

RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY

RICHMOND EXPRESSWAY SYSTEM

DECK REHABILITATION – 2018
RMTA BRIDGES 49, 50, 51, 54, 55, 56, 57, 58, 60 & 62

RMTA BRIDGE NO. 49, 50, 51, 54, 55, 56, 57, 58, 60 & 62
STATE BRIDGE NO. 127-8057, 127-8058, 127-1872, 127-8060, 127-8061,
127-8062, 127-8063, 127-8064, 127-8065, 127-1869

PROPOSAL DOCUMENTS
CONTRACT AND CONTRACT BOND
SUPPLEMENTAL SPECIFICATIONS
SPECIAL PROVISIONS
RECORD PLANS

HNTB Corporation

November 2017

RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY

RICHMOND EXPRESSWAY SYSTEM

DECK REHABILITATION – 2018
RMTA BRIDGES 49, 50, 51, 54, 55, 56, 57, 58, 60 & 62

INSTRUCTIONS TO BIDDERS

1. FORM OF BID: Submit bid, on forms furnished by the Authority, without alterations in the form. When completing bid, please notice the unit (Lump Sum, Each, Square Foot, etc...) of the individual line item and enter bid item prices and total amount accordingly.

If applicable, Contractor shall replace any original bid tab sheets with replacement bid tab sheets issued through an Addendum.

- a. Required Forms: The following list of required forms to be included in bid is provided for Contractors reference only:
 - i. Bid (see below)
 - ii. Non-Collusion Affidavit
 - iii. Statement of Contracts Underway
 - iv. Very Early Strength Concrete Bridge Overlay Experience
 - v. Hydro-Demolition Experience – Bidder/Subcontractor
 - vi. Joint Venture Statement (if applicable)
 - vii. Bid Bond
 - viii. Receipt of Addenda (if applicable)
2. SUBMISSION OF BID: Bidder is responsible for delivery of the bid at or before the time set for opening. Bids received after the time set will be rejected. Bids will be received at the location in the Invitation to Bid.

If mailing, please write “*Attention: RMTA DECK REHAB. – 2018 Contract Bid Opening*” on outside of envelope or on mailing label.

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INVITATION TO BID

Sealed Proposals for the above project will be received by the Richmond Metropolitan Transportation Authority (RMTA), 901 East Byrd Street, Suite 1120, Richmond, Virginia 23219 until 10:00 a.m. local time, **Tuesday, December 19, 2017** at which time and place the bids will be publicly opened and read.

The work under this contract shall be completed no later than the fixed date of September 21, 2018. The Placing of Very Early Strength Latex Modified Concrete shall not commence until April 20, 2018, provided weather conditions are in accordance with the applicable specifications. The principal items of work and approximate quantities are as follows:

<u>Item*:</u>	<u>Quantity:</u>	<u>Unit:</u>
Type A Milling	9,150	S.Y.
Dry Hydro-Demolition ½"	9,150	S.Y.
Furnish Very Early Strength Latex Modified Concrete (VESLMC)	640	C.Y.
Place Very Early Strength Latex Modified Concrete (VESLMC)	9,150	S.Y.
Joint Sealant Replacement	2,270	L.F.
Type B, Class VI Pavement Line Marking 4" Contrast	3,040	L.F.
Parapet Wall Coating	6,065	S.Y.

*Note: See Bid Tab for complete itemization of contract bid items.

A mandatory pre-bid meeting will be held at 901 East Byrd Street, Suite 1120, Richmond, Virginia 23219 at 10:00 a.m. local time, on Tuesday, November 21, 2017. A mandatory site visit shall immediately follow the office portion of the pre-bid meeting.

Bids for this Contract must be submitted on complete bid forms bound in the Contract documents. The successful bidder will be notified in writing.

To submit Proposals for this Contract, contractors or qualified subcontractors shall, on Tuesday, November 21, 2017 at 10:00 a.m. local time, meet the following requirements:

- Be prequalified by the Virginia Department of Transportation (VDOT) for bidding on State projects. The Authority reserves the right to request additional experience information for any bidder that has not been assigned the “**Bridge Repair**” and/ or “**Major Structures**” work classification by VDOT, or for contractors that have a prequalification level of Conditional, Currently Inactive or Probationary.
- Have experience in bridge overlay projects and overlay projects using Very Early Strength Latex Modified Concrete. Written documentation will be required for a minimum of (2) projects in the past seven (7) years:
 - At least (1) overlay project using Very Early Strength Latex Modified Concrete (VESLMC).
 - At least (1) overlay project using hydro-demolition.
- Have attended the mandatory pre-bid meeting and mandatory site visit.

Note that a bidder must have prior experience and meet all requirements listed.

Complete Contract documents will be available on Tuesday, November 7, 2017 after 1:00 p.m. (local time) from www.rmtaonline.org or may be purchased for \$70.00 per set from the Richmond Metropolitan Transportation Authority at 901 East Byrd Street, Suite 1120, Richmond, Virginia 23219. The documents may also be examined by any party, without purchase, at the Authority’s office during normal business hours after such date. Specifications (Virginia Department of Transportation “Road and Bridge Specifications”, 2016) which form an integral part of this Contract, are available from the Virginia Department of Transportation. <http://www.virginiadot.org/business/const/spec-default.asp>

Unsubmitted Contract documents need not be returned and no refunds will be made for any documents.

Each Bidder submitting a Proposal must also complete a statement bound with the Proposal forms, in which each Bidder shall give full information relating to the status of their contracts presently underway.

Each Proposal must be accompanied by a Proposal Guarantee consisting of either a certified check in the amount of at least five (5) percent of the Total Bid Price, made payable to the Richmond Metropolitan Transportation Authority, or a Bid Bond (on the form provided) in the amount of five (5) percent of the same Total Bid Price.

The Authority strongly encourages the submission of bids by contractors whose principal businesses are located in the Richmond Metropolitan Area and further strongly encourage such contractors to utilize the services of local subcontractors and vendors.

The Authority strongly encourages minority owned and women owned businesses to submit proposals for this contract.

The Authority reserves the right to reject any and all Proposals submitted, and to waive informalities in bidding.

Project related inquiries must be submitted in writing to Mr. Mark Grossenbacher, P.E. at HNTB Corporation at mgrossenbacher@hntb.com or Ms. Theresa Simmons, P.E., RMTA Director of Operations at Theresa.Simmons@rmtaonline.org. The deadline to submit inquiries and questions is Monday, December 11, 2017 at 1:00 p.m. local time.

RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY
Joi Taylor Dean, CEO
Richmond, Virginia

(Note: Bidders shall not remove this Bidding form from attached documents.)

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BID FOR GENERAL CONSTRUCTION CONTRACT

To: Richmond Metropolitan Transportation Authority
901 East Byrd Street, Suite 1120
Richmond, Virginia 23219

Gentlemen:

I/we, the undersigned, declare: that no other person, firm or corporation is interested in this Bid; that I/we have carefully examined the Plans, Standard Specifications, Supplemental Specifications, and all other documents pertaining to this Contract which form a part of this Bid as if set forth at length herein; that I/we understand that the quantities of items shown herein below are approximate only; that I/we have examined the location of the proposed work; that I/we agree to bind myself/ourselves, upon award to me/us by the Richmond Metropolitan Transportation Authority under this Bid, to enter into and execute a Contract, with necessary surety bond, for the project named above; that I/we agree to start work not later than the date stated in the written Notice to Proceed (Sec. 105.01 of the Specifications), to furnish all necessary materials, provide all necessary labor, equipment, tools and plant, pay for all required insurance, bonds, permits, fees and service, and do all required work in strict compliance with the terms of all documents comprising said Contract, and to fully complete the entire project by September 21, 2018 and that I/we agree to accept as full compensation for the satisfactory prosecution of this project the following named unit and lump sum prices for the various scheduled items of work.

DR-2018 BID TAB

(_____) (INSERT BIDDER FIRM NAME HERE)

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT	SPECIFICATION
1	MOBILIZATION	LS	1	\$	\$	513
2	MAINTENANCE OF TRAFFIC BRIDGE 4	LS	1	\$	\$	512 / SP-E
3	MAINTENANCE OF TRAFFIC BRIDGE 36	LS	1	\$	\$	512 / SP-E
4	MAINTENANCE OF TRAFFIC BRIDGE 46	LS	1	\$	\$	512 / SP-E
5	MAINTENANCE OF TRAFFIC BRIDGE 47	LS	1	\$	\$	512 / SP-E
6	MAINTENANCE OF TRAFFIC BRIDGE 48	LS	1	\$	\$	512 / SP-E
7	MAINTENANCE OF TRAFFIC BRIDGE 49	LS	1	\$	\$	512 / SP-E
8	MAINTENANCE OF TRAFFIC BRIDGE 50	LS	1	\$	\$	512 / SP-E
9	MAINTENANCE OF TRAFFIC BRIDGE 51	LS	1	\$	\$	512 / SP-E
10	MAINTENANCE OF TRAFFIC BRIDGE 54	LS	1	\$	\$	512 / SP-E
11	MAINTENANCE OF TRAFFIC BRIDGE 55	LS	1	\$	\$	512 / SP-E
12	MAINTENANCE OF TRAFFIC BRIDGE 56	LS	1	\$	\$	512 / SP-E
13	MAINTENANCE OF TRAFFIC BRIDGE 57	LS	1	\$	\$	512 / SP-E
14	MAINTENANCE OF TRAFFIC BRIDGE 58	LS	1	\$	\$	512 / SP-E
15	MAINTENANCE OF TRAFFIC BRIDGE 60	LS	1	\$	\$	512 / SP-E
16	MAINTENANCE OF TRAFFIC BRIDGE 62	LS	1	\$	\$	512 / SP-E
17	GROUND-PENETRATING RADAR TESTING	LS	1	\$	\$	SP-C
18	TYPE A MILLING	SY	9,150	\$	\$	425 / SP-B
19	TYPE A HYDRO-DEMOLITION	SY	9,150	\$	\$	425 / SP-B
20	FURNISH VERY EARLY STRENGTH LATEX MODIFIED CONCRETE	CY	640	\$	\$	217 / 425 / SP-B
21	PLACE VERY EARLY STRENGTH LATEX MODIFIED CONCRETE OVERLAY	SY	9,150	\$	\$	425 / SP-B

DR-2018 BID TAB

(_____) (INSERT BIDDER FIRM NAME HERE)

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT	SPECIFICATION
22	BRIDGE DECK GROOVING	SY	8,750	\$	\$	404
23	SNOW PLOWABLE RAISED PAVEMENT MARKER HYDRAULIC CONCRETE	EA	3	\$	\$	704 / SP-H
24	JOINT SEALANT REPLACEMENT	LF	2,270	\$	\$	SP-D
25	TYPE B CLASS VI PAVEMENT CONTRAST PVMT MRKG 4"	LF	3,040	\$	\$	704 / SP-F
26	TYPE B CLASS VI PAVEMENT CONTRAST PVMT MRKG 24"	LF	42	\$	\$	704 / SP-F
27	PVMT SYMB MRKG (THRU ARROW) TY B, CL I	EA	4	\$	\$	704 / SP-F
28	PVMT SYMB MRKG (SGL TURN ARROW) TY B, CL I	EA	4	\$	\$	704 / SP-F
29	PARAPET WALL COATING	SY	6,065	\$	\$	SP-G
30	CONCRETE BARRIER DELINEATORS	EA	68	\$	\$	702/ATTD

Total

\$

(SIGN HERE)

Signature of Owner, Partner, or Corporate Officer:

(INSERT HERE)

Title:

The quantities shown in the above schedule of items are considered to be approximate only and are given as the basis for comparison of bids. The Authority may increase or decrease the amount of any item or portion of the work as may be deemed necessary or expedient. The Authority reserves the right to delete, in whole or in part, without prejudice prior to the award of the Contract, any items listed in the Bid. It is understood that payment for unit price items will be made for the actual quantities of such work satisfactorily completed, rather than the estimated quantities given hereinabove. An increase or decrease in the quantity for any unit price item will not be regarded as sufficient ground for an increase or decrease in the unit price, nor in the time allowed for the completion of the work, except as provided for in the Specifications.

The cost of any work performed, materials furnished, services provided or expenses incurred, whether or not specifically delineated in the Contract document but which are incidental to the scope, intent and completion of this Contract, have been included in the price bid for the various items scheduled hereinabove.

Accompanying this Bid is a Proposal Guaranty (Sec. 102.07 of the Specifications) consisting of either a certified check in the amount of at least five (5) percent of the Total Bid Price for this Contract or a Bid Bond (Elsewhere herein) in the amount of five (5) percent of the same Total Bid Price. It is hereby understood and agreed that said check or bond is to be forfeited as described in the Bid Bond, in the event that, on the basis of this Bid, the Authority should award this Contract to me/us and that I/we should fail to execute and deliver said Contract and the prescribed Contract Bond, together with the required progress schedule, proof of proper insurance coverage and other necessary documents, all within the prescribed time (Sec. 103.07 of the Specifications); otherwise, said check or bond is to be returned to the undersigned.

Business Name of Bidder _____

Type of Organization Individual ☐
 Partnership ☐
 Corporation ☐

Virginia Contractor Registration No. _____

Address of Bidder: _____

Signature of Owner, Partner or Corp. Officer: _____

Title: _____

Date: _____

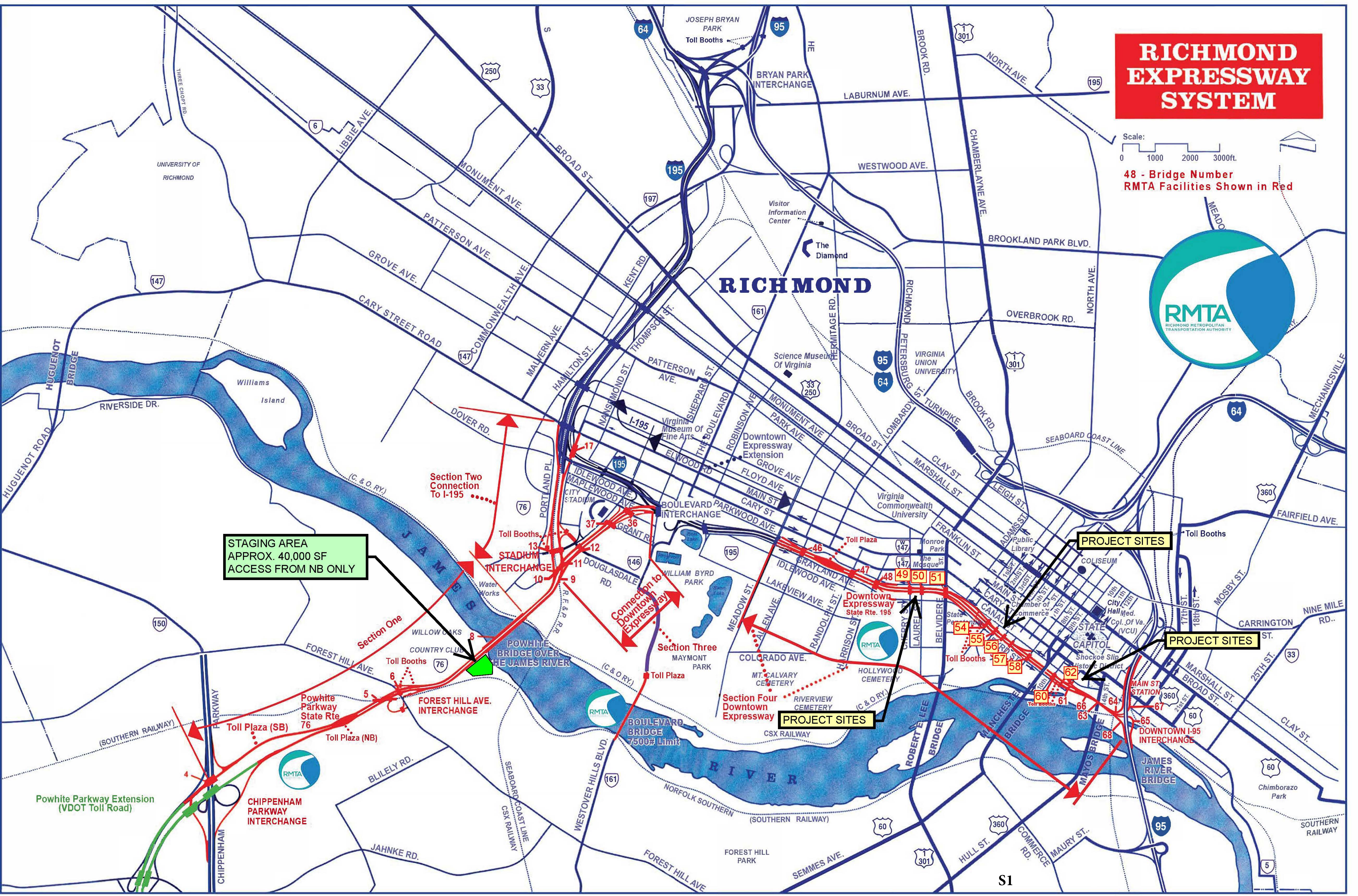
Witness or Attest _____

(Affix Corporate Seal Here)

RICHMOND EXPRESSWAY SYSTEM

Scale:
0 1000 2000 3000ft.

48 - Bridge Number
RMTA Facilities Shown in Red



STAGING AREA
APPROX. 40,000 SF
ACCESS FROM NB ONLY

Powhite Parkway Extension
(VDOT Toll Road)

CHIPPENHAM
PARKWAY
INTERCHANGE

RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY

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NON-COLLUSION AFFIDAVIT

STATE OF _____)
_____) ss.
COUNTY OF _____)

I, _____, of the City
of _____, County of _____ and State of
_____, being of full age and duly sworn according to law on my oath
depose and say:

That I am _____ (Title) of
_____, the Bidder making
the Bid submitted to the Richmond Metropolitan Transportation Authority, on the _____ day of
_____, 20____, for Contract Deck Rehabilitation – 2018 : RMTA bridges 49, 50, 51, 54,
55, 56, 57, 58, 60 and 62 in connection with the Richmond Expressway System; that I executed the
said Bid with full authority to do so;

The said Bidder has not, directly or indirectly, entered into any combination or
arrangement with any person, firm or corporation or entered into any agreement, participated in
any collusion, or otherwise taken any action in restraint of free, competitive bidding or which
would increase the cost of construction or maintenance in connection with the said Contract; that
no person or selling agency has been employed or retained to solicit or secure the said Contract
upon an agreement or understanding for a commission, percentage, brokerage or contingent fee,
except bona fide full-time employees;

And that said Bidder is or has been a member of the following highway contractors' association during the preceding twelve months:

Name of Association	Location of Principal Office
_____	_____
_____	_____
_____	_____

I further warrant that all statements contained in said Bid and in this Affidavit are true and correct and made with full knowledge that the said Authority relies upon the truth of the statements contained in said Bid and in this Affidavit in awarding the said Contract.

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

By: _____(L.S.)

Person Signing Bid

Print Name: _____

Notary Public

My commission expires:

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STATEMENT OF CONTRACTS UNDERWAY

The following is a tabulation of all contracts in which I/we am/are engaged as of the date given below, whether as a prime contractor or as a subcontractor. This tabulation includes not only contracts which are under construction, but also those awarded to me/us but not begun, and those on which I/we am/are the lowest bidder awaiting formal award.

<u>Contract Designation</u>	<u>City and State</u>	<u>Owner</u>	<u>Estimated Value of Work Remaining to be Completed</u>	<u>Estimated Completion Date</u>

Total: \$ _____

NOTE: Contracts in which the remaining work in each amounts to less than \$25,000 may be combined into one entry under the fourth column and designated as "Miscellaneous" in the first column.

If more space is needed, attach additional sheet(s).

Please ensure that all calculations are correct and there are no rounding errors.

The undersigned guarantees the accuracy and completeness of all the information given above.

Business Name of Bidder: _____

Address of Bidder: _____

Signature of Owner,
Partner or Corp. Officer: _____

Title: _____

Date: _____

Witness or Attest:

(Affix Corporate Seal Here)

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JOINT VENTURE STATEMENT

STATE OF _____)
_____) ss.
COUNTY OF _____)

We, the undersigned, being duly sworn according to law, upon our respective oaths depose and say that:

1. The following named contractors have entered into a Joint Venture for the purpose of carrying out all the provisions of Contract Deck Rehabilitation – 2018: RMTA bridges 49, 50, 51, 54, 55, 56, 57, 58, 60 and 62.

(a) _____
☐ An Individual
☐ A Partnership
☐ A Corporation

(b) _____
☐ An Individual
☐ A Partnership
☐ A Corporation

(c) _____
☐ An Individual
☐ A Partnership
☐ A Corporation

2. The contractors, under whose names we have affixed our respective signatures, have duly authorized and empowered us to execute this Joint Venture Statement in the name of and on behalf of such contractors for the purpose herein above stated.

