



# ROANOKE COUNTY

## Purchasing Division

5204 Bernard Drive, Suite 300-F, P.O. Box 29800  
Roanoke, Virginia 24018-0798  
TEL: (540) 772-2061 FAX: (540) 772-2074

September 6, 2023

### ADDENDUM NO. 1 TO ALL BIDDERS:

Reference: IFB 2024-001

Description: East Roanoke River Greenway Extension and Connector  
(UPC 110155 and 113356)

Issue Date: August 4, 2023

Proposal Due: September 15, 2023

The above Project is hereby changed as addressed below:

1. Pre-Bid Conference Sign-In Log: See Attachment A to this Addendum for a copy of the attendance log from the mandatory pre-bid conference held on August 24, 2023.
2. VDOT Civil Rights Handouts: See Attachment B to this Addendum for handouts regarding VDOT civil rights requirements.
3. VDOT Responses to Bidder Questions: The following questions were submitted to VDOT during the pre-bid meeting; the responses below are provided by VDOT Salem District Civil Rights Manager, Lori Law.
  - a. Please provide the Civil Rights Report that was used to establish [the UPC 110155 9%] goal.  
*The confidential itemized cost estimate for the project is integral to the DBE goal analysis process and will not be shared with the contractors.*
  - b. Will follow up emails serve as good faith effort in lieu of telephone calls and logs required on Page 3 of 10 of VDOT form C-49?  
*The content and requirements of VDOT Form C-49, as included in the contract documents, remains in effect for all potential bidders.*
  - c. If we select a non-DBE subcontractor over a DBE subcontractor due to a 10% or more price difference, have we met the good faith effort required by page 5 of 10 of VDOT form C-49 for the listed work activities and would the required DBE goal be reduced accordingly?  
*The intent of having a DBE goal on a federally-assisted project is to provide opportunities for certified DBE firms in the project area to participate in subcontract opportunities on the project. Each potential bidder has latitude as to how to achieve the minimum DBE goal requirement, prior to bidding and throughout the life of the contract.*
  - d. If we elect to self-perform certain activities due to our bid cost being 20% less than a DBE quote, have we met the "Good Faith Effort for those work items and

would the DBE goal be reduced accordingly? If not, what is the required cost percentage difference?

*In order to award a contract to a bidder that has failed to meet DBE contract goal requirements, there will be determination if the bidder's efforts were adequate good faith efforts. Efforts to obtain DBE participation are not good faith efforts if the bidder could not reasonably be expected to produce a level of DBE participation sufficient to meet the DBE Program and contract goal requirements. Failure to adequately document that the bidder made a good faith effort to achieve sufficient DBE participation as specified in the bid proposal, the firm will be offered the opportunity for administrative reconsideration hearing. If, after reconsideration, determination that the bidder has failed to meet the requirements of the contract goal and has failed to make adequate good faith efforts to achieve the level of DBE participation as specified, the bidder's bid will be rejected. If sufficient documented evidence is presented and demonstrated that the apparent low bidder made reasonable good faith efforts will award the contract and reduce the DBE requirement to actual commitment identified by the lowest successful bidder at the time of its bid. The Contractor is still encouraged to seek additional DBE participation during the life of the contract.*

- e. Assume a DBE subcontractor selectively quotes certain contractors, but not all contractors and if the DBE subcontractor has no bases (i.e. prior non-payment, unreasonable subcontract terms, etc.) for this action. Can we, if not quoted, claim 90% of our bid price for the items that would have subcontracted and have the DBE goals reduced accordingly? If not, what is our recourse?  
*No.*
- f. Page 6 of 10 of VDOT Form C-49 still requires publication of advertisement in a newspaper. This goes back to the 1990's when newspapers were thriving and advertisements were of insignificant cost. We have NEVER received a quotation as a result of an advertisement in a publication. Advertisement cost are no longer insignificant as the newspapers are no longer thriving. We opt to not spend the time or money in placing useless advertisements in publications. It is far more effective and efficient to reach out electronically to certified DBE and non-DBE vendors. Does this position cause us to fail to meet the "Good Faith Effort"?  
*If the low bid is determined non-responsive, then this is determined during the reconsideration administrative hearing.*

4. Questions Submitted by Potential Offerors: The following questions have been submitted by prospective Offerors. Answers are provided below as the County is able.
  - a. The plans list EC-2 Erosion Control Matting; is this EC-2 type 1, type 2, or type 3?  
*EC-2 lining specifications are updated in the Table on revised Sheet C8.2, provided as Attachment C to this Addendum.*
  - b. Can you advise if the EAST plans have what the WEST project has? (re: seeding & Sod Rehab Guidelines)  
*All relevant seeding, fertilizer, etc. specs are contained within the design plans. Please reference Sheet C7 for UPC 110155, and Sheet C8 for UPC 113356.*

- c. Additional Specifications Provided: Please see Attachment C for the following.
  - i. Retaining Walls: Request for clarification of location of retaining walls, and larger scale documents (1:10 or 1:20 scale).  
*Larger scale images of the retaining wall sections of the sheets are included as Attachment C to this Addendum. (Reference Sheet C4.1 for UPC 110155, and profile with detailed elevation information on Sheet C8.1; Sheet C4.1 for UPC 113356.)*
  - ii. Timber Guardrail Detail: updated specifications to more accurately represent connections between rails and posts. Please see Attachment C; reference Sheet C8.1 for UPC 110155, and Sheet C9 for UPC 113356.
- d. Could you provide the Bid Form in Excel? If not, could you provide it in larger font?  
*The County will not be providing an Excel version of the Bid Form. Bidders may edit the size of the Bid Form as needed, i.e. by printing the document in a larger size. (This will not impact the responsiveness of a bid submission.)*
- 5. Bid Bond Form: See Attachment D to this Addendum for a copy of the required bid bond form.
- 6. CQAP: See Attachment E to this Addendum for a draft quality assurance plan.

**Note:** A signed acknowledgment of this addendum must be received at the location indicated on the original solicitation either prior to the proposal due date or attached to your proposal. Signature on this addendum does not substitute for your signature on the original proposal/bid document. The original proposal/bid document must be signed.

Thank you,

Kate Hoyt  
Phone: (540) 283-8149  
[KHoyt@roanokecountyva.gov](mailto:KHoyt@roanokecountyva.gov)

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Sign Name:

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Print Name:

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Name of Firm:

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Date:

PRE-BID MEETING SIGN-IN LOG  
IFB #2024-001 East Roanoke River Greenway Extension & Connector  
UPC 110155 & 113356  
August 24, 2023 10:00 AM

(PLEASE PRINT)

Name/Title David Henderson, ~~Perry~~ County Engineer  
Organization Roanoke County  
Email & Phone \_\_\_\_\_

Name/Title Dick Morgan  
Organization EC Page  
Email & Phone Dmorgan@ecpage.com 540-525-3157

Name/Title Daniel Runion / President  
Organization Burleigh Construction  
Email & Phone drunion@burleighconstruction.com 434-993-2214

Name/Title Matt Combs  
Organization Summit Contracting  
Email & Phone Matt@summitcontractingroanoke.com

Name/Title Lindsay Welbo | Parks Planning & Dev. Manager  
Organization Roanoke County Parks  
Email & Phone lwelbo@roanokecountyna.gov

Name/Title Lori Law  
Organization VDOT Salem Civil Rights  
Email & Phone Lori.Law@VDOT.Virginia.gov

Name/Title Chris Burns  
Organization Balzer and Associates, Inc.  
Email & Phone cburns@balzer.cc (540) 772-9580

Name/Title JESSIE NESTER  
Organization VDOT  
Email & Phone jessie.nester@vdot.virginia.gov 540-613-4115

PRE-BID MEETING SIGN-IN LOG

IFB #2024-001 East Roanoke River Greenway Extension & Connector

UPC 110155 & 113356

August 24, 2023 10:00 AM

(PLEASE PRINT)

Name/Title

John Douthit

✓/1

Organization

Allegheny Const. Co. Inc.

Email & Phone

john@alleghenyconstruction.net 540 345-0817

Name/Title

Leighton Dubbeld

PC

Organization

FIB Contractors

Email & Phone

lmd.fibcontractors@gmail.com (540) 293-8468

Name/Title

Holly Willard

Organization

BWI

Email & Phone

Holly@BWI-INF.COM 919-880-2810

Name/Title

Mark Betterton

Organization

MBPCE

Email & Phone

mbetterton@mbpce.com 540-420-6170

Name/Title

Mitch Eakin

276-698-4032

Organization

Jones Road and Bridge, Inc

Email & Phone

Meaking@jonesroadbridge.com

Name/Title

Jeff Harbin

Organization

RVRA

Email & Phone

JeffHarbin@rvra.net

Name/Title

Jeremy Garrett, Director of Operations

Organization

RVRA

Email & Phone

jgarrett@rvra.net, 540-581-2063

Name/Title

Jake Harding

Organization

Ro. Co.

Email & Phone

PRE-BID MEETING SIGN-IN LOG

IFB #2024-001 East Roanoke River Greenway Extension & Connector  
UPC 110155 & 113356  
August 24, 2023 10:00 AM

(PLEASE PRINT)

Name/Title Angie Oaks  
Organization MBP  
Email & Phone 5403097734 aoaks@mbpce.com

Name/Title ERIC VEST Assistant Director of Parks  
Organization Roanoke County  
Email & Phone evest@roanokecounty.va.gov

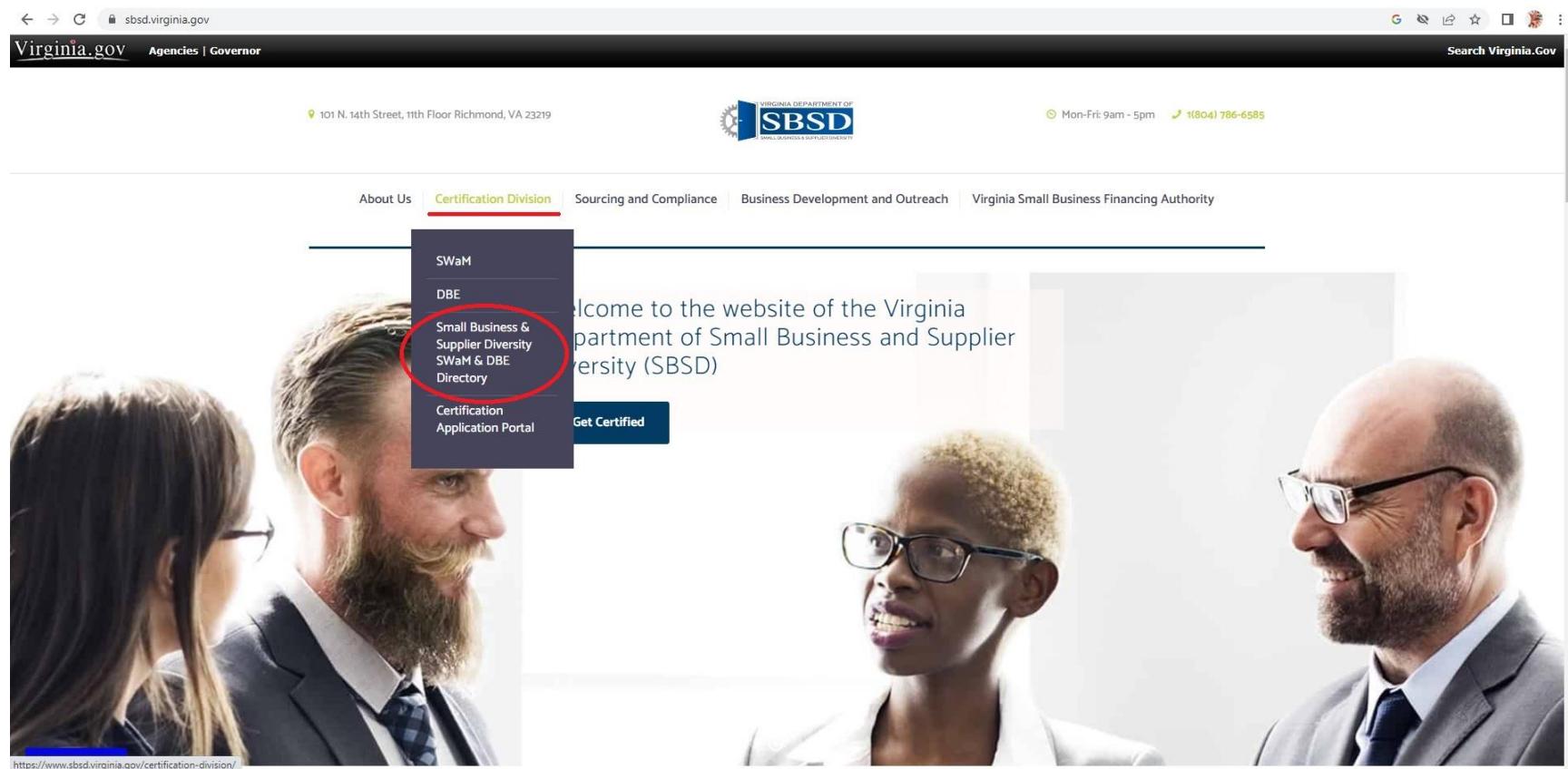
Name/Title FRANK CALDWELL  
Organization ROCKY DALE QUARRIES  
Email & Phone 540-588-4650 FCALDWELL@ROCKYDALEQUARRIES.COM

Name/Title \_\_\_\_\_  
Organization \_\_\_\_\_  
Email & Phone \_\_\_\_\_

- Form C-111 is due by 10:00 AM the next business day after the receipt of bids
- Form C-111—DBE Credit for suppliers is 60% unless the supplier is also the manufacturer
- Form C-112 is due within three (3) business days after the bids are received
- Form C-112 revision includes multi-tier DBE Subcontractors for participation credit
- DBE Firms must be certified in the specific work listed for DBE Contract goal credit
- Form C-48 is due within ten (10) days after the big opening
- Form C-49 must be used to show DBE Good Faith Efforts
- These forms are made available on VDOT website at  
<http://vdotforms.vdot.virginia.gov/>

## **Search for DBE firms:**

- Visit Virginia Department of Small Business Supplier Diversity website: [www.sbsd.virginia.gov](http://www.sbsd.virginia.gov)
- Under certification division > Click on Small Business & Supplier Diversity SWaM & DBE Directory > The link to the directory is on this page (Pictured on the next page)



Attachment B to Addendum 1  
IFB 2024-001

Small Business & Supplier Diversity SWaM & DBE Directory

The Small Business Supplier Diversity Agency provides an all inclusive list of firms which have been certified by the Commonwealth of Virginia. The Directory now includes SWaM and DBE-certified firms. SWaM designations include Small, Women-owned, Minority-owned, Micro, Service Disabled Veteran-owned, and ESO businesses. DBE includes DBE and ACDBE businesses.

