

**ADDENDUM NUMBER 2**  
ISSUED August 2, 2019

to the CONTRACT DOCUMENTS for:

**BLAND COUNTY**  
**ROCKY GAP GREENWAY PROJECT - PHOENIX BRIDGE**

Prepared by: CHA Consulting, Inc.  
1341 Research Center Drive, Suite 2100  
Blacksburg, VA 24060  
CHA Project Number: 30509

The following revisions, additions, and clarifications are hereby made part of the Contract Documents and Technical Specifications for the above-referenced project and shall be taken into account in the preparation of all bids and the execution of all Work. Bidders shall acknowledge receipt of the addendum in the appropriate space on the Bid Form.

**GENERAL REVISIONS/CLARIFICATIONS**

- Ad2-1 Control monument information will be provided to Contractor by Engineer.
- Ad2-2 Construction clearing limits are confined to the area indicated on the plans. Additional clearing requested by Owner will include additional payment.
- Ad2-3 Lighting information has been included on the *attached* pdf document.
- Ad2-4 A meter base will be required for the project to meter power consumption used by the project poles. Contract 1 (trail and parking lot) will be terminated at each end of the bridge.
- Ad2-5 Sheet C-300 has been **REVISED** to reflect the new alignment of the sidewalk and crosswalks at the Route 52 intersection. See *attached* revised plan sheet.
- Ad2-6 The Bid Form has been **REVISED** to reflect two (2) separate contracts: Contract 1 - Trail, Lighting, and Parking Lot and Contract 2 - Bridge Rehabilitation. See *attached* Bid Forms and Agreements.
- Ad2-7 A report detailing the existing condition of the bridge has been included via this addendum; see *attached*.
- Ad2-8 The bid must include the following VDOT forms: C-111, C-112, C-49, and C-48. The DBE percentage of 2% must be stated in the good faith effort forms.

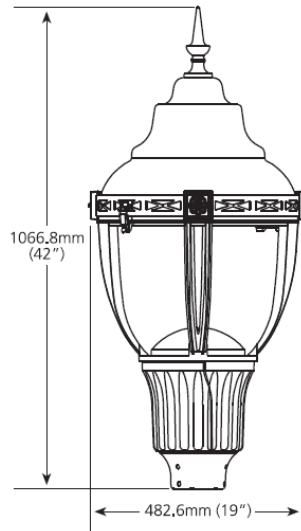
END OF ADDENDUM



Stephen M. Steele, P.E.  
Project Manager



Schedule										
Symbol	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
	4	Holophane	WFL0704KXXL3X	WASHINGTON FCO LED	70W LED ARRAY	1	WFL0704KXXL3X.ies	4332	1	71



**WFL | UTILITY WASHINGTON PostLite**  
 Maximum Weight: 25.6 kg (57 lbs)  
 Maximum E.P.A.: 1.72 sq. ft.

Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Sidewalk	+	1.7 fc	5.0 fc	0.3 fc	16.7:1	5.7:1

Luminaire Locations					
No.	Label	Location			MH
		X	Y	Z	
1	B	0.00	0.00	12.00	12.00
5	B	80.00	0.00	12.00	12.00
6	B	160.00	0.00	12.00	12.00
7	B	240.00	0.00	12.00	12.00



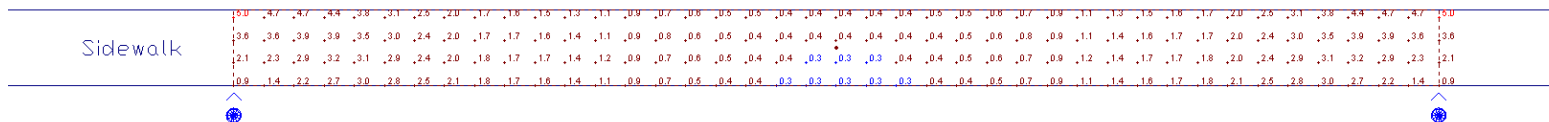
N. Scenic HWY  
 Sidewalk Lighting

Designer

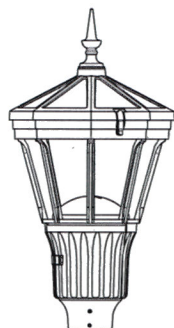
Date  
 3/12/2016

Scale  
 Not to Scale  
 Drawing No.

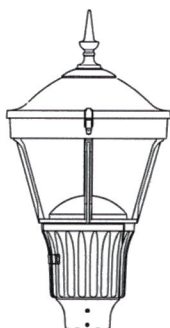
Summary



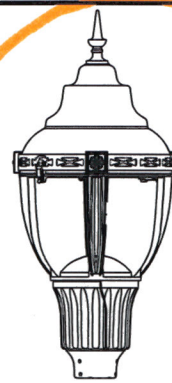
**AFTER INSTALLATION DELIVER THIS MANUAL TO OWNER**



Utility Arlington® LED



Utility Posttop LED



Utility Washington Postlite® LED

GR1777, GR1780, GR1830

### IMPORTANT SAFETY INSTRUCTIONS

**WARNING** – READ THESE INSTRUCTIONS CAREFULLY BEFORE ATTEMPTING TO INSTALL OR MAINTAIN THIS FIXTURE. WORK MUST BE DONE BY QUALIFIED PERSONNEL.

**WARNING** – BE CERTAIN THAT ALL ELECTRICAL POWER IS DISCONNECTED FROM THE FIXTURE BEFORE INSTALLING OR MAINTAINING THE FIXTURE.

**FAILURE TO FOLLOW THESE WARNINGS MAY RESULT IN DEATH, INJURY OR SIGNIFICANT PROPERTY DAMAGE.**

## 1. INTRODUCTION

### 1.1 Product Description.

This post top luminaire is designed with LED's which do not require replacement. The luminaire includes a plug-in electrical module that contains the photocontrol receptacle when specified. These modules are common to all luminaire styles in this series.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

### 1.2 Alternate Information Sources.

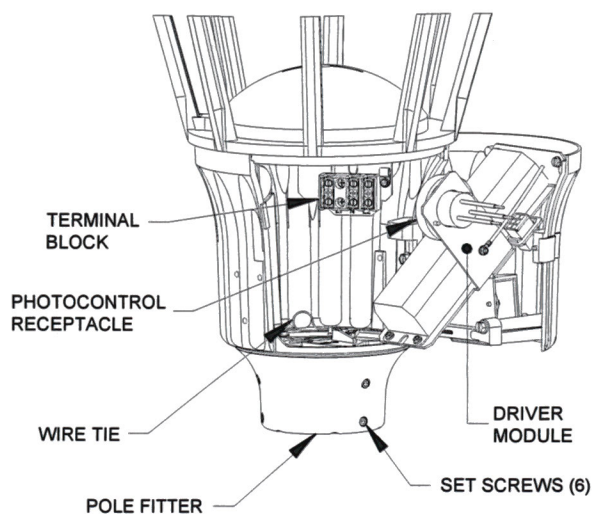
Holophane  
Field Service Department  
P.O. Box 3004  
Newark, OH 43058-3004  
(866) 759-1577

## 2. INSTALLATION

### 2.1 Tools and Material Required.

Table 1. Installation Tools and Materials	
DESCRIPTION	USE
Flat-end Screwdriver	Installation of electrical module
3/16" Allen Wrench	3/8" set screws in pole fitter
Torque Wrench	Set screws

Figure 1



GR1862

### 2.2 Luminaire Installation.

**2.2.1** This luminaire is designed to be installed on a bracket or a pole top with a 3" tenon fitter. A latched door on the side of the housing allows access to the driver module and electrical connections. The



electrical driver module may remain in place while installing on this fitter.

**2.2.2** The luminaire comes with 2 foot long leads pre-wired to terminal block.

**2.2.2.1** If leads not required, remove by opening latched door and loosening the incoming lead terminal block screws. Discard leads. Proceed to section 2.2.3. See Figure 1.

**2.2.2.2** If leads required, make electrical connections per local code. Proceed to section 2.2.4, then section 2.2.7.

**2.2.3** Insert the electrical supply wiring into the luminaire's electrical chamber through the hole in the pole fitter.

**2.2.4** Set the luminaire on its mounting (bracket, tenon, pole top), being careful not to pinch the supply wires. Orient and level the luminaire before tightening all six set screws. Alternate tightening of the screws will assist in leveling and insuring proper attachment. Tighten the set screws to 10 to 12 ft-lbs of torque. See Figure 1.

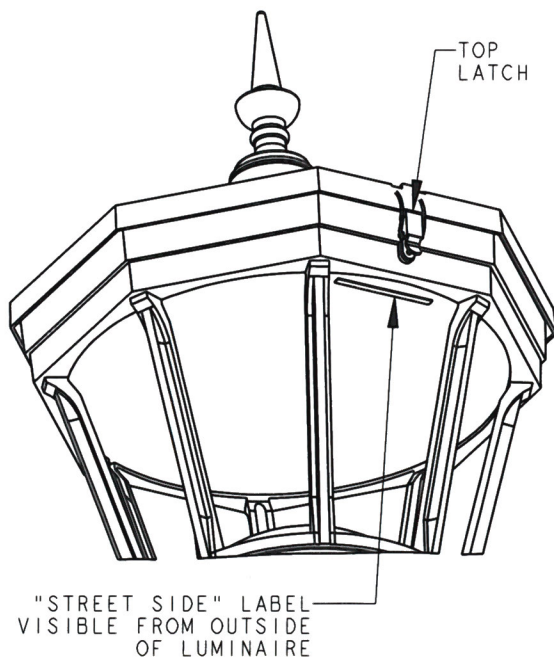
### LUMINAIRE ORIENTATION NOTES

For installations with symmetric optical components, orient the luminaire with the top latch pointed toward street. See Figure 2.

### OPTIC ORIENTATION NOTES

Some of the luminaires in this series are equipped with optical components that produce distributions of light that are not symmetric. These optics have a "Street Side" label visible from the outside of the fixture which indicates proper orientation. See Figure 2.

Figure 2



GR1863

**2.2.5** Pass the supply conductors through the wire tie provided, leave enough length for connections. See Figure 1.

**2.2.6** Connect the electrical supply wires to the terminal block in the back of the electrical chamber. The terminals are marked "L1" (Line 1), "G" (Ground), and "L2" (Line 2). If one of the supply lines is electrically neutral, it should be connected to terminal "L2".

**2.2.7** For units equipped with 0-10V dimming, locate the gray and violet leads coming off of the driver. If the unit is to be connected to dimming control gear (not included), trim, strip, and connect these leads according to the dimming control gear manufacturer's instructions. The violet lead is positive, and the gray lead is negative.

If the unit is not to be connected to dimming control gear, leave the leads individually capped.

**2.2.8** Units supplied with a photo control option require a shorting plug or a twist lock photo control to be installed. Install the device by twisting it clockwise. See Figure 1.

### CAUTION

A PHOTO CONTROL THAT MEETS THE REQUIREMENTS OF ANSI C136.10 AND WITH A CLEAR WINDOW ON THE SIDE THAT EXPOSES THE PHOTOCELL MUST BE USED.

**2.2.8** Return internal wiring to original locations and tighten wire tie around supply wires.

**2.2.9** Close the electrical compartment, engage and secure the latch.

**2.2.10** Energize the unit and check for proper operation.

## 3. MAINTENANCE

### 3.1 Cleaning

**3.1.1** Make sure the unit is de-energized.

**3.1.2** Wipe off exterior dirt and debris using a soft, clean cloth.

### CAUTION

DO NOT USE ABRASIVE CLEANSERS ON OPTICAL SURFACES. THEIR USE MAY RESULT IN THE LOSS OF OPTICAL EFFICIENCY.

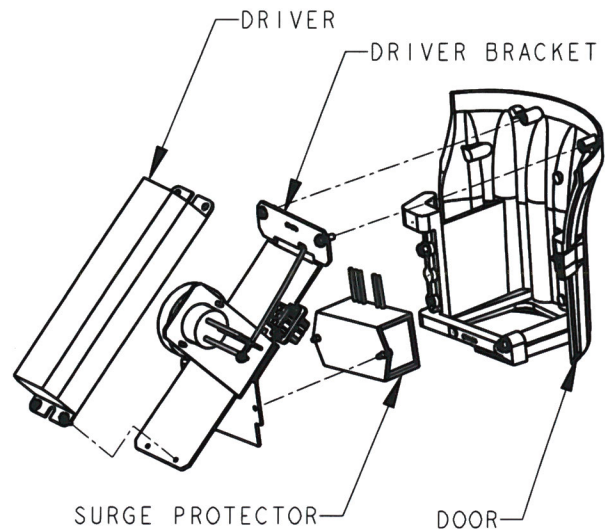
### 3.2 Electrical Component Replacement

**3.2.1** Make sure the unit is de-energized. Open housing door by unlatching and swinging open.

**3.2.2** To replace photocontrol, if provided as part of the fixture, twist counterclockwise and remove. Replace with equivalent photocontrol. See Figure 1. If no other components are to be replaced go to Section 3.2.6.

