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	PAGE
DEFK11029	1

ADDRESS CORRESPONDENCE TO ATTENTION OF:
TARA LYLE
304-558-2544

VENDOR
RFQ COPY
TYPE NAME/ADDRESS HERE

SHIP TO
DIV ENGINEERING & FACILITIES
ARMORY BOARD SECTION

1707 COONSKIN DRIVE
CHARLESTON, WV
25311-1099 304-341-6368

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
04/21/2011				

BID OPENING DATE: 05/11/2011 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT

ADDENDUM NO. 3

1. QUESTION AND ANSWERS ARE ATTACHED.
2. TO MOVE THE BID OPENING DATE FROM 04/26/2011 TO 05/11/2011.
3. ADDENDUM ACKNOWLEDGEMENT IS ATTACHED. THIS DOCUMENT SHOULD BE SIGNED AND RETURNED WITH YOUR BID. FAILURE TO SIGN AND RETURN MAY RESULT IN DISQUALIFICATION OF YOUR BID.

END OF ADDENDUM NO. 3

0001 JB 968-20
1
CONSTRUCTION OF THE MORGANTOWN READINESS CENTER

****** THIS IS THE END OF RFQ DEFK11029 ****** TOTAL:

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE | TELEPHONE | DATE

TITLE | FEIN | ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

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. Prior to any award, the apparent successful vendor must be properly registered with the Purchasing Division and have paid the required $125 fee.

4. 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.

5. Payment may only be made after the delivery and acceptance of goods or services.

6. Interest may be paid for late payment in accordance with the ***West Virginia Code***.

7. Vendor preference will be granted upon written request in accordance with the ***West Virginia Code***.

8. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.

9. The Director of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller.

10. The laws of the State of West Virginia and the ***Legislative Rules*** of the Purchasing Division shall govern the purchasing process.

11. Any reference to automatic renewal is hereby deleted. The Contract may be renewed only upon mutual written agreement of the parties.

12. BANKRUPTCY: In the event the vendor/contractor files for bankruptcy protection, the State may deem this contract null and void, and terminate such contract without further order.

13. HIPAA BUSINESS ASSOCIATE ADDENDUM: The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, is available online at **www.state.wv.us/admin/purchase/vrc/hipaa.htm** and 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.

14. 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.

15. 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, and the West Virginia Insurance Commission. 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.

16. 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 material, 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.

INSTRUCTIONS TO BIDDERS

1. Use the quotation forms provided by the Purchasing Division. Complete all sections of the quotation form.

2. 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. Unit prices shall prevail in case of discrepancy. All quotations are considered F.O.B. destination unless alternate shipping terms are clearly identified in the quotation.

4. 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

5. Communication during the solicitation, bid, evaluation or award periods, except through the Purchasing Division, is strictly prohibited (W.Va. C.S.R. §148-1-6.6).

ZMM
ARCHITECTS & ENGINEERS

ADDENDUM NO. 3

RE: Morgantown Readiness Center
West Virginia Army National Guard
Morgantown, West Virginia
Architect's Project No. 0616

TO: Prospective Bidders

FROM: ZMM, Inc. Architects And Engineers

This Addendum forms a part of the Contract Documents and modifies the original Bidding Documents.

ATTACH THIS ADDENDUM TO THE FRONT COVER OF THE PROJECT MANUAL AND ACKNOWLEDGE RECEIPT OF THIS ADDENDUM IN THE SPACE PROVIDED ON THE BID FORM.

PART 1 - CLARIFICATIONS

A. Responses to Requests For Information (RFI) and Requests For Substitutions are attached to this Addendum.

B. Section 07210 – Building Insulation – Line 2.3.A.2: Sound attenuation blanket insulation can be unfaced.

C. Section 07610 – REPLACE Article 1.6 with the following:

1.6 WARRANTY

A. General Warranty: Special warranties specified in this Article shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by the Contractor under requirements of the Contract Documents.

B. Weather Tightness "no monetary limit" Warranty: Submit a written warranty, signed by manufacture, covering all system panels, insulations and system components and accessories. Warranty covers finish, materials, labor and workmanship.

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C. Special Finish Warranty: Submit a written warranty, signed by manufacturer, covering failure of the factory-applied exterior finish on metal roof panels within the specified warranty period and agreeing to repair finish or replace roof panels that show evidence of finish deterioration. Deterioration of finish includes, but is not limited to, color fade, chalking, cracking, peeling, and loss of film integrity. Non pro-rated liability coverage.

D. Finish Warranty Period: 20 years from date of Substantial Completion.

E. Weather Tightness "No Monetary Limit" Warranty Period: 20 years from date of Substantial Completion.

PART 2 - CHANGES TO SPECIFICATIONS

A. Bid Form Section Nos. II and III re-issued as attached to this Addendum.

B. REVISIONS TO BID FORM SECTION II, BID LIST

1. Delete Bid Item #35, "30' Sliding Gate".

2. Change Bid Item #36 from "20' Sliding Gate" to "24' Sliding Gate".

3. Change Bid Item #100 Quantity to "1", and Unit of Measure to "LS".

C. REVISIONS TO BID FORM SECTION III, DESCRIPTION OF BID ITEMS

1. Delete Bid Item Description #35, "30' Sliding Gate"

2. Revisions to Bid Item #36, "20' Sliding Gate"

a. Replace "20' Sliding Gate" with "24' Sliding Gate".

3. Revisions to Alternate Bid Item #14, "Grouting"

a. Replace Bid Item #100 with the following:

1) Bid Item 100: Grouting

2) Unit: Lump Sum (LS)

3) Description: This work consists of furnishing and complete installation of grout to fill any voids found within the project area and directed by the COTR. 10,000 lf of rotary drilling, 1,000 cy of grout, grout placement and grout testing in accordance with Specification Section 02751. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.

