



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER
DEFK9025

PAGE
1

ADDRESS CORRESPONDENCE TO ATTENTION OF
JOHN ABBOTT
304-558-2544

RFQ COPY
 TYPE NAME/ADDRESS HERE

VENDOR

SHIP TO

DIV ENGINEERING & FACILITIES
JOBSITE
SEE SPECIFICATIONS

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
04/02/2009				

BID OPENING DATE: **05/14/2009** BID OPENING TIME **01:30PM**

LINE	QUANTITY	UOP	CAT NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	LS		988-14		
EROSION CONTROL SERVICES CONTRACT TO PROVIDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO REPAIR THE STORM WATER AND SLOPE EROSION AT THE GALLAGHER TUNNEL (OLD I77 TUNNEL) FOR THE WV ARMY NATIONAL GUARD, PER THE SPECIFICATIONS. MANDATORY ON-SITE PRE-BID: 4/28/2009; 1:30 PM GALLAGHER TUNNEL, I77 SOUTH EXIT 74, PAINT CREEK, CTY. HWY. 83 (MEMORIAL TUNNEL CENTER FOR NATIONAL RESPONSE TRAINING CENTER) PLANS AND SPECIFICATIONS: CONTACT POTESTA & ASSOC. 304-342-1400 A&E PROJECT#: 0101-08-0283 EXHIBIT 5 WEST VIRGINIA CODE 21-1D-5 PROVIDES THAT: ANY SOLICITATION FOR A PUBLIC IMPROVEMENT CONSTRUCTION CONTRACT REQUIRES EACH VENDOR THAT SUBMITS A BID FOR THE WORK TO SUBMIT AT THE SAME TIME AN AFFIDAVIT OF COMPLIANCE WITH THE BID. THE ENCLOSED DRUG-FREE WORKPLACE AFFIDAVIT MUST BE SIGNED AND SUBMITTED WITH THE BID AS EVIDENCE OF THE VENDOR'S COMPLIANCE WITH THE PROVISIONS OF ARTICLE 1D, CHAPTER 21 OF THE WEST VIRGINIA CODE. FAILURE TO SUBMIT THE SIGNED DRUG-FREE WORKPLACE AFFIDAVIT WITH THE BID SHALL RESULT IN DISQUALIFICATION OF SUCH BID.						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

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GENERAL TERMS & CONDITIONS REQUEST FOR QUOTATION (RFQ) AND REQUEST FOR PROPOSAL (RFP)

1. Awards will be made in the best interest of the State of West Virginia.
2. The State may accept or reject in part, or in whole, any bid.
3. All quotations are governed by the **West Virginia Code** and the **Legislative Rules** of the Purchasing Division.
4. Prior to any award, the apparent successful vendor must be properly registered with the Purchasing Division and have paid the required \$125 fee.
5. All services performed or goods delivered under State Purchase Order/Contracts are to be continued for the term of the Purchase Order/Contracts, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise available for these services or goods, this Purchase Order/Contract becomes void and of no effect after June 30.
6. Payment may only be made after the delivery and acceptance of goods or services.
7. Interest may be paid for late payment in accordance with the **West Virginia Code**.
8. Vendor preference will be granted upon written request in accordance with the **West Virginia Code**.
9. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.
10. The Director of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller.
11. The laws of the State of West Virginia and the **Legislative Rules** of the Purchasing Division shall govern all rights and duties under the Contract, including without limitation the validity of this Purchase Order/Contract.
12. Any reference to automatic renewal is hereby deleted. The Contract may be renewed only upon mutual written agreement of the parties.
13. **BANKRUPTCY:** In the event the vendor/contractor files for bankruptcy protection, this Contract may be deemed null and void, and terminated without further order.
14. **HIPAA BUSINESS ASSOCIATE ADDENDUM:** The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, and available online at the Purchasing Division's web site (<http://www.state.wv.us/admin/purchase/vrc/hipaa.htm>) is hereby made part of the agreement. Provided that, the Agency meets the definition of a Cover Entity (45 CFR §160.103) and will be disclosing Protected Health Information (45 CFR §160.103) to the vendor.
15. **WEST VIRGINIA ALCOHOL & DRUG-FREE WORKPLACE ACT:** If this Contract constitutes a public improvement construction contract as set forth in Article 1D, Chapter 21 of the West Virginia Code ("The West Virginia Alcohol and Drug-Free Workplace Act"), then the following language shall hereby become part of this Contract: "The contractor and its subcontractors shall implement and maintain a written drug-free workplace policy in compliance with the West Virginia Alcohol and Drug-Free Workplace Act, as set forth in Article 1D, Chapter 21 of the West Virginia Code. The contractor and its subcontractors shall provide a sworn statement in writing, under the penalties of perjury, that they maintain a valid drug-free work place policy in compliance with the West Virginia and Drug-Free Workplace Act. It is understood and agreed that this Contract shall be cancelled by the awarding authority if the Contractor: 1) Fails to implement its drug-free workplace policy; 2) Fails to provide information regarding implementation of the contractor's drug-free workplace policy at the request of the public authority; or 3) Provides to the public authority false information regarding the contractor's drug-free workplace policy."

INSTRUCTIONS TO BIDDERS

1. Use the quotation forms provided by the Purchasing Division.
2. **SPECIFICATIONS:** Items offered must be in compliance with the specifications. Any deviation from the specifications must be clearly indicated by the bidder. Alternates offered by the bidder as **EQUAL** to the specifications must be clearly defined. A bidder offering an alternate should attach complete specifications and literature to the bid. The Purchasing Division may waive minor deviations to specifications.
3. Complete all sections of the quotation form.
4. Unit prices shall prevail in case of discrepancy.
5. All quotations are considered F.O.B. destination unless alternate shipping terms are clearly identified in the quotation.
6. **BID SUBMISSION:** All quotations must be delivered by the bidder to the office listed below prior to the date and time of the bid opening. Failure of the bidder to deliver the quotations on time will result in bid disqualifications: Department of Administration, Purchasing Division, 2019 Washington Street East, P.O. Box 50130, Charleston, WV 25305-0130



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<p>NOTICE TO PROCEED: THIS CONTRACT IS TO BE PERFORMED WITHIN XXXX CALENDAR DAYS AFTER THE NOTICE TO PROCEED IS RECEIVED. UNLESS OTHERWISE SPECIFIED, THE FULLY EXECUTED PURCHASE ORDER WILL BE CONSIDERED NOTICE TO PROCEED.</p> <p>CANCELLATION: THE DIRECTOR OF PURCHASING RESERVES THE RIGHT TO CANCEL THIS CONTRACT IMMEDIATELY UPON WRITTEN NOTICE TO THE VENDOR IF THE MATERIALS OR WORKMANSHIP SUPPLIED ARE OF AN INFERIOR QUALITY OR DO NOT CONFORM WITH THE SPECIFICATIONS OF THE BID AND CONTRACT HERE IN.</p> <p>WAGE RATES: THE CONTRACTOR OR SUBCONTRACTOR SHALL PAY THE HIGHER OF THE U.S. DEPARTMENT OF LABOR MINIMUM WAGE RATES AS ESTABLISHED FOR KANAWHA COUNTY, PURSUANT TO WEST VIRGINIA CODE 21-5A, ET, SEQ. (PREVAILING WAGE RATES APPLY TO THIS PROJECT)</p> <p>ARBITRATION: ANY REFERENCES MADE TO ARBITRATION OR INTEREST FOR PAYMENTS DUE (EXCEPT FOR ANY INTEREST REQUIRED BY STATE LAW) CONTAINED IN THIS CONTRACT OR IN ANY AMERICAN INSTITUTE OF ARCHITECTS DOCUMENTS PERTAINING TO THIS CONTRACT ARE HEREBY DELETED.</p> <p>WORKERS' COMPENSATION: VENDOR IS REQUIRED TO PROVIDE A CERTIFICATE FROM WORKERS' COMPENSATION IF SUCCESSFUL.</p> <p>ALL OF THE ITEMS CHECKED BELOW WILL BE A REQUIREMENT OF THIS CONTRACT:</p> <p>(XX) INSURANCE: SUCCESSFUL VENDOR SHALL FURNISH PROOF OF COMMERCIAL GENERAL LIABILITY INSURANCE PRIOR TO ISSUANCE OF CONTRACT. UNLESS OTHERWISE SPECIFIED IN THE BID DOCUMENTS, THE MINIMUM AMOUNT OF INSURANCE</p>						

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<p>COVERAGE REQUIRED IS \$250,000.</p> <p>() BUILDERS RISK INSURANCE: SUCCESSFUL VENDOR SHALL FURNISH PROOF OF BUILDERS RISK - ALL RISK INSURANCE IN AN AMOUNT EQUAL TO 100% OF THE AMOUNT OF THE CONTRACT.</p> <p>(XX) BONDS: FIVE PERCENT (5%) OF THE TOTAL AMOUNT OF THE BID PAYABLE TO THE STATE OF WEST VIRGINIA, SHALL BE SUBMITTED WITH EACH BID AS A BID BOND. THE SUCCESSFUL BIDDER SHALL ALSO FURNISH A PERFORMANCE BOND AND LABOR/MATERIAL BOND FOR 100% OF THE AMOUNT OF THE CONTRACT. BONDS MAY BE PROVIDED IN THE FORM OF A CERTIFIED CHECK IRREVOCABLE LETTER OF CREDIT, OR BOND FURNISHED BY A SOLVENT SURETY COMPANY AUTHORIZED TO DO BUSINESS IN THE STATE OF WEST VIRGINIA. A LETTER OF CREDIT SUBMITTED IN LIEU OF A BOND WILL ONLY BE ALLOWED FOR PROJECTS UNDER \$100,000. PERSONAL OR BUSINESS CHECKS ARE NOT ACCEPCTABLE IN LIEU OF THE 5% BID BOND, PERFORMANCE BOND, OR LABOR AND MATERIAL BOND.</p> <p>() MAINTENANCE BOND: A TWO (2) YEAR MAINTENANCE BOND COVERING THE ROOFING SYSTEM WILL BE A REQUIREMENT OF THE SUCCESSFUL VENDOR.</p> <p>REV. 11/00</p> <p>EXHIBIT 7</p> <p>DOMESTIC ALUMINUM, GLASS & STEEL IN PUBLIC WORKS PROJECTS</p> <p>IN ACCORDANCE WITH WEST VIRGINIA CODE 5-19-1 ET., SEQ., EVERY CONTRACT FOR CONSTRUCTION, RECONSTRUCTION, ALTERATION, REPAIR, IMPROVEMENT OR MAINTENANCE OF PUBLIC WORKS, WHERE THE COST IS MORE THAN \$50,000 AND,</p>						

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<p>IN THE CASE OF STEEL ONLY, WHERE THE COST OF STEEL IS MORE THAN \$50,000 OR WHERE MORE THAN 10,000 POUNDS OF STEEL ARE REQUIRED, THE STATE WILL ACCEPT ONLY ALUMINUM GLASS, OR STEEL PRODUCTS PRODUCED IN THE UNITED STATES. IN ADDITION, ITEMS OF MACHINERY OR EQUIPMENT PURCHASED FOR USE AT THE SITE OF PUBLIC WORKS SHALL BE MADE OF DOMESTIC ALUMINUM, GLASS OR STEEL, UNLESS THE COST OF THE PRODUCT IS LESS THAN \$50,000 OR LESS THAN 10,000 POUNDS OF STEEL ARE USED IN PUBLIC WORKS PROJECTS.</p> <p>FOREIGN MADE ALUMINUM, GLASS OR STEEL PRODUCTS MAY BE ACCEPTED ONLY IF THE COST OF DOMESTIC PRODUCTS IS FOUND TO BE UNREASONABLE. SUCH COST IS UNREASONABLE IF IT IS 20% OR MORE HIGHER THAN THE BID PRICE FOR FOREIGN MADE PRODUCTS. IF THE DOMESTIC ALUMINUM, GLASS OR STEEL PRODUCTS TO BE SUPPLIED OR PRODUCED IN A "SUBSTANTIAL LABOR SURPLUS AREA", AS DEFINED BY THE UNITED STATES DEPARTMENT OF LABOR, FOREIGN PRODUCTS MAY BE SUPPLIED ONLY IF DOMESTIC PRODUCTS ARE 30% OR MORE HIGHER IN PRICE THAN THE FOREIGN MADE PRODUCTS.</p> <p>IF, PRIOR TO THE AWARD OF A CONTRACT UNDER THE ABOVE PROVISIONS, THE SPENDING OFFICER OF THE SPENDING UNIT DETERMINES THAT THERE EXISTS A BID FOR LIKE FOREIGN ALUMINUM, GLASS OR STEEL THAT IS REASONABLE AND LOWER THAN THE LOWEST BID DOMESTIC PRODUCTS, THE SPENDING OFFICE MAY REQUEST, IN WRITING, A REEVALUATION AND REDUCTION IN THE LOWEST BID FOR SUCH DOMESTIC PRODUCTS. ALL VENDORS MUST INDICATE IN THEIR BID IF THEY ARE SUPPLYING FOREIGN ALUMINUM, GLASS OR STEEL.</p> <p>REV. 3/88</p> <p>EXHIBIT 9</p>						