**3.2.3** To replace driver, disconnect input and output via quick disconnects and remove (2) mounting screws. Replace with Holophane approved driver. See Figure 3. If no other components are to be replaced go to Section 3.2.6.

Figure 3



GR1864



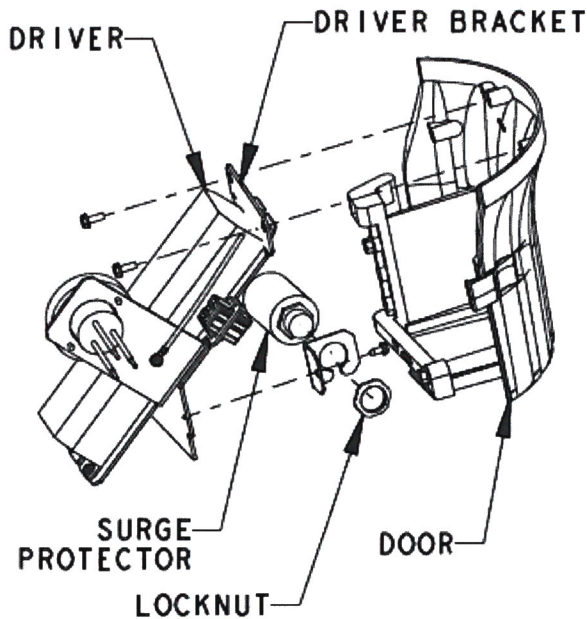
**3.2.4 To remove surge protector**, disconnect quick disconnect plug coming from terminal and quick disconnect going to optical compartment. Remove (2) screws connecting driver bracket to door; retain screws for re-installation. Disconnect surge protector via quick disconnect.

**3.2.4.1** For 120-277V units, remove (2) screws; retain screws for re-installation. Remove surge protector, and replace with Holophane approved device. Replace (2) screws and connect quick disconnect. See Figure 3.

**3.2.4.2** For 347-480V units, remove surge protector by loosening locknut and sliding wires through opening in mounting bracket. Replace with Holophane approved device. Route wires through opening in bracket, tighten locknut, and connect quick disconnect. See Figure 4.

Replace driver bracket and screws. Reconnect quick disconnect plug from terminal block and quick disconnect plug going to optical compartment. If no other components are to be replaced go to Section 3.2.6.

Figure 4



GR1948

**3.2.5 To remove driver module**, disconnect quick disconnect plug coming from terminal and quick disconnect going to optical compartment. Remove (2) screws connecting driver bracket to door, retain screws for re-installation. Reinstall new driver module in door. Reconnect quick disconnect plugs from terminal block and quick disconnect plug going to optical compartment. See figure 3.

**3.2.6** Bundle and secure the wiring in a manner similar to the way it was originally secured to avoid pinching of wires when re-installing the module into the housing.

**3.2.7** Close the housing by carefully swinging door shut while ensuring no leads are pinched. Engage and secure the latch.

**3.2.8** Energize the unit and check for proper operation.

#### 4. LIMITED WARRANTY AND LIMITATION OF LIABILITY

The Holophane limited warranty and limitation of liability is published in the "Terms and Conditions" section of the current Holophane buyer's guide, and is available from your local Holophane sales representative.



An Acuity Brands Company  
Acuity Brands Lighting, Inc.  
3825 Columbus Rd SW, Granville, OH 43023

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Visit our web site at [www.holophane.com](http://www.holophane.com)

Printed in USA

IM-303-C

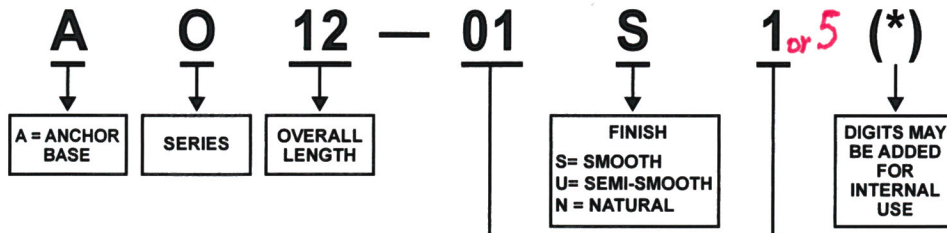
**ROUND TAPERED COMPOSITE LIGHT POLE ANCHOR BASE INSTALLATION**

**SHAKESPEARE AO-SERIES ANCHOR BASE POLES**

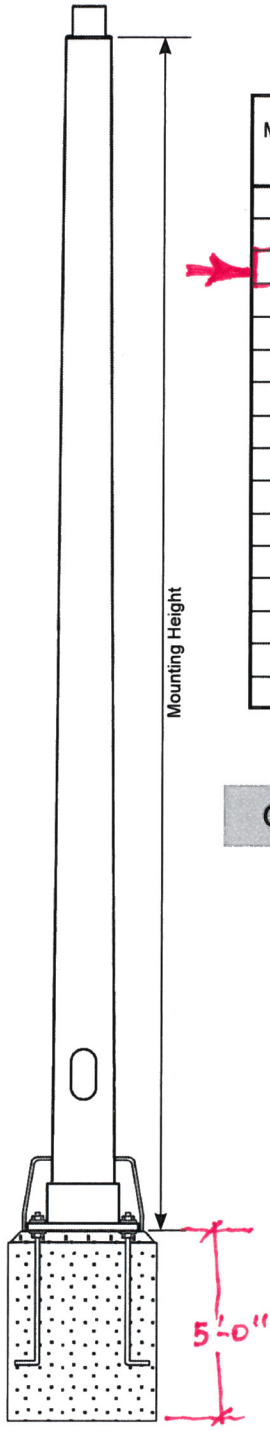
MOUNTING HEIGHT	TIP DIAMETER	GROUNDLINE DIAMETER	WEIGHT
10	4.1	5.4	21
11	4.1	5.6	25
12	4.1	5.7	29
13	4.1	5.8	32
14	4.1	5.9	35
15	4.1	6.1	37
16	4.1	6.2	39
17	4.1	6.3	41
18	4.1	6.5	44
19	4.1	6.6	45
20	4.1	6.7	49
21	4.1	6.7	52
22	4.1	6.7	56
23	4.1	6.7	58
24	4.1	6.7	59
25	4.1	6.8	60

- Mounting heights to 25 feet
- Smooth, semi-smooth or natural finish
- 3 standard and 5 special architectural colors available
- High performance UV and weather-resistant pigmented resin system with an additional pigmented polyurethane coating.
- Tenon top or Drilled and Capped
- Standard 2-1/2" x 5" handhole located 18" above grade
- Poles are individually identified with a permanent embossed tag located 9" from tip.
- Sleeved individually for shipment
- Lightweight, easy to install, saves money

**ORDERING INFORMATION**



TENON	STANDARD COLORS	PREMIUM COLORS
01 = 3" X 3.75" TENON	1 = BLACK	3 = BROWN
02 = 2.375" X 3.75" TENON	2 = GRAY	4 = LIGHT GREEN
00 = CAPPED	5 = DARK BRONZE	6 = SILVER
• CONSULT FACTORY FOR OPTIONS		7 = WHITE
		8 = DARK GREEN
		9 = CUSTOM





# AO-SERIES



# Shakespeare

## ROUND TAPERED COMPOSITE LIGHT POLE - ANCHOR BASE INSTALLATION

### SPECIFICATIONS

#### POLE SHAFT

The pole shaft shall be round tapered, smooth with a .14"/3.5mm per foot taper. The hand hole shall be 2.5"/62mm x 5"/125mm with a cover. The shaft shall be constructed of continuous fiberglass filament combined with a thermosetting resin. The glass filament shall be helically wound at alternating high and low angle layers for maximum compressive and bending strength. The hand hole area and hardware attachment areas shall be reinforced. The poles shall be designed with a minimum safety factor of 1.5:1 and have a maximum deflection of 15% under full wind loading conditions.

The post shall be non-conductive and chemically inert.

#### PERFORMANCE CRITERIA

The post shall be designed with a minimum safety factor of 1.5:1 and have no more than a 15% deflection at full wind loading. The post shall deflect no more than 2.5% of the above-ground length with 100 lbs. of lateral top load. Poles shall be tested and rated per ANSI C136.20-2012.

#### ANCHOR BASE

Anchor bases shall be constructed of primed and painted aluminum or galvanized steel. The base shall be factory bonded to the pole.

#### TENON

A painted galvanized steel or aluminum tenon shall be firmly bonded to the pole for mounting a post-top luminaire or arm.

#### FINISH

The surface of the post shall be uniform and consistent for the entire length of the post. A UV-resistant catalyzed urethane coating shall be extremely durable and retains its gloss after a 5000 hour exposure test (ASTM G-154) to the sun, with no dulling or chalking of the surface.

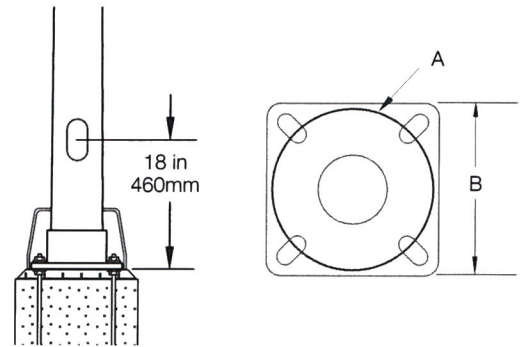
#### BASE COVER

The standard base cover shall be a round or square two-piece cover. All base covers shall be corrosion free and painted to match pole.

#### WARRANTY

The products shall be warranted to be free of defects for three years from the date of shipment from the factory.

### Anchor Base Installation - AO



### Anchor Base Dimensions for AO-Series

- Hand hole is 2.5"/62mm x 5"/125mm

SHAFT LENGTH	BOLT CIRCLE (A)	BASE PLATE SIZE (B)	SHROUD NUMBER	ANCHOR BOLTS	SLOT SIZE
10'	8.0"	7.75"	OPSH-1017	0.625"	.8125" x 1.3125"
11'-16'	8.5"	8.125"	OPSH-1821	0.625"	.8125" x 1.3125"
17'-25'	9.5"	8.125"	OPSH-2225	0.625"	.8125" x 1.3125"

### WIND LOADING DATA

Wind speed (mph) values calculated as per ANSI C136.20 for a 3-second gust factor.

