attend in advance. Attend meetings, and maintain and circulate copies of minutes thereof.
3. Liaison: Serve as OWNER'S liaison with CONTRACTOR, work principally through CONTRACTOR'S superintendent and assist him in understanding the intent of the Contract Documents.
4. Shop Drawings and Samples: Receive and record date of receipt Shop drawings and samples, receive samples which are furnished at the site by CONTRACTOR.

Advise CONTRACTOR or its superintendent immediately of the commencement of any work requiring a shop drawing or sample submission if the submission has not been approved by the OWNER.

5. Review of Work, Rejection of Defective Work, Inspections and Tests:

Conduct on-site observations of the work in progress to assist the OWNER in determining if the work is proceeding in accordance with the

Contract Documents and that completed work will conform to the Contract Documents.

Report to OWNER whenever he believes that any work is unsatisfactory, faulty or defective or does not conform to the Contract Documents, or does not meet the requirements of any inspections, tests or approval required to be made or has been damaged prior to final payment; and advise OWNER when he believes work should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval. Verify that tests, equipment and systems startups and operating and maintenance instructions are conducted as required by the Contract Documents and in presence of the required personnel, and that CONTRACTOR maintains adequate records thereof; observe, record and report to OWNER appropriate details relative to the test procedures and startups.

Accompany inspectors representing public or other agencies having jurisdiction over the project, record the outcome of these inspections and report to OWNER.

6. Modifications: Consider and evaluate CONTRACTOR'S suggestions for modifications in drawings or specifications and report them with recommendations to OWNER.
7. Records: Maintain at the job site orderly files for correspondence, reports of job conferences, shop drawings and samples submissions, reproductions of original Contract Documents including all addenda, change orders, field orders, additional drawings issued subsequent to the execution of the Contract, OWNER'S clarification's and interpretations of the Contract
8. Documents, progress reports, and other project-related documents. Keep a diary or log book, recording hours on the job site, weather conditions, data relative to questions of extras or deductions, list of visiting officials and representatives of manufacturers, fabricators, suppliers and distributors, daily activities, decisions, observations in general and specific observations in more detail, as in the case of observing test procedures. Send copies to OWNER.

Record names, addresses and telephone numbers of all contractors, subcontractors, and major suppliers of materials and equipment.

9. Reports: Furnish OWNER periodic reports as required of progress of the Work and CONTRACTOR'S compliance with the approved progress schedule and schedule of shop drawing submissions.

Consult with OWNER in advance of scheduled major tests, inspections or start of important phases of work.

Report immediately to OWNER upon the occurrence of any accident.

10. Payment requisitions: review applications for payment with CONTRACTOR for compliance with the established procedure for their submission and forward them with recommendations to OWNER, noting particularly their relation to the schedule of values, work completed and materials and equipment delivered at the site but not incorporated in the Work.
11. Certificates, maintenance and operation manuals: During the course of the work, verify that certificates, maintenance and operation manuals and other data required to be assembled and furnished by CONTRACTOR are applicable to the items actually installed; and deliver this material to OWNER for his review and forwarding to OWNER prior to final acceptance of the Work.
12. Completion: Before OWNER issues a Certificate of Substantial Completion, submit to CONTRACTOR a list of observed items requiring completion or correction.

Conduct final inspection in the company of the OWNER and CONTRACTOR and prepare a final list of items to be completed or corrected. Verify that all items on final list have been completed or corrected and make recommendations to OWNER concerning acceptance.

- C. Limitations of Authority: Except upon written instructions of OWNER, resident project representative:
1. Shall not authorize any deviation from the Contract Documents or approve any substitute materials or equipment.
  2. Shall not exceed limitations on OWNER'S authority set forth in the Contract Documents.
  3. Shall not undertake any of the responsibilities of CONTRACTOR, subcontractors or CONTRACTOR'S superintendent, or expedite the work.
  4. Shall not advise on or issue directions relative to any aspect of the means, methods, techniques, sequences or procedures of construction unless such is specifically called for in the Contract Documents.
  5. Shall not advise on or issue directions as to safety precautions and programs in connection with the work.
  6. Shall not authorize OWNER to occupy the project in whole or in part.
  7. Shall not participate in specialized field or laboratory tests.

## 6. EMPLOYMENT DISCRIMINATION PROHIBITED

6.01 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 or national origin, except where religion, sex or national origin is a bona fide occupational qualification reasonably necessary to the normal operation of the CONTRACTOR. The CONTRACTOR agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.
- B. The CONTRACTOR, in all solicitations or advertisements for employees placed by or on behalf of the CONTRACTOR, will state that such CONTRACTOR is an equal opportunity employer.
- C. Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section.

6.02 The CONTRACTOR will include the provisions of the foregoing paragraphs A, B, C in every subcontract or purchase order of over \$10,000, so that the provisions will be binding upon each subcontractor or vendor.

## 7. CONSTRUCTION SCHEDULE

7.01 The CONTRACTOR shall submit for review, a detailed construction schedule prior to beginning the project, which the OWNER will review for potential conflicts with other planned work or civic events. The OWNER shall be notified in advance of any major changes in the Construction Schedule as the project progresses. In order to assist the DIRECTOR with Project Staffing Requirements for the following week, the CONTRACTOR shall provide the Director's project representative, on each Friday, with a detailed work schedule for the following week.

The CONTRACTOR shall provide the DIRECTOR with at least a 72 hour notice for the following items:

- (1) All asphalt concrete placements
- (2) Need for review of planned adjustments to utility covers

7.02 The CONTRACTOR may be charged for additional costs of inspection when material and/or workmanship are found not to be ready for inspection at the time the CONTRACTOR calls for inspection.

7.03 CONTRACTOR shall remain flexible to changing, at OWNER'S direction, the order or timing of specific tasks within the schedule, including time between milling and paving the same street, as necessary for coordination with utility adjustments, special events, priority changes and similar circumstances.

## 8. MISCELLANEOUS PROVISIONS

8.01 Traffic Control

- A. One way traffic shall be maintained at all times during working hours.
- B. Two-way traffic shall be maintained at all times during non-working hours.
- C. Minimum 24 hour advanced signage with temporary “No Parking” signs (furnished by the OWNER) to warn residents of street to be milled or paved.

8.02 Disposal of Excess Material

- A. Excess material, excluding excess CIR material, including debris and milled asphalt, shall be disposed of off the site. Completed street sections shall be clear of excess material and debris within 48 hours of completion.
- B. Excess CIR material shall be retained by the City, and shall be transported to a location within the City limits as directed by the DIRECTOR.
- C. Payment for hauling and disposing of such material will not be made directly but all costs thereof shall be included in the unit prices bid.

8.03 Existing Utilities

- A. Contractor shall exercise precaution when working in or near existing electric and telephone services, water services, water valves, sewer manholes, etc.
- B. Contractor shall allow City ample time to adjust utilities (if City is responsible for utility), and traffic signal sensors beneath surface, after milling and prior to pavement overlay.

8.04 Restrictions on Working Hours

- A. No day time work shall be performed on Sunday or City observed Holidays. No work shall be started the day proceeding a weekend Holiday or special event.
- B. Contractor shall reference paving schedule for paving restrictions prior to scheduling paving activities.

9. APPLICATIONS FOR PROGRESS PAYMENT

9.01 Add the following to Article 14, paragraph 14.2:

- A. Applications for progress payment shall be made by itemized invoice acceptable to City Director of Public Works.

**END OF SUPPLEMENTARY CONDITIONS**

## **GENERAL REQUIREMENTS**

**CITY OF HARRISONBURG, VIRGINIA  
DEPARTMENT OF PUBLIC WORKS**

Prepared by

**DEPARTMENT OF PUBLIC WORKS  
City of Harrisonburg  
320 East Mosby Road  
Harrisonburg, Virginia 22801**

## SECTION 01010 - SUMMARY OF WORK

### 1.01 WORK COVERED BY CONTRACT DOCUMENTS

- A. The “Project” which the “Work” of this Contract constitutes, is titled “Annual Street Paving”. The Work shall be completed in strict accordance with the Contract Documents as modified herein.
  
- B. Related requirements specified elsewhere:
  - 1. Project Meetings: Section 01200.
  - 2. Construction Schedule: Section 01310.
  - 3. Schedule of Values: General Conditions
  
- C. CONTRACTOR’S Duties:
  - 1. Except as especially noted, provide and pay for:
    - a. Labor, materials and equipment
    - b. Tools, construction equipment and machinery
    - c. Water, heat, and utilities required for construction
    - d. Other facilities and services necessary for proper execution and completion of Work.
  - 2. Secure and pay for, as necessary for proper execution and completion of Work, and as applicable at time of receipt of bids.
    - a. Permits
    - b. Government fees
    - c. Licenses
  - 3. Give required notices.
  - 4. Comply with codes, ordinances, rules, regulations, orders and other legal requirements of public authorities which bear on performance of Work.
  - 5. Promptly submit written notice to Director of observed variance of Contract Documents from legal requirements.
  - 6. Enforce strict discipline and good order among employees. Do not employ on Work:

- a. Unfit persons
- b. Persons not skilled in assigned task

1.02 CONTRACTS:

- A. Construct Work specified by the Contract Documents under prices shown on Bid Form.

1.03 CONCURRENT WORK

- A. Keep Work clear of encroachment into area required for concurrent work.

1.04 WORK SEQUENCE:

- A. Schedule Work as required in Section 01310 and coordinate all activities which will affect other contractors and the DIRECTOR.

1.05 CONTRACTOR USE OF PREMISES:

- A. Confine operations at site to areas permitted by:
  - 1. Law
  - 2. Ordinance
  - 3. Permits
  - 4. Contract Documents
- B. Do not unreasonably encumber site with materials or equipment.
- C. Do not load structure with weight that will endanger structure.
- D. Assume full responsibility for protection and safekeeping of products stored on premises.
- E. Move any stored products which interfere with operations of OWNER or other contractor.
- F. Obtain and pay for use of additional storage or work areas needed for operations.
- G. Use of site: exclusive and complete, for execution of work, except:
  - 1. For OWNER, and OWNER'S representatives unrestricted access.