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<p>NOTICE FOR ISSUANCE & ACKNOWLEDGEMENT OF CONSTRUCTION PROJECT ADDENDA</p> <p>THE ARCHITECT/ENGINEER AND/OR AGENCY SHALL BE REQUIRED TO ABIDE BY THE FOLLOWING SCHEDULE IN ISSUING CONSTRUCTION PROJECT ADDENDA FOR STATE AGENCIES:</p> <p>(1) THE ARCHITECT/ENGINEER SHALL PREPARE THE ADDENDUM AND A LIST OF ALL PARTIES THAT HAVE PROCURED DRAWINGS AND SPECIFICATIONS FOR THE PROJECT. THE ADDENDUM AND LIST SHALL BE FORWARDED TO THE BUYER IN THE STATE PURCHASING DIVISION. THE ARCHITECT/ENGINEER SHALL ALSO SEND A COPY OF THE ADDENDUM TO THE STATE AGENCY FOR WHICH THE CONTRACT IS ISSUED.</p> <p>(2) THE BUYER SHALL SEND THE ADDENDUM TO ALL INTERESTED PARTIES AND, IF NECESSARY, EXTEND THE BID OPENING DATE. ANY ADDENDUM SHOULD BE RECEIVED BY THE BUYER WITHIN FOURTEEN (14) DAYS PRIOR TO THE BID OPENING DATE.</p> <p>(3) ALL ADDENDA SHOULD BE FORMALLY ACKNOWLEDGED BY ALL BIDDERS AND SUBMITTED TO THE STATE PURCHASING DIVISION. THE SAME RULES AND REGULATIONS THAT APPLY TO THE ORIGINAL BIDDING DOCUMENT SHALL ALSO APPLY TO AN ADDENDUM DOCUMENT. THE ONLY EXCEPTION MAY BE FOR AN ADDENDUM THAT IS ISSUED FOR THE SOLE PURPOSE OF CHANGING A BID OPENING TIME AND/OR DATE.</p> <p>REV. 11/96</p> <p>EXHIBIT 10</p> <p>ADDENDUM ACKNOWLEDGEMENT</p>						

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PAGE
6

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<p>I HEREBY ACKNOWLEDGE RECEIPT OF THE FOLLOWING CHECKED ADDENDUM(S) AND HAVE MADE THE NECESSARY REVISIONS TO MY PROPOSAL, PLANS AND/OR SPECIFICATION, ETC.</p> <p>ADDENDUM NOS.:</p> <p>NO. 1</p> <p>NO. 2</p> <p>NO. 3</p> <p>NO. 4</p> <p>NO. 5</p> <p>I UNDERSTAND THAT FAILURE TO CONFIRM THE RECEIPT OF TH ADDENDUM(S) MAY BE CAUSE FOR REJECTION OF THE BIDS.</p> <p>VENDOR MUST CLEARLY UNDERSTAND THAT ANY VERBAL REPRESENTATION MADE OR ASSUMED TO BE MADE DURING ANY ORAL DISCUSSION HELD BETWEEN VENDOR'S REPRESENTATIVES AND ANY STATE PERSONNEL IS NOT BINDING. ONLY THE INFORMATION ISSUED IN WRITING AND ADDED TO THE SPECIFICATIONS BY AN OFFICIAL ADDENDUM IS BINDING.</p> <p>.....SIGNATURE</p> <p>.....COMPANY</p> <p>.....DATE</p> <p>REV. 11/96</p>						

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PAGE
7

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CONTRACTORS LICENSE						
<p>WEST VIRGINIA STATE CODE 21-11-2 REQUIRES THAT ALL PERSONS DESIRING TO PERFORM CONTRACTING WORK IN THIS STATE MUST BE LICENSED. THE WEST VIRGINIA CONTRACTORS LICENSING BOARD IS EMPOWERED TO ISSUE THE CONTRACTORS LICENSE. APPLICATIONS FOR A CONTRACTORS LICENSE MAY BE MADE BY CONTACTING THE WEST VIRGINIA DIVISION OF LABOR CAPITOL COMPLEX, BUILDING 3, ROOM 319, CHARLESTON, WV 25305. TELEPHONE: (304) 558-7890.</p> <p>WEST VIRGINIA STATE CODE 21-11-11 REQUIRES ANY PROSPECTIVE BIDDER TO INCLUDE THE CONTRACTORS LICENSE NUMBER ON THEIR BID.</p> <p>BIDDER TO COMPLETE:</p> <p>CONTRACTORS NAME:</p> <p>CONTRACTORS LICENSE NO.:</p> <p>THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FURNISH A COPY OF THEIR CONTRACTORS LICENSE PRIOR TO ISSUANCE OF A PURCHASE ORDER/CONTRACT</p> <p style="text-align: center;">APPLICABLE LAW</p> <p>THE WEST VIRGINIA STATE CODE, PURCHASING DIVISION RULES AND REGULATIONS, AND THE INFORMATION PROVIDED IN THE "REQUEST FOR QUOTATION" ISSUED BY THE PURCHASING DIVISION IS THE SOLE AUTHORITY GOVERNING THIS PROCUREMENT.</p> <p>ANY INFORMATION PROVIDED IN SPECIFICATION MANUALS, OR ANY OTHER SOURCE, VERBAL OR WRITTEN, WHICH CONTRADICTS</p>						

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<p>OR ALTERS THE INFORMATION PROVIDED FROM THE SOURCES AS DESCRIBED IN THE ABOVE PARAGRAPH IS VOID AND OF NO EFFECT.</p> <p>BANKRUPTCY: IN THE EVENT THE VENDOR/CONTRACTOR FILES FOR BANKRUPTCY PROTECTION, THIS CONTRACT IS AUTOMATICALLY NULL AND VOID, AND IS TERMINATED WITHOUT FURTHER ORDER.</p> <p>REV. 1/2005</p> <p style="text-align: center;">NOTICE</p> <p>A SIGNED BID MUST BE SUBMITTED TO:</p> <p style="text-align: center;">DEPARTMENT OF ADMINISTRATION PURCHASING DIVISION BUILDING 15 2019 WASHINGTON STREET, EAST CHARLESTON, WV 25305-0130</p> <p>THE BID SHOULD CONTAIN THIS INFORMATION ON THE FACE OF THE ENVELOPE OR THE BID MAY NOT BE CONSIDERED:</p> <p>SEALED BID</p> <p>BUYER: JOHN ABBOTT-----</p> <p>REQ. NO.: DEFK9025-----</p> <p>BID OPENING DATE: 05/14/2009-----</p> <p>BID OPENING TIME: 1:30 PM-----</p>						

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PLEASE PROVIDE A FAX NUMBER IN CASE IT IS NECESSARY TO CONTACT YOU REGARDING YOUR BID: ----- PLEASE PRINT OR TYPE NAME OF PERSON TO CONTACT CONCERNING THIS QUOTE: ----- ***** THIS IS THE END OF RFQ DEFK9025 ***** TOTAL: _____						

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TECHNICAL SPECIFICATIONS

*The Center for National Response
Gallagher Tunnel (Old Turnpike/I77)
Storm Water and Slope Erosion Project
Kanawha County, West Virginia*

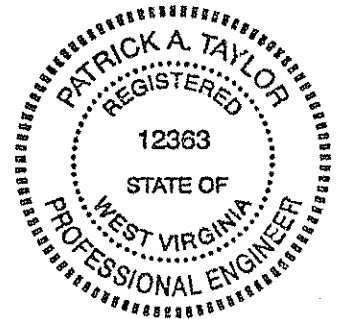
NO. DEFK9025

Prepared for:

West Virginia Army National Guard
Joint Forces Headquarters (WV-JFHQ)
Construction & Facilities Management Office (C&FMO)
1703 Coonskin Drive
Charleston, West Virginia 25311

Prepared by:

Potesta & Associates, Inc.
7012 MacCorkle Avenue, SE
Charleston, West Virginia 25304
Phone: (304) 342-1400 Fax: (304) 343-9031
Email: potesta@potesta.com



Project No. 0101-08-0283

April 1, 2009

POTESTA

TABLE OF CONTENTS

SPECIAL PROVISIONS	1
I.	LOCATION / SITE DESCRIPTION	1
II.	REFERENCE SPECIFICATIONS / DEFINITIONS	1
III.	SCOPE OF WORK.....	2
IV.	BIDDERS TO EXAMINE LOCATION.....	3
V.	SCHEDULE OF WORK	3
VI.	MEASUREMENT OF QUANTITIES	3
VII.	BORROW (DISPOSAL) AREAS	4
VIII.	DISPOSAL OF UNSUITABLE MATERIAL	5
IX.	INTERPRETATION OF APPROXIMATE ESTIMATE OF QUANTITIES	5
X.	SAFETY	5
XI.	REGULATIONS.....	5
XII.	LAWS TO BE OBSERVED.....	6
XIII.	PERMITS, LICENSES AND FEES	6
XIV.	ELECTRICITY, WATER SUPPLY AND SANITARY FACILITIES	6
XV.	UTILITIES AND OTHER OBSTRUCTIONS.....	6
XVI.	SITE CLEANUP	7
XVII.	ROCK BLASTING.....	7
XVIII.	TEMPORARY ACCESS ROADS	7
XIX.	SITE CONDITIONS AND ENVIRONMENTAL PROTECTION	7

XX. CONTROL AND REVIEW OF WORK BY THE WVANG..... 8

XXI. CITATION OF OTHER SPECIFICATIONS 8

TECHNICAL SPECIFICATIONS 10

1.0 MOBILIZATION AND DEMOBILIZATION 10

 1.1 Description..... 10

 1.2 Method of Measurement 10

 1.3 Basis of Payment..... 10

 1.4 Pay Item 11

2.0 UTILITIES 12

 2.1 Description..... 12

 2.2 Materials 12

 2.3 Construction Methods..... 12

 2.4 Method of Measurement 12

3.0 CONSTRUCTION LAYOUT STAKES 13

 3.1 Description..... 13

 3.2 Materials 13

 3.3 Construction Methods..... 13

 3.4 Measurement and Payment 14

 3.5 Pay Item 14

4.0 QUALITY CONTROL 15

 4.1 Description..... 15

 4.2 Materials 15

 4.3 Construction Methods..... 15

 4.4 Method of Measurement 16

 4.5 Basis of Payment..... 16

 4.6 Pay Item 16

5.0 SITE PREPARATION..... 17

 5.1 Description..... 17

 5.2 Construction Methods..... 18

 5.3 Method of Measurement 20

 5.4 Basis of Payment..... 20

 5.5 Pay Items..... 20

6.0 EROSION AND SEDIMENTATION CONTROL 21

 6.1 Scope..... 21

 6.2 Measurement..... 22

6.3	Payment.....	22
6.4	Pay Item	22
7.0	ROCKFALL MESH	23
7.1	Description.....	23
7.2	Materials	23
7.3	Construction Methods.....	23
7.4	Method of Measurement	24
7.5	Basis of Payment.....	24
7.6	Pay Item	24
8.0	DRAINAGE STRUCTURES	25
8.1	Description.....	25
8.2	Materials	25
8.3	Construction Methods.....	26
8.4	Method of Measurement	27
8.5	Pay Items.....	28
9.0	FILL MATERIAL.....	29
9.1	Description.....	29
9.2	Materials	29
9.3	Borrow/Disposal Area.....	29
9.4	Construction Methods.....	30
9.5	Method of Measurement	32
9.6	Basis of Payment.....	33
9.7	Pay Item	33
10.0	CHAIN-LINK FENCING	34
10.1	Description.....	34
10.2	Materials	34
10.3	Construction Methods.....	35
10.4	Method of Measurement	37
10.5	Basis of Payment.....	37
10.6	Pay Item	38
11.0	REVEGETATION	39
11.1	Description.....	39
11.2	Materials	39
11.3	Construction Methods.....	42
11.4	Method of Measurement	44
11.5	Basis of Payment.....	44
11.6	Pay Items	44

TECHNICAL SPECIFICATIONS

*The Center for National Response
Gallagher Tunnel (Old Turnpike/I77)
Storm Water and Slope Erosion Project
Kanawha County, West Virginia*

SPECIAL PROVISIONS

I. LOCATION / SITE DESCRIPTION

Description

This stormwater and slope erosion project consists of stabilizing a rock cut slope and constructing a parking area with appropriate drainage control at the center for National Response/Memorial Tunnel site.