3. Under the provisions of such Joint Venture, the assets of each of the contractors named in Paragraph 1 hereof, and in case any contractor so named above is a partnership, the

assets of the individual members of such partnership, will be available for the performance of such Joint Venture and liable therefore and for all obligations incurred in connection therewith.

4. The assets and liabilities of the named contractors for whom we respectively execute this Joint Venture Statement are set forth in the statements given to the Virginia Department of Transportation in our prequalification questionnaire(s).

5. This Joint Venture Statement is executed so that the named contractors, as one organization, may, under such Joint Venture, bid upon said Contract, and be awarded the Contract if they should become the successful bidder therefore. Any bid, bond and agreement relating to said Contract shall be executed by any of the undersigned, and when so executed shall bind this Joint Venture and each and every contractor named herein, severally and jointly. Simultaneously with the execution of the Contract, the contractors entering into this Joint Venture shall designate and appoint a Project Supervisor to act as their true and lawful agent with full power and authority to do and perform any and all acts or things necessary to carry out the work set forth in said Contract.

6. We bind the contractors for whom we respectively execute this Joint Venture Statement in firm agreement with the Richmond Metropolitan Transportation Authority that each of the representations herein set forth is true.

Subscribed and sworn to before me,
this _____ day of

(a) _____
Name of Contractor

_____, 20____.

By _____ (L.S.)
Notary Public

Print Name:

My commission expires _____

Title:

Va. Contractor Reg. No. _____

Subscribed and sworn to before me,
this _____ day of
_____, 20__.

Notary Public

My commission expires _____

(b) _____
Name of Contractor

By _____ (L.S.)
Print Name:

Title: _____

Va. Contractor Reg. No. _____

Subscribed and sworn to before me,
this _____ day of
_____, 20__.

Notary Public

My commission expires _____

(c) _____
Name of Contractor

By _____ (L.S.)
Print Name:

Title: _____

Va. Contractor Reg. No. _____

RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY

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VERY EARLY STRENGTH CONCRETE BRIDGE OVERLAY AND HYDRO-DEMOLITION
EXPERIENCE – CONTRACTOR/SUBCONTRACTOR

In addition to the bidding requirements stated elsewhere in these documents, prospective bidders must have successfully completed at least two bridge overlay projects, with at least one overlay project using very early strength concrete and at least one project using hydro-demolition in the past seven (7) years. This form is provided to bidders for them to demonstrate that experience, and must be completed and submitted by all bidders, bound in this proposal. Note that a bidder must be experienced, and complete these experience forms, and be prequalified by the Virginia Department of Transportation (VDOT) for bidding on State projects by November 21, 2017 at 10:00 a.m.

The Authority reserves the right to request additional experience information for any bidder that has not been assigned the “Bridge Repair” and/ or “Major Structures” work classification by VDOT, or for contractors that have a prequalification level of Conditional, Currently Inactive or Probationary.

A bidder cannot have a subcontractor be the documented experience for both required types of projects.

VERY EARLY STRENGTH CONCRETE BRIDGE OVERLAY PROJECT NO. 1

Job Location(s)/Description(s): _____

Total no. of SY placed and no. of bridges in project: _____

Owner/Contact Information: _____

Owner/Contact Phone Number: _____

Approximate Date(s) of Project: _____

VERY EARLY STRENGTH CONCRETE BRIDGE OVERLAY PROJECT NO. 2

Job Location(s)/Description(s): _____

Total no. of SY placed and no. of bridges in project: _____

Owner/Contact Information: _____

Owner/Contact Phone Number: _____

Approximate Date(s) of Project: _____

VERY EARLY STRENGTH CONCRETE BRIDGE OVERLAY PROJECT NO. 3

Job Location(s)/Description(s): _____

Total no. of SY placed and no. of bridges in project: _____

Owner/Contact Information: _____

Owner/Contact Phone Number: _____

Approximate Date(s) of Project: _____

CONCRETE BRIDGE OVERLAY USING HYDRO-DEMOLITION PROJECT NO. 1

Job Location(s)/Description(s): _____

Total no. of SY placed and no. of bridges in project: _____

Owner/Contact Information: _____

Owner/Contact Phone Number: _____

Approximate Date(s) of Project: _____

CONCRETE BRIDGE OVERLAY USING HYDRO-DEMOLITION PROJECT NO. 2

Job Location(s)/Description(s): _____

Total no. of SY placed and no. of bridges in project: _____

Owner/Contact Information: _____

Owner/Contact Phone Number: _____

Approximate Date(s) of Project: _____

CONCRETE BRIDGE OVERLAY USING HYDRO-DEMOLITION PROJECT NO. 3

Job Location(s)/Description(s): _____

Total no. of SY placed and no. of bridges in project: _____

Owner/Contact Information: _____

Owner/Contact Phone Number: _____

Approximate Date(s) of Project: _____

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BID BOND

KNOW ALL MEN BY THESE PRESENTS, that _____
_____, as Principal/Contractor, and
_____, as Surety, legally authorized to do
business in the Commonwealth of Virginia, are held and firmly bounded unto the Richmond
Metropolitan Transportation Authority, as Authority, in the amount of FIVE (5) PERCENT OF
THE DOLLAR VALUE OF THE TOTAL AMOUNT WRITTEN IN THE BID, on which the
Contract is awarded lawful money of the United States of America, for the payment of which, well
and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and
assigns, jointly and severally and firmly by these presents:

WHEREAS, the Contractor is herewith submitting its Bid for Contract entitled Deck
Rehabilitation – 2018: RMTA bridges 49, 50, 51, 54, 55, 56, 57, 58, 60 and 62 in connection with the
Richmond Expressway System; and

NOW, THEREFORE, the condition of this obligation is such, that if the Contractor shall be
awarded the Contract upon said Bid and shall, within fifteen (15) calendar days after the date of
written notice of such award, enter into and deliver a Contract and the prescribed Contract Bond
for the faithful performance of the Contract, together with the required proof of proper insurance
coverage and other necessary documents, then this obligation shall be null and void; otherwise, to
remain in full force and effect, and the Contractor and Surety will pay unto the Authority the
difference in money between the amount of the Total Amount written in the Bid of said
Contractor and the amount for which the Authority may legally contract with another party to
perform the said work, if the latter amount be in excess of the former; but in no event shall the
Surety's liability exceed the penal sum hereof.

SIGNED AND SEALED this _____ day of _____, 20____.

PRINCIPAL/CONTRACTOR

Business Name

Address

Witness or Attest:

By: _____ (L.S.)
Title:

(Affix Corporate Seal Here)

SURETY:

Business Name

Address

Witness or Attest:

By: _____ (L.S.)
Title:

(Attach evidence of Power of Attorney)

(Affix Corporate Seal Here)

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DECK REHABILITATION – 2018

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CONTRACT AGREEMENT

THIS AGREEMENT, made this _____ day of _____, 20 ____, between the Richmond Metropolitan Transportation Authority, 901 East Byrd Street, Suite 1120, Richmond, Virginia, 23219, hereinafter called the Authority and _____, or his, its or their successors, executors, administrators and assigns, hereinafter called the Contractor.

WITNESSETH, that the Contractor agrees with the Authority for the consideration herein mentioned, and at his, its or their own proper cost and expense, to do all the work and furnish all the materials, equipment, teams and labor necessary to prosecute and complete and to extinguish all liens therefore, Contract No. DR - 2018, entitled Deck Rehabilitation - 2018, in the manner and to the full extent as set forth in the Special Provisions, Plans, Supplemental Specifications, 2016 Road and Bridge Specifications of the Virginia Department of Transportation, Bid (for the basis of award stated herein below) and other documents related to said Contract which are on file at the office of the Richmond Metropolitan Transportation Authority and which are hereby adopted and made part of this Agreement as completely as if incorporated herein, and to the satisfaction of the Richmond Metropolitan Transportation Authority or its duly authorized representative who shall have at all times full opportunity to inspect the materials to be furnished and the work to be done under this Agreement. In the event of a conflict among the Contract Documents, the Contract Documents shall control one over another in the following descending order of precedence: Special Provisions, Plans, Supplemental Specifications, 2016 Road and Bridge Specifications of the Virginia Department of Transportation, Bid and other documents related to said Contract.

This Contract is awarded on the basis of the Total Bid Price (based on Bid quantities) of _____ dollars and _____ Cents (\$_____).

In consideration of the foregoing premise, the Authority agrees to pay the Contractor for all items of work performed and materials furnished at the unit and lump sum prices bid therefore in the Bid submitted for this Contract, subject to any percentage reductions in the total Contract amount that may be named in the Bid corresponding to the basis of award stated in the above paragraph, and subject to the conditions set forth in the Specifications.

The Contractor agrees as follows:

Indemnification: The Contractor shall indemnify and hold harmless Richmond Metropolitan Transportation Authority, and all officers, directors and employees of the named entity, (individually and collectively), from any and all liability, loss, damage, expense, cause of action, suits, claims or judgments arising from injury to person or property resulting from activity arising out of this contract; and shall, at its own cost and expense, defend any and all suits which may be brought against such parties, either alone or in conjunction with others upon any such liability or claim or claims and shall satisfy, pay and discharge any and all judgments and fines that may be recovered against such parties in any such action or actions, provided, such indemnity shall not extend to the negligence of such parties and, provided, further, that such parties shall give the Richmond Metropolitan Transportation Authority written notice of any such claim or demand.

Cancellation of Contract: The Authority reserves the right to cancel and terminate any resulting contract, in part or in whole, without penalty, upon 60 days written notice. Any contract cancellation notice shall not relieve the contractor of the obligation to deliver and/or complete all work tasks in progress prior to the effective date of cancellation.

Term of Contract: Sealed proposals for the above project are due Tuesday December 19, 2017, 10:00 a.m. at which time and place the bids will be publicly opened and read. The work under this contract shall be completed no later than September 21, 2018. The Placing Latex Modified Concrete, Very Early Strength Overlay shall not commence until April 20, 2018 provided weather conditions are in accordance with the applicable specifications.

Scope of Work: A complete list of all bid items and estimated quantities is included beginning on sheet P-2 in BID FOR GENERAL CONSTRUCTION CONTRACT.

Anti-Discrimination: By submitting their (bids/proposals), (bidders/offerors) certify to the Commonwealth 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*. If the award is made to a faith-based organization, the organization shall not discriminate against any recipient of goods, services, or disbursements made pursuant to the contract on the basis of the recipient's religion, religious belief, refusal to participate in a religious practice, or on the basis of race, age, color, gender or national origin and shall be subject to the same rules as other organizations that contract with public bodies to account for the use of the funds provided; however, if the faith-based organization segregates public funds into separate accounts, only the accounts and programs funded with public funds shall be subject to audit by the public body. (*Code of Virginia*, § 2.2-4343.1 E).

During the performance of this Contract, the Contractor agrees as follows:

- a. I/WE 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.
- b. I/WE agree to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.
- c. I/WE in any solicitations or advertising for employees placed by or on behalf of itself, will state that it is an equal opportunity employer.
- d. Notices and advertisements and solicitations placed in accordance with federal law, rule or regulation, shall be deemed sufficient for the purposes of meeting the requirements of this section.
- e. The Contractor does not, and shall not during the performance of the contract for goods and services in the Commonwealth knowingly employ an unauthorized alien as defined in the Federal Immigration Reform and Control Act of 1986.

To the extent that the Contractor enters into any subcontract or purchase order over Ten Thousand Dollars (\$10,000.00), the provisions of (a), (b) (c) (d) and (e) above shall be binding on each subcontractor or vendor.

IN WITNESS WHEREOF, the parties hereto have duly executed this Agreement the day and year written above.

RICHMOND METROPOLITAN
TRANSPORTATION AUTHORITY

By: _____
Joi Taylor Dean, CEO

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

(Authority's Seal)

Notary Public
My commission expires: _____

CONTRACTOR:

Business Name

Address

by: _____ (L.S.)
Title

(Affix Corporate Seal Here)

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

Notary Public
My commission expires: _____

EVIDENCE OF CORPORATE AUTHORITY

I, _____, hereby certify that I am Secretary of _____, a Corporation existing under the laws of the State of _____, and that the following resolution was adopted at a meeting of the Board of Directors of the said Corporation duly called and held on the _____ day of _____, 20____, and that the same remains in full force and effect:

(Here insert resolution)

IN WITNESS WHEREOF, I have hereto appended my signature and the seal of the said Corporation on this the _____ day of _____, 20____.

Secretary

SEAL

RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY

RICHMOND EXPRESSWAY SYSTEM

DECK REHABILITATION – 2018

RMTA BRIDGES 49, 50, 51, 54, 55, 56, 57, 58, 60 & 62

CONTRACT BOND

KNOW ALL MEN BY THESE PRESENTS, that _____,
_____, as Principal/Contractor, and _____,
as Surety, legally authorized to do business in the Commonwealth of Virginia, are held and firmly
bounded unto the Richmond Metropolitan Transportation Authority (Authority), in the amount
of _____ Dollars
and _____ Cents (\$ _____), lawful money of the United
States of America, for the payment of which, well and truly to be made, we bind ourselves, our
heirs, executors, administrators, successors and assigns, jointly and severally and firmly by these
presents:

WHEREAS, the Contractor has entered into a Contract with the Authority for the faithful
prosecution and completion of a project designated as Contract Deck Rehabilitation – 2018:
RMTA bridges 49, 50, 51, 54, 55, 56, 57, 58, 60 and 62 in connection with the Richmond
Expressway System; and

WHEREAS, it was one of the conditions of the Contract award by the Authority pursuant
to which said Contract was entered into, that these presents shall be executed;

NOW, THEREFORE, the condition of this obligation is such, that if the Contractor shall
faithfully prosecute and complete the entire work prescribed for this project in full compliance with
the terms and conditions of said Contract, including the Special Provisions, Plans, Standard
Specifications, Supplemental Specifications, Bid and all other documents pertaining to this
Contract, and such alterations as may be made in said Plans and Specifications as therein provided
for, shall indemnify and save harmless the Authority against or from all costs, expenses; damages
injury or loss to which the Authority may be subjected by reason of any wrongdoing, misconduct,
want of care or skill, negligence or default, including patent infringement, on the part of the
Contractor, his agents or employees, in the execution or performance of said Contract, including
errors in drawings furnished by the Contractor, and shall promptly pay all just claims for damages,
for injury to property, and for labor, materials, equipment rentals, services and other charges

incurred by the Contractor in or about the work contracted for, and extinguish all liens therefore, then this obligation shall be null and void; otherwise, to remain in full force and effect.

SIGNED AND SEALED THIS _____ day of _____, 20____.

PRINCIPAL/CONTRACTOR:

Business Name

Address

Witness or Attest:

By: _____ (L.S.)

Title:

(Affix Corporate Seal Here)

SURETY:

Business Name

Address

Witness or Attest:

By: _____ (L.S.)

Title:
(Attach evidence of Power of Attorney)

Countersigned by
Resident Virginia Agent:

(Affix Corporate Seal Here)

RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY

RICHMOND EXPRESSWAY SYSTEM

CONTRACT NO. DR-2018

DECK REHABILITATION – 2018
RMTA BRIDGES 49, 50, 51, 54, 55, 56, 57, 58, 60 & 62

FINAL RELEASE OF LIABILITY

I/We, _____, hereby certify that all bills, charges and salaries for labor, services, materials and rental of equipment, arising out of the prosecution of the work under Contract/Project No. DR-2018 have been paid, or satisfactory arrangements for payment have been made. I/We further certify that all other just demands and liens relating to this project have been fully satisfied or provided for. I/We hereby release the Richmond Metropolitan Transportation Authority, its Engineers and representatives from all claims demands and liability of whatsoever nature arising from anything done or furnished under this contract except to the extent only as to the following matters for which unresolved claims have been submitted by the Contractor in accordance with Section 105.19 of the Supplemental Specifications of the Contract:

SIGNED AND SEALED THIS _____ day of _____, 20____.

Business Name

Address

By: _____ (L.S.)

Title: _____

(Affix Corporate Seal Here)

STATE OF _____ AT LARGE: }

}

CITY/COUNTY OF _____ } to-wit:

The foregoing instrument was acknowledged before me this _____ day of _____,
20____, by _____, _____ of

_____, [name] _____ [title]

_____,

_____, [business name]

a _____ corporation/partnership, on behalf of said corporation/partnership,

_____, [state]

Notary Public

My Commission expires: _____.

RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY

RICHMOND EXPRESSWAY SYSTEM

CONTRACT NO. DR-2018

DECK REHABILITATION – 2018
RMTA BRIDGES 49, 50, 51, 54, 55, 56, 57, 58, 60 & 62

SWaM Participation

The Authority strongly encourages the submission of bids by qualified contractors whose principal businesses are located in the Richmond Metropolitan Area and further encourage such contractors to utilize the services of local subcontractors and vendors.

In addition the Authority strongly encourages the submission of bids by qualified contractors certified as Small, Women, and Minority Owned (SWaM) businesses and/or Disadvantaged Business Enterprises (DBE).

Furthermore, the Authority encourages the use of certified Small, Women, and Minority Owned (SWaM) businesses and Disadvantaged Business Enterprises (DBE) as subcontractors or vendors to the fullest extent reasonably possible.

Certification:

The Virginia Department of Small Business and Supplier Diversity is responsible for the certification of eligible small, women, and minority-owned businesses to participate in the SWaM Procurement Initiative. They also certify Disadvantaged Business Enterprises (DBEs) for participation under the Virginia Unified Certification Program (as part of the federal DBE Program). Service Disabled Veterans are also able to obtain SWaM certification upon receipt of their certification by the Department of Veterans Services and by meeting the eligibility requirements of the SWaM Program.

<http://www.dmbv.virginia.gov/SWaMSearchSub.html>

SWaM Category Type:

(As certified by the Virginia Department of Small Business and Supplier Diversity)

Minority Owned (M)

Small Business (S)

Women Owned (W)

Minority Owned with Small Business Certification (MS)

Women Owned with Small Business Certification (WS)

Other SWaM, DBE, WBE and MBE Programs:

Any contractors, subcontractors or vendors whose principal businesses are located outside the Commonwealth of Virginia must submit information on any business that is qualified as a Small, Women-Owned, Minority Owned and/or Disadvantaged Business Enterprises (DBE) by their home state or any federal program .

SwaM Summary:

As a part of the project closeout process and a prerequisite to final payment, the prime contractor shall submit fully executed pages DBE-3 and DBE-4, along with any additional sheets as needed, to document the actual amounts paid to each SWaM and/or DBE businesses that provided service or products during this execution of the contract.

Firm Name: _____

Firm Address: _____

Owner/Contact Name: _____

Owner/Contact Phone Number: _____

SWaM Category Type: _____SWaM Certification Number: _____

Amount Paid: \$ _____

Firm Name: _____

Firm Address: _____

Owner/Contact Name: _____

Owner/Contact Phone Number: _____

SWaM Category Type: _____SWaM Certification Number: _____

Amount Paid: \$ _____

Firm Name: _____

Firm Address: _____

Owner/Contact Name: _____

Owner/Contact Phone Number: _____

SWaM Category Type: _____SWaM Certification Number: _____

Amount Paid: \$ _____

Contractor shall attach additional sheets if needed.

SIGNED AND SEALED THIS _____ day of _____, 20____.

Business Name

Address

By: _____(L.S.)

Title: _____

STATE OF _____ AT LARGE:

CITY/COUNTY OF _____

The foregoing instrument was acknowledged before me this ____ day of _____,
20 __, by _____, _____ of

[name] [title]

[business name]

a _____ corporation/partnership, on behalf of said Corporation/partnership,
_____[state]

Notary Public

My Commission expires:_____.

RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY

RICHMOND EXPRESSWAY SYSTEM

DECK REHABILITATION – 2018
RMTA BRIDGES 49, 50, 51, 54, 55, 56, 57, 58, 60 & 62

RECEIPT OF ADDENDA

I/We hereby acknowledge receipt of the following addenda and have made the necessary revisions to the Contractor's Bid for General Construction Contract, proposal, plans, and specifications, etc., and agree that these addenda are included in the Contractor's Bid for General Construction Contract.

<u>Addenda #</u>	<u>Signature</u>	<u>Date</u>
1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____
6.	_____	_____

I understand that failure to confirm receipt of addenda may cause the bid to be irregular.

RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY
 SUPPLEMENTAL SPECIFICATIONS

To

VIRGINIA DEPARTMENT OF TRANSPORTATION
 ROAD AND BRIDGE SPECIFICATIONS
 2016

FOR
 RICHMOND EXPRESSWAY SYSTEM

CONTRACT NO. DR-2018

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RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY

SUPPLEMENTAL SPECIFICATIONS

PREFACE:

The "Road and Bridge Specifications" of the Virginia Department of Transportation, 2016, copies of which are issued separately, as amended and augmented by the Supplemental Specifications following, shall govern the construction of this Project and the performance of the Contract. These specifications are hereby made a part of the Contract as fully and with the same effect as if set forth at length herein.

Attention is directed to the fact that any other documents printed by the Virginia Department of Transportation modifying or supplementing said "Road and Bridge Specifications", such as Standard Supplemental Specifications, Special Provisions (by the Department), Notice to Bidders, etc., do not form a part of this Contract nor govern its performance, unless specifically so stated in the Supplemental Specifications herein contained. The 2016 edition of the VDOT "Road and Bridge Standards" are hereby made a part of this contract. The Virginia Erosion and Sediment Control Handbook, Third Edition 1992 Standards and Specifications are hereby made a part of this Contract.

References to "Proposal" have been changed to "Bid" in the Authority's documents for this contract, including many standard VDOT terms such as "Examination of Site of Work and Bid [Proposal]". This shall be accounted for when working contract documents prepared by the Authority with those standards prepared by VDOT.

References made to specific section numbers in these Supplemental Specifications, or in any of the various documents which constitute the complete Contract Documents, shall, unless otherwise denoted, be construed as referenced to the corresponding section of the "Road and Bridge Specifications" issued by the Virginia Department of Transportation, 2016.

RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY

SUPPLEMENTAL SPECIFICATIONS

TO

VIRGINIA DEPARTMENT OF TRANSPORTATION

ROAD AND BRIDGE SPECIFICATIONS

2016

The following provisions represent modifications to the corresponding sections of the Virginia Department of Transportation Specifications, described above, and relate exclusively to the Richmond Metropolitan Transportation Authority Contracts. In case of conflicting requirements between the Virginia Department of Transportation Specifications and these Supplemental Specifications, the Supplemental Specifications shall govern. Any applicable provision in the Virginia Department of Transportation Specifications not amended by and not in conflict with any Supplemental Specifications or Special Provisions shall be in full effect.

All modifications contained herein are additions to the provisions of the designated sections of the Virginia Department of Transportation Specifications unless the text specifically identifies a requirement to be an amendment to, deletion of or substitution for a provision in the Virginia Department of Transportation Specifications.

SECTION 101 - DEFINITION OF ABBREVIATIONS, ACRONYMS, AND TERMS

101.02 Terms

The following new definitions are added to this section:

ADDENDUM - - A written, fax or e-mail revision or addition to any of the Contract Documents, transmitted in advance of the opening of Bids to all parties who have been recorded by the Authority as having secured full sets of Contract Documents directly from the Authority or their designee.

AUTHORITY - - The Richmond Metropolitan Transportation Authority, a political subdivision and public body corporate and politic of the Commonwealth of Virginia, organized and existing under Virginia Code §§ 33.2-2900 et seq. The Authority's principal office is presently located at 901 East Byrd Street, Suite 1120, Richmond, Virginia, 23219.

AVERAGE ANTICIPATED OPERATING SPEED - - The posted speed of the work zone plus 5 miles per hour.

MOT - - Maintenance of Traffic

BID BOND - - One of the two permissible means of security offered as the Bid Guaranty, in the form of a surety bond executed by the Bidder and the Contractor's Surety, guaranteeing that if the Authority should award the Contract to the Contractor, the Bidder will execute and deliver the Contract Agreement and Contract Bond, together with other required documents, all within the prescribed time.

STANDARD DRAWINGS - - Whenever the Plans and/or Specifications refer to "Standards" or "Standard Drawings" such reference shall be construed to mean the set of drawings issued by the Location and Design Division, Virginia Department of Transportation, 2016, and entitled "Road and Bridge Standards", Volumes I and II. Only those standards or standard drawings specifically referred to by number on the Plans or in the various Contract Documents are applicable to work on this Contract.

FULL COMPLETION OF ALL WORK (OR TO FULLY COMPLETE ALL WORK) - - The completion of all work specified under this Contract as evidenced by the formal acceptance thereof by the Authority.

WORK AREA PROTECTION MANUAL - - The 2011 Virginia Work Area Protection Manual including Revision 1 (4/2015), and all subsequent revisions.

Whenever in the various Contract Documents the term, "Commission" or "State" appears it shall be replaced by the term, "Richmond Metropolitan Transportation Authority." Similarly, the term, "Commissioner" shall be replaced by the term, "CEO of the Richmond Metropolitan Transportation Authority," and the term, "Deputy Commissioner" replaced by the term, "Director of Operations of the Richmond Metropolitan Transportation Authority."

Whenever in the Virginia Department of Transportation Specifications and Standard Drawings the term, "Department" or "Virginia Department of Transportation" appears, it shall be replaced by the term, "Richmond Metropolitan Transportation Authority, (Authority)" except in references to said Virginia Department of Transportation as being the author of certain Specifications and Standard Drawings, and in reference to said Department as the agency prequalifying prospective Bidders.

Whenever in the Virginia Department of Transportation Specifications and Standard Drawings the term, "District Engineer" appears, it shall be replaced by the term, "Engineer."

The definitions for the following terms as they appear in this section are deleted and the following definitions substituted therefore:

CONTRACT TIME - - Each calendar date indicated in the Specifications or Special Provisions as the time allowed for the completion of any designated portion or for all of the work under the Contract, including any extensions thereto that may subsequently be authorized.

ENGINEER - - The authorized representative(s) of the firm of the General Consultant, HNTB Corporation, who have been duly appointed by the Authority to prepare Plans and Specifications for the Contract and to monitor the construction work performed in connection therewith.

The headquarters office of HNTB Corporation for this project is located at 2900 S. Quincy St, Suite 600, Arlington, Virginia 22206, telephone (703) 824-5100.

SPECIFICATIONS (SPEC) - - The general term comprising all the directions, provisions and requirements contained in the Virginia Department of Transportation, "Road and Bridge Specifications," 2016, Edition, the Authority's Supplemental Specifications and Special Provisions, and in any Addenda and Change Orders or Supplemental Agreements that may be issued, all of which are necessary for the proper performance of the Contract.

SECTION 102 - BIDDING REQUIREMENTS AND CONDITIONS

102.01 Prequalification of Bidders

This Section is amended to add the following:

Only contractors who have been prequalified by the Virginia Department of Transportation for bidding on State projects will be permitted to submit Bids for Contracts for Construction of this Project. The foregoing notwithstanding, the Authority reserves the right to reject the bid of any bidder because of reason of unsatisfactory performance or progress on other or prior Authority contracts, as determined by the Authority in its sole discretion.

Contractor shall also see Prequalification requirements in the "Invitation to Bid" (Sheet IB-2 of the Contract Documents). If a Subcontractor is listed in one of the experience forms, that Subcontractor or a different Subcontractor which meets the experience requirements must complete at least 90% of the work in that category.

In order to bid on this project, prospective Bidders must meet the Prequalification requirements at the time specified in the "Invitation to Bid". The Authority cannot be held liable in the event a party is unable to submit a valid bid due to a delay in the prequalification procedure.

Securing prequalification and the timing thereof, shall at all times be the sole responsibility of the Contractor.

If a group of contractors should desire to submit a single bid for a contract or group of contracts, acting under the terms of a joint venture, each such contractor must be prequalified in the proper classification of work and must be registered with the Virginia Department of Transportation. The sum of the maximum pre-qualified classification capacity of the contractors comprising the joint venture must be greater than the estimated dollar value of the contract or group of contracts comprising the bid.

102.02 Content of Proposal

This section is amended as follows:

The following documents are bound with and are also a part of the Bid Form:

- Bid
- Non-Collusion Affidavit
- Statement of Contracts Underway
- Very Early Strength Concrete Bridge Overlay Experience
- Hydro-Demolition Experience – Bidder/Subcontractor
- Joint Venture Statement
- Bid Bond
- Receipt of Addenda (if applicable)

102.04 Examination of Site of Work and Proposal

The Section is amended to add the following:

In addition to the mandatory site visit, the Bidders are allowed to visit the Project site to form their own conclusions regarding access requirements, effort required to perform the tasks and other information needed to prepare their bid. Prior to visiting the site, a Bidder shall notify the Authority and Glen Parker at 804-938-3963 to coordinate the time and date of the Bidder's visit.

Any Addenda that may be issued will be posted on the RMTA website. <http://www.rmtaonline.org/> All bidders are required to download any and all addenda from the website. The Authority shall not be responsible for individually delivering addenda to all proposers.

102.05 Preparation of Bid

Sub-Section (a) is amended to add the following:

No electronic bids shall be accepted. All bids shall be submitted on forms furnished by the Authority.

As part of the execution of the Bid, each Bidder shall execute the Statement of Contracts Underway, and the Non-Collusion Affidavit and, in the case of Joint Venture Bidders, the Joint Venture Statement.

The Statement of Contracts Underway shall list the stipulated status information of all other work in which the Bidder is presently engaged, whether as a prime contractor or a subcontractor. Such listings shall include not only contracts which are under construction, but also those awarded to the Contractor but not begun and those on which the contractor is the lowest bidder awaiting formal award. In the case of Joint Venture Bidders, each party involved shall complete, execute and submit a separate Statement of Contracts Underway, as well as the Bidder's portion of the Joint Venture Statement. Additional Statements of Contracts Underway forms are available at the office of the General Manager of the Authority.

The Non-Collusion Affidavit must be executed by the person signing the Bid. In the case of Joint Venture Bidders, only the person signing the Bid on behalf of the Contractors involved need execute the Non-Collusion Affidavit.

The Richmond Metropolitan Transportation Authority may elect to receive bids on more than one construction contract on the same date. When this event occurs, the Authority will award the various contracts after all of the bids for the various contracts are received and analyzed.

Sub-Section (f) is amended as follows:

In the event of a joint venture of a group of Contractors submitting a single Bid, the Bid shall be signed by an individual owner, partner or officer of any one of the Contractors bound in the joint venture, and the official business address of the joint venture shall be given. In addition, a Joint Venture Statement must be executed by all Contractors involved.

102.06 Irregular Bids

This section is amended as follows:

The following section is deleted:

Section (m)

The following is added:

- (p). If the bidder fails to submit the executed Statement of Contracts Underway; in the case of Joint Venture Bidders, failure to submit an executed Statement of Contracts Underway for each Contractor in the joint venture and the Joint Venture Statement.
- (q). If the signed bid form is received from a party who was not represented, and recorded by the Authority as attending both the mandatory pre-bid meeting and site visit.
- (r). If the bidder is not pre-qualified by the Virginia Department of Transportation at the time of the mandatory pre-bid meeting.
- (s). If the bidder fails to attach required Very Early Strength Concrete Bridge Overlay and Hydro-Demolition Experience forms.
- (t). If the bidder fails to properly acknowledge receipt of addenda/addendum in the Receipt of Addenda form.
- (u) Alterations to the Bid Tab

102.07 Proposal Guaranty

Add the following:

If a certified check is submitted as the Bid Guaranty, the check is to be made payable to the Richmond Metropolitan Transportation Authority, and the project name and Contract number shall also appear on the face of the check, as well as the business name of the bidder.

A bid bond will be accepted only if executed on a form which contains the exact wording as the Bid Bond included in these contract documents form. Any bid accompanied by a bond having wording which differs in any respect from the Bid Bond form may be rejected.

102.09 Submission of Bid

This section of the Specifications is completely replaced by the following:

Bids will be accepted at the Authority's office at 901 East Byrd Street, Suite 1120, Richmond, Virginia until scheduled bid opening time and shall be submitted in a sealed envelope. Bids shall be filed prior to the time specified in the Invitation to Bid. Bids received after that time will be

returned to the bidder unopened. The date for opening of bids may be deferred by the Authority, in which case the bidders will be notified.

102.12 Public Opening of Bids

This section of the Specifications is completely replaced by the following:

Bids will be opened and read publicly at the time and place specified in the Invitation to Bid. Interested parties are invited to be present.

SECTION 103 - AWARD AND EXECUTION OF CONTRACTS

103.01 Consideration of Bids

Add the following:

In reviewing bids received, the Authority will give full consideration to a Bidder's capacity for undertaking and handling the work included in the bid. The difference in amounts between the maximum capacity stated in the prequalification certification for this classification of work, and the total estimated value of work remaining to be completed by the Bidder's organization as given in the Bidder's Statement of Contract Underway, shall constitute the Bidder's net capacity for handling additional work. Such net capacity will be considered by the Authority in determining the successful Bidders for Contracts on this Project.

103.02 Award of Contract

This section of the Specifications is completely replaced by the following:

The Authority will award a contract within sixty (60) calendar days of the bid opening for said Contract. If a Contract is not awarded within this time period, the Bidder shall have the right to withdraw the Bidder's Bid for the Contract without penalty or prejudice, unless the award date is extended by mutual consent.

The Authority agrees that Award of Contract, if made, will be determined without discrimination on the ground of race, creed, color, sex or national origin.

Basis for Contract Award: The Contract, if awarded, will be awarded to the lowest responsive and responsible bidder, if any, provided the bid is reasonable and it is in the best interest of the Authority to accept it and subject to the Authority's right to reject any and all bids and to waive informality in the bids and in the bidding. Determination of the lowest responsive bidder, if any, will be based on the Total Bid Amount entered on the Bid Tab Form including any

properly submitted bid modifications taken in sequence as the Authority in its discretion chooses to Award. **Where the sum of the values entered in the multiple parts do not agree with the Total Bid Amount, the Total Bid Amount entered on the Bid Tab Form, including any properly submitted bid modifications, shall take precedence.**

In the event that the Total Bid Amount from the lowest responsible bidder exceeds available funds, the Authority may negotiate the Total Bid Amount with the apparent low bidder to obtain a contract price within available funds, pursuant to §2.24318 of the Code of Virginia, as amended, and Section 12(c) herein.

Informalities: The Authority reserves the right to waive any informality in the bids when such waiver is in the interest of the Authority.

Negotiation with Lowest Responsible Bidder: If award of a contract to the lowest responsive and responsible bidder is precluded because of limitations on available funds, under the provisions of §2.2-4318 of the Code of Virginia (the Public Procurement Act), the Authority reserves the right to negotiate the Total Bid Amount with the lowest responsive, responsible bidder to obtain a contract price within the available funds. This may involve changes in either the features or scope of the work included in the Contract Documents. Such negotiations with the apparent low bidder may include reducing the quantity, quality, unit prices, or other cost saving mechanisms involving items in the Total Bid Amount. The Authority shall notify the lowest responsive and responsible bidder that such a situation exists and the Authority and bidder shall then conduct their negotiations in person, by mail, by telephone or by any means they find convenient. If an acceptable contract can be negotiated, the changes to the Invitation to Bid documents agreed upon in the negotiations shall be summarized in a "Post Bid Modification" and included in the contract. If an acceptable contract cannot be negotiated, the Authority reserves the right to terminate negotiations and begin negotiations with the second lowest responsive and responsible bidder or terminate negotiations with all bidders and reject all bids.

Notice of Award: The Notice of Award, the Notice of Intent to Award, or the Notice of Decision to Award will be posted at the Authority's Construction Engineering Inspection Office.

103.06 Contract Documents

Subsection (d) of this section of the Specifications is amended to include:

- All insurance certificates as required in Sec. 103.06 (d), as prescribed in Sec. 107 and as may be required in other sections.

Subsection (e) of this subsection of the Specifications is amended to include the following:

The Contractor shall submit a progress schedule using the Critical Path Method (CPM) format. As a minimum, the schedule shall include:

- The duration of activities.
- The interrelationship of critical activities.
- Maintenance of traffic changes.
- Any temporary work necessary to complete project.
- An easily distinguishable critical path.
- Final completion by the date specified.

SECTION 104 - SCOPE OF WORK

104.02 Changes in Quantities or Alterations in the Work

Subsection (b) of this section of the Specifications is amended to include:

1. Major Items: There are no major items under this contract.
2. Minor Items: All items under this Contract are considered minor items. No adjustment of contract unit prices will be made for overruns or underruns of the original contract quantities, regardless of the extent of such overruns or underruns.

SECTION 105 - CONTROL OF WORK

105.01 Notice to Proceed

Add the following:

Notice to Proceed will be issued within seven (7) calendar days after the execution of the Contract by the Authority.

Contractor shall submit CPM schedule as detailed in Section 103.06 within fourteen (14) days of issuance of Notice to Proceed by the Authority.

105.06 Subcontracting

Add the following:

Except as noted below, the consent to sublet any part of the work, or obtain supplies, shall not be construed to be an approval of the said subcontract, supply contract or any of its terms, but shall operate only as an approval of the making of a subcontract or supply contract between the

Contractor and Subcontractor or Supplier. The Subcontractor agrees, as a condition of entering into a subcontract on the project, that the Contractor shall make no claim whatsoever against the Authority, the Engineer, or any of their officers, servants, agents or employees for any work performed or thing done by reason of said subcontract, or for any other cause whatsoever that may arise by reason of the relationship created between the Contractor and Subcontractor unless the proposed Subcontractor furnishes a statement to the effect that said Subcontractor is acquainted with all provisions of the Contract and agrees thereto.

In the case of extra work to be performed on a force-account basis, if any portion of such work is proposed to be sublet on the basis of negotiated unit and/or lump-sum prices instead of on a force-account basis, then such negotiated unit and/or lump-sum prices shall first meet with the approval of the Engineer before consent will be given to sublet the work.

Sublet work shall not begin until approval thereof has been secured from the Engineer. It is understood, however, that any consent by the Engineer for the subletting of any of the work under the Contract in no way relieves the Contractor from the Contractor's full obligations under the Contract. The Contractor shall be responsible for all acts of omissions of any Subcontractor or Supplier.

105.13 State Force Construction Surveying

This Section is deleted in its entirety. All construction surveying shall be the responsibility of the Contractor.

105.15 Removing and Disposing of Structures and Obstructions

This section is amended as follows:

All materials removed by the Contractor as specified therein, shall become the property of the Contractor, except as may be otherwise specifically required, and shall be legally disposed of by the Contractor off of RMTA property.

105.19 Submission and Disposition of Claims

This section of the Specifications is completely replaced by the following:

(a) Alleged Damages and Exceptions. Early or prior knowledge by the Authority of an existing or impending claim for damages might alter the plans, scheduling and other actions of the Authority or result in mitigation or elimination of the effect of the act objected to by the Contractor. Therefore, a written statement describing (1) the act of omission or commission by the Authority or its agents that allegedly caused or will likely cause damage to the Contractor and (2) the nature of the claimed damage must be submitted to the Engineer at the time of occurrence or

beginning of the work upon which the claim and subsequent action is based. If such damage is reasonable likely to result from the Contractor's acting upon an order emanating from the Engineer, the Contractor shall take written exception, delivered to the Authority, to such order immediately. Submission of such written statement or exception, as specified, shall be mandatory. Failure to submit such written statement or exception shall be a conclusive waiver of such damages or exception by the Contractor. Mere oral notice or statement will not be sufficient, nor will notice or statement after the event.

(b) Additional Compensation. At the time of occurrence or prior to beginning the work the Contractor shall furnish the Engineer, in writing, an itemized list of materials, equipment, and labor for which additional compensation will be claimed. The contractor shall afford the Engineer every facility for keeping an actual cost record of the work. The Contractor and the Engineer shall compare records and bring them into agreement at the end of each day. Failure on the part of the Contractor to afford the Engineer proper facilities for keeping a record of actual costs will constitute a conclusive waiver of a claim for such extra compensation except to the extent that it is substantiated by the Authority's records. The filing of such notice by the Contractor and the keeping of cost records by the Engineer shall in no way establish the validity of a claim. Failure to submit such written itemized list shall be a conclusive waiver of such claim for additional compensation. Mere oral notice or statement will not be sufficient, nor will notice or statement after the fact.

(c) Verification. If the Contractor's claim contains data furnished by the Contractor that cannot be verified by the Authority's records, the data shall be subject to complete audit by the Authority or its authorized representative if they are to be used as a basis for claim settlement.

(d) Claims Procedure. Upon completion of the Contract, the Contractor may, within 60 calendar days from expiration of the period for review of the Final Estimate by the Contractor as provided in Section 109.10, submit to the Authority a written claim (original plus three legible copies) for such amount as the Contractor deems it is entitled to under the said contract setting forth the facts upon which said claim is based and including all pertinent data and correspondence which may substantiate the claim, provided that written notice of intention to file such claim shall have been given to the Authority at the time of occurrence or beginning of the work upon which claim and subsequent action is based. Failure of the Contractor to furnish any of the items required by Section 109.10 as prerequisite to the issuance of final payment shall not extend the time period in which the Contractor may submit a claim under this or any other section of the Contract. If the claim is not disposed of by agreement, then within 90 calendar days from receipt of said claim, the Authority will make an investigation and notify the Contractor by registered or certified mail, return receipt requested, of its decision; however, the Authority and Contractor may, by mutual agreement, extend such 90 calendar day period for another 30 calendar days. The decision

of the CEO of the Authority shall be final, and failure of the Contractor to comply with the provisions of this section shall constitute a conclusive waiver of any such claim hereunder.