4) Measurement: There will be no direct measurement of materials, labor, and services provided by the Contractor in completing this item.

5) Payment: Payment shall be made at the contract unit price for lump sum.

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D. Section 01501 – Airport Operations Requirements – Supplemental Information.

1. Addendum No. 1 – Item E.2 reference Exhibits "A and B" are provided to aid with fence installation and are attached to this Addendum.

E. REPLACE Section 02300 – Earthwork dated 12/01/10 with replacement Section dated 04/15/11 as attached to this Addendum.

F. DELETE Section 05721 Ornamental Railings.

G. DELETE Section 06150 Wood Decking.

H. Section 07410 – Metal Soffit Panels – ADD line 2.2.B.4 to read: Dimensional Metals, Inc.

I. REPLACE Section 08345 – Vault Doors dated 10/08/10 with Section 08346 – Armory Doors dated 04/12/11 as attached to this Addendum.

J. Section 08712 – Door Hardware – Make the following revisions:

1. Hardware Set No. 8 – DELETE the following items for Door No. BB 1133 ONLY:

a. Acoustical Adjustable Jamb Weather Stripping.
b. Acoustical Door Bottoms.
c. Acoustical Threshold.

RETAIN balance of hardware indicated.

2. Hardware Set No. 29 – ADD the following items:

a. Acoustical Adjustable Jamb Weather Stripping.
b. Acoustical Door Bottoms.
c. Acoustical Threshold.

K. Section 10651 – Operable Panel Partitions: Make the following revisions:

1. REVISE Paragraph 2.2.A.1. to read: OP-01: Acousti-Seal #941 manually operated, single-panel operable partition. Include RT100 Track Suspension System.

2. REVISE Paragraph 2.2.A.2. to read: OP-02: Acousti-Seal #933E electrically operated, continuously-hinged panel operable partition. Include 30# Track Suspension System.

3. REPLACE Paragraph 2.3.A.1 and 2 with the following:

RT100 Suspension System – Multi-Directional

1) Suspension Tracks: Precision heat-treated extruded aluminum. Track to be supported by pairs of 3/8-inch (9.5 mm) diameter threaded rods.
2) Exposed track soffit: Aluminum, integral to track:
3) Standard: Clear anodized finish.

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4) Carriers: Shall have horizontal counter-rotating wheels with heavy duty steel thrust bearings. Carriers permit panels to traverse L, T, or X intersections without mechanical switching.

4. REPLACE Paragraph 2.3.B.1 and 2 with the following:

#30 Suspension System

1) Suspension Tracks: Track shall be structural aluminum. Static loading of track with brackets at 48-inch (1220 mm) centers shall show no failure of track or brackets at 5,000 pounds (2250 kg) point loading at mid-span. Track shall be supported by adjustable steel hanger brackets connected to structural support by pairs of 3/8-inch (9.5 mm) diameter threaded rods.

2) Exposed track soffit: Track soffit to be integral to track shape and shall be powder-coated off white paint finish. Track must accommodate termination of plenum sound barriers on both sides of track for maximum sound control.

3) Carriers: One trolley in alternating panels with 3-inch (76.2 mm) diameter glass reinforced nylon, all steel precision-ground ball-bearing wheels. Steel wheeled or reinforced polymer trolleys on aluminum track not permitted. Trolleys shall attach to panels with 1/2-inch (12.7 mm) diameter pendent bolt mounted to welded steel mounting plate.

L. REPLACE Section 09310 – Tiling dated 07/18/10 with replacement Section 09310 dated 04/15/11 as attached to this Addendum.

M. Section 11400 – Food Service Equipment – Make the following clarifications and revisions:

1. Kitchen Equipment List: Revise quantities for the following equipment items as numbered:

Equipment Item No.	Corrected Quantity
1 - Shelving Unit, Wire	4
8 – Sink, Hand	3
10 – Dispenser, Tray	1
12 – Cooler Shelving	3
13 – Freezer Shelving	3
14 – Range Restaurant, Gas	1
15 – Convection Oven, Gas	1

REVISE Item No. 38 To read: No. 29, Quantity: 1

2. Kitchen Equipment List: The following numbered items are revised as follows:

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a. Item No. 9 – Additional Acceptable Manufacturer – Scotsman.

b. Item Nos. 10, 11, 22, 23, and 27 – Additional Acceptable Manufacturer – Duke Manufacturing. Duke Manufacturing product for Item No. 22 must include "eutectic fluid self-contained refrigeration" in lieu of standard cold pan.

c. Item Nos. 14, 15, 16, and 20 – Additional Acceptable Manufacturer – Vulcan.

1) Item No. 15 Convection Ovens requires Vulcan Model No. SG44D with Two Year Warranty.

2) Item No. 16 Braising Pan is to include "Sliding Drain Drawer."

d. Item No. 21 – Additional Acceptable Manufacturer – Pitco product must have "Energy Star Rating".

N. REPLACE Section 13125 – Pre-Engineered Metal Storage Building dated 10/08/10 with same Section dated 04/12/11 as attached to this Addendum.

O. Section 15629 - Scroll Water Chillers - ADD York/ JCI "Tempo" to list of Manufacturers.

P. Section 15837 – Automotive Exhaust Systems - Paragraph 2.1 A Manufacturers – ADD MONOXIVENT.

Q. Section 15840 - Air Terminal Units, ADD York/JCI "TSS" to list of Manufacturers.

R. Section 15900, Building Automation Systems, ADD York/JCI "Metasys" to list of Manufacturers.

PART 3 - CHANGES TO DRAWINGS

A. REPLACE the following reference note in all Wall Section Drawings and Detail Drawings reading:

"Standing Seam Metal Roofing Over 30lb Asphalt-Saturated Felt Paper Over 3" Roof Insulation Over Metal Roof Decking"

with the following:

"Standing Seam Metal Roofing Over Underlayment Including Fiberglas-Mat Faced Gypsum Board Over 3" Roof Insulation Over Metal Roof Decking".