DSBSD's directory listing for a vendor is not a confirmation or endorsement by DSBSD that the listed vendor meets any or all potentially required state, local, profession or trade-specific licensing or registration requirements for performing specific services that may be listed in the directory. Potential customers must perform their own due diligence to confirm the vendor is qualified to perform the specific services for which the vendor is hired.

You are able to search the Directory by filtering according to Certification Type, NIGP code, NAICS code, City, and/or Zip Code.

You are also able to search by Company Name (Legal business name), Certification Number, DBA (Trade name), Contact Name (Contact person shown on the Directory), Address, State, Phone, Email, or Website, or you may search all of these fields.

Please be aware that if you search by Certification Number, that it is an exact match field, so for example, searching Certification number 306 will only return the company with that certification number and will not return certification #686306 or #701306.

To access the Certification Directory, click below.

[Small Business & Supplier Diversity SWaM and DBE Directory](#)

**What's Hot**

- COVID-19 Information
- Business One Stop
- Step by Step Tutorial of the SWaM Application Process
- Important Forms
- Scaling4Growth
- Events
- Buyer Page
- SBSD SWaM & DBE Directory
- FAQs
- Certification Application Portal
- Certification Application Information
- NAICS Code & Description Search

- Under the directory you can conduct your search
- Please note that SWaM certification and DBE Certification are not the same!!!
- When researching firms, ensure that the DBE has the correct NAICS code needed for the type of work

Below is a sample of a SWaM ONLY firm in the directory:

Below is a sample of a DBE firm in the directory:

directory.sbsd.virginia.gov/#/executiveExport

**Virginia.gov Agencies | Governor** **Search Virginia.Gov**

**SBSD** **SBSD** MWAA last updated on JAN 02, 2023 04:16 AM EST

### Directory Listing

**Certification Type ▾** **NIGP** **NAICS** **City** **ZIP Code** **Business Category ▾**

All contains quinn

Match found 2  
Sort by: SWaM cert

**Applied Filters**

**Quinn Consulting Services Incorporated**

Elizabeth Quinn Vicinski  
14160 Newbrook Drive, Suite 220  
Chantilly, VA 20151  
Phone: (703) 818-0721  
Fax: (703) 818-9392  
equinn@quinn-consulting.com  
www.quinn-consulting.com

Certification Number: 626289  
**SWaM Certification Type:**  
Small Start Date: 04-24-2018  
Women-Owned Start Date: 04-24-2018  
SWaM Expiration Date: 04-24-2023  
NIGP Code and Description:  
92500 ENGINEERING SERVICES, PROFESSIONAL  
95826 Construction Management Services  
90700 ARCHITECTURAL AND ENGINEERING SERVICES, NON-PROFESSIONAL

**DBE Certification Type:** Has DBE Certification DBE Start Date: 04-01-1998 DBE Fed Type: DBE/WBE DBE/ACDBE Certifying Agency: SBSD Certifying agency is SBSD

NAICS Code and Description:  
237310 Construction project management, highway, street and bridge construction  
237990 Construction project management, mass transit  
Pcard: N  
Business Category: Architectural and Engineering Services

**Q-Design, P.L.C.** Certification Number: 680500

Below is a sample of a DBE firm in the directory that is certified by MWAA AND SBSD recognizes the DBE certification.

The screenshot shows a web page with three separate certification boxes for the company CSI Engineering, P.C. Each box contains the company's contact information, certification details, and NAICS codes. The 'DBE/A/DBE Certifying Agency' field is circled in red in all three boxes.

**CSI ENGINEERING, P.C.**

Ashlen Stevenson  
14205 Park Center Drive, Suite 203  
Laurel, MD 20707  
Phone: (301) 210-9090  
aslevenson@csie.com  
www.csie.com

**Certification Number:** 626810  
**SWaM Certification Type:**  
Small Start Date: 05-18-2021  
SWaM Expiration Date: 05-18-2026  
**NAIGP Code and Description:**  
91800 CONSULTING SERVICES  
**Pcard:** N  
**Business Category:** Architectural and Engineering Services

**MWAA Information**  
**CSI Engineering P.C.**

Debdas Ghosal  
14205 PARK CENTER DRIVE SUITE 203  
LAUREL, MD 20707  
Phone: (301) 210-9090  
Fax: (240) 845-7006  
corporate@csie.com

**Certification Number:** 2554485  
**DBE Certification Type:**  
DBE Start Date: 10-04-2020  
DBE Fed Type: MBE  
**DBE/A/DBE Certifying Agency:** MWAA (circled)  
**NAICS Code and Description:**  
561210 Facilities Support Services  
541330 Engineering services  
236210 Industrial Building Construction  
236220 Commercial and Institutional Building Construction  
**Pcard:** N  
**Business Category:** Not Available

**Certification Number:** 4640746  
**DBE Certification Type:**  
DBE Start Date: 10-04-2022  
DBE Fed Type: MBE  
**DBE/A/DBE Certifying Agency:** MWAA (circled)  
**NAICS Code and Description:**  
236220 Commercial and Institutional Building Construction  
541990 All Other Professional Scientific and Technical Services  
541340 Drafting Services  
236210 Industrial Building Construction  
541350 Building Inspection Services  
541690 Other Scientific and Technical Consulting Services  
561210 Facilities Support Services  
541330 Engineering services  
541310 Architectural Services  
**Pcard:** N  
**Business Category:** Not Available

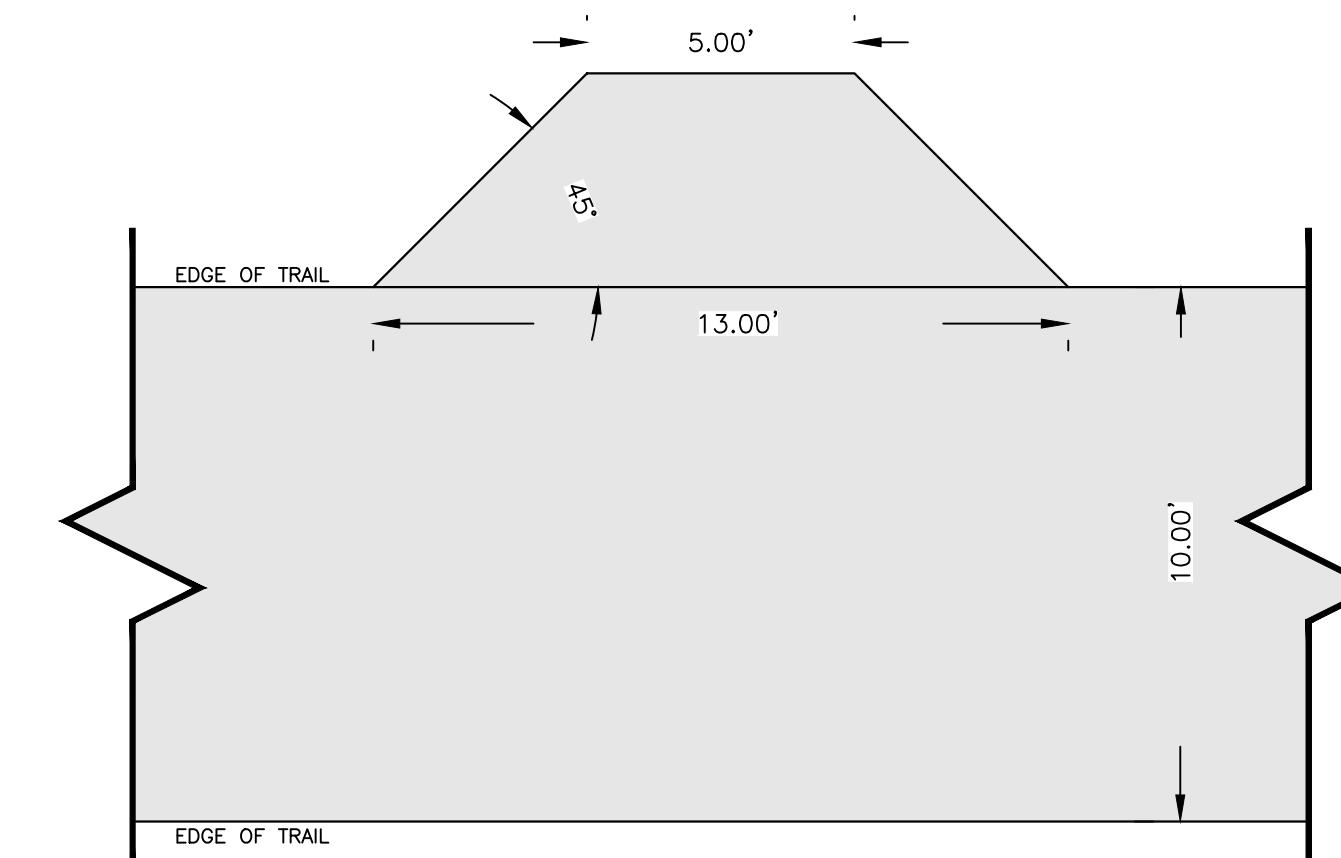
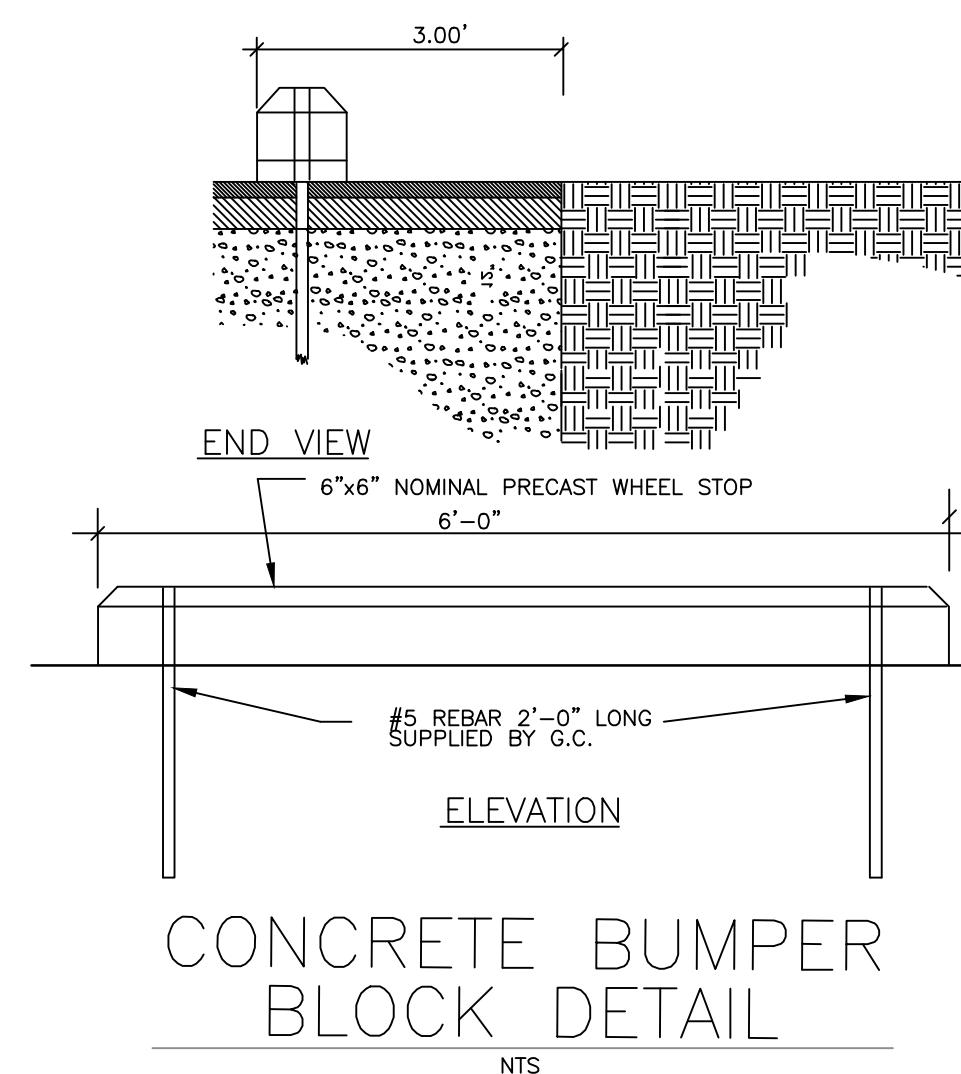
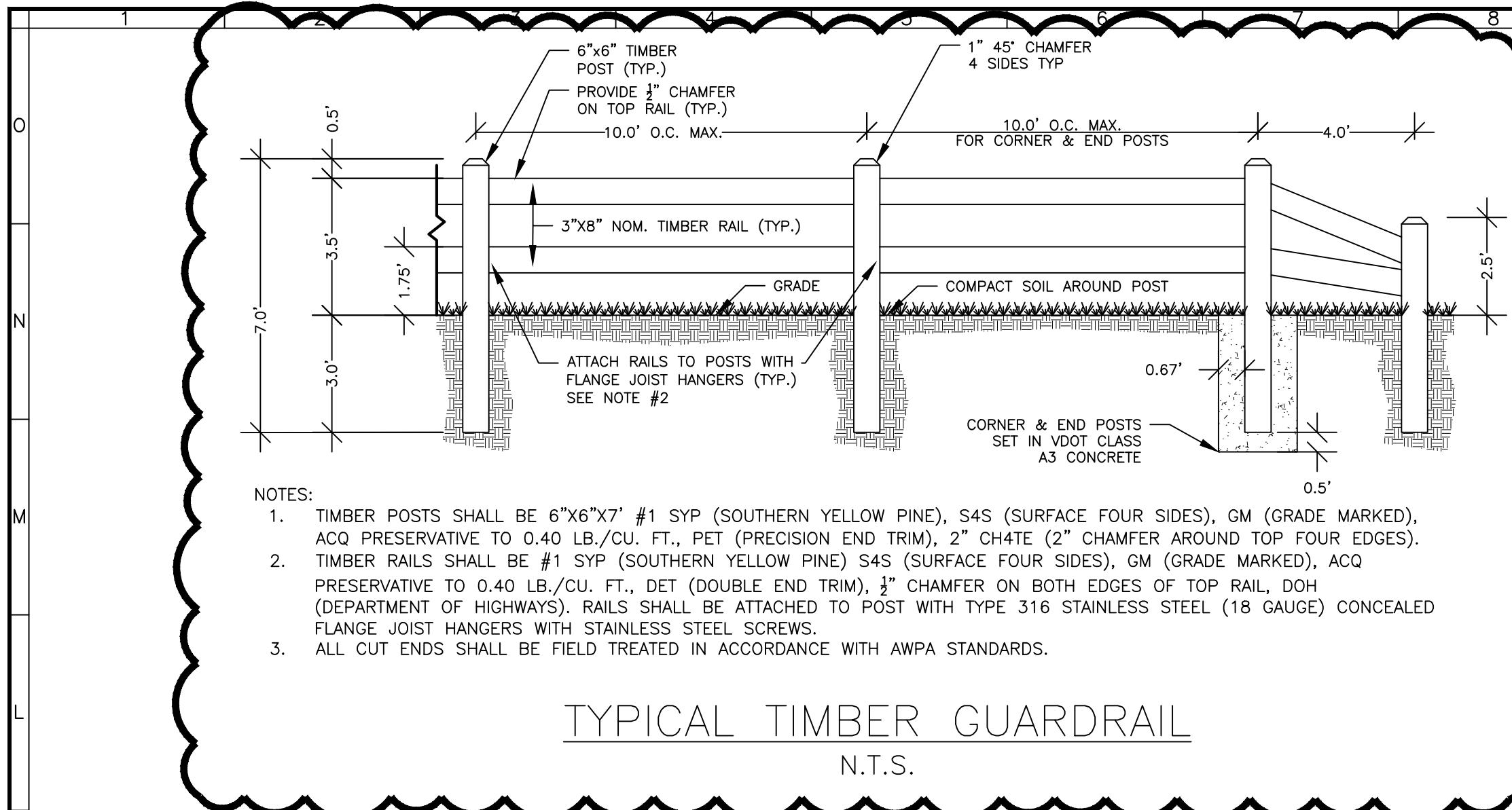
## Appendix 17 D – Good Faith Efforts (GFE) Administrative Review Process