Location

The project site is located at Standard off Exit 74 of the West Virginia Turnpike. To access the project site, turn left on Paint Creek Road (County Highway 83), go northwest approximately 1.5 miles, turn left onto Memorial Tunnel Place and continue approximately one mile to the Memorial Tunnel Center for National Response Training Center.

II. REFERENCE SPECIFICATIONS / DEFINITIONS

All references to "WVANG" in these Specifications shall mean West Army National Guard (WVANG), or WVANG's Engineer or authorized representative.

All reference to "ASTM" shall mean the American Society of Testing and Material Specifications, Latest Edition unless otherwise noted.

All reference to "AASHTO Specifications" shall mean the Standard Specifications for Transportation Materials and Methods of Sampling and Testing by the American Association of State Highway and Transportation Officials, latest edition, and all subsequent addenda thereto.

All reference to "WVDOT Standard Specifications" shall mean State of West Virginia Department of Transportation, Division of Highways Standard Specifications for Roads and Bridges, adopted 2000, and all-subsequent addenda thereto.

All references to the "Contractor" shall be understood to mean the successful bidder and or firm or corporation undertaking the execution of the work under the terms of these Specifications.

All reference to "OSHA" shall be understood to mean The Occupational Safety and Health Administration and the standards set in the Occupational Safety and Health Act of 1970.

III. SCOPE OF WORK

The work covered by the Special Provisions and Technical Specifications consists of furnishing all labor, plant, power, equipment and supplies, and performing all operations necessary for the completion of the project. The Contractor shall perform all operations necessary adjacent to Center For Nation Response Training Center including:

- ◆ Providing sediment control.
- ◆ Maintain and protect all utilities and existing drainage structures within the limits of work.
- ◆ Clearing and grubbing at the site, and removal or burning of debris, trash, tree roots, and associated materials.
- ◆ Removal and disposal of unstable rocks from cut slope.
- ◆ Construction and installation of support areas, and maintenance of access roads to the site to install rockfall mesh.
- ◆ Installation of fencing adjacent to highwall on roadway to Memorial Tunnel.
- ◆ Construction and installation of drainage control items including:
 - 42-inch Reinforced Concrete Pipe (RCP) culvert, stormwater manhole, and headwalls.
 - 24-inch RCP to connect existing 24-inch CMP culvert that extends out from the WV Turnpike Embankment.
 - Riprap ditches to handle drainage between fill area and WV Turnpike Embankment and to convey drainage adjacent to proposed parking lot access road to existing drop inlet (di.).

- ◆ Construction of parking area including installation of fill material and gravel.
- ◆ Revegetation of disturbed areas.

The Contractor also shall be responsible for surveying, including establishing construction baselines, measuring and developing all completed quantities on the job, and for ordering, purchase and delivery of any and all materials required for construction or required for development of support areas. The Contractor shall perform all other operations as incidental to the program as specified herein.

IV. BIDDERS TO EXAMINE LOCATION

Prospective bidders are required to examine the locations of the proposed work and to determine, each in their own way, the difficulties which may be encountered in the prosecution of the same. The submission of a bid shall be prima facie evidence that such examination and determinations have been made by the Bidder. No claims for additional compensation will be considered by the WVANG based on obstruction or conditions at the location of the work, which may add to the difficulties or costs of construction, even though such obstructions or conditions are not shown on the Construction Drawings or indicated in the other construction documents. Prospective bidders are advised that should they deem it necessary to obtain any subsurface samples of test borings etc., at the site, they should obtain their own permission from the landowners.

V. SCHEDULE OF WORK

Before commencing work on this project, the Contractor shall prepare and submit a schedule of construction activities for approval by the WVANG.

The Contractor shall provide adequate supervision, labor, tools, equipment, and materials to prosecute the work energetically and complete the work within the time specified.

It is the intention not to delay the work for the checking of lines or grades, but if necessary, working operations shall be suspended for such reasonable time as the WVANG may require for that purpose. No special compensation shall be paid for the cost to the Contractor for any of the work or delay occasioned by checking lines and grades, by making other necessary measurements, or by inspection.

VI. MEASUREMENT OF QUANTITIES

The Contractor shall be responsible for providing all necessary volumetric, dimension, and weight measurement equipment necessary to prosecute the work as shown on the Construction Drawings and to accurately determine quantities for payment of Contract Bid Items as approved by the Engineer. Such measurements and equipment shall be subject to the approval of the WVANG for use in this project.

VII. BORROW (DISPOSAL) AREAS

All borrow (disposal) areas must be approved by WVANG. Should the Contractor decide to obtain and utilize any borrow areas outside of construction limits, or move material from one property owner to another unless designated on the Construction Drawings, the Contractor shall be responsible to obtain from the property owner(s) of the borrow areas, all necessary rights of entry, including rights of entry for WVANG for inspection purposes. The said rights of entry agreement must state that the property owner(s) indemnify and hold harmless the WVANG for Contractor's action for any injury or damages whatsoever resulting from the use of the property.

The Contractor also shall submit a borrow area reclamation plan for prior approval by WVANG. The Contractor shall observe the following NEPA compliance schedule relative to selecting and utilizing any off site borrow areas and or any waste disposal areas.

- a. No borrow (disposal) site operations will affect a site listed in, eligible or proposed to be listed in the National Register of Historic Places.
- b. No borrow (disposal) operations will be located within one-quarter mile of any Federally listed established or prospective component of the National Wild and Scenic River System under 16 USC 1274 and 1276.
- c. Borrow (disposal) site operations will not cause a significant encroachment within the base floodplain (CE.O. 11988: Floodplain Management).
- d. Borrow (disposal) site operations will not be located in or affect a critical habitat of a federally listed endangered or threatened species under 16 USC 1531, et. seq.
- e. No borrow (disposal) operations will occur in wetland areas which are designated by appropriate agencies.
- f. Borrow (disposal) site operations will be consistent with any approved Construction Drawings governing ambient air quality.
- g. Adherence to these mitigation measures does not relieve the Contractor of the obligation or responsibility to obtain any other Federal, State, or local approvals required to use borrow (disposal) areas and conduct such activities.
- h. Documentation: Copies of borrow (disposal) site approvals and concurrences will be submitted to the WVANG prior to the commencement of reclamation activities.

- i. Site Monitoring: Borrow (disposal) activities will be monitored by the State to ensure compliance with contractual requirements, applicable Federal, State, and local laws, and any permit conditions.

VIII. DISPOSAL OF UNSUITABLE MATERIAL

All waste areas shall be obtained in accordance with Special Provisions Section VII. of these specifications. All unsuitable materials (wood, trash, debris, and garbage) as determined by the WVANG shall be wasted by the Contractor, at his/her expense, outside the limits of work conforming to the requirements of Sections 5.2.8 of these Specifications. Wood may be burned in conformity with Sections 5.2.7 of these Specifications.

The Contractor shall observe the NEPA compliance schedule relative to selecting and utilizing any off-site disposal areas in accordance with Special Provisions Section VII of these Specifications.

IX. INTERPRETATION OF APPROXIMATE ESTIMATE OF QUANTITIES

The estimate of quantities of work to be done and/or materials to be furnished under the Special Provisions and Technical Specifications, as shown on the Contract Bid Schedule, is approximate and is given only as a basis of calculation upon which the award of the Contract is to be made. WVANG reserves the right to increase or decrease any or all of the quantities of work or to omit any of them, as it may deem necessary.

X. SAFETY

All regulations of the Occupational Safety and Health Act of 1970 (OSHA) are in effect for this Contract. WVANG shall not be liable for any citations received by the Contractor as a result of failure to comply with applicable OSHA standards. Compensation is to be included in the various items of the Contract for the expense involved in complying with these standards. In addition, the Contractor shall comply with Section 107.7 of the WVDOH Standard Specifications and Addendums regarding public convenience and safety.

XI. REGULATIONS

All appropriate Township, County, State, and Federal Regulations shall apply to this Contract. It shall be the Contractor's sole responsibility to be aware of these regulations and to comply with them. WVANG shall not be liable for any citations received by the Contractor. The Contractor shall keep the existing roads open and safe to public vehicular traffic at all times and shall provide appropriate barriers and warning devices as directed by the WVANG.

XII. LAWS TO BE OBSERVED

The Contractor shall at all times, observe, comply with, and post as required all federal, state, and local laws, ordinances, and regulations in any manner affecting the conduct of the work or applying to employees on the project as well as all orders or decrees which have been or may be promulgated or enacted by any legal bodies or tribunals having authority or jurisdiction over the work, materials, employees, or Contract. The Contractor shall protect and indemnify WVANG and its representatives against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order, or decree whether by the Contractor or by the Contractor's employees.

XIII. PERMITS, LICENSES AND FEES

The Contractor shall procure all permits and licenses, pay all charges and fees, and give all notices necessary and incidental to the due and lawful prosecution of the work. Permits required for this project may include but not be limited to: Water Quality Certification from West Virginia Department of Environmental Protection (WVDEP) and PLC permit from Public Land Corporation and burning permit from West Virginia Department of Natural Resources (WVDNR). A copy of the permits as procured shall be furnished to the WVANG prior to initiation of the work under this Contract.

XIV. ELECTRICITY, WATER SUPPLY AND SANITARY FACILITIES

Electricity and water supplies and sanitary facilities are located near the site. Arrangements to use these facilities shall be made by the Contractor, and all costs for such arrangements shall be borne by the Contractor at no additional cost to the WVANG.

XV. UTILITIES AND OTHER OBSTRUCTIONS

The Contractor shall be solely responsible to correctly locate all existing active underground and overhead utilities at the project sites and take precautions to avoid damage to them. Any existing utility lines damaged by the Contractor shall be replaced by the Contractor or repaired at no cost to the WVANG. The Contractor shall notify the utility companies likely to be affected well in advance and before beginning any work within the project sites. In the event of damage to the existing utilities or other facilities, the Contractor shall notify the affected utility(s) and the WVANG immediately and make, or have made, all necessary repairs and bear the expense thereof and resulting damaged caused thereby. It shall be the responsibility of the Contractor to arrange for relocating the utility lines, where required and as directed by the WVANG, in accordance with the guidelines set forth by the utility company, prior to beginning construction. The Contractor will be reimbursed for actual charges invoiced by the Utility Company. The utility companies (and Miss Utility of West Virginia) must be contacted by the Contractor at least one week prior to commencement of construction activities for the purpose of field locating and marking utility owned facilities within the project area. The name, address, and phone number of the Miss Utility of West Virginia location service and of

Virginia location service and of the utility companies are as follows:

Miss Utility of West Virginia

1-800-245-4848

XVI. SITE CLEANUP

Before the project shall be considered as having been satisfactorily completed, the Contractor shall clean and remove, from the project site, all surplus and discarded materials, and equipment and shall further remove all debris and objectionable materials of any kind from areas used or disturbed by the construction operations within or within sight of the project area.

XVII. ROCK BLASTING

The Contractor shall not conduct blasting operations.

XVIII. TEMPORARY ACCESS ROADS

The Contractor shall construct and maintain temporary access roads for convenient access to the various parts of the work, and for other necessary purposes incidental to the performance of this Contract. The location of access roads shall be approved by the WVANG or Engineer prior to construction. No separate payment for construction and maintenance of such roads will be made. The Contractor shall erect such temporary fences or guards as may be necessary to keep unauthorized persons away from the work. Grading and surfacing of temporary access roads, excavations, fills and embankments for purposes of construction, or for convenience, beyond the limits of ordered excavations and all temporary fences and guards, shall be provided by the Contractor and shall be maintained in good condition. The Contractor shall be required to maintain all roads used by his hauling equipment in a dust-controlled condition. Upon completion, the Contractor shall return the disturbed areas to the approximate original condition as approved by the WVANG.

XIX. SITE CONDITIONS AND ENVIRONMENTAL PROTECTION

Conditions at the site shall be examined by the Contractor, and he shall assume responsibility as to the contours and the character of the earth, rock, water and other items that may be encountered during the excavation and filling operations.