B. Reference the following revised Drawings as attached to this Addendum:

1. A2-2R1 Finish Plan Area 'A'
2. A2-3R1 Finish Plan Area 'B'
3. A2-5R1 Finish Plan Area 'D'
4. A2-6R1 Finish Schedule

C. ADD Supplemental Drawing No. E1-1R1 as attached to this Addendum.

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End Of Addendum

Attachments:	Responses to Requests For Information and Substitutions	6 pages
	Pre-Bid Meeting Minutes	5 pages
	Bid Form Section II	5 pages
	Bid Form Section III	31 pages
	Exhibits "A and B"	2 pages
	Section 02300 Earthwork	17 pages
	Section 08346 Armory Doors	5 pages
	Section 09310 Tiling	12 pages
	Section 13125 Pre-Engineered Metal storage Building	10 pages
	A2-2R1 Finish Plan Area 'A'	30" x 42"
	A2-3R1 Finish Plan Area 'B'	30" x 42"
	A2-5R1 Finish Plan Area 'D'	30" x 42"
	A2-6R1 Finish Schedule	30" x 42"
	Supplemental Drawing E1-1R1	8 ½" x 11"

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RE: Morgantown Readiness Center
West Virginia Army National Guard
Morgantown, West Virginia
Architect's Project No. 0616

Requests For Information (RFI) and Substitutions/*Responses*

1. Substitution Request to include Dorma Architectural Hardware is not accepted.

2. Substitution Request for numbered Kitchen Equipment Items was considered as follows:

   #2/3 Bally Cooler – No Approved Equals: WA Brown, Kolpak.

   #6 Insinger Dishwasher – No, Does not meet specifications. AM1ST allows for timed wash cycles of 1,2,4,or 6 minutes.

   #9 Hoshizaki Ice Maker – Yes.

   #17 & 35 Continental – No, Does not meet specifications. Traulsen uses expansion valve.

   #24 Univex Slicer – No, Hobart uses a stainless steel blade.

   #30 Univex Mixer – No, Does not meet specifications. Hobart has "ergonomic swing-out bowl".

   #31 Elecrtolux Food Processor – Yes.

3. Operable Panel Partition 10651 2.2 A 2 indicates electrically operated, 932 Paired it should be 933E. Track at 9'-0" height can be #30 or #14, use #30 52 STC. ***Provide 933E panel with #30 track.***

4. Operable Panel Partition 10651 2.2 A 1 Single Panels 931 can only go to 52 STC. 55 STC needs to be 941 4" thick panel and at 16'-0" height use RT100 Track (Contact Kevin Shinton at 412-457-1286 if you have any questions) ***Provide 941 panel with RT100 track.***

5. Hardware SET #8 LISTS ACOUSTICAL DR BOT'S/WEATHERSTRIP (DR- QQ1130 IS ACOUSTICAL ASSY); OTHER SET 8 DR (BB1133 IS NOT) SAME WITH SET #18 (DR-TT2001 IS ACOUSTICAL ASSY) OTHER SET 18 DR (E1165 IS NOT) ***Hardware for Door Nos. BB 1133 and E 1165 will be revised to delete acoustical weather stripping and door bottoms.***

6. Hardware SET #29 HAS 2 DOORS RR-1137 & RR-1138 (WHICH ARE ACOUSTICAL ASSY'S),BUT SET 29 DOES NOT LIST ACOUSTICAL DR BOT'S/WEATHERSTRIP ***Hardware Set No. 29 will be revised to include acoustical weather stripping and door bottoms.***

7. Specification Section 09831 – Acoustical Wall Finishes, Page 5 item B has two listings for AP-4. One is listed as GENERAL AP-4 and the other is listed as Alternative AP-4. GENERAL AP-4 is a 24" by 24" panel while the ALTERNATIVE AP-4 is a 18" by 48" Hardwood Panel. Please clarify what your intentions are for GENERAL AP-4 and ALTERNATIVE AP-4. Where is GENERAL AP-4 to be used and where is ALTERNATIVE AP-4 to be used? ***Either item can be provided for AP-4. They are located in the Large Practice Rooms.***

8. Bid Item #36 - 20' Sliding Gate: On drawing C1-3 there is only 1 20' gate and it is Layout Note #20, which describes a 20' pipe gate. Assuming that this is place on the bid form where this gate goes, is it a pipe or sliding gate? ***Bid Item #36 will be changed to 24' sliding gate in the next addendwn. The pipe gate is Bid Item #87.***

9. On drawing C1-3, Layout Note 25 is for a 24' sliding gate. This gate doesn't show up on the bid form. Is it supposed to be part of another bid item? ***No, it is incorrectly labeled 20 ft. on the Bid Form. Refer to response to question on Bid Item #36 above.***

10. Bid Item #35 - 30' Sliding Gate: On drawing C1-3 there is only 1 30' gate and it is Lay out Note #27, which describes a 30' double gate. Assuming this is the same gate, is it supposed to be a slide gate or a double gate? ***Bid Item will be eliminated in the forthcoming Addendum.***

11. Bid Item #11 - Double Swing Gate, 30'. On drawing C1-3, this appears to be a 16' swing gate. Which size is correct? ***Drawing C1-3 "Site Layout" shows one 30 ft. and two 16 ft. double swing gates.***

12. In Addendum 1 E 2 it says "Exhibit A and B are provided to aid with fence installation", what or where are Exhibit A and B? ***Exhibits "A" and "B" will be issued in the forthcoming Addendum.***

13. Masonry wall type 3 at room 1044 on sheet A1.5, does it go to deck because ceiling is exposed per finish schedule? Or does it stop at 8'-8"? ***Partition should extend to underside of deck.***