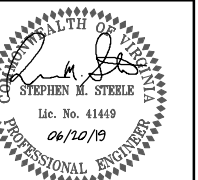
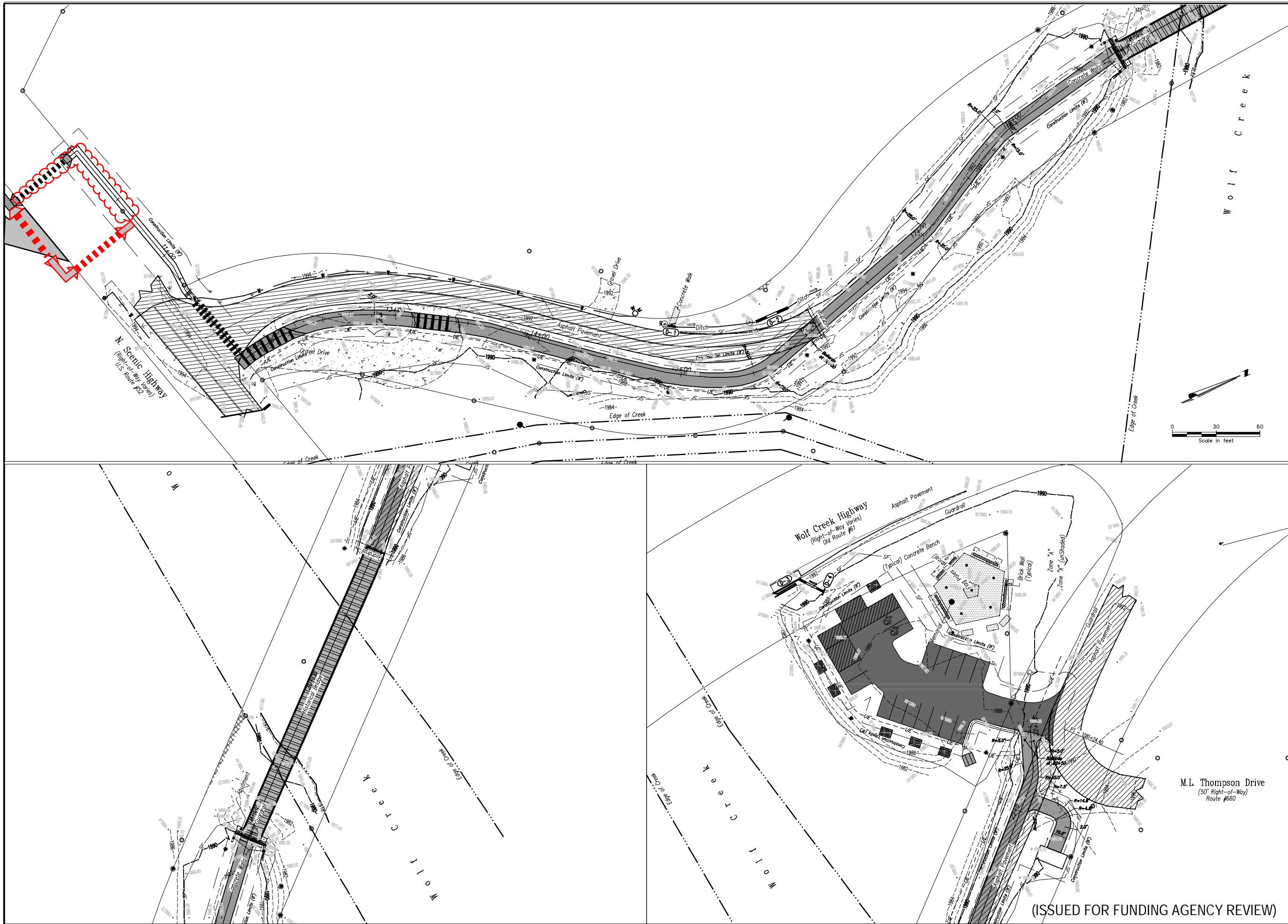
MOUNTING HEIGHT	LUMINAIRE MAX WEIGHT (LBS.)	90 MPH	100 MPH	110 MPH	120 MPH	130 MPH	140 MPH	150 MPH
10	150	11.8	9.2	7.5	6.2	5.2	4.4	3.8
11	150	11.3	8.8	7.2	5.9	5.0	4.2	3.6
12	150	10.2	8.0	6.5	5.3	4.4	3.7	3.2
13	150	9.4	7.4	5.9	4.9	4.1	3.4	2.9
14	150	8.7	6.8	5.5	4.5	3.7	3.1	2.6
15	100	9.2	8.0	6.5	5.3	4.4	3.7	3.1
16	100	9.3	7.3	5.9	4.8	4.0	3.3	2.8
17	100	8.6	6.7	5.4	4.4	3.6	3.0	2.5
18	100	7.9	6.1	4.9	3.9	3.2	2.7	2.2
19	100	7.2	5.6	4.4	3.6	2.9	2.4	2.0
20	100	6.6	5.1	4.0	3.2	2.6	2.1	1.8
21	100	5.7	4.4	3.5	2.8	2.2	1.8	1.5
22	100	5.2	3.9	3.0	2.4	1.9	1.5	1.2
23	100	4.5	3.4	2.6	2.0	1.6	1.2	1.0
24	100	3.9	2.9	2.3	1.6	1.3	1.0	0.7
25	100	3.5	2.1	1.8	1.4	1.0	0.7	0.5

Wind speed values are for a 3-second gust. Calculated per ANSI C136.20-2012. Assumes load 12 inches above the pole top. Safety factor = 1.5:1. Maximum weight for tenon mount is 300 lbs; for side mounting, total loading cannot exceed 75 lbs (max loading includes all attachments, arms, fixtures & accessories).

Contact factory for AASHTO or specific local codes.

**valmont**  
COMPOSITE STRUCTURES





IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

ROCKY GAP GREENWAY PROJECT - SEGMENT 1  
 TRAILHEAD PARKING/DAY USE AREA,  
 MULTI-PURPOSE TRAIL &  
 PHOENIX BRIDGE REHABILITATION

No.	Submitted / Revision	App'd.	By	Date

EROSION AND  
 SEDIMENT  
 CONTROL PLAN

Designed By: BSR	Drawn By: RAS	Checked By: SMS
Issue Date: 06/20/19	Project No: 30509	Scale: AS SHOWN

(ISSUED FOR FUNDING AGENCY REVIEW)

**BID FORM – CONTRACT 1**

PROJECT IDENTIFICATION: ROCKY GAP GREENWAY PROJECT - PHOENIX BRIDGE

CONTRACT IDENTIFICATION \_\_\_\_\_  
AND NUMBER:

THIS BID IS SUBMITTED TO: COUNTY OF BLAND  
(Name and Address of Owner) 612 MAIN STREET  
BLAND, VA 24315

1. The undersigned BIDDER proposes and agrees, if this Bid is accepted, to enter into an agreement with OWNER in the form included in the Contract Documents to perform and furnish all Work as specified or indicated in the Contract Documents for the Bid Price and within the Bid Times indicated in this Bid and in accordance with the other terms and conditions of the Contract Documents.
2. BIDDER accepts all of the terms and conditions of the Advertisement or Notice to Bidders and Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for forty-five (45) days after the day of Bid opening. BIDDER will sign and deliver the required number of counterparts of the Agreement with the Bonds and other documents required by the Bidding Requirements within fifteen days after the date of OWNER’s Notice of Award.
3. In submitting this Bid, BIDDER represents as more fully set forth in the Agreement, that:
  - a. BIDDER has examined and carefully studied the Bidding Documents and the following Addenda receipt of all which is hereby acknowledged: (List Addenda by Addendum Number and Date)  
  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
  - b. BIDDER has visited the site and become familiar with and is satisfied as to the general, local, and site conditions that may affect cost, progress, performance, and furnishing of the Work.
  - c. BIDDER is familiar with and is satisfied as to all federal, state, and local Laws and Regulations that may affect cost, progress, performance, and furnishing of the Work.
  - d. BIDDER has carefully studied all reports of explorations and tests of subsurface conditions at or contiguous to the site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the site (except underground facilities) which have been identified in the Supplementary Conditions as provided in paragraph 4.2.1 of the General Conditions. BIDDER accepts the determination set forth in paragraph SC-4.2 of the Supplementary Conditions of the extent of the “technical data” contained in such reports and drawings upon which BIDDER is entitled to rely as provided in paragraph 4.2 of the General Conditions. BIDDER acknowledges that such reports and drawings are not Contract Documents and may not be complete for BIDDER’s purposes. BIDDER acknowledges that OWNER and ENGINEER do not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Bidding Documents with respect to underground facilities at or contiguous to the site. BIDDER has obtained and carefully studied (or assumes responsibility for

having done so) all such additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and underground facilities) at or contiguous to the site or otherwise which may affect cost progress, performance or furnishing of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by BIDDER and safety precautions and programs incident thereto. BIDDER does not consider that any additional examinations, investigations, explorations, tests, studies or data are necessary for the determination of this Bid for performance and furnishing of the Work in accordance with the times, price, and other terms and conditions of the Contract Documents.

- e. BIDDER is aware of the general nature of Work to be performed by OWNER and others at the site that relates to Work for which this Bid is submitted as indicated in the Contract Documents.
  - f. BIDDER has correlated the information known to BIDDER, information and observation obtained from visits to the site, reports and drawings identified in the Contract Documents and all additional examinations, investigations, explorations, tests, studies, and data with the Contract Documents.
  - g. BIDDER has given ENGINEER written notice of all conflicts, errors, ambiguities or discrepancies that BIDDER has discovered in the Contract Documents and the written resolution thereof by ENGINEER is acceptable to BIDDER, and the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work for which this Bid is submitted.
  - h. This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm, or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization, or corporation; BIDDER has not directly or indirectly induced or solicited any other BIDDER to submit a false or sham Bid; BIDDER has not solicited or induced any person, firm or corporation to refrain from bidding; and BIDDER has not sought by collusion to obtain for itself any advantage over any other BIDDER or over OWNER.
  - i. (Any other representation required by Laws and Regulations.)
4. BIDDER will complete the Work in accordance with the Contract Documents for the following price(s):
- LUMP SUM BID PRICE: \_\_\_\_\_ (use words) \$(\_\_\_\_\_) (use figures)
- SECTION I only: \_\_\_\_\_ (use words) \$(\_\_\_\_\_) (use figures)
- SECTION II only: \_\_\_\_\_ (use words) \$(\_\_\_\_\_) (use figures)
- SECTION I & II: \_\_\_\_\_ (use words) \$(\_\_\_\_\_) (use figures)
- TOTAL BID PRICE: \_\_\_\_\_ (use words) \$(\_\_\_\_\_) (use figures)
- BASE BID: \_\_\_\_\_ (use words) \$(\_\_\_\_\_) (use figures)
- Alternative A (add)(deduct): \_\_\_\_\_ (use words) \$(\_\_\_\_\_) (use figures)
- Alternative B (add)(deduct): \_\_\_\_\_ (use words) \$(\_\_\_\_\_) (use figures)

All specific cash allowances are included in price(s) set forth above and have been computed in accordance with paragraph 11.8 of the General Conditions.



Required Base Bid quantities of the items listed below are set forth in the Specifications. If increases or decreases in these quantities occur the Contract Price is to be adjusted by Change Order on the basis of the following:

Item and Location in Specifications	Unit for Adjustment	Adjustment Price Per Unit
_____	_____	_____
_____	_____	_____
_____	_____	_____

Adjustment prices are subject to acceptance by OWNER, and rejection of one or more adjustment prices will not invalidate acceptance of this Bid.

**COST PLUS BID PRICE**

The Cost of Work other than Unit Price Work shall be determined as provided in Paragraphs 11.4 and 11.5 of the General Conditions plus for all Unit Price Work the amounts indicted below.

The GUARANTEED MAXIMUM COST TO OWNER of the Cost of the Work and Bidder's Fee will not exceed \_\_\_\_\_  
(words)  
 \_\_\_\_\_ Dollars (\$ \_\_\_\_\_)  
(words - continued) (figures)

subject to increases or decrease in the Work.

BIDDER's Fee will be a fixed sum of \_\_\_\_\_  
(words)  
 \_\_\_\_\_ Dollars (\$ \_\_\_\_\_)  
(words - continued) (figures)

subject to increases or decrease in the Work.

BIDDER's Fee will be based on the following percentages of the various portions of the Cost of the Work as indicated in Article 11 of the General Conditions:

- Payroll costs (see paragraph 11.4.1 of General Conditions) \_\_\_\_\_%
- Material and Equipment costs (see paragraph 11.4.2 of General Conditions) \_\_\_\_\_%
- Amounts paid to Subcontractors (see paragraph 11.4.3 of General Conditions) \_\_\_\_\_%
- Amounts paid to special consultants (see paragraph 11.4.4 of General Conditions) \_\_\_\_\_%
- Supplemental costs (see paragraph 11.4.5 of General Conditions) \_\_\_\_\_%

None of the costs described in paragraph 11.5 will be included in determining BIDDER's Fee.

The maximum amount payable to BIDDER on account of this percentage fee will not exceed \_\_\_\_\_  
(words)  
 \_\_\_\_\_ Dollars (\$ \_\_\_\_\_)  
(words - continued) (figures)

subject to increases or decrease in the Work.

UNIT PRICE BID						
Ref. Spec.	No.	Item	Unit	Estimated Quantity	Unit Price	Total Estimated Price
	1	Mobilization	LS	1		
311000	2	Removals and Relocations	LS	1		
311000	3	Site Clearing	LS	1		
321116	4	Grading/Subgrade Preparation	LS	1		
321630	5	Concrete Sidewalk	SY	74		
321216	6	Multi-Use Asphalt Footpath	SY	1,000		
321316	7	Light Asphalt Pavement	SY	916		
	8	Stormwater Gutter	LF	50		
	9	Riprap Channel	LS	1		
321723	10	Pavement Line Markings (24")	LF	150		
321723	11	Parking Space Markings (4")	LF	252		
	12	Bollards	EA	4		
	13	Standard VDOT CG-12	EA	2		
033000	14	Concrete Pad for Info Board	SY	22		
	15	Information Board	EA	1		
321216	16	Asphalt Transitions	EA	1		
	17	1" Conduit & Wire for Area Lighting	LF	1,090		
	18	Area Lighting (including bases, connections & appurtenances)	EA	12		
312500	19	Erosion and Sediment Control	LS	1		
015700	20	Maintenance of Traffic	LS	1		
	21	Restoration of Property Pins and Monuments	LS	1		
	22	Record Drawings	LS	1		

TOTAL BID FOR ALL UNIT PRICES \_\_\_\_\_  
 (words)

\_\_\_\_\_ Dollars (\$ \_\_\_\_\_)  
 (words - continued) (figures)

Unit Prices have been computed in accordance with paragraph 11.9.2 of the General Conditions.

BIDDER acknowledges that quantities are not guaranteed and final payment will be based on actual quantities determined as provided in the Contract Documents.

5. BIDDER agrees that the Work

will be substantially complete on or before July 2020 and completed and ready for final payment in accordance with paragraph 14.13 of the General Conditions on or before August 2020.

BIDDER accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work within the times specified in the Agreement.