SECTION 106 - CONTROL OF MATERIAL

106.01 Source of Supply and Quality Requirements

This section is amended to add the following:

The Contractor shall not use in preparation of the bid nor on construction of this project any supplier or material person, hereinafter referred to simply as supplier, debarred by the Virginia Department of Transportation as of the date of advertisement.

It shall be the responsibility of the Bidder to determine from the Department's listings which suppliers are debarred as of the date of advertisement of this project. Such listings will be posted in the office of the Contract Engineer, 1401 E. Broad Street, Richmond, Virginia and in each District Office.

The Engineer will not approve for use any material furnished by a supplier debarred by the Department.

If subsequent to award of this contract, a previously debarred supplier is reinstated to eligibility, the Engineer may approve the use of that supplier on this project when requested by the Contractor and after consideration of all relevant factors.

106.02 Material Delivery

This section is amended as follows:

Contractor's invoices for materials delivered to the site shall show actual prices for such materials.

106.04 Disposal Areas

The entire third paragraph under section (a) of the Specification is deleted.

SECTION 107 - LEGAL RESPONSIBILITIES

107.12 Responsibility for Damage Claims

Delete the first line of paragraph (a) and substitute:

"The Contractor shall indemnify and save harmless the Authority, the Engineer and its..."

Add the following statement to the end of paragraph (b):

". . . the contract provided, however, that the Authority and, where applicable, the Engineer are intended beneficiaries of this Contract and shall have standing to enforce the provisions of this Contract including the right to indemnification and the right to ascertain claims for damages.

Add the following after the last paragraph of this section:

In connection with the indemnification assumed by the Contractor by virtue of this section, but without limitation or release of the Contractor's responsibility for such indemnification or any other liability hereunder, the Contractor shall provide the following types and minimum amounts of insurance coverage for this project:

- (a) Contractor's Comprehensive General Bodily Injury and Property Damage Liability Insurance, including Contractor's Protective Liability Insurance and Contractual Liability Insurance:
 - (1) One (1) person in any one (1) occurrence, amount One Million Dollars (\$1,000,000).
 - (2) Two (2) or more persons in any one (1) occurrence, amount One Million Dollars (\$1,000,000).
 - (3) Property Damage in any one (1) occurrence, amount One Million Dollars (\$1,000,000), with aggregate property damage policy limit of One Million Dollars (\$1,000,000).

The portion of the policy dealing with property damage liability shall contain a provision of endorsement providing insurance protection against property damage, including loss of use, caused by explosion and/or collapse, and against damage to existing underground and overhead pipes, cables, ducts and other such facilities, whether or not such facilities appear on available plans and whether or not accurately located on such plans.

The Contractual Liability Insurance policy shall contain an endorsement attesting to the Contractor's responsibilities for indemnification set forth in this section. Insurance certificates shall specifically indicate the inclusion of such an endorsement with particular reference to the Contract number and to "Compliance with Sec. 107.13 of the Specifications."

- (b) Comprehensive Automobile and Truck Liability Insurance including coverage for Contractor's automotive equipment (and including non-owned and hired vehicles):
 - (1) One (1) person in any (1) occurrence, amount One Million Dollars (\$1,000,000).
 - (2) Two (2) or more persons in any one (1) occurrence, amount One Million Dollars (\$1,000,000).
 - (3) Property damage in any one (1) occurrence, amount One Million Dollars (\$1,000,000).
- (c) Workmen's Compensation Insurance - Statutory. Employer's Liability Insurance in the amount of Five-Hundred Thousand Dollars (\$500,000).

If any part of the work is sublet, similar insurance shall be obtained by or on behalf of the Subcontractor to cover the Subcontractor's operation.

The insurance specified shall be with an insurance company acceptable to the parties hereto and licensed to do business in the State of Virginia. All insurance must be obtained before any work is commenced and kept in effect until its completion.

In compliance with Sec. 103.06, satisfactory evidence, in triplicate, of all required insurance coverage, including special endorsements, shall be forwarded to the Authority for approval within fourteen (14) Calendar Days after the date of written notice of Award of Contract. All insurance coverage must be approved by the Authority before the Contract will be executed by the Authority.

The Authority's approval of insurance furnished by the Contractor, or its failure to disapprove such insurance shall not relieve the Contractor of full responsibility for liability, damages and accidents as set forth elsewhere herein.

All policies required above shall include an endorsement requiring thirty (30) calendar days prior written notice to the Authority before any change or cancellation is made effective.

All policies required shall be maintained until completion and acceptance of all work under this Contract.

No separate payment will be made for the cost of the insurance herein specified but the Contractor shall include the cost of such insurance in the prices bid for the various items scheduled in the Bid.

107.19 Railway - Highway Provisions

This section is amended as follows:

It is not anticipated that the scope of work will require any right of entry to railroad property. The successful bidder should develop all means and methods for performing the scope of work without encroaching upon railroad property or easements and shall not foul the tracks.

If any coordination, submittals, right of entry, watchpersons, or additional insurance is required by a railroad for any reason during the performance of the scope of work, the payment for any railway-highway costs shall be covered in other pay items and will not be measured for payment. Any railway-highway requirements will be completed at no extra cost to the RMTA and with no extension of contract time.

MEASUREMENT AND PAYMENT

No separate payment will be made for the cost of Railway-Highway Provisions but the Contractor shall include the cost in the prices bid for the various items scheduled in the Bid.

SECTION 108 - PROSECUTION AND PROGRESS OF WORK

108.04 Determination and Extension of Completion Date

In the second paragraph of this section, substitute the number "75" for the number "60" wherever it appears.

108.06 Failure To Complete on Time

Sub-section (B) is completely replaced by the following:

CONTRACTOR WAIVES ANY DEFENSE AS TO THE VALIDITY OF ANY LIQUIDATED DAMAGES STATED IN THIS CONTRACT ON THE GROUNDS THAT SUCH LIQUIDATED DAMAGES ARE VOID AS PENALTIES OR ARE NOT REASONABLY RELATED TO ACTUAL DAMAGES.

SECTION 109 - MEASUREMENT AND PAYMENT

109.06 Common Carrier Rates.

This Section of the Specifications is deleted in its entirety.

109.08 Partial Payments

This section is completely replaced by the following:

Partial payments will be made once each month covering work performed and materials complete-in-place in accordance with the contract and for materials delivered in accordance with Sec. 109.09 on and between the 5th day of a month and the 4th day of the succeeding month as the work progresses. Partial payments will be made on the value of work performed based on approximate estimates prepared by the Engineer, provided, however, that no estimate shall be certified or payment made where the net amount receivable by the Contractor is less than Five-hundred Dollars (\$500.00). The value of work done on items measured on a unit basis will be determined on a pro rata basis. If the Engineer determines that the Contractor has been overpaid, all further partial payments may be credited against such overpayment.

The Engineer will review the partial payment estimate with the Contractor's representative prior to each partial payment.

From the total of the amounts so determined will be deducted an amount equivalent to five (5) percent of the whole, which will be retained by the Authority until completion of the entire Contract in an acceptable manner and the balance, less all previous payments, shall be certified for payment.

Total Contract value shall be considered to mean the original amount of the Contract, except when the Contract is increased or decreased by a supplemental agreement in which case the adjusted total shall be used.

The Authority reserves the right to withhold the payment of any partial or final estimate voucher or any sum or sums thereof from such vouchers in the event of the failure of the Contractor to promptly make payment to all persons supplying equipment, tools or materials, or for any labor used by the Contractor in the prosecution of the work provided for in the Contract, and for any other cause as determined by the Authority in its sole discretion, including overpayment on previous partial payments.

109.10 Final Payment

This section of the Specifications is completely replaced by the following:

After final inspection and final acceptance of the project has been made by the Engineer, as provided in Sec. 108.09, the Engineer will prepare the final estimate of item quantities and amounts for the completed work. The Contractor will be afforded a period of fifteen (15) calendar days from the date of the final estimate to review the final estimate at the Authority's office.

As a prerequisite to the issuance of final payment, the Contractor will be required to furnish the following items to the Engineer:

- (a) An executed SWaM Participation form (on the Authority's standard form) attesting to actual amounts fully paid to each Small, Women, and Minority Owned (SWaM) businesses and/or Disadvantaged Business Enterprises (DBE).
- (b) An executed Final Release of Liability (on the Authority's standard form) attesting to the fact that all bills, charges and salaries for labor, services, materials and rental of equipment, arising out of the prosecution of work under this Contract have been fully paid or arrangements satisfactory to the Engineer therefore have been made and all other just demands and liens relating to this project fully satisfied or arrangements to the Engineer therefore have been made, and releasing the Authority and their representatives from all claims, demands and liability of whatsoever nature from anything done or furnished under this Contract, except to the extent only as to such matters for which unresolved claims have been submitted by the Contractor in accordance with Section 105.19 hereof;
- (c) Sworn statements of any property owners or other parties who may have had any claims against the Contractor or liens against the project, evidencing that all their claims and liens are fully satisfied or provided for and the Contractor and Authority are released there from;
- (d) Any other documents, invoices, releases or objects which the Engineer may request in finalizing the Contract.

After the above items have been forwarded to the Engineer, and the final estimate and certificate for final payment sent to the Authority with the Engineer's recommendation for acceptance, the Contractor will be paid the total Contract amount less the amounts of all previous partial payments and less any imposed liquidated damages. This net amount will be subject to any increase or decrease resulting from corrections to any errors in previous partial payments that may be detected at this time and to deductions for unacceptable work not corrected by the Contractor as required hereunder.

This final payment will become due and payable to the Contractor within ninety (90) calendar days after the date when all the above listed documents and tracings have been received by the Engineer and acknowledged in writing by the Contractor. The Contractor will be entitled to interest on the final payment amount at the rate of four (4) percent per annum for the length of time beyond said 90 calendar days period that the final payment should remain unpaid.

SECTION 512 - MAINTAINING TRAFFIC

512.01 Description

The following is added to this section:

The Contractor shall schedule the Contractor's operations in a manner as to not adversely affect traffic conditions. At all locations the Contractor shall schedule the Contractor's operations in such a manner that all available traffic lanes are open to traffic on Commonwealth of Virginia holidays, the day preceding holidays and the day after holidays. Ramp traffic (unless otherwise noted) shall be maintained at all times.

The Engineer reserves the right to require the Contractor to provide a proposed maintenance of traffic plan for all lane closures 7 calendar days prior to closure. The Engineer shall coordinate the maintenance of traffic plan with the RMTA and provide any changes and additions required prior to the lane closure. In the event that a detour route is detailed in the contract drawings, the Contractor shall be required to provide a traffic plan for installing and removing the proposed detour route.

The Contractor shall not utilize shoulders, median or similar areas for storage of equipment or material including vehicles used by Contractor's personnel to access the site. Any stored equipment shall be placed behind guardrail or concrete barriers.

The Contractor shall provide continuous monitoring of traffic control devices as part of the effort required to maintain them. Additionally, the Contractor shall possess a minimum of one spare operable electronic arrow on site only when directed by the Engineer.

When night work is in progress, the Contractor shall provide sufficient lighting of the work site(s) to enable the satisfactory completion of the work. Lighting shall be arranged so as not to interfere with or impede traffic approaching the worksite(s). Payment for lighting of the work site shall be covered in other pay items and will not be measured for payment.

See Maintenance of Traffic Special Provision for further information.

512.04 Measurement and Payment

Maintaining Traffic items shall not be measured and will be paid for on a lump sum basis for each bridge. See Maintenance of Traffic Special Provision for further information.

SECTION 514 - FIELD OFFICE

This section of the Specifications is completely replaced by the following:

A field office is not required for this project.

RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY

SPECIAL PROVISIONS

To

VIRGINIA DEPARTMENT OF TRANSPORTATION

ROAD AND BRIDGE SPECIFICATIONS 2016

FOR

RICHMOND EXPRESSWAY SYSTEM

DECK REHABILITATION – 2018

RMTA BRIDGES 49, 50, 51, 54, 55, 56, 57, 58, 60 & 62

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SPECIAL PROVISION TOLL COLLECTION PASS CARDS

DESCRIPTION

This provision details the disbursement and return of Toll Collection Pass Cards.

PROCEDURES

The Contractor shall provide the Engineer and the RMTA with a written request for Toll Collection Pass Cards within (7) days prior to work start. The written request shall contain, but not be limited to, the number of Toll Collection Pass Cards requested, names and addresses of the individuals to whom the Cards shall be assigned, a digital passport style photo of each individual, a brief but thorough explanation why each individual requires a Card, and the anticipated time frame for each individual to require the Card.

The Engineer shall review the Request for Cards within (8) working days of receipt of Request. The RMTA, via the Engineer, may provide between zero and the total number of Cards requested.

Cards cannot be used in the Open Road Tolling (ORT), or “Express,” lanes located on northbound and southbound Powhite Parkway and on the westbound Downtown Expressway (DTE). At these Toll Plazas, Contractors’ vehicles must go through “Cash” Toll Full Service Lanes to use Toll Pass Cards.

Prior to the distribution of a Card, the individual designated to receive a Card shall be required to provide a picture ID (driver’s license) of him- or herself, their home phone number, the name of their employer, their employer’s address, and their employer’s phone number. In addition, each person receiving a Card is required to sign a statement of fact that the Card shall be used only for and during the execution of RMTA contract obligations. Misuse of any Card by an individual shall result in the immediate revocation of Card privileges. Engineer shall notify individual’s company and the Contractor of the assumed Card misuse. The Contractor is responsible for returning the misused Card to the Engineer within 48 hours of notification.

In addition, all Cards issued in accordance to this contract shall be returned to the Engineer within 48 hours after completion of work. Failure to return all Cards may result in delays in processing of the final payment.

**SPECIAL PROVISION
HYDRO-DEMOLITION AND
VERY EARLY STRENGTH LATEX MODIFIED CONCRETE OVERLAY**

I. DESCRIPTION

This work shall consist of the removal of a portion of the existing concrete bridge deck and any additional unsound concrete using a combination of milling and hydro-demolition and replacing the deck with a new Very Early Strength Latex Modified Concrete (VESLMC) overlay. The work locations are around the RMTA bridges 49, 50, 51, 54, 55, 56, 57, 58, 60 and 62.

Once the Contractor begins the process of replacing the existing bridge deck surface, the work must progress in an expedient manner to complete the entire overlay process and provide lanes open to traffic in accordance with all dates and times listed in the Maintenance of Traffic special provision SP-E.

The record plans for these bridges are included in the Appendix for reference. The Contractor shall adhere to the 2016 Road and Bridge Specifications Section 425 and the special provisions herein.

This work shall consist of: mechanically milling 1.5 inches of the top surface of bridge deck; removing an additional ½ inch of bridge deck and virtually all unsound concrete using hydro-demolition; sounding the remaining deck for additional unsound concrete; removing loose and unsound concrete with hand tools as necessary; removal and disposal of all concrete and debris off-site including any required permits; vacuuming; shielding; water control; forming for full depth repairs if needed; and all aspects of work necessary to prepare for the placement of VESLMC in areas where unsound concrete was removed and the placement of VESLMC Overlay.

The Contractor shall be aware that there may be clearance issues with large equipment due to bridge overpasses. Large milling machines may have to lower their waste chutes and smaller dump trucks used as a result. It shall be the Contractor's responsibility to account for this in his bid.

II. MECHANICAL MILLING (TYPE A MILLING)

Prior to initiating Mechanical Milling the Contractor shall remove all debris from the deck and dispose of it offsite. Next the Contractor shall evaluate the concrete cover over the existing reinforcing steel and adjust the depth of milling as to prevent damage to the reinforcing steel. Prior to any mechanical milling the Contractor shall perform non-destructive testing using Ground-Penetrating Radar (GPR) analysis to locate any potential problem areas where there may be steel rebar with less than 2" concrete cover. With the approval of the Engineer, the milling depth may be reduced to avoid contact with the reinforcing bars however in no case shall the hydro-demolition depth be less than 0.5 inch nor shall the overall depth of the overall deck removal be less than 1.5 inches. Contractor shall refer to the Ground-Penetrating Radar special provision SP-C for additional requirements.

Mechanical Milling shall be performed in accordance with the Specifications for Type A Milling at a depth of 1.5 inches. If GPR test results indicate that the top mat of reinforcement is less than 1.25 inches from the deck surface, and with the approval of the Engineer, the Contractor may reduce the height of milling to avoid damage to the reinforcing steel. A reduced mill depth of $\frac{3}{4}$ inches shall only be used in these areas with the approval of the Engineer.

The Contractor shall use extra caution during the milling procedures. Damaged reinforcing steel shall be repaired in accordance with Section 412.03 of the 2016 Road and Bridge Specifications at no additional cost to the Authority and with no extension of contract time. Reinforcing steel shall be ASTM A615 Grade 60 deformed and plain uncoated.

Due to the limitations of the milling machine, the Contractor shall utilize jack hammering and saw cutting to remove unsound concrete not removed during the milling process. When saw cutting the deck near bridge joints and scuppers, adequate shielding to the approval of the Engineer should be used to protect nearby live traffic and pedestrians that may be present both near and below the work area, from sparks and other debris.

The Contractor will be permitted, at his discretion to allow traffic to drive on the milled surface for no more than 48 hours after milling (e.g. the deck could be milled Wednesday night before a weekend lane closure). An extension of the 48-hour limit may be granted in writing at the discretion of the Engineer. If traffic is allowed on milled surfaces, temporary pavement wedges must be installed per VDOT Detail 305.01. Additional signing and use of Temporary Type D pavement markings shall be required to adequately warn motorists of this condition and delineate the lanes. No lane shall be opened to traffic until these pavement wedges are installed and temporary markings are installed. All lanes of the bridge must be open and available to traffic Monday through Friday during peak rush hour times. Contractor shall be responsible for

maintaining milled surfaces when open to traffic. Contractor shall maintain pavement wedges and have proper drainage measures in-place prior to forecasted inclement weather. Drainage measures shall be submitted to the Engineer for approval prior to installation. All equipment, materials including Type D pavement markings, and labor required to maintain drainage measures and pavement wedges of the milled surface will be incidental.

Contractor shall refer to the Maintenance of Traffic special provision SP-E for lane closure times, a copy of VDOT Detail 305.01, and liquidated damages. All asphalt, asphalt placement and removal shall be incidental to the mechanical milling.

The limits of work will be from the following;

Bridge:	Location	Work Limits:
49	S Cherry Street	Abutment to Abutment
50	S Laurel Street	Abutment to Abutment
51	S Belvidere Street	Abutment to Abutment
54	S 2 nd Street	Abutment to Abutment
55	S 3 rd Street	Abutment to Abutment
56	S 4 th Street	Abutment to Abutment
57	S 5 th Street	Abutment to Abutment
58	S 7 th Street	Abutment to Abutment
60	S 10 th Street	Abutment to Abutment
62	11 th Street Ramp Exit	Abutment to Abutment

The Contractor will mill to the edge of the joint. Any damage to the joints shall be repaired up to full joint replacement to the approval of the Engineer and at no additional cost to the RMTA and with no extension of contract time.

III. HYDRO-DEMOLITION

Type A Hydro-Demolition shall be performed in accordance with the Hydro-Demolition equipment Manufacturer's recommendations, these provisions, and as directed by the Engineer.

The Contractor shall perform iterative passes using hydro-demolition equipment over the bridge deck surface until the concrete is removed to a minimum of ½ inch below the previously milled depth.

If unsound concrete is encountered at this depth, the concrete shall be further removed until sound concrete is encountered to the approval of the Engineer. No additional payment shall be

made for removal of unsound concrete below the initial 1/2 inch. Areas exist where concrete patches cover the deck surface to be removed. A quantity and volume of the patches are not known. After milling and hydro-demolition, excessively deep patches will be evaluated by the Engineer to determine if they are sound.

The Contractor shall take all necessary steps to avoid cutting the reinforcing steel. Any bars damaged as a result of the hydro-demolition operations shall be repaired in accordance with Section 412 of the 2016 Road and Bridge Specifications at no additional cost to the RMTA and with no extension of contract time. Reinforcing steel shall be ASTM A615 Grade 60 deformed plain and uncoated. Any reinforcing steel that is left unsupported after the hydro-demolition operations shall be adequately tied and supported as soon as practical before beginning overlay operations.