### Virginia Department of Transportation Good Faith Efforts (GFE) Guidelines

Good Faith efforts may be determined through use of the following list of the types of actions the Consultant/Contractor may make to obtain DBE participation. This is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts of similar intent may be relevant in appropriate cases:

- Include the following completed forms:
  - Form C-111 - Minimum DBE Requirements
  - Form C-112 - Certification of Binding Agreement
  - Form C-48 - Contractor/Supplier Solicitation and Utilization Form
  - Form C-49 - Summary of GFE Documentation
  - Copy of the Request for Bid Solicitation to DBEs
- Solicit through reasonable and available means, such as but not limited to, attendance at pre-bid meetings, advertising, and written notices to certified DBEs who have the capability to perform the work of the contract. Examples include: advertising in at least one daily/weekly/monthly newspapers of general circulation as applicable; phone contact with a completely documented telephone log, including the date and time called, contact person, or voice mail status; and internet contacts with supporting documentation, including dates advertised.
- Solicit DBEs no less than five (5) business days before the bids are due so that the solicited DBEs have enough time to reasonably respond to the solicitation.
- Follow up initial solicitations as evidenced by documenting such efforts on Department standard DBE good faith documentation form, C-49.
- Select portions of the work to be performed by certified DBEs in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the Contractor might otherwise prefer to perform these work items completely or with its own forces.
- Provide interested certified DBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner, which will assist the DBEs in responding to a solicitation.
- Provide evidence of names, addresses, and telephone numbers of DBEs that were considered for the solicitation; dates DBEs were contacted, a description of the information provided regarding the plans, specifications, and requirements of the contract for the work selected for subcontracting, and, if insufficient DBE participation seems likely, evidence as to why additional agreements could not be reached for DBEs to perform the work.

- For DBE bids declared noncompetitive, include copies of DBE and non-DBE bid quotes. DBE quotes may be rejected as noncompetitive if the DBE sub's quote is more than 10% higher than the non-DBE's quote, as verified by supporting documentation. The prime must contract with the non-DBE sub when declaring a DBE firm non-competitive.
- Offer assistance to DBEs in obtaining bonding, lines of credit, or insurance.
- Offer assistance to DBEs with information about securing equipment, supplies, materials, or related assistance/services.
- Effectively utilize the services of appropriate personnel from VDOT, the Virginia Department of Small Business and Supplier Diversity, the Metropolitan Washington Airports Authority, and other organizations in the recruitment and utilization of qualified DBEs.



**BALZER**  
AND ASSOCIATES INC  
**BUILT**  
REFLECTING TOMORROW  
www.balzer.cc

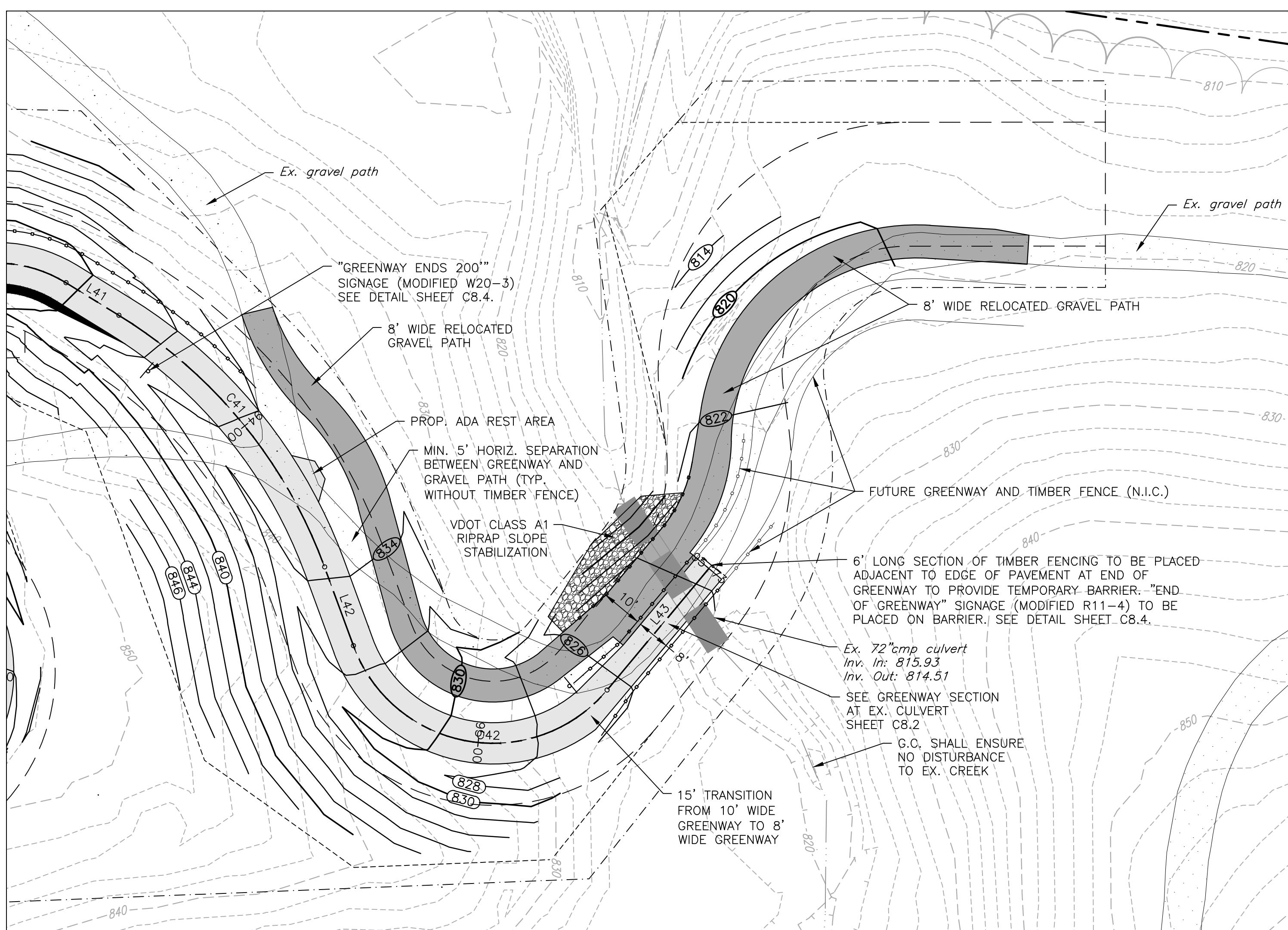
Roanoke  
New River Valley  
Richmond  
Staunton  
Harrisonburg

RESIDENTIAL LAND DEVELOPMENT ENGINEERING  
SITE DEVELOPMENT ENGINEERING  
LAND USE PLANNING & ZONING  
LANDSCAPE ARCHITECTURE  
LAND SURVEYING  
ARCHITECTURE  
STRUCTURAL ENGINEERING  
TRANSPORTATION ENGINEERING  
ENVIRONMENTAL & SOIL SCIENCE  
WETLAND DELINEATIONS & STREAM EVALUATIONS

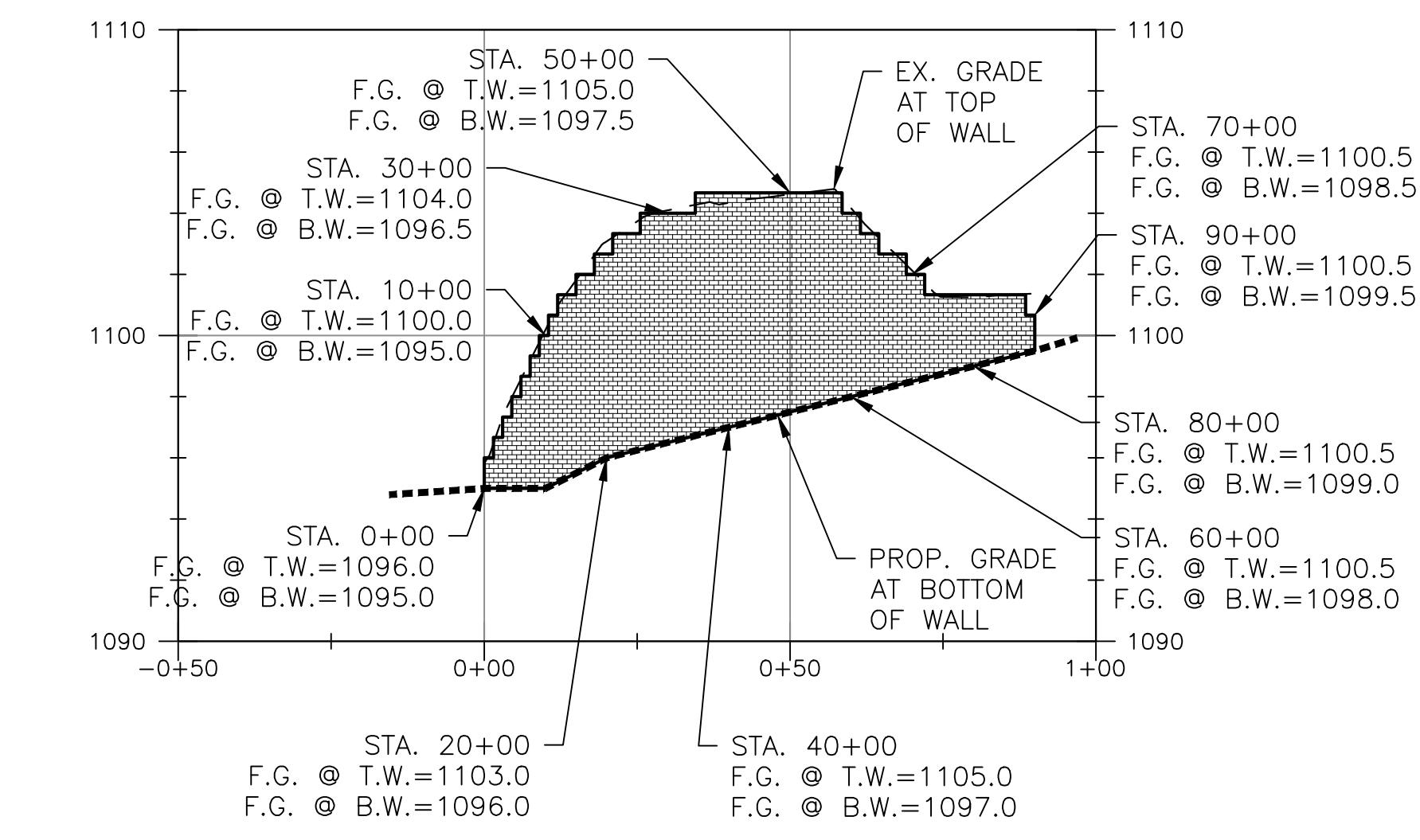
Balzer and Associates, Inc.  
1208 Corporate Circle  
Roanoke, VA 24018  
540-772-9580  
FAX 540-772-8050

CHRISTOPHER P. BURNS  
LIC. NO. 047338  
8/31/23  
PROFESSIONAL ENGINEER  
COMMONWEALTH OF VIRGINIA

**EAST ROANOKE RIVER GREENWAY EXTENSION**  
VINTON DISTRICT  
ROANOKE COUNTY, VIRGINIA  
GENERAL NOTES & DETAILS I



### RETAINING WALL PROFILE



HORIZONTAL SCALE



VERTICAL SCALE



### NOTES:

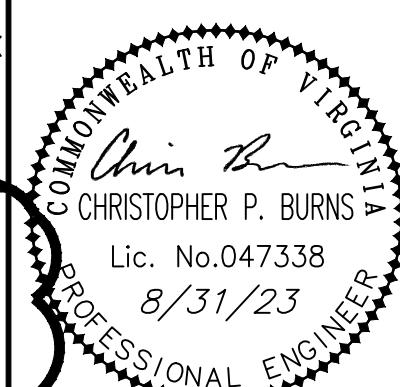
1. PROFILE PROVIDED FOR INFORMATIONAL PURPOSES ONLY. FINAL SEGMENTAL BLOCK RETAINING WALL TO BE DESIGNED BY OTHERS.
2. G.C. SHALL BE RESPONSIBLE FOR DESIGN (BY PROFESSIONAL ENGINEER), PERMITTING, AND ALL RETAINING WALL CONSTRUCTION.
3. ELEVATIONS PROVIDED ARE FINISHED GRADE AT TOP AND BOTTOM OF WALL. FINAL WALL ELEVATIONS, INCLUDING EMBEDMENT, TO BE DETERMINED WITH THE FINAL WALL DESIGN.
4. CHAIN LINK FENCE TO BE PROVIDED AT TOP OF WALL. SEE DETAILS.