6. The following documents are attached to and made a condition of this Bid:

- a. Resolution of Board of Directors
- b. Non-Collusion Form
- c. Required Bid Security in the form of \_\_\_\_\_
- d. Required BIDDER's Qualification Statement with supporting data.
- e. (Add other documents as pertinent.)
- f. Communications concerning this Bid shall be addressed to:

The address of BIDDER indicated below.

The following address:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

7. Terms used in this Bid which are defined in the General Conditions or Instructions will have the meanings indicated in the General Conditions or Instructions.

SUBMITTED on \_\_\_\_\_ 20 \_\_\_\_\_.



If BIDDER is:

An Individual

By \_\_\_\_\_ (SEAL)  
(Individual's Name)

doing business as \_\_\_\_\_  
Business address: \_\_\_\_\_

Phone No.: \_\_\_\_\_

A Partnership

By \_\_\_\_\_ (SEAL)  
(Firm Name)

\_\_\_\_\_ (general partner)  
Business address: \_\_\_\_\_

Phone No.: \_\_\_\_\_

A Corporation

By \_\_\_\_\_ (SEAL)  
(Corporation Name)

\_\_\_\_\_ (state of incorporation)

By \_\_\_\_\_ (SEAL)  
(name of person authorized to sign)

\_\_\_\_\_ (Title)

(Corporate Seal)  
Attest \_\_\_\_\_

\_\_\_\_\_ (Secretary)

Business address: \_\_\_\_\_

Phone No.: \_\_\_\_\_

Date of Qualification to do business is \_\_\_\_\_

A Joint Venture

By \_\_\_\_\_ (SEAL)  
(Name)

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

By \_\_\_\_\_ (SEAL)  
(Name)

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

Phone Number and Address for receipt of official communications

\_\_\_\_\_  
(Each joint venturer must sign. The manner of signing for each individual, partnership and corporation that is a party to the joint venture should be in the manner indicated above).

**CERTIFIED COPY OF RESOLUTION OF  
BOARD OF DIRECTORS OF**

---

(NAME OF CORPORATION)

“RESOLVED that \_\_\_\_\_, \_\_\_\_\_  
(Person Authorized to Sign) (Title)

of \_\_\_\_\_ authorized to sign  
(NAME OF CORPORATION) and submit the Bid of this corporation for

the following Project:

---

and to include in such bid the certificate as to non-collusion, and for any inaccuracies or misstatements in such certificate this corporate Bidder shall be liable under the penalties of perjury.

The foregoing is a true and correct copy of the resolution adopted by

---

(NAME OF CORPORATION)

at a meeting of its Board of Directors held on the \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_.

By \_\_\_\_\_

Title \_\_\_\_\_

(SEAL)

**The above form must be completed if the Bidder is a Corporation.**

**NON-COLLUSION FORM**  
**GENERAL MUNICIPAL LAW**  
**CHAPTER 675**

Amending 103-d - General Municipal Law

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“(a) By submission of this Bid, each Bidder and each person signing on behalf of any Bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of his knowledge and belief:

- (1) The prices in this Bid have been arrived at independently without collusion, consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other Bidder or with any competitor;
- (2) Unless otherwise required by law, the prices which have been quoted in this Bid have not been knowingly disclosed by the Bidder and will not knowingly be disclosed by the Bidder prior to opening, directly or indirectly, to any other Bidder or to any competitor; and,
- (3) No attempt has been made or will be made by the Bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.”

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FIRM

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BY

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DATE

CONTRACT NO(S)\_\_\_\_\_

CONTRACT NAME(S)\_\_\_\_\_

**BID FORM – CONTRACT 2**

PROJECT IDENTIFICATION: ROCKY GAP GREENWAY PROJECT - PHOENIX BRIDGE

CONTRACT IDENTIFICATION \_\_\_\_\_  
AND NUMBER:

THIS BID IS SUBMITTED TO: COUNTY OF BLAND  
(Name and Address of Owner) 612 MAIN STREET  
BLAND, VA 24315

1. The undersigned BIDDER proposes and agrees, if this Bid is accepted, to enter into an agreement with OWNER in the form included in the Contract Documents to perform and furnish all Work as specified or indicated in the Contract Documents for the Bid Price and within the Bid Times indicated in this Bid and in accordance with the other terms and conditions of the Contract Documents.
2. BIDDER accepts all of the terms and conditions of the Advertisement or Notice to Bidders and Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for forty-five (45) days after the day of Bid opening. BIDDER will sign and deliver the required number of counterparts of the Agreement with the Bonds and other documents required by the Bidding Requirements within fifteen days after the date of OWNER’s Notice of Award.
3. In submitting this Bid, BIDDER represents as more fully set forth in the Agreement, that:
  - a. BIDDER has examined and carefully studied the Bidding Documents and the following Addenda receipt of all which is hereby acknowledged: (List Addenda by Addendum Number and Date)  
  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
  - b. BIDDER has visited the site and become familiar with and is satisfied as to the general, local, and site conditions that may affect cost, progress, performance, and furnishing of the Work.
  - c. BIDDER is familiar with and is satisfied as to all federal, state, and local Laws and Regulations that may affect cost, progress, performance, and furnishing of the Work.
  - d. BIDDER has carefully studied all reports of explorations and tests of subsurface conditions at or contiguous to the site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the site (except underground facilities) which have been identified in the Supplementary Conditions as provided in paragraph 4.2.1 of the General Conditions. BIDDER accepts the determination set forth in paragraph SC-4.2 of the Supplementary Conditions of the extent of the “technical data” contained in such reports and drawings upon which BIDDER is entitled to rely as provided in paragraph 4.2 of the General Conditions. BIDDER acknowledges that such reports and drawings are not Contract Documents and may not be complete for BIDDER’s purposes. BIDDER acknowledges that OWNER and ENGINEER do not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Bidding Documents with respect to underground facilities at or contiguous to the site. BIDDER has obtained and carefully studied (or assumes responsibility for



having done so) all such additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and underground facilities) at or contiguous to the site or otherwise which may affect cost progress, performance or furnishing of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by BIDDER and safety precautions and programs incident thereto. BIDDER does not consider that any additional examinations, investigations, explorations, tests, studies or data are necessary for the determination of this Bid for performance and furnishing of the Work in accordance with the times, price, and other terms and conditions of the Contract Documents.

- e. BIDDER is aware of the general nature of Work to be performed by OWNER and others at the site that relates to Work for which this Bid is submitted as indicated in the Contract Documents.
  - f. BIDDER has correlated the information known to BIDDER, information and observation obtained from visits to the site, reports and drawings identified in the Contract Documents and all additional examinations, investigations, explorations, tests, studies, and data with the Contract Documents.
  - g. BIDDER has given ENGINEER written notice of all conflicts, errors, ambiguities or discrepancies that BIDDER has discovered in the Contract Documents and the written resolution thereof by ENGINEER is acceptable to BIDDER, and the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work for which this Bid is submitted.
  - h. This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm, or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization, or corporation; BIDDER has not directly or indirectly induced or solicited any other BIDDER to submit a false or sham Bid; BIDDER has not solicited or induced any person, firm or corporation to refrain from bidding; and BIDDER has not sought by collusion to obtain for itself any advantage over any other BIDDER or over OWNER.
  - i. (Any other representation required by Laws and Regulations.)
4. BIDDER will complete the Work in accordance with the Contract Documents for the following price(s):
- LUMP SUM BID PRICE: \_\_\_\_ (use words) \$(\_\_\_\_) (use figures)
- SECTION I only: \_\_\_\_ (use words) \$(\_\_\_\_) (use figures)
- SECTION II only: \_\_\_\_ (use words) \$(\_\_\_\_) (use figures)
- SECTION I & II: \_\_\_\_ (use words) \$(\_\_\_\_) (use figures)
- TOTAL BID PRICE: \_\_\_\_ (use words) \$(\_\_\_\_) (use figures)
- BASE BID: \_\_\_\_ (use words) \$(\_\_\_\_) (use figures)
- Alternative A (add)(deduct): \_\_\_\_ (use words) \$(\_\_\_\_) (use figures)
- Alternative B (add)(deduct): \_\_\_\_ (use words) \$(\_\_\_\_) (use figures)

All specific cash allowances are included in price(s) set forth above and have been computed in accordance with paragraph 11.8 of the General Conditions.

Required Base Bid quantities of the items listed below are set forth in the Specifications. If increases or decreases in these quantities occur the Contract Price is to be adjusted by Change Order on the basis of the following:

Item and Location in Specifications	Unit for Adjustment	Adjustment Price Per Unit
_____	_____	_____
_____	_____	_____
_____	_____	_____

Adjustment prices are subject to acceptance by OWNER, and rejection of one or more adjustment prices will not invalidate acceptance of this Bid.

**COST PLUS BID PRICE**

The Cost of Work other than Unit Price Work shall be determined as provided in Paragraphs 11.4 and 11.5 of the General Conditions plus for all Unit Price Work the amounts indicted below.

The GUARANTEED MAXIMUM COST TO OWNER of the Cost of the Work and Bidder's Fee will not exceed \_\_\_\_\_  
(words)  
 \_\_\_\_\_ Dollars (\$ \_\_\_\_\_)  
(words - continued) (figures)

subject to increases or decrease in the Work.

BIDDER's Fee will be a fixed sum of \_\_\_\_\_  
(words)  
 \_\_\_\_\_ Dollars (\$ \_\_\_\_\_)  
(words - continued) (figures)

subject to increases or decrease in the Work.

BIDDER's Fee will be based on the following percentages of the various portions of the Cost of the Work as indicated in Article 11 of the General Conditions:

- Payroll costs (see paragraph 11.4.1 of General Conditions) \_\_\_\_\_%
- Material and Equipment costs (see paragraph 11.4.2 of General Conditions) \_\_\_\_\_%
- Amounts paid to Subcontractors (see paragraph 11.4.3 of General Conditions) \_\_\_\_\_%
- Amounts paid to special consultants (see paragraph 11.4.4 of General Conditions) \_\_\_\_\_%
- Supplemental costs (see paragraph 11.4.5 of General Conditions) \_\_\_\_\_%

None of the costs described in paragraph 11.5 will be included in determining BIDDER's Fee.

The maximum amount payable to BIDDER on account of this percentage fee will not exceed \_\_\_\_\_  
(words)  
 \_\_\_\_\_ Dollars (\$ \_\_\_\_\_)  
(words - continued) (figures)

subject to increases or decrease in the Work.

UNIT PRICE BID						
Ref. Spec.	No.	Item	Unit	Estimated Quantity	Unit Price	Total Estimated Price
	<b>23</b>	<b>Bridge Rehabilitation</b>				
S&ME Rehab	23A	Removal of Existing Coating	LS	1		
S&ME Rehab	23B	Containment	LS	1		
S&ME Rehab	23C	Storage and Disposal of Waste Material	LS	1		
S&ME Rehab	23D	Recoating of Existing Structure	LS	1		
S&ME Rehab	23E	Decking Improvements	LF	206		

TOTAL BID FOR ALL UNIT PRICES \_\_\_\_\_  
 (words) \_\_\_\_\_  
 Dollars (\$) \_\_\_\_\_  
 (words - continued) \_\_\_\_\_ (figures)

Unit Prices have been computed in accordance with paragraph 11.9.2 of the General Conditions.

BIDDER acknowledges that quantities are not guaranteed and final payment will be based on actual quantities determined as provided in the Contract Documents.

5. BIDDER agrees that the Work

will be substantially complete on or before July 2020 and completed and ready for final payment in accordance with paragraph 14.13 of the General Conditions on or before August 2020.

BIDDER accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work within the times specified in the Agreement.

6. The following documents are attached to and made a condition of this Bid:

- a. Resolution of Board of Directors
- b. Non-Collusion Form
- c. Required Bid Security in the form of \_\_\_\_\_
- d. Required BIDDER's Qualification Statement with supporting data.
- e. (Add other documents as pertinent.)
- f. Communications concerning this Bid shall be addressed to:

The address of BIDDER indicated below.  
 The following address:

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

7. Terms used in this Bid which are defined in the General Conditions or Instructions will have the meanings indicated in the General Conditions or Instructions.

SUBMITTED on \_\_\_\_\_ 20 \_\_\_\_\_.

If BIDDER is:

An Individual

By \_\_\_\_\_ (SEAL)

(Individual's Name)

doing business as \_\_\_\_\_

Business address: \_\_\_\_\_

Phone No.: \_\_\_\_\_

A Partnership

By \_\_\_\_\_ (SEAL)

(Firm Name)

(general partner)

Business address: \_\_\_\_\_

Phone No.: \_\_\_\_\_

A Corporation

By \_\_\_\_\_ (SEAL)

(Corporation Name)

(state of incorporation)

By \_\_\_\_\_ (SEAL)

(name of person authorized to sign)

(Title)

(Corporate Seal)

Attest \_\_\_\_\_

(Secretary)

Business address: \_\_\_\_\_

Phone No.: \_\_\_\_\_

Date of Qualification to do business is \_\_\_\_\_

A Joint Venture

By \_\_\_\_\_ (SEAL)

(Name)

(Address)

By \_\_\_\_\_ (SEAL)

(Name)

(Address)

Phone Number and Address for receipt of official communications

\_\_\_\_\_  
(Each joint venturer must sign. The manner of signing for each individual, partnership and corporation that is a party to the joint venture should be in the manner indicated above).