2. Access required for other construction at the site that may or may not be a part of these Contract Documents.

1.06 COMPLETION OF THE WORK

- A. All Work described in these Contract Documents shall be complete and have passed all tests as required by the Contract Documents no later than the date stipulated in the Notice to Proceed.

**END OF SUMMARY OF WORK**

## SECTION 01153 - CHANGE ORDER PROCEDURE

### PART 1 – GENERAL

#### 1.01 DESCRIPTION

- A. Work included: Make such changes in the Work, in the Contracts Sum in the Contract Time of Completion, or any combination thereof, as are described in written Change Orders signed by the OWNER and the DIRECTOR and issued after execution of the Contract, in accordance with the provisions of the Section.

#### 1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Changes in the Work: General Conditions
- B. Change in the Contract Price: General Conditions
- C. Construction Schedules: Section 01310

#### 1.03 SUBMITTALS

- A. Make submittals directly to the DIRECTOR at the address shown on the Project Directory in the Project Manual.
- B. Submit the number of copies called for under the various items listed in this Section.

#### 1.04 PROJECT HANDLING

- A. Maintain a “Register of Bulletins and Change Orders” accurately reflecting current status of all pertinent data.
- B. Make the Register available to the DIRECTOR for review at his request.

#### 1.05 PROCESSING CHANGES INITIATED BY THE OWNER

- A. Should the OWNER contemplate making a change in the Work or a change in the Contract Time of Completion, the DIRECTOR will issue a “Bulletin” to the CONTRACTOR
  - 1. Bulletins will be dated and will be numbered sequence.
  - 2. The Bulletin will describe the contemplated change and will carry one of the following instructions to the Contractor.
    - a. Make the described change in the Work at no change in the Contract Sum and no change in the Contract Time of Completion.

- b. Make the described change in the Work, credit or cost for which will be determined in accordance with Article 11 of the General Conditions.
    - c. Promptly advise the DIRECTOR as to credit or cost proposed for the described change. This is not an authorization to proceed with the change.
- B. If the CONTRACTOR has been directed by the DIRECTOR to make the described change in the Work at no change in the Contract Sum and no change in the Contract Time of Completion, but the CONTRACTOR wishes to make a claim for one or both of such changes, the CONTRACTOR shall notify the DIRECTOR as provided in Article 11 or Article 12 of the General Conditions.
- C. If the CONTRACTOR has been directed by the DIRECTOR to promptly advise him as to credit or cost proposed for the described change, the CONTRACTOR shall:
  - 1. Analyze the described change and its impact on costs and time;
  - 2. Secure the required information and forward it to the DIRECTOR for review;
  - 3. Meet with the DIRECTOR as required to explain costs and, when appropriate, determine other acceptable ways to achieve the desired objectives;
  - 4. Alert pertinent personnel and subcontractors as to the impending change and, to the maximum extent possible, avoid such work as would increase the OWNER'S cost for making the change, advising the DIRECTOR in writing when such avoidance no longer is practicable.

#### 1.06 PROCESSING CHANGES INITIATED BY THE CONTRACTOR

- A. Should the CONTRACTOR discover a discrepancy among the Contract Documents, a concealed condition as described in Section 4.3 of the General Conditions, or other cause for suggesting a change in the Work, a change in the Contract Sum, or a change in the Contract Time of Completion, he shall notify the DIRECTOR as required by pertinent provisions of the Contract Documents.
- B. Upon agreement by the DIRECTOR that there is reasonable cause to consider the CONTRACTOR'S proposed change, the DIRECTOR will issue a Bulletin in accordance with the provisions described in Article 1.05 above.

#### 1.07 PROCESSING BULLETINS

- A. Make written reply to the DIRECTOR in response to each Bulletin:
  - 1. State proposed change on the Contract Sum, if any;

2. State proposed change in the Contract Time of Completion, if any;
  3. Clearly describe other changes in the Work required by the proposed change, or desirable therewith, if any;
  4. Include full backup data such as subcontractor's letter of proposal or similar information;
  5. Submit this response in a single copy.
- B. When cost or credit for the change has been agreed upon by the OWNER and the CONTRACTOR, or the OWNER has directed that cost or credit be determined in accordance with provisions of Section 11.3 of the General Conditions, the DIRECTOR will issue a "Change Order" to the CONTRACTOR.

#### 1.08 PROCESSING CHANGE ORDERS

- A. Change Orders will be dated and will be numbered in sequence.
- B. The Change Order will describe the change or changes, will refer to the Bulletin or Bulletins involved, and will be signed by the OWNER and the DIRECTOR.
- C. The DIRECTOR will issue three copies of each Change Order to the CONTRACTOR:
1. The CONTRACTOR promptly shall sign all three copies and return two copies to the DIRECTOR.
  2. The DIRECTOR will retain one signed copy in his file, and will forward one signed copy to the OWNER.
- D. Should the CONTRACTOR disagree with the stipulated change in the Contract Sum or change in the Contract Time of Completion, or both:
1. The CONTRACTOR promptly shall return three copies of the Change Order, unsigned by him, to the DIRECTOR with a letter signed by the CONTRACTOR and stating the reason or reasons for the CONTRACTOR'S disagreement.
  2. The CONTRACTOR'S disagreement with the Change Order shall not in any way relieve the CONTRACTOR of his responsibility to proceed with the change as ordered and to seek settlement of the dispute under the pertinent provisions of the Contract Documents.

## SECTION 01200 - PROJECT COORDINATION AND PROGRESS MEETINGS

### 1.01 GENERAL

- A. Related Requirements Specified Elsewhere:
  - 1. Summary of Work: Section 01010
  - 2. Construction Schedules: Section 01310
- B. The DIRECTOR will schedule and administer progress meetings.
  - 1. Prepare agenda.
  - 2. Distribute written notice and agenda of regular and called meetings 4 days in advance of meeting date.
  - 3. Make physical arrangements for meetings.
  - 4. Preside at meetings.
  - 5. Record minutes; include significant proceedings and decisions.
  - 6. Distribute copies of minutes to participants, within 4 days after the meetings.
- C. All Contractors working at the Project Site at the time of such project meetings shall attend meetings.

### 1.02 PRE-CONSTRUCTION MEETING

- A. To be scheduled within 5 days after Date of Notice to Proceed.
- B. Attendance:
  - 1. OWNER
  - 2. DIRECTOR and his Consultants.
  - 3. Other Contractors working at the Project Site.
  - 4. Major subcontractors of all Contractors.
  - 5. Representative of Governmental or other Regulatory Agencies as necessary.
- C. Minimum Agenda:
  - 1. Distribute and discuss:

- a. List of major subcontractors.
- b. Tentative Construction Schedule.
2. Critical Work Sequencing
3. Relation and coordination of Contractors
4. Designation of responsible personnel.
5. Processing of field decisions and Change Orders.
6. Adequacy of distribution of Contract Documents.
7. Submittal of shop drawings, project data and samples.
8. Procedures for maintaining Record Documents.
9. Use of premises:
  - a. Office and storage areas.
  - b. OWNER'S requirements.
10. Major equipment deliveries and priorities.
11. Safety and first-aid procedures.
12. Security procedures.
13. Housekeeping procedures.

#### 1.03 PROGRESS MEETINGS

- A. Schedule regular meetings to be held at time and place mutually agreed upon between CONTRACTOR and DIRECTOR and OWNER.
- B. Hold called meetings as progress of Work dictates.
- C. Attendance:
  1. DIRECTOR and his Consultants
  2. All Contractors working at the Project Site.
  3. Subcontractors as pertinent to agenda.
  4. Safety Representatives.

5. Representatives of Governmental or other Regulatory Agencies, as required.

D. Minimum Agenda:

1. Review, approve minutes of previous meeting.
2. Review Work Progress since last meeting.
3. DIRECTOR will accept and give preliminary review of all Applications for Progress Payments.
4. Note field observations, problems, and decisions.
5. Identify problems which impede planned progress.
6. Review off-site fabrication problems.
7. Develop corrective measures and procedures to regain planned schedule.
8. Review Construction Schedule as indicated.
9. Plan progress during next work period.
10. Coordinate projected progress with other Contractors on the Project Site.
11. Review submittal schedules, expedite as required to maintain schedule.
12. Review maintaining of quality and work standards.
13. Review changes proposed by OWNER for:
  - a. Effect on Construction Schedule.
  - b. Effect on Completion Date.
14. Complete other current business.

**END OF PROJECT COORDINATION AND PROGRESS MEETINGS**

## SECTION 01310 - CONSTRUCTION SCHEDULES

### PART 1 – GENERAL

#### 1.01 GENERAL

- A. Related Requirements Specified Elsewhere:
  - 1. Summary of Work: Section 01010.
  - 2. Schedule of Values: General Conditions.
- B. Provide projected construction schedules for entire Work to DIRECTOR – revise monthly.
- C. The Construction Schedule in the form specified will be used as the “Schedule of Values” when dollar values are assigned to each activity. See General Conditions.

#### 1.02 FORM OF SCHEDULES

- A. Prepare in form of horizontal bar chart.
  - 1. Provide separate horizontal bar column for each activity.
  - 2. Order: Table of Contents of Specifications.
  - 3. Identify each column:
    - a. By distinct graphic delineation.
    - b. Maximum of 100 activities will be allowed for all work.
    - c. Activity No. 1 shall be “Mobilization”.
    - d. Activity No. 2 shall be “General Expense Items”.
  - 4. Horizontal time scale: Identify first work day of each week.
  - 5. Scale and spacing: To allow space for updating.
- B. Sheet Size: 11” x 17” on transparent reproducible material.