Demolition shall continue until planned depth is reached and sound concrete is encountered. If demolition continues beyond sound concrete depth, VESLMC shall be placed in limits of erroneous concrete removal, as defined by the Engineer and at no additional cost to the RMTA and with no extension of contract time.

The Contractor will perform the Hydro-Demolition to the edge of the sliding plate joints. Any damage to the joints shall be repaired up to full joint replacement at the Contractor's expense and to the approval of the Engineer with no extension in contract time.

III.A. HYDRO-DEMOLITION WORK PLAN

Prior to beginning the work the Contractor shall submit to the Engineer for approval a hydro-demolition work plan. This work plan shall include complete details of the following items:

a) The Contractor's means of controlling runoff water. The Contractor shall make every attempt to prevent the runoff water from flowing onto lanes of traffic adjacent to the work or leaking onto roadways and parking lots below the bridge. No discharge of water or debris will be permitted into the James River or Kanawha Canal. Bridge scuppers will require inlet protection. Furthermore, the Contractor shall be responsible for compliance with all environmental laws and regulations regarding the discharge of runoff water into the environment off-site. The Contractor shall provide specific details of the method of runoff water treatment and collection, including waste tank locations if used, and shall obtain all necessary permits required for its legal disposal offsite. Onsite disposal of any waste water or other products will not be permitted.

- b) The Contractor's method of safety shielding to prevent overspray into traffic. Shielding shall be installed as necessary to ensure the containment of all dislodged concrete, debris, and sparks. The Contractor shall be aware that containment is required to protect the traveling public both adjacent to and below the work area, and pedestrian who are walking near and under the bridge.
- c) The Contractor's method for handling expected and unexpected blow-through of the deck. This method shall provide for containment of runoff water, debris, coating repair and the protection of the area under the bridge deck. These methods should account for areas of the bridge over land, water, and the railroad. In the event of an unexpected blow-through, the Contractor shall immediately stop the hydro-demolition equipment and verify sufficient containment and protection procedures are in place and supplement as necessary. The Contractor shall ensure the equipment is correctly calibrated prior to restarting the hydro-demolition operation. The cost of any blow-through the deck will be incidental to the hydro-demolition and repaired to the approval of the Engineer at the Contractor's expense with no extension of contract time.
- d) The Contractor shall submit Maintenance of Traffic plans to the Engineer for review and approval. See Maintenance of Traffic special provision SP-E for details and requirements.
- e) A method for preparing, repairing and overlaying the deck at the longitudinal construction joint and outlining how the inherent limitations of hydro-demolition working adjacent to the previously installed overlay will be handled. Details and methodology should include method to ensure that unsound concrete will not be left in this area and how overlay bond will not be compromised. The Contractor shall include concrete removal details at the joints to maintain design width.

III.B. HYDRO- DEMOLITION EQUIPMENT

Hydro-demolition equipment shall consist of a water supply system, high- pressure water pumping system, and a demolition unit. The demolition unit shall be fully automated and provide precise control of the water jet(s) to facilitate a thorough and consistent removal operation. If required, the hydro-demolition equipment shall be capable of removing concrete from around and below the reinforcing steel. Such removal may require several passes of the equipment; however, payment shall be based on the square yards of deck surface at the depth of removal specified on the plans regardless of the number of passes necessary to achieve the depth specified. The hydro-demolition equipment shall clean all exposed reinforcing steel of rust, concrete fragments, laitance, loose scale, and other coatings that may inhibit or destroy bonding

with the new concrete. Reinforcing steel not thoroughly cleaned during hydro-demolition concrete removal shall be handtool cleaned. Epoxy coated steel damaged during removal operations need not be recoated. Any damage to the scuppers shall be repaired up to full replacement to the approval of the Engineer at the Contractor's expense and with no extension of contract time.

Qualified personnel certified by the equipment manufacturer shall operate the hydro-demolition equipment. Operator certification shall be submitted to the Engineer for review at a minimum (7) days prior to beginning the hydro-demolition operations.

To guarantee that the hydro-demolition operations will not be interrupted for more than (3) consecutive hours, the Contractor shall maintain on site, an adequate supply of wear items, repair parts, and service personnel. No adjustment to the contract time will be considered due to delays associated with repairs or obtaining replacement equipment. The Contractor shall be responsible for supplying the water and all other materials necessary to do the specified work and for the disposal of all removed concrete and other debris offsite.

III.C. TESTING AND CALIBRATION OF THE HYDRO-DEMOLITION EQUIPMENT

The Engineer shall designate a trial area in which the Contractor shall demonstrate that the equipment, personnel, and method of operation are capable of producing results satisfactory to the Engineer. The trial area shall consist of two areas, each approximately 50 square feet. The first trial area shall consist of sound concrete as determined by the Engineer. The second trial area shall consist of deteriorated concrete as determined by the Engineer. The hydro-demolition equipment shall first be calibrated on the sound trial patch to remove concrete to a depth of 1/2 inch. The hydro-demolition equipment shall then be used to remove concrete from the deteriorated trial patch using the operating parameters established from the sound trial patch. If the deteriorated concrete is sufficiently removed as determined by the Engineer, then the hydro-demolition equipment shall be considered as calibrated.

These operating parameters shall be used as the basis for the production removal. Anytime the hydro-demolition equipment is transported offsite and returned, the equipment shall be recalibrated to the approval of the Engineer and at the Contractor's expense with no extension of contract time.

The Contractor shall record the calibrated hydro-demolition equipment's operating parameters and provide the Engineer with a copy. The record shall include at least the following information:

- a) Water pressure (gauge)
- b) Machine staging control (step)
- c) Nozzle size
- d) Nozzle travel speed

After calibration, the hydro-demolition equipment operating parameters shall not change unless directed or approved by the Engineer. In lieu of this method of calibration, the hydro-demolition equipment Manufacturer's Representative may propose an alternate method of calibration which is more suitable for this work. This method shall only be used with the approval of the Engineer.

III.D. SURFACE PREPARATION AFTER HYDRO-DEMOLITION

After hydro-demolition operations, the Contractor shall clean up all debris before it dries on the deck. Clean-up operations shall directly follow the hydro-demolition process to prevent the debris from resettling or reattaching itself to the surface of the sound concrete. Should the hydro-demolition debris dry on the surface of the sound concrete, the Contractor shall clean the concrete or other surfaces to the Engineer's satisfaction at no additional cost to the RMTA and with no extension of contract time.

Immediately after hydro-demolition and clean-up operations, the Contractor shall sound the deck and remove all remaining loose and unsound concrete at the direction of the Engineer. Hand-work will be utilized only when unsound concrete cannot be removed due to the limitations of the hydro-demolition equipment. The Contractor shall predominantly perform all hand-work using a hydro-demolition wand. 15lb. pneumatic hammers may be utilized only with the approval of the Engineer. In addition to loose and unsound concrete, areas of shadowing shall be removed at the direction of the Engineer where the top mat of reinforcing steel has been revealed in its entirety.

Areas of blow-through to receive full depth repair shall be squared-up and additional concrete removed to obtain a minimum edge thickness of 1 ½ inch at the bottom of the deck. Additional cleaning of the exposed steel reinforcement will not be required for areas of the deck treated by hydro-demolition, provided that concrete is placed within 48 hours of the hydro-demolition operation.

Additional cleaning of the exposed steel reinforcement by abrasive blasting or high-pressure water blast shall be performed if steel reinforcement is exposed for longer than 48 hours prior to placing concrete or if a particular area of the deck was treated by processes other than hydro-demolition. Water containment for these operations will be required.

Once all concrete fragments are removed from the deck surface the Contractor shall form the joints using rigid Styrofoam, wood, or other materials as approved by the Engineer. The Contractor shall use elevation measurements taken during the GPR testing to ensure that the new joints match both the elevations on each parapet and cross slope of the existing joints. All spaces between newly formed joints shall be uniform in width so that one size of Evazote joint sealant material can be installed once the concrete has properly cured. All formwork shall be securely fastened prior to the beginning of placing the VESLMC Overlay.

The final prepared surface shall be free of dirt, oil, concrete fragments, abrasive blast residue, standing water, or any other material that may adversely affect the bond of the concrete. If the Contractor uses compressed air, it shall be oil-free. Any areas of the prepared deck surface contaminated as a result of the Contractor's operations; with oil, grease or other materials detrimental to good bonding of the concrete, shall be removed to such depth as is necessary to achieve satisfactory bond as determined by the Engineer. Cleaning and removal necessitated by contamination caused by the Contractor's operations shall be performed at no additional cost to the RMTA and without extension of the contract time.

IV. LATEX MODIFIED CONCRETE OVERLAY

Latex Modified Concrete overlay shall be Very Early Strength Latex Modified Concrete (VESLMC). Patches and overlays shall be constructed in accordance with the requirements of Section 217.13 and 425 of the Specifications of the Virginia Department of Transportation and the following:

Requirements for Very Early Strength Latex Modified Concrete (VESLMC):

Compressive Strength, minimum (ASTM C39):

3 hours: 2500 psi

24 hours: 3500 psi

Compressive strength specimens shall be cured in the molds until tested and in conditions identical to the material placed on the structure.

Permeability, maximum at 28 days, AASHTO T277 and ASTM C1202: 1000 coulombs.

Permeability samples shall be cured 1 day in the molds and air cured 28 days.

Contractor shall submit compressive strength and permeability test results to Engineer for approval (14) days prior to initial placement of VESLMC.

Prior to placing the overlay, the Contractor shall calibrate the mobile concrete mixers. Once the mixers are calibrated, the mixtures shall be sampled and tested for slump and air content. Specimens shall be prepared and tested to demonstrate that the concrete mixture will obtain a compressive strength of at least 2500 psi within the curing period, and at the curing temperatures in which the overlay will be placed. The compressive strength shall reach at least 3500 psi at an age of 1 day. During the overlay, placement samples shall be taken for testing of compressive strength and permeability but slump and air content measurements will not be required.

The overlay shall be one continuous pour over the entire length of the slab between joints. All lanes and shoulders shall be poured back in essentially the same location. The Contractor will not be permitted to have a "cold joint" in the transverse direction along any span between the bridge joints. Additionally, the Contractor will not be allowed to place any longitudinal cold joint in the vehicle wheel path as determined by the Engineer.

The Contractor shall furnish VESLMC overlay at a depth of 2 inches, however in areas where the milling is limited due to the depth to the top mat of reinforcement a minimum depth of 1 1/2 inches will be allowed with approval of the Engineer. This depth will increase in areas where additional unsound concrete was removed.

The Contractor shall ensure that all concrete trucks leaving the work site have been properly cleaned to ensure that concrete deposits are not left on any roadway as they return to the staging area to be refilled.

Placing and consolidating VESLMC shall be conducted to form a compact, dense, impervious mass of consistent texture that will show uniform faces on exposed surfaces. Any section of concrete found to be defective shall be removed or repaired as directed by the Engineer.

The concrete shall be maintained in a moist condition by fogging after screeding and until covered with the sheeting. Fogging with pressure sprayers acceptable to the Engineer and sufficient to maintain a moist surface shall be required. Burlap used to aid in curing shall be cut into manageable pieces. Material shall be in strips no greater than the width of the lane being poured by an arm span in length to sufficiently cover the freshly placed concrete overlay. The burlap must be soaked in water and rung out before being placed onto the deck. Spraying water

on burlap alone will not be allowed. Burlap shall be taught and placed in a manner as not to adversely affect the final riding surface. Dragging the wet burlap across the new LMC will not be allowed. Moist burlap shall be placed in such a manner as to provide a uniform and even finished surface. There shall be a minimum of 1 foot of overlap between pieces of burlap. The Contractor shall also use a soaker hose, or misting hose to help keep the burlap wet for the first 90 minutes of curing.

The deck surface shall be tested with a 10-foot straightedge and rescreeded as many times as is necessary to ensure a smooth riding surface. The straightedge shall be held in successive positions at the edges and quarter points and on the centerline, parallel thereto and in contact with the surface. Advancement along the deck shall be in successive stages of not more than the length of the straightedge. The surface shall also be checked transversely at the ends, quarter points, and center of the span. The top of the proposed VESLMC overlay shall match the line and grade between the adjacent joints.

Areas showing high spots or depressions of more than 1/8 inch in 10 feet in the longitudinal direction and 1/4 inch in 10 feet in the transverse direction shall be struck off or filled with freshly mixed concrete. Attention shall be given to ensure that the surface across joints conforms to the requirements for smoothness.

V. VALUE ENGINEERING

Value engineering proposals may be submitted regarding any part of this special provision, once the contract has been awarded, except for substitution of the Hydro-Demolition. Shot-blasting will not be permitted under any circumstance as an alternate method of concrete removal. All value engineering proposals will be evaluated based on Section 104.02 (c) of the Specifications.

VI. QUANTITIES

Presented below are the approximate quantities of Type A Milling, Type A Hydro-Demolition, furnishing and placing the VESLMC.

<u>Bridge:</u>	Type A Milling, Type A Hydro- Demolition, Placing VESLMC	Furnishing VESLMC
	(SY)	(CY)
49	499	34.6
50	645	44.7
51	2,461	170.8
54	1,224	85.0
55	944	65.5
56	871	60.4
57	712	49.4
58	664	46.1
60	538	37.3
62	592	41.1

VII. FINAL PAYMENT

In addition to other items contained in this special provision, all bridge scuppers shall be cleaned prior to final payment. Cleaning of all scuppers includes removing dirt, trash, concrete overspray and other debris from the grates, connections and pipes so that the scuppers are in full working order. The Contractor and the Engineer shall agree on a suitable technique for debris removal in the field. Typical methods include vacuuming and / or pressure washing. The Contractor shall dispose of all debris properly off site. The Contractor shall be aware that access to pipes and other connections may need to be accessed from below the bridge. The cost of cleaning all bridge scuppers shall be incidental to the Type A Milling quantity.

VIII. METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Type A Milling shall be measured and paid for on a square yard basis for the depth specified in the plans or as approved by the Engineer. The bid price will be considered full compensation for the removal and disposal of unsound and loose concrete, replacement of any damaged

reinforcing steel, pavement wedges, if used (including maintaining the pavement wedges, disposal of asphalt and cleaning the deck after removal), installation and maintenance of drainage measures on milled surfaces, cleaning of all bridge scuppers, connections, and pipes, and all labor, tools, equipment, materials, and incidentals required to complete the work.

Payment will be made under:

Pay Item

Type A Milling 1.5"

Pay Unit

Square Yards

Type A Hydro-Demolition shall be measured and paid for on a square yard basis. The bid price will be considered full compensation for surface preparation and roughening the bridge deck, the removal and disposal of all unsound and loose concrete, sounding of the deck after hydro-demolition, any additional concrete removal necessary after sounding, cleaning of reinforcing steel, replacement of any damaged reinforcement, repairing any areas of blow-through the deck, cleaning the deck surface after demolition, the collection, filtering, and disposal of waste water off-site in accordance to all applicable environmental laws and regulations, any required environmental permits and documentation to comply with such laws and regulations, preparation of a work plan and containment system, trial areas, shielding protection for the public near and below the bridge, and all labor, tools, equipment, materials, and incidentals required to complete the work.

Payment will be made under:

Pay Item

Type A Hydro-Demolition - ½" minimum

Pay Unit

Square Yards

Very Early Strength Latex Modified Concrete (VESLMC) Overlay will be measured and paid for under the following (2) Items:

Furnish Very Early Strength Latex Modified Concrete shall be measured in cubic yards and will be paid for at the contract unit price per cubic yard. This price shall be full compensation for trial batching, compressive strength and permeability testing, producing the Very Early Strength Latex Modified Concrete, and delivering it to the job site. The Engineer may direct additional depth of Very Early Strength Latex Modified Concrete to address cross slope and other surface irregularities and rideability issues. Additional Very Early Strength Latex Modified Concrete

beyond the depth range of the pay item that is requested to address such issues, at the direction of the Engineer, will be compensated for in accordance with VDOT Specifications Sections 104.02 and 109.05. Only those volumes of additional Very Early Strength Latex Modified Concrete that are approved for additional payment by the Engineer prior to or during the placement of the overlay will be considered for additional payment.

Payment will be made under:

Pay Item

Furnish Very Early Strength
Latex Modified Concrete

Pay Unit

Cubic Yards

Place Very Early Strength Latex Modified Concrete shall be measured and paid for at the contract unit price per square yard. This price shall also include handling, finishing, and curing the Very Early Strength Latex Modified Concrete and all material, labor, tools, equipment, and incidentals necessary to complete the work. Very Early Strength Latex Modified Concrete shall be placed to the minimum depth as specified in the plans and verified by the Engineer prior to and during placement operations. Placement also shall include those depths necessary to accomplish all partial and full depth repairs at no additional cost to the Authority. Any survey cost associated with matching the proposed overlay to the line and grade between the adjacent joints shall be incidental to this work.

Payment will be made under:

Pay Item

Place Very Early Strength
Latex Modified Concrete

Pay Unit

Square Yards

SPECIAL PROVISION GROUND-PENETRATING RADAR TESTING

DESCRIPTION

This work shall consist of locating areas of high steel along the deck using Ground-Penetrating Radar (GPR) prior to any mechanical milling. The Contractor shall report their findings to the Engineer for approval. The work locations are on the RMTA Bridges 49, 50, 51, 54, 55, 56, 57, 58, 60 and 62.

When the GPR testing is being executed, the Contractor shall take and mark out measurements of the existing deck elevation every 25 feet on both sides of each roadway/ramp. Additionally the elevations at each joint shall be measured on each side of the road/ramp. No permanent marks shall be applied to the parapet. Any marks or scuffs to the parapets shall be repaired at the Contractor's expense, to the approval of the Engineer and with no extension in contract time.

The Contractor shall measure the top layer of reinforcing bars to $\pm \frac{1}{4}$ ". Testing of the deck shall be in accordance of ASTM D6087-08 and ASTM D6432-11.

The Contractor shall submit complete findings from the GPR testing to the Engineer for approval. The report shall contain pictures, exhibits, and maps to clearly locate areas of high steel. In this report, the Contractor shall make suggestions of reduced mechanical milling depths and limits of reduced depth to avoid damage to the reinforcing bars. Any change in milling depth shall be approved by the Engineer.

Placement of Maintenance of Traffic devices will be required to complete this work. All testing performed shall be completed within the allowable lane closures as specified in the Maintenance of Traffic Special Provision SP-E.

MEASUREMENT AND PAYMENT

Ground-penetrating Radar Testing will be measured by lump sum and be paid for at the contract price. This price shall be full compensation for testing the concrete, analysis, production and printing of the reports, all equipment required, materials, labor, and incidentals required to complete the work. Any Maintenance of Traffic operations required will be paid for under the Maintenance of Traffic item, see Special Provision SP-E.

Pay Item:

Ground-penetrating Radar Testing

Pay Unit:

Lump Sum

SPECIAL PROVISION EXPANSION JOINT SEALANT

DESCRIPTION

This work consists of removing joint material for its entire length including parapet walls, sandblasting the joint substrates clean, applying an epoxy bonder to both the joint substrate and joint seal and installation of a low density, closed cell, cross-linked nitrogen blown joint seal.

All repair work, materials, methods and equipment shall be in accordance with the joint sealant manufacturer's recommendations unless specified in this special provision or as directed by the Engineer.

The Contractor shall obtain the most recent copies of the sealant manufacturer's current installation guidelines and equipment recommendations and submit to the Engineer (7) days prior to any joint installation or removal.

MATERIALS

Materials shall be delivered to the job site in the manufacturer's original sealed containers. Each container shall be marked with the manufacturer's name and lot number. Materials will be accepted based on the manufacturer's certification, subject to the storage and handling requirements of the manufacturer.

Joint Sealant shall be the Wabo Evazote UV seal or Engineer approved equal.

Backer rod shall be a round, flexible, continuous-length, non-absorbent, non-gassing, non-staining and non-shrinking material extruded from a closed-cell polyolefin or equivalent that is compatible with the joint sealant and approved for use by the sealant manufacturer.

Wherever the Wabo Evazote UV seal is to be applied, the epoxy bonder shall be the recommended epoxy bonder listed in the *Watson Bowman ACME* document for the type of seal. Mixing and application apparatus utilized for sealant application must be as recommended by the manufacturer.

LOCATION

Presented below is a table of currently identified Joint Sealant replacements locations. These estimated quantities below are provided for planning purposes only and are in no way a guarantee of actual quantities. In addition to the length of the joint, joint sealant material shall continue up to the sloped face and stop at the vertical face of both bridge parapets. The Contractor is responsible to inspect the structure locations prior to bidding.