**NON-COLLUSION FORM**  
**GENERAL MUNICIPAL LAW**  
**CHAPTER 675**

Amending 103-d - General Municipal Law

---

“(a) By submission of this Bid, each Bidder and each person signing on behalf of any Bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of his knowledge and belief:

- (1) The prices in this Bid have been arrived at independently without collusion, consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other Bidder or with any competitor;
- (2) Unless otherwise required by law, the prices which have been quoted in this Bid have not been knowingly disclosed by the Bidder and will not knowingly be disclosed by the Bidder prior to opening, directly or indirectly, to any other Bidder or to any competitor; and,
- (3) No attempt has been made or will be made by the Bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.”

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FIRM

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BY

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DATE

CONTRACT NO(S)\_\_\_\_\_

CONTRACT NAME(S)\_\_\_\_\_

**STANDARD FORM OF AGREEMENT  
BETWEEN OWNER AND CONTRACTOR  
ON THE BASIS OF A STIPULATED PRICE**

THIS AGREEMENT is dated as of the \_\_\_\_\_ day of \_\_\_\_\_ in the year 20\_\_ by and between the County of Bland (hereinafter called OWNER) and \_\_\_\_\_ (hereinafter called CONTRACTOR).

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

**ARTICLE 1 - WORK.**

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

Providing all labor, materials, tools, equipment and other means of construction necessary and incidental to the completion of work shown on the plans and as described in these specifications including, but not necessarily limited to the following: installation of approximately 935 square yards of Multi-Use Asphalt footpath, 906 square yards of asphalt pavement, parking spaces, detectable transitions, and installation of pedestrian lighting and conduit in the Rocky Gap Community of Bland County.

**ARTICLE 2 - ENGINEER.**

The Project has been designed by CHA who is hereinafter called ENGINEER and who is to act as OWNER's representative, assume all duties and responsibilities and have the rights and authority assigned to ENGINEER in the Contract Documents in connection with completion of the Work in accordance with the Contract Documents.

**ARTICLE 3 - CONTRACT TIMES.**

3.1 The Work will be substantially completed within 150 days after the date when the Contract Times commence to run as provided in paragraph 2.3 of the General Conditions and completed and ready for final payment in accordance with paragraph 14.13 of the General Conditions within 180 days after the date when the Contract Times commence to run.

3.2 *Liquidated Damages.* Liquidated damages shall conform to Section 108.06(b) of the 2016 VDOT Road and Bridge Specifications and Section 12.6.4.3 of the Locally Administered Projects (LAP) Manual. Standard rates can be found on Table 1-1, Schedule of Liquidated Damages, in the 2016 Road and Bridge Specifications.

**ARTICLE 4 - CONTRACT PRICE.**

OWNER shall pay CONTRACTOR for completion of the Work in accordance with the Contract Documents an amount in current funds equal to the sum of the amounts determined pursuant to paragraphs 4.1 and 4.2 below:

4.1 For all Unit Price Work, an amount equal to the sum of the established unit price for each separately identified item of Unit Price Work times the estimated quantity of that item as indicated in this paragraph 4.2:

**UNIT PRICE WORK – CONTRACT 1**

UNIT PRICE BID						
Ref. Spec.	No.	Item	Unit	Estimated Quantity	Unit Price	Total Estimated Price
	1	Mobilization	LS	1		
311000	2	Removals and Relocations	LS	1		
311000	3	Site Clearing	LS	1		
321116	4	Grading/Subgrade Preparation	LS	1		
321630	5	Concrete Sidewalk	SY	74		
321216	6	Multi-Use Asphalt Footpath	SY	1,000		
321316	7	Light Asphalt Pavement	SY	916		
	8	Stormwater Gutter	LF	50		
	9	Riprap Channel	LS	1		
321723	10	Pavement Line Markings (24")	LF	150		
321723	11	Parking Space Markings (4")	LF	252		
	12	Bollards	EA	4		
	13	Standard VDOT CG-12	EA	2		
033000	14	Concrete Pad for Info Board	SY	22		
	15	Information Board	EA	1		
321216	16	Asphalt Transitions	EA	1		
260001	17	1" Conduit & Wire for Area Lighting	LF	1,090		
260001	18	Area Lighting (including bases, connections & appurtenances)	EA	12		
312500	19	Erosion and Sediment Control	LS	1		
015700	20	Maintenance of Traffic	LS	1		
	21	Restoration of Property Pins and Monuments	LS	1		
	22	Record Drawings	LS	1		

As provided in paragraph 11.9 of the General Conditions estimated quantities are not guaranteed, and determinations of actual quantities and classification are to be made by ENGINEER as provided in paragraph 9.10 of the General Conditions. Unit prices have been computed as provided in paragraph 11.9.2 of the General Conditions.

**ARTICLE 5 - PAYMENT PROCEDURES.**

CONTRACTOR shall submit Application for Payment in accordance with Article 15 of the General Conditions, Applications for Payment will be processed by ENGINEER as provided in the General Conditions.

5.1 *Progress Payments*; OWNER shall make progress payments on account of the Contract Price on the basis of CONTRACTOR's Applications for Payment as recommended by ENGINEER, on or about the 15<sup>th</sup> day of each month during construction. All such payments will be measured by the schedule of values established in paragraph 2.9 of the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no schedule of values, as provided in the General Requirements.

**ARTICLE 6 - INTEREST.**

All moneys not paid when due as provided in Article 15 of the General Conditions shall bear interest at the statutory rate of the Commonwealth of Virginia.

## **ARTICLE 7 - CONTRACTOR'S REPRESENTATIONS.**

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

7.1 CONTRACTOR has examined and carefully studied the Contract Documents (including the Addenda listed in paragraph 8) and the other related data identified in the Bidding Documents including "technical data."

7.2 CONTRACTOR has visited the site and become familiar with and is satisfied as to the general, local, and site conditions that may affect cost, progress, performance or furnishing of the Work. CONTRACTOR is familiar with and is satisfied as to all federal, state, and local Laws and Regulations that may affect cost, progress, performance and furnishing of the Work.

7.3 CONTRACTOR has carefully studied all reports of explorations and tests of subsurface conditions at or contiguous to site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in paragraph 5.3 of the General Conditions. CONTRACTOR accepts the determination set forth in paragraph SC-5.3.(A).3 of the Supplementary Conditions of the extent of the "technical data" contained in such reports and drawings upon which CONTRACTOR is entitled to rely as provided in paragraph 5.3 of the General Conditions. CONTRACTOR acknowledges that such reports and drawings are not Contract Documents and may not be complete for CONTRACTOR's purposes. CONTRACTOR acknowledges that OWNER and ENGINEER do not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Contract Documents with respect to Underground Facilities at or contiguous to the site. CONTRACTOR has obtained and carefully studied (or assumes responsibility for having done so) all such additional supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the site or otherwise which may affect cost, progress, performance, or furnishing of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by CONTRACTOR and safety precautions, and programs incident thereto. CONTRACTOR does not consider that any additional examinations, investigations, explorations, tests, studies, or data are necessary for the performance and furnishing of the Work at the Contract Price, within the Contract Times and in accordance with the other terms and conditions of the Contract Documents.

7.4 CONTRACTOR is aware of the general nature of work to be performed by OWNER and others at the site that relates to the Work as indicated in the Contract Documents. CONTRACTOR has correlated the information known to CONTRACTOR, information and observation obtained from visits to the site, reports, and drawings identified in the Contract Documents and all additional examinations, investigations, explorations, tests, studies, and data with the Contract Documents.

7.5 CONTRACTOR has given ENGINEER written notice of all conflicts, errors, ambiguities or discrepancies that CONTRACTOR has discovered in the Contract Documents and the written resolution thereof by ENGINEER is acceptable to CONTRACTOR, and the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

## **ARTICLE 8 - CONTRACT DOCUMENTS.**

The Contract Documents which comprise the entire agreement between OWNER and CONTRACTOR concerning the Work consist of the following:

- 8.1 This Agreement (pages 59 to 63, inclusive).
- 8.2 Exhibits to this Agreement (N/A).
- 8.3 Performance, and Payment Bonds, consisting of 2 page(s) each.

- 8.4 Notice to Proceed.
- 8.5 General Conditions (pages 65 to 137, inclusive).
- 8.6 Supplementary Conditions (pages 139 to 154, inclusive).
- 8.7 Specifications bearing the title Rocky Gap Greenway Project – Phoenix Bridge and consisting of 25 divisions and 152 pages, as listed in table of contents thereof.
- 8.8 Drawings consisting of a cover sheet and sheets numbered G-002 through C-400, inclusive with each sheet bearing the following general title:
- 8.9 Addenda numbers N/A to N/A, inclusive.
- 8.10 CONTRACTOR's Bid (pages \_\_ to \_\_).
- 8.11 Documentation submitted by CONTRACTOR prior to Notice of Award (pages \_\_ to \_\_).
- 8.12 The following which may be delivered or issued after the Effective Date of the Agreement and are not attached hereto: All Written Amendments and other documents amending, modifying or supplementing the Contract Documents pursuant to Article 3 of the General Conditions.

The documents listed in paragraph 8.2 et seq. above are attached to this Agreement (except as expressly noted otherwise above).

There are not Contract Documents other than those listed above in this Article 8. The Contract Documents may only be amended, modified or supplemented as provided in Article 3 of the General Conditions.

#### **ARTICLE 9 - MISCELLANEOUS.**

9.1 Terms used in this Agreement which are defined in Article 1 of the General Conditions will have the meanings indicated in the General Conditions.

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

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

9.4 Any provisions or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon OWNER and CONTRACTOR, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

#### **9.5 OTHER PROVISIONS**

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

This Agreement will be effective on \_\_\_\_\_, 20\_\_ (which is the Effective Date of the Agreement).

OWNER: County of Bland

CONTRACTOR: \_\_\_\_\_.

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

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

[CORPORATE SEAL]

[CORPORATE SEAL]

Attest \_\_\_\_\_

Attest \_\_\_\_\_

Address for giving notices

Address for giving notices

P.O. Box 510

\_\_\_\_\_

Bland, VA 24315

\_\_\_\_\_

(If OWNER is a public body, attached evidence of authority to sign and resolution or other documents authorizing execution of Agreement).

License No. \_\_\_\_\_

Agent for services of process: \_\_\_\_\_

\_\_\_\_\_

(If CONTRACTOR is a corporation, attach evidence of authority to sign).



**STANDARD FORM OF AGREEMENT  
BETWEEN OWNER AND CONTRACTOR  
ON THE BASIS OF A STIPULATED PRICE**

THIS AGREEMENT is dated as of the \_\_\_\_\_ day of \_\_\_\_\_ in the year 20\_\_ by and between the County of Bland (hereinafter called OWNER) and \_\_\_\_\_ (hereinafter called CONTRACTOR).

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

**ARTICLE 1 - WORK.**

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

Providing all labor, materials, tools, equipment and other means of construction necessary and incidental to the completion of work shown on the plans and as described in these specifications including, but not necessarily limited to the following: The rehabilitation of the Pheonix Bridge in the Rocky Gap Community of Bland County. Bridge rehabilitation must adhere to regulations stated in Section 411 of the VDOT Road and Bridge Specification, shown in Appendix A.

**ARTICLE 2 - ENGINEER.**

The Project has been designed by CHA who is hereinafter called ENGINEER and who is to act as OWNER's representative, assume all duties and responsibilities and have the rights and authority assigned to ENGINEER in the Contract Documents in connection with completion of the Work in accordance with the Contract Documents.

**ARTICLE 3 - CONTRACT TIMES.**

3.1 The Work will be substantially completed within 150 days after the date when the Contract Times commence to run as provided in paragraph 2.3 of the General Conditions and completed and ready for final payment in accordance with paragraph 14.13 of the General Conditions within 180 days after the date when the Contract Times commence to run.

3.2 *Liquidated Damages.* Liquidated damages shall conform to Section 108.06(b) of the 2016 VDOT Road and Bridge Specifications and Section 12.6.4.3 of the Locally Administered Projects (LAP) Manual. Standard rates can be found on Table 1-1, Schedule of Liquidated Damages, in the 2016 Road and Bridge Specifications.