DRAWN BY CPB  
DESIGNED BY CPB  
CHECKED BY BTC  
DATE 9/4/2019  
SCALE AS NOTED

REVISIONS:  
12/20/2019  
3/27/2020  
8/7/2020  
7/27/2021

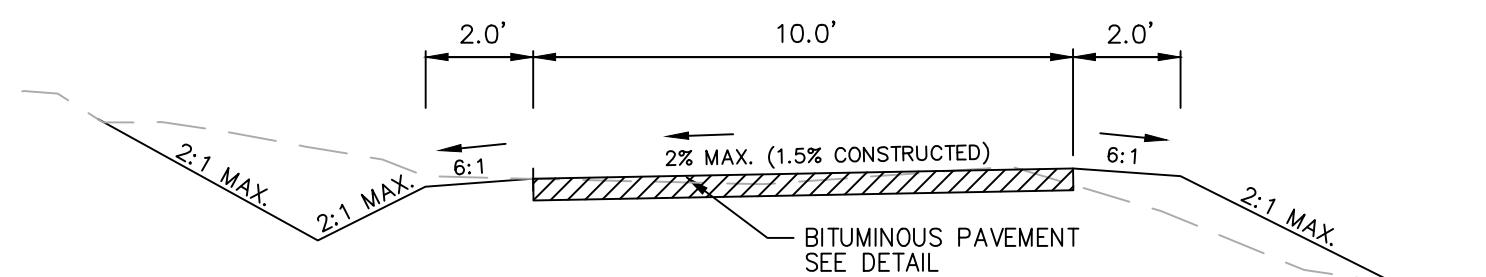
12/21/2022  
4/4/2023  
8/4/2023  
8/31/2023

SHEET NO. **C8.1**  
JOB NO. 04160062.00



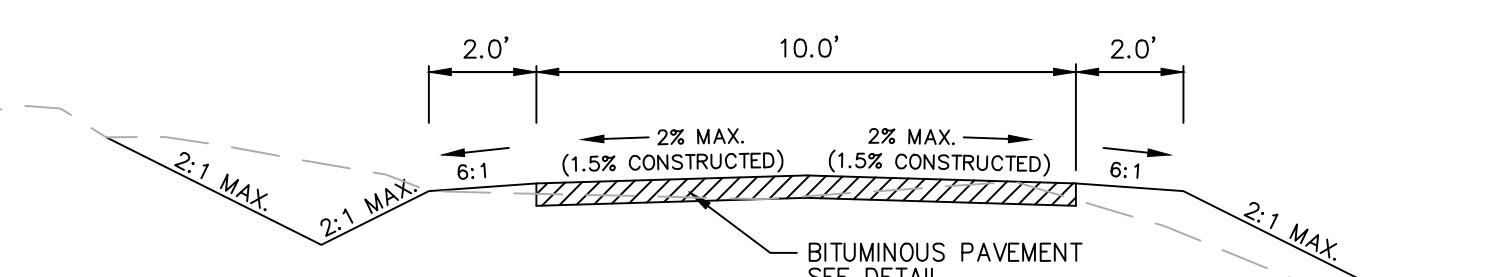
## TYPICAL GREENWAY SECTION—CROSS SLOPE LEFT

N.T.S.

TYPICAL TRAIL SECTION  
DESIGN SPEED = 12 MPH

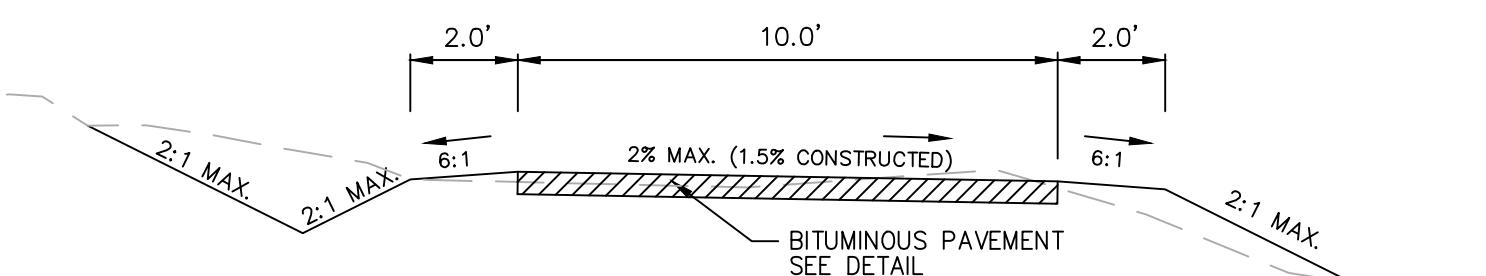
## TYPICAL GREENWAY SECTION—CROWNED

N.T.S.

TYPICAL TRAIL SECTION  
DESIGN SPEED = 12 MPH

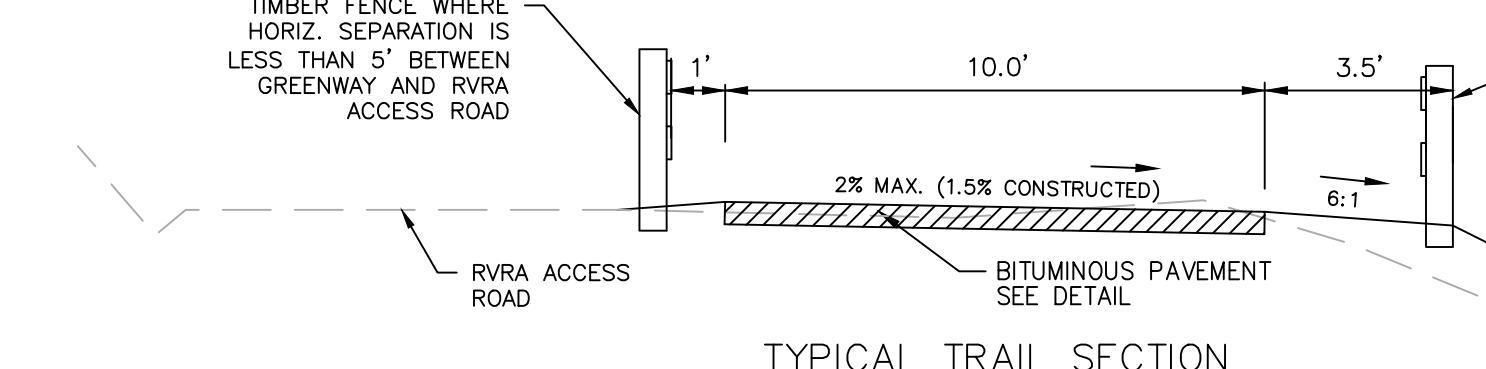
## TYPICAL GREENWAY SECTION—CROSS SLOPE RIGHT

N.T.S.

TYPICAL TRAIL SECTION  
DESIGN SPEED = 12 MPH

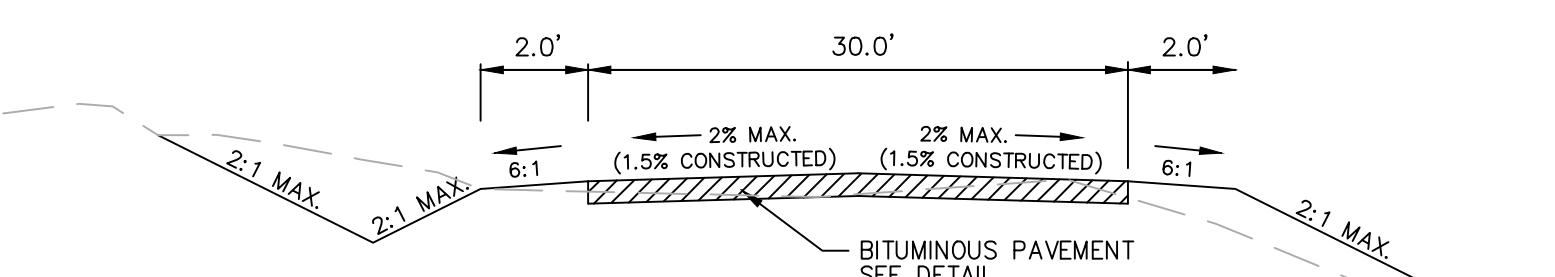
## GREENWAY SECTION AT RVRA ACCESS ROAD (STA. 68+00)

N.T.S.

TYPICAL TRAIL SECTION  
DESIGN SPEED = 12 MPH

## TYPICAL PAVED TRAILHEAD ACCESS ROAD/PARKING AREA

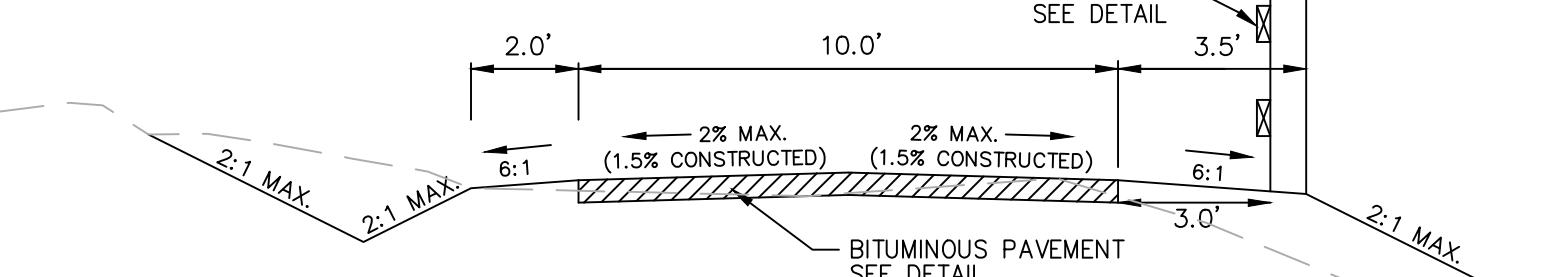
N.T.S.



TYPICAL ROAD SECTION

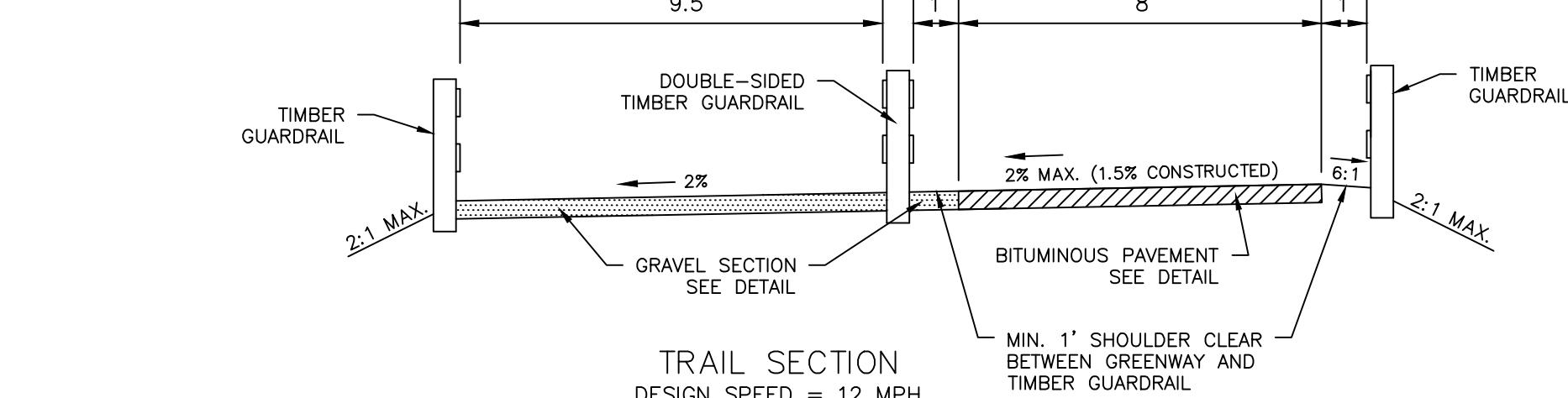
## TYPICAL GREENWAY SECTION W/ GUARDRAIL

N.T.S.

TYPICAL TRAIL SECTION  
DESIGN SPEED = 12 MPH

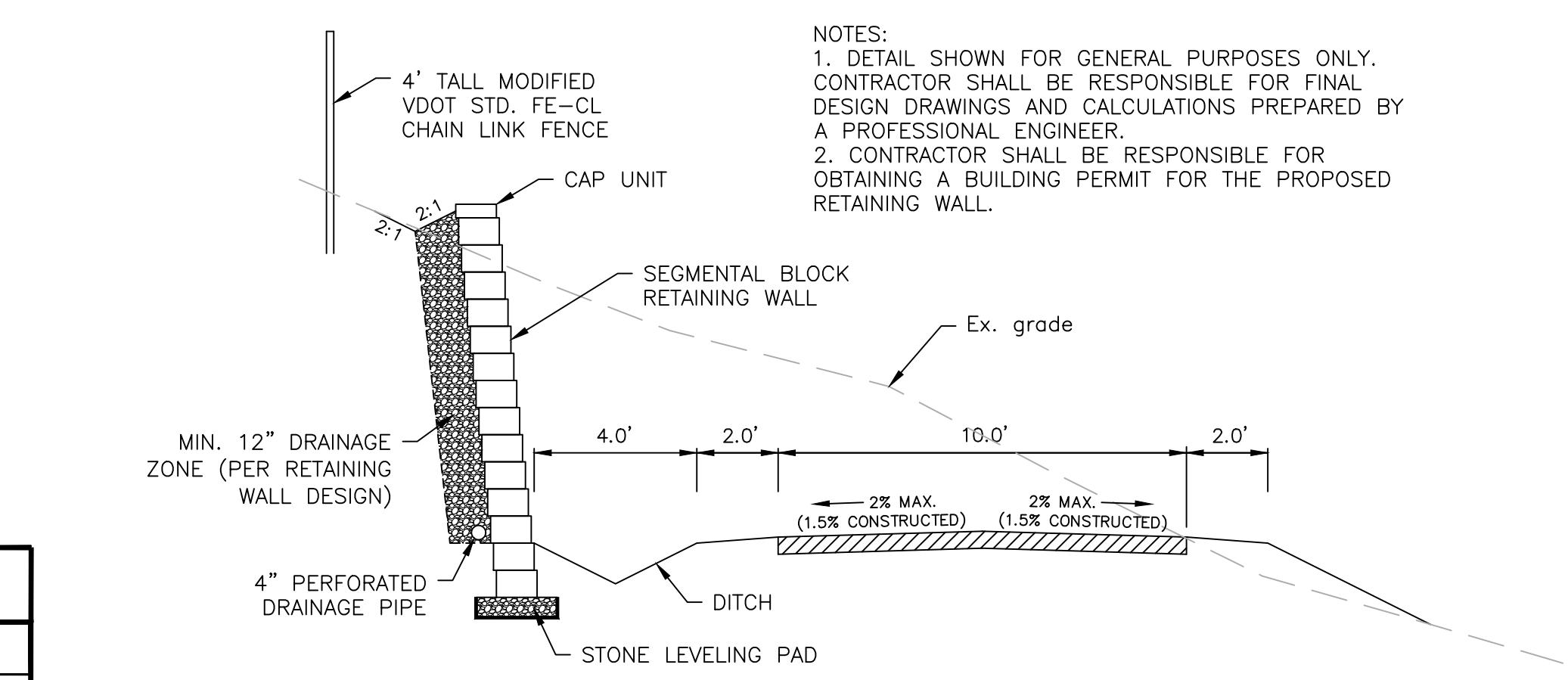
## GREENWAY SECTION AT EX. CULVERT (STA. 95+70)

N.T.S.

