



# AET Conversion – Powhite

RICHMOND EXPRESSWAY SYSTEM

CONTRACT NO. AET PW-2025

ALL ELECTRONIC TOLLING ITS & CIVIL ELEMENTS

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PROPOSAL DOCUMENTS  
SUPPLEMENTAL SPECIFICATIONS  
SPECIAL PROVISIONS  
DESIGN PLANS

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December 2024, V1 including Draft plans

Mandatory Pre-bid meeting: 1/22/2025, 10:00AM

Bids due 2/4/2025 10:00AM

RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY

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RICHMOND EXPRESSWAY SYSTEM

CONTRACT NO. AET PW-2025

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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 unit and total bid item prices 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. Joint Venture Statement (if applicable)
  - v. Bidder or Subcontractor Electrical Installation /Traffic Mgmt. Systems Experience
  - vi. Bid Bond
  - vii. Receipt of Addenda (if applicable)
2. SUBMISSION OF BID: Make sure the Authority receives bid prior to the time and date listed on the Invitation to Bid. The Bidder is responsible for delivery of the bid at or before the time set for opening. The RMTA is not responsible for late courier delivery. Bids received after the time set will be rejected.

**If mailing, please write "Attention: RMTA AET PW – 2025 ITS/CIVIL Contract Bid Opening" on outside of envelope or on mailing label.**

RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY

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RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY

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RICHMOND EXPRESSWAY SYSTEM

CONTRACT NO. AET PW-2025

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INVITATION TO BID

The Richmond Metropolitan Transportation Authority (RMTA), 901 East Byrd Street, Suite 1120, Richmond, Virginia 23219 until 10:00 AM local time, will receive sealed Proposals for the above project on **Tuesday, February 4, 2025** at which time (10:30AM) and place the bids will be publicly opened and read.

Under this contract, the All Electronic Tolling ITS & Civil Elements project will deliver the concrete foundations by June 23, 2025; electrical/communications components & devices by July 11, 2025; the paved shoulder by July 18, 2025; and all remaining work (including grading, drainage, and roadway elements) will be completed by December 1, 2025. Note: environmental permitting, gantry erection, gantry device installation, major component acquisition (items not listed below such as: generator, roadside cabinets, tech shelter, etc.), and tech shelter delivery & assembly will be handled by others. The generator, roadside cabinets, and tech shelter ancillary equipment line items are to include the cost of acquiring, transporting from storage to the Powhite roadside installation location, and installing the items listed on the ancillary equipment list (as well as similar items as needed to complete the installation of the generator, roadside cabinets, and tech shelter equipment).

The principal items of work and approximate quantities are as follows:

<u>Item:</u>	<u>Quantity:</u>	<u>Unit:</u>
Mobilization	1	Ea.
Clearing and Grubbing	.5	Acre
Selective Tree Removal, Trimming, & cleanup	.5	Acre
Temp. Silt Fence Ty. A	300	LF
Inlet Protection Ty. A	1	Ea.
Earthwork	1	LS
Permanent Seed	500	Lbs
Fertilizer	25	Lbs
Sediment Retention Roll	300	LF

Remove Existing Guardrail	340	LF
Guardrail GR-2	720	LF
Guardrail GR-2A	150	LF
Guardrail Terminal GR-7	1	Ea.
Guardrail Attenuator TL-3	1	Ea.
Maintenance of Traffic	1	LS
NS Flexible Pavement Planing 4"	120	SY
Asphalt Concrete TY. SM-9.5E 4"	27	Ton
Rumble strips Cylindrical Asphalt	90	LF
Pavement Marking Eradication	300	LF
Type B Class VI Pavement Marking	300	LF
2 Cabinets and Ancillary Equip.* Installation (including transport)	1	LS
Generator & Ancillary Equip.* Install (incl. initial fueling & testing)	1	Ea.
Tech Shelter Ancillary Equipment *	1	Ea.
Electrical Service SE-4 Type A	1	Ea.
Junction Box JB-S1	2	Ea.
Junction Box JB-S2	8	Ea.
Junction Box JB-S3	14	Ea.
Electrical Service Ground Electrode 10'	21	Ea.
Test Bore	1	Ea.
Communication Equip. Buried Cable Marker Post	2	Ea.
Buried Cable Marker Post	5	Ea.
Shelter Site Work Pad	1	Ea.
Technical Shelter Foundation	1	Ea.
Non Standard Concrete Foundation	2	Ea.
Generator Foundation	1	Ea.
Toll Gantry Foundation	2	Ea.

\*Ancillary equipment list attached on following sheets

Optional Services Quantities

Mobilization	1	Ea.
Test Bore	1	Ea.
Communication Equip. Buried Cable Marker Post	20	Ea.
Cable CAT6 Water blocking, shielded, direct buried	250	LF
2 Conductor Cable	1500	LF
3 Conductor Cable	225	LF
4 Conductor Cable	75	LF
6 Conductor Cable	1500	LF
8 Conductor Cable	250	LF
12 Conductor Cable	1500	LF
Bored Conduit 2"	2000	LF
Bored Conduit 3"	2500	LF
Trench Excavation EC-1	370	LF
2" PVC Conduit	400	LF
3" PVC Conduit	600	LF
Communication Equip Fiber Optic Cable 12 strand	800	LF
Miscellaneous Ancillary Equipment (optional)*	1	LS

\*Ancillary equipment (optional) list attached on following sheets

Item #	Ancillary Equipment list - Item Description and/or Part Number	Vendor	QTY	UOM
1	Type "LC" FO connector, 50/125 um Multimode Unicam 95-050-99-X	Coming	24	Ea
2	Shelter Load Center, SE QO124M200P, 36 ckt	Schneider Electric	1	EA
3	Breaker, Single Pole, 120VAC 70Amp, QO 170	Schneider Electric	2	EA
4	Breaker, Dual Pole, 30 Amps, 240VAC, QO 230	Schneider Electric	5	EA
5	Breaker, Single Pole, 120VAC 15 Amp, QO 115	Schneider Electric	7	EA
6	Breaker, Single Pole, 120VAC 20 Amp, QO 120	Schneider Electric	7	EA
7	Ladder Rack, Telco, 12" Wide, 10ft Length, black PN 11252-712	Chatsworth Products	3	EA
8	Ladder Rack Corner Bracket, 15" Length, black PN 11959-715	Chatsworth Products	3	EA
9	Ladder Rack Junction Splice Kit, black, PN 11298-701	Chatsworth Products	4	EA
10	Ladder Rack Ceiling Kit 5/8" Rod (5/8-11), PN 11310-003	Chatsworth Products	2	EA
11	Ceiling M16 Nuts for Rods	Chatsworth Products	10	EA
12	Ladder Rack ceiling mount brack for 1 1/2" rack PN 11408-003	Chatsworth Products	10	EA
13	Ladder Rack ceiling mount bracket for 5/8" rod PN 11406-001	Chatsworth Products	10	EA
14	Master Ground Buss Bar, 4" x 20" x 1/4" with standoffs PN 40158-020	Chatsworth Products	1	EA
15	Conduit 3" - 90 degree Elbow PVC Sched 80	Allied Tube & Conduit	24	EA
16	Conduit 3" - 45 degree elbow PVC Sched 80	Allied Tube & Conduit	9	EA
17	Conduit 3" Female Adapter PVC Sched 80 to GRC	Allied Tube & Conduit	11	EA
18	Conduit 4" Trade size, PVC Sched 80	Allied Tube & Conduit	100	EA
19	Conduit 4" - 90 degree Elbow PVC Sched 80	Allied Tube & Conduit	11	EA
20	Conduit 4" - 45 degree Elbow PVC Sched 80	Allied Tube & Conduit	3	EA
21	Conduit 4" Female Adapter PVC Sched 80 to GRC	Allied Tube & Conduit	6	EA
22	Conduit 2" Trade Size, PVC Coated Rigid Galvanized Steel	Allied Tube & Conduit	75	LF
23	Conduit 2" - 90 degree Elbow PVC Sched 80	Allied Tube & Conduit	5	EA
24	Conduit 2" - 45 degree Elbow PVC Sched 80	Allied Tube & Conduit	1	EA
25	Conduit 2" Female Adapter PVC Sched 80 to GRC	Allied Tube & Conduit	7	EA
26	Conduit 2" Trade Size, PVC Sched 80	Allied Tube & Conduit	400	LF
27	GFCI Outlets, 20 Amp, 2097W	Legrand	3	EA
28	Outdoor rated GFCI Outlet Box with Cover MKG420CS	Hubbell Taymac	3	EA
29	Conduit Bodies Type LB, 2", Threaded, coated iron, LB200M	Thomas & Betts	7	EA
30	Trenching For Ground Ring, Shelter, Gantry Cap & Cabinet		235	LF
31	#2 AWG Bare Tinned Copper Wire Soft Drawn, for grounding NNC1258x	NNC	250	LF
32	3/4" x 10 Ft Copper or Copper Clad Steel Ground Rods F4P GR-34X10C	CES	21	EA
33	Exothermic Weld One Shots for connections to ground ring GT1181VPlus	nVent Erico	35	EA
34	Disconnect Switch (Service & Generator) VH224DSGL	Schneider Electric	2	EA
35	Integra Enclosure, Polycarbonate, 8"H x 6"W x 4" Deep single door H8064HFFL	Solutions direct	1	EA
36	8" x 6" back plate, Aluminum for Integra Enclosure ABP-86	Solutions direct	1	EA
37	Din Rail, 35mm x 7.5mm x 1 meter	Omega	1	EA
38	Phoenix Contact Din Rail 4 position ground terminal block, green #3209594	Newark	1	EA
39	Phoenix Contact Din Rail 4 Position Terminal Block, Gray 3209578	Newark	2	EA
40	Minature Circuit Breaker, Din Rail Mount, 120VAC 15 Amp FAX-B15/1-NA	Eaton	2	EA
41	Hand Hole 48"x48"x36", Polymer Concrete w/Cover, Tier 22, PG4848Z50612	Quazite	2	EA
42	Hand Hole 24"x36"x36", Polymer Concrete w/Cover, Tier 22, PG2436z42312 JB-S3	Quazite	14	EA
43	Hand Hole 24"x36"x24", Polymer Concrete w/Cover, Tier 22, PG2436Z52512 JB-S3	Quazite	8	EA
44	Hand Hole 13"x24"x24", Polymer Concrete w/Cover, Tier 22, PG1324Z87612 JB-S1	Quazite	2	EA
45	Conduit, 1" Trade, EMT,	Allied Tube & Conduit	50	EA
46	Conduit, 1" EMT 90 deg Elbow	Allied Tube & Conduit	5	EA
47	Conduit, 1" EMT Couplings, set screw	Allied Tube & Conduit	5	EA
48	Outlet Box, Surface Mount, New/Old Work, Raco 8660	Hubbel Raco	6	EA
49	Outlet 15 Amp, USB Duplex Outlet w/ Type A & Type C ports, R02-W5633-00W	Leviton	4	EA
50	Light Switch, Wall, Illuminated, 1-pole, 15 Amp, 120VAC, 1201-LHI	Leviton	1	EA
51	Disconnect Switch, 240VAC, 30 Amp, Fused, VH221NDSGL	Schneider Electric	3	EA
52	Ethernet, CAT6, Direct Bury, Shielded, PN 6ESCMXBLK	TrueCable	250	LF
53	CAT6 RJ-45 Punchdown, Keystone Jack, White PN 6EPD90CMPTWHT	TrueCable	2	EA
54	Dual Jack, Single Gang Wall Plate for Keystone Jacks PN 2PFPWHT	TrueCable	1	EA
55	Network/Server Cabinets, 45" Depth, 30" Width, 48RU SR48UBDPWD	Eaton/Tripplite	4	EA
56	Server Cable Vertical Cable Mgmt, SCRCABLERINGVRT	Eaton/Tripplite	4	EA
57	Single-Phase Metered Input Rack PDU G4, 100-240V, 24 Outlets, 16A, 3.8kW, C20/L6-20 Input, 10 ft. Cord, 0U Vertical	Eaton	4	EA
58	EDS G509-T 9G-port full Gigabit managed Ethernet switch, High Temp	Moxa	6	EA
59	SFP-1GLXLC-T Fiber Optic Module, 10km max	Moxa	4	EA
60	SFP-1GSXLC-T Fiber Optic Module, 550m max	Moxa	8	EA
61	Belden 3108A 22AWG 3 Pair EIA RS485 comm cable	Belden	50	LF
62	HVAC Lead/Lag PLC Controller (1 per cabinet)	Thermal Edge	2	EA
63	Belden 1 pair, shielded, 24AWG #9841	Belden	50	LF