14. What is construction of wall type 16 in Rooms 1111, 1110, and 1054? ***Wall Furring: 1-layer of 5/8" GWB on 3-5/8" metal studs @ 24" o.c.***

15. Is double layer drywall ceiling (suspended) in Auditorium part of base bid or Alternate 5? ***Base Bid***

16. In areas where suspended acoustic ceiling is called out below the double layer drywall ceilings, are the acoustic ceilings suspended (attached) from the drywall system or the structure above? For example see 2 on A6-4. ***Structure above.***

17. Detail 3 on A6-10 note calls for 10" metal joist framing @ 16" o.c to support suspended ceiling. Should this note say 48" o.c since ceiling is supported @ 48" o.c? Also, what gauge would these studs be? ***24" o.c. is sufficient.***

18. Please clarify "Alternate suspension cables and 2 ½" metal studs for bridging ties." Not sure if this is an alternate to the 2 ½" metal stud bridging @ 4'0" o.c or if it is in addition to and we are to alternate the cables and studs. ***Alternate the cables and studs.***

19. In auditorium where drywall ceiling is suspended from structure above; (1 on A6-8), the trusses in this area are mostly 8' o.c. Will it be acceptable to splay wires from the trusses? Or will there need to be bridging between the trusses to suspend the ceiling? ***Do not splay wires. Bridging not required. Extend hanger wires to underside of metal deck.***

20. All similar details for suspended drywall ceilings i.e. (1 on A6-4 thru 4 on A6-4, 2 on A6-13, 1 on A-8) call for 7/8 metal furring channels attached to 1 ¼" metal channel. Spec section 09111, 2.2, C calls out minimum 2 ½". Please clarify. ***2-1/2" is correct.***

21. Does bulkhead framing shown on details (2 on A6-5, 3 on A6-5, 1 on A6-6) fall under spec section 09111 or 05400 as far as shop drawings, gauges, connections, etc? ***Section 09111***

22. Detail 4 on A6-4 and all similar sections have a note that reads "1 ¼" metal channel @ each isolation hanger attach to top of joists." What is acceptable method of attachment? Is this to be used as bridging to keep wires from being splayed? ***Attach per manufacturer's recommendations.***

23. Details 4 on A6-1 and all similar details, is 3 ½" sound attenuation blanket in drywall ceiling faced or unfaced? ***Sound attenuation blanket insulation may be unfaced. Reference Specifications Section 07210 line 2.3.A.2.***

24. Detail 4 on A6-9 and all similar details: calls out suspension "cables". Is this something other than hanger wire that is listed in spec section 09111-3, 2.2, B? ***No.***

25. In reference to spec section 09250, 3.5, D, 3 "unless level 4 is indicated. Where would this be indicated at? ***No level 4 required.***

26. Please verify that room number 1077 is the only room that requires sound insulation in the suspended acoustic ceilings as referenced in spec section 07210, 3.5, B. ***Yes.***

27. What are drywall ceilings in the restrooms, showers, and toilet areas to be framed with? ***Drywall grid is acceptable per 09111.***

28. Spec section 09111, 2.2 calls out for the use of drywall grid. Is this acceptable for drywall ceilings that are not detailed in building and wall section drawings (A6-1 thru A6-18)? ***Yes. This is also acceptable for those detailed in the building and wall sections.***

29. Addendum 1 Part 3. F. 1. references crane restrictions on hours of use and maximum height. Please provide what these restrictions are for the immediate areas around the proposed building. ***Any proposed use of cranes over 80 feet above existing grade will require written approval from Morgantown Municipal Airport.***

30. Will a bituminous waterproofing coating be required under all concrete that is placed on exposed shale? Please specify a product. Will this also be required under areas where a lean concrete mud matt is place? ***The Mud Mat will be removed from Section 02300 Earthwork in the next addendum. There is no bituminous waterproofing specified for concrete installed over the exposed shale.***

31. Please provide details & limits for the mud mat specified in spec 02300 3.22 B.1. ***The Mud Mat will be removed from Section 02300 Earthwork in the next addendum.***

32. Please clarify the requirements for the sub-grade prep work referenced in spec 02300 3.21 B.1 & B.2. This section references lime stabilization & water proof coating of the sub grade. ***The lime stabilization and water proof coating requirements do not apply to this project and will be replaced with the correct requirements in the next addendum.***

33. Drawing C1-5 : need reinforcing information for the riser concrete bases. ***#4 bars at 12 inches O.C. each way.***

34. Drawing C2-11 : need reinforcing information for the wash rack pad and curb. ***WWF 6 x 6, W2.9 x 2.9.***

35. Drawing C2-15 : need reinforcing information for the fuel truck parking pad and curb. ***WWF 6 x 6, W2.9 x 2.9.***

36. Substitution Request to use Tate Access Flooring is not accepted.

37. Regarding drawing C1-1.1, please provide the extent of removal for the 18" CMP. Unless directed otherwise, we shall assume that the line shall be capped at the property line and removed within the boundaries of the property, is this correct? ***The entire pipe shall be removed.***

38. Regarding drawing C1-1.1, is there underground electric in excess of that which is shown on the drawings? Specifically to power the light bases not in line with the shown underground electric as well as the edge lights. Also, to what extent shall the shown underground electric be removed? We assume that the underground electric which is shown is the only underground electric to be removed and that it shall be removed from the transformer (noted to be removed by Allegheny Power) to the northern property line, is this correct? ***Yes, there is underground electric in excess of that which is shown on the drawings. There shall be total removal of the underground electric shown. Yes, the underground electric shown is the only underground electric to be removed and it shall be removed from the transformer to the northern property line.***