TRAIL SECTION  
DESIGN SPEED = 12 MPH

## TYPICAL GREENWAY SECTION WITH CUT RETAINING WALL

N.T.S.



NOTES:  
1. DETAIL SHOWN FOR GENERAL PURPOSES ONLY.  
2. CONTRACTOR SHALL BE RESPONSIBLE FOR FINAL DESIGN DRAWINGS AND CALCULATIONS PREPARED BY A PROFESSIONAL ENGINEER.  
3. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A BUILDING PERMIT FOR THE PROPOSED RETAINING WALL.

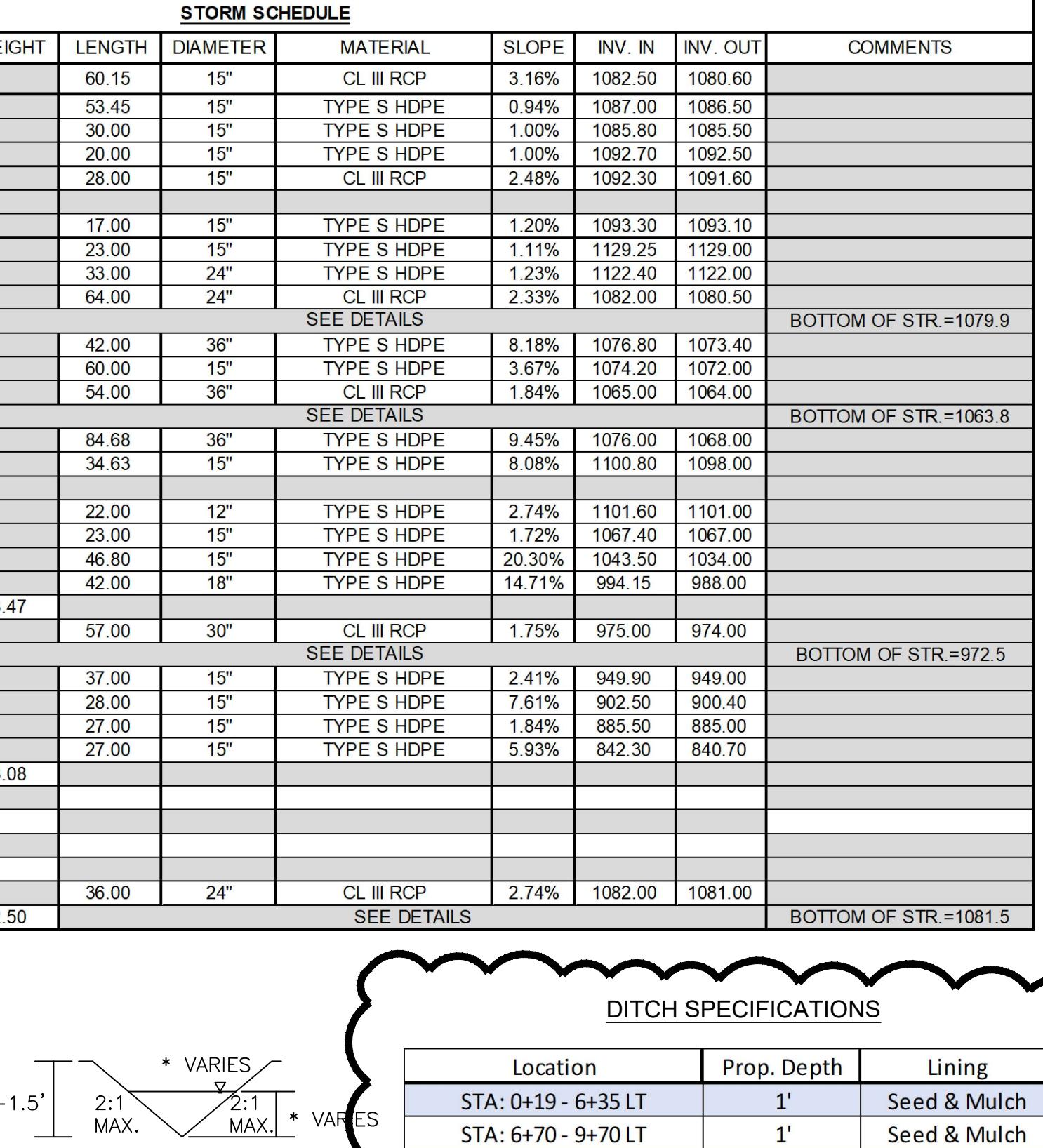
## GRAVEL PATH SECTION

NO SCALE

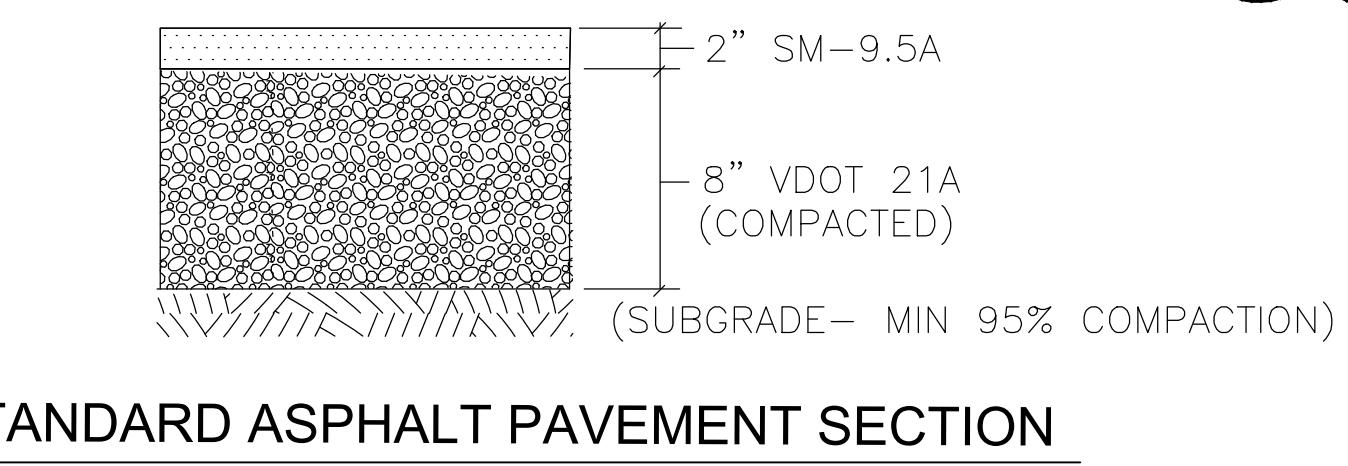
1. STONE MUST BE PLACED IN LIFTS OF NO MORE THAN 4" EACH.  
2. G.C. TO ENSURE A MINIMUM OF 95% COMPACTION OF THE SUBGRADE PRIOR TO STONE/ASPHALT PLACEMENT.

NOTE: GRAVEL PATH SECTION SHALL BE USED FOR THE PROPOSED GRAVEL PATH RELOCATION NEAR GREENWAY STATIONS 94+00 TO 95+75.

STORM SCHEDULE											COMMENTS
STR #	TYPE	NOSE	TOP ELEV	HEIGHT	LENGTH	DIAMETER	MATERIAL	SLOPE	INV. IN	INV. OUT	COMMENTS
1					60.15	15"	CL III RCP	3.16%	1082.50	1080.60	
1A					53.45	15"	TYPE S HDPE	0.94%	1087.00	1086.50	
2					30.00	15"	TYPE S HDPE	1.00%	1085.80	1085.50	
3					20.00	15"	TYPE S HDPE	1.00%	1092.70	1092.50	
4					28.00	15"	CL III RCP	2.48%	1092.30	1091.60	
5	OMITTED										
6					17.00	15"	TYPE S HDPE	1.20%	1093.30	1093.10	
7					23.00	15"	TYPE S HDPE	1.11%	1129.25	1129.00	
8					33.00	24"	TYPE S HDPE	1.23%	1122.40	1122.00	
9					64.00	24"	CL III RCP	2.33%	1082.00	1080.50	
9R	BMP RISER		1088.00					SEE DETAILS			BOTTOM OF STR.=1079.9
10					42.00	36"	TYPE S HDPE	8.18%	1076.80	1073.40	
10A					60.00	15"	TYPE S HDPE	3.67%	1074.20	1072.00	
11					54.00	36"	CL III RCP	1.84%	1065.00	1064.00	
11R	BMP RISER		1069.00					SEE DETAILS			BOTTOM OF STR.=1063.8
12					84.68	36"	TYPE S HDPE	9.45%	1076.00	1068.00	
12A					34.63	15"	TYPE S HDPE	8.08%	1100.80	1098.00	
13	OMITTED										
14					22.00	12"	TYPE S HDPE	2.74%	1101.60	1101.00	
15					23.00	15"	TYPE S HDPE	1.72%	1067.40	1067.00	
16					46.80	15"	TYPE S HDPE	20.30%	1043.50	1034.00	
17					42.00	18"	TYPE S HDPE	14.71%	994.15	988.00	
18	DI-7A TYPE III		997.62	3.47							
19					57.00	30"	CL III RCP	1.75%	975.00	974.00	
19R	BMP RISER		982.00					SEE DETAILS			BOTTOM OF STR.=972.5
20					37.00	15"	TYPE S HDPE	2.41%	949.90	949.00	
21					28.00	15"	TYPE S HDPE	7.61%	902.50	900.40	
22					27.00	15"	TYPE S HDPE	1.84%	885.50	885.00	
23					27.00	15"	TYPE S HDPE	5.93%	842.30	840.70	
24	DI-7A TYPE III		1088.88	3.08							
25											
26	OMITTED										
27	OMITTED										
28	OMITTED										
29					36.00	24"	CL III RCP	2.74%	1082.00	1081.00	
29R	BMP RISER		1084.50	2.50				SEE DETAILS			BOTTOM OF STR.=1081.5



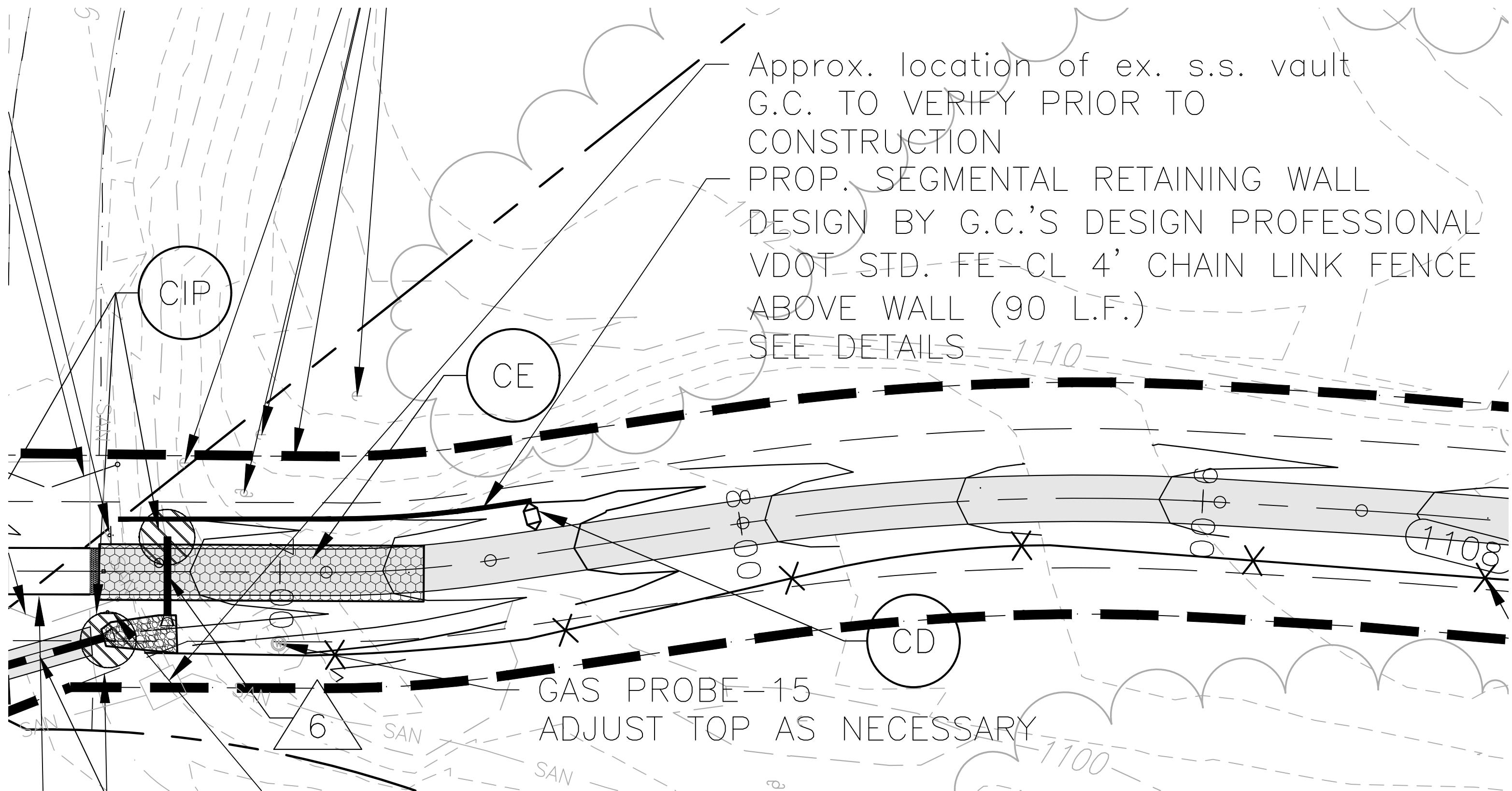
Location	Prop. Depth	Lining
STA: 0+19 - 6+35 LT	1'	Seed & Mulch
STA: 6+70 - 9+70 LT	1'	Seed & Mulch
STA: 6+70 - 8+90 RT	1'	Seed & Mulch
STA: 19+40 - 28+75 LT	1.25'	EC-2, Type 1
STA: 34+80 - 36+00 LT	1'	Seed & Mulch
STA: 36+00 - 36+60 LT	1'	EC-2, Type 1
STA: 36+70 - 38+50 LT	1'	EC-2, Type 1
STA: 46+70 - 51+00 RT	1'	Seed & Mulch
STA: 54+25 - 59+00 LT	1'	Seed & Mulch
STA: 59+20 - 66+20 LT	1.5'	EC-3A
STA: 71+20 - 76+50 LT	1'	EC-2, Type 1
STA: 78+25 - 83+50 LT	1'	EC-2, Type 1
STA: 83+50 - 87+00 RT	1.25'	EC-2, Type 2
STA: 86+15 - 93+00 LT	1.25'	EC-2, Type 3
STA: 92+00 - 95+20 RT	1.25'	EC-2, Type 3