Ground water may be encountered at various locations within the proposed work area and pumping or diversion may be required to remove ground water from these locations prior to performing the work.

The Contractor shall be responsible for the operation and maintenance of any required diversion

diversion or pumping facilities for removing ground water from work areas during progress of the work under this Contract.

The Contractor shall take any necessary steps to prevent erosion or silting problems from occurring and to minimize pollution or sedimentation of streams adjacent to the site. If any such problems develop, the Contractor shall be responsible to take immediate corrective action.

The Contractor shall be responsible for the repair or replacement of streets or driveways (blacktop, gravel & concrete), trees, shrubs, fences, or any other physical features disturbed by construction under this contract to original condition or better.

The Contractor shall be responsible for the replacement of any existing boundary or corner markers disturbed by construction activities.

XX. CONTROL AND REVIEW OF WORK BY THE WVANG

All services rendered by the WVANG consist of professional opinions and recommendations made in accordance with generally accepted WVANG practice. Under no circumstances is it the intent of the WVANG to directly control the physical activities of the Contractor or the Contractor's workmen's accomplishment of work on this project.

The presence of the WVANG at the site is to provide the WVANG a continuing source of professional advice, opinions and recommendations based upon the Field Representative's and/or WVANG's observations of the Contractor's work and does not include any superintending, supervision or direction of the actual work of the Contractor or the Contractor's workmen.

Any construction review of the Contractor's performance conducted by the WVANG is not intended to include review of the adequacy of the Contractor's safety measures, in, or near the construction site.

XXI. CITATION OF OTHER SPECIFICATIONS

Whenever the Specifications for this Contract refer to the specifications of any society, institute, association or government organization, then such specifications cited shall become a part of this Contract as if written in full. Commonly used abbreviations have the following meanings:

ASTM - American Society for Testing Materials

ASA - American Standards Association

AWWA - American Water Works Association

AASHTO - American Association of State Highway and Transportation Officials

ACI - American Concrete Institute

Where reference is made to a specification, it shall be the latest revision at the time called for bids, except as noted on the Construction Drawings or elsewhere herein.

TECHNICAL SPECIFICATIONS

1.0 MOBILIZATION AND DEMOBILIZATION

1.1 Description

This work shall consist of the performance of construction preparatory operations, including the movement of personnel and equipment to the project sites and for the establishment of the Contractor's offices, buildings and other facilities including the construction of all temporary access roads as necessary to begin work on a substantial phase of the contract. The location of Contractor's office to be established shall be approved by WVANG. It also shall include all demobilization activities involving the removal from the sites of all plant, equipment, supplies and personnel after completion of the work including cleanup of all rubbish and waste materials generated during the construction of this project; and restoration of any damage to existing site improvements resulting from the Contractor's activities at the site; and installation of the project sign.

Equipment and material storage area is identified on the Construction Drawings. It shall be the Contractor's responsibility to obtain approval for additional equipment and material storage areas located within the Construction Limits from the WVANG and from the landowner for storage areas located outside of the Construction Limits.

1.2 Method of Measurement

The method of measurement will be per lump sum.

1.3 Basis of Payment

The bid for "Mobilization and Demobilization" shall be a lump sum and cannot be more than 10% of the TOTAL AMOUNT BID for the project. Partial payments will be as follows:

- (a) One-half of the amount bid will be released to the Contractor with the first estimate payable, not less than 15 days after the start of work at the project site.
- (b) The final one-half of the amount bid shall be released with the estimate payable after the work is accepted by the WVANG and when all "As-Built" drawings are submitted and approved by WVANG.

Nothing herein shall be construed to limit or preclude partial payments otherwise provided for by the Contract. No deduction will be made nor will any increase be made, in the lump sum mobilization and demobilization item amount regardless of decreases or increases in the final total contract amount or for any other cause.

1.4 **Pay Item**

Item 1.0. "Mobilization and Demobilization" per lump sum. Cannot be more than 10% of the TOTAL AMOUNT BID for the project.

2.0 UTILITIES

2.1 Description

This work shall consist of all necessary measures to relocate, maintain and protect all utilities, and existing drainage structures that are not project scope, within the limits of work specified herein and on the Construction Drawings.

The contractor shall notify the utility in writing at least fifteen (15) but preferably thirty (30) days prior to the time that work within the area will be done.

The Contractor shall be responsible for making all necessary arrangements and/or performing all necessary work to the satisfaction of the affected utility company, the West Virginia Turnpike Authority, and/or the West Virginia Department of Highways in connection with any disturbances within their right-of-way or services.

The Contractor shall be solely responsible for locating all utilities within the limits of work. All damage made to existing utilities and drainage structures by the Contractor shall be the sole responsibility of the Contractor. In the event damage does occur, the Contractor shall notify the affected utility and the WVANG immediately and make or have made all necessary repairs and bear the expenses thereof and resulting damage caused thereby.

The Contractor shall obtain right-of-entry and/or any necessary permits for repairs or relocation.

Utility Companies Contacts

Miss Utility of West Virginia
1-800-245-4848

2.2 Materials

All materials used for utility related disturbance shall be in accordance with these specifications or as indicated by the affected utility.

2.3 Construction Methods

All work shall be in accordance with these specifications or in accordance with those methods as indicated by the affected utility.

2.4 Method of Measurement

The Contractor will not bid on utility work but will be reimbursed the actual approved invoice cost. The Contractor shall submit an estimate for utility relocation to the WVANG for approval. The WVANG will not reimburse the Contractor for any WVDOH costs. Only utilities affected by the proposed reclamation will be reimbursed.

3.0 CONSTRUCTION LAYOUT STAKES

3.1 Description

This item consists of furnishing, placing, and maintaining construction layout stakes necessary for the proper performance of the work under this contract including borrow areas. It shall further consist of determining the exact units of measure for payment. It also consists of checking and making any field adjustment to the plan alignment, grades and elevations as considered necessary by the WVANG. Additionally, this item shall also include the preparation of "As-Built" Construction Drawings including the Reclamation Plan and any others specifically requested by the WVANG. All of these "As-Built" Construction Drawings shall be provided prior to the Final Inspection Meeting. Upon receipt and approval of the "As-Built" Construction Drawings by WVANG, the final one-half of the amount bid for Mobilization and Demobilization under Section 1 shall be released with the estimate payable.

3.2 Materials

Conventional survey stakes, hubs, batter boards, flagging, templates, straightedges and other devices necessary for laying out all parts of the work.

3.3 Construction Methods

3.3.1 The Contractor shall be responsible for the proper layout of the work. The WVANG will provide the Contractor with survey information regarding the baselines and the existing surface features shown on the Construction Drawings. The Contractor shall make all calculations involved and shall furnish and place all layout stakes.

3.3.2 The Contractor shall provide field forces and shall set all additional stakes as needed, such as offset stakes, reference point stakes, slope stakes, grade stakes, stakes for drainage, or other structures, supplementary bench marks, and any other horizontal or vertical controls necessary to secure a correct layout of the work including the re-establishment of the survey and construction baselines (as necessary), as shown on the Construction Drawings. The Contractor shall also perform any necessary cross section surveying of the existing ground surface at the intervals shown within the Construction Drawings, provide an overlay of the surveyed cross sections on the cross-sections shown on the Construction Drawings, and submit the same to the WVANG for comparison prior to initiating earthwork. The original grade line and proposed final grade line shall be included on all sections. Incomplete cross sections will be returned to the Contractor for necessary additions. Cross sections, which do not encompass all areas of both earthwork excavation (including borrow excavation) and fill placement shall be considered incomplete without exception. The Contractor shall also include the locations of baselines used showing cross section locations on a copy of the reclamation plan when submitting cross sections.

- 3.3.3 The Contractor shall be responsible for assuring the layout staking work is in conformance to the lines, grades, elevations, dimensions, and locations shown on the Construction Drawings or as required by the WVANG. The Contractor shall furnish a copy of his/her survey records for checking by the WVANG and for the WVANG's permanent file. These records shall be furnished as they are completed during the progress of the work.

Inspection or checking of the Contractor's layout by the WVANG and the acceptance of all or part of it shall not relieve the Contractor of his/her responsibility to secure the proper dimensions, grades, and elevations of the several parts of the work.

- 3.3.4 The Contractor shall exercise care in the preservation of stakes and benchmarks, including existing property line markers, and shall have them reset at his/her expense when any are damaged, lost, displaced or removed. The Contractor shall use competent personnel and suitable equipment for the layout work required and shall provide that it be done under the supervision of, or directed by, a Registered Professional Civil Engineer or Licensed Land Surveyor registered in the State of West Virginia.

3.4 Measurement and Payment

Measurement and payment for furnishing, setting, maintaining, and resetting the stakes when necessary, and for furnishing all engineering personnel, equipment, materials, and all incidentals thereto, shall be by the lump sum bid for "Construction Layout Stakes". The lump sum payment also shall include the cost for providing the WVANG pre- and post-construction ground line cross-sections for all disturbed or regraded areas including borrow areas and "As-Built" Construction Drawings as described herein. Said lump sum bid cannot be more than 5% of the TOTAL AMOUNT BID for the project. No deduction will be made, nor will any increase be made, in the lump sum "Construction Layout Stakes" item amount regardless of decreases or increases in the final total contract amount or for any other cause.

3.5 Pay Item

Item 3.0. "Construction Layout Stakes," per lump sum. Cannot be more than 5% of the TOTAL AMOUNT BID for the project.

4.0 QUALITY CONTROL

4.1 Description

This work shall consist of testing for verification that the materials supplied and the work performed are in accordance with these specifications.

4.2 Materials

4.2.1 The Contractor shall submit a minimum of two (2) copies of shop drawings, catalog cuts and material certifications (as applicable) to the WVANG of all off-site materials to be incorporated into the work. Written approval from the WVANG will be required prior to incorporation of these items into the work.

4.2.2 The Contractor shall submit at least two (2) copies of the results of all tests conducted on in-situ material, concrete and grout to be used in this project, soil tests to determine the lime and nutrient requirements of the areas to be revegetated, compressive strength test for grout in accordance with ASTM C109, and for concrete in accordance with ASTM C31 & C39.

4.3 Construction Methods

4.3.1 The Contractor shall furnish the services of his own testing laboratory or select an independent testing laboratory, as long as the laboratory is under the direct supervision of a Registered Professional Civil Engineer. The laboratory must be approved by the WVANG.

4.3.2 Testing for compaction, soil nutrient and lime requirements for soil; compressive strength tests for concrete and grout; shall be performed as required by these specifications and/or ordered by the Engineer in writing. The Engineer will determine the locations and time of any testing herein specified and the need and extent of any testing in addition to that which is herein specified.

4.3.3 Only new and first class materials, which conform to the requirements of these Specifications, shall be used unless specified otherwise. When requested by the WVANG, the Contractor shall furnish a written statement of the origin, composition, and manufacturer of any or all materials (manufactured or produced) that are to be used in the work. The sources of supply of each material used shall be approved by the WVANG before delivery is started. If, at any time, sources previously approved fail to produce materials acceptable to the WVANG, the Contractor shall furnish materials from other approved sources.

4.4 Method of Measurement

The method of measurement for determining the quantity of quality control work done as described above will be incidental to the overall project cost.

4.5 Basis of Payment

The quantity of quality control work done will be incidental to the overall project lump sum amount.

4.6 Pay Item

No Pay Item. Quality control is incidental to the overall project cost.

5.0 SITE PREPARATION

5.1 Description

5.1.1 Clearing and Grubbing

Work performed under this section shall include the removal and disposal of all trees, stumps, shrubs and any other vegetation, wood, debris, and garbage of any nature from those areas specified below and/or shown on the Construction Drawings and/or any other areas as approved by WVANG. This work shall also include the preservation from injury to all vegetation, utilities or other objects to remain.

5.1.2 Access Road Construction

Access roads constructed to gain access to, travel between, or otherwise required for equipment /vehicular site access shall be kept to a minimum and only constructed where necessary upon approval from the WVANG, where applicable. If the Contractor constructs such travel routes, they shall be reclaimed and revegetated according to Section 11 of these specifications upon completion of the construction activities, as deemed necessary by the WVANG, with associated costs being incidental. Any access in addition to that shown on the Construction Drawings shall require the Contractor to obtain written permission from the respective land owner. The existing access roads shall be maintained during construction (except when culvert, ditch and road construction are being performed), and shall be left in a condition equal to, or better than, the existing condition upon completion of construction. Resurfacing and/or stabilization stone will be incidental to the cost of the work described herein, except where designated on the Construction Drawings, for any road upgrading required for construction entry, as deemed necessary by the WVANG, to facilitate site travel. Final grading, stabilization, and providing final drainage control for existing access roads shall be performed after reclamation operations for the project have been completed.