Item #	Ancillary Equipment list (optional services) Item Description and/or Part No.	Vendor	QTY	UOM
1	#2 AWG XHHW, Black Insulation, SIMpull #112987	Southwire	1000	LF
2	#2 AWG XHHW, White Insulation, SIMpull #218107	Southwire	500	LF
3	#6AWG XHHW, Green Insulation, SIMpull, #553230	Southwire	1500	LF
4	#1/0 AWG XHHW, Black Insulation, SIMpull, #113001	Southwire	1500	LF
5	#8 AWG XHHW, Green Insulation, SIMpull, #952739	Southwire	250	LF
6	#3/0 AWG XHHW, Black Insulation, SIMpull #113027	Southwire	150	LF
7	#3/0 AWG XHHW, White Insulation, SIMpull #553880	Southwire	75	LF
8	#4 AWG XHHW, Green Insulation, SIMpull #558627	Southwire	75	LF
9	Fiber Optic cable, 12 fiber, 50/125um, OM4 Multimode, COR-012TU4-T4790D20	Corning	800	MTR
10	Type "LC" FO connector, 50/125 um Multimode Unicam 95-050-99-X	Corning	24	Ea
11	Conduit, 3" Trade size, PVC Sched 80	Allied Tube & Conduit	600	LF
12	Conduit 2" Trade Size, PVC Sched 80	Allied Tube & Conduit	400	LF
13	Directional Boring with 2" HDPE SDR-11 Conduit		2100	LF
14	Trenching, 12" Wide, For Conduit		370	LF
15	#2 AWG Bare Tinned Copper Wire Soft Drawn, for grounding NNC1258x	NNC	250	LF
16	Hand Hole 48"x48"x36", Polymer Concrete w/Cover, Tier 22, PG4848Z50612	Quazite	2	EA
17	Hand Hole 24"x36"x36", Polymer Concrete w/Cover, Tier 22 PG2436z42312 JB-S3	Quazite	14	EA
18	Hand Hole 24"x36"x24", Polymer Concrete w/Cover, Tier 22, PG2436Z52512 JB-S3	Quazite	8	EA
19	Hand Hole 13"x24"x24", Polymer Concrete w/Cover, Tier 22, PG1324Z87612 JB-S1	Quazite	2	EA
20	#12 AWG Copper THHN, Black insulation,	Southwire	500	LF
21	#12 AWG Copper THHN, White insulation,	Southwire	500	LF
22	#12 AWG Copper THHN, Green insulation,	Southwire	500	LF
23	Ethernet, CAT6, Direct Bury, Shielded, PN 6ESCMXBLK	TrueCable	250	LF
24	CAT6 RJ-45 Punchdown, Keystone Jack, White PN 6EPD90CMPTWHT	TrueCable	2	EA
25	Dual Jack, Single Gang Wall Plate for Keystone Jacks PN 2PPFWHT	TrueCable	1	EA
26	Belden 3108A 22AWG 3 Pair EIA RS485 comm cable	Belden	50	LF
27	Belden 1 pair, shielded, 24AWG #9841	Belden	50	LF

A **mandatory pre-bid meeting** will be held at 6500 Powhite Pkwy S, Richmond, Virginia 23225 (37°31'52.2"N 77°31'07.6"W) at 10:00 AM local time, on **Wednesday, January 22, 2025**. A mandatory site visit shall immediately follow the office portion of the pre-bid meeting. Only contractors and qualified subcontractors, who meet the requirements to propose, as stated below, should attend the pre-bid meeting.

Bids for this Contract must be submitted on complete bidding forms bound in the Contract Documents. Optional services quantities shall be included under a separate bid tabulation form, and will be awarded at the discretion of the RMTA. The successful bidder will be notified in writing.

To submit Proposals for this Contract, contractors or qualified subcontractors shall, on Monday, January 22, 2025 at 10:00 a.m. local time, meet the following requirements:

- Be prequalified by the Virginia Department of Transportation for bidding on State projects. The Authority reserves the right to request additional experience information for any bidder that has not been assigned the “**Electrical Installation**” and/or “**Traffic Management Systems**” work classes by VDOT or for contractors that have a prequalification level of Conditional, Currently Inactive or Probationary.



Note that a bidder must have prior experience and be able to provide written documentation in a minimum of one of the work experience categories as noted above. A bidder cannot have subcontractors be the documented experience in all categories.

Complete Contract documents will be available on Thursday, January 15, 2025 after 1:00 p.m. (local time) from <http://www.rmtaonline.org/rfps/>. Specifications (Virginia Department of Transportation 2020 Road and Bridge Specifications, revised December 2022) and (2011 Virginia Work Area Protection Manual, Revision 2.1 - November 2020) which form an integral part of this Contract, are available from the Virginia Department of Transportation website free of charge.

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 a Proposal 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, as it may deem in its best interests.

Project related inquiries must be submitted in writing to Ms. Maria Johnson, RMTA Deputy Director of Operations at [maria.johnson@rmtaonline.org](mailto:maria.johnson@rmtaonline.org) and Mr. Danny Baiden, P.E. of AtkinsRéalis at [danny.baiden@atkinsrealis.com](mailto:danny.baiden@atkinsrealis.com). The deadline to submit inquiries and questions is Thursday, January 24, 2025 at 1 P.M. local time.

RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY  
Joi Dean, CEO  
Richmond, Virginia

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

RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY

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RICHMOND EXPRESSWAY SYSTEM

CONTRACT NO. AET PW-2025

ALL ELECTRONIC TOLLING ITS & CIVIL ELEMENTS

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BID FOR GENERAL CONSTRUCTION CONTRACT

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

All:

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 December 1, 2025. The gantry, tech shelter, cabinet, and generator foundations shall be completed no later than 6/23/2025 and the pavement shall be completed no later than 7/18/2025 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.