39. Layout note 42 on C1-3 is used for both the Permanent and Temporary AOA Fence. This note references drawing C2-5, on which there is only one fence detail which appears to be permanent. We assume that all fences shall be per the details on C2-5 and, if the "Temporary" fence is to be removed, it shall be removed by others, is this correct? ***Yes, that is correct.***

40. Please provide a specification for the grouting required per Alternate #14. Also, please provide unit prices under Alternate #14 to pay for Grout Mobilization (LS) and Drilling (LF). Grout Mobilization cannot be carried under the "Mobilization" unit price because it will only be required if Alternate #14 is accepted and it cannot be incorporated into the cubic yardage price because it will be a lump sum completely independent of the quantity installed. Also, please consider the fact that the drilling operation and associated quantity will be completely independent of the quantity of grout pumped and therefore should be priced separately. ***Alternate # 14 will be revised to a lump sum item in the next addendum.***

41. In reference to utility company fees. We assume all fees charged by the utility companies with the exception of usage charges for the construction work are paid for by the owner directly. Is this correct? If this is incorrect please provide all the required information on the utility companies that may require fees associated with this project. We require names, contact information, pertinent engineering information that may be required by the utility companies.

    No, the contractor is responsible to obtain and pay for all required applications, permits and inspections pertaining to the work. Refer to Specification Section 1500 'Temporary Facilities" paragraph 1.4 for additional information on contractor responsibilities. At a minimum, tapping fees are required for both water and sewer connections by the Morgantown Utility Board (304-292-8443). The estimated tapping fees are $700 for sanitary sewer and approximately $2,000 for water service. However, the contractor is not responsible for costs associated with utility line extensions required to provide permanent service to the project.

42. Can the period for pre bid RFIs be extended to allow for more drawing review time? ***NO.***

43. We need more information concerning the storage building such as Heights and materials. ***Supplemental information to be supplied in forthcoming Addendum.***

44. We received the test borings but not the geotechnical report. Will the report be made available? ***Report not available.***

45. Is the fencing shown on the plans to be permanent or is it temporary in some locations? ***The AOA fencing is labeled as Temporary or Permanent on Sheet CI-l.I ,"Airport Safety and Demolition Plan".***

46. Are we responsible for applying stone to the existing dirt access roads? ***Yes, refer to Note No. 6 of the "Airport Operations Requirements Notes" on Drawing Sheet C1-1.1 "Airport Safety and Demolition Plan" and to Specification section 01501 :Airport Operations requirements" paragraph 3.2.B.1.***

47. Can the bid breakdown be submitted on an excel spreadsheet as long as it matches the breakdown shown in the specs on the bid form? ***Bidders are to submit bids on bid forms provided as per Instructions To Bidders.***

48. Is there an anticipated start date? ***Starting Date is not specified.***

49. Some of the drawings indicate the storage building being by others. Please clarify. ***Storage Building is not work by others and is part of the project.***

50. What are the requirements for data connectivity to the auditorium seating as indicated in Alternate 13? ***The data jacks are integral to the furniture from the manufacturer. Division 16 provides data cabling and terminations.***

51. The documents define the IT/Data Cabling requirements, data outlet locations and configurations, but no equipment rack configurations. Will this information be available? ***The equipment rack configurations are the responsibility of the contractor and the supplier. The layout shall be based on the data outlet quantities and locations in reference to the nearest data closet.***

SUBSTITUTION REQUESTS:

52. Networked Voice Evacuation Fire Alarm System / MNS Section 16721: ***Siemens MXLV Fire Safety and Communication System is not an approved substitution.***

53. Security Access Control Section 16789: ***Schlage SRCNX-R Security Management System is not an approved substitution.***

54. IP Closed Circuit TV System Section 16782: ***Panasonic is not an approved substitution.***

    Galaxy Open Eye IP Camera System and associated software compatible DVR is an approved substitution.

55. Voice and Data Cabling Systems Section 16950: ***Hubbell-Premise and Leviton are approved manufacturers for data connectivity devices.***

C&FMO-WVARNG

Pre-Bid Meeting Minutes
Morgantown Readiness Center
05 April 2011

Project Number:	DEFK11029
Date of Pre-Bid Meeting:	29 March 2011
Time of Pre-Bid:	1300
Location of Pre-Bid:	Morgantown Airport

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1. Funding: Project is a federally-funded, State-administrated project. Award of this Project is contingent on availability of Federal Funds.

2. Project User: West Virginia Army National Guard

3. Project Administrator: Construction & Facilities Management Office, WVARNG

   A. Address:

   1703 Coonskin Drive
   Charleston, WV 25311

   B. Principals:

   LTC David Shafer, CFMO
   CPT Daniel Clevenger, Acting Design & Construction Branch Chief
   CPT Daniel Clevenger, Project Manager
   Gary Blackhurst, Environmental Program Management Officer

4. Division of Purchasing:

   Ms. Tara Lyle
   Email: tara.l.lyle@wv.gov
   (304) 558-2544 (office)
   (304) 558-4115 (fax)

5. Designer of Record:

   ZMM Architects and Engineers
   222 Lee Street West
   Charleston, WV 25302
   Mr. Adam Krason

6. Questions:

   Questions must be submitted to Purchasing Division, attention Ms. Tara Lyle via email (tara.l.lyle@wv.gov), USPS, Fax or Courier no later than 1700 on *06 April 2011*. Direct

discussion is not authorized with the Designer of Record, the Facilities Engineer, or the Project Manager.

7. Prevailing Wage: State Prevailing Wage Rates Apply.

8. Bid Opening: Bid Opening is scheduled for *26 April 2011* at 1:30 PM.

9. Change Orders: The only changes authorized or reviewed by the Owner will be
   A. Owner directed.
   B. Unforeseen site conditions.