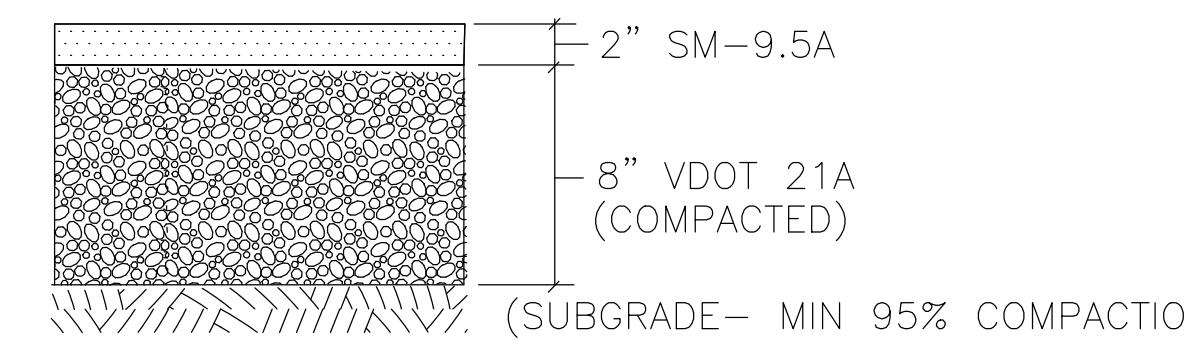
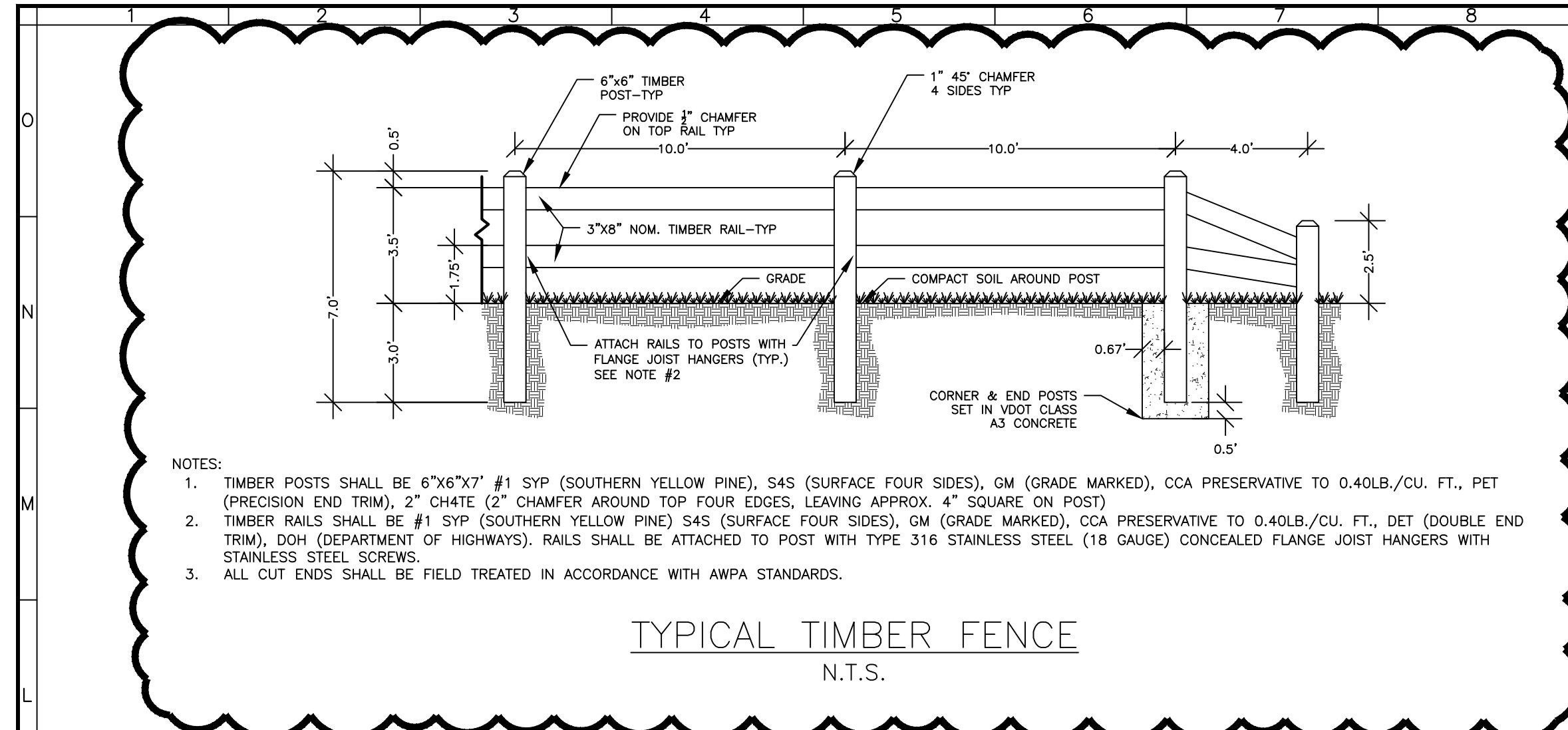


## STANDARD ASPHALT PAVEMENT SECTION

NO SCALE

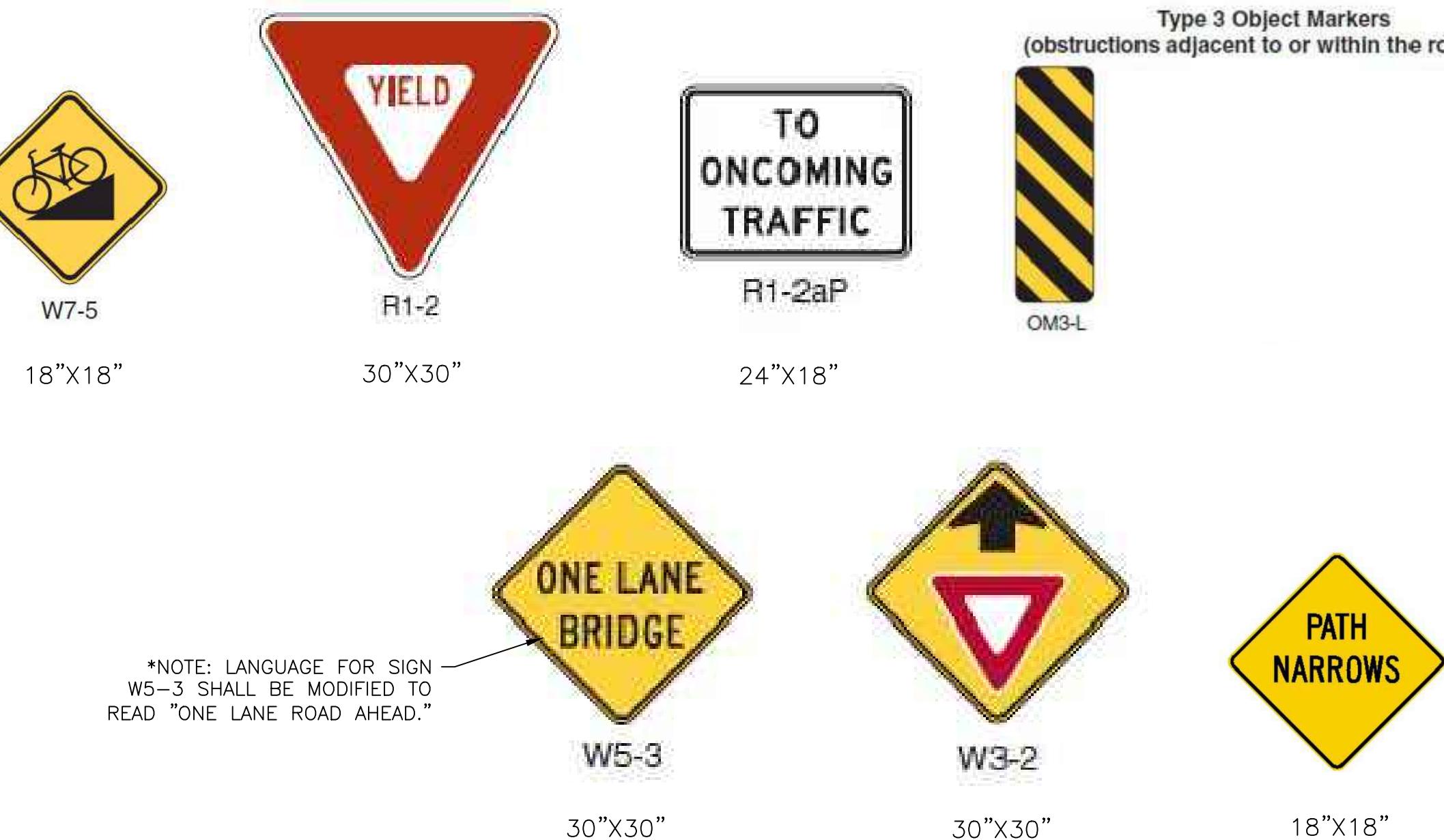
1. STONE BASE MUST BE PLACED IN LIFTS OF NO MORE THAN 4" EACH.  
2. A TACK COAT SHALL BE APPLIED BETWEEN ASPHALT PAVEMENT LAYERS.  
3. G.C. TO ENSURE A MINIMUM OF 95% COMPACTION OF THE SUBGRADE PRIOR TO STONE/





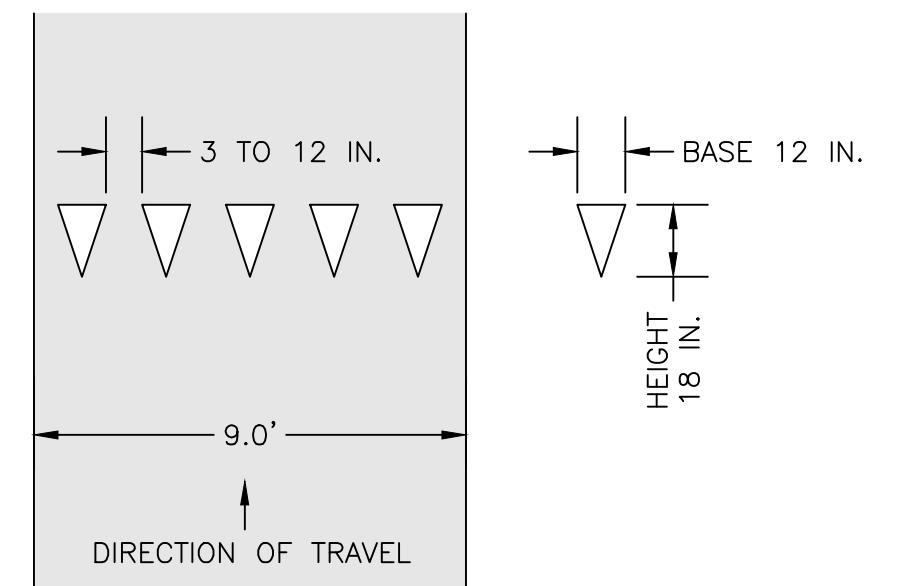
1. STONE BASE MUST BE PLACED IN LIFTS OF NO MORE THAN 4" EACH.  
2. G.C. TO ENSURE A MINIMUM OF 95% COMPACTION OF THE SUBGRADE PRIOR TO STONE/ASPHALT PLACEMENT.

## SIGN DETAILS



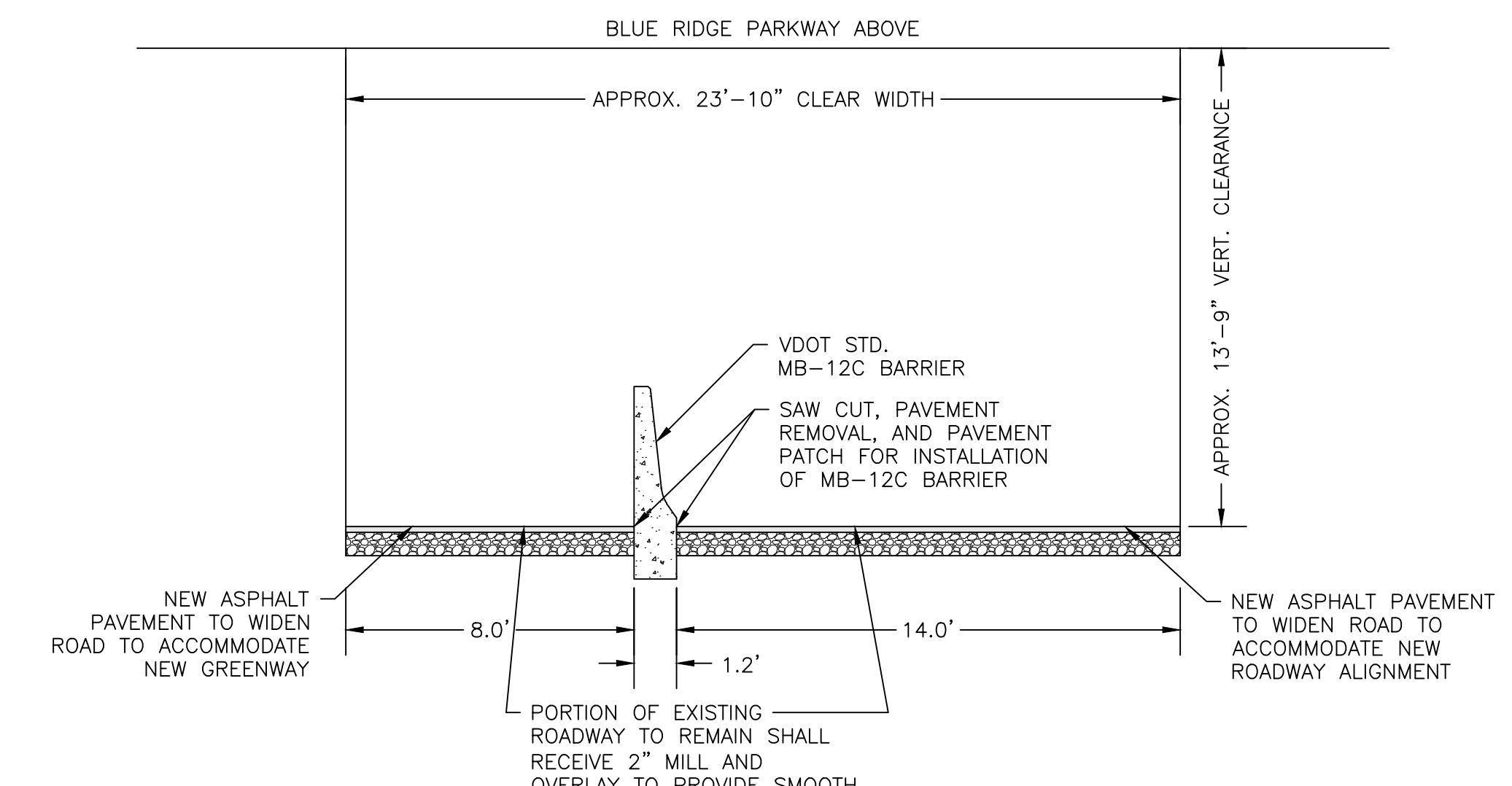
## SIGN NOTES

1. ALL SIGNS TO BE INSTALLED IN ACCORDANCE WITH VDOT AND MUTCD STANDARDS.
2. SIGNS LOCATED ON OUTSIDE OF SHARED USE PATH SHALL ENSURE MINIMUM 2' LATERAL CLEARANCE TO EDGE OF SIGN. MOUNTING HEIGHT SHALL BE 5' TO BOTTOM EDGE OF SIGN.
3. SIGNS LOCATED BETWEEN ROADWAY AND SHARED USE PATH SHALL BE CENTERED IN THE BUFFER STRIP. MOUNTING HEIGHT SHALL BE 7' TO BOTTOM EDGE OF SIGN.