**ARTICLE 4 - CONTRACT PRICE.**

OWNER shall pay CONTRACTOR for completion of the Work in accordance with the Contract Documents an amount in current funds equal to the sum of the amounts determined pursuant to paragraphs 4.1 and 4.2 below:

4.1 For all Unit Price Work, an amount equal to the sum of the established unit price for each separately identified item of Unit Price Work times the estimated quantity of that item as indicated in this paragraph 4.2:

**UNIT PRICE WORK – CONTRACT 2**

UNIT PRICE BID						
Ref. Spec.	No.	Item	Unit	Estimated Quantity	Unit Price	Total Estimated Price
	23	Bridge Rehabilitation				
S&ME Rehab	23A	Removal of Existing Coating	LS	1		
S&ME Rehab	23B	Containment	LS	1		
S&ME Rehab	23C	Storage and Disposal of Waste Material	LS	1		
S&ME Rehab	23D	Recoating of Existing Structure	LS	1		
S&ME Rehab	23E	Decking Improvements	LF	206		

As provided in paragraph 11.9 of the General Conditions estimated quantities are not guaranteed, and determinations of actual quantities and classification are to be made by ENGINEER as provided in paragraph 9.10 of the General Conditions. Unit prices have been computed as provided in paragraph 11.9.2 of the General Conditions.

**ARTICLE 5 - PAYMENT PROCEDURES.**

CONTRACTOR shall submit Application for Payment in accordance with Article 15 of the General Conditions, Applications for Payment will be processed by ENGINEER as provided in the General Conditions.

5.1 *Progress Payments;* OWNER shall make progress payments on account of the Contract Price on the basis of CONTRACTOR’s Applications for Payment as recommended by ENGINEER, on or about the 15<sup>th</sup> day of each month during construction. All such payments will be measured by the schedule of values established in paragraph 2.9 of the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no schedule of values, as provided in the General Requirements.

**ARTICLE 6 - INTEREST.**

All moneys not paid when due as provided in Article 15 of the General Conditions shall bear interest at the statutory rate of the Commonwealth of Virginia.

**ARTICLE 7 - CONTRACTOR’S REPRESENTATIONS.**

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

7.1 CONTRACTOR has examined and carefully studied the Contract Documents (including the Addenda listed in paragraph 8) and the other related data identified in the Bidding Documents including “technical data.”

7.2 CONTRACTOR has visited the site and become familiar with and is satisfied as to the general, local, and site conditions that may affect cost, progress, performance or furnishing of the Work. CONTRACTOR is familiar with and is satisfied as to all federal, state, and local Laws and Regulations that may affect cost, progress, performance and furnishing of the Work.

7.3 CONTRACTOR has carefully studied all reports of explorations and tests of subsurface conditions at or contiguous to site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in paragraph 5.3 of the General Conditions. CONTRACTOR accepts the determination set forth in paragraph

SC-5.3.(A).3 of the Supplementary Conditions of the extent of the “technical data” contained in such reports and drawings upon which CONTRACTOR is entitled to rely as provided in paragraph 5.3 of the General Conditions. CONTRACTOR acknowledges that such reports and drawings are not Contract Documents and may not be complete for CONTRACTOR’s purposes. CONTRACTOR acknowledges that OWNER and ENGINEER do not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Contract Documents with respect to Underground Facilities at or contiguous to the site. CONTRACTOR has obtained and carefully studied (or assumes responsibility for having done so) all such additional supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the site or otherwise which may affect cost, progress, performance, or furnishing of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by CONTRACTOR and safety precautions, and programs incident thereto. CONTRACTOR does not consider that any additional examinations, investigations, explorations, tests, studies, or data are necessary for the performance and furnishing of the Work at the Contract Price, within the Contract Times and in accordance with the other terms and conditions of the Contract Documents.

7.4 CONTRACTOR is aware of the general nature of work to be performed by OWNER and others at the site that relates to the Work as indicated in the Contract Documents. CONTRACTOR has correlated the information known to CONTRACTOR, information and observation obtained from visits to the site, reports, and drawings identified in the Contract Documents and all additional examinations, investigations, explorations, tests, studies, and data with the Contract Documents.

7.5 CONTRACTOR has given ENGINEER written notice of all conflicts, errors, ambiguities or discrepancies that CONTRACTOR has discovered in the Contract Documents and the written resolution thereof by ENGINEER is acceptable to CONTRACTOR, and the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

## **ARTICLE 8 - CONTRACT DOCUMENTS.**

The Contract Documents which comprise the entire agreement between OWNER and CONTRACTOR concerning the Work consist of the following:

- 8.1 This Agreement (pages 59 to 63, inclusive).
- 8.2 Exhibits to this Agreement (N/A).
- 8.3 Performance, and Payment Bonds, consisting of 2 page(s) each.
- 8.4 Notice to Proceed.
- 8.5 General Conditions (pages 65 to 137, inclusive).
- 8.6 Supplementary Conditions (pages 139 to 154, inclusive).
- 8.7 Specifications bearing the title Rocky Gap Greenway Project – Phoenix Bridge and consisting of 25 divisions and 152 pages, as listed in table of contents thereof.
- 8.8 Drawings consisting of a cover sheet and sheets numbered G-002 through C-400, inclusive with each sheet bearing the following general title:
- 8.9 Addenda numbers N/A to N/A, inclusive.
- 8.10 CONTRACTOR’s Bid (pages \_\_\_ to \_\_\_).
- 8.11 Documentation submitted by CONTRACTOR prior to Notice of Award (pages \_\_\_ to \_\_\_).
- 8.12 The following which may be delivered or issued after the Effective Date of the Agreement and are not attached hereto: All Written Amendments and other documents amending, modifying or supplementing the Contract Documents

pursuant to Article 3 of the General Conditions.

The documents listed in paragraph 8.2 et seq. above are attached to this Agreement (except as expressly noted otherwise above). There are not Contract Documents other than those listed above in this Article 8. The Contract Documents may only be amended, modified or supplemented as provided in Article 3 of the General Conditions.

**ARTICLE 9 - MISCELLANEOUS.**

9.1 Terms used in this Agreement which are defined in Article 1 of the General Conditions will have the meanings indicated in the General Conditions.

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

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

9.4 Any provisions or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon OWNER and CONTRACTOR, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

9.5 OTHER PROVISIONS

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

This Agreement will be effective on \_\_\_\_\_, 20\_\_ (which is the Effective Date of the Agreement).

OWNER: County of Bland

CONTRACTOR: \_\_\_\_\_.

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

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

[CORPORATE SEAL]

[CORPORATE SEAL]

Attest \_\_\_\_\_

Attest \_\_\_\_\_

Address for giving notices

Address for giving notices

P.O. Box 510

\_\_\_\_\_

Bland, VA 24315

\_\_\_\_\_

(If OWNER is a public body, attached evidence of authority to sign and resolution or other documents authorizing execution of Agreement).

License No. \_\_\_\_\_

Agent for services of process: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(If CONTRACTOR is a corporation, attach evidence of authority to sign).

## **LIMITED COATING ASSESSMENT REPORT**

Phoenix Bridge  
Old State Route 61-Wolf Creek Road  
Rocky Gap, Virginia  
S&ME Project No. 3458-15-059

Prepared for:  
CHA Consulting, Inc.  
1901 Innovation Drive, Suite 2100  
Blacksburg, Virginia 24060

Prepared by:



S&ME, Inc.  
8646 West Market Street, Suite 105  
Greensboro, North Carolina 27409

June 8, 2015



June 8, 2015

CHA Consulting, Inc.  
1901 Innovation Drive, Suite 2100  
Blacksburg, Virginia 24060

Attention: Mr. Steven Steele

Reference: **LIMITED COATING ASSESSMENT REPORT**  
Phoenix Bridge  
Old State Route 61-Wolf Creek Road  
Rocky Gap, Virginia  
S&ME Project No. 3458-15-059

Dear Mr. Steele:

S&ME, Inc. is pleased to provide this limited coating assessment report for the above referenced bridge structure. The purpose of the assessment was to develop information relative to the bridge and the bridge general coating condition for use in long term planning by Rocky Gap Greenway Planning Project. The work was performed in general accordance with S&ME Proposal No. 34-1500199 dated May 1, 2015. This report summarizes our observations, findings and recommendations.

## **BACKGROUND**

The bridge is owned by Bland County, Virginia and it is registered under the National Register of Historical Places and is listed as "The Wolf Creek Bridge." The bridge was fabricated in 1912 and is a one span, one lane steel Pratt through truss structure. The only known modification to the bridge is the concrete abutments. The last coating application was not known at the time of this report. The coating assessment information is to be used to give the Bland County options on the bridge coating rehabilitation.

## **OBSERVATION AND ASSESSMENT PROCEDURES**

The scope of service consisted of the following:

### Visual Observation

Coating assessment and visual observations of the structure were performed from points safely accessible on and under the structure. Areas of corrosion, coating adhesion, coating thickness or visual coating deficiencies were noted and photographed.



### Dry Film Thickness (DFT) Testing

Dry film thickness (DFT) testing was performed at various random accessible areas to develop a baseline average. The high, low and average dry film thickness was recorded at each location. A total of 160 readings were taken at areas including above and below the deck. A summary of the test results are attached for your review/use.

### Adhesion Testing

Adhesion testing was performed at accessible locations in accordance with ASTM D3359-09e2, "Test Method for Testing Adhesion by Tape Test", using Method A. Testing was performed at three (3) locations where the coating was smooth and multiple coats were present. The adhesion testing provides information on the adhesion and cohesion properties between the primer and the substrate and also between the multiple coats. Test results indicate poor adhesion properties on the multiple coats and primer has a cohesive break down. The coating system would not be a candidate for over coating. Detailed adhesion test results are attached for your review/use.

### Lead Content Testing

Two samples of the coating system were collected and tested for lead content per EPA standard SW-846, 3<sup>rd</sup> Edition, Method No. 3050B/Method No. 7420 by an outside laboratory. The test results indicate test sample #1 had 26% lead concentration and sample #2 had 18% lead concentration. Both coating samples levels are above the 0.06% threshold and will require lead abatement if removal is considered.

### Photo Documentation

Photographs depicting and documenting conditions observed and tested are attached.

## **FINDINGS**

The structure has significant metal loss on the flanges of the "I" beams and on the web of the "I" beam on the south side of the bridge (*See attached photos*). Prior to considering over coating, structural repairs should be evaluated.

When considering over coating of an existing coating 3 findings must be evaluated. (1) Adhesion and cohesive strength of the existing coating, (2) Dry film thickness of the coating system and (3) percentage of coating breakdown. The bridge coating system is exhibiting poor adhesion of the multiple layers and cohesive break down of the primer to substrate interface. Dry film thickness were average for a multiple coating system. Visual corrosion on the structure was approximately 35% with severe metal loss below the decking on the main structural members. With poor adhesion and high percentage of corrosion the existing system should not be considered as a candidate for over coating.

The existing coating contains lead. The Society for Protective Coatings (SSPC) Guide 6, Guide for "Containing Surface Preparation Debris Generated During Paint Removal" along with governmental laws applicable to lead paint removal should be complied with.

## RECOMMENDATIONS

- The coating system is no longer adequate to protect the steel bridge structure.
- The existing coating should not be considered for over coating.
- Removal of the coating system with lead abatement requirements is recommended.
- Surface preparation for a new coating system should be conducted to meet SSPC SP-6 "Commercial Blast" requirements.
- Application of a new coating system to include:
  - (1) Coat of organic zinc
  - (1) Coat of Polyamidoamine epoxy
  - (1) Coat Aliphatic polyurethane
- The specified coating system with overcoats every 12-15 years could potentially last 45-50 years.
- Metal loss should be evaluated and repairs made prior to surface preparation and coating application.

## CLOSURE

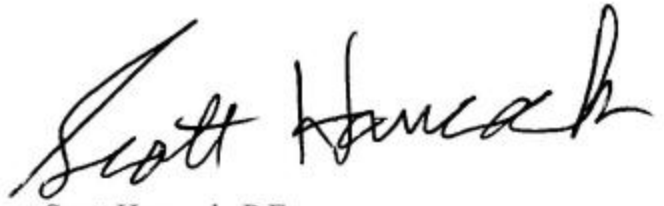
S&ME appreciates the opportunity to provide these services to CHA Consulting Inc. If you should have any questions or require any additional information, please feel free to contact us.

Sincerely,

S&ME, Inc.



Tim Greene  
Coating Services Coordinator  
NACE Certified #3492



Scott Hancock, P.E.  
Technical Principle/Vice President

TG/BG/lss

Attachments: Dry Film Thickness and Adhesion Testing Results Summary (2 pages)  
Dry Film Thickness Measurements (6 pages)  
Lead Content Test Reports (2 page)  
Photos (18 pages)

**DRY FILM THICKNESS RESULTS SUMMARY  
PHOENIX BRIDGE  
ROCKY GAP, VIRGINIA  
S&ME PROJECT NO. 3458-15-059**

**Dry Film Thickness Measurements**

Dry film coating thickness measurements were performed on various accessible areas of the tanks exterior using the following equipment:

- Positector 6000-F3 S/N # 50349
- NIST Calibration standards S/N # K-61704 5.31-18.2 Mils

The calibration, verification and measurement of dry film thickness were performed using a programmable type 2 constant pressure probe gage, readings were taken randomly to get a baseline average. The high, low and average dry film thickness was recorded at each location.