AET PW-2025 All Electronic Tolling ITS & Civil Elements Bid Tabulation

( \_\_\_\_\_ ) (INSERT BIDDER FIRM NAME HERE)

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
1	Mobilization	Ea.	1		
2	Clearing and Grubbing	Acre	0.5		
3	Selective Tree Removal, Trimming, & cleanup	Acre	0.5		
4	Temp. Silt Fence Ty. A	LF	300		
5	Inlet Protection Ty. A	Ea.	1		
6	Earthwork	LS	1		
7	Permanent Seed	Lbs	500		
8	Fertilizer	Lbs	25		
9	Sediment Retention Roll	LF	300		
10	Remove Existing Guardrail	LF	360		
11	Guardrail GR-2	LF	735		
12	Guardrail GR-2A	LF	150		
13	Guardrail Terminal GR-7	Ea.	1		
14	Guardrail Attenuator TL-3	Ea.	1		
15	Maintenance of Traffic	LS	1		
16	NS Flexible Pavement Planing 4"	SY	120		
17	Asphalt Concrete TY. SM-9.5E 4"	Ton	27		
18	Rumble strips Cylindrical Asphalt	LF	90		
19	Pavement Marking Eradication	LF	450		
20	Type B Class VI Pavement Marking	LF	450		
21	2 Cabinets and Ancillary Equip.* Installation (including transport)	LS	1		
22	Generator & Ancillary Equip.* Install (incl. initial fueling & testing)	Ea.	1		
23	Tech Shelter Ancillary Equipment *	Ea.	1		
24	Electrical Service SE-4 Type A	Ea.	1		
25	Junction Box JB-S2	Ea.	6		
26	Junction Box JB-S3	Ea.	6		
27	Junction Box JB-S4	Ea.	6		
28	Electrical Service Ground Electrode 10'	Ea.	21		
29	Test Bore	Ea.	1		
30	Communication Equip. Buried Cable Marker Post	Ea.	2		
31	Buried Cable Marker Post	Ea.	5		
32	Shelter Site Work Pad	Ea.	1		
33	Technical Shelter Foundation	Ea.	1		
34	Non Standard Concrete Foundation	Ea.	2		
35	Generator Foundation	Ea.	1		
36	Toll Gantry Foundation	Ea.	2		
				<b>Total</b>	

(SIGN HERE)

(INSERT HERE)

Signature of Owner, Partner, or Corporate Officer:

Title:

TOTAL

AET PW-2025 All Electronic Tolling ITS & Civil Elements (optional services) Bid Tabulation

( \_\_\_\_\_ ) (INSERT BIDDER FIRM NAME HERE)

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
1	Mobilization	Ea.	1		
2	Test Bore	Ea.	1		
3	Communication Equipment Buried Cable Marker Post	Ea.	20		
4	Cable CAT6 Water blocking, shielded direct buried	LF	250		
5	#2 Conductor Cable	LF	1,500		
6	#3 Conductor Cable	LF	225		
7	#4 Conductor Cable	LF	75		
8	#6 Conductor Cable	LF	1,500		
9	#8 Conductor Cable	LF	250		
10	#12 Conductor Cable	LF	1,500		
11	Bored Conduit 2"	LF	2,000		
12	Bored Conduit 3"	LF	2,500		
13	Trench Excavation EC-1	LF	370		
14	2" PVC Conduit	LF	400		
15	3" PVC Conduit	LF	600		
16	Communication Equipment Fiber Optic Cable 12 strand	LF	800		
17	Miscellaneous Ancillary Equipment (optional)	LS	1		
				<b>Total</b>	

(SIGN HERE)

(INSERT HERE)

Signature of Owner, Partner, or Corporate Officer:

Title:

TOTAL

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 grounds 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 Bid Guarantee (Sec. 102.07 of the Specifications) consisting of a Bid Bond (Sec. PB of the bid documents) in the amount of (5) percent of the same Total Bid Price. It is hereby understood and agreed that said bond is to be forfeited as liquidated damages 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: \_\_\_\_\_

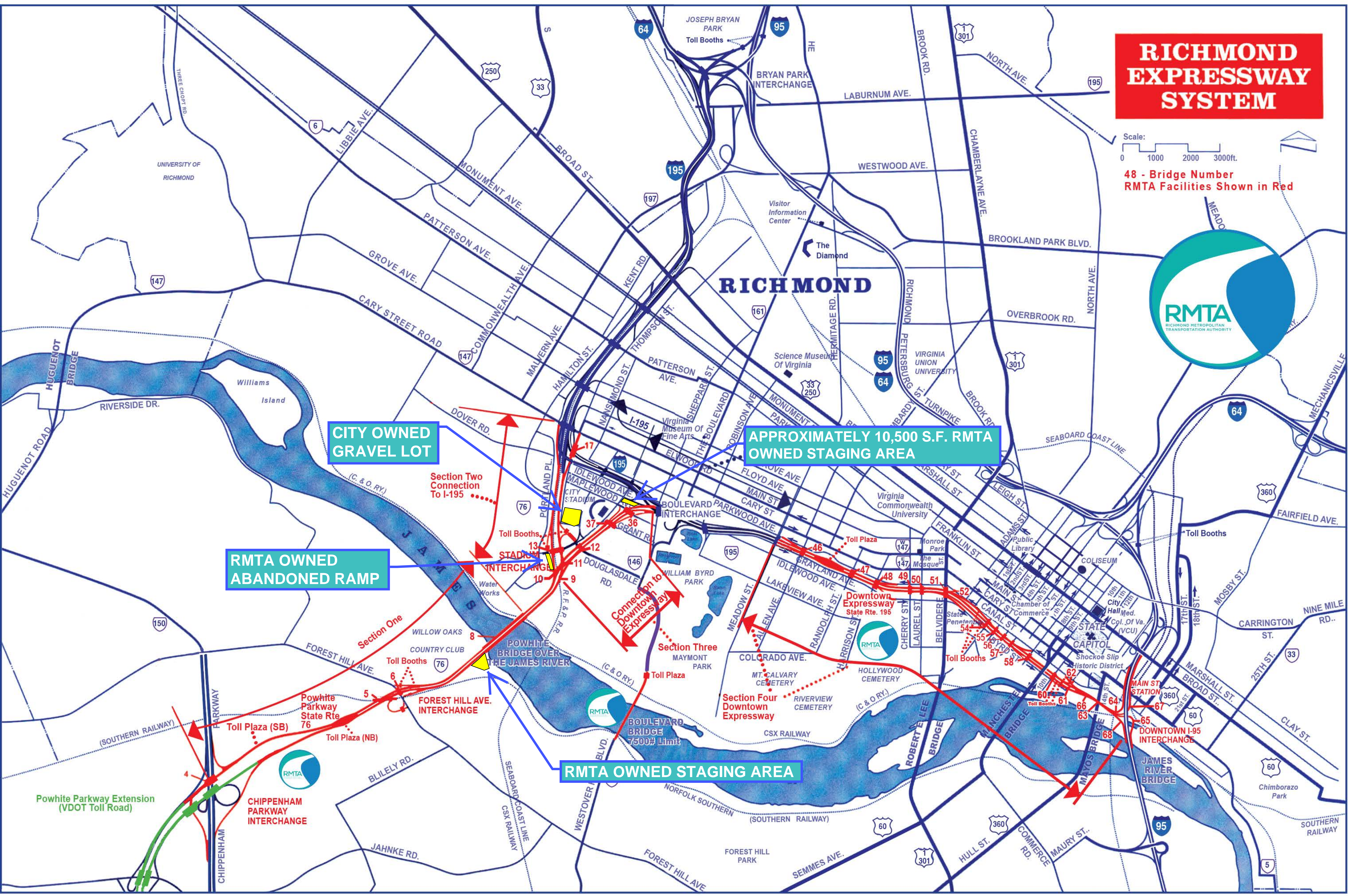
Witness or Attest: \_\_\_\_\_ (Affix Corporate Seal Here)

NOTE: ONLY A PREQUALIFIED BIDDER MAY  
USE THIS BIDDING FORM. BIDDING FORMS ARE NOT TRANSFERABLE.

# RICHMOND EXPRESSWAY SYSTEM

Scale: 0 1000 2000 3000ft.

48 - Bridge Number  
RMTA Facilities Shown in Red



CITY OWNED GRAVEL LOT

APPROXIMATELY 10,500 S.F. RMTA OWNED STAGING AREA

RMTA OWNED ABANDONED RAMP

RMTA OWNED STAGING AREA

Powhite Parkway Extension (VDOT Toll Road)

CHIPPENHAM PARKWAY INTERCHANGE

Downtown Expressway State Rte. 195

MAIN ST. STATION

DOWNTOWN I-95 INTERCHANGE

JAMES RIVER BRIDGE

RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY

\_\_\_\_\_  
RICHMOND EXPRESSWAY SYSTEM

CONTRACT NO. AET PW-2025

ALL ELECTRONIC TOLLING ITS & CIVIL ELEMENTS

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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 No. AET PW -2025 All Electronic Tolling ITS & Civil  
Elements 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:

RICHMONT METROPOLITAN TRANSPORTATION AUTHORITY

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RICHMONT EXPRESSWAY SYSTEM

CONTRACT NO. AET PW-2025

ALL ELECTRONIC TOLLING ITS & CIVIL ELEMENTS

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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).