5.1.3 Fence Replacement and Temporary Fencing

When existing fences are encountered within the work limits, which by necessity of the construction activities require their dismantling, the WVANG shall be consulted to secure their approval for the need of fencing as well as determination as to whether temporary and/or permanent fencing will be utilized. Temporary fencing shall be installed along the alignment selected by the WVANG, with sufficient material included to alter said alignment as may be required to accommodate the construction activity. Similarly, approval for the use and location of permanent fencing shall be obtained from the WVANG well in advance of construction. Typically, permanent fencing shall be installed in the location of the existing fence. Existing fences outside the construction limits and near, or adjacent to, the project are to remain in place. Any

place. Any fencing damaged outside the work limits shall be repaired or replaced at the expense of the Contractor, to a condition equal to, or better than, its original condition. Any and all fencing costs shall be incidental and covered under the lump sum bid for Item 5.0 Site Preparation.

Temporary fence shall be installed as needed at the discretion and approval of the WVANG. Temporary fence shall consist of metal or fiberglass posts. Posts shall be a minimum of five feet in height. Non-electric temporary fence shall use four (4) strands of barbed wire anchored to metal posts set on fifteen (15) foot centers.

If temporary fence is electrified, three (3) strands of barbed wire or six (6) conductor wires of woven fiberglass may be used. Posts shall be set on twenty (20) foot centers. Battery or solar powered energizers may be used to electrify the temporary fence provided that a minimum of one (1) joule of output is used.

5.2 Construction Methods

- 5.2.1** The specific areas to be cleared and grubbed are as shown on the Construction Drawings and are generally described as, but not limited to, those specific areas of excavation, backfill, soil borrow or drainage structure installation.
- 5.2.2** The Contractor shall clear the site within the limits of the areas to be regraded. The WVANG shall exercise control over clearing and shall designate all trees, plants and other objects to be removed or to remain.
- 5.2.3** Clearing and grubbing shall be completed prior to initiation of earthwork operations only to the extent necessary to complete the work. The Contractor shall confine his operations strictly to required areas. If he clears and grubs beyond the required areas, whether knowingly or accidentally, he shall, at his expense, replant and otherwise restore all areas outside the limit lines to a condition equal to that existing prior to start of work.
- 5.2.4** All timber eight (8) inches in diameter and larger at stump height shall be saw cut prior to grubbing operations. Timber shall be topped with the branches removed and stacked and stockpiled in an appropriate manner in an accessible location approved by the WVANG on the property from which it was cut. Timber to be stockpiled shall not be pushed down by equipment prior to being cut nor can it be indiscriminately shoved into a stockpile.
- 5.2.5** All stumps, roots, buried logs and brush shall be removed. Grass, however, may be incorporated into the resoiling material. Taproots and other projections over 1-½ inches in diameter shall be grubbed out to a depth of at least ten (10) inches below the planned subgrade or slope elevation. All holes remaining after the grubbing operation shall have the sides broken down to flatten out the slopes, and shall be filled with

filled with suitable materials, moistened and properly compacted.

- 5.2.6** Cleared and grubbed areas shall be worked such that positive drainage is provided to prevent ponding of water except for the purpose of sediment control sumps as approved by the WVANG.
- 5.2.7** All organic material shall be burned completely to ash or otherwise removed from the site and disposed of in a manner approved by the WVANG. Burning of the combustible material will not be permitted on or near refuse, mine portals or within close proximity to coal seams or utilities. The Contractor shall obtain all permits and licenses required prior to burning the material. A plan showing the location of material to be burned and all fire control measures to be implemented, including copies of permits and licenses, shall be submitted to the WVANG's representative at the site for approval.
- 5.2.8** All other materials generated from required clearing and grubbing operations shall be removed and disposed of by the Contractor. All garbage, construction debris, etc., shall be disposed of in approved waste areas or landfills. It shall be the responsibility of the Contractor to obtain, at no expense to the WVANG, all necessary waste and borrow areas or landfills for the disposal of waste materials in accordance with any applicable local, state, and/or federal regulations including compliance with NEPA requirements (See Section VII for NEPA Compliance Schedule). All waste and borrow areas must be approved by the WVANG and, the Contractor must provide a reclamation plan for approval. In addition, for all waste and borrow areas outside the construction limits, the Contractor must obtain from the property owner a right-of-entry agreement in which the property owner indemnifies and holds the WVANG harmless from any injury or damages whatsoever resulting from the use of the property.
- 5.2.9** It shall be the sole responsibility of the Contractor to correctly locate and avoid all underground, on-ground, and overhead utilities, facilities and other structures and constructions, and for that purpose, shall employ all necessary precautions and methods to insure avoidance of and damage to such constructions. In the event damage does occur, the Contractor shall notify the affected WVANG and the WVANG immediately and make or have made all necessary repairs and bear the expense thereof and resulting damage caused thereby. See "Special Provisions," Section XV "Utilities and Other Obstructions," of these specifications for more information on utilities.
- 5.2.10** Trash, garbage, railroad ties, roofing shingles, tires, plastic, metal and other unsuitable material resulting from demolition shall be disposed of by the Contractor at his/her own responsibility and expense outside the work limits in an approved landfill, as approved by the WVANG, unless otherwise directed.

5.2.11 Should offsite disposal or borrow be necessary, the Contractor shall observe the NEPA Compliance Schedule as per Section VII of the Special Provisions.

5.2.12 Existing site access roads shall provide safe, all-weather access to the site. These existing roads, including stoned and paved roads, shall be maintained during construction and left in a better than or equal to condition. The Contractor is responsible for locating and avoiding all underground and overhead utilities and other improvements during access road grading and maintenance.

5.2.13 Any existing fence lines encountered during construction activities shall be removed, repaired or replaced to an "as good as" or "better than" condition and as approved by the WVANG. In situations where fencing is used to control or contain cattle and livestock, the Contractor shall also be responsible for any temporary fencing required to assure the safety and containment of the livestock.

5.3 Method of Measurement

5.3.1 There shall be no measurement of the "Site Preparation" item as it is a lump sum.

5.4 Basis of Payment

5.4.1 This item shall be paid at the bid lump sum price. The amount shall not exceed 10% of the TOTAL AMOUNT BID for each bid. Payment shall be full compensation for doing all the work herein prescribed in a workmanlike and acceptable manner; including the furnishing of all labor, materials, tools, equipment, supplies, and incidentals necessary to complete the work.

No deduction will be made, nor will any increase be made, in the lump sum "Site Preparation" amount regardless of decreases or increases in the final total contract amount or for any other cause.

5.5 Pay Items

Item 5.0, "Site Preparation," per lump sum cannot be more than 10% of the "TOTAL AMOUNT BID" for the project.

6.0 EROSION AND SEDIMENTATION CONTROL

6.1 Scope

This item shall consist of furnishing, maintaining and removing temporary erosion and sedimentation control as detailed on the Construction Drawings, and as directed by the WVANG. These shall include silt fences and rock check dams.

6.1.1 Materials: All constituent elements of the erosion and sediment control devices shall conform to the notes and dimensions as shown on the Construction Drawings.

6.1.2 Silt fence filter fabric shall be specifically recommended for this purpose by the manufacturer and shall meet or exceed the following specifications:

Property	Value
Bursting Strength (ASTM D751)	150 psi
Grab Strength (ASTM D1682)	100 psi
Permeability	0.02 to 0.03 cm/sec

Silt Fence posts shall be either timber stakes (2-inch by 2-inch minimum) or pressed steel stakes set plumb and to sufficient depth to provide a sound anchor for the supporting wire fence and/or filter fabric.

6.1.3 Rock check dams shall use Riprap as specified in the Construction Drawings.

6.1.4 Installation: All erosion and sediment control devices shall be placed as detailed by the Construction Drawings and/or Specifications prior to starting the excavation or construction activities. Silt fence and rock check dams shall be constructed at the locations and to the dimensions shown on the Construction Drawings. Vertical wood posts shall be protected by means of a metal cap or other device to prevent damage when hammers are used to drive the posts into the ground.

6.1.5 Maintenance: Silt fences and rock check dams shall be maintained in a functionally sound condition and accumulations of silt shall be promptly removed each day. Following the usefulness of each structure, it shall be removed and disposed of in an approved location.

In-stream sumps shall be cleaned out at the direction of the WVANG. Following the stabilization of the work site against further significant erosion, sumps shall be removed or allowed to fill in as directed by the WVANG.

6.2 Measurement

6.2.1 Silt fence shall be measured on a lineal foot basis for the length of sediment control acceptably installed, maintained and removed.

6.2.2 Rock check dams shall be measured on a per each basis, to include acceptable installation, maintenance and removal.

6.3 Payment

Payment as specified shall be full compensation for all labor, materials, equipment and incidentals required to install, maintain and remove the items specified.

6.3.1 Payment for Silt Fence shall be based upon the lineal feet accepted and approved by the WVANG and the Unit Price listed in the Bid Schedule.

6.3.2 Payment for Rock Check Dams shall be based upon the number of structures accepted and approved by WVANG and the unit price listed in the Bid Schedule.

6.4 Pay Item

Item 6.1, "Silt Fence" per linear foot.

Item 6.2, "Rock Check Dams" per each.

7.0 ROCKFALL MESH

7.1 Description

This section describes the requirements for furnishing and installing anchors and rockfall mesh on finished backslopes.

7.2 Materials

Materials shall be manufactured by Maccaferri Inc. or equivalent in accordance with the following:

7.2.1 Wire Rope Anchorage, Galvanized, Rope 5/8-inch Diameter. Steel Core Type 6x19+OWRC (ASTM A 1023 / A 1023M – 02) with terminal eyelets, using thimbles and pressed aluminum sleeves.

Simple drapery protection with double twist wire mesh type 8x10, wire 0.106-inch diameter brown PVC coated, ASTM A 975.

7.2.2 Contractor shall provide wire rope ½ inch [12 mm] in diameter, zinc-coated steel structural wire strand, in accordance with ASTM A 603, class A.

7.2.3 Hardware, grout, and associated fittings shall be Maccaferri Inc. recommended or equivalent.

7.3 Construction Methods

7.3.1 Before installing mesh, prune shrubs and trees so that mesh will lie flat. The Contractor shall scale backslopes in accordance with Section 9.3.2, Scaling Rock Cuts. The Contractor shall submit copies of the tensile and punching test results along with a sample, 2 ft × 2 ft, of types of rockfall mesh to be used on the project. These samples shall be obtained from a roll of rockfall mesh that is on the project site. At least 14 calendar days before starting the work, submit a plan for the ground anchors that details the following:

1. The proposed construction sequence and schedule.
2. The proposed drilling methods and equipment.
3. The proposed grout, mix design or specifications, and placement procedures.
4. The proposed anchors, plate, washers and nuts, top support wire rope, wire rope clips, thimbles, and rockfall mesh fasteners, all with specifications, including manufacturers' data sheets.
5. Calibration data for each load cell and calibration data for the test jack and master pressure gauges to be used in the work, obtained from calibration tests performed by an independent testing laboratory within 60 calendar days of the

the submission.

6. The proposed stressing procedures and stressing equipment setup. Do not begin installation until the WVANG has approved the submission in writing.

7.3.2 Wire mesh and associated wire rope anchorage, horizontal wire rope, wire mesh, and ancillary equipment and grout shall be installed using Maccaferri Inc. or equivalent manufacturer's recommendation.

7.4 **Method of Measurement**

The method of measurement for Rockfall Mesh installation shall be by the square yard acceptably installed. No separate payment shall be made for anchors, lacing and fasteners, grout and any other hardware used. These are considered incidental to the installation of the Rockfall Mesh.

7.5 **Basis of Payment**

Payment for acceptable installation of Rockfall Mesh will be by the Unit Price bid for "Rockfall Mesh."

7.6 **Pay Item**

Item 7.0, "Rockfall Mesh," per square yard.

8.0 DRAINAGE STRUCTURES

8.1 Description

8.1.1 This work shall consist of furnishing all labor, equipment and materials necessary to construct the drainage structures shown on the Construction Drawings. Drainage structures shown include but are not limited to riprap ditch, pipes, manholes, and head walls.