Bridge No.	Number of Locations	Joints (LF)
49	3	152
50	4	202
51	5	711
54	4	236
55	3	170
56	3	170
57	3	170
58	3	183
60	3	170
62	3	105

COORDINATION AND SCHEDULING

Contractor should be aware that it may be difficult to install the joint sealant material in one continuous piece across all lanes of traffic. The Contractor shall refer to the Maintenance of Traffic special provision SP-E for details on scheduling restrictions.

PROCEDURES

It is the Contractor's responsibility to measure the openings at each joint location. Measurements will be taken at each location in accordance with the manufacturer's guidelines. Seal material shall be sized 25% larger than the actual joint width at neutral temperature. All joints shall be uniform and maintain design width prior to installing joint seals. Non uniform joints will be saw cut to design width with no additional cost to the Authority.

Please note measurement taken during this stage will not be used for payment. The procedures for taking measurements for payment are described below.

The Contractor shall follow the Manufacturer's recommendations for installation of the Joint Sealant Material and submit to the Engineer for approval (7) days prior to initial installation. The Contractor shall completely remove the old seal and sealant from transverse joint, longitudinal joint and parapet joint if present. The exposed substrate shall be sandblasted thoroughly, removing all visible residue and contaminants to assure a good bonding surface. Wire brushing will not be allowed. The concrete substrate, if present, shall be sandblasted until clean, sound, free of contaminants and steel armor joint to "Near White" SSPC-SP10. All dust and debris shall be blown out with moisture-free and oil-free compressed air immediately prior to application of the epoxy bonder.

PROJECT CLEANUP

After installation of Joint Sealant material, all waste materials such as: existing joint sealant removed, sandblasting debris, containers, boxes, packages, wrappers, etc. generated under this project shall be disposed of properly off site. All sandblasting media shall be properly cleaned and removed from area below bridge. Failure to properly remove and clean spent media from pier caps may delay final payment of this contract. In addition the new LMC overlay and parapet wall must be cleaned of any marks, excess epoxy or other discolorations to the satisfaction of the Engineer.

MEASUREMENT AND PAYMENT

Measurement of Joint Sealant replacement shall be per Linear Foot of joint sealant. Contractor shall measure the joint width required to fit each joint, furnish and install the appropriate size.

Payment shall include furnishing and installing the new joint, removing and disposing of the existing sealant, sandblasting and disposing of the sandblast media, and furnishing and installing the epoxy bonder and joint sealant in accordance with the sealant manufacturer's guidelines or as approved by the Engineer. Any Maintenance of Traffic operations required will be paid for under the Maintenance of Traffic item, see Special Provision SP-E.

Payment will be made under:

Pay Item:

Joint Sealant Replacement

Pay Unit:

Linear Foot

SPECIAL PROVISION MAINTENANCE OF TRAFFIC

MAINTENANCE OF TRAFFIC

All Maintenance of Traffic (MOT) operations shall be conducted in accordance with the current versions of the Manual on Uniform Traffic Control Devices (MUTCD), the Virginia Work Area Protection Manual (WAPM), and subject to the approval of the Engineer, VDOT, City of Richmond, and the RMTA. The Contractor shall prepare and submit a Maintenance of Traffic (MOT) Plan for review and approval by the Engineer for each phase of construction. The Contractor's signing and MOT plan shall consider the efforts of adjacent contractors, motorists and any pedestrian traffic adjacent or below the work area.

The Contractor shall provide the Engineer no less than 7 calendar days notice before closing any ramp or bridge. A minimum of 10 calendar days notice is required if the request is to close Boulevard Bridge. A minimum of 14 calendar days notice is required if the request is to close any lane that would impact or extend onto a VDOT/City of Richmond roadway. Approval to close any ramp or bridge is subject to review and consideration of event traffic in the vicinity.

No work or installation of any MOT devices may commence unless the work can be completed and the area reopened to traffic within the allowable lane closure hours, AND the Contractor has a contingency plan approved by the Engineer. No less than (7) calendar days prior to beginning the work, the Contractor shall submit a contingency plan to the Engineer for approval. This plan shall detail temporary protective measures to allow for restoration of the road for use when the Contractor is unable to complete a repair due to unusual circumstances beyond his control. Temporary protective measures shall only be used in emergency situations and are not allowed to remain in place for an extended period of time without authorization by the Engineer.

The Contractor shall be aware that no traffic control devices (such as Group II channeling devices, cones, Arrow Boards, etc.), with the exception of advance warning signs shall be placed on any median, roadway or shoulder prior to the time shown. Advance warning signs may be placed not more than thirty (30) minutes prior to the begin time herein. All traffic control devices including advance warning signs shall be removed, the roadway free of debris, and the lane open to traffic by the end time herein.

The Contractor shall be aware that failure to comply with the times set forth herein may result in liquidated damages.

Prior to setting any lane or shoulder closures, the Contractor shall meet with the Engineer to review MOT for each of the lane closures the Contractor intends to perform. The Contractor shall prepare a sketch identifying the signs to be used and their respective locations. Sketches shall be prepared in accordance with the current version of the WAPM. The Contractor shall coordinate these meetings with the Engineer, so that the RMTA has no less than (7) days after

the meeting ends, to advise the motoring public of upcoming traffic restrictions. Maintenance and installation of all lane closures shall be the sole responsibility of the Contractor.

BRIDGE DESCRIPTIONS

Bridge 4 – SB Powhite Parkway over Chippenham Parkway.

Bridge 4 runs north-south and carries Southbound Powhite Parkway over northbound and southbound Chippenham Parkway. It has a total of 4 lanes with the two left most lanes designate as left exit lanes for Southbound Chippenham Parkway. One lane of traffic must be maintained at all times. Available work times and durations will be subject to the Work In Street Permit (WISP) issued by the City of Richmond.

BRIDGE 36 – Maplewood Avenue over the Downtown Expressway Connector.

Bridge 36 runs east-west and carries Maplewood Avenue between McCloy Street and South Sheppard Street. It has a total of 2 lanes with a concrete sidewalk adjacent to the eastbound lane. One lane of traffic must be maintained at all times. Available work times and durations will be subject to the Work In Street Permit (WISP) issued by the City of Richmond.

BRIDGE 46 – South Allen Avenue over Downtown Expressway.

Bridge 46 runs North-South and carries S Allen Avenue between W Cary Street and Colorado Avenue. It has a total of 2 lanes (1 in each direction). A concrete sidewalk is adjacent to the northbound and southbound lanes. One lane of traffic must be maintained at all times. Available work times and durations will be subject to the Work In Street Permit (WISP) issued by the City of Richmond.

BRIDGE 47 – South Randolph Street over Downtown Expressway.

Bridge 47 runs North-South and carries S Randolph Street between W Main Street and Colorado Avenue/S Harrison Street. It has a total of 2 lanes (1 in each direction). A concrete sidewalk is adjacent to the northbound and southbound lanes. One lane of traffic must be maintained at all times. Available work times and durations will be subject to the Work In Street Permit (WISP) issued by the City of Richmond.

BRIDGE 48 – South Harrison Street over Downtown Expressway.

Bridge 48 runs North-South and carries S Harrison Street between W Main Street and Colorado Avenue. It has a total of 2 lanes (1 in each direction) and street parking on both sides of the bridge. A concrete sidewalk is adjacent to the northbound and southbound lanes. One lane of traffic must be maintained at all times. Available work times and durations will be subject to the Work In Street Permit (WISP) issued by the City of Richmond.

BRIDGE 49 – S Cherry Street over the Downtown Expressway.

S Cherry Street is an urban local street that is only northbound from Oregon Hill Parkway to W Main Street. Bridge 49 has one northbound travel lane, a concrete sidewalk and street parking on both sides. Traffic must be maintained at all times and coordinating restrictive street parking

where necessary will necessitate a conservative approach to MOT. Available work times and durations will be subject to the Work In Street Permit (WISP) issued by the City of Richmond.

BRIDGE 50 – S Laurel Street over the Downtown Expressway.

South Laurel Street is a major collector that is only southbound from West Main Street to Oregon Hill Parkway. Bridge 50 has a total of one southbound travel lane, a concrete sidewalk and street parking on both sides. Traffic must be maintained at all times and coordinating restrictive street parking where necessary will necessitate a conservative approach to MOT. Available work times and durations will be subject to the Work In Street Permit (WISP) issued by the City of Richmond.

BRIDGE 51 – S Belvidere Street over the Downtown Expressway.

Bridge 51 carries South Belvidere Street over the Downtown Expressway. South Belvidere Street is considered an Other Principal Arterial and runs north-south from West Main Street to the Robert E Lee Bridge over the James River. The bridge has a total of 6 travel lanes (3 northbound and 3 southbound) separated by a raised median and a concrete sidewalk adjacent to both directions. Traffic must be maintained at all times. Available work times and durations will be subject to the Work In Street Permit (WISP) issued by the City of Richmond.

BRIDGE 54 – S 2nd Street over the Downtown Expressway.

Bridge 54 runs north-south and carries South 2nd Street over the Downtown Expressway. S 2nd Street runs from East Main Street to South Belvidere Street and is a Minor Arterial. The Bridge has a total of 4 lanes (2 in each direction) and a sidewalk adjacent to both sides. Traffic must be maintained (1 lane in each direction) at all times. Available work times and durations will be subject to the Work In Street Permit (WISP) issued by the City of Richmond.

BRIDGE 55 – S 3rd Street over the Downtown Expressway.

Bridge 55 runs southbound and carries South 3rd Street over the Downtown Expressway. South 3rd Street runs from East Main Street to West/East Byrd Street just over the Bridge and is a Minor Arterial. Bridge 55 has two southbound lanes with street parking and a sidewalk adjacent to both sides. Traffic must be maintained at all times. Available work times and durations will be subject to the Work In Street Permit (WISP) issued by the City of Richmond.

BRIDGE 56 – S 4th Street over the Downtown Expressway.

Bridge 56 carries South 4th Street over the Downtown Expressway. South 4th Street is considered a Minor Arterial and runs from East Main Street to East Byrd Street. The Bridge has two northbound lanes and a concrete sidewalk adjacent to both the northbound and southbound lanes. One lane of traffic must be maintained at all times. Available work times and durations will be subject to the Work In Street Permit (WISP) issued by the City of Richmond.

BRIDGE 57 – S 5th Street over the Downtown Expressway.

Bridge 57 carries South 5th Street over the Downtown Expressway. South 5th Street is a Major Collector and runs north-south between East Main Street and Tredegar Street. The Bridge has a

total of 4 lanes (2 in each direction) and a concrete sidewalk adjacent to the northbound and southbound lanes. One lane of traffic must be maintained at all times. Available work times and durations will be subject to the Work In Street Permit (WISP) issued by the City of Richmond.

BRIDGE 58 – S 7th Street over the Downtown Expressway.

Bridge 58 carries South 7th Street over the Downtown Expressway. South 7th Street is a Major Collector and runs between East Main Street and Tredegar Street. The Bridge has four northbound lanes and a concrete sidewalk adjacent to the northbound and southbound lanes. One lane of traffic must be maintained at all times. Available work times and durations will be subject to the Work In Street Permit (WISP) issued by the City of Richmond.

BRIDGE 60 – S 10th Street over the Downtown Expressway..

Bridge 60 carries South 10th Street over the Downtown Expressway. South 10th Street is an Urban Local Street and runs north-south between East Main Street and Tredegar Street. The Bridge has four lanes (2 in each direction) and a concrete sidewalk is adjacent to the northbound and southbound lanes. One lane of traffic must be maintained at all times. Available work times and durations will be subject to the Work In Street Permit (WISP) issued by the City of Richmond.

BRIDGE 62 – Ramp E-11th Over Ramp 12th-W and 12th St.

Bridge 62 carries the Westbound Downtown Expressway 11th Street Exit Ramp over South 12th Street. The Bridge has two lanes. One lane of traffic must be maintained at all times. Available work times and durations will be subject to the Work In Street Permit (WISP) issued by the City of Richmond.

DOWNTOWN EXPRESSWAY (DTE) & BELTLINE EXPWY. CONNECTOR TO DTE

Eastbound DTE/Northbound Connector: The road/ramp is to be clear by 6:00 a.m.

Westbound DTE/Southbound Connector: The road/ramp is to be clear by 3:00 p.m.

TIMES OF ALLOWABLE SINGLE LANE CLOSURES:

(1) E.B. DTE / N.B. Connector:

A. Weekdays – 10:00 a.m. to 6:00 a.m.

B. Weekends – 10:00 a.m. Friday – 6:00 a.m. Monday

(2) W.B. DTE / S.B. Connector:

A. Weekdays – 6:00 a.m. to 3:00 p.m. & 7:00 p.m. to 6:00 a.m.

B. Weekends – 7:00 p.m. Friday – 3:00 p.m. Monday

TIMES OF ALLOWABLE MULTIPLE LANE CLOSURES: Multiple lane closures which restrict open lanes to (1) one in a single direction.

(1) E.B. DTE / N.B. Connector:

A. Weekdays – 7:00 p.m. to 6:00 a.m.

B. Weekends – RMTA shall decide allowable times based on individual weekend request by Contractor

(2) W.B. DTE / S.B. Connector:

- A. Weekdays – 9:00 p.m. to 6:00 a.m.
- B. Weekends – RMTA shall decide allowable times based on individual weekend request by Contractor

NUMBER OF LANES CLOSED (ANY DIRECTION)

- All roadways must have a minimum of (1) one lane open at all times. If a full roadway closure is required, the Contractor, the Authority and the Engineer shall schedule a mutually agreeable time. The length of the full closure shall be minimized by the Contractor.
- Where three (3) or more roadway lanes exist, the number of lanes which the Contractor may close is at the Engineer's discretion, based on the geometry of the area where lane/shoulder closures are desired.

DTE TOLL PLAZA (GATED LANES) AND EXPRESS LANES (ORT ZONE) RESTRICTIONS

NUMBER OF LANES CLOSED W.B DTE TOLL PLAZA (GATED LANES)

- No more than one lane closure will be permitted at any time for the cash lanes 43-46.
One (1) Full Service lane must remain open at all times.
No Toll Lane shall be closed from 3:00 p.m. to 7:00 p.m.
Lane 45 (Secure Booth) may not be closed from 11:00 p.m. to 7:00 a.m. any day

NUMBER OF LANES CLOSED E.B DTE TOLL PLAZA (GATED LANES)

- There shall be at least three toll lanes open in a single direction at all times.
- One (1) Full Service lane must remain open at all times.
- No Toll Lane shall be closed from 3:00 p.m. to 7:00 p.m.
- Lane 55 (Secure Booth) may not be closed from 11:00 p.m. to 7:00 a.m. any day

NUMBER OF LANES CLOSED W.B DTE EXPRESS (ORT) LANES

- No more than two lane closures will be permitted at any time for the WB express lanes 47- 49.
- No Toll Lane shall be closed from 3:00 p.m. to 7:00 p.m.

POWHITE PARKWAY

Northbound/Eastbound: The road is to be clear by 6:00 am.

Southbound/Westbound: The road is to be clear by 3:00 pm.

TIMES OF ALLOWABLE SINGLE LANE CLOSURES:

- (1) Northbound/Eastbound:
 - A. Weekdays – 10:00 a.m. to 5:00 a.m.

- B. Weekends – 10:00 a.m. Friday – 5:00 a.m. Monday
- (2) Southbound/Westbound:
 - A. Weekdays – 6:00 a.m. to 3:00 p.m. & 7:00 p.m. to 6:00 a.m.
 - B. Weekends – 7:00 p.m. Friday – 3:00 p.m. Monday

TIMES OF ALLOWABLE MULTIPLE LANE CLOSURES: Lane closures which restrict open lanes to (1) one in a single direction.

- (1) Northbound/Eastbound:
 - A. Weekdays – 9:00 p.m. to 5:00 a.m.
 - B. Weekends – RMTA shall decide allowable times based on individual weekend request by Contractor
- (2) Southbound/Westbound:
 - A. Weekdays – 9:00 p.m. to 6:00 a.m.
 - B. Weekends – RMTA shall decide allowable times based on individual weekend request by Contractor

LANE RESTRICTIONS (ANY DIRECTION)

- All roadways must have a minimum of (1) one lane open at all times.
- Where three (3) or more roadway lanes exist, the number of lanes which the Contractor may close is at the Engineer's discretion, based on the geometry of the area where lane/shoulder closures are desired.

POWHITE PARKWAY TOLL PLAZA (GATED LANES) AND EXPRESS LANES (ORT ZONE) RESTRICTIONS

NUMBER OF LANES CLOSED POWHITE N.B. AND S.B. TOLL PLAZAS (GATED LANES)

- There shall be at least three toll lanes open in a single direction at all times.
- One (1) Full Service lane must remain open at all times.
- No NB Toll Lane shall be closed from 5:00 a.m. to 10:00 a.m.
- No SB Toll Lane shall be closed from 3:00 p.m. to 7:00 p.m.
- Lane 3 and Lane 12 (Secure Booths) may not be closed between 11:00 p.m. to 7:00 a.m. any day

NUMBER OF LANES CLOSED POWHITE EXPRESS (ORT) LANES

- No more than two lane closures will be permitted at any time for the NB express lanes 90- 92.
- No more than two lane closures will be permitted at any time for the SB express lanes 93- 95.
- No NB ORT Toll Lane shall be closed from 5:00 a.m. to 10:00 a.m.
- No SB ORT Toll Lane shall be closed from 3:00 p.m. to 7:00 p.m.

The Contractor shall provide written notice to the Engineer a minimum of 7 calendar days notice before any lane or ramp closures. The RMTA and the Engineer reserve the right to restrict dates and times of proposed lane or ramp closures. Contractor shall not be permitted to close any ramps or lanes during events in Downtown Richmond or the vicinity when high traffic volumes are expected to enter or exit Downtown.

All lane closures must be coordinated with VDOT, RMTA, City of Richmond (if applicable) and the Engineer for final approval of dates and times. It will be the Engineer's sole responsibility to notify VDOT Traffic Operations Center (Smart Traffic) at 804-796-4520 to advise of the lane closure status of these bridges. The Contractor shall communicate any changes in these times/dates immediately with the Engineer.

HOLIDAYS AND SPECIAL EVENTS

The project will be officially shut down for the following holidays during the periods noted:

- Memorial Day: 5/25/18 (Friday) – 5:00 A.M. through
5/29/18 (Tuesday) – 10:00 A.M.
- Independence Day: 7/3/18 (Tuesday) – 5:00 A.M. through
7/5/18 (Thursday) – 10:00 A.M.
- Labor Day: 8/31/18 (Friday) - 5:00 A.M. through
9/4/18 (Tuesday) - 10:00 A.M.

The Engineer reserves the right to limit/cancel/modify the lane closure times and/or work that may be performed to accommodate the following special events. The Contractor should be aware of typical increased weekend traffic during these events.

- Any NASCAR Race in Richmond (Typically 2 per year, in April and September)
- Ukrop's Monument Ave. 10K Race (Typically the second weekend in April)
- Dominion River Rock (Weekend in middle of May)
- Slide the City (Typically a Saturday in June)
- Jazz Festival at Maymont Park (Typically a weekend in August).
- Richmond Folk Festival (Weekend in the Middle of October)
- Richmond Marathon (Weekend in the Middle of November)

The Contractor shall prepare and submit a Maintenance of Traffic (MOT) Plan for review and approval by the Engineer (7) days in advance for any lane closure during a special event. No allowance shall be made for these periods in determining the contract end date.

POINT OF CONTACT

The Contractor must have a point of contact or construction foreman responsible for the entire project on site at all times. This person will coordinate all work and shall be in close contact with the onsite inspections and shall clearly communicate any changes to the work plan, if they occur. In the event that this individual changes from the previous day, the Contractor shall contact the Engineer and confirm this change, prior to starting any work. The Contractor will be required to have a point of contact on duty at all times, regardless of extended shifts or type(s) of work being performed.

LANE CLOSURE AND MOT VIOLATIONS

The RMTA reserves the right to charge liquidated damages for the Contractor's failure to remove a lane or ramp closure by the prescribed time each day. The liquidated damages shall be established as One Thousand Dollars (\$1,000) per each fifteen (15) minutes, or a portion of 15 minutes, per lane or ramp, for any closure beyond the limits established above. Assessment of liquidated damages will stop when all maintenance of traffic devices are removed from the roadway and lanes or ramps have been safely reopened to the approval of the Engineer. Any liquidated damages assessed in this Special Provision will be in addition to those listed in Section 108 of the Specifications.

Active work shall be pursued by the Contractor within one (1) hour from the time a lane or ramp closure is placed. The RMTA reserves the right to charge liquidated damages, as stated above, after one (1) hour of non-active work from the time the lane or ramp closure placement is completed. If active work has not started within two (2) hours from the time that the lane closure placement is completed, the Engineer shall require the lane closure to be immediately removed. Assessment of liquidated damages will end when lanes or ramps have been safely reopened to the approval of the Engineer or active work is pursued. Active work will be on-site activity as determined by the Engineer and the RMTA.