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)

RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY

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RICHMOND EXPRESSWAY SYSTEM

CONTRACT NO. AET PW-2025

ALL ELECTRONIC TOLLING ITS & CIVIL ELEMENTS

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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 No. AET PW-2025 for the above project:

(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

\_\_\_\_\_, 20\_\_.

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

My commission expires \_\_\_\_\_

(a) \_\_\_\_\_  
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 \_\_\_\_\_

(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

RICHMOND EXPRESSWAY SYSTEM

CONTRACT NO. AET PW-2025

ALL ELECTRONIC TOLLING ITS & CIVIL ELEMENTS

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ELECTRICAL INSTALLATION / TRAFFIC MGMT SYSTEMS EXPERIENCE - BIDDER/SUBCONTRACTOR

In addition to the bidding requirements stated elsewhere in these documents, prospective bidders or their subcontractor must have successfully completed at least three (3) electrical installation and/or traffic management systems projects. 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 the experience forms. A bidder cannot have a subcontractor be the documented experience in all categories.

If the bidder is not anticipating self-performing the scope of work associated with the experience type listed herein, please list the name of the qualified subcontractor below:

Subcontractor \_\_\_\_\_  
(If applicable) Company Name

\*\*\*\*\*

ELECTRICAL INSTALLATION AND/OR TRAFFIC MANAGEMENT SYSTEMS PROJECT NO. 1

Job Location(s)/Description(s): \_\_\_\_\_

Owner/Contact Information: \_\_\_\_\_

Owner/Contact Phone Number: \_\_\_\_\_

Approximate Date(s) of Project: \_\_\_\_\_

\*\*\*\*\*

ELECTRICAL INSTALLATION AND/OR TRAFFIC MANAGEMENT SYSTEMS PROJECT NO. 2

Job Location(s)/Description(s): \_\_\_\_\_

Owner/Contact Information: \_\_\_\_\_

Owner/Contact Phone Number: \_\_\_\_\_

Approximate Date(s) of Project: \_\_\_\_\_

\*\*\*\*\*

ELECTRICAL INSTALLATION AND/OR TRAFFIC MANAGEMENT SYSTEMS PROJECT NO. 3

Job Location(s)/Description(s): \_\_\_\_\_

Owner/Contact Information: \_\_\_\_\_

Owner/Contact Phone Number: \_\_\_\_\_

Approximate Date(s) of Project: \_\_\_\_\_

\*\*\*\*\*

ELECTRICAL INSTALLATION AND/OR TRAFFIC MANAGEMENT SYSTEMS PROJECT NO. 4

Job Location(s)/Description(s): \_\_\_\_\_

Owner/Contact Information: \_\_\_\_\_

Owner/Contact Phone Number: \_\_\_\_\_

Approximate Date(s) of Project: \_\_\_\_\_

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RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY

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RICHMOND EXPRESSWAY SYSTEM

CONTRACT NO. AET PW-2025

ALL ELECTRONIC TOLLING ITS & CIVIL ELEMENTS

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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 No. AET PW-2025  
entitled PIER PROTECTION, 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)

RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY

RICHMOND EXPRESSWAY SYSTEM

CONTRACT NO. AET PW-2025

ALL ELECTRONIC TOLLING ITS & CIVIL ELEMENTS

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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, it's 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. AET PW-2025, entitled All Electronic Tolling ITS & Civil Elements, in the manner and to the full extent as set forth in the Special Provisions, Plans, Supplemental Specifications, 2020 Road and Bridge Specifications of the Virginia Department of Transportation (revised December 2022), 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, 2020 Road and Bridge Specifications of the Virginia Department of Transportation (revised December 2022). 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, February 4, 2025 at 10:00 AM at which time (10:30AM) and place the bids will be publicly opened and read. The work under this contract shall be completed no later than December 1, 2025, with the concrete foundations to be completed by June 23, 2025 and the paved shoulder by July 18, 2025.

**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 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

CONTRACT NO. AET PW-2025

ALL ELECTRONIC TOLLING ITS & CIVIL ELEMENTS

\*\*\*\*\*

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 No. AET PW-2025, entitled All  
Electronic Tolling ITS & Civil Elements 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 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

Countersigned by  
Resident Virginia Agent:

(Attach evidence of Power of Attorney)

\_\_\_\_\_

(Affix Corporate Seal Here)

RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY

---

RICHMOND EXPRESSWAY SYSTEM

CONTRACT NO. AET PW-2025

ALL ELECTRONIC TOLLING ITS & CIVIL ELEMENTS

\*\*\*\*\*

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. AET PW-2025 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 VIRGINIA 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. AET PW-2025

ALL ELECTRONIC TOLLING ITS & CIVIL ELEMENTS

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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.

<https://www.sbsd.virginia.gov/directory/>

**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 VIRGINIA 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

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RICHMOND EXPRESSWAY SYSTEM

CONTRACT NO. AET PW-2025

ALL ELECTRONIC TOLLING ITS & CIVIL ELEMENTS

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RECEIPT OF ADDENDA

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

<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.

RMTA SUPPLEMENTAL SPECIFICATIONS

To

VIRGINIA DEPARTMENT OF TRANSPORTATION  
2020 ROAD AND BRIDGE SPECIFICATIONS

FOR  
RICHMOND EXPRESSWAY SYSTEM

CONTRACT NO. AET PW-2025  
ALL ELECTRONIC TOLLING ITS & CIVIL ELEMENTS

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RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY

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SUPPLEMENTAL SPECIFICATIONS

PREFACE:

The 2020 Road and Bridge Specifications of the Virginia Department of Transportation, available from the Virginia Department of Transportation, 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 2020 Road and Bridge Specifications (revised December 2022), 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", revised April 2024 are hereby made a part of this contract. The Virginia Erosion and Sediment Control Handbook, Third Edition 1992 Standards and Specifications (change to Version 1.1 of the Virginia Stormwater Management Handbook (effective April 2024) 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 2020 Road and Bridge Specifications issued by the Virginia Department of Transportation.

RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY

SUPPLEMENTAL SPECIFICATIONS

TO

VIRGINIA DEPARTMENT OF TRANSPORTATION  
2020 ROAD AND BRIDGE SPECIFICATIONS

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.

AFFILIATE - - Any business entity which is closely associated to another business entity so that one has the power to control the other either directly or indirectly; or, where one business entity systematically shares resources, officers and/or other management with another business entity to the extent that a business relationship legally exists or is publicly perceived to exist; or, when a third party has the power to control both; or, where one business entity has been so closely allied with another through an established course of dealings, including but not limited to the lending of financial wherewithal or engaging in joint ventures, so as to cause a public perception that the two firms are one entity.

AVERAGE ANTICIPATED OPERATING SPEED - - The posted speed of the work zone plus 5 miles per hour as defined in Appendix A of the Virginia Work Area Protection Manual.

MOT - - Maintenance of Traffic

BID BOND - - The 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 2.1 (11/2020), 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, "Deputy 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, AtkinsRéalis, 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 AtkinsRéalis for this project is located at 1925 Ballenger Ave ste. 400, Alexandria, Virginia 22314, telephone (703) 535-3008

SPECIFICATIONS (SPEC) - - The general term comprising all the directions, provisions and requirements contained in the Virginia Department of Transportation, 2020 Road and Bridge Specifications (revised December 2022), 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-5 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
- 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 Danny Baiden (AtkinsRéalis) at 804-523-2335 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/rfps/>. 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 properly acknowledge receipt of addenda/addendum in the Receipt of Addenda form.
- (t). Alterations to the Bid Tab

#### 102.07 Proposal Guaranty (Bid Bond)

Add the following:

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 bid date 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 §2.2-4318 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 on the Authority's website.

#### 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.**

## 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.

RICHMOND METROPOLITAN TRANSPORTATION AUTHORITY

SPECIAL PROVISIONS

To

VIRGINIA DEPARTMENT OF TRANSPORTATION

2020 ROAD AND BRIDGE SPECIFICATIONS

FOR

RICHMOND EXPRESSWAY SYSTEM

CONTRACT NO. AET PW-2025

ALL ELECTRONIC TOLLING ITS & CIVIL ELEMENTS

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**SPECIAL PROVISION  
TOLL COLLECTION PASS CARDS**

**DESCRIPTION**

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

**PROCEDURES**

The Contractor shall provide the Engineer and the RMTA with a written request for Cards within seven (7) calendar days prior to work start. The written request shall contain, but not be limited to, the number of Cards requested, names and addresses of the individuals to whom the Cards shall be assigned, 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 seven (7) calendar 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 a "Full Service" lane to use Toll Pass Cards. Toll cards shall only be used while performing work under the contract.

In the event that the Contractor is required to use the ORT lanes to perform Maintenance of Traffic operations, and with the approval of the Engineer, arrangements be made to permit designated vehicles to use the ORT lanes with compensation. Other than said designated vehicles, additional Contractor's vehicles using the ORT lanes will not be compensated and are required to purchase an E-ZPass Transponder.

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 preferred), 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. The RMTA shall notify individual's company and the Contractor of the assumed Card misuse. The Contractor is responsible for returning the misused Card to the RMTA 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  
MAINTENANCE OF TRAFFIC**

**MAINTENANCE OF TRAFFIC**

All maintenance of traffic operations shall be conducted in accordance with the most 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 pedestrian traffic.