8.2 Materials

8.2.1 All rock riprap used throughout the project site shall consist of commercially purchased limestone. Rock for riprap channels shall consist of hard, durable limestone and shall have a d50 of 12 inches unless otherwise stated on the Construction Drawings. The rock shall range in size from 6 inches minimum to 18 inches maximum diameter with no more than 15 percent by weight less than 6 inches.

The rock riprap shall have a maximum weighted loss of thirty percent when subjected to five (5) cycles of the Sodium Sulfate Soundness Test – ASTM C88 (ASTM C88-99a Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate), as modified by the American Association of State Highway and Transportation Officials (AASHTO) T-104.

8.2.2 The 24- and 42-inch RCP shall be in accordance with Section 714.19 of the WVDOT Standard Specifications. Pipe bedding shall consist of fine aggregate meeting the requirements of Section 704.6 of the WVDOT Standard Specifications, except that the gradation shall meet the requirements of Section 702.6 of the WVDOT Standard Specifications.

8.2.3 Engineering Fabric for separation between riprap ditch, stone, and fill material shall meet the WVDOH Standard Specification 715.11.8.

8.2.4 A stormwater manhole shall be installed at the location shown on the Construction Drawings. The manhole shall have a Neenah Foundry R-1713 Manhole Cover or equivalent installed at grade Section 715.19 of the WVDOT Standard Specifications for Roads and Bridges, Adopted 2000 and the WVDOT Standard Details Book, Volume I, dated January 1, 2000, and with as shown on the Construction Drawings.

8.2.5 **Concrete Headwalls**

A. General: Cast-in-place concrete according to WVDOH Specification Section 601, Class B.

- B. Portland Cement Design Mix: 3000 psi minimum, with 0.48 maximum water-cementitious materials ratio.
 - 1. Reinforcement Fabric: ASTM A 185, steel, welded wire fabric, plain.
 - 2. Reinforcement Bars: ASTM A 615/A 615M, Grade 60 (420 MPa), deformed steel.

- C. Ballast and Pipe Supports: Portland cement design mix, 3000 psi (20.7 MPa) minimum, with 0.58 maximum water-cementitious materials ratio.
 - 1. Reinforcement Fabric: ASTM A 185, steel, welded wire fabric, plain.
 - 2. Reinforcement Bars: ASTM A 615/A 615M, Grade 60 (420 MPa), deformed steel.

8.3 Construction Methods

- 8.3.1 The ditch shall be constructed to the approximate line, grade, and templates as shown on the Construction Drawings or as directed by the WVANG. Excess material from ditch excavation that is suitable for fill may be segregated, stockpiled and utilized to support "Fill Material" operations. Otherwise, excess material from excavation will be required to be disposed of by the Contractor in an off-site disposal area obtained by the Contractor in accordance with Section VIII of the Special Provisions for these specifications.

- 8.3.2 Riprap shall be placed in accordance with Section 218.3.2 of the WVDOT Standard Specifications.

- 8.3.3 Engineering fabric shall be placed in accordance with Section 218.3.7 of the WVDOT Standard Specifications.

- 8.3.4 The 24- and 42-inch RCPs shall be installed at the locations shown on the Construction Drawings. The trench for the pipes shall be excavated in accordance with the detail provided in the Construction Drawings. Pipe bedding shall conform to the details. Fine aggregate shall be placed in the bottom of the trench to the dimensions indicated by the details for leveling purposes.

Headwalls shall be constructed at the inlet and outlet of the 42-inch RCP. Headwalls shall be constructed as shown on the Construction Drawings in accordance with the "Concrete for Headwall Requirements."

- 8.3.5 The pre-manufactured Storm Manhole shall be installed at the locations shown on the Construction Drawings.

- 8.3.5.1** Pre-manufactured drainage structures shall be placed on a level, prepared and compacted subgrade as directed and approved by the WVANG. Pre-manufactured structures shall have lifting hooks that will be out of sight after placement and sufficient reinforcement to resist handling stresses.
- 8.3.5.2** Pipe sections shall be flush on the inside of the structure wall and project outside sufficiently for proper connection with the next pipe joint. Masonry shall fit neatly and tight around the pipe. The flow line of the outlet pipe section shall match the bottom elevation of the inlet or manhole. Inlet pipes shall be higher from the structure bottom and as shown on the Construction Drawings. Sufficient mortar shall be placed in the inlet bottom to create a smooth flow line from the inlet pipes to the outlet pipes.
- 8.3.5.3** Backfilling around pre-manufactured drainage structures shall comply with Section 212 of the WVDOT Standard Specifications. Backfill material shall be select, suitable on-site material resulting from excavation operations and as directed and approved by the WVANG. Care shall be taken not to displace or disturb the drainage structure from the intended installation site or elevation.

Backfilling shall be brought up uniformly around the structure to avoid distortional stress. If in the opinion of the WVANG backfilling operations have caused damage or displaced the drainage structure, the Contractor shall remove the drainage structure, re-repair the subgrade, and reset the structure and complete backfilling operations to the satisfaction of and at no cost to the WVANG. The pre-manufactured drainage structures shall be set flush with the surrounding top of gravel surface as shown on the Construction Drawings.

- 8.3.6** Existing ditches located within the project limits shall be cleaned to provide positive drainage to the inverts of the downstream structures and ensure free flowing conditions within the ditch as directed by the WVANG, at the locations identified on the Construction Drawings. The ditch cleanings shall be disposed of on-site in a location approved by the WVANG or off-site in accordance with Sections VII and VIII of the Special Provisions of these Specifications. Riprap shall be placed in existing ditches at the inlet and outlets of the proposed 42-inch RCP to provide stream channel protection as approved by the WVANG.

8.4 **Method of Measurement**

- 8.4.1** The method of measurement for Riprap Channel shall be on a linear foot basis acceptably installed.

- 8.4.2 The method of measurement for the 42-inch RCP shall be on a linear foot basis acceptably installed.
- 8.4.3 The method of measurement for the 24-inch RCP shall be on a linear foot basis acceptably installed. The dissimilar pipe connector shall be incidental to the pipe.
- 8.4.4 The method of measurement for pre-manufactured Storm Manhole shall be per each purchased, installed, and approved by the WVANG. The unit price bid for Storm Manhole shall include the cost for the manhole cover and frame.

8.5 Pay Items

Item 8.1, "Riprap Ditch," per linear foot.

Item 8.2, "42-inch RCP ," per linear foot.

Item 8.3, "24-inch RCP ," per linear foot.

Item 8.4, "Storm Water Manhole," per each.

Item 8.5, "Headwall," per each.

9.0 FILL MATERIAL

9.1 Description

This work shall consist of excavating, transporting, stockpiling, placing and compacting mine spoil, soil, rock, or other materials encountered in the grading of the highwall, in the preparation of the proposed parking area, in the excavation of borrow area, and any other indicated incidental work. It shall also include the regrading and covering of borrow material areas to eliminate erosion rills and gullies and to establish and promote positive drainage and vegetative cover to these areas.

Work under this item consists of the providing of fill material to the limits, required grade, cross sections and profiles as shown on the Construction Drawings. The primary source of fill material shall be from the removal of rock wall debris along roadway shown on Construction Drawings to the approval of the WVANG. The secondary source of fill material shall be from the excavation for preparation of the proposed parking area and from projected borrow areas.

9.2 Materials

9.2.1 Fill material for parking area embankments shall be considered a mixture of any or all of mine spoil, soil, soil cover, and rock. All excavation under this specification shall be classified as "common." Materials to be removed will consist of earth, sediment, mine refuse, loose and fragmented sandstone material, soft or disintegrated shales, and similar materials which can be moved by equipment, up to and including heavy ripping machinery and scaled high wall rock.

Soil cover material shall be natural occurring earthen material from potential borrow areas. This material shall be capable of supporting vegetation.

9.2.2 Gravel for parking area shall consist of Class 2 crushed stone as defined by WVDOH Standard Specification Section 704.

9.2.3 Engineering Fabric for separation between fill material and gravel shall meet the WVDOH Standard Specification 715.11.8.

9.3 Borrow/Disposal Area

Potential soil borrow areas could be needed to construct a fill embankment for a parking area. Potential soil borrow areas have not been identified on the Construction Drawings. However, if off-site borrow/disposal areas should be necessary to provide for material shortages or excess material disposal, then the Contractor is responsible for locating these areas and obtaining right-of-entry agreements in which the property owner indemnifies and holds WVANG harmless from any injury or damage whatsoever resulting from the Contractor's use

Contractor's use of the property. All prospective Contractors and Bidders must obtain their own permission from the landowner for any subsurface tests, borings, or pits. The Contractor shall be held responsible for compliance with all NEPA requirements and shall provide proof of such compliance to the WVANG. The Contractor shall submit a reclamation plan to the WVANG and must obtain approval for said plan prior to any disturbance to the disposal site.

Excavated material may be stockpiled upon approval of the WVANG, if such stockpiling is necessary to the coordination of work, or the material is too wet to permit proper disposal.

9.4 Construction Methods

9.4.1 Excavation

Material excavation shall consist of the required removal of materials from areas shown on the Construction Drawings and from off-site borrow areas approved by the WVANG. Excavated areas shall be finished to the required lines and grades approved by the WVANG. Slopes of finished excavated areas shall be trimmed neatly to present a uniform surface, free from hollows and protrusions and loose or overhanging rocks. The tops of all slopes shall be rounded to form a smooth, uniform transition to the existing ground. Non-rock areas cut to grade (e.g., borrow areas) shall be undercut 1 foot below the final grades shown on the Construction Drawings or approved by the WVANG. Final grades of non-rock areas shall be achieved by filling the final undercut with soil cover material.

The approach described in these construction specifications is intended to provide a lasting, stable configuration. The Contractor is required to exercise care to avoid conditions which may result in unstable conditions during the construction process. The Contractor shall be responsible for protecting the public and their structures from damage.

The Contractor must utilize material removal techniques, which are generally considered to be conducive to retaining slope stability. Additionally, disturbed slopes shall be brought to the design template as soon as practical and shall be protected in accordance with Section 11, "Revegetation."

9.4.2 Scaling (machine) consists of dragging a scaling apparatus suspended from a crane over a slope to remove loose rock, soil, and debris. Contractor shall provide a scaling apparatus consisting of a series of cleated dozer tracks, blasting mats, or similar equipment and provide a crane with sufficient reach and lifting capacity to drag the scaling apparatus up and down the slope. If the equipment and methods do not produce the desired results, the Contractor shall propose and test changes until results are satisfactory.

Before starting, the Contractor shall install a temporary rockfall barrier in the portion of the cut to be scaled. Contractor shall not scale beyond the limits of the rockfall barrier and not allow traffic to pass through the work zone while scaling. Contractor shall protect the pavement with blast mats or other protective systems and repair damaged pavement at no additional cost to the department. The Contractor shall clear the roadway and ditches of rock, and load, haul, and dispose of rock debris to a specified location approved by the WVANG.

The Contractor shall manually scale unstable rock that cannot be removed by machine. During manual scaling, the Contractor shall provide a crew on the slope that consists at all times of a working foreman and two scalers and immediately replace with a foreman or scaler any crew member who leaves. Light mechanical means, such as hydraulic jacks or splitters, may be used to remove unstable rock that cannot be removed by conventional manual methods. Slopes will be inspected to determine whether scaling is complete. If inspection reveals additional hazardous rocks, continue scaling until the WVANG is satisfied.

9.4.3 Material Placement at Parking Area Site

Depositing and compacting fill in layers shall be started at the lowest point in the fill below grade, at the bottom of ravines and at the toe of the slope on side hill fills. Prior to fill placement, existing foundation for the embankment will be proof-rolled and all unsuitable material, as determined by the WVANG, will be removed.

The Contractor shall place the material in level, horizontal lifts, extending over the entire area being filled.

During construction, the top surface of the disposal area shall be sloped with a grade of not less than 2 percent, in order that the fill may freely drain toward the slopes. Sediment control shall be placed around the toe of the slopes as specified in the Construction Drawings and Specifications.

The thickness of the layers before compaction shall not be more than 4 feet. No material placed in the fill area by dumping in piles or windrows shall be incorporated in a layer in that position, but shall be moved and spread by blading or similarly approved methods. All finished grading shall be pleasing in appearance with smooth grades and no abrupt changes or surface irregularities. All completed surfaces shall be tracked or otherwise roughened in preparation for revegetation.