**TABLE I  
DRY FILM THICKNESS MEASUREMENT RESULT**

TEST AREA	NUMBER OF READINGS	MEASURED COATING THICKNESS (mils)		
		LOW	HIGH	AVERAGE
ABOVE DECKING	100	4.2	28.7	12.7
BELOW DECKING	60	5.3	14.6	9.2

**ADHESION TESTING RESULTS  
PHOENIX BRIDGE  
ROCKY GAP, VIRGINIA  
S&ME PROJECT NO. 3458-15-059**

**Adhesion Testing**

Adhesion testing was performed at 3 selected locations on the bridge to determine adhesion properties of the existing coating. Adhesion tests were performed in accordance with ASTM D3359-97 test method "A" based on the dry film thickness measurements. The rating system for adhesion values is presented below, the values rating is from 5A-0A, with 5A being the most desirable. The adhesion results and locations are listed in Table II.

5A No peeling or removal.

4A Trace peeling or removal along incisions or at their intersection.

3A Jagged removal along incision up to 1/16 in. (1.6 mm) on either side.

2A Jagged removal along most of intersection up to 1/8 in. (3.2mm) on either side.

1A Removal from most of the area of the X under the tape.

0A Removal beyond the area of the X.

**TABLE II  
ADHESION CLASSIFICATION TESTING RESULTS  
EXTERIOR**

<b>TEST NUMBER</b>	<b>EXTERIOR TEST AREA</b>	<b>PRIMER TO SUBSTRATE</b>	<b>MULTIPLE COATS</b>
1	PHOENIX COLUMN	0A	0A
2	DIAGONAL BRACING	0A	0A
3	STRUCTURAL GIRDER	0A	0A

## Readings - Bridge Above Decking

Reading	Time & Date	Multiple coat (mil)
1		14.8
2		14.9
3		16.5
4		16.6
5		7.6
6		16.0
7		7.6
8		14.6
9		9.7
10		7.0
11		10.3
12		9.4
13		8.3
14		21.9
15		7.2
16		18.0
17		18.5
18		5.9
19		13.8
20		15.4
21		12.4
22		16.1
23		11.5
24		14.0
25		10.8
26		9.5
27		14.9
28		7.7
29		10.9
30		16.5
31		19.5
32		17.3
33		14.5
34		21.2
35		19.4
36		18.2
37		22.2
38		16.6
39		13.3
40		16.0
41		13.4
42		11.8
43		11.0
44		9.6
45		11.6
46		16.0
47		15.3
48		14.6
49		13.4
50		7.5
51		7.2
52		6.6
53		13.5
54		9.1
55		8.4
56		10.8
57		11.2
58		13.0

59	8.7
60	6.4
61	7.8
62	4.9
63	7.2
64	8.4
65	9.9
66	10.0
67	12.3
68	12.2
69	24.8
70	17.6
71	28.7
72	16.6
73	21.1
74	15.8
75	14.4
76	16.1
77	17.5
78	11.1
79	10.7
80	13.2
81	4.2
82	5.6
83	5.0
84	10.4
85	9.6
86	10.0
87	17.5
88	17.3
89	13.6
90	12.0
91	9.9
92	10.9
93	9.6
94	14.6
95	14.1
96	15.2
97	8.7
98	8.3
99	8.2
100	11.4

**Summary - Bridge Above Decking**

Reading	Time & Date	Multiple coat (mil)
Max		28.70
Min		4.20
Mean		12.72
StdDev.		4.61

**Annotations - Bridge Above Decking**

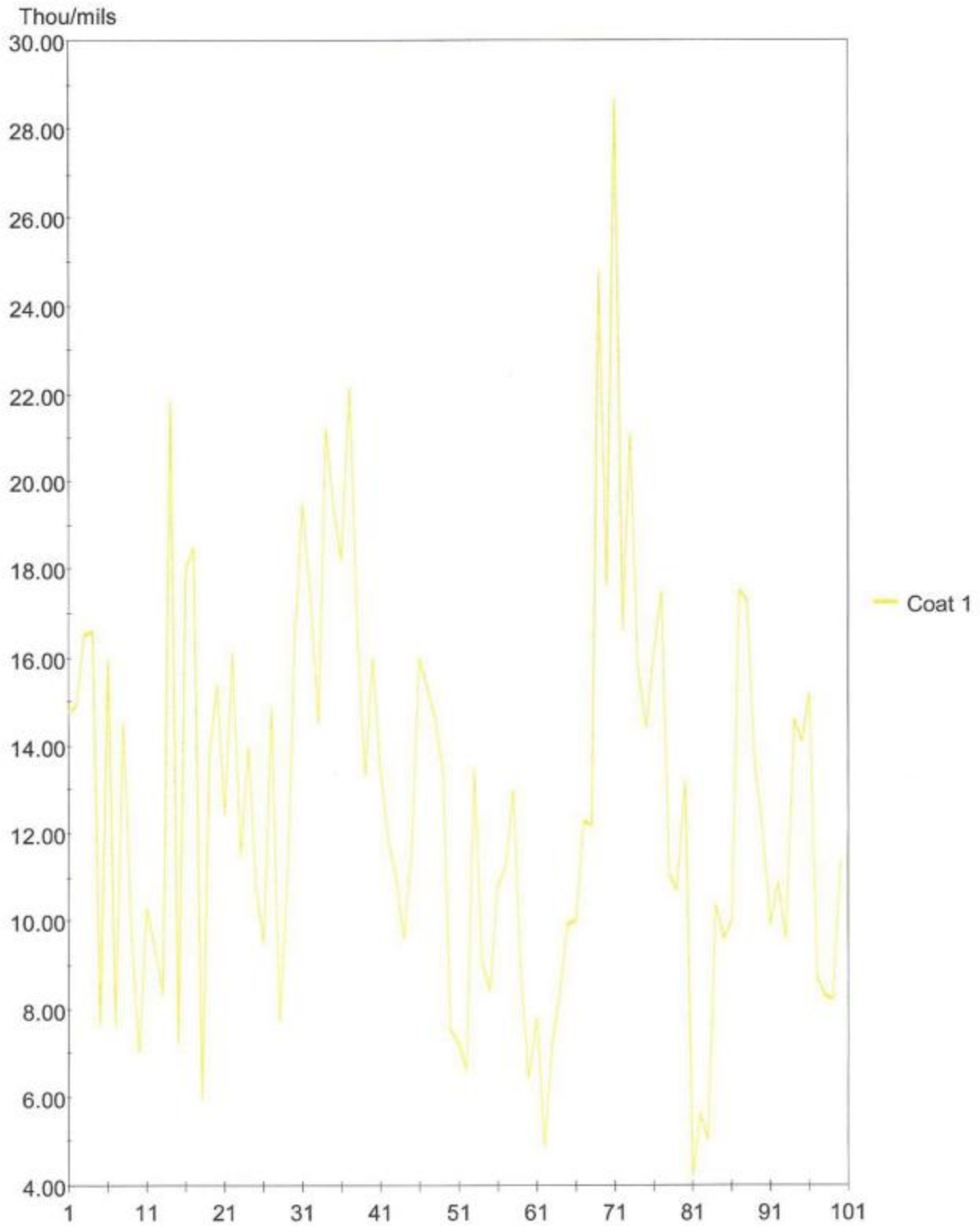
Gage Model: 6000F  
 Gage S/N: 703720  
 Probe Model: F  
 Probe S/N: 160388  
 User: Tim Greene  
 Part: Upper Bridge  
 Substrate: Steel

Coating 1: Multiple coat

Reading were taken on the coating remaining on the steel substrate.



Chart - Bridge Above Decking



## Readings - Bridge Below Decking

Reading	Time & Date	Multiple Coats (mil)
1		5.3
2		12.5
3		10.5
4		8.0
5		8.0
6		7.8
7		8.4
8		9.2
9		8.6
10		8.3
11		8.6
12		8.8
13		7.3
14		8.8
15		7.9
16		9.5
17		9.0
18		9.5
19		8.0
20		8.6
21		13.1
22		11.2
23		9.7
24		7.2
25		7.2
26		8.1
27		9.5
28		9.7
29		14.6
30		11.6
31		8.6
32		9.1
33		9.8
34		9.8
35		11.3
36		5.5
37		6.5
38		12.0
39		10.1
40		10.7
41		7.3
42		9.2
43		9.8
44		6.9
45		10.1
46		6.7
47		10.4
48		8.9
49		6.0
50		8.4
51		11.3
52		8.7
53		8.7
54		12.1
55		10.7
56		8.7
57		9.5
58		9.3

---

59	11.3
60	7.7

**Summary - Bridge Below Decking**

Reading	Time & Date	Multiple Coats (mil)
Max		14.60
Min		5.30
Mean		9.16
StdDev.		1.82

**Annotations - Bridge Below Decking**

Gage Model: 6000F

Gage S/N: 703720

Probe Model: F

Probe S/N: 160388

User: Tim Greene

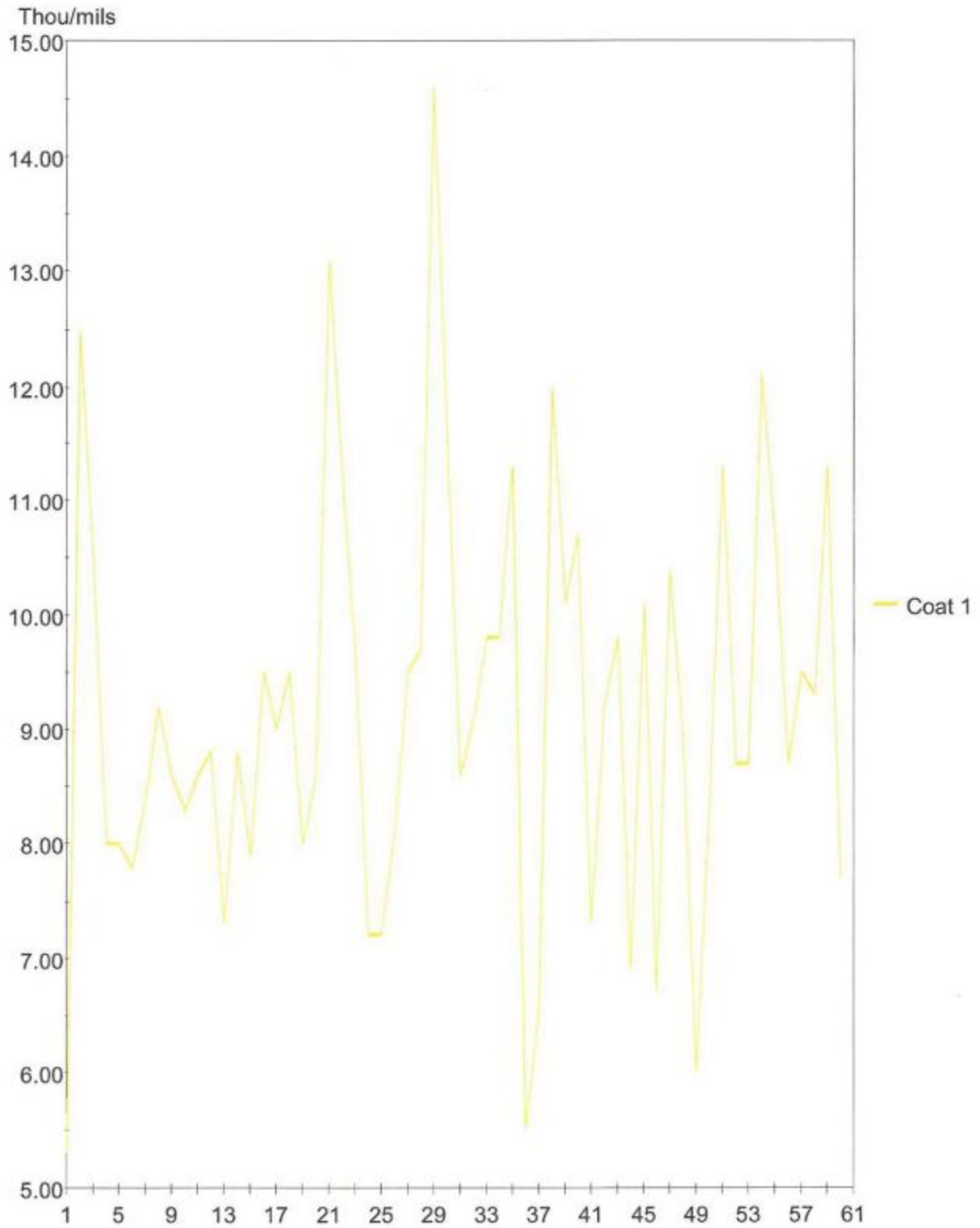
Part: Lower section

Substrate: Steel

Coating 1: Multiple Coats

Reading were taken on the coating remaining on the steel substrate.