10. Bidding Issues
   A. Government assumes no responsibility for any conclusions or interpretations made by the Contractor based on the information made available by the Government. Conflicts in drawings, clarifications, and/or lack of clarity shall be the responsibility of the Contractor after Bid Award. The Contractor is responsible to seek clarification prior to bidding if they believe there is a conflict or lack of clarity.
   B. Government assumes no responsibility for any understanding reached or representation made concerning conditions which can affect the work by any of its officers or agents before the execution of this contract, unless that understanding or representation is expressly stated in this contract. The solicitation and specification remain unchanged regardless of what is said at the pre-bid conference unless they are changed by formal amendment to the solicitation.

11. Purchasing Documents:
   A. All blanks on the RFQ must be filled in.
   B. Bid bond must be submitted with bid.
   C. Drug Free Compliance Affidavit (mandatory submission with bid)
   D. Purchasing Affidavit
   E. Workers Compensation and Unemployment Certificates

12. Work Hours / Site Access / Security:
   A. The Contractor will have access to the site from 0700 to 1800 hrs, Monday to Friday. If work hours must be modified, these will be approved on a case-by-case via the Project Manager.
   B. Contractor is required to provide to the Project Manager, a listing of personnel, which will be gaining access to the site at the first pre-construction meeting.
   C. Superintendence: In accordance with Contract documents, the Contractor must maintain full-time, active superintendent on the job. Duties of the superintendent will be identified at the first pre-construction meeting.
   D. Morgantown Airport Requirements: Refer to Airport Operation Requirements – Section 01501.

13. Temporary Facilities / Utility Usage:

    A. Temporary Facilities

    B. Utility Usage

14. Contract Duration / Liquidated Damages:

    A. Contract Duration: *545* days from the Notice to Proceed with milestones.

    B. Liquidated Damages: *$1,500* for each day of delay, plus a one time fixed cost of *$2,500* for Staff Judge Advocate Review and contract modification. Per General Provisions 54, "Liquidated Damages".

15. Safety:

    A. All construction activities will be in conjunction with OHSA, Safety and Health Requirements Manual (US Army Corps of Engineers). As noted, the Army safety and health standards mirror OHSA. All construction activities on site will be a hardhat area and marked as such.

    B. Access to the site will be restricted and controlled by the Contractor. Review civil plans for access control path. A visitor's sign-in sheet and hardhats to be made available for personnel visiting site.

    C. Temporary fueling operations: Any temporary fueling operation will be maintained in accordance with OSHA and WV Fire Marshall Standards to included secondary containment, fire extinguishers, and spill control.

    D. Cleanup required daily by each perspective sub and General Contractor: No open dumps of construction materials. Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off Owner's property. Crushed pavement, gravel and clean soil may be given to nearby landowners with written approval from the C&FMO.

16. Supervision of Work:

    Designer of Record will have the responsibility for the observation of Contractor's quality of work. The Designer of Record will provide recommendations for actions regarding progress payments, change orders, and acceptance of work.

17. Aspects of Contract: Please review the following information.

    A. Modification Procedures – Section 01035
    B. Project Coordination (Correspondence) – Section 01040
    C. Cutting and Patching – Section 01045
    D. Project Meetings – Section 1200
    E. Submittals – Section 01300
    F. Construction Analysis - Schedules and Reports – Section 01355
    G. Materials and Equipment – Section 01600
    H. Warranties – Section 01740

18. Substitutions:

    A. Substitution requests must be submitted within *30* days of Notice to Proceed.

    B. Substitution requests will only be considered when one or more of the following applies:

1. Extensive revisions to the Contract Documents are not required.
2. Proposed changes are in keeping with the intent of the Contract Documents.
3. The request is timely, fully documented and properly submitted.
4. The specified product or method cannot be provided within the Contract Time. The Architect will not consider the request if the specified product cannot be provided as a result of failure to pursue the Work promptly.
5. The request is related to an "or-equal" clause.
6. A substantial advantage is offered the Owner, in terms of cost, time, energy conservation or other considerations of merit, after deducting offsetting responsibilities the Owner may be required to bear. Such additional responsibilities for the Owner may include additional expenses for redesign and evaluation services, increased cost of related construction, and other similar considerations.
7. The specified product cannot receive approval by a governing authority, and the substitution can be approved.
8. The Contractor's submittal and the Architect's review or approval of Shop Drawings, Product Data or Samples that relate to a substitute does not by itself constitute a final approval of the requested substitution, nor does it relieve the Contractor from fulfilling existing Contract Requirements. Final approval will be granted by the Owner and confirmed in the form of a Change Order.

C. Approval of Material Submittals shall not relieve the Contractor from responsibility for any errors or omissions in such drawings, nor from responsibility for complying with the requirements of this contract, except with respect to variations described and approved in accordance as stated in (d) below.

D. If shop drawings show variations from the contract requirements, the Contractor shall describe such variations in writing, separate from the submittals, at the time of submission. If the Contracting Officer shall issue an appropriate contract modification, except that, if the variation is minor or does not involve a change in price or in time of performance, a modification NEED not be issued.

19. Summary of Work

A. Project Description: A brief description of the Project was provided by ZMM.

B. Work will be constructed under a single prime contractor.

C. Contractor shall have full use of premises for construction operations, subject to limitations and requirements of the West Virginia Army National Guard, and access requirements of Morgantown Municipal Airport.