Each lift of material shall be compacted with at least four passes of a dozer that exhibits a minimum ground pressure of 9 psi. Approved equipment includes Caterpillar Model D-6D (maximum track width of 18 inches) and Model D-7G (maximum track width of 22 inches). Other compaction methods may be utilized if approved by the WVANG.

The Contractor shall select and segregate the soil cover from the proposed excavations to place as the top 12 inches of backfill along the surface of borrow areas, and non-graveled areas of the parking area (embankment, etc.). The 12 inches at the top of the backfill will serve as the vegetative layer; therefore, the best soil-like spoil material shall be used in this layer to promote vegetative growth.

Fill materials to be used in any area of an embankment shall be free from trash, debris, frozen soil, organic material or other foreign material.

At the close of each day's work, or when work is to be stopped for a period of time, the entire surface of the compacted fill shall be sealed by a method approved by the WVANG. If, after a prolonged rainfall, the top surface of the embankment is too wet and plastic to work properly, the top material shall be removed to expose firm material. Ruts in the surface of any layer shall be suitably filled or eliminated by grading before compaction. The disturbed areas will be revegetated according to Section 11, "Revegetation."

9.4.4 Engineering Fabric

Engineering Fabric shall be placed in accordance with WVDOH Section 207 in the areas shown on the Construction Drawings.

9.4.5 Gravel

Gravel for access roads and parking areas shall consist of 6 inches of crushed stone in accordance with WVDOH Section 704 and placed in the areas indicated on the Construction Drawings.

9.5 Method of Measurement

9.5.1 The method of measurement for fill material shall be by the cubic yard, which shall be the material actually moved and placed in the proposed parking area designated on the Construction Drawings, measured in its placed location and determined from the certified cross-sections by the method of average end areas. No separate payment will be made for fill placed incidental to the work referred under "Fill Material."

There shall be no measurement of regrading of spoil or refuse areas where there are no cross-sections, as payment for this work shall be incidental to Construction Drawings.

- 9.5.2 The method of measurement for gravel shall be on a per ton basis acceptably installed. Weight tickets shall be submitted as documentation for payment. Tickets shall include the total weight of the truck empty and loaded and the net stone weight, the name of the project, date, and type of stone.
- 9.5.3 The method of measurement for the engineering fabric shall be on a square yard basis acceptably installed.
- 9.5.4 The method of measurement for liming, fertilizing, seeding and mulching soil borrow areas located within the construction limits as addressed in this item is to be included under Section 11.0, "Revegetation," as contained elsewhere in these specifications.

9.6 **Basis of Payment**

- 9.6.1 Payment for material excavated, transported, and/or backfilled to achieve the final grades will be by the unit price bid for "Fill Material."
- 9.6.2 Payment for gravel transported and placed per WVANG approval to achieve the final grades will be by the unit price bid for "Gravel."
- 9.6.3 Payment for engineering fabric transported and placed per WVANG approval will be by the unit price bid for "Engineering Fabric."

9.7 **Pay Item**

Item 9.1, "Fill Material," per cubic yard.

Item 9.2, "Gravel," per ton.

Item 9.3, "Engineering Fabric," per square yard.

10.0 CHAIN-LINK FENCING

10.1 Description

Chain-link fencing shall include installing new 6-foot high non-barbed wire fencing and the removal and reinstallation of existing barbed-wire chain-link fencing as shown on the Construction Drawings. The fencing shall be installed along the paved road to the Memorial Tunnel adjacent to the highwall.

10.2 Materials

10.2.1 Definitions

- A. CLFMI: Chain Link Fence Manufacturers Institute.
- B. Zn-5-Al-MM Alloy: Zinc-5 percent aluminum-mischmetal alloy.

10.2.2 Submittals

- A. Product Data: Material descriptions, construction details, dimensions of individual components and profiles, and finishes for the following:
 - 1. Fence, rails, and fittings.
 - 2. Chain-link fabric, reinforcements, and attachments.
- B. Product Certificates: Signed by manufacturers of chain-link fences certifying that products furnished comply with requirements.

10.2.3 Quality Assurance

Installer Qualifications: An experienced installer who has completed chain-link fences similar in material, design, and extent to those indicated for this project and whose work has resulted in construction with a record of successful in-service performance.

Field Measurements: Verify layout information for chain-link fences shown on Construction Drawings in relation to property survey and existing structures. Verify dimensions by field measurements.

Fencing shall be in accordance with Section 712 of WVDOH "Standard Specifications for Roads and Bridges," and as shown on the Construction Drawings.

10.2.4 Material Items

Metal Pipe and Tubing: Galvanized steel. Comply with ASTM F 1083 and ASTM F 1043 for materials and protective coatings.

Frames and Bracing: Fabricate members from galvanized steel tubing with outside dimension and weight according to ASTM F 900 for the following gate fabric height:

Frame Corner Construction: Welded or assembled with corner fittings and 5/16-inch diameter, adjustable truss rods for panels 5 feet wide or wider.

10.2.5 Cast-In-Place Concrete

General: Comply with ACI 301 for cast-in-place concrete.

Materials: Dry-packaged concrete mix complying with ASTM C 387 for normal-weight concrete mixed with potable water according to manufacturer's written instructions.

10.3 Construction Methods

10.3.1 Examination: Contractor shall examine areas and conditions, with Installer present, for compliance with requirements for site clearing, earthwork, pavement work, and other conditions affecting performance.

Contractor shall not begin installation before final grading is completed, unless otherwise permitted by WVANG nor proceed with installation only after unsatisfactory conditions have been corrected.

10.3.2 Preparation

Contractor shall stake locations of fence lines and terminal posts and indicate locations of utilities, lawn sprinkler system, underground structures, benchmarks, and property monuments.

10.3.3 Installation, General

General: Contractor shall install chain-link fencing to comply with ASTM F 567 and in accordance with WVDOH Specifications.

Post Excavation: Contractor shall drill or hand-excavate holes for posts to diameters and spacings indicated, in firm, undisturbed or compacted soil.

Post Setting: Contractor shall hand-excavate holes for post foundations in firm, undisturbed or compacted soil; set posts in concrete footings; protect portion of posts aboveground from concrete splatter; and place concrete around posts and vibrate or tamp for consolidation. Using mechanical devices to set line posts per ASTM F 567 is not permitted. Contractor shall verify that posts are set plumb, aligned, and at correct height and spacing, and hold in position during placement and finishing operations until concrete is sufficiently cured.

1. Dimensions and Profile: As indicated on Construction Drawings.
2. Exposed Concrete Footings: Contractor shall extend concrete 2 inches above grade, smooth, and shape to shed water.
3. Posts Set into Concrete in Sleeves: Contractor shall use steel pipe sleeves preset and anchored into concrete for installing posts. After posts have been inserted into sleeves, Contractor shall fill annular space between post and sleeve with nonshrink, nonmetallic grout, mixed and placed to comply with anchoring material manufacturer's written instructions, and finished sloped to drain water away from post.

10.3.4 Chain-Link Fence Installation

- A. Terminal Posts: Contractor shall locate terminal end, corner, and gate posts per ASTM F 567 and terminal pull posts at changes in horizontal or vertical alignment of 15 degrees or more.
- B. Line Posts: Contractor shall space line posts uniformly at 10 feet o.c.
- C. Post Bracing Assemblies: Contractor shall install post bracing assemblies according to ASTM F 567, maintaining plumb position and alignment of fencing; and install braces at end and gate posts and at both sides of corner and pull posts. Contractor shall locate horizontal braces at midheight of fabric on fences with top rail and at two-thirds fabric height on fences without top rail and install so posts are plumb when diagonal rod is under proper tension.
- D. Tension Wire: Contractor shall install tension wire according to ASTM F 567, maintaining plumb position and alignment of fencing. Contractor shall pull wire taut, without sags; fasten fabric to tension wire with 0.120-inch diameter hog rings of same material and finish as fabric wire, spaced a maximum of 24 inches o.c. Contractor shall install tension wire in locations indicated before stretching fabric.
 1. Top Tension Wire: Contractor shall install tension wire through post cap loops.

2. Bottom Tension Wire: Contractor shall install tension wire within 6 inches of bottom of fabric and tie to each post with not less than same gage and type of wire.
- E. Top Rail: Contractor shall install top rail according to ASTM F 567, maintaining plumb position and alignment of fencing. Run rail continuously through line post caps, bending to radius for curved runs and terminating into rail end attached to posts or post caps fabricated to receive rail at terminal posts. Contractor shall provide expansion couplings as recommended by fencing manufacturer.
 - F. Intermediate Rails: Contractor shall install intermediate rails in one piece at post-height center span, spanning between posts, using fittings, special offset fittings, and accessories.
 - G. Chain-Link Fabric: Contractor shall apply fabric to outside of enclosing framework. Leave 1 inch between finish grade or surface and bottom selvage, unless otherwise indicated and pull fabric taut and tie to posts, rails, and tension wires. Anchor to framework so fabric remains under tension after pulling force is released.
 - H. Tension or Stretcher Bars: Contractor shall thread through fabric and secure to end, corner, pull, and gate posts with tension bands spaced not more than 15 inches o.c.
 - I. Tie Wires: Contractor shall use wire of proper length to firmly secure fabric to line posts and rails, attach wire at one end to chain-link fabric, wrap wire around post a minimum of 180 degrees, and attach other end to chain-link fabric per ASTM F 626. Contractor shall bend ends of wire to minimize hazard to individuals and clothing. Maximum Spacing: Contractor shall tie fabric to line posts 12 inches o.c. and to braces 24 inches o.c.

10.4 Method of Measurement

- 10.4.1 The method of measurement for new chain-link fence shall be on a linear foot basis acceptably installed.
- 10.4.2 The method of measurement for existing chain-link fence shall be on a linear foot basis removed and acceptably reinstalled.

10.5 Basis of Payment

- 10.5.1 The basis of payment for chain-link fence will be by Unit Price bid for "Chain-Link Fence.

10.5.2 The basis of payment for the Existing Chain-Link Fence will be by Unit Price bid for “Existing Chain-Link Fence with Barbed Wire Removal and Reinstallation of Chain-Link Fence.”

10.6 **Pay Item**

Item 10.1, “Chain-Link Fence,” per linear foot.

Item 10.2, “Existing Chain-Link Fence with Barbed Wire Removal and Reinstallation,” per linear foot.

11.0 REVEGETATION

11.1 Description

This work shall cover the establishment of vegetation within the limits of construction as shown on the Construction Drawings and any other areas as approved by the WVANG. This work also includes the furnishing and the application of fertilizer, agricultural limestone and mulch and the furnishing and sowing of seed, all in accordance with these Specifications and as designated herein.

No areas outside the limits of construction shall be disturbed without prior approval from the WVANG in order to ensure that Right-of-Entry has been obtained.

Any areas outside the limits of construction, disturbed by the Contractor shall be revegetated by the Contractor at no expense to the WVANG.

11.2 Materials

11.2.1 Fertilizer

The commercial fertilizer to be used shall consist of 10-20-10 grade of uniform composition and furnished in standard containers. These containers, in accordance with applicable state and federal laws, must be clearly marked with the following information:

- a. Weight
- b. Name of Plant Nutrients
- c. Guaranteed Nutrients Percentages

Fertilizer shall be applied at a minimum rate of 1,000 lbs/acre. Fertilizer shall be applied immediately to all areas reaching final grade by one of the two following methods:

- a. Apply and incorporate fertilizer during seedbed preparation.
- b. Apply fertilizer in hydro seeding mixture following seedbed preparation.

11.2.2 Limestone

The lime to be used will be an agricultural grade pulverized limestone containing a minimum of 10% MgCO₃ and not less than 75% total carbonates. Fineness will be such that no less than 75% will pass through a #100 sieve and 100% will pass through a #10 sieve.

Lime rate shall be formulated from soil test results. In the absence of soil testing, a rate of five (5) tons per acre will serve as a preferred minimum.

Lime shall be applied immediately to all areas requiring seeding reaching final grade by one of the two methods listed in Section 11.2.1, "Fertilizer."

11.2.3 Seed Mixtures

The variety of grass and legume seed furnished for the project shall bear a tag, in accordance with applicable state and federal laws, with the following information listed:

1. Lot Number
2. Seed Producers Name
3. Percent Purity
4. Percent Germination
5. Date of Germination Testing
6. Weed Seed Content (should be <0.25% by weight)

All leguminous seed shall be inoculated with the specified strain of rhizobia which shall be a pure culture of bacteria selected for maximum vitality. No rhizobia shall be used which has passed the expiration date on each package. The inoculant shall be applied at five times the recommended rate except when used in a hydroseeding mixture when the rate will be ten times the recommended rate.