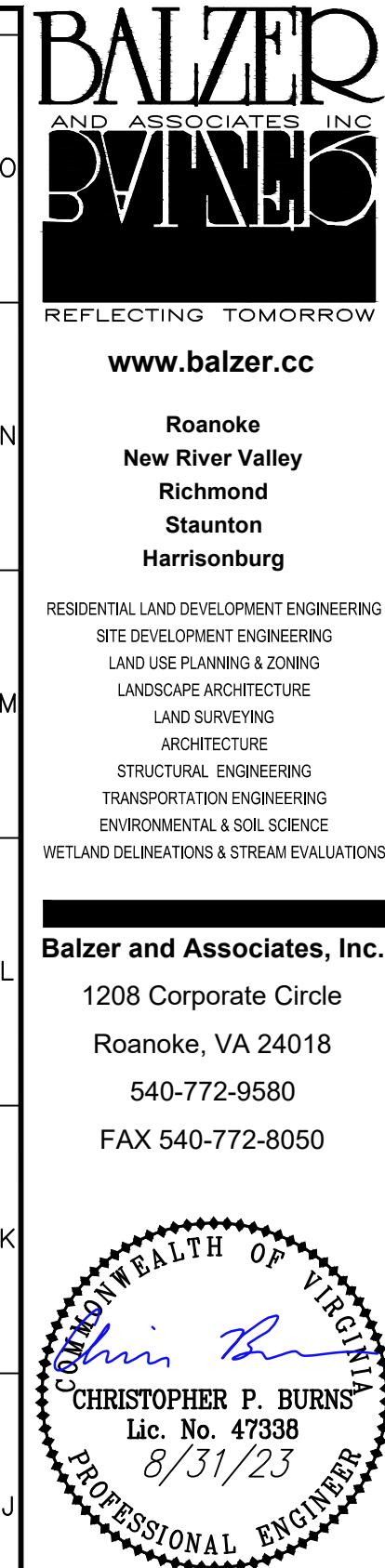


## YIELD BAR DETAIL

N.T.S.



EAST ROANOKE RIVER  
GREENWAY CONNECTOR  
SITE DETAILS  
VINTON DISTRICT  
ROANOKE COUNTY, VIRGINIA



REVISIONS:  
3/19/2020  
6/10/2020  
7/27/2021  
12/21/2022  
3/20/2023  
8/4/2023  
8/31/2023

SHEET NO.

C9

JOB NO. 04170071.00

**UPC 113356 - RETAINING WALL****SCALE: 1"=10'**

30.70	11082504.40
31.25	11082530.66
34.62	11082515.91
36.36	11082503.24
39.46	11082515.88
45.80	11082540.49

EX TO REMAIN  
URBED BELOW  
RIPRAP DITCH

PROP. SEGMENTAL BLOCK  
RETAINING WALL  
DESIGN BY CONTRACTOR'S  
DESIGN PROFESSIONAL

TW1023  
BW1020

END OF WALL  
STA. 4+10  
29.4' OFFSET LT.  
TW1023.5  
BW1023

PC: 4+11.54

END OF WALL  
STA. 4+72  
42.1' OFFSET LT.  
TW1022  
BW1021.5

1620

1620

## BID BOND (PENAL SUM FORM)

<b>Bidder</b> Name: Address ( <i>principal place of business</i> ):	<b>Surety</b> Name: Address ( <i>principal place of business</i> ):
<b>Owner</b> Name: Address ( <i>principal place of business</i> ):	<b>Bid</b> Project ( <i>name and location</i> ): <b>East Roanoke River Greenway Extension (UPC 110155) &amp; East Roanoke River Greenway Connector (UPC 113356)</b> Bid Due Date:
<b>Bond</b> Penal Sum: Date of Bond:	
Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth in this Bid Bond, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.	
<b>Bidder</b>  <hr/> <i>(Full formal name of Bidder)</i>	<b>Surety</b>  <hr/> <i>(Full formal name of Surety) (corporate seal)</i>
By: _____  <hr/> <i>(Signature)</i>	By: _____  <hr/> <i>(Signature) (Attach Power of Attorney)</i>
Name: _____  <hr/> <i>(Printed or typed)</i>	Name: _____  <hr/> <i>(Printed or typed)</i>
Title: _____	Title: _____
Attest: _____  <hr/> <i>(Signature)</i>	Attest: _____  <hr/> <i>(Signature)</i>
Name: _____  <hr/> <i>(Printed or typed)</i>	Name: _____  <hr/> <i>(Printed or typed)</i>
Title: _____	Title: _____
Notes: (1) Note: Addresses are to be used for giving any required notice. (2) Provide execution by any additional parties, such as joint venturers, if necessary.	

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond will be Owner's sole and exclusive remedy upon default of Bidder.
2. Default of Bidder occurs upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.
3. This obligation will be null and void if:
  - 3.1. Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or
  - 3.2. All Bids are rejected by Owner, or
  - 3.3. Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).
4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions does not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.
6. No suit or action will be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety, and in no case later than one year after the Bid due date.
7. Any suit or action under this Bond will be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notices required hereunder must be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Postal Service registered or certified mail, return receipt requested, postage pre-paid, and will be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond will be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute governs and the remainder of this Bond that is not in conflict therewith continues in full force and effect.
11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

Construction Quality Assurance Plan (CQAP) for

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**Roanoke County, VA**

August 18, 2022

**LAP Construction Quality Assurance Plan (CQAP)**

**EAST ROANOKE RIVER GREENWAY EXTENSION**

**UPC 110155**

**VDOT Project #FL16-080-000**

**Federal Project #FLAP-5128(490)**

**AND**

**EAST ROANOKE RIVER GREENWAY CONNECTOR**

**UPC 113356**

**VDOT Project #EN18-080-932**

**Federal Project #TAP-5128(489)**

**Roanoke County, VA**

**Project Description**

Project includes the following Work:

**ERRG Extension (UPC 110155)**

Base Bid: Construction of approximately 1.4 miles of shared use path, the construction of a parking area with access to Highland Road, storm sewer improvements, stormwater management facilities, retaining wall, signage, and associated appurtenances.

Bid Additive #1: Construction of approximately 0.25 miles of additional shared use path, storm sewer, signage, and associated appurtenances.

Bid Additive #2: Construction of approximately 0.25 miles of additional shared use path, storm sewer, signage, and associated appurtenances.

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**ERRG Connector (UPC 113356)**

Construction of approximately 0.3 miles of shared use path, to connect the East Roanoke River Greenway project (currently under construction) to the proposed East Roanoke River Greenway Extension project (UPC 110155), including improvements to the existing Blue Ridge Parkway tunnel, storm sewer improvements, retaining wall, signage, and other improvements.

I. Date of Original CQAP Submittal: Draft attached to Addendum #1

II. CQAP Revision Date (if applicable):

III. Locality Name and Physical Address:

Roanoke County  
5204 Bernard Drive  
P.O. Box 29800  
Roanoke, VA 24018  
Attn. David M. Henderson, PE

IV. Roanoke County Project Management Team:

David M. Henderson, PE

Responsible Charge Person:

Printed Name: David M Henderson, PE

Signature of Responsible Charge Person: \_\_\_\_\_

Contact Information: [DHENDERSON@roanokecountyyva.gov](mailto:DHENDERSON@roanokecountyyva.gov)

Phone number: 540-772-2083

Engineer of Record (EOR):

Printed Name: Chris Burn, PE, Balzer and Associates

Signature of EOR: \_\_\_\_\_

Contact Information: [cburns@balzer.cc](mailto:cburns@balzer.cc)

Phone number: 540-293-8073

Construction Quality Assurance Plan (CQAP) for  
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CEI Project Manager/Contact for CQAP:

Printed Name of PM/CQAP Contact Person: Mark Betterton

Signature of Contact Person: \_\_\_\_\_

Contact Information: [mbetterton@mbpce.com](mailto:mbetterton@mbpce.com)

Phone number: 540-420-6176

QA Testing & Laboratory:

ECS

**In-Plan Utility Owner(s) –**

**V. Contractor's name and address:**

TBD

**Project Manager (PM):**

TBD

**Superintendent:**

TBD

**QC Testing & Laboratory:**

TBD

**VI. Organizational Chart:**

a. See Appendix A

Construction Quality Assurance Plan (CQAP) for  
**Eastern Roanoke River Greenway Extension and Connector Project**  
**Roanoke County, VA**

August 18, 2022

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Construction Quality Assurance Plan (CQAP) for

**Eastern Roanoke River Greenway Extension and Connector Project**  
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## **Construction Quality Assurance Plan (CQAP) Narrative**

### **I. Mission Statement**

This Construction Quality Assurance Plan (CQAP) identifies the guidelines under which the QC/QA staff(s) will perform their respective roles and responsibilities.

The contractor's QC staff will consist of VDOT certified technicians employed by **XXXX**. Technicians from **XXXXX** will be performing both onsite and laboratory QC materials testing in accordance with the guidelines set forth in Chapter 13 of the LAP Manual.

The QA staff will consist of VDOT certified personnel from MBP/ECS. MBP/ECS will perform QA materials testing as required by the County, and in compliance with the current VDOT LAP Manual, Chapter 13 (Ref. Appendix C), to ensure Contractor QC tests are performed in compliance with the applicable test methods and specifications and are representative of the quality of the on-site product.

Independent Assurance (IA) and Verification Sampling and Testing (VST) will be performed as required for a state funded, state-maintained projects. IA inspections/testing shall be performed by either MBP or ECS and the technician and equipment shall be independent of the QA Testing personnel and equipment.

All materials shall be approved, sampled, and/or tested in conformance with contract specifications and the current version of the VDOT Locally Administered Projects Manual (LAP MANUAL).

The contractor will ultimately be responsible for the quality of the construction, *including the performance of QC testing as required in Chapter 13 of VDOT's current LAP Manual (see Appendix C)*. MBP will serve as the County's on-site representative and assist in managing the Construction Quality program, including the performance

Construction Quality Assurance Plan (CQAP) for

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of QA Testing. MBP will provide on-site Quality Assurance (QA) inspection services (CEI) to assess the effectiveness of the construction processes, means and methods relative to the contract terms and conditions, approved for construction plans, and applicable County and State standards and specifications. The QC and QA testing firms/agencies will perform testing in accordance with this Construction QA Plan which is based on VDOT's Local Assistance Program (LAP) Manual Chapter 13 Guidelines and provide feedback to the Project Manager (PM) and/or their on-site representative. MBP will assure that all necessary QA/QC inspections and testing of materials and in-place construction has been performed and adheres to the contract, and that all associated documentation is in hand and acceptable before any payment is recommended for approval.

Any deviation from this CQAP shall not occur without a revised submittal of this CQAP to the both the County Engineer and the Salem VDOT District LAP Project Coordinator (or designee) for his or her review and approval.

**II. Personnel Certification and Licenses**

Copies of Personnel Certifications and Licenses as required by the Contract and/or VDOT LAP Manual are available upon request and are kept on file readily available for review. All personnel performing materials testing shall have the necessary certifications and experience/expertise required by the contract documents and the most current version of the VDOT LAP MANUAL. No work shall be performed otherwise.

The MBP QA Staff will provide inspection and testing to assess construction processes relative to the applicable standards and specifications. The MBP QA staff will provide daily reports of contractor's activities, inspection findings, and all other pertinent information. The MBP QA staff will also review all pay applications provided by the contractor prior to payment and make recommendation to the County Engineer regarding payment.

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The QC staff will be responsible for performing and reporting of all QC sampling, testing, visual inspections, certifications, and daily reports directly to the MBP QA Inspector.

The Engineer of Record's (EOR's) role is as defined in the scope of work of the Construction Administration Contract. Generally, the EOR will be consulted for all design related changes, questions, or RFIs applicable to the plans and the contract documents. They may also be consulted for Shop Drawing submittals as applicable.

The Responsible Charge/Owner's Representative for this project is Chris Burns, PE (Balzer and Associates). Generally, the Responsible Charge individual will represent the Owner and approve work performed and recommend approval of changes to the contract. Payment applications will be approved by the Owner. The Contractor, EOR, Responsible Charge, and the QA Inspector will perform services for the Owner as defined in their respective agreements.

The Contractor's role is as defined in the contract with the County. Generally, as related to this plan, the contractor is responsible for all construction means and methods to ensure a quality finished product is achieved on time and within budget as practicable. He is also responsible for carrying out the project QC requirements as described herein, and in accordance the contract terms and conditions and with Chapter 13 of the most current version of the VDOT LAP Manual. With respect to this project, the respective VDOT LAP requirements that apply to *locally and state funded projects that are locally maintained*.

**III. Independent Assurance (IA)**

IA materials testing is required for this project in accordance with the chapter 13 of the LAP Manual. MBP will handle the coordination of this aspect of the CQAP.