20. Civil Work

A. Scope of Work: A description of the Project scope was provided by CEI which consisted of the following:

1. Existing site consists of asphalt runway and unreclaimed strip mine
2. All work must comply with the requirements in Specification Section 01501 – Airport Operations Requirements
3. Training provided by MMA required prior to being in the Airport Operations Area
4. Project site shall be barricaded and fenced off to remove project site from AOA
5. Mobilization is not allowed until Airport approves the new AOA perimeter

6. Access is from Hartman Run Road
   a. Gravel access road crosses through the Airport Operations Area
   b. Security must be posted at the two entrances to the crossing point
   c. All untrained personnel and deliveries must be escorted through the AOA
7. NO Burning and NO Blasting is allowed.
8. Coal or other organic material is not acceptable in soil or rock fill
9. Sandy silts, sandy clays and shales are the predominant soil and rock on the site
10. Some excavation is expected to occur in sandstone or sandy shale
11. Four contingency bid items that deal with wet or soft soil conditions - not expecting to have to use much of these items
12. Soil Drying: Lime addition to soil stockpile
13. Soil conditioning: Lime addition to top 12" layer of soil
14. Subsurface Drains: 24" of #57 stone wrapped in geotextile with drain pipe
15. Over-Excavation: Biaxial geogrid and 18" #1 stone
16. Foundations are shallow spread footings bearing on 5,000 psf material
17. Southwest corner will require excavation to reach suitable bearing material and requires lean concrete backfill
18. Subgrade Preparation Pay Item: 24" of removal and re-compaction under improvements in cut areas
19. WVARNG is in the process of obtaining the CSW permit for the project
20. Contractor must obtain CSW permit modification prior to beginning work
21. Mass excavation not allowed until initial E & S measures are in place - including Ponds
22. Contractor must obtain City of Morgantown Contractor's license and pay 2% B&O taxes
23. LEED Project: Demolished asphalt may be used for access road maintenance.

SECTION II - BID ITEMS AND UNIT COSTS

In the event that unit quantities stated below differ from quantities required for completion of the Work, unit costs as stated below shall be the basis of adjustments in Contract Sum.

Bid items with the same number must include the same unit price.

NO.	ITEM	QTY	UNIT	UNIT PRICE ($)	EXTENDED PRICE ($)
Primary Facility Base Bid					
1	Readiness Center	1	LS		
2	Unheated Storage Building	1	LS		
	PRIMARY FACILITY BASE BID SUB-TOTAL				
Project Administration/Quality Control Base Bid					
3	Mobilization/Demobilization	1	LS		
4	General Administration	1	LS		
5	Project Quality Control	1	LS		
	PROJECT ADMIN/QUALITY CONTROL SUB-TOTAL				
Civil/Site Base Bid					
Site Preparation					
6	Site Preparation	1	LS		
7	Sediment and Erosion Control	1	LS		
8	Retention Ponds	1	LS		
9	Waste Disposal	5	TN		
10	AOA Fencing	2,800	LF		
11	Double Swing Gate, 30'	3	EA		
12	Monitoring Well Removal	1	LS		
Earthwork					
13	Unclassified Excavation	1	LS		
14	Subgrade Preparation	20,000	SY		
15	Soil Drying	100	TN		
16	Soil Conditioning	500	SY		
17	Over-Excavation	100	SY		
18	6" Subsurface Drains	600	LF		
On-Site Roads and Paving					
19	7" Concrete Paving	9,252	SY		
20	HMA Wearing Course	584	TN		
21	HMA Base Course	2,659	TN		
22	Free Draining Base	3,822	TN		
23	Free Draining Base Trench and Piping	3,550	LF		

NO.	ITEM	QTY	UNIT	UNIT PRICE ($)	EXTENDED PRICE ($)
24	Fabric Separation	17,600	SY		
25	Class 1 Stone	3,100	TN		
26	Pavement Marking	1	LS		
27	Wheel Stops	95	EA		
28	Concrete Curbing	1,700	LF		
29	Signage	1	LS		
Off-Site Roads and Paving					
20	HMA Wearing Course	90	TN		
21	HMA Base Course	480	TN		
22	Free Draining Base	252	TN		
23	Free Draining Base Trench and Piping	783	LF		
24	Fabric Separation	1,120	SY		
25	Class 1 Stone	189	TN		
30	Pavement Marking	1	LS		
Miscellaneous					
31	Sidewalk	1,500	SY		
32	Type I and II Lawns	1	LS		
33	Type III Ground Cover for Slopes	1	LS		
34	Force Protection Gate	2	EA		
35	Not Used	-	-	-	-
36	24' Sliding Gate	1	EA		
37	Security Fencing	900	LF		
38	40' Flagpole	2	EA		
39	Retaining Wall	600	LF		
40	Loading Dock Wall	1	LS		
41	Vehicle Wash Rack	1	LS		
42	Oil/Water Separator	1	EA		
43	Loading Ramp	1	LS		
44	Bollards 8"	15	EA		
45	Bollards 12"	6	EA		
46	Bollards Removeable	3	EA		
47	Trash Enclosure	1	LS		
48	Fuel Truck Pad	1	LS		
Water					
49	2" PVC Water	250	LF		
50	6" DIP Water	80	LF		
51	6" PVC Water	1,800	LF		
52	10" DIP Water	60	LF		
53	10" PVC Water	1,400	LF		
54	PIV	5	EA		
55	Fire Hydrant	4	EA		
56	Water Vault	1	EA		

NO.	ITEM	QTY	UNIT	UNIT PRICE ($)	EXTENDED PRICE ($)
Sewer					
57	Manholes, Sanitary Sewer	120	VF		
58	Frame and Cover, Sanitary Sewer	18	EA		
59	4" PVC Sanitary Sewer	150	LF		
60	6" PVC Sanitary Sewer	1,000	LF		
61	8" PVC Sanitary Sewer	1,500	LF		
62	8" DIP Sanitary Sewer	440	LF		
Gas					
63	4" Gas Service Line	1,800	LF		
Storm Drainage					
64	6" PVC Storm	1,400	LF		
65	12" PVC Storm	600	LF		
66	12" HDPE Storm	500	LF		
67	18" HDPE Storm	1,100	LF		
68	24" HDPE Storm	850	LF		
69	30" HDPE Storm	220	LF		
70	Type 1 Ditch	400	LF		
71	Type 2 Ditch	160	LF		
72	Type 4 Ditch	4,400	LF		
73	Junction Box	2	EA		
74	Type "B" Drop Inlets	20	EA		
75	Type "G" Drop Inlets	2	EA		
76	Stormwater Treatment Unit	2	EA		
77	12" In-Line Inlets	14	EA		
78	Trench Drain and Grate	40	LF		
79	Concrete Headwall	3	EA		
Power and Communications					
80	Electrical Duct Bank Type 1	200	LF		
81	Electrical Duct Bank Type 2	50	LF		
82	Electrical Duct Bank Type 3	60	LF		
83	Combined Duct Bank Type 1	700	LF		
84	Communications Duct Bank Type 1	150	LF		
85	Transformer Pad	1	LS		
86	Emergency Generator Pad	1	LS		
				CIVIL/SITE BASE BID SUB-TOTAL	