11.2.3.1 Temporary Seed Mixture

All stockpiles or other disturbed areas which will require further disturbance in which the additional disturbance will be delayed for a period of three (3) weeks or longer shall be vegetated according to the following guidelines.

Temporary Seed Mixtures (Per Acre)

Summer Seeding (July through August)		Winter Seeding (November through January)	
German Millet	40 lbs.	Winter wheat	50 lbs.
		or	
		Cereal Rye	40 lbs.
		Annual Ryegrass	20 lbs.
Overseed in the Fall with Appropriate Seed Mixture		Overseed in the Spring with Appropriate Seed Mixture	
Fertilizer (per Acre) 10-20-10		600 lbs.	

All areas to be temporarily seeded which are to be redisturbed shall be fertilized with 500 lbs/acre of 10-20-10. All areas reaching final grade to be temporarily seeded shall be fertilized according to Section 11.2.1. Lime shall be applied according to Section 11.2.2 and mulched according to Section 11.2.4.

11.2.3.2 Permanent Seed Mixture

Permanent vegetation shall be established on all areas reaching final grade or other areas not likely to be destroyed by further construction activities. Any areas which reach final grade between May 31 - August 15 or October 15 - November 15 shall be seeded with the appropriate temporary seed mixture according to Section 11.2.3.1. These areas shall then be reseeded with a permanent seed mixture, without Annual Ryegrass, during the next defined seeding period according to this section. The actual date of permanent seeding will require the WVANG's approval.

Permanent Seed Mixtures (Per Acre) - Non Lawn Areas

Spring Seeding (February 15 through May 15)		Fall Seeding (August 1 through October 15)	
Annual Ryegrass	20 lbs.	Annual Ryegrass	20 lbs.
Orchardgrass	20 lbs.	Orchardgrass	20 lbs.
Red Clover	15 lbs.	Red Clover	15 lbs.
Birdsfoot Trefoil	15 lbs.	Birdsfoot Trefoil	15 lbs.
Cereal Rye	30 lbs.	Cereal Rye	0 lbs.
Winter Wheat	0 lbs.	Winter Wheat	30 lbs.
Fertilizer (per Acre) 10-20-10 1000 lbs			

*Use only certified "blue tag" seed. Seed-rate suggested is for pure live seed (PLS) in lbs/acre.

11.2.4 Mulch Material

Mulching procedures shall take place immediately following seeding. Mulch material shall consist of straw or wood cellulose fiber.

11.2.4.1 Straw

Straw mulch shall include baled wheat or oats straw, or baled grass hay. Straw mulch shall be dry and reasonably free of weed, seeds, sticks, or other foreign material. Straw mulch shall be applied at a rate of 2 tons/acre. The straw

straw mulch shall be anchored with 100 gallons/acre asphalt emulsion or 750 lbs/acre wood cellulose fiber. However, baled grass hay will not be allowed as mulch for seeding lawn areas.

11.2.4.2 Wood Cellulose Fiber

Wood cellulose fiber may be used only on slopes steeper than 2H:1V at a rate of 1,500 lbs/acre. A mulch for use with the hydraulic application of seed, fertilizer, and lime shall consist of wood cellulose fiber. It shall be processed in such a manner that it will contain no growth or germination inhibiting factors and shall be dyed green. It shall be manufactured in such a manner that (1) after addition and agitation in slurry tanks with fertilizers, lime, seeds, and water, the fibers in the material will become uniformly suspended to form a homogeneous slurry and (2) the material, when hydraulically sprayed on the ground, will form a blotter-like ground cover impregnated uniformly with seed, and will allow rainfall to percolate to the underlying soil. Wood cellulose shall only be used on areas that have been approved by WVANG.

The wood cellulose fiber shall be supplied in packages having a gross weight not to exceed 100 pounds. Weight specifications of this material from suppliers, and for all applications, shall refer only to air dry weight of the fiber material. Air dry weight is based on the normal weight standard of the Technical Association of the Pulp and Paper Industry for Wood Cellulose and is considered equivalent to 10 percent moisture. Each package of the cellulose fiber shall be marked by the manufacturer to show the air dry weight content.

11.2.5 Water

Water shall be reasonably free of injurious and other toxic substances harmful to plant life. The source of water is subject to the approval of the WVANG.

11.3 Construction Methods

11.3.1 All revegetation activities shall be conducted immediately following completion of final grading so as to utilize the fine soil material as a seedbed before this material is lost via subsequent rainfall.

11.3.2 On sites where appropriate equipment can operate the seedbed shall be prepared by breaking up surface crusts and loosening the soil material to a minimum of three (3) inches. Disking, harrowing, cultipacking or other acceptable tillage operations may be used to prepare the seedbed. On sites where appropriate equipment cannot operate, the seedbed shall be prepared by "tracking in" with a dozer or scarifying by other

other approved methods. Lawn areas are to be hand raked. Rocks larger than six (6) inches in diameter or two (2) inches in diameter in lawn areas, trash, weeds and other debris that will interfere with seeding or maintenance shall be removed or disposed of as approved by the WVANG. Seedbed preparation shall be suspended when soil moisture conditions are not suitable for the preparation of a satisfactory seedbed as determined by WVANG.

- 11.3.3 Seedbed preparation and seeding shall take place progressively as various regraded areas are brought to final grade.
- 11.3.4 All seeding operations shall be performed immediately following seedbed preparation in such a manner that the seed is applied in the specified quantities uniformly on the designated areas.
- 11.3.5 Seed Application shall consist of approved hydroseeding methods where feasible. Any seed left in hydroseeder overnight shall be reinoculated before that seed shall be applied. Other methods of seed application may be utilized for site-specific reasons when approved by the WVANG.
- 11.3.6 Any area failing to establish a vegetative stand due to weather or adverse soil conditions shall be reseeded, relimed, refertilized and remulched as approved by the WVANG.
- 11.3.7 The Contractor shall maintain all seeded areas until final acceptance of the project. All areas shall be protected from any further equipment traffic and any damaged areas shall be repaired and reseeded. Maintaining seeded areas shall consist of watering, refilling, refertilizing, reliming, reseeding, and remulching erosion gullies and all bare areas.
- 11.3.8 A second and third seeding will be applied as needed, or as approved by the WVANG.

11.3.8.1 Second Step Seeding

The second step seeding will take place during the first defined seeding period following the initial seeding. No payment shall be made for second step seeding, this work is part of the contract if completed before the final inspection or shall be considered warranty if completed after the final inspection. The following shall be used as a guide for second step application.

- a. For areas with less than a 50 percent stand or subject to severe erosion, apply the complete amount of seed, fertilizer, lime much as specified.

- b. For areas with over 50 percent stand apply one half the original fertilizer, lime and seed. If erosion is a problem, apply one half of the original mulch specified in Section 6.2.4.

11.3.8.2 Third Step Seeding

The third step seeding shall consist of spot applications on areas not showing a satisfactory stand. The seeding shall take place at the next defined seeding period following the second step application. The quantity of material to be used shall be determined on the same basis as the second step application in Section 11.3.8.1.

11.4 Method of Measurement

The method of measurement for revegetation shall be per acre.

11.5 Basis of Payment

11.5.1 Payment will be made at the Contract unit price bid for these items, which price and payment shall be full compensation for doing all the work herein described in a workmanlike and acceptable manner; including the furnishing of all labor, materials, tools, equipment, supplies and incidentals as necessary to complete the work. Payment for seeding includes all seeding (i.e. – temporary, first and second seeding). No additional payment will be made for second or third step seeding.

11.5.2 Temporary seeding will be incidental to the seeding item and no separate measurement or payment will be made for temporary seeding. There will be no separate payment for maintaining seeded areas. No payment will be made for seeding after the final inspection. All work performed after the final inspection will be done under warranty.

11.6 Pay Items

Item 11.0, "Revegetation," per acre.

CONTRACTOR'S BID FORM

*West Virginia Army National Guard
Gallagher Tunnel Stormwater and Slope Erosion Project*

Item No.	Quantity		Description	Unit Price	Amount
1.0	1	LS	Mobilization and Demobilization (Limited to 10% of Total Bid)	\$ -	\$ -
3.0	1	LS	Construction Layout Stakes (Limited to 5% of Total Bid)	\$ -	\$ -
5.0	1	LS	Site Preparation (Limited to 10% of Total Bid)	\$ -	\$ -
6.1	250	LF	Silt Fence	\$ -	\$ -
6.2	4	EA	Rock Check Dams	\$ -	\$ -
7.0	640	SY	Rockfall Mesh	\$ -	\$ -
8.1	175	LF	Riprap Ditch	\$ -	\$ -
8.2	120	LF	42" RCP	\$ -	\$ -
8.3	22	LF	24" RCP	\$ -	\$ -
8.4	1	EA	72" Diameter Stormwater Manhole	\$ -	\$ -
8.5	2	EA	Headwall	\$ -	\$ -
9.1	2,200	CY	Fill Material	\$ -	\$ -
9.2	240	TN	Gravel	\$ -	\$ -
9.3	720	SY	Engineering Fabric	\$ -	\$ -
10.1	155	LF	Chain-Link Fence	\$ -	\$ -
10.2	120	LF	Existing Chain-Link Fence w/Barbed Wire Removal and Reinstallation	\$ -	\$ -
11.0	0.5	AC	Revegetation	\$ -	\$ -
TOTAL:					\$ -



State of West Virginia
DRUG FREE WORKPLACE CONFORMANCE AFFIDAVIT
West Virginia Code §21-1D-5

STATE OF _____

COUNTY OF _____, TO-WIT:

I, _____, after being first duly sworn, depose and state as follows:

- 1. I am an employee of _____; and,
(Company Name)
- 2. I do hereby attest that _____
(Company Name)

maintains a valid written drug free workplace policy and that such policy is in compliance with **West Virginia Code §21-1D-5**.

The above statements are sworn to under the penalty of perjury.

(Company Name)

By: _____

Title: _____

Date: _____

Taken, subscribed and sworn to before me this _____ day of _____.

By Commission expires _____

(Seal)

(Notary Public)

THIS AFFIDAVIT MUST BE SUBMITTED WITH THE BID IN ORDER TO COMPLY WITH WV CODE PROVISIONS. FAILURE TO INCLUDE THE AFFIDAVIT WITH THE BID SHALL RESULT IN DISQUALIFICATION OF THE BID.

STATE OF WEST VIRGINIA
Purchasing Division**PURCHASING AFFIDAVIT****VENDOR OWING A DEBT TO THE STATE:**

West Virginia Code §5A-3-10a provides that: No contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and the debt owed is an amount greater than one thousand dollars in the aggregate.

PUBLIC IMPROVEMENT CONTRACTS & DRUG-FREE WORKPLACE ACT:

If this is a solicitation for a public improvement construction contract, the vendor, by its signature below, affirms that it has a written plan for a drug-free workplace policy in compliance with Article 1D, Chapter 21 of the *West Virginia Code*. The vendor **must** make said affirmation with its bid submission. Further, public improvement construction contract may not be awarded to a vendor who does not have a written plan for a drug-free workplace policy in compliance with Article 1D, Chapter 21 of the *West Virginia Code* and who has not submitted that plan to the appropriate contracting authority in timely fashion. For a vendor who is a subcontractor, compliance with Section 5, Article 1D, Chapter 21 of the *West Virginia Code* may take place before their work on the public improvement is begun.

ANTITRUST:

In submitting a bid to any agency for the state of West Virginia, the bidder offers and agrees that if the bid is accepted the bidder will convey, sell, assign or transfer to the state of West Virginia all rights, title and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the state of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the state of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to the bidder.

I certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership or person or entity submitting a bid for the same materials, supplies, equipment or services and is in all respects fair and without collusion or fraud. I further certify that I am authorized to sign the certification on behalf of the bidder or this bid.

LICENSING:

Vendors must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agencies or political subdivision. Furthermore, the vendor must provide all necessary releases to obtain information to enable the Director or spending unit to verify that the vendor is licensed and in good standing with the above entities.

CONFIDENTIALITY:

The vendor agrees that he or she will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the agency's policies, procedures and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in <http://www.state.wv.us/admin/purchase/privacy/noticeConfidentiality.pdf>.

Under penalty of law for false swearing (*West Virginia Code* §61-5-3), it is hereby certified that the vendor affirms and acknowledges the information in this affidavit and is in compliance with the requirements as stated.

Vendor's Name: _____

Authorized Signature: _____ Date: _____