The Contractor shall provide the Engineer no less than 7 calendar days' notice before closing any lane, ramp or bridge. A minimum of ten (10) calendar days' notice is required if the request is to close Boulevard Bridge. A minimum of fourteen (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 seven (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 in this special provision. All traffic control devices including advance warning signs and detours shall be removed, the roadway free of debris, and the lane open to traffic by the end time in this special provision.

The Contractor shall be aware that failure to comply with the times set forth in this special provision could 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 seven (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.

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

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

Westbound DTE/Southbound Connector: The road 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 always have a minimum of one (1) 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 (1) 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 (3) 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 (2) 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.

## DOWNTOWN EXPRESSWAY (DTE) RAMP CONNECTIONS TO/FROM I-95

Lane closures on Bridges 63 and 66 shall only be permitted at nights between 9 P.M. and 6 A.M. and on weekends between 9 P.M. Friday and 6 A.M. Monday. Closures of Ramp Bridges 64, 65, 67 and 68 shall only be permitted at nights between 10 P.M. and 5 A.M. weekdays, and on weekends between 5 A.M. Saturday and 5 A.M. Monday.

There shall be no total closures of the either the eastbound Downtown Expressway (DTE) or westbound DTE permitted; One (1) lane shall be maintained on Bridge 63 and Bridge 66 at all times. In addition, Contractor shall maintain at least one (1) ramp entering and at least one (1) ramp exiting the city at all times; Bridge 64 shall not be permitted to be closed while Bridge 65 is closed and Bridge 67 shall not be permitted to be closed while Bridge 68 is closed.

All lane closures must be coordinated with VDOT, RMTA and the Engineer for final approval of dates and times. Contractor shall notify VDOT Smart Traffic Center at 804-796-4520 to advise of the lane closure status of these bridges.

## **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 (3) 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 (2) lane closures will be permitted at any time for the NB express lanes 90 - 92.
- No more than two (2) 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.

#### EXIT AND ENTRANCE RAMP TOLL PLAZAS

##### TIMES AND NUMBERS OF TOLL LANE CLOSURES (ANY DIRECTION)

No toll lane closures shall be permitted during peak hours each weekday. Peak hours are 6:00 a.m. to 10:00 a.m. for EB or NB ramps and 3:00 p.m. to 7:00 p.m. for WB or SB ramps.

- 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.
- The Authority and the Engineer shall schedule a mutually agreeable time.
- The length of the full closure shall be minimized by the Contractor.

The Contractor shall provide the Engineer no less than seven (7) calendar days' notice before closing any given toll lane or any exit or entrance ramp. Pick up operation shall commence no later than thirty (30) minutes prior to closing period(s) referenced above.

The Contractor shall provide written notice to the Engineer a minimum of seven (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 Contractor's sole responsibility to enter the work zone in LCAMS and VA Traffic. Contractor shall notify VDOT Traffic Operations Center (Smart Traffic) at 804-796-4520 to advise of the lane closure status when the first sign is placed and last sign is picked up. The Contractor shall communicate any changes in these times/dates immediately with the Engineer.

## **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 on-site 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.

## **BOULEVARD BRIDGE**

Boulevard Bridge is a two-lane bridge carrying traffic in opposing directions. Traffic in both directions must be maintained at all times. Typically, only single lane closures are permitted at any time. A full bridge closure may be permitted under rare circumstances with the approval of the Engineer and the Authority. The Contractor shall submit plans no less than ten (10) calendar days' notice prior for approval. Consideration to traffic volumes and event traffic in the vicinity will be given.

Lane closures shall not be permitted Monday – Friday between the hours of 6:30 am to 9:30 am and 3:00 pm to 7:00 pm, or as directed by the Engineer.

Traffic control shall utilize flaggers and be in accordance with MUTCD and the Virginia Work Area Protection Manual (WAPM) standards. Truck mounted attenuators are prohibited on Boulevard Bridge.

## **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 minutes (15) , or a portion of 15 minutes (15) , per lane or ramp, for any closure beyond the limits established above. Assessment of liquidated damages will stop when all maintenance of traffic devices have been 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.

### **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: <http://www.vdot.virginia.gov/business/trafficeng-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).

HOLIDAYS AND SPECIAL EVENTS

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

- Memorial Day (Monday 5/26/25): 5/23/25 (Friday) – 5:00 A.M. through 5/27/25 (Tuesday) – 10:00 A.M.
- Independence Day (Wednesday 7/4/25): 7/3/25 (Tuesday) – 5:00 A.M. through 7/5/25 (Thursday) – 10:00 A.M.
- Labor Day (Monday 9/1/25): 8/29/25 (Friday) – 5:00 A.M. through 9/2/25 (Tuesday) – 10:00 A.M.

The Authority will not allow any lane closures during special events. 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 third 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 Schedule of Work Activities and Maintenance of Traffic (MOT) Plan for review and approval by the Engineer a minimum of fourteen (14) calendar days in advance of any special event.

No allowance shall be made for these periods in determining the contract end date.

## **MEASUREMENT AND PAYMENT**

Standard Maintenance of Traffic pay items will be measured and paid as per VDOT 2020 Road and Bridge Specifications Section 512.04 unless modified by Special Provisions Contained herein.

**SPECIAL PROVISION  
HYDRAULIC CEMENT CONCRETE OPERATIONS**

**DESCRIPTION**

This work shall consist of furnishing and placing hydraulic cement concrete in accordance with these specifications and in conformity with the dimensions, lines, and grades shown on the plans or as established by the RMTA.

**MATERIALS**

- a) Concrete admixtures shall conform to Section 215. Concrete admixture use shall conform to Sections 215 and 217.
- b) Anchor bolts shall conform to Section 226.
- c) Reinforcing steel shall conform to Section 223
- d) Conduit shall conform to section 238

**PROCEDURE**

**A) Drilled shaft :**

- 1. The shaft shall be excavated to plan depth or no more than 3” greater. Bottom of shaft shall be clear of debris
- 2. Rebar shall not make contact with bottom of the shaft
- 3. Spacers shall be used to maintain clear cover
- 4. Shaft shall be poured in the dry. Water encountered shall be pumped out prior to the pour.

**B) Reinforcing steel:** Fabricate and place reinforcement steel in accordance with VDOT spec section 406. Reinforcing steel clear cover (unless otherwise noted) per VDOT Spec section 406.03 (D)

- 1. Drilled shaft principal reinforcement 3.5”
- 2. Spirals and ties: 3” (corrosive environment)
- 3. Pier cap principal reinforcement: 3.5” (Corrosive Environment)
- 4. Pier cap stirrups and ties: 3” (Corrosive Environment)

**C) Forms:** Forms for exposed surfaces below the bottom of slabs of bridges, including substructures, and on end walls and wing walls of culverts down to an elevation of 1 foot below low water or 2 feet below the final ground line above water shall be faced with metal, plyboard, or other approved smooth-faced material constructed to provide a minimum of joints and prevent leakage. Concrete shall present a uniform and smooth surface without requiring touch-up or surface finishing upon removal of forms. Uneven joint protrusions of more than 1/8 inch shall be removed. Cavities shall be filled with



cement mortar, and the surface left sound, smooth, even, and uniform in color. Forms shall be set and maintained true to line. When forms appear to be unsatisfactory, either before or during concrete placement, the Engineer may order the work stopped until defects have been corrected. The shape, strength, rigidity, water tightness, and surface smoothness of reused forms shall be maintained at all times. Warped or bulged lumber shall be resized before being reused. For narrow walls and columns where the bottom of the form is inaccessible, the lower form boards shall be left loose so that they may be removed for cleaning immediately before concrete placement. Forms shall be treated with an approved oil or form-coating material or thoroughly wetted with water immediately before concrete placement. Material that will potentially adhere to or discolor concrete shall not be used. Forms shall be maintained at a temperature that will not adversely affect curing of concrete. Formed voids in concrete shall be of accurate dimensions and locations so that the thickness of surrounding concrete shall not be reduced from plan dimensions. Methods of positioning void forms and placing surrounding concrete shall be subject to the approval of the Engineer prior to their use.