In addition, active work must be on-going at all times while a closure is in place. If active work is stopped for one (1) hour while a closure is in place or a closure is not removed within one (1) hour of the completion of active work, the Authority reserves the right to charge liquidated damages as stated above. The Contractor shall be aware that he will be required to perform active work while the deck is curing and shall have a minimum of two vehicles in the lane closure with high-intensity rotating, oscillating, or strobe lights flashing at all times.

STAGING AREA / CONSTRUCTION ENTRANCE

The Contractor shall be aware of the close proximity of live traffic to the work zone. Extra care shall be taken when slow moving vehicles are entering live traffic. Contractor must demonstrate how vehicles can enter and exit the work zone safely and minimize impacts to general public in his MOT plan. Contractor may consider the use of a shadow vehicle for equipment entering live traffic at slow speeds.

CERTIFICATION OF PERSONNEL

FHWA regulations provided in 23 CFR Subpart J state “States shall require that personnel involved in the development, design, implementation, operation, inspection, and enforcement of work zone related transportation management and traffic control be trained, appropriate to the job decisions each individual is required to make.” In accordance with the FHWA regulation and VDOT regulations, the Contractors foreman, or employee who is directly responsible for placing maintenance of traffic devices, shall be properly trained. The minimum training required for this Contract is the “Basic Work Zone Traffic Control Training” course. This is a one-day course designed by VDOT. For more information on the course, see the following website: <http://www.vdot.virginia.gov/business/trafficing-WZS.asp>

A trained employee must be on-site prior to setting up traffic control devices or a stop work order may be issued. In addition, a trained employee must be on-site at all times when any work inside a work zone requiring traffic control is on-going. A trained employee must be on-site at all times during the removal of traffic control devices. This employee will coordinate with the “Point of Contact” at all times. If the inspector or engineer observes the Contractor without a trained employee on-site during the setting up, maintenance or removal of the work zone traffic control, the RMTA reserves the right to charge liquidated damages at the rate of One Thousand Dollars (\$1,000) per day.

RESTRICTED TIME OF WORK AREAS

Portions of the Downtown Expressway, Beltline Expressway Connectors, and the Powhite Parkway are adjacent to residential areas. These areas are identified as, but not limited to, the neighborhoods near the intersection of Powhite Parkway and Forest Hill Avenue and neighborhoods between the Downtown Expressway Beltline Connector and Park Drive/Blanton Avenue on the north end of the project.

Work in these areas after 11:00 PM shall be restricted. Activities permitted after this time shall include saw-cutting, placement of concrete, and asphalt paving. Any activities that produce unacceptable decibel levels, as determined by the Engineer and the RMTA, shall not be permitted. Typical activities not permitted after 11:00 PM include, but are not limited to, jack hammering or roto-hammering.

PROTECTION OF PROPERTY

The Contractor shall provide for the Engineer's review the method intended to protect the motoring public, from any activity which poses a potential threat to another's property or person (i.e. cars, motorcycles, pedestrians, businesses, etc.). This includes debris from jack-hammering and hydro-demolition activities. The Contractor shall provide protective measures for pedestrians using sidewalks both adjacent to and beneath the bridges.

TRAFFIC ON MILLED SURFACES

At the Contractor's discretion he will be allowed to have traffic drive on a milled surface for no more than 48 hours after the milling operation is complete. If the Contractor chooses this method and there are deck elevation differences, he will be required to install temporary pavement wedges per VDOT Road and Bridge Standard 305.01, ACOT -1. This detail is provided below for the Contractor's reference. The Contractor shall also have proper drainage measures in-place prior to forecasted inclement weather. Drainage measures shall be submitted to the Engineer for approval prior to installation. Contractor shall be responsible for installation and maintenance of the pavement wedges and drainage measures to the approval of the Engineer. The Contractor shall not be allowed to remove any lane closure until all required pavement wedges and drainage measures are installed.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Maintenance of Traffic shall be measured and paid for on a lump sum basis for each bridge.

The bid price will be considered full compensation for all required MOT setups for construction activities (lane closures and detours) including, but not limited to: Ground-penetrating Radar testing, Type A milling, Type A hydro-demolition, placing and furnishing Latex Modified Concrete, Very Early Strength Overlay, deck grooving, installation of joint material, installation of pavement markers and markings, parapet wall coatings, detour routes, highway flaggers, and advance signing and preparation of all MOT submittals and resubmittals to the Engineer and VDOT for approval. The Contractor shall also include in the lump sum bid price all permits, including Work in Streets permits, required by the City of Richmond necessary to perform all MOT work.

All MOT plans and requests for lane closures on VDOT highways must be prepared and submitted in a format acceptable to VDOT which may include providing plans and narratives that are prepared by a Virginia Professional Engineer.

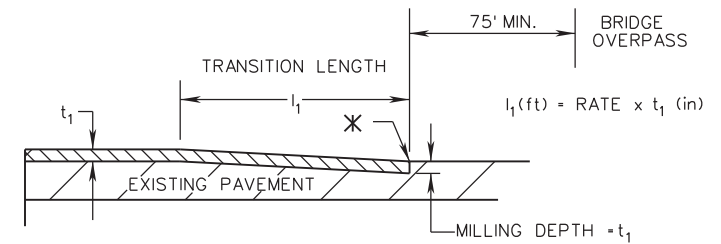
Additionally the lump sum bid price shall include all equipment, light pods, materials, labor and equipment required to install and maintain MOT setups for the duration specified in this Special Provision.

<u>Pay Item</u>	<u>Pay Unit</u>
Maintenance of Traffic	Lump Sum (for each Bridge)

NOTES

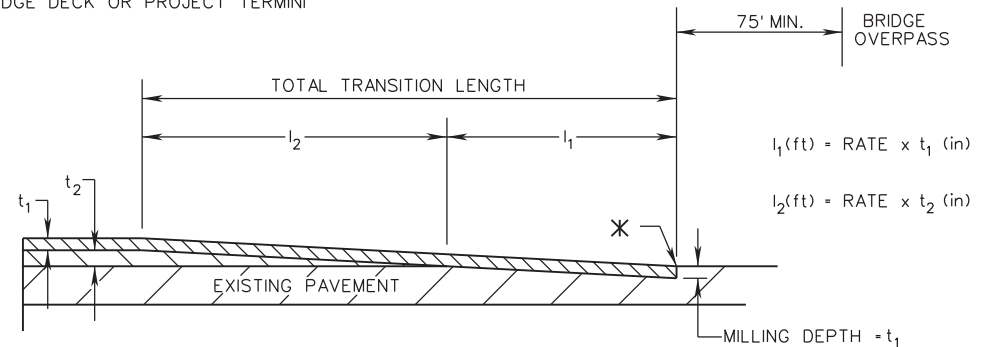
ACOT-1

1. TIE-IN REQUIREMENTS TO INTERSECTING ROADS OR STREETS SHALL BE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS OR AT THE DIRECTION OF THE ENGINEER.
2. EXISTING PAVEMENT SURFACE SHALL BE PLANED TO TRANSITION THE TOP COURSE OF THE ASPHALT CONCRETE OVERLAY. ANY SUB-COURSE TERMINATION MAY BE NOTCHED INTO THE EXISTING PAVEMENT OR BLENDED WITH THE NEXT COURSE OF PAVEMENT.
3. WHEN THERE IS A SPECIAL PROVISION FOR RIDEABILITY INCLUDED IN THE CONTRACT, A DISTANCE OF 105 FEET (0.02 OF A MILE), MEASURED FROM THE LINE OF THE TIE-IN WILL BE EXEMPTED FROM PAY ADJUSTMENT.
4. TRANSITION SHALL BEGIN/END AT THE PROJECT LIMITS, AT BRIDGE APPROACH SLAB/ABUTMENT (OR AN INTERMEDIATE POINT DETERMINED BY THE ENGINEER), AND A MINIMUM OF 75 FEET FROM A VERTICAL PLANE OF THE NEAREST OUTER FACE OF THE BRIDGE OVERPASS.
5. NO OVERLAY OR MILLING SHALL BE PERMITTED ON THE BRIDGE DECK WITHOUT THE PRIOR WRITTEN APPROVAL OF THE DISTRICT BRIDGE ENGINEER.



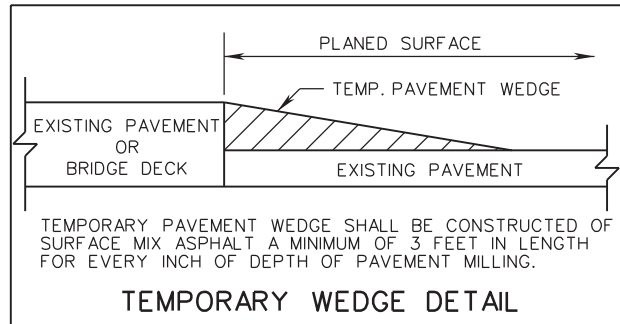
**SINGLE COURSE OVERLAY
TRANSITION GEOMETRY**
(NOT TO SCALE)

✱ BRIDGE DECK OR PROJECT TERMINI

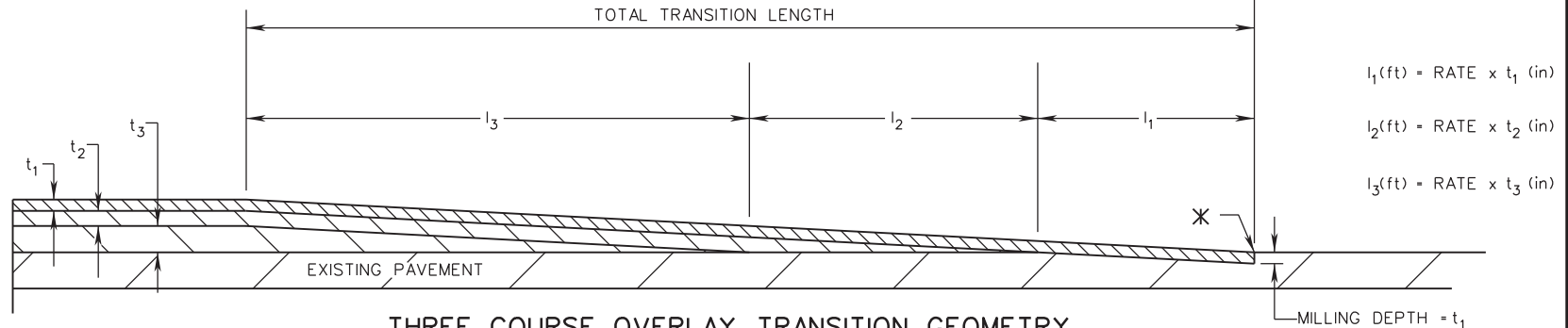


TWO COURSE OVERLAY TRANSITION GEOMETRY
(NOT TO SCALE)

TRANSITION RATE						
RATE (FT/INCH)	POSTED SPEED MPH					
	25	35	45	55	65	70
	20	25	35	40	45	50



TEMPORARY WEDGE DETAIL



THREE COURSE OVERLAY TRANSITION GEOMETRY
(NOT TO SCALE)

SPECIFICATION
REFERENCE

210
315
515

A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE.
ASPHALT CONCRETE OVERLAY TRANSITIONS

VIRGINIA DEPARTMENT OF TRANSPORTATION

VDOT

ROAD AND BRIDGE STANDARDS

REVISION DATE

SHEET 1 OF 1

7/12

305.01

**SPECIAL PROVISION
PAVEMENT LINE MARKINGS**

DESCRIPTION

This work shall consist of applying 4” Contrast Type B Class VI Pavement Line Markings and 24” Contrast Type B Class VI Pavement Line Markings to the newly placed Latex Modified Concrete, Very Early Strength Overlay. The Contractor shall install pavement markings per the manufacturer’s recommendations. The Contractor shall be aware that permanent markings shall be inlaid or “recessed” into the overlay.

Temporary Type D Removable Tape shall be required if the Contractor is unable to install permanent lane markings within the allowable lane closure times set forth in the Maintenance of Traffic Special Provision SP-E and prior to opening the lane to traffic. Type D tape installed for skips shall be 10’ in length consisting of 5’ of white tape followed immediately by 5’ of black tape.

MATERIALS

<u>ITEM</u>	<u>VDOT SECTION</u>
Type B Class VI Pavement Contrast PVMT MRKG 4”	704*
Type B Class VI Pavement Contrast PVMT MRKG 24”	704*

*Note: Contractor shall comply with the VDOT 2016 Road and Bridge Specification Revisions in “Division 7 – Traffic Control Devices”

Contrast markings shall be an additional 3 inches wider minimum, than the width specified in the pay item. This additional tape width shall be black non-reflective with 1 ½ inches minimum on both sides of the white or yellow. Pavement markings shall conform to the requirements of Section 246 and the glass beads shall conform to the requirements of Section 234.

Snow-Plowable raised pavement markers shall conform to the requirements of section 235 in the specifications.

Materials shall be delivered to the job site in the manufacturer’s original sealed containers. Each container shall be marked with the manufacturer’s name and lot number. Materials will be

accepted based on the manufacturer's certification, subject to the storage and handling requirements of the manufacturer. The Contractor shall use an approved inventory tracking system for all materials received from the manufacturer. Shipment of materials from such inventory shall be accompanied by a signed form C-85 containing the following certification statement:

Material shipped under the certification has been tested and approved by VDOT as indicated by Laboratory test numbers listed hereon.

PROCEDURES

Markings shall be installed in accordance with the latest editions of the "Manual on Uniform Traffic Control Devices" (MUTCD), the Virginia Supplement to the MUTCD, and the Virginia Work Area Protection Manual.

The Contractor shall have a Certified Pavement Marking Technician present during pavement marking operations. Grooves for inlaid tape shall be a minimum 1" wider than the specified Type B Class VI pavement marking. The Contractor shall install either permanent or temporary pavement markings prior to removing the lane closure and opening up the lane to traffic. All pavement markings shall be installed per the manufacturer's recommendations or as approved by the Engineer.

If the Contractor chooses to install temporary pavement markings, they shall be Type D and in the color scheme mentioned within this special provision. The Contractor shall be required to maintain the temporary pavement marking until permanent markings are installed. The cost of installing, maintaining, and removing the Type D will be incidental to the Type B Class VI Pavement Line Marking 4" Contrast item. Maintaining Type D markings shall be to the approval of the Engineer and at no additional cost to the RMTA and with no extension of contract time.

MEASUREMENT AND PAYMENT

Type B Class VI Pavement Contrast PVMT MRKG 4" and **Type B Class VI Pavement Contrast PVMT MRKG 24"** will be measured by linear foot and be paid at the contract price. This price shall be full compensation for furnishing and installing pavement line markings, surface preparation, recessing for inlay, all equipment, labor, and incidentals required to complete the work. The cost of eradicating any existing pavement markings and installing, maintaining, and removing any Type D Construction Pavement Markings will be incidental to this item. Maintenance of Traffic items will be paid for on a lump sum basis as per Special Provision SP-E.

Pay Item

Type B Class VI Pavement Contrast PVMT MRKG 4”
Type B Class VI Pavement Contrast PVMT MRKG 24”

Pay Unit

Linear Foot
Linear Foot

Snow-Plowable Raised Pavement Markers will be measured each and be paid at the contract price. This price shall be full compensation for furnishing and installing markers, surface preparation, grooving for inlay, all equipment, labor, and incidentals required to complete the work. Maintenance of Traffic items will be paid for on a lump sum basis as per Special Provision SP-E.

Pay Item

Snow-Plowable Raised Pavement Marker Hydraulic Concrete

Pay Unit

Each

SPECIAL PROVISION PARAPET WALL COATINGS

DESCRIPTION

This work shall consist of cleaning, patching and coating the inside face, top and backside of the parapet walls. The intent of this work is to provide a properly prepared concrete surface that is suitable for application and adhesion of the specified protective coating system. In addition to the 10 Bridges in this contract two more bridges, Bridges 4 and 36, have been added to this special provision for parapet wall coatings.

All concrete sidewalks and medians for the 10 Bridges and Bridges 4, 36, 46, 47 and 48 will be included in this Special Provision. The same preparation and application methods used for the parapet walls shall be applied to the sidewalks and medians including the vertical curb abutting the sidewalk.

MATERIALS

All cleaned surfaces shall receive the following coating system, or Engineer approved equal:

- A. PPG Amercoat 385 Polyamide Epoxy at 3.0 -8.0 mils DFT. A multi-purpose high build epoxy compatible with a wide range of substrates and surface preparations that cures down to 40°.
- B. PPG Amercoat 114A Epoxy Filler Compound for bug holes and surface cracks in concrete.

PROCEDURES

Contractor shall repair all delamination, spalls and significant cracks and allow proper curing as per manufacturer's recommendations before applying coating. All delineators shall be removed prior to cleaning. Surface Preparation will be in accordance with SSPC SP-13 guidelines with minimum high-pressure water cleaning of 3000 PSI. Detergent water cleaning and steam cleaning may be used to remove oils and grease from concrete. After pressure cleaning the surface of the parapet wall must dry for a minimum of 24 hours before applying the coating.

Coating application must be in accordance with the approved manufactures recommendation. Application will be by brush and roller only. No spraying will be permitted. A minimum of two coats will be necessary to achieve adequate film-build. One coat application will not be allowed.

QUANTITIES

<u>Bridge:</u> <u>No.</u>	Parapet Wall Coatings	Sidewalk Coating
	(SY)	(SY)
4	308	0
36	247	196
46	0	273
47	0	377
48	0	261
49	134	292
50	173	376
51	242	685
54	224	320
55	181	259
56	167	239
57	136	195
58	125	193
60	103	84
62	266	0

MEASUREMENT AND PAYMENT

Parapet Wall Coating will include concrete sidewalk and median and be measured by square yards and paid for at the contract price. This price shall be full compensation for any necessary patching/crack sealing, surface preparation, environmental protection, proper disposal of waste material offsite, furnishing and installing coatings per manufacturer's recommendations, all equipment, labor, materials, and incidentals required to complete the work.

Maintenance of Traffic items for Parapet Wall Coatings will be paid as per MOT Special Provision SP-E and the Supplemental Specifications.

Payment will be made under:

Pay Item

Parapet Wall Coating

Pay Unit

Square Yards

AMERCOAT® 385

DESCRIPTION

Two-component, multi-purpose polyamide epoxy coating

PRINCIPAL CHARACTERISTICS

- Multi-purpose high build epoxy
- High solids high build epoxy intermediate coat
- Compatibility with a wide range of substrates and surface preparations
- AMERCOAT 385 PA contains zinc phosphate for enhanced corrosion inhibitive performance

COLOR AND GLOSS LEVEL

- White, Black, Oxide Red, Light Buff, Pearl Gray
- Flat

Notes:

- Epoxy coatings will characteristically chalk and fade upon exposure to sunlight. Light colors are prone to ambering to some extent
- AMERCOAT 385 PA Red (MIO containing formula), AMERCOAT 385 PA Buff (no MIO)

BASIC DATA AT 68°F (20°C)

Data for mixed product	
Number of components	Two
Volume solids	68 ± 2%
VOC (Supplied)	max. 2.6 lb/US gal (approx. 312 g/l)
Temperature resistance (Continuous)	To 200°F (93°C)
Temperature resistance (Intermittent)	To 250°F 121°C)
Recommended dry film thickness	3.0 - 8.0 mils (75 - 200 µm) depending on system
Theoretical spreading rate	218 ft²/US gal for 5.0 mils (5.4 m²/l for 125 µm)
Shelf life	Base: at least 36 months when stored cool and dry Hardener: at least 24 months when stored cool and dry

Notes:

- See ADDITIONAL DATA – Overcoating intervals
- See ADDITIONAL DATA – Curing time
- Color will drift at elevated temperatures
- Intermittent temperature resistance should be less than 5% of the time, and maximum 24 hours
- For immersion service, the product should be applied at a minimum of 10 mils (250 µm) dft total in 2 – 3 coats

AMERCOAT® 385

RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

- Coating performance is, in general, proportional to the degree of surface preparation
- Abrasive blasting is usually the most effective and economical method. When this is impossible or impractical, coating can be applied over mechanically cleaned surfaces
- All surfaces must be clean, dry and free of all contaminants, including salt deposits. Contact PPG for maximum allowable salt containment levels

Mild steel

- Remove all loose rust, dirt, grease or other contaminants by one of the following depending on the degree of cleanliness required: SSPC SP-2, 3, 6, 7 or 10 (ISO 8501-1 St-2, St-3, Sa 1, Sa 2.5). These minimum surface preparation standards apply to steel that has been previously abrasive blasted. The choice of surface preparation will depend on the system selected and end-use service conditions
- For more severe service and immersion, clean to SSPC SP-10 (ISO8501-1 Sa 2.5). Blast to achieve an anchor profile of 1.0 – 5.0 mils (25 – 125 µm) as indicted by a Keane-Tator Surface profile Comparator or Testex Tape. For immersion and severe duty applications, the recommended blast profile is 2.0 – 4.0 mils (50 – 100 µm). Previously blasted steel may be ultra-high pressure water jetted to SSPC -SPWJ-2(L) / NACE WJ-2(L). The wet surface can be dried by blowing with dry compressed air giving special attention to horizontal surfaces and recesses

Concrete

- Prepare in accordance with SSPC SP-13 guidelines
- Abrade surface per ASTM D-4259 to remove all efflorescence and laitance, to expose subsurface voids, and to provide a surface roughness equivalent of 60 grit sandpaper or coarser
- Test for moisture by conducting a plastic sheet test in accordance with ASTM D4263
- Fill voids as necessary with AMERCOAT 114 A epoxy filler

Galvanized steel

- Remove oil or soap film with detergent or emulsion cleaner
- Lightly abrasive blast with a fine abrasive in accordance with SSPC SP-16 guidelines to achieve a profile of 1.5 – 3.0 mils (38 – 75 µm). When light abrasive blasting is not possible, galvanizing can be treated with a suitable zinc phosphate conversion coating.
- Galvanizing that has at least 12 months of exterior weathering and has a rough surface with white rust present may be over-coated after power washing and cleaning to remove white rust and other contaminants
- The surface must have a measurable profile
- A test patch is recommended to determine compatibility and adhesion
- Not recommended over chromate sealed galvanizing without blasting to thoroughly remove chromates. Adhesion problems may occur

Non-ferrous metals and stainless steel

- Abrasive blast in accordance with SSPC SP-16 guidelines to achieve a uniform and dense 1.5-4.0 mil anchor profile. Size and hardness of abrasive should be adjusted as necessary based on the hardness of the substrate
- Aluminum may be treated with a surface treatment compliant with Mil-DTL-5541 or equivalent (non-immersion applications only).