BASE BID TOTAL*	

*Note: Base Bid Total is the summation of PRIMARY FACILITY BASE BID, PROJECT ADMINISTRATION/QUALITY CONTROL BASE BID, and CIVIL/SITE BASE BID.

Alternate Bid Items					
NO.	ITEM	QTY	UNIT	UNIT PRICE ($)	EXTENDED PRICE ($)
Alternate #1 - Taxiway Access Road					
20	HMA Wearing Course	53	TN		
21	HMA Base Course	281	TN		
22	Free Draining Base	148	TN		
23	Free Draining Base Trench and Piping	360	LF		
24	Fabric Separation	657	SY		
25	Class 1 Stone	111	TN		
87	Pipe Gate	1	EA		
Alternate #1 Total					
Alternate #2 - Security Fencing Upgrade					
88	Upgrade to 8' Fabric	1	LS		
Alternate #2 Total					
Alternate #3 - Exterior Canopy					
89	Canopy	1	LS		
Alternate #3 Total					
Alternate #4 - Lockers					
90	Lockers	1	LS		
Alternate #4 Total					
Alternate #5 - Resilient Isolated Gypsum Board Ceilings					
91	Isolated Gypsum Board Ceilings	1	LS		
Alternate #5 Total					
Alternate #6 - Acoustical Wall and Ceiling Treatment for Practice Rooms and Large & Small Rehearsal Rooms					
92	Acoustical Treatment	1	LS		
Alternate #6 Total					
Alternate #7 - Acoustical Wall Treatment for Drill Hall					
93	Acoustical Wall Treatment	1	LS		
Alternate #7 Total					
Alternate #8 - Acoustical Wall Treatment for Auditorium and Main Rehearsal					
94	Acoustical Wall Treatment	1	LS		
Alternate #8 Total					

Alternate Bid Items					
NO.	ITEM	QTY	UNIT	UNIT PRICE ($)	EXTENDED PRICE ($)
Alternate #9 - Suspended Acoustic Reflectors for Auditorium and Main Rehearsal					
95	Acoustical Reflectors	1	LS		
Alternate #9 Total					
Alternate #10 - Additional Kitchen Equipment					
96	Additional Kitchen Equipment	1	LS		
Alternate #10 Total					
Alternate #11 - Landscaping					
97	Landscaping	1	LS		
Alternate #11 Total					
Alternate #12 - Dock Lift					
98	Dock Lift	1	LS		
Alternate #12 Total					
Alternate #13 - Power and Data on Fixed Audience Seating for Auditorium					
99	Seating Power and Data	1	LS		
Alternate #13 Total					
Alternate #14 - Grouting					
100	Grouting	1	LS		
Alternate #14 Total					
ALTERNATE BID ITEM TOTAL					

TOTAL COST WITH ALTERNATES	

END OF SECTION II

SECTION III – DESCRIPTION OF BID ITEMS

Bid Item 1:	**Readiness Center**
Unit:	Lump Sum (LS)
Description:	The item shall consist of any and all material, equipment, and labor for items required by the contract documents to provide a complete and functional Readiness Center building and/or assembly as shown under Base Bid in the Drawings and Specifications. The Readiness Center includes lobbies, corridors, administration space, recruiting and family support space, educational facilities, storage, locker rooms, physical training rooms, mail rooms, drill halls, toilets, janitor closets, as well as mechanical, electrical, and data rooms. This item shall include any additional items related to Site Construction where a unit cost has not been requested. Additionally, this work shall include site utilities, excavation and backfill to foundation subgrade for utilities and foundations, and grading within five feet of the building perimeter. The work shall include, but is not limited to, all materials, labor, equipment, and incidentals to construct the facility within the terms and conditions of the plans and specifications. This work also includes, but is not limited to: building excavation; backfill; foundation systems; gravel dry beds; up to 40 cubic yards of lean concrete backfill, concrete; masonry; veneer brick; structural steel; metal stud framing; pre-engineered metal trusses; carpentry and wood decking; waterproofing; insulation; roofing; interior and exterior walls; railings; doors; windows; finishes; casework; mechanical systems; electrical systems; fire suppression system; fire alarm; and data systems. The full extent of this work is defined by the Contract Documents, including the Drawings and Project Manual, dated February 24, 2011 as well as any addenda issued during the bidding process. Work shall include, but is not limited to, providing labor, materials, equipment, and incidentals necessary to perform all items of work.
Measurement:	Measurement will be based on completion of the work described and accepted by the Contracting Officer Technical Representative (COTR).
Payment:	Payment for item will be in accordance with the specifications.

Bid Item 2:	**Unheated Storage Building**
Unit:	Lump Sum (LS)
Description:	The item shall consist of any and all material, equipment, and labor for items required by the contract documents to provide a complete and functional Unheated Storage Building as shown under Base Bid in the Drawings and Specifications.

This item shall include any additional items related to Site Construction where a unit cost has not been requested. Additionally, this work shall include