- D) **Anchor Bolts:** Anchor bolts shall be protected during concrete placement to prevent concrete bonding to the threads. The template must be used and bolts shall align with the axis of the structure. Anchor bolt orientation shall be checked by survey.
- E) **Conduit:** Conduit quantity shall be checked prior to pour. Conduit shall be spaced to allow concrete to encapsulate individual conduits. Conduit shall protrude a minimum of 12" above gantry cap at the time of the pour .
- F) **Placement and Consolidation:** Concrete shall be placed as soon as practicable after forms are prepared and excavation is completed. Water shall be removed from excavations before concrete is placed. Flowing water within the excavation shall be diverted outside concrete areas to a sump. Before concrete is placed, sawdust, chips, dirt, other debris and temporary struts and braces shall be removed from the space to be occupied by concrete. Toll Gantry piers and elements shall be poured in a single pour. Removable forms shall be thoroughly wetted, oiled, or treated with an approved form-coating material. Concrete shall be placed in forms immediately after mixing. Concrete that does not reach its final position in forms within the time specified in Section 217 shall not be used. The method of placement shall be such as to avoid the possibility of segregating ingredients and displacing reinforcement or void forms. The use of long chutes for conveying concrete from the mixing plant to forms will be allowed only with the written permission of the Engineer. If chutes are allowed and the quality of concrete as it reaches the forms or the methods of placing it therein are not satisfactory, the Contractor shall, upon direction from the Engineer, discontinue the use of chutes and re-equip his operation for placing concrete in a satisfactory manner. Where steep slopes are required, chutes shall be equipped with baffle boards. Chutes, troughs, and pipes shall be

kept clean and free from coatings of hardened concrete by thorough flushing with water after each run. Water used for flushing shall be discharged clear of concrete in place and filtered prior to entry into state waters. Open troughs and chutes shall be metal or lined with metal and shall extend as nearly as possible to the point of deposit. Dropping concrete a distance of more than 5 feet or depositing a large quantity at any point and running or working it along forms will not be permitted. Concrete placement shall be regulated so that pressures caused by the presence of fresh concrete shall be not more than those used in the design of forms. Embedded materials shown on the plans shall be installed during each stage of concrete operations and suitably supported and maintained in the correct position. Care shall be taken to fill each part of a form by placing concrete as near its final position as possible, working coarse aggregates back from forms, and moving concrete under and around reinforcing bars without displacing them. After concrete has taken its initial set, care shall be taken to avoid jarring forms or placing strain on the ends of projecting reinforcement. Concrete shall be thoroughly consolidated during and immediately following placement. Consolidation shall be accomplished by mechanical vibration subject to the following provisions:

1. Vibration shall be internal to the concrete but not applied directly to reinforcement or formwork.
2. Vibrators shall be of a type and design approved by the Engineer
3. The intensity of vibration shall visibly affect a mass of concrete over a radius of at least 18 inches.
4. The Contractor shall provide a sufficient number of vibrators to consolidate each batch immediately after it is placed in forms.
5. Vibrators shall be manipulated to work concrete thoroughly around reinforcement and embedded fixtures and into corners and angles of forms. Vibration shall be applied at the point of deposit and in the area of the freshly placed concrete. Vibrators shall not be pulled through concrete and shall be inserted and withdrawn slowly and maintained nearly vertical at all times. Vibration shall be of sufficient duration and intensity to consolidate concrete thoroughly but shall not be continued so as to cause segregation. Vibration shall not be continued at any one point to the extent that localized areas of grout are formed. Application of vibrators shall be at points uniformly spaced and not further apart than twice the radius over which the vibration is visibly effective.
6. Vibration shall not be applied directly or indirectly to sections or layers of concrete that have hardened to the degree that it ceases to be plastic under vibration. Vibration shall not be used to make concrete flow in forms, and vibrators shall not be used to transport concrete in forms.
7. Vibration shall be supplemented by such spading as is necessary to ensure smooth surfaces and dense concrete along form surfaces and in corners and locations inaccessible to vibrators

When vibrating is not practicable, concrete shall be consolidated and its faces well spaded by continuous working with a suitable tool in a manner acceptable to the Engineer. Concrete shall be placed in continuous horizontal layers not more than 12 inches in thickness; however, slabs shall be placed in a single layer. When it is necessary in an emergency to place less than a complete horizontal layer in one operation, the layer shall terminate in a vertical bulkhead. In any given layer, separate batches shall follow each other so closely that each one shall be placed and consolidated before the preceding one has taken initial set. Each layer of concrete shall be left rough to secure efficient bonding with the layer above. A succeeding layer placed before the underlying layer has become set shall be consolidated in a manner to prohibit the tendency to produce a construction joint between layers. Layers placed at the end of one day's work or prior to temporarily discontinuing operations shall be cleaned of laitance and other objectionable material as soon as the surface has become sufficiently firm to retain its form. The top surface of concrete adjacent to forms shall be smoothed with a trowel. Horizontal layers located to produce a construction joint at a location wherein a feather edge might be produced in the succeeding layer shall be formed by inset formwork so that the succeeding layer will end in a body of concrete having a thickness of at least 6 inches. The work on any section or layer shall not be stopped or temporarily discontinued within 18 inches below the top of any face unless the details of the work provide for a coping having a thickness of not more than 18 inches, in which case the construction joint may be made at the underside of the coping at the option of the Engineer. Care shall be taken when placing concrete to avoid coating reinforcing steel, structural steel, forms, and other items that extend into areas to be involved in a subsequent placement. If coating of steel does occur, no attempt shall be made to remove the mortar until after the concrete steel bond of the earlier placement has developed sufficiently to withstand a cleaning operation. Any coating of mortar on deformed bars that cannot be removed by hand brushing with a wire bristle brush or a light chipping action will not have to be removed. The method and manner of placing concrete shall be regulated so as to place construction joints across regions of low shearing stress and in locations that will be hidden from view to the greatest extent possible. Placing and consolidating concrete shall be conducted to form a compact, dense, impervious mass of uniform texture that will show smooth faces on exposed surfaces. Any section of concrete found to be defective shall be removed or repaired as directed by the Engineer. If concrete operations are permitted to extend after sunset, the work area shall be brightly lit so that all operations are plainly visible.

- G) **Casing:** Temporary casing, permanent casing, or other shaft stabilization methods may be required. If permanent casing is used, the casing should be securely fastened to the hole such that there are no voids between the soil and the casing. If there is any void between the casing and the hole, the void shall be completely filled with pumped grout. The grout must be pumped through a tremie or grout pipe set to the bottom of the

annular void and grout must be seen exiting the top of the annular void completely around the casing to ensure the void is filled. The Grout must have a minimum compressive shear strength of 250 PSI.

- H) **Construction Joints** : Construction joints that are not detailed on the plans shall be placed as directed or approved by the Engineer. The Contractor shall use shear keys or inclined reinforcement where necessary to transmit shear or bond the two sections together. Joints shall be constructed so that feather edging does not occur. Construction joints against which earth fill is placed shall be protected by a heavy coat of asphalt conforming to Section 213 applied for a distance of 3 inches on each side of the joint and continuous throughout its length. In construction joints exposed to view, a waterstop conforming to Section 212 shall be inserted. The waterstop shall be placed at least 3 inches from the face of the concrete and shall extend at least 2 inches into each section of concrete. Longitudinal or transverse construction joints may be used to facilitate placing concrete in continuous slab spans. Longitudinal joints shall be spaced so that each concrete placement will be at least 10 feet in width. Concrete shall be placed in one continuous operation between construction joints. The volume of concrete in any one placement shall be not less than the volume of concrete in one end span.
- I) **Bonding Construction Joints**: In preparation for joining fresh concrete to set concrete, the Contractor shall roughen the surface of the work already in place. Shavings, sawdust, and other loose and foreign material shall be removed. The surface shall be washed and scrubbed with wire brooms when necessary to remove substances that will interfere with bonding. Concrete of the preceding placement shall be thoroughly wetted prior to placement of the next unit of fresh concrete. Prior to placing adjoining concrete, the vertical face shall be cleaned and in a saturated surface moist condition.
- J) **Curing Concrete** : The method of curing concrete shall be subject to the approval of the Engineer prior to mixing or placing concrete. When the atmospheric temperature is above 40 degrees F in the shade, concrete surfaces that are not protected by formwork and surfaces from which forms have been removed shall be cured using approved materials applied before the sheen disappears from fresh concrete or immediately upon removal of formwork. Concrete shall be cured for 7 days, regardless of the strength obtained with control cylinders. During this 7-day curing period, a curing agent or medium shall be used. PE film used for curing shall be white except that opaque or transparent PE film may be used between November 1 and April 1. When liquid membrane seal is used for curing grooved horizontal surfaces, the application rate shall be 100 to 150 square feet per gallon. The application rate for all other surfaces shall be 150 to 200 square feet per gallon. Application shall be such that an even, white, continuous membrane is produced on the concrete surface. If the atmospheric temperature falls below 40 degrees F in the shade, water curing shall be discontinued

except when it is accomplished by flooding as specified herein. Curing shall be immediately resumed using insulated blankets or other approved methods that will retain or supply moisture and maintain the temperature at the outermost surfaces of the concrete mass above 50 degrees F for at least 72 hours immediately following concrete placement and above 40 degrees F for at least 48 additional hours. If the Contractor begins masonry concrete operations when the atmospheric temperature is below 40 degrees F in the shade, the method of cure and protection shall retain or supply moisture and maintain the temperature at the outermost surfaces of the concrete mass above 50 degrees F for at least 72 hours immediately following concrete placement and above 40 degrees F for at least 48 additional hours. When concrete is cured by flooding with water and the temperature is below 40 degrees F in the shade, a depth of at least 6 inches shall be maintained above the surface of the mass until concrete has attained the minimum required design compressive strength as determined by a test cylinder cured in the same water.