AMERCOAT® 385

Aged coatings

- All surfaces must be clean, dry, tightly bonded and free of all loose paint, corrosion products or chalky residue
- Abrade surface, or clean with PREP 88. This product is compatible over most types of properly applied and tightly adhering coatings, however, a test patch is recommended to confirm compatibility

Repair

- Prepare damaged areas to original surface preparation specifications, feathering edges of intact coating. Thoroughly remove dust or abrasive residue before touch-up.

Substrate temperature and application conditions

- Surface temperature during application should be at least 5°F (3°C) above dew point
- Ambient temperature during application and curing should be between 40°F (4°C) and 122°F (50°C)
- Relative humidity during application should not exceed 85%

SYSTEM SPECIFICATION

- Primers: Direct to substrate; DIMETCOTE- Series Primers, AMERCOAT 68HS, AMERCOAT 68MCZ
- Topcoats: AMERCOAT 450-Series Polyurethanes, AMERSHIELD, PSX 700, AMERCOAT 229T, PITTHANE Polyurethanes

INSTRUCTIONS FOR USE

Mixing ratio by volume: base to hardener 50:50 (1:1)

- Pre-mix base component with a pneumatic air mixer at moderate speeds to homogenize the container. Add hardener to base and agitate with a power mixer for 1–2 minutes until completely dispersed

Induction time

Mixed product induction time	
Mixed product temperature	Induction time
Below 60°F (16°C)	30 minutes
60°F (16°C)	15 minutes
Above 75°F (24°C)	None

Pot life

3 hours at 70°F (21°C)

Note: See ADDITIONAL DATA – Pot life



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Application

- Area should be sheltered from airborne particulates and pollutants
- Avoid combustion gases or other sources of carbon dioxide that may promote amine blush and ambering of light colors
- Ensure good ventilation during application and curing
- Provide shelter to prevent wind from affecting spray patterns

Material temperature

Material temperature during application should be between 50°F (10°C) and 90°F (32°C)

Air spray

- Use standard conventional equipment

Recommended thinner

Thinner 21-06 (Amercoat 65) or Thinner 91-82 (Amercoat T-10) or Thinner 21-25 (Amercoat 101) for above 90 °F

Volume of thinner

0 - 20%

Nozzle orifice

Approx. 0.070 in (1.8 mm)

Airless spray

- 45:1 pump or larger
- Can be applied with plural component equipment
- Hoses should normally be kept as short as possible

Recommended thinner

Thinner 21-06 (Amercoat 65) or Thinner 91-82 (Amercoat T-10) or Thinner 21-25 (Amercoat 101) for above 90 °F

Nozzle orifice

0.017 – 0.019 in (approx. 0.43 – 0.48 mm)

Brush/roller

- Use a high quality natural bristle brush and/or solvent resistant, 3/8" nap roller. Ensure brush/roller is well loaded to avoid air entrainment. Multiple coats may be necessary to achieve adequate film-build

Recommended thinner

AMERCOAT 65 (xylene), AMERCOAT 101 (recommended for > 90°F (32°C))

Cleaning solvent

Amercoat 12 Cleaner (Thinner 90-58) or Amercoat 65 Thinner (Thinner 21-06)

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ADDITIONAL DATA

Overcoating interval for DFT up to 8.0 mils (200 µm)						
Overcoating with...	Overcoating Interval	40°F (4°C)	50°F (10°C)	60°F (16°C)	70°F (21°C)	90°F (32°C)
itself	Minimum	3 days	42 hours	24 hours	12 hours	6 hours
	Maximum	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited
	Maximum - immersion	30 days	30 days	30 days	30 days	30 days

Notes:

- Dry times are dependent on air and surface temperatures as well as film thickness, ventilation, and relative humidity. Maximum recoating time is highly dependent upon actual surface temperatures – not simply air temperatures. Surface temperatures should be monitored, especially with sun-exposed or otherwise heated surfaces. Higher surface temperatures shorten the maximum recoat window
- Surface must be clean and dry. Any contamination must be identified and removed. A detergent wash with PREP 88 or equivalent is required prior to application of topcoats after 30 days of exposure. However, particular attention must be paid to surfaces exposed to sunlight where chalking may be present. In those situations, a further degree of cleaning may be required. PPG Technical Service can advise on suitable cleaning methods. If maximum recoat/topcoat time is exceeded, then roughen surface.

Overcoating interval for DFT up to 8.0 mils (200 µm)						
Overcoating with...	Interval	40°F (4°C)	50°F (10°C)	60°F (16°C)	70°F (21°C)	90°F (32°C)
urethane and PSX	Minimum	3 days	42 hours	24 hours	12 hours	6 hours
	Maximum	2 months	1.5 months	1 month	30 days	14 days

Notes:

- Dry times are dependent on air and surface temperatures as well as film thickness, ventilation, and relative humidity. Maximum recoating time is highly dependent upon actual surface temperatures – not simply air temperatures. Surface temperatures should be monitored, especially with sun-exposed or otherwise heated surfaces. Higher surface temperatures shorten the maximum recoat window
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Curing time for DFT up to 8.0 mils (200 µm)			
Substrate temperature	Dry to touch	Dry to handle	Service- water immersion
40°F (4°C)	8 hours	4 days	10 days
50°F (10°C)	4 hours	24 hours	3 days
60°F (16°C)	3 hours	20 hours	60 hours
70°F (21°C)	2 hours	16 hours	48 hours
90°F (32°C)	1 hour	10 hours	24 hours



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Pot life (at application viscosity)	
Mixed product temperature	Pot life
50°F (10°C)	5 hours
70°F (21°C)	3 hours
90°F (32°C)	1.5 hours

Product Qualifications

- Mil-PRF-23236(C) Type V, Class 7, Grade C
- Military Sealift Command – Underwater hulls, topside and salt water ballast tank service
- Compliant with USDA Incidental Food Contact Requirements
- NFPA Class A for Flame Spread and Smoke Development
- NORSOK M501 Rev. 5, System 7 Subsea surfaces
- MPI Category #108

SAFETY PRECAUTIONS

- For paint and recommended thinners see INFORMATION SHEETS 1430, 1431 and relevant Material Safety Data Sheets
- This is a solvent-borne paint and care should be taken to avoid inhalation of spray mist or vapor, as well as contact between the wet paint and exposed skin or eyes

WORLDWIDE AVAILABILITY

It is always the aim of PPG Protective and Marine Coatings to supply the same product on a worldwide basis. However, slight modification of the product is sometimes necessary to comply with local or national rules/circumstances. Under these circumstances an alternative product data sheet is used.

REFERENCES

- | | | |
|--|-------------------|------|
| • CONVERSION TABLES | INFORMATION SHEET | 1410 |
| • EXPLANATION TO PRODUCT DATA SHEETS | INFORMATION SHEET | 1411 |
| • SAFETY INDICATIONS | INFORMATION SHEET | 1430 |
| • SAFETY IN CONFINED SPACES AND HEALTH SAFETY, EXPLOSION HAZARD – TOXIC HAZARD | INFORMATION SHEET | 1431 |

WARRANTY

PPG warrants (i) its title to the product, (ii) that the quality of the product conforms to PPG's specifications for such product in effect at the time of manufacture and (iii) that the product shall be delivered free of the rightful claim of any third person for infringement of any U.S. patent covering the product. THESE ARE THE ONLY WARRANTIES THAT PPG MAKES AND ALL OTHER EXPRESS OR IMPLIED WARRANTIES, UNDER STATUTE OR ARISING OTHERWISE IN LAW, FROM A COURSE OF DEALING OR USAGE OF TRADE, INCLUDING WITHOUT LIMITATION, ANY OTHER WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR USE, ARE DISCLAIMED BY PPG. Any claim under this warranty must be made by Buyer to PPG in writing within five (5) days of Buyer's discovery of the claimed defect, but in no event later than the expiration of the applicable shelf life of the product, or one year from the date of the delivery of the product to the Buyer, whichever is earlier. Buyer's failure to notify PPG of such non-conformance as required herein shall bar Buyer from recovery under this warranty.



AMERCOAT® 385

LIMITATIONS OF LIABILITY

IN NO EVENT WILL PPG BE LIABLE UNDER ANY THEORY OF RECOVERY (WHETHER BASED ON NEGLIGENCE OF ANY KIND, STRICT LIABILITY OR TORT) FOR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES IN ANY WAY RELATED TO, ARISING FROM, OR RESULTING FROM ANY USE MADE OF THE PRODUCT. The information in this sheet is intended for guidance only and is based upon laboratory tests that PPG believes to be reliable. PPG may modify the information contained herein at any time as a result of practical experience and continuous product development. All recommendations or suggestions relating to the use of the PPG product, whether in technical documentation, or in response to a specific inquiry, or otherwise, are based on data, which to the best of PPG's knowledge, is reliable. The product and related information is designed for users having the requisite knowledge and industrial skills in the industry and it is the end-user's responsibility to determine the suitability of the product for its own particular use and it shall be deemed that Buyer has done so, as its sole discretion and risk. PPG has no control over either the quality or condition of the substrate, or the many factors affecting the use and application of the product. Therefore, PPG does not accept any liability arising from any loss, injury or damage resulting from such use or the contents of this information (unless there are written agreements stating otherwise). Variations in the application environment, changes in procedures of use, or extrapolation of data may cause unsatisfactory results. This sheet supersedes all previous versions and it is the Buyer's responsibility to ensure that this information is current prior to using the product. Current sheets for all PPG Protective & Marine Coatings Products are maintained at www.ppgpmc.com. The English text of this sheet shall prevail over any translation thereof.

Packaging: Available in 2-gallon and 10-gallon kits; (2-gallon kits have 1 full gallon of base and 1 full gallon of hardener, 10 gallon kits have 5-gallons of base and 5-gallons of hardener)

Product code	Description
AT 385-1	Buff Base
AT 385-3	White Base
AT 385-9	Black Base
AT 385-23	Pearl Gray Base
AT 385-72	Oxide Red Base
AT385A-1	AMERCOAT 385PA Buff (contains zinc phosphate)
AT385A-7	AMERCOAT 385 PA Red (contains micaceous iron oxide)
AT385-B	Hardener

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AMERCOAT® 114 A

(Formerly Nu-Klad 114A; Also branded as Megasel CF)

DESCRIPTION

Epoxy filler compound

PRINCIPAL CHARACTERISTICS

- Suitable for use on primed steel or direct to concrete/masonry
- Pit filler / seam sealer for steel
- Filler for bug holes and surface cracks in concrete
- Suitable as a masonry block filler / scratch coat
- Excellent chemical resistance

COLOR AND GLOSS LEVEL

- Offwhite

BASIC DATA AT 68°F (20°C)

Data for mixed product	
Number of components	Two
Volume solids	100%
VOC (Supplied)	max. 0.0 lb/US gal (approx. 0 g/l)
Theoretical spreading rate	1604 ft ² /US gal for 1.0 mils (40.0 m ² /l for 25 µm)
Shelf life	Base: at least 36 months when stored cool and dry Hardener: at least 36 months when stored cool and dry

Notes:

- Flush with surrounding substrate to fill voids
- See ADDITIONAL DATA – Overcoating intervals
- See ADDITIONAL DATA – Curing time
- 1.33 gallons in a 20-lb kit

RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

Steel

- Abrasive blast to SSPC SP-10 standards. Prepare surface in accordance with application instructions for the specific primer being used.

AMERCOAT® 114 A

(Formerly Nu-Klad 114A; Also branded as Megasel CF)

Concrete

- Cure concrete a minimum of 14 days and until 80 percent of its physical properties have been attained before applying this product
- Prepared surfaces according to ASTM D4258 (surface cleaning) and either ASTM D4259 (abrading), or ASTM D4260 (acid etching)
- Blow / vacuum cracks and bugholes free of loose particulates

Concrete block

- Walls must be laid plumb and square with flush joints. Do not rake joints
- All surfaces must be clean and dry as per ASTM D4261

Substrate temperature

- Surface temperature during application should be between 50°F (10°C) and 120°F (49°C)
- Substrate temperature during application should be at least 5°F (3°C) above dew point
- Ambient temperature during application and curing should be between 50°F (10°C) and 120°F (49°C)
- Relative humidity during application should be between 0% and 85%

SYSTEM SPECIFICATION

- Primers: Direct to concrete or over epoxy sealer
- Primers to steel: AMERCOAT 68HS, AMERCOAT 68MCZ, AMERCOAT epoxies, AMERLOCK series
- Topcoats: AMERCOAT Epoxies, PITTGUARD Epoxies

INSTRUCTIONS FOR USE

Mixing ratio by volume: base to hardener 65:35

- Pre-mix pigmented components with a pneumatic air mixer at moderate speeds to homogenize the container. Add hardener to base and agitate with a power mixer for 1–2 minutes until completely dispersed
- Scrape sides and bottom occasionally to ensure all contents are incorporated. Mix only full kits

Induction time

None

Pot life

2.5 hours at 70°F (21°C)

Note: See ADDITIONAL DATA – Pot life



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AMERCOAT® 114 A

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Application

- Amercoat 114A can be applied via short nap roller, trowel, putty knives, squeegee, or a combination of these methods. Spread 114A across the surface applying uniform pressure to achieve a smooth finish. Leave only a slight film above the surface plane.
- A rounded trowel can be used to form a cove based of up to 1 inch.
- Amercoat 114A may be used to fill surface voids up to 1" in width or depth.
- Amercoat 114A is not elastomeric and will not bridge dynamic cracks.
- Area should be sheltered from airborne particulates and pollutants
- Avoid combustion gases or other sources of carbon dioxide that may promote amine blush and ambering of light colors
- Ensure good ventilation during application and curing
- Bulletin #1489 for further information on prevention, detection, and removal of amine blush

Material temperature

Material temperature during application should be between 50°F (10°C) and 90°F (32°C)

Cleaning solvent

Amercoat 12 Cleaner (Thinner 90-58) or Amercoat 65 Thinner (Thinner 21-06)

ADDITIONAL DATA

Overcoating interval for DFT up to 5.0 mils (125 µm)				
Overcoating with...	Interval	50°F (10°C)	70°F (21°C)	90°F (32°C)
solvent-borne coatings	Minimum	36 hours	18 hours	9 hours
	Maximum	30 days	7 days	3 days
solvent-free epoxies	Minimum	6 hours	3 hours	1 hour
	Maximum	6 days	3 days	36 hours

Notes:

- Dry times are dependent on air and surface temperatures as well as film thickness, ventilation, and relative humidity. Maximum recoating time is highly dependent upon actual surface temperatures – not simply air temperatures. Surface temperatures should be monitored, especially with sun-exposed or otherwise heated surfaces. Higher surface temperatures shorten the maximum recoat window
- Surface must be clean and dry. Any contamination must be identified and removed. Particular attention must be paid to surfaces exposed to sunlight where chalking may be present. In those situations, a further degree of cleaning may be required. PPG Technical Service can advise on suitable cleaning methods. If maximum recoat/topcoat time is exceeded, then roughen surface

AMERCOAT® 114 A

(Formerly Nu-Klad 114A; Also branded as Megasel CF)

Curing time for DFT up to 5.0 mils (125 µm)	
Substrate temperature	Dry to handle
50°F (10°C)	36 hours
70°F (21°C)	18 hours
90°F (32°C)	9 hours

Note: Drying times are dependent on air and steel temperature, applied film thickness, ventilation and other environmental conditions

Pot life (at application viscosity): AMERCOAT 68 A	
Mixed product temperature	Pot life
50°F (10°C)	4 hours
70°F (21°C)	2.5 hours
90°F (32°C)	1 hour

Product Qualifications

- Compliant with USDA Incidental Food Contact Requirements
- NFPA Class A for Flame Spread and Smoke Development
- Nuclear Service Level 2 (partial)

SAFETY PRECAUTIONS

- For paint and recommended thinners see INFORMATION SHEETS 1430, 1431 and relevant Material Safety Data Sheets

WORLDWIDE AVAILABILITY

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REFERENCES

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AMERCOAT® 114 A

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LIMITATIONS OF LIABILITY

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Packaging: Available in 20-lb (1.33. gallons) and 3-lb kits (0.2 gallons)

Product code	Description
AT114-35	Epoxy Base
AT114-B	Hardener

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SPECIAL PROVISION CONCRETE BARRIER DELINEATORS

DESCRIPTION

This work shall consist of installing delineators along existing concrete barrier/ parapet walls on Bridges 49, 50, 51, 54, 55, 56, 57, 58, 60 and 62. Additionally Bridges 4 and 36 have been included for installing delineators. Delineators will be installed after the Parapet Wall Coating has been applied and is dry as determined by the Engineer. The Contractor shall install all delineators per the manufacturer's recommendations and to the approval of the Engineer.

The Contractor shall refer to *Section 3F.04 Delineator Placement and Spacing* on pages 426-427 of the Manual for Uniform Traffic Control Devices for additional guidance. In addition, the contractor shall install a BLUE delineator to mark the location of each drainage inlet or bridge scupper.

Any costs for removing and disposing offsite of existing delineators shall be incidental to this work. This shall include any required disposal permits.

MATERIALS

<u>ITEM</u>	<u>VDOT SECTION</u>
Barrier Delineator	702*

*Note: Contractor shall comply with the VDOT 2016 Road and Bridge Specification Revisions in "Division 7 – Traffic Control Devices"

PROCEDURES

Delineators shall be installed in accordance with the latest editions of the "Manual on Uniform Traffic Control Devices" (MUTCD) and the 2016 Road and Bridge Standards.

The Contractor shall, unless otherwise directed by the Engineer, remove old delineators and install new delineators during the same lane closure. Delineators shall always be visible to motorists once traffic is allowed back on the ramp. The Contractor shall refer to Maintenance of

Traffic Special Provision SP-E for allowable lane closure times.

The Contractor and the Engineer shall first agree on the delineator spacing and layout prior to the installation of and removal of any existing delineators.

QUANTITIES

<u>Bridge:</u> <u>No.</u>	Barrier Delineators
	(EA)
4	6
36	6
49	4
50	6
51	8
54	8
55	6
56	6
57	4
58	4
60	4
62	6

MEASUREMENT AND PAYMENT

Concrete Barrier Delineators will be measured by each and be paid for at the contract price. This price shall be full compensation for removing of existing delineators and disposal offsite, and permits or fees required for disposal, furnishing and installing delineators per manufacturer's recommendations, all equipment, labor, materials, and incidentals required to complete the work. Maintenance of Traffic items for Concrete Barrier Delineators will be paid for as per MOT Special Provision SP-E and the Supplemental Specifications.

Pay Item

Concrete Barrier Delineators

Pay Unit

Each