Chart - Bridge Below Decking





EMSL ANALYTICAL, INC.  
LABORATORY PRODUCTS DIVISION

# Lead (Pb) Chain of Custody

2650

EMSL ANALYTICAL, INC.  
200 ROUTE 130 NORTH  
CINNAMINSON, NJ 08077  
PHONE: (800) 220-3675  
FAX: (856) 786-5974

EMSL Order ID: [REDACTED]

**TIMOTHY GREENE**  
Coating Location Coordinator  
NACE Certified #3492  
SSPC Certified Concrete Coating  
Inspector #26188



8646 W. Market Street, Suite 105  
Greensboro, NC 27409

p 336-288-7180  
f 336-288-8980

tgreene@smeinc.com  
www.smeinc.com

Different  
Comments in Comments\*\*

Authorization from third party

Country:

Purchase Order: *292*

Email

Residential/Tax Exempt

Company:

Street:

City: State/F

Report To (Name):

Email Address:

Project Name/Number: *Phoenix Bridge*

U.S. State Samples Taken: *345B-15-059*

### Turnaround Time (TAT) Options\* - Please Check

3 Hour     6 Hour     24 Hour     48 Hour     72 Hour     96 Hour     1 Week     2 Week

\*Analysis completed in accordance with EMSL's Terms and Conditions located in the Price Guide

Matrix	Method	Instrument	Reporting Limit	Check
Chips <input checked="" type="checkbox"/> % by wt. <input type="checkbox"/> mg/cm <sup>2</sup> <input type="checkbox"/> ppm	SW846-7000B	Flame Atomic Absorption	0.01%	<input type="checkbox"/>
Air	NIOSH 7082	Flame Atomic Absorption	4 µg/filter	<input type="checkbox"/>
	NIOSH 7105	Graphite Furnace AA	0.03 µg/filter	<input type="checkbox"/>
	NIOSH 7300 modified	ICP-AES/ICP-MS	0.5 µg/filter	<input type="checkbox"/>
Wipe* ASTM <input type="checkbox"/> non ASTM <input type="checkbox"/> *If no box is checked, non-ASTM Wipe is assumed	SW846-7000B	Flame Atomic Absorption	10 µg/wipe	<input type="checkbox"/>
	SW846-6010B or C	ICP-AES	1.0 µg/wipe	<input type="checkbox"/>
TCLP	SW846-1311/7000B/SM 3111B	Flame Atomic Absorption	0.4 mg/L (ppm)	<input type="checkbox"/>
	SW846-1131/SW846-6010B or C	ICP-AES	0.1 mg/L (ppm)	<input type="checkbox"/>
Soil	SW846-7000B	Flame Atomic Absorption	40 mg/kg (ppm)	<input type="checkbox"/>
	SW846-6010B or C	ICP-AES	2 mg/kg (ppm)	<input type="checkbox"/>
Wastewater    Unpreserved <input type="checkbox"/> Preserved with HNO <sub>3</sub> pH < 2 <input type="checkbox"/>	SM3111B/SW846-7000B	Flame Atomic Absorption	0.4 mg/L (ppm)	<input type="checkbox"/>
	EPA 200.9	Graphite Furnace AA	0.003 mg/L (ppm)	<input type="checkbox"/>
	EPA 200.7	ICP-AES	0.020 mg/L (ppm)	<input type="checkbox"/>
Drinking Water    Unpreserved <input type="checkbox"/> Preserved with HNO <sub>3</sub> pH < 2 <input type="checkbox"/>	EPA 200.9	Graphite Furnace AA	0.003 mg/L (ppm)	<input type="checkbox"/>
	EPA 200.8	ICP-MS	0.001 mg/L (ppm)	<input type="checkbox"/>
TSP/SPM Filter	40 CFR Part 50 (2013)	ICP-MS	1.2 µg/filter	<input type="checkbox"/>
Other:				<input type="checkbox"/>

Name of Sampler: \_\_\_\_\_ Signature of Sampler: \_\_\_\_\_

Sample #	Location	Volume/Area	Date/Time Sampled
1	<i>Upper Bridge</i>		
2	<i>Lower Bridge</i>		

Client Sample #'s: \_\_\_\_\_ Total # of Samples: \_\_\_\_\_

Relinquished (Client): *Tim Greene* Date: *5-21-15* Time: *1:45*

Received (Lab): *JH* Date: *5-21-15* Time: *1:45*

Comments:

**EMSL Analytical, Inc.**

706 Gralin Street, Kernersville, NC 27284

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EMSL Order:	021502650
CustomerID:	SME156
CustomerPO:	792
ProjectID:	

Attn: **Tim Greene**  
**S&ME, Inc.**  
**8646 West Market Street**  
**Suite 105**  
**Greensboro, NC 27409**

Phone: (336) 288-7180  
 Fax: (336) 288-8980  
 Received: 05/21/15 1:45 PM  
 Collected:

Project: **Phoenix Bridge 3458-15-059****Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)\***

<i>Client Sample Description</i>	<i>Lab ID</i>	<i>Collected</i>	<i>Analyzed</i>	<i>Lead Concentration</i>
1	021502650-0001		5/23/2015	26 % wt
2	021502650-0002		5/23/2015	18 % wt

James Cole, Laboratory Manager  
 or other approved signatory


\*Analysis following Lead in Paint by EMSL SOP/Determination of Environmental Lead by FLAA. Reporting limit is 0.010 % wt based on the minimum sample weight per our SOP. Unless noted, results in this report are not blank corrected. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities. Samples received in good condition unless otherwise noted. "<" (less than) result signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. The QC data associated with the sample results included in this report meet the recovery and precision requirements established by the AIHA-LAP, unless specifically indicated otherwise.

Samples analyzed by EMSL Analytical, Inc. Kernersville, NC EMSL Lab ID 102564 is accredited by the AIHA Laboratory Accreditation Program (AIHA-LAP), LLC in the Environmental Lead accreditation program for Lead in Paint Chips.

Initial report from 05/26/2015 09:01:22



		Date: 5-14-15
		Photographer: Tim Greene
<b>1</b>	<b>Location / Orientation</b>	North side of bridge
	<b>Remarks</b>	General view

		Date: 5-14-15
		Photographer: Tim Greene
<b>2</b>	<b>Location / Orientation</b>	View from highway 61
	<b>Remarks</b>	General view.





<b>3</b>		<b>Location / Orientation</b>	North side view	Date: 5-14-15  Photographer: Tim Greene
		<b>Remarks</b>	General view	




<b>4</b>		<b>Location / Orientation</b>	North side view	Date: 5-14-15  Photographer: Tim Greene
		<b>Remarks</b>	General view of coating condition	



		Date: 5-14-15
<b>5</b>	<b>Location / Orientation</b>	North side view
	<b>Remarks</b>	Phoenix Column

		Date: 5-14-15
<b>6</b>	<b>Location / Orientation</b>	North side view
	<b>Remarks</b>	Top of Phoenix Column



		Date: 5-14-15
<b>7</b>	<b>Location / Orientation</b>	Typical Column
	<b>Remarks</b>	General coating condition

		Date: 5-14-15
<b>8</b>	<b>Location / Orientation</b>	Typical column
	<b>Remarks</b>	Additional view of coating on column

<b>9</b>	<b>Location / Orientation</b>	Column	Date: 5-14-15
	<b>Remarks</b>	Lower section of column	




<b>10</b>	<b>Location / Orientation</b>	East view	Date: 5-14-15
	<b>Remarks</b>	Wolf Creek	





<b>11</b>		<b>Location / Orientation</b>	West view	Photographer: Tim Greene Date: 5-14-15
		<b>Remarks</b>	Wolf Creek	

<b>12</b>		<b>Location / Orientation</b>	South side of bridge	Photographer: Tim Greene Date: 5-14-15
		<b>Remarks</b>	Vegetation growth on decking and bridge structure	

		Date: 5-14-15
<b>13</b>	<b>Location / Orientation</b>	Below deck
	<b>Remarks</b>	General view of bridge girders


		Date: 5-14-15
<b>14</b>	<b>Location / Orientation</b>	North side
	<b>Remarks</b>	Bridge bearing




		Date: 5-14-15  Photographer: Tim Greene			
			<table border="1"> <tr> <td rowspan="2" style="text-align: center; vertical-align: middle;"><b>15</b></td> <td style="text-align: center;"><b>Location / Orientation</b></td> <td>Below decking</td> </tr> <tr> <td style="text-align: center;"><b>Remarks</b></td> <td>"I" beam supports</td> </tr> </table>	<b>15</b>	<b>Location / Orientation</b>
<b>15</b>	<b>Location / Orientation</b>	Below decking			
	<b>Remarks</b>	"I" beam supports			

		Date: 5-14-15  Photographer: Tim Greene			
			<table border="1"> <tr> <td rowspan="2" style="text-align: center; vertical-align: middle;"><b>16</b></td> <td style="text-align: center;"><b>Location / Orientation</b></td> <td>Below decking</td> </tr> <tr> <td style="text-align: center;"><b>Remarks</b></td> <td>General view of coating condition</td> </tr> </table>	<b>16</b>	<b>Location / Orientation</b>
<b>16</b>	<b>Location / Orientation</b>	Below decking			
	<b>Remarks</b>	General view of coating condition			



		Date: 5-14-15
		Photographer: Tim Greene
<b>17</b>	<b>Location / Orientation</b>	"I" beam supports
	<b>Remarks</b>	General view

		Date: 5-14-15
		Photographer: Tim Greene
<b>18</b>	<b>Location / Orientation</b>	Bottom flange of girder
	<b>Remarks</b>	General view



		Date: 5-14-15
<b>19</b>	<b>Location / Orientation</b>	North side
	<b>Remarks</b>	General condition of girder flange

		Date: 5-14-15
<b>20</b>	<b>Location / Orientation</b>	North side
	<b>Remarks</b>	Concrete abutment



		Date: 5-14-15
<b>21</b>	<b>Location / Orientation</b>	"I" beam
	<b>Remarks</b>	Typical corrosion on flange


		Date: 5-14-15
<b>22</b>	<b>Location / Orientation</b>	"I" beam
	<b>Remarks</b>	Galvanized fastener for decking to "I" beam connection with accelerated corrosion due to dissimilar metals

<b>23</b>	<b>Location / Orientation</b>	Below decking	Photographer: Tim Greene Date: 5-14-15
	<b>Remarks</b>	General view of fasteners and "I" beams	

<b>24</b>	<b>Location / Orientation</b>	South side	Photographer: Tim Greene Date: 5-14-15
	<b>Remarks</b>	"I" beam with severe metal loss on the abutment	




		Date: 5-14-15
<b>25</b>	<b>Location / Orientation</b>	South side
	<b>Remarks</b>	Metal loss on "I" beams

		Date: 5-14-15
<b>26</b>	<b>Location / Orientation</b>	View looking north
	<b>Remarks</b>	Note debris lodged on top of girder



		Date: 5-14-15
		Photographer: Tim Greene
<b>27</b>	<b>Location / Orientation</b>	South side
	<b>Remarks</b>	General view

		Date: 5-14-15
		Photographer: Tim Greene
<b>28</b>	<b>Location / Orientation</b>	View looking north
	<b>Remarks</b>	General view east side




<b>29</b>	<b>Location / Orientation</b>	View looking north	Photographer: Tim Greene  Date: 5-14-15
	<b>Remarks</b>	General view west side	

<b>30</b>	<b>Location / Orientation</b>	South side	Photographer: Tim Greene  Date: 5-14-15
	<b>Remarks</b>	Metal loss on "I" beam	



		Date: 5-14-15
<b>31</b>	<b>Location / Orientation</b>	South side
	<b>Remarks</b>	Additional view of metal loss on "I" beam

		Date: 5-14-15
<b>32</b>	<b>Location / Orientation</b>	South side
	<b>Remarks</b>	Same "I" beam as photo 31 with additional metal loss on the web of the "I" beam

		Date: 5-14-15
<b>33</b>	<b>Location / Orientation</b>	South side abutment
	<b>Remarks</b>	General view of girder and "I" beams

		Date: 5-14-15
<b>34</b>	<b>Location / Orientation</b>	Adhesion test #1 Results 0A
	<b>Remarks</b>	Phoenix column



<b>35</b>	<b>Location / Orientation</b>	Adhesion test #2 results 0A	<b>Date: 5-14-15</b>
	<b>Remarks</b>	Diagonal bracing	



<b>36</b>	<b>Location / Orientation</b>	Adhesion test #3 results 0A	<b>Date: 5-14-15</b>
	<b>Remarks</b>	Structural girder	