- K) **Protecting Concrete:** Protection of concrete shall begin immediately following concrete placement in the formwork and shall continue without interruption throughout the curing period.
1. **Weather:** The Contractor shall schedule the placement of structural concrete so that the date and hour decided upon reflect consideration of weather conditions. Concrete shall be protected from rain. Concrete shall not be placed against surfaces whose temperature is below 40 degrees F. Concrete shall be protected from freezing by approved coverings and, when necessary, heating the surrounding air in such a manner that the concrete will not dry. Protection shall be provided to prevent rapid drying of concrete as a result of low humidity, high wind, higher concrete temperatures than atmospheric temperatures, or combinations thereof. The Contractor shall perform evaporation rate testing for bridge deck placements and concrete overlays. Immediately after screeding and until the application of plastic sheeting and/or wet burlap, no surface of the freshly mixed concrete shall be allowed to dry.
  2. **Construction activities:** Care shall be taken to avoid damage to concrete from vibration created by blasting and pile driving operations, movement of equipment in the vicinity of the structure, or disturbance of formwork or protruding reinforcement. Concrete shall be protected from the heat of an open fire. A watchperson shall be provided at the structure throughout any period in which open-flame heaters are operated in the vicinity of the concrete. After concrete in finished surfaces has begun to set, it shall not be walked on or otherwise disturbed for at least 24 hours except as provided for in (j) herein.

- L) Exposed areas shall be given a class 7 sidewalk finish in accordance with VDOT spec section 404.07(G). Cap shall have ¾” chamfered edge per VDOT spec 700.05.

**MEASUREMENT AND PAYMENT**

Unless designated as separate pay items, this price shall include excavation, reinforcing steel, waterstops, waterproofing, damp-proofing, anchor bolts, drain assemblies, silicone treatment, protective coating for concrete exposed to tidal waters, and trial batches.

<u>Pay Item</u>	<u>Pay Unit</u>
Shelter Site Work Pad	Each
Technical Shelter Foundation	Each
Non-standard Concrete Foundation	Each
Generator Foundation	Each
Toll Gantry Foundation	Each

**SPECIAL PROVISION  
ROADSIDE, TECHNICAL SHELTER, AND GENERATOR SITE**

**DESCRIPTION**

This work pertains to the Technical Shelter and Generator site arrangement specifics

**MATERIALS**

- a) Concrete admixtures shall conform to Section 215. Concrete admixture use shall conform to Sections 215 and 217.
- b) Anchor bolts shall conform to Section 226.
- c) Reinforcing steel shall conform to Section 223.
- d) Electrical components shall conform to section 238.

**PROCEDURE**

- A) Anchor bolts and bolt templates shall be furnished with the cabinets
- B) Anchor bolts are to be cast in place per manufacturer's instructions. The contractor may use an epoxy or expansion anchor bolts system where field drill is permitted on the concrete foundation, to be approved prior by the RMTA.
- C) The generator container system shall be installed in accordance with NFPA58, 2020 edition
- D) Refueling, emergency, & maintenance access shall be from the gravel lot, and not on Powhite Parkway.
- E) Tank shall be grounded per manufacturer's recommendation
- F) Visible hazard identification signs shall be placed in accordance with NFPA 704 and VA statewide fire prevention code.
- G) Electrical equipment and wiring installed shall be in accordance with the National Electrical Code.
- H) The RMTA shall be contacted prior to filling the tank to arrange site inspection. Container shall be filled only after determination that it complies with the design, fabrication, inspection, and marking codes.
- I) Container site shall meet the requirements for "low emission transfer site" (NFPA 6.7.3.4 and 6.30.5)
- J) Interconnect generator, service panel, and fence ground rod electrodes shall be connected with #2 bare tinned solid conductor. All other metallic structures with paths to the ground shall be connected to the grounding conductor if they are located within 10' of the grounding electrode system.
- K) Installation and testing of the ground rods shall be in accordance with VDOT 2020 Road and Bridge Specifications section 700.

- L) The Contractor shall verify existing utilities prior to the installation of any equipment. The Contractor shall immediately notify the RMTA of any discovered conflicts.
- M) Maintain a minimum of 3' of clearance around all sides of each equipment and 3.5' in front of all electrical equipment.
- N) Grounding bushings shall be installed on each end of metal conduits. Bell ends shall be installed on the end of PVC conduits
- O) The foundations shall be permanently marked to indicate all sides from which conduits pass. This mark shall be made with a trowel when finishing the concrete and shall be ¼" deep and 4-6" long.
- P) Foundation shall be sloped to drain away from roadside cabinets (2% max)
- Q) All conduits entering the roadside cabinet shall extend 6-10" above the foundation surface.
- R) Install ground rods and junction boxes in accordance with 2020 VDOT Road and Bridge specifications.
- S) Cabinets and base adapters shall be sealed with a silicone caulk where they mate with each other or concrete.
- T) For all conduit entries into cabinets and Tech Shelter:
  - 1. Cap and label spare conduit.
  - 2. Furnish and install copper wool and duct seal around cables to prevent moisture and rodent entry at all conduits entering the cabinet and Tech Shelter.
  - 3. Provide a means to prevent moisture build up in cabinetry prior to power connection.
- U) Two 1/2" diameter weepholes shall be provided in the cabinet foundations and located 2 inches inside the back or side edges of the base adapter. Weepholes shall be sloped to allow the outlet to exit 3 inches below the top of the foundations. Two inches of the outlet shall be fiber filled.
- V) HVAC condensation drain shall be provided.
- W) The Contractor shall stub out conduits a minimum of 24" from the edge of the foundation or pad and the direction of stub outs shall be determined in the field. Stub outs shall be in a direction that allows for future access based on current site conditions. Provide 2 ½" trowel marks in foundation / pad indicating direction of stub outs.
- X) Finished grade shall be sloped to drain water away from the pads.
- Y) Junction boxes:
  - 1. Lids shall be removable using a pickbar
  - 2. Provide four pairs of cable hooks equally spaced. Each hook shall have a 3" throat opening, be at least 3" wide, have rounded edges, have a capacity for 10 – 5/8" cables, support at least 220 Lbs., be made of non-corrosive material, and be bolted or otherwise permanently to the wall of the box.
  - 3. Deepen trench in vicinity of box, so that all conduits are 30" below grade at box. Adjust trench depth uniformly over a distance of at least 20 feet.
  - 4. Grade area around box such that runoff is directed away from the box.



5. For communication junction boxes located on slopes 2:1 or steeper, and located more than 2 feet in elevation above the toe of a slope. 3' x 6' maintenance pad shall be provided immediately adjacent to the downslope side of the junction box.
  6. Provide positive drainage into gravel subbase
- Z) Install innerduct as shown in attached plans.

**MEASUREMENT AND PAYMENT**

Concrete, reinforcement, anchor bolts, etc. will not be paid separately, and are to be priced along with pertinent bid items on the Invitation to Bid.

<b><u>Pay Item</u></b>	<b><u>Pay Unit</u></b>
Junction Box	Each
NS Concrete Foundation (Cabinet Foundations)	Each
Technical Shelter Foundation	Each
Toll Gantry Foundation	Each
Generator Foundation	Each
Shelter Site Work pad	Each
Bored Conduit	Linear Feet
Conduit	Linear Feet
Trench Excavation	Linear Feet

## **SPECIAL PROVISIONS FOR CONDUIT, JUNCTION BOXES, FIBER, & CONDUCTOR**

### **DESCRIPTION**

This work pertains to the conduit, junction boxes, fiber, and conductor cable elements of the project.

### **MATERIALS**

- a) Electrical components shall conform to section 238 of the Virginia Road and Bridge Specifications.

### **PROCEDURE**

- A) The Contractor shall immediately report all discrepancies between the plans and contract specifications to the RMTA for clarification.
- B) The Contractor shall be responsible for returning all disturbed areas to their original state, if details are not specified in the plans.
- C) All utility locations shown on the plans are approximate and may not be accurate or complete. The Contractor shall be responsible for ensuring that all utilities within the project limits are identified and located before beginning work. The Contractor shall receive a clear Miss utility ticket prior to commencement of any excavation or other earth disturbing activities. If the Contractor is aware of any utilities within the project limits that are not identified, the Contractor shall notify the RMTA.
- D) The Contractor shall be responsible for repairing or replacing, at their own expense, any existing utilities, pavement, concrete items, vegetation, etc. that are damaged or disturbed beyond the scope of work during construction.
- E) Final field inspection will not occur until all punch list items have been corrected.
- F) Prior to commencing construction activities, the Contractor shall inspect the site and report any deficiencies to the RMTA for correction. Once ITS work begins, the Contractor shall be responsible for responding to, assessing, and correcting all field device and communication outages, malfunctions, and emergency situations identified by the RMTA at locations for which the Contractor has assumed maintenance responsibility.
- G) Conduit shall be installed in accordance with section 812 of the Road and Bridge Specifications for ITS Conduit.
- H) Fiber optic cable and interconnect shall be installed in accordance with section 808 of the Road and Bridge Specifications.
- I) Fiber optic cable shall be subjected to reel test and installation testing. The Contractor shall meet the requirements of VDOT's test plan for reel and field acceptance testing (FAT).