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**IV. Communication Channels**

Once construction starts, MBP will coordinate, as appropriate, with the Contractor regarding the inspection and testing frequencies outlined and/or referenced in the CQAP, ensuring that adequate inspection and testing resources are available to meet the scheduled construction activities. During the prosecution of LAP related construction activities, the MBP QA Inspector, **TBD**, will communicate daily with the Contractor and as needed with QC team to ensure adequate testing services are available. The QA Inspector's primary point of contact on site will be the Superintendent from **Contractor**, MBP's PM, Mark Betterton, will review/audit the project and project documentation routinely (no less than monthly) to assure the CQAP is being followed and required documentation is accurate and complete. Results of QA/QC laboratory testing may be submitted at a later date in conjunction with internal QA/QC reviews. Any unacceptable work identified by the QA/QC staff will be documented, brought to the contractor's attention, and in concert with the contractor's plan for corrective action, scheduled for correction, to include additional inspection and testing requirements as appropriate and/or necessary. In conjunction with the contractor's two-week look-ahead schedule, MBP will verify that upcoming work activities are inspected and tested in accordance with the approved CQAP.

Communications will be handled by the QA Staff via the following meetings:

1. **Preparatory Inspection Meetings (PIMs):** Inspection preparatory meetings will be held in advance of specific work activities such as: Earthwork, Subgrade preparation, Stone Placement, Concrete Placement, Asphalt Placement, Pavement Markings, and any other activities identified as needing preparatory meetings. Appropriate Contractor representatives (to include Prime and Subs as applicable), County, Designer, QC, and QA staff will be invited to attend these meetings. The meetings will serve to verify the process for submitting and approving documents, materials, and permits specific to the upcoming work packages. The QA and QC inspection and testing requirements, as detailed in the approved CQAP, will be reviewed, and scheduled. Materials sampling and testing by the respective QC

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personnel will also be scheduled. This meeting will be scheduled by the QA staff in conjunction with the project schedule.

2. **Monthly Progress Meetings:** The Responsible Charge Representative and/or the CEI PM will lead the monthly progress meeting, to include the County's Design Engineer (Balzer), QC, QA, and the Prime Contractor's staff. VDOT may attend at their discretion.

At a minimum, the Contractor will provide two-week look ahead schedules as well as daily coordination with the MBP QA Inspector for advanced notice of inspection/testing. The MBP QA Inspector will oversee QC materials testing and provide QA inspection and testing as required.

**V. Submittal Procedures**

The QA CEI Project Manager, Mark Betterton, will be responsible for initially reviewing, recommending for approval, and tracking all submittals regarding compliance with the contract requirements, to the best of his knowledge. The County's Responsible Charge person is the ultimate approving authority on all submittals unless it is determined they require the Engineer of Record's (EOR's) review and approval. Once received from the Contractor, the QA Project Manager is responsible for timeliness and delivery of submittals to the appropriate authority for approval as necessary and will work directly with the QA Inspector to maintain a log of all submittals.

**VI. Resolution Procedure**

In the event of inconsistencies or ambiguities, the most stringent requirement will be considered the controlling requirement. In the event of unclear contract specifications, published guidelines, or disputes related to substandard materials, the dispute will be resolved in the following manner: The Contractor shall immediately report to the Responsible Charge individual, in writing, all discrepancies found between the Contract Documents and site conditions and/or any

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inconsistencies or ambiguities in the Contract Documents. The Responsible Charge shall promptly either correct such discrepancies, inconsistencies, or ambiguities in writing, or respond promptly detailing the course of action that will be implemented to bring the matter to resolution. Work performed by the Contractor after discovery of such discrepancies, inconsistencies, or ambiguities, but before the Responsible Charge has provided a written response, shall be performed at the Contractor's risk.

**VII. Progress Reports**

Progress reports will be provided by MBP to Roanoke County on a monthly basis or as requested by the Responsible Charge.

**VIII. Materials Acceptance Records and Test Data**

Materials Acceptance Records and Test Data shall be maintained by the MBP QA inspector during the construction of the project and are to be always readily available for inspection by the Salem VDOT district's LAP Engineer, or designee. These records shall be kept by the County for a minimum of 5 years after project completion.

This section describes the responsibilities and requirements for the identification, preparation, and maintenance of records that furnish objective documented evidence of quality. The term "records," used throughout this section, refers to QC and QA records attesting to the achievement of the quality and technical requirements of the work generated during the various phases of project construction activities of the contractor and its subcontractors and suppliers. Quality records shall be available for review by the Owner and VDOT.

*General*

A quality record is defined as a completed document that furnishes objective evidence attesting to the quality of items and/or activities. Quality records shall be legible, identifiable, and retrievable. These records shall be protected against

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damage, deterioration, or loss. Requirements and responsibilities for record transmittal, distribution, retention, maintenance, disposition, and department or organization responsibilities shall be in accordance with the contract documents and the appropriate rules and regulations contained therein, and the VDOT Construction Manual, where applicable.

Each of the QC/ QA inspectors and/or technicians shall summarize their daily inspections, tests, and material sampling activities in a daily report. The report will include a summary of the Contractor's daily construction activities. Supporting inspection data sheets will be attached to the daily report where needed. Copies of the inspector's records shall be provided to VDOT upon request. All reports will be completed and incorporated in the project records within 24 hours.

At a minimum, the construction QA Inspection report will include the following information:

- Work performed by the firm, subcontractor, or material supplier, identified by Work Package notation
- Weather conditions
- Inspections performed and their results
- Communications
- Type, location, and results of all tests performed
- Delays encountered
- Safety related problems and corrective action taken
- Non-conforming work and the corrective action taken
- Reports on any meetings held and their results
- Record of visitors to site
- Signature of inspector

MBP will be responsible for the creation and/or management of the following additional reports and logs:

- Project Daily Work Reports

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- Test Reports (provided by Contractor QC & MBP/ECS QA inspector/technicians)
- Nonconformance Log
- Punch List
- Preparatory Inspection Meeting Minutes
- Progress Meeting Minutes

MBP will use the VDOT C-107 form to document erosion and sediment inspections.

The QA inspectors will refer to the following documents during inspection and testing:

- Most Current Version of the VDOT LAP Manual
- East Roanoke River Extension and Connector Project Manual
- Most Current Version of Roanoke County Specifications
- Roanoke County Approved for Construction Plans
- VDOT Construction Resource Guidebook
- VDOT Construction Quality Improvement Program Checklists
- VDOT Construction Manual (2005 with 2008 amendments)
- VDOT Post Construction Manual (May 2011)
- VDOT Road and Bridge Standards, Vol. 1, and Vol. 2 (2016 and
- VDOT Road and Bridge Specifications (2020)
- VDOT Survey Manual
- VDOT Manual of Instruction for Material Division
- VDOT Virginia Work Area Protection Manual (2011 Revision 2)

*Control of Quality Records*

MBP's Construction Manager verifies QA record accuracy and maintains copies of all quality-related documentation. These records will be stored in files maintained in the project document control files in the MBP Roanoke office. All original documents pertaining to project information will be maintained in the project file in the MBP Roanoke office. A complete set of project records (paper copies and electronic copies) will be provided to the Owner at the completion of the project. These records will be made available to VDOT upon request.

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**IX. Materials Testing Methods and Frequencies**

Field and/or laboratory sampling will be performed for each material type to ensure compliance with all applicable specifications. Work will be sampled so that it meets the current County Specifications, VDOT Road and Bridge Specifications, and be carried out in compliance with the most current VDOT LAP Manual (Chapter 13) requirements. In addition, any material that appears defective or inconsistent with similar material being produced will be sampled, unless such material is voluntarily removed and replaced or corrected. Samples will be taken in accordance with American Association of Highway and Transportation Officials (AASHTO) procedures or other acceptable procedures by personnel approved by VDOT.

To the extent practicable Contractor QC testing will be performed in the presence of the MBP QA Inspector. Field and laboratory testing will be performed for each material type that meets the frequencies outlined in the LAP Manual. Copies of all test results will be furnished to the QA Inspector as soon as possible after the test has been performed, recorded, and the results checked to ensure compliance with the appropriate testing guidelines. The requirements for furnishing test results do not include sample aging or curing time; therefore, reporting times will be extended accordingly. If necessary, proposals will be submitted in writing for approval to use alternate AASHTO or state-approved test methods.

Specific testing quantities and/or frequencies will be established by the QC/QA team in conjunction with the contractor's two-week look ahead schedule and before initiation of corresponding construction activities. At a minimum, the project schedule will be evaluated in 30-day increments to establish more finite testing quantities applicable within that period, with two-week look ahead's preferred. This will be discussed at inspection preparatory meetings specific to planned work activities and their corresponding testing and inspection requirements.

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Laboratory materials sampling and testing to be performed by QA/QC will be performed by a laboratory that is either:

- A. Accredited in the applicable AASHTO procedures by the AASHTO Accreditation Program, or
- B. Complies with the requirements of AASHTO R18 (18th edition) for those tests to be performed and compliance with R18 for those tests not covered by ASSHTO Material Reference Laboratory, or
- C. A laboratory approved by VDOT's Materials Division or other accreditation program meeting the requirements of R18.

All materials testing laboratories shall meet the requirements as outlined in the LAP MANUAL, Chapter 13.2 for "Qualified Laboratories". No work shall be authorized otherwise.

**X. Right to Inspect**

The "right to inspect" by the VDOT LAP Engineer or designee is agreed upon for any and all project items and recognized by submittal of this CQAP.

VDOT has the right to inspect the work, in accordance with the LAP Manual, as noted herein.

**Potential HOLD POINTS:**

- **Subgrade Approval:** Requires written approval of the QA Inspector prior to the placement of the aggregate base layer.
- **Aggregate Base Approval:** Requires written approval by the QA Inspector prior to the placement of asphalt concrete pavement layer(s).
- **Erosion & Sediment Controls and Stormwater Pollution Prevention:** Requires written approval by the QA Inspector and the Roanoke County E&S Inspector prior to installation and/or modification.

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- **Permanent Pavement Markings and Markers:** Requires written approval by the QA Inspector prior to installation, following the placement of the asphalt concrete pavement surface layer.

**XI. Non-compliance**

Non-compliance to this CQAP shall be promptly reported through the established communications process outlined in this CQAP.

Throughout the course of a project, items may be identified that do not meet specifications. Most of these items are identified as they happen and consequently, are corrected immediately. There are two classifications of non-compliant work:

1. **Level 1:** Deficient work identified and corrected on the same day. The Inspector points out the deficiency to the Superintendent, who corrects it immediately. This issue is noted in the DWR by the Inspector. The Inspector notes what he found and what the Contractor did to correct the issue. The issue is closed.
2. **Level 2:** Deficient work identified and corrected at a later date. These are items that an inspector identifies in the field, notifies the Superintendent, the Superintendent agrees to fix the item, and the inspector notes in his DWR what the issue is, the corrective action agreed to, and the date it will be completed. The issue is then recorded in the project Issue Log so it can be tracked to ensure it is resolved. The Issue Log is reviewed by the QA team on a weekly basis to ensure that all items are corrected. The QA team performs re-inspection of the item prior to removing it from the Issue Log. All issues must be corrected before the Contractor receives 100% payment for that item.

In the event of disputes, or noncompliant work that is not resolved by the contractor refer to Part V of this CQAP, and the applicable contract documents.

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**XII. Appendices**

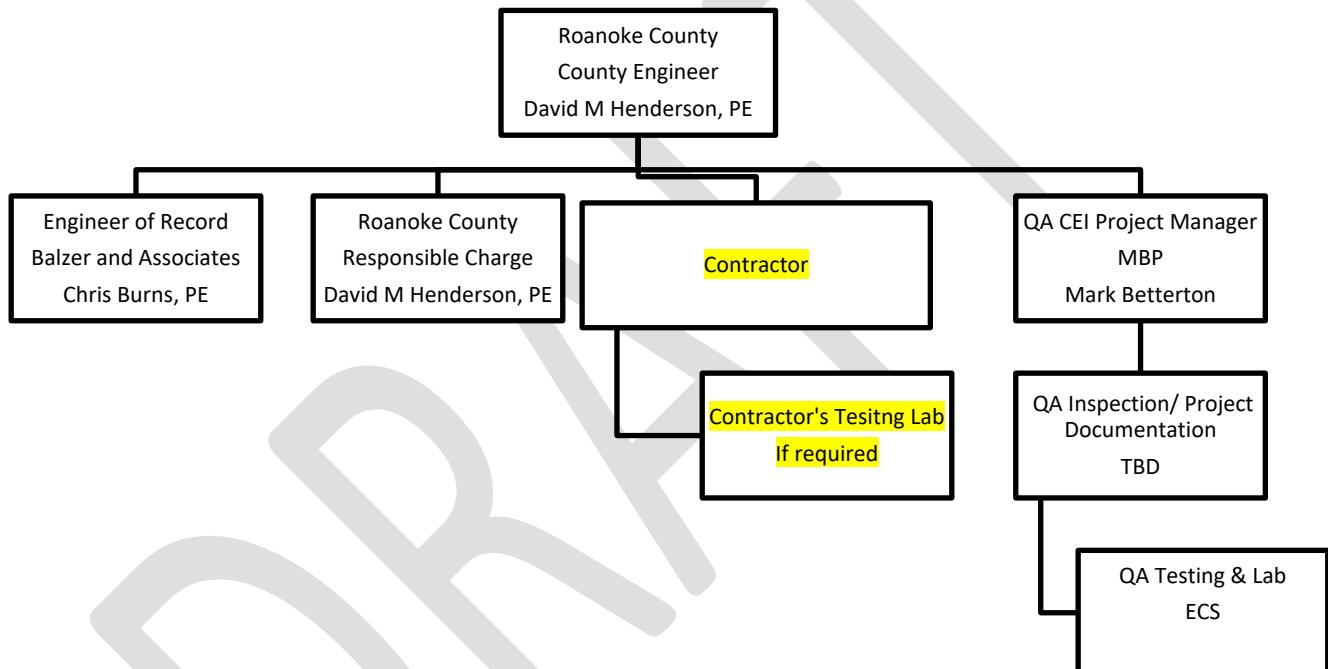
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**Appendix A – Organizational Chart**



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**Appendix B - Staff Qualifications Matrix**

Inspector Name	Firm	Experience	Asphalt Concrete Field	ACI Concrete	Soils & Aggregate	Hazmat	Pavement Marking	GRIT	OSHA 30-- HR	DEQ Dual Inspector	Flagger	Work Zone Training (Intermediate)
QA CEI Project Manager <b>Mark Betterton</b>	MBP	11 yrs.										
QA Inspector	MBP	.										
QC Manager												
QC Inspector(s)												