#### 1.03 CONTENTS OF SCHEDULES

- A. Provide complete sequence of construction by activity.
  - 1. Shop Drawings, Project Data and Samples:

- a. Submittal dates.
  - b. Dates reviewed copies will be required.
- 2. Product procurement and delivery dates.
- 3. Dates for beginning, and completion of , each element of construction, specifically:
  - a. Concrete placement.
  - b. Subcontractor work.
  - c. Material installations.
  - d. Material tests.
- B. Identify Work of separate phases, or other logically grouped activities.
- C. Provide separate subschedule, showing submittals, review times, procurement schedules, and delivery dates.
- D. Provide subschedule to define critical portions of entire schedule.

#### 1.04 UPDATING

- A. Show all changes occurring since previous submission of updated schedule.
- B. Indicate progress of each activity, show completion dates.
- C. Include:
  - 1. Major changes in scope.
  - 2. Corrective action taken, or proposed, and it's effect.
  - 3. Revised projections due to changes.
  - 4. Other identifiable changes.
- D. Provide narrative report, including:
  - 1. Discussion of problem areas, including current and anticipated delay factors, and their impact.
  - 2. Corrective action taken, or proposed, and its effect.
  - 3. Effect of change in schedules of other contractors at the Project Site.

4. Description of revisions.
  - a. Effect of schedule due to change of scope.
  - b. Revisions in duration of activities.
  - c. Other changes that may affect schedule.

#### 1.05 SUBMITTALS

- A. Submit initial schedules within 15 days after date of Notice to Proceed.
  1. DIRECTOR will review schedules and return review copy within 10 days after the receipt.
  2. If required, re-submit within 7 days after return of review copy.
- B. Submit monthly updated schedules accurately depicting progress.
- C. Submit 2 copies to be retained by DIRECTOR.

#### 1.06 DISTRIBUTION

- A. Distribute copies of review schedules to:
  1. Job site file.
  2. Other contractors.
  3. Subcontractors.

**END OF CONSTRUCTION SCHEDULES**

## **SECTION 01551 - SITE, ACCESS, PARKING AND TRAFFIC REGULATIONS**

### **PART 1 – GENERAL**

#### **1.01 RELATED WORK SPECIFIED ELSEWHERE**

- A. General requirements: General Conditions
- B. Summary of Work: Section 01010
- C. Maintenance of Traffic: Section 02703

#### **1.02 ACCESS**

- A. The CONTRACTOR shall provide reasonable and safe access to the Project Site at all reasonable times for the OWNER, DIRECTOR, representative of governmental agencies and his workmen.
- B. Work shall be confined to public right-of-way, permanent easements and temporary construction easements shown on plan.

#### **1.03 PARKING**

- A. The CONTRACTOR shall provide off-street parking for all workmen engaged on the work of the Project and shall endeavor to ensure the use thereof.

#### **1.04 MAINTENANCE**

- A. The CONTRACTOR shall provide for the prompt removal (within 48 hours) from traveled streets and roadways of all dirt and other materials that have been deposited thereon by his operation whenever the accumulation is sufficient to cause the formation of dust or mud, damage to pavements or creates a traffic hazard.

**END OF REGULATIONS**

## SECTION 01630 - PRODUCT DELIVERY, STORAGE AND PROTECTION

### PART 1 – GENERAL

#### 1.01 APPLICABILITY

- A. These specifications apply to all products furnished under this contract.

#### 1.02 DELIVERY

- A. Shipments of material to be used by the CONTRACTOR or any subcontractor under this contract should be delivered to the job site only during the regular working hours of the CONTRACTOR or subcontractor. If a delivery is made during other than the normal working hours of the CONTRACTOR or subcontractor, his authorized agent must be on duty to receive such material. No employee of the OWNER or the DIRECTOR is authorized to receive any shipment designed for the CONTRACTOR or subcontractor.
- B. Products shall not be delivered to the OWNER or the DIRECTOR.
- C. Products shall not be delivered to project site until related shop drawings have been reviewed by the DIRECTOR.
- D. Products shall not be delivered to project site until required storage facilities as specified below have been reviewed by the DIRECTOR.
- E. Products shall be delivered to site in manufacturer's original, unopened, labeled containers.
- F. The CONTRACTOR shall not drop, roll or skid products off delivery vehicles. Hand carry or use suitable materials handling equipment.

#### 1.03 STORAGE AND PROTECTION

- A. General:
  - 1. The CONTRACTOR shall store and protect products in accordance with the manufacturer's recommendations and the requirements specified herein. No on-site or existing storage facilities are available for use by the CONTRACTOR. All on-site facilities shall be furnished by the CONTRACTOR if space is available in the area defined as the "Site Limits" for the Work.
  - 2. When area for storage facilities is no available within the "Site Limits" the CONTRACTOR shall provide off-site, weather proof storage facilities reviewed by the DIRECTOR at no extra charge to the OWNER in accordance with the storage requirements in the Contract Documents.

3. The CONTRACTOR shall provide weatherproof storage for all spare parts. This storage shall be off site in a facility reviewed by the DIRECTOR when area within "Site Limits" for provision of such shall provide for security of such spare parts and for the segregation of spare parts from uninstalled products that will be used by the CONTRACTOR in the performance of his work.
4. The CONTRACTOR shall provide all equipment, spare parts and supplies that are to be delivered to the OWNER in accordance with the Contract Documents in properly marked, original packages that show the name of the item, the equipment, or system in which the item belongs, the OWNER'S requisition number, the quantity and the Specification's Section Number.
5. The CONTRACTOR shall not store products in the structures being constructed unless consented to in writing by the DIRECTOR.
6. The CONTRACTOR shall no block or restrict the use of access roads with stored materials.
7. The CONTRACTOR shall not store products where they will interfere with operations of the OWNER or other contractors or on the OWNER'S property outside the "Site Limits" of the Work.
8. The CONTRACTOR shall protect stored materials from damage by vandals. CONTRACTOR is fully responsible for products stored within his limits of work.
9. The CONTRACTOR shall protect all products from damage or deterioration by weather.
10. The CONTRACTOR shall not store any products directly on the ground.
11. The CONTRACTOR shall not store any products in drainage ditches or areas where water may stand.
12. The CONTRACTOR shall label containers to identify materials inside using the terminology found in these specifications.

B. Uncovered Storage:

1. The following types of materials may be stored out-of-doors without cover:
  - a. Masonry units
  - b. Reinforcing steel
  - c. Structural steel

- d. Piping
  - e. Precast concrete items
  - f. Castings
  - g. Gratings
  - h. Hand railing
2. Store the above materials on wood blocking.
- C. Covered Storage:
- 1. The following types of materials may be stored out-of-doors if covered with material impervious to water.
    - a. Rough lumber.
  - 2. Tie down covers with rope and slope to prevent accumulation of water on covers.
  - 3. Store materials on wood blocking of sufficient height to insure no contact of materials with ground.
- D. Fully Protected Storage:
- 1. Store all products not named above in buildings or trailers which have a concrete or wooden floor, a roof and fully closed walls on all sides.
  - 2. Provide heated storage space for materials which would be damaged by freezing.
  - 3. Protect mechanical and electrical equipment from being contaminated by dust and dirt.
  - 4. Maintain temperature and humidity at levels recommended by manufacturer's for electrical and electronic equipment.

**END OF PRODUCT DELIVERY & STORAGE**

## SECTION 01700 - CONTRACT CLOSEOUT

### PART 1 – GENERAL

#### 1.01 DESCRIPTION

- A. Work included: Provide an orderly and efficient transfer of the completed work to the Owner. This shall be done for each street project, in a manner which resembles that specified below in 1.03 PROCEDURES, but in an informal basis to be coordinated with City Chief Construction Inspector.

#### 1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Substantial Completion: General Conditions
- B. Completion: General Conditions
- C. Final Inspection: General Conditions
- D. Final Application for Payment: General Conditions
- E. Waiver of Claims: General Conditions
- F. Change Order Procedure: Section 01153
- G. Cleaning: Section 01710

#### 1.03 PROCEDURES

- A. Substantial Completion:
  - 1. Prepare and submit a list of items completed or to be completed.
  - 2. Within a reasonable time after receipt of the list, the DIRECTOR will inspect to determine status of completion.
  - 3. Should the DIRECTOR determine that the work is not substantially complete:
    - a. The DIRECTOR promptly will so notify the CONTRACTOR, in writing, giving the reasons therefore.
    - b. CONTRACTOR will remedy the deficiencies and notify the DIRECTOR when ready for re-inspection.
    - c. The DIRECTOR will re-inspect the work.
  - 4. When the DIRECTOR concurs that the work is substantially complete:

- a. The DIRECTOR will prepare a “Certificate of Substantial Completion” accompanied by the CONTRACTOR’S list of items to be completed or corrected, as verified by the DIRECTOR.
- b. The DIRECTOR will submit the Certificate to the OWNER and the CONTRACTOR for their written acceptance of the responsibilities assigned to them in the Certificate.

B. Final Completion:

1. Prepare and submit the notice that work is ready for final inspection and acceptance.
2. Verify that the work is complete including, but not necessarily limited to, payment affidavits, consent of surety, receipts, waivers, operation and maintenance manuals.
3. Certify that:
  - a. Contract Documents have been reviewed;
  - b. Work has been inspected for compliance with the Contract Documents;
  - c. Work has been completed in accordance with the Contract Documents;
  - d. Equipment and systems have been tested as required, and are operational;
  - e. Work is completed and ready for final inspection.
4. The DIRECTOR will make an inspection to verify status of completion.
5. Should the DIRECTOR determine that the work is incomplete or defective:
  - a. The DIRECTOR promptly will so notify the CONTRACTOR, in writing, listing the incomplete or defective work;
  - b. CONTRACTOR will remedy the deficiencies promptly, and notify the DIRECTOR when ready for re-inspection.
6. When the DIRECTOR determines that the work is acceptable under the Contract Documents, he will request the CONTRACTOR submit a final statement of accounting to the DIRECTOR showing all adjustments to the Contract Sum, and application for retainage.

7. If so required, the DIRECTOR will prepare a final Change Order showing adjustments to the Contract Sum which were not made previously by Change Orders.

**END OF CONTRACT CLOSEOUT**

## SECTION 01710 - CLEANING

### PART 1 – GENERAL

#### 1.01 DESCRIPTION

- A. Related Requirements Specified Elsewhere:
  - 1. Summary of Work: Section 01010
  - 2. Cleaning for Specific Products of Work: Specifications Section for that work.
- B. Maintain premises and public and private properties free from accumulations of waste, debris, and rubbish, caused by operations.
- C. At completion of Work, remove waste materials, rubbish, tools, equipment, machinery and surplus materials, and clean all sight exposed surfaces; leave project clean and ready for occupancy.
- D. All cleaning shall be performed in a manner which does not adversely impact private properties, pedestrians or motor vehicles.

#### 1.02 SAFETY REQUIREMENTS

- A. Standards: Maintain project in accord with following safety and insurance standards.
  - 1. Applicable State, City, County and Federal Codes and Regulations.
- B. Hazards Control
  - 1. Store volatile wastes in covered metal containers and remove from premises daily.
  - 2. Prevent accumulation of wastes which create hazardous conditions.
  - 3. Provide adequate ventilation during use of volatile or noxious substances.
- C. Conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws.
  - 1. Do not burn or bury rubbish and waste materials on project site.
  - 2. Do not dispose of volatile wastes such as mineral spirits, oil, or paint thinner in storm or sanitary drains.
  - 3. Do not dispose of wastes into streams or waterways.

### PART 2 – PRODUCTS

## 2.01 MATERIALS

- A. Use only cleaning materials recommended by manufacture of surface to be cleaned.
- B. Use cleaning materials only on surfaces recommended by cleaning material manufacturer.

## PART 3 – EXECUTION

### 3.01 DURING CONSTRUCTION

- A. Execute cleaning to ensure that Work, grounds, and public properties are maintained free from accumulations of waste materials and rubbish.
- B. Wet down dry materials and rubbish to lay dust and prevent blowing dust.
- C. At reasonable intervals during progress of Work, clean site and public properties, and dispose of waste materials, debris, and rubbish.
- D. Provide on-site dump containers for collection of waste materials, debris and rubbish.
- E. Dispose of waste materials, debris and rubbish in a legal manner.

### 3.02 FINAL CLEANING

- A. Employ experienced workmen, or professional cleaners, for final cleaning.
- B. In preparation for substantial completion or occupancy conduct final inspection of sight exposed interior and exterior surfaces and of concealed spaces.
- C. Broom clean paved surfaces; rake clean other surfaces of grounds.
- D. Maintain cleaning until project, or portion thereof, is occupied by OWNER.

**END OF CLEANING**

**SITE WORK**

**CITY OF HARRISONBURG, VIRGINIA  
DEPARTMENT OF PUBLIC WORKS**

Prepared by

**DEPARTMENT OF PUBLIC WORKS  
City of Harrisonburg  
320 East Mosby Road  
Harrisonburg, Virginia 22801**

## SECTION 02580 - FLEXIBLE PAVEMENT PLANING

### PART 1 – GENERAL

#### 1.01 DESCRIPTION

- A. This work shall consist of planing flexible pavement to the designated depth in preparation for pavement repair or pavement overlay.

#### 1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Cleaning: Section 01710
- B. Paving and Surfacing: Section 02600

### PART 2 – EQUIPMENT

- 2.01 Planing shall be performed with a pavement planing machine of a type that has operated successfully on comparable work.
- 2.02 Equipment and vehicles in use under traffic shall operate flashing or rotating amber lights. In addition, trail vehicles shall be equipped with electronic flashing or sequential amber arrows.
- 2.03 Milling equipment shall be capable of cutting to a depth of 2 inches in flexible pavement while leaving a uniformly cut roadway surface capable of handling traffic prior to overlay placement. The ground speeds of the machine and the cutting equipment shall be independent. The machine shall have a self-contained water system for the control of dust and fine particles. The width of the machine shall allow controlled traffic.

### PART 3 – SUMMARY OF WORK

Schedule of Work is shown in Appendix A. Such Schedule indicates work required for each individual street. Curb relief milling versus full-width milling on particular street is distinguished by use of asterisk notations.

### PART 4 – EXECUTION

- 4.01 Plane pavement between gutter faces, along gutters only for curb relief or to other limits as specified by City Inspector.
- 4.02 Irregularities and high spots shall be eliminated. The pavement surface shall be planed to the designated grade or gradient of approximately ¼ inch per foot or as directed by the Directors project representative. Super elevated curves shall be planed as directed. Where the pavement is to be resurfaced, a 1-inch minimum shoulder shall be cut along the gutter line to eliminate the necessity of feathering the edge of the new surface.

- 4.03 The planed surface shall be free from gouges, grooves, ridges, soot, oil film, and other imperfections and shall have a mosaic appearance suitable as a riding surface.
- 4.04 Planing shall be provided at variable depth, from one to one-half to two inches, as directed by City Inspector for individual streets included on work schedule.
- 4.05 The City will field locate, prior to milling, all known valve boxes, manholes and other in-street structures. Contractor shall plane existing pavement around such facilities by hand or other means in order to provide for equivalent resurfacing in those areas. Contractor shall constantly monitor planing operation to discover similar structures which are not readily evident. The City is not responsible for any damage to milling equipment caused by the presence of utility structures or other similar objects, either evident or hidden. Any utility structures that have been identified, and are damaged by paving or milling operations shall be repaired by Contractor at the expense of the Contractor.
- 4.06 Upon completion of work on any given street, Contractor shall thoroughly clean work area and remove all debris within 48 hours.
- 4.07 Contractor shall be responsible for tapering tie-ends to original pavements and to other structures i.e. : Connecting Streets, Private Entrances, Bridges and Railroad crossings. Refer to Appendix B, Drawings B-1 and B-2 for tie-in connections. Also planing around manholes and valve boxes must be wedged with fresh asphalt, a minimum of 3.0' larger than the diameter of the structure. Milling of the tie-in taper area shall be performed immediately before the actual placement of the new asphalt overlay. This work will be performed within the same paving train operation, within the work zone established for the paving process.

#### **PART 5 – MEASUREMENT AND PAYMENT**

Planing will be measured in square yards of pavement and will be paid for at the contract price per square yard 0” to 2” in depth. This price shall include site preparation, vehicles, safety equipment, warning devices, certified flag persons, and removing and disposing of existing pavement.

**END OF FLEXIBLE PAVEMENT PLANNING**

## SECTION 02600 - PAVING AND SURFACING

### PART 1 – GENERAL

#### 1.01 DESCRIPTION

This Work consists of preparing the surface to be paved, providing and testing plant-mix asphalt concrete base and surface and providing bituminous material for tack coat.

#### 1.02 RELATED WORK SPECIFIED ELSEWHERE

Flexible Pavement Planing: Section 02580

Utility Adjustments: Section 02650

#### 1.03 SUBMITTALS

##### A. Certificates

1. Certify that materials comply with specification requirements.
2. Signed by Supplier and CONTRACTOR.

### PART 2 – PRODUCTS

2.01 Asphalt Concrete: as indicated on Bid and work schedules and in conference with Standard Specifications.

2.02 Thickness shown for aggregate base and asphalt concrete are the minimum compacted thickness required upon completion of the work.

2.03 Tack Coat: RC-250 or CRS-2

2.04 Product handling and transportation shall be performed in accordance with all applicable Local, State and Federal regulations.

### PART 3 – SUMMARY OF WORK

3.01 Schedule of Work is shown in Appendix A. Such schedule indicates specific mixes and estimated quantities required for each street.

### PART 4 – PLACEMENT

4.01 In conformance with the Standard Specifications.

4.02 Provide Tack Coat on all surfaces to be overlaid unless otherwise directed by the City Inspector. All street surfaces shall be thoroughly cleaned prior to placement of tack coat and/or asphalt concrete.

- 4.03 Provide in-place testing of all asphalt concrete placements in accordance with the Standard Specifications.
- 4.04 Prepare and construct tie-in connections to existing surfaces in accordance with Appendix B, Drawing B-1 and B-2.
- 4.05 Paving of a particular street shall follow within 10 working days of milling on the same street, unless additional time is required for adjustments of City utility structures in writing to be approved by Director of Public Works, or specifically authorized by City. The city may also require less than the 10 working days for a specific location.
- 4.06 The City will make all adjustments to traffic signal sensors, between milling and paving. Contractor shall coordinate with City on scheduling for such work.
- 4.07 City will install permanent lane and other pavement markings following paving work. Contractor shall maintain traffic control and work area protection during this process, and shall assist City in coordinating, scheduling and accomplishing this work. Contractor shall adjust City utility structures.
- 4.08 Finish surface appearance and roughness shall meet VDOT standards and City approval.
- 4.09 Cold weather paving will be permitted per VDOT specifications described in Section 315, Asphalt Concrete Pavement. No paving will be allowed November 15, 2013 to April 1, 2014 unless authorized by Director.

#### PART 5 – MEASUREMENT AND PAYMENT

In accordance with Standard Specifications.

### **END OF PAVING & SURFACING**

## **SECTION 02610 - PAVEMENT REJUVENATION and CRACK SEALING**

### **PART 1- GENERAL**

#### **1.01 DESCRIPTION**

Preparing surface to be sprayed with a clear liquid sealer with joints to be Crack sealed per work schedule.

#### **1.02 RELATED WORK SPECIFIED ELSEWHERE**

None

#### **1.03 SUBMITTALS**

A. Certify that materials comply with specification requirements.

### **PART-2 PRODUCTS**

2.01 Rejuvenator Sealer: “Reclamite” and or “Replay”.

2.02 Crack Sealer: Type C to meet ASTM-D 6690, AASHTO M-173 and Federal Specification SS S-164 and VDOT Guidelines for application.

### **PART 3-PLACEMENT**

3.01 Rejuvenator sealer to be applied at a rate of 0.020 gallons per square yard not to exceed 0.025 gallons per square yard.

3.02 Crack Sealer in conformance with the standard specifications.

### **PART 4 – QUALITY CONTROL**

4.01 A test strip shall be performed at the beginning of each day, prior to the start of placement of the rejuvenation material. The test strip shall be a one lane width wide by 100 ft in length, and the rejuvenation dispensing equipment shall be set to the desired setting that will be used for the entire roadway. The City Representative shall confirm that the proper amount of material was placed. If the application rate is less than or exceeds the desired application rate, the Contractor shall adjust the dispensing equipment and the test strip shall be repeated until the desired application rate is achieved.

### **PART 5-METHOD OF PAYMENT**

5.01 Rejuvenator sealer per square yard of applicated area.

5.02 Crack Sealer per pound of application.

## PART 6- SUMMARY OF WORK

6.01 Schedule of Work is shown in Appendix A. Such schedule indicates specific mixes and estimated quantities required for each street.

**END OF PAVEMENT REJUVENATION and CRACK SEALING**

## SECTION 02640 – COLD IN-PLACE RECYCLING

### CITY OF HARRISONBURG SPECIAL PROVISION FOR COLD IN-PLACE RECYCLING (CIR)

#### 1. DESCRIPTION

Cold In-Place Recycling (CIR) is defined as those processes in which a portion of existing asphalt concrete pavement layers are pulverized, stabilized, and repaved in place. This is most commonly performed using foamed asphalt or asphalt emulsion as the primary stabilizing additive to a thickness of 3 to 6 inches. The pavement may be milled, stabilized, and repaved using the same machine or machine train, or paved from a stabilized, windrowed material using traditional practices.

The Contractor shall furnish all labor, materials and equipment required for completing the work. The Contractor shall select the final mix design (job mix formula- JMF) and construction methods to meet the performance requirements specified herein. The Contractor shall also be responsible for developing and implementing a Quality Control Plan to ensure that operational techniques and activities under their control provide homogeneous and finished material of acceptable quality. Contractor sampling and testing shall be performed to control the processes and ensure material compliance with the requirement of this special provision. The Contractor shall provide their Quality Control Plan (in accordance with the requirements of this special provision) and the Job Mix Formula(s) they intend to accomplish the work to the applicable local Materials Engineer for Department approval no less than thirty (30) calendar days prior to the start of CIR operations.

For each CIR project, a project specific Quality Control Plan is required, and shall include the following (minimum) information:

- a. A description of the Contractor's Quality Control organization, including the number of fulltime equivalent employees or Sub-Contractors with specific Quality Control responsibilities, including an organizational chart showing lines of authority and reporting responsibilities.
- b. A listing by discipline with the name, qualifications, duties, responsibilities and authorities for all persons proposed to be responsible for Construction Quality Control;
- c. A Quality Control Sampling, Testing and Analysis Plan with methods that include a description of how random locations for testing and sampling are determined;
- d. Identification and description (Accreditation) of the laboratory(s) to be used for each type of testing;

- e. Specify documentation for QC activities;
- f. Procedures to meet contract requirements for corrective action when QC criteria are not met.
- g. Procedures to protect stabilized material from receiving excessive moisture from weather events (i.e. rain, fog, etc.) and corrective actions when criteria are not met.

The Contractor is required to have a technical representative at the project site during mixing and placement operations. At a minimum, this person must:

- Have 2 years minimum experience with the CIR process,
- Have personally supervised a minimum of 5 successful CIR projects,
- Have personal experience in developing CIR mix designs,
- Have the experience to perform and supervise field process control testing, and

- Submit a list of references, with current telephone numbers, of persons who are able to verify the experience required herein

The Contractor may use consultants or manufacturers' representatives to satisfy the technical representative requirements of this section provided these individuals meet the requirements listed above and are on-site at all times construction operations are being performed.

## II. MATERIALS

- Stabilizing Agent (Emulsified or Foamed Asphalt)** – All liquid asphalts used for stabilizing agents shall be emulsions and PG binders (Lists Nos.50 and 50.1) on the VDOT Materials Division's Approved List. Asphalt emulsions shall conform to the requirements of Section 210 of the Specifications; liquid asphalts shall meet the requirements of Section 211.02 of the Specifications.
- Water** – Any water used for mixing shall meet the requirements of Section 216 of the Specifications.
- CIR** – The CIR material shall have 100% of all particles passing the 1.5 inch (37mm) size sieve and meeting the gradation requirements in **TABLE 3** herein prior to the addition of any stabilizing agents.
- Other Additives** – If necessary, additional additives may be used to meet the requirements in **TABLE 4**. In the case where an additional additive is used, the type and dosage must be described in the Job Mix Formula(s) submitted to the Department.
- Addition of Crushed Reclaimed Asphalt Pavement (RAP) Material** – Additional RAP material (other than that reclaimed from the project) may be added by the Contractor and, if added, shall meet the requirements of Section 211.02(j) of the Specifications and **TABLE 1** herein.

TABLE 1 – ADDITIONAL CRUSHED RAP		
Tests	Method	Limit
Deleterious Materials: Clay Lumps and Friable Particles in Aggregate	AASHTO T 112	0.2% maximum
Maximum Sieve Size, 1.5 inches (37mm)	AASHTO T 27	100% Passing,

- Additional aggregate** – Based on the results of the job mixture design(s) or other requirements of this provision, the Contractor shall determine if additional aggregate is required. If the Contractor determines additional aggregate is needed, any additional aggregate shall meet the requirements of Section 203 and **TABLE 2** herein, and it shall be graded to produce a product which meets the specification given in **TABLE 3**.

TABLE 2 – ADDITIONAL AGGREGATE		
Tests	Method	Limit
Los Angeles Abrasion Value	AASHTO T 96	45% maximum loss
Sand Equivalent	AASHTO T 176	60% minimum
Maximum size, 100% Passing, Sieve Size	AASHTO T 27	1.5 inches (37mm)

Water absorption	AASHTO T 85	3% maximum
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### III. Job Mix Formula

**Mixture Designs** – CIR mix design(s) in the form of a job-mix formula(s) (JMF) shall be submitted to the Engineer for Department approval no less than 30 calendar days prior to the start of CIR operations; more than one JMF may be required. The gradation of each JMF shall fall within the bands shown in **TABLE 3**.

<b>TABLE 3 – GRADATION REQUIREMENTS</b>				
Sieve Size	Foamed Asphalt*		Asphalt Emulsion*	
	Lower	Upper	Lower	Upper
1.5"	100	100	100	100
1.0"	78	100	85	100
3/4"	70	93	75	96
3/8"	--	55	--	55

\*based on pulverized materials, prior to stabilization, washed, following AASHTO T 27 and T 11

The JMF(s) shall be created using existing materials obtained directly from the project site (prior to the start of construction). Sampling shall be conducted at a maximum of once per 2500 lane-feet. Each JMF shall provide, as a minimum, the following mix design parameters:

- 1) Target field density,
- 2) Percent by weight of all stabilizing agent(s) to be added to the recycled mix,
- 3) Percent by weight of water (at room temperature) required,
- 4) Expansion ratio and half-life characteristics and temperature of asphalt binder at the time of dosage into foaming chamber (for mixtures using foamed asphalt), minimum curing time/set time for the asphalt emulsion and temperature of asphalt emulsion at the time of dosage into the mixture (for mixtures using asphalt emulsion), and
- 5) Target gradation (including any aggregate to be added).

If a change in source materials is made during construction, a new JMF(s) shall be established, submitted to the Engineer and approved prior to use on the project. The JMF(s) shall meet the criteria of **TABLE 4** at the approved stabilizing agent(s) content.

<b>TABLE 4 – CIR MIX DESIGN REQUIREMENTS</b>			
Item	Test Method	Criteria	Fabrication / Conditioning Procedure

<b>Asphalt Emulsion Stabilized Materials</b>			
1	Moisture Density Relations AASHTO T 180	Determined by Design	
2	Marshall Stability Test ASTM 5581 (6 inch specimens), AASHTO T 245 (4 inch specimens)	2500 lbs minimum (6 inch (150mm) diameter specimen), or 1250 lbs (4 inch (100mm) diameter specimen)	Three (3) specimens shall be produced at 75 blows per side (or 30 gyrations per AASHTO T 312) and cured at 60 °C to constant mass, hold specimens at 40 °C for 2 hours in a forced draft oven immediately prior to testing.
3	Retained Stability ASTM 5581 (6 inch specimens), AASHTO T 245 (4 inch specimens)	70% of results of #2	An additional three (3) specimens shall be produced at cured at 60 °C to constant mass. Specimens shall then be vacuum saturated to 55-65%, 25 °C water bath for 23 hours and 40 °C water bath for an additional hour immediately prior to testing
4	Raveling Stability (ASTM D 7196)	Maximum 2%	Specimens shall be produced using a gyratory at 20 gyrations and cured at 10°C for 4 hours at 50% humidity.
5*	Thermal Cracking (Indirect Tensile Test, AASHTO T 322)	The critical cracking temperature must be less than or equal to the pavement temperature given for the project climate area and pavement depth by LTPPBind.	See Notes 1 through 7 below.
6	Resilient Modulus (ASTM D 7369)	150,000 psi minimum	Same as Item 2.
<b>Foamed Asphalt Stabilized Materials</b>			
8	Moisture Density Relations AASHTO T 180	Determined by Design	
9	Dry Indirect Tensile Strength (ITS), AASHTO T 283 Section 11	45 psi minimum	Three (3) specimens shall be produced using 75 blows per side (or 30 gyrations per AASHTO T 312) compacted at or below OMC and cured as follows: 4 inch (100 mm) diameter specimens, oven dry at 40 °C for 72 hrs and cool to ambient temperature for 24 hrs; 6 inch (150 mm) diameter specimens, air dried for 24 hours, then an additional 48 hours at 40 °C in sealed plastic bag, cool to ambient temperature for 24 hrs.
10	Retained Indirect Tensile Strength, AASHTO T 283 Section 11	Minimum, 70% of the Dry ITS from Item 9	An additional three (3) specimens shall be produced and cured according to Item 9, and then submerged in 25 °C water bath for 24 hours prior to testing.
11	Resilient Modulus ASTM D 7369	150,000 psi minimum	Same as Item 9.

**All materials (asphalt emulsion and foamed asphalt) shall be controlled following Item 12.**

12	Materials Gradation Test (AASHTO T 27), prior to stabilization	Coarse and fine gradation to control field production.	
<p>* 1. Specification temperature shall be chosen using current FHWA LTPPBind software, using the weather station closest to the project. The required temperature shall be the coldest temperature at the top of the recycled layer, using 98% reliability.</p> <p>2. Samples shall be compacted to 150 mm diameter and at least 115 mm height, compacted to within 1% of design air voids at the design stabilizing agent content. Compacted samples shall be cured at 60 °C no less than 48 hours. Before testing, sample mass shall be checked every two (2) hours until change in mass between successive checks does not exceed 0.05%. After curing, two (2) specimens shall be sawcut from each compacted sample to 50 mm in height. Perform bulk density testing after sawcutting.</p> <p>3. Three (3) specimens are required at each of the three (3) testing temperatures.</p> <p>4. Select two (2) testing temperatures that bracket the specification temperature above. For example, if the specification temperature is -25 °C, then two (2) of the selected testing temperatures shall be -20 °C and -30 °C. A temperature of -10 °C or -40 °C shall be used as the third testing temperature.</p> <p>5. The tensile strength test shall be performed on each specimen directly after the tensile creep test (at the same temperature as the creep test).</p> <p>6. The critical cracking temperature is defined as the temperature at the intersection of the thermal stress curve (derived from the creep data) and the tensile strength line (the line connecting the average tensile strengths at the three testing temperatures).</p> <p>7. To meet this specification, the critical cracking temperature predicted by the Indirect Tensile Test must be less than or equal to the pavement temperature given for the project climate area and pavement depth by LTPPBind.</p>			

**IV. EQUIPMENT**

(a) **CIR** – The CIR work shall be completed with the following required equipment.

A self-propelled machine with a down cutting milling head that is capable of pulverizing and recycling the existing bituminous pavement to a maximum depth of 6 inches (0.12m), uniformly incorporating the stabilizing agent(s) and water, and mixing the materials to produce a homogeneous product. The machine shall be capable of pulverizing and recycling the full lane width in no more than two passes (with the longitudinal joint located between the anticipated wheel paths). The machine shall have the ability to meter dosage rates for stabilizing agent(s) and water relative to the machine's ground speed. Individual valves on the spray bar shall be capable of being turned off as necessary to minimize stabilizing agent(s) and water overlap on subsequent passes. The equipment shall be operated in accordance with the manufacturers' recommendations.

The self-propelled machine may also have a screed attached to the milling and mixing unit. The screed shall have slope control and the ability to convey material out to the side of the screed if there is a surge of material between the mixing chamber and the screed. The mixing unit and screed combination must have electronic grade controls. In lieu of a screed attachment, the material may be placed into an asphalt paver that meets the requirements of Section 315.03(b) by means of a material transfer device.

Any additives such as water, lime slurry, etc. added by the equipment at the milling head or mixing unit shall be controlled through liquid metering devices capable of automatically adjusting for the variation in the weight of the pulverized bituminous material going into the mixing unit.

The metering devices shall be capable of delivering the amount of additive to within +/- 0.2% of the required amount by weight of the pulverized bituminous material, except that a capability of adding up to 5% water by weight of the pulverized bituminous material is mandatory. It is not required, by the Department, to meter the water added at the milling machine to control dust in the screens, belts, or crusher/material sizing unit.

A pozzolonic material distributor truck shall be used if dry stabilizing agent(s) is/are applied directly to the bituminous pavement prior to CIR operations. The pozzolonic material distributor truck shall have the ability to uniformly apply the stabilizing agent(s) at the specified rate.

- (b) **Rollers** – All rollers shall be self-propelled. At least one pneumatic tire roller shall have a minimum gross operating weight of not less than 50,000 lbs. (22,600 kg). At least one double steel-wheeled vibratory roller shall have a gross operating weight of not less than 24,000 lbs. (10,800 kg) and a width of 78 inches ( 2.0 meters). All rollers must have properly working scrapers and water spraying systems.

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## V. Test Strip

One week before planned start of full production, stabilize a 2,500 foot long test strip, one-lane wide, at the designated thickness and designed optimal stabilizing agent(s) content provided in the approved job mix design. Construct the test strip on the project at an approved location.

Construct the test strip using construction procedures intended for the entire project. Cease production after construction of the test strip until the test strip is evaluated and accepted. Payment will follow the payment tables established in this specification

## VI. CONSTRUCTION METHODS

- (a) Grass and other vegetation shall be removed from the edge of the existing pavement to prevent contamination of the pulverized bituminous material during the milling operation.
- (b) The existing bituminous pavement shall be milled to the required depth and width as indicated on the plans. Recycling shall be performed in a manner that does not disturb the underlying material in the existing roadway. The milling operation shall be conducted so that the amount of fines occurring along the vertical faces of the cut shall not prevent bonding of the CIR materials. If needed, the CIR materials shall be processed by crushing or sizing to the required gradation specified in **TABLE 3**. When a paving fabric is encountered during the CIR operation, the Contractor shall make the necessary adjustments in equipment or operations so that at least ninety percent (90%) of the shredded fabric in the recycled material is no more than the particle size specified in Section II.c herein. These changes may include, but shall not be limited to: adjusting the milling rate, the milling depth, and/or adding or removing screens in order to obtain the specified recycled material. The Contractor will be required to waste material containing oversized pieces of paving fabric as directed by the Engineer. The Contractor will not receive additional payment for the necessary adjustments to his equipment or CIR operations to accommodate the presence and processing of the paving fabric.
- (c) Adjacent CIR passes shall overlap by 4 to 6 inches. The stabilizing agent shall be controlled such that it is not applied at the joint overlap location more than the dosage rate in the approved mix design by the total of the passes.
- (d) Compaction of the recycled mix shall be completed using rollers meeting the requirements of Section IV.c herein. The Contractor shall establish rolling patterns to achieve the density target as determined by nuclear density testing. Final rolling to eliminate pneumatic tire marks and to achieve density shall be done by double drum steel roller(s), either operating in a static, oscillating or vibratory mode. Oscillating and vibratory mode should only be used if it is shown to not damage the pavement. Rolling shall be performed until the material reaches a density of 98% the maximum theoretical density as measured via a nuclear density gauge. Rolling shall start no

more than 30 minutes after initiation of paving. Finish rolling shall be completed no more than one hour after paving is completed, unless otherwise approved by the Engineer. When possible, rolling shall not be started or stopped on uncompacted material but performed with rolling patterns established so that they begin or end on previously compacted material or the existing pavement.

- (e) After compaction of the recycled material, a fog seal shall be applied to the recycled surface at a uniform application rate of 0.05 gal/sy. The fog seal shall be a CSS-1h, CQS-1h, or Non Tracking Tack Coat conforming to the requirements of Section 210 of the Specifications and the Special Provision For *Non Tracking Tack Coat* included in the Contract. A light grit may be applied to reduce raveling. After fog sealing, no traffic, including the Contractor's equipment, will be permitted on the completed recycled material for at least two (2) hours. After two hours rolling traffic may be permitted on the recycled material. This time may be adjusted by the Engineer to allow establishment of sufficient cure so traffic will not initiate raveling. After opening to traffic, the surface of the recycled pavement shall be maintained in a condition suitable for the safe movement of traffic. All loose particles that may develop on the pavement surface shall be removed by power brooming.
- (f) Any damage to the completed CIR material shall be repaired by the Contractor at their expense, to the Engineer's satisfaction, prior to the placement of the asphalt concrete surface course(s), or other applicable surface treatment. Damage unrelated to Contractor's construction procedures or quality of work, such as due to poor base conditions, shall be paid for as described in the VDOT Special Provision for *Surface Preparation and Restoration Prior to Plant-Mix Overlay* included in the Contract.
- (g) Before placing the asphalt concrete surface course(s), or other applicable surface treatment, the CIR material shall be allowed to cure until the moisture of the material is a maximum of 50% of the optimum moisture content or until approval of the Engineer is received. Moisture content shall be measured per AASHTO T 329 on samples (immediately placed in a sealed plastic bag) taken from two stratified random locations as determined by the Engineer for each production day. Other methods and sampling rates may be used if supplied in the Contractor's Quality Control Plan and approved by the Engineer. Split samples may be taken at the direction of the Engineer.

## VII. ACCEPTANCE TESTING

- (a) **Field Compaction** – A nuclear density gauge conforming to the requirements of VTM-10 shall be used for determining mat density by the Direct Transmission method. The Contractor's nuclear density gauge shall have been 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 and furnish the same to the Engineer if requested. The Contractor shall determine a roller pattern and construct a control strip in accordance with the requirements of VTM 10. Density test locations shall be marked and labeled by the Contractor in accordance with the requirements of VTM-76. The control strip will be acceptable if the field proctor (AASHTO T 180) is at least 98% of the target density from the approved job mix design(s). The required density of the compacted CIR course shall not be less than 98.0 percent of the target density from the approved job mix design(s).

Test section (lot) – For the purposes of acceptance, each day's production will be considered a lot unless the paving length is less than 3,000 linear feet or greater than 7,500 linear feet. When paving is less than 3,000 feet, it shall 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 shall be 5,000 linear feet, with 1,000 linear foot sublots, of any pass 6 feet or greater made by the paving train for the thickness of the course. When a partial lot occurs at the end of a day's production or upon completion of the project, the lot shall be 1) added to the

previous lot if the partial lot contains one or two sublots or 2) redefined to be an entire lot if the partial lot contains three or four sublots.

Each lot shall be tested for density by taking a nuclear density reading from two random test sites selected by the Engineer within each subplot used for acceptance. Test sites shall not be located within 18 inches of the edge of any application width for CIR mixes.

The average of the subplot density measurements will be compared to the target nuclear density established by the approved mix design to determine the acceptability of the lot. Once the average density of the lot has been determined, the Contractor will not be permitted to provide additional compaction to raise the average. If two consecutive sublots produce density results less than 98 percent of the target density, the Contractor shall immediately notify the Engineer and institute corrective action. By the end of the day's operations, the Contractor shall furnish the test data developed during the day's recycling to the Engineer. The Contractor shall verify their results for every lot by performing a field proctor (AASHTO T180). The field proctor shall be at least 98% of the target density from the approved mix design.

The tonnage or square yards of each lot 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 5**.

<b>TABLE 5 - PAYMENT SCHEDULE FOR LOT DENSITIES</b>	
<b>% of Target Control Strip Density</b>	<b>% of Payment</b>
98.0 or greater	100
97.0 to less than 98.0	95
96.0 to less than 97.0	90
Less than 96.0	75

- (b) **Material Composition** – The Contractor shall determine material composition properties by obtaining samples and testing ITS/Stability in the lab. Testing ITS/stability values shall be conducted twice per lot.

The minimum ITS/stability value shall be a minimum of 95% of the approved JMF and maintain a retained ITS/stability value of 60% for field produced, laboratory compacted samples. Six ITS/Stability specimens shall be tested in accordance with **TABLE 4**. Payment for that lot will be based on **TABLE 6**.

<b>TABLE 6 – ITS/STABILITY PAY ADJUSTMENTS</b>	
<b>ITS/stability, % of approved JMF</b>	<b>% of Payment</b>
95% or greater	100
90% to 95%	90
80% to 90%	80
Less than 80% and greater than 45 psi/2500 lbs	50
Less than 80% and less than 45 psi/2500 lbs	0

In the event the Contractor disputes the ITS/stability value results, the Contractor, under the supervision of the Engineer, shall obtain 6 cores (randomly stratified) for the lot in question. Payment for that subplot in question will be based on **TABLE 6**.

- (c) **Gradation** – For CIR, the Contractor shall verify that the unstabilized gradation conforms to the JMF at the beginning of each production day and wherever there are changes in the pavement structure being recycled. Gradation bands shall be established for the day by operating the machine at two distinct speeds and sampling the associated unstabilized material for field gradation testing.
- (d) **Depth Check** – Depth checks shall be performed by the Contractor by coring in accordance with VTM-38 at a rate of twice per 5,000 linear feet after compaction and placement of the first lift of asphalt. Depth checks shall be taken at the Engineer's direction. Depth check cores will be retained by the Department.

Acceptance of CIR course for depth will be based on the mean result of measurements of samples taken from each lot of material placed.

A lot will be considered acceptable for depth if the mean result of the tests is within the tolerance of the plan depth for the number of tests taken as shown in **TABLE 7**.

<b>TABLE 7 – PROCESS TOLERANCE FOR DEPTH CHECKS</b>				
<b>Plan Depth, inches</b>	<b>Tolerance, inches</b>			
	<b>1 test</b>	<b>2 tests</b>	<b>3 tests</b>	<b>4 tests</b>
≤ 4	0.6	0.45	0.35	0.30
>4 ≤ 6	0.9	0.65	0.50	0.40

If an individual depth test exceeds the tolerance for one test, that portion of the lot represented by the test will be excluded 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 for the specified depth, the Contractor will not be paid for that material in excess of the tolerance throughout the length and width of that portion of the lot 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 tolerance for one test, correction of that portion of the lot of the CIR course represented by the test shall be made as specified hereinafter.

If the mean depth of a lot of material is excessive, the Contractor will not be paid for that material in excess of the tolerance for the plan depth specified throughout the length and width of the lot of material represented by the tests.

If the mean depth of a lot of material is deficient by more than the allowable tolerance for the plan depth specified, correction will not normally be required and the Contractor will be paid for the quantity of material that has been placed in the lot.

For excessive depth CIR courses, the rate of deduction from the tonnage allowed for payment as CIR course will be calculated based on the JMF weight per square yard per inch of depth in excess of the tolerance for the plan depth specified or the Department can require excessive material to be removed at the Contractor's expense.

For sections of CIR course that are deficient in depth by more than the tolerance for one test and less than 1.50 inches, the Contractor shall furnish and place material specified for the subsequent course to bring the deficient CIR course depth within the tolerance of the specified plan depth. This additional material shall be placed at the Contractor's expense.

If the deficiency is more than 1.50 inches, the Contractor shall furnish and place the CIR course material to bring the thickness within the tolerance of the specified plan depth. Corrections for deficient CIR course depth shall be made in a manner to provide a finished pavement that is smooth and uniform. Sections requiring significant grade adjustments that 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.

- (e) **Stabilizing Agent Dosage Rate** – The Contractor shall verify the stabilizing agent dosage rate by reading a calibrated meter ten times per lot. The dosage rate shall be within 0.20 percentage points of the approved JMF. If the dosage rate is outside 0.20 percentage points, then paving/production shall stop and the Contractor shall take corrective measures to bring the dosage rate within tolerance. The Engineer will calculate the yield at the end of each production day.
- (f) **Construction Records** – The Contractor shall prepare separate test reports meeting the requirements of AASHTO R 18 or may use the current appropriate VDOT forms. Records documenting the dosage rate of stabilizing agent(s) and other test results from **TABLE 4** shall be provided to the Engineer, unless specified otherwise.

## VIII. WEATHER LIMITATIONS

Recycling operations shall be completed when the atmospheric temperature and material to be processed (measured in the shade and away from artificial heat) is a minimum 50°F (10 °C). The weather forecast shall not call for freezing temperature within 48 hours after placement of CIR on any portion of the project.

## IX. MEASUREMENT AND PAYMENT

**Cold In-Place Recycling (CIR)** will be measured by the square yard (or square meter) of the completed sections for the depth specified in the plans and will be paid for at the Contract unit price per square yard (square meter) of depth. This price shall be full compensation for removal and processing of the existing pavement; for preparing, hauling, and placing of all materials; furnishing stabilizing agents, fog seal, grit and additives, for all freight involved; for all manipulations, including removal of grass and other vegetation, rolling and brooming, for testing and documentation, asphalt supplier services, and for all labor, tools, equipment and incidentals necessary to complete the work.

**Liquid Asphalt (Emulsion)** will be measured and paid for at the Contract unit price per ton (Metric ton). This price shall be full compensation for furnishing and incorporating the emulsion into the mixture. An emulsion content of 3.0% by weight of the milled bituminous material shall be used for bidding purposes prior to the completed mix design. The actual emulsion content will be adjusted based on the quantity necessary to meet the design requirements in **TABLE 4**.

**Liquid Asphalt (Foamed)** will be measured and paid for at the Contract unit price per ton (Metric ton). This price shall be full compensation for furnishing and incorporating the foamed asphalt into the mixture. A foamed asphalt content of 2.5% by weight of the milled bituminous material shall be used for bidding purposes prior to the completed mix design. The actual foamed asphalt content will be adjusted based on the quantity necessary to meet the design requirements in **TABLE 4**.

**Additional Crushed RAP** if required to meet the contract requirements will be measured and paid for at the Contract unit price per ton (Metric ton). This price shall be full compensation for furnishing and incorporating the additional RAP into the mixture. The additional RAP must meet the requirements of Section II (e) herein for payment purposes.

**Additional Aggregate**, if required, in accordance with the JMF and other contract requirements, will be measured and paid for at the Contract unit price per ton (Metric ton). This price shall be full compensation for furnishing and incorporating the additional aggregate material into the mixture. The additional aggregate material must meet the requirements of Section II (f) herein for payment purposes.

Payment will be made under:

<b>Pay Items</b>	<b>Unit</b>
Cold In-Place Recycling (CIR) (Depth)	Square Yard
Liquid Asphalt (Emulsion)	Ton
Liquid Asphalt (Foamed)	Ton
Additional Crushed RAP	Ton
Additional Aggregate	Ton

Replace Section V – Test Strip with the following:

One week before planned start of full production, a stabilized test strip shall be installed at the designated thickness and designed optimal stabilizing agent(s), content provided in the approved job mix design. The test strip will be one lane width wide, located in the east bound - outside lane, and span the entire length of the project.

Construct the test strip using construction procedures intended for the entire project. Cease production after construction of the test strip until the test strip is evaluated and accepted. Payment will follow the payment tables established in this specification.

Amend Section III – Job Mix Formula with the following:

The sample used for the design of the job mixture formula shall be from the existing pavement found at depths of 2” to 6” below existing top of pavement.

**END COLD IN-PLACE RECYCLING**

## **SECTION 02650 - UTILITY STRUCTURE ADJUSTMENT**

### **DESCRIPTION**

The work consists of repairing and adjustments to manhole and valve box Structures to meet the surface elevation of the new plant mix surface.

**END OF UTILITY STRUCTURE ADJUSTMENT**

## SECTION 02700 - TEMPORARY TRAFFIC CONTROL DEVICES

### PART 1 – GENERAL

#### 1.01 DESCRIPTION

- A. This Work consists of providing traffic control devices as required for work area protection and for provision of traffic in and around the work area.

#### 1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Flexible Pavement Planning: Section 02580
- B. Paving and Surfacing: Section 02600
- C. Pavement Rejuvenation and Crack Sealing : Section 02610

### PART 2 – PRODUCTS

- 2.01 All signs and installations shall conform to the requirements of the Manual on Uniform Traffic Control Devices for Streets and Highways, as amended, and The Virginia Supplement to the Manual of Uniform Traffic Control Devices for Streets and Highways.
- 2.02 Sign posts shall conform to the requirements of Section 700.02 (j) of the Standard Specifications.
- 2.03 Traffic Signs shall meet all applicable requirements of Section 701.02 and Section 701.03 of the Standard Specifications. Additionally, the metal sheet shall be 16 gage for steel or aluminum with a thickness of 0.08 inches except that if any dimension of the sign exceeds 30 inches the thickness shall be 0.10 inches.
- 2.04 Paint and enamel shall meet all application requirements of Section 239 of the Standard Specifications.

### PART 3 – EXECUTION

- 3.01 Installation shall comply with all applicable provisions of the Standard Specifications.
- 3.02 Posts may be driven by hand or mechanical devices to the required line and grade. Posts shall be placed vertically and signs, when attached, shall be aligned accurately. During driving, posts shall be protected by a special driving cap. Any post bent or otherwise damaged so as to be unfit for use shall be removed and replaced. If a post cannot be driven at the desired location, the post shall be installed by drilling a 12” diameter hole and backfilling with size 78 coarse aggregate.
- 3.03 The minimum depth for posts shall be 42”.

### PART 4 – MEASUREMENT AND PAYMENT

Payment for Work required under this section shall not be made directly but shall be included in the contract prices for Asphalt Concrete and Flexible Pavement Planing.

**END OF TRAFFIC CONTROL DEVICES**

## SECTION 02703 - MAINTENANCE OF TRAFFIC

### PART 1 – GENERAL

#### 1.01 DESCRIPTION

- A. This work consists of providing flag persons, pilot cars, signage, markers and barriers as necessary and scheduling work to maintain and control one-way vehicular traffic movement during normal working hours and two-way vehicular traffic movement during all other times, and to clear work area of parked cars prior to mobilization.

#### 1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Site Access, Parking and Traffic Regulations                      Sect. 01551
- B. Flexible Pavement Planning    Sect. 02580
- C. Paving and Surfacing    Sect. 02600
- D. Rejuvenator Sealer / Crack Sealer                                      Sect. 02610
- E. Cold In Place Recycling    Sect. 02640
- F. Temporary Traffic Control Devices                                      Sect. 02701

#### 1.03 SUBMITTALS

Certifications of training for all flag persons.

### PART 2 – PRODUCTS

- 2.01 All signs and installations shall conform to Section 02701 Temporary Traffic Control Devices.
- 2.02 City will provide “No Parking – Paving” signs for Contractor’s installation.

### PART 3 – EXECUTION

- 3.01 Except as modified herein, this work shall comply with the applicable provisions of the Standard Specifications.
- 3.02 Erect “No Parking – Paving” signs, with dates, at least 48 hours prior to mobilization to work area. Provide temporary sign posts as necessary for 100 ft. maximum spacing between signs.
- 3.03 Erect traffic control signs and barricades prior to commencement of any work. Relocate signs as necessary during phasing of the work.

- 3.04 Traffic control procedures through work area shall comply with the Virginia Work Area Protection Manual. Included in Appendix B, Drawings B-2 through B-5, is pertinent information regarding flagging and typical work-area traffic Control signage. This shall represent the typical requirements for such work on this project. However, Contractor shall comply with instructions given by City Inspector on special situations where additional signage or other traffic control is deemed necessary.
- 3.05 One-way vehicular movement shall be maintained during normal working hours
- 3.06 Two-way vehicular traffic shall be maintained during all non-working hours.
- 3.07 Street closings will not be allowed unless specifically authorized by the City Director of Public Works and the Police Department. Emergency authorities shall be notified in advance. All work and costs associated with establishing street closings and signing detours shall be the Contractor's responsibility.

**END OF MAINTENANCE OF TRAFFIC**

**APPENDIX A**  
**SCHEDULE OF WORK**

**CITY OF HARRISONBURG, VIRGINIA**  
**DEPARTMENT OF PUBLIC WORKS**

Prepared by

**DEPARTMENT OF PUBLIC WORKS**  
City of Harrisonburg  
320 East Mosby Road  
Harrisonburg, Virginia 22801

## 2013 Alternative Paving Schedule

### Pavement Rejuvenator Schedule with Crack sealer

Street	From	To	Loc.	Width	Length	Sq. Yd	Sealer (Gallons)	Crack Sealer (lbs)
Linda Lane	Country Club	Roundabout	NE	47	3200	16711.11	376	150

**Note:**

Application Rate for Rejuvenator equals 0.020 - 0.025 per Sq. Yd.

Crack Sealer equals approximately 1 lb. per 10 LF. (if needed)

### \*FOUR INCH COLD INPLACE RECLAMATION- With FOAMED ASPHALT

Street	From	To	Loc.	Width	Length	CIR (Sq. Yd.)	Liquid Asphalt Foamed (Tons)	Additional Agregate (Tons)	Fog Sealer (Gallons)
E. Market St.	Country Club	E.C.L.	SE	56	4130	25697.78	31.0	15.0	1290

**Note:**

**Foamed Asphalt Binder** based on an average of 2% of volume at 120 LBs per square yard.

**Aggregate Additive** based on 1 % of volume per square yard.

**Fog Sealer** based on .05 gallons per square yard.

### TWO ( 2) INCH FLEXIABLE PAVEMENT PLANING

Street	From	To	Loc.	Width	Length	Sq. Yd
E. Market St.	0.14 Mi East of Linda Lane	E.C.L.	NE	62	6200	42711.11

### TWO (2) INCH PAVEMENT OVERLAY

Street	From	To	Loc.	Width	Length	Sq. Yd	Miles	Mix	LBS/SY	Tons
E. Market St.	0.14 Mi East of Linda Lane	E.C.L.	NE	62	6200	42711.11	1.17	12.5D	235	5018.6

### PAY ITEMS

Cold In-Place Recycling (CIR) (4" Depth)	25,700 Square Yards
Liquid Asphalt (Foamed)	31.0 Tons
Additional Agreggate (if needed)	15.0 Tons
Fog Sealer	1290 Gallons
Rejuvenating Sealer	16,711 Square Yards
Crack Sealer ( if needed)	150 Pounds
Flexible Pavement Planing (2" Depth)	42711 Square Yards
Surface Asphalt SM-12.5D	5018 Tons

**APPENDIX B**

**ASPHALT MATERIAL PRICE ADJUSTMENTS**

**CITY OF HARRISONBURG, VIRGINIA  
DEPARTMENT OF PUBLIC WORKS**

Prepared by

**DEPARTMENT OF PUBLIC WORKS  
320 East Mosby Road  
Harrisonburg, Virginia 22801**

Special Provision For  
**Asphalt Material Price Adjustments**

Bid items designated in the contract as Price Adjustment Items will be subject to price adjustment as set forth herein. Other items will not be adjusted, except as otherwise specified in the contract. If new pay items which contain Asphalt Material are established by Work Order, they will not be subject to Price Adjustments unless specifically designated in the Work Order to be subject to Price Adjustment.

Each month VDOT will publish an average state-wide PG 64-22 f.o.b. price per ton developed from the average terminal prices provided to the Department from suppliers of asphalt cement to contractors doing work in Virginia. VDOT will collect terminal prices from approximately 12 terminals each month. These prices will be received once each month from suppliers on the Monday of the week immediately preceding the week of the standard bid receipt date. The high and low prices will be eliminated and the remaining values averaged to establish the average statewide price. That monthly state-wide average price will be posted on the Scheduling and Contract Division website on the Tuesday immediately after the prices are received from the suppliers.

This monthly statewide average price will be the Base Index for all contracts (except as noted below) on which bids are received during the calendar month of its posting and will be the Current Index for all monthly progress estimates prepared during the next calendar month after its posting. If there is a special bid letting on a date other than the standard monthly bid letting date, the Base Index for that letting will be the Base Index posted for the previous calendar month. In the event an index changes radically from the apparent trend, as determined by the Engineer, VDOT may establish an index which is determined to best reflect the trend.

The amount of adjustment applied will be based on the difference between the contract Base Index and the Current Index for the month in which an estimate is to be prepared. Adjustment of any item designated as a price adjustment item which does not contain PG 64-22, except PG 76-22, will be based on the indexes for PG 64-22. The quantity of asphalt cement for asphalt concrete pavement to which adjustment will be applied will be the quantity based on the percent of asphalt cement shown on the appropriate approved job mix formula in use during the estimate period.

The quantity of asphalt emulsion for surface treatments to which adjustment will be applied will be the quantity based on 65 percent residual asphalt.

When final quantities differ from semi-final estimate quantities by no more than ten tons of asphalt concrete or no more than 150 square yards of surface treatment, no adjustment will be made. When such differences exceed these limits, price adjustment for such differences will be made using the Current Indexes for the periods in which work was performed, as shown on the monthly progress estimates, and adjustment in payment will be made accordingly.

Price adjustment will be shown as a separate entry on the monthly progress estimate; however, such adjustment will not be included in the total cost of the work for progress determination or for extension of contract time.

Any apparent attempt to unbalance bids in favor of items subject to price adjustment or failure to submit required cost and price data as noted herein before may result in rejection of the bid proposal.