- J) Pre-terminated patch panel shall come with sufficient length of fiber optic cable to reach the proposed splice locations. The Contractor shall coil 50' of fiber optic cable slack at junction boxes and 100' of fiber optic cable slack at splice points.
- K) ITS cabinets, cabling, conductors, and equipment shall be installed in accordance with Road and Bridge Specifications, Section 801 – ITS infrastructure components.
- L) The Contractor shall provide documentation of the testing of ground rods and grounding system to the RMTA.
- M) Conduit transitions shall be made with approved couplings in accordance with the manufacturer's recommendations.
- N) The Contractor shall install either watertight plugs or caps in the open ends of unused conduit to seal the ends against moisture and rodent entry. Open ends of conduits with installed conductors shall be sealed with an approved soft, pliable, and easily removable waterproof sealant. The sealant shall not have a deleterious effect on cable coverings or the conductors.
- O) The Contractor shall install a no. 8 locator wire in all nonmetallic conduits containing fiber optic cable.
- P) All fiber optic splicing to the existing RMTA communications production network shall be performed by others, including any penetrations into existing field infrastructure (e.g. junction boxes).
- Q) Junction boxes shall not be installed in roadways, driveways, parking areas, ditches or public sidewalk curb ramps. The Contractor shall avoid placing junction boxes in low lying locations with poor drainage. Electrical junction box length (long side) shall be parallel to the conduit run. When the conduit run is perpendicular to the roadway at the junction point, the junction box shall be parallel to the roadway.
- R) All cables, pigtails, jumpers shall be labeled. Labels shall be installed immediately upon installation.
- S) Ground rods shall include a conductor connected to the ground rod by a clamp or exothermic weld, except where noted in the plans.
- T) When boring, provide a means of collecting and containing drilling fluid/slurry to prevent entry to sewer system or waterways.
- U) Blocked or damaged conduit shall not be accepted
- V) Junction boxes shall be free of silt, debris, and standing water to comply with final acceptance. All efforts to remove material from junction boxes shall be done at no additional cost to the RMTA.

## **MEASUREMENT AND PAYMENT**

Bored ITS conduit will be measured in linear feet and will be paid for at the contract unit price per linear foot for the size specified. This price shall include directional bore installation of conduit, providing conduit, fittings, couplings, conduit bodies, pull tapes, locator tape, RFID

markers and pegs, mule tape, testing, and disposal of surplus and unusable material. This price shall also include electronic as-built information of conduit routes.

ITS conduit will be measured in linear feet and will be paid for at the contract unit price per linear foot for the size specified. This price shall include providing and installing conduit, fittings, couplings, pull ropes, locator tape, RFID markers and pegs, testing, and electronic as-built information of conduit routes.

Trench excavation will be paid for separately in accordance with Section 700.05

<b><u>Pay Item</u></b>	<b><u>Pay Unit</u></b>
Bored Conduit	Linear Feet
Conduit Linear	Linear Feet
Trench Excavation	Linear Feet

## SPECIAL PROVISIONS ENVIRONMENTAL AND EARTHWORK

### DESCRIPTION

This work shall consist of providing erosion and siltation control for areas disturbed by excavation, trenching, grading, or construction operations in accordance with this specification, Virginia Erosion and Sediment Control Law and Regulations. Other earthwork accommodations are also discussed herein.

### MATERIALS

- a) Silt Fence & filter barrier shall be in accordance with Section 242 of the specifications
- b) Inlet protection, rock check dams, seed, fertilizer, & mulch shall be in accordance with Section 244 of the specifications.

### PROCEDURE

- A) The temporary erosion and siltation control items shown on the erosion and sediment control plan (ESC) for this project are intended to provide a general plan for controlling erosion and sediment within the project limits. The ESC plan is based on field conditions at the time of plan development and an assumed sequence of construction for the project. The Contractor shall adjust the location, quantity, and type of erosion and sediment control items required based on the actual field conditions encountered at the time of construction.
- B) Earthwork shall be performed in accordance with Section 303.
- C) The Contractor shall exercise care when performing open trench or foundation excavations. The excavated material shall be confined along the open trench or foundation, and all excavated material shall be used as backfill or removed from the construction site at the end of the day.
- D) The Contractor may be required to stabilize certain areas of the project prior to moving on to new locations or phases of work.
- E) Disposal of unsuitable material shall be in accordance with Section 106 of the Specifications.
- F) In the event the Contractor does not use the material as backfill or remove the material from the site at the end of the day, the Contractor shall install temporary silt fence at no additional cost to the RMTA to prevent erosion.
- G) The Contractor shall restore and seed areas disturbed by excavation, grading, or construction operations. Seeding shall be in accordance with Section 603 of the Specifications.
  - Mulch shall be applied at a rate of 3000 pounds per acre in accordance with Section 603 of the Specifications.

- Fertilizer shall be 15-30-15 applied at a rate in accordance with Section 603 of the Specifications.
- H) Any changes to the proposed plan shall be submitted to the RMTA for approval.
- I) The areas beyond the project's construction area shall be protected from siltation or run-off from the project. Perimeter controls such, such as filter barrier, silt fence, diversion dikes, inlet protection, rock check dam, etc., shall be installed prior to any grubbing operations or other earth moving activities
- J) Temporary earthen structures are to be stabilized per applicable regulation. Stabilization may include temporary or permanent seeding, riprap, aggregate, sod, mulching, and or soil stabilization blankets and matting in conjunction with seeding.
- K) All channel relocations are to be constructed during the earliest stage of construction in accordance with all applicable permit requirements and shall be constructed in the dry whenever possible. Stabilization or vegetation shall be established before flow is redirected through the constructed areas as directed by the RMTA.
- L) Silt removal and sediment clean-out from erosion and siltation control items shall be performed when capacity, height, or depth has been reduced by 50%.
- M) Existing light poles located in the construction work area shall be maintained and protected at all times during construction activities.
- N) Guardrail removed during construction activities shall be replaced at the end of activities.
- O) Water pumped out of excavated areas shall be pumped through a filter bag per VDOT specifications prior to discharge.
- P) Portable concrete washout areas shall be provided by the Contractor and no concrete waste shall be discharged onto site.

**MEASUREMENT AND PAYMENT**

The seeding shall include site preparation, seed, fertilizer, mulching; finishing and maintaining seeded areas until final acceptance, and restoring disturbed areas prior to final acceptance. This work will not be measured for separate payment but will be included in the price bid for other items of work.

<u>Pay Item</u>	<u>Pay Unit</u>
Clearing and grubbing	Acre
Selective tree removal, trimming, & cleanup	Acre
Temp Silt Fence Ty. A	Linear Feet
Inlet Protection Ty. A	Each
Earthwork	Lump Sum
Permanent Seed	Pounds
Fertilizer	Pounds
Sediment Retention Roll	Linear Feet



## **SPECIAL PROVISIONS FOR BURIED CABLE MARKER POST**

### **DESCRIPTION**

This work shall consist of furnishing and installing Buried Cable Marker Posts in accordance with this special provision and as shown on the plans or as directed by the Engineer.

Buried Cable Marker Post is a rigid, tubular, driven post used for location and notification purposes only. Each Marker Post shall be labeled and identified as a RMTA fiber optic cable marker unless otherwise shown in the Plans. The labels must include the Authority's logo, contact information, and a telephone number to call prior to any excavation in the area. The identification information shall be permanently imprinted on the top fitting, and will not peel, fade, or deteriorate.

### **MATERIAL**

The Buried Cable Marker Post shall be white with an orange top fitting cover with black or white lettering and graphics. It shall be of a tubular configuration, and both the marker post and the top fitting are made from virgin Type 111 HDPE. Any fasteners used with the Marker Post shall be constructed of stainless steel.

The Marker Posts shall have a minimum outside diameter of 3.5 inches with a minimum wall thickness of 0.125 inches. The top fitting cover shall have a minimum of 1.5 feet long and an outside diameter of 3.75 inches with a minimum wall thickness of 0.125 inches. Each Marker Post shall have a tensile strength of 4,200 pounds per square inch as required in ASTM D638. Each Marker Post shall be manufactured for use in temperatures range of minus 30° to 165°F in accordance with NEMA TS 2.

The Marker Post shall be capable of withstanding an impact force of 70 pounds per foot at 32°F in accordance with ASTM D2444, before and after UV conditioning for 2,000 hours in accordance with ASTM G154. The control sample of any material tested shall maintain a minimum of 70 percent of its original tensile strength.

Marker Posts shall be installed at the minimum 2-foot depth and should be such that it can withstand at least one impact by a vehicle weighing at least 3,500 pounds and traveling at 45 miles per hour; after that impact, the post shall return to an upright position within 10 degrees of vertical alignment within 30 seconds from the time of impact.

### **INSTALLATION**



Install Buried Cable Marker Posts for fiber optic cable installations and ensure the following:

- Markers are plumb and level and the notification information is clearly visible when viewed from the side facing the roadway.
- Markers are set within the right of way.
- Markers are placed at a 1 foot offset from the conduit system.
- The top of the marker post is between 5 and 6 feet above the finish grade
- Markers are spaced no more than 500 feet apart.
- A clear line of sight is maintained from one marker to the next.
- Markers are installed on both sides of the roadway at any crossing point where the conduit system changes to the opposite side of the roadway.
- Markers are installed at splice boxes.
- Markers are installed at gate locations when the conduit system is adjacent to a fence line
- Markers are installed on both sides of a stream, river, or other water crossing, and on both sides of aboveground attachments such as bridges and walls.

#### **MEASUREMENT AND PAYMENT**

Buried cable marker posts will be measured in units of each and will be paid for at the Contract each price. This price shall include furnishing and installing the marker post.

Payment will be made under:

<b><u>Pay Item</u></b>	<b><u>Pay Unit</u></b>
Buried Cable Marker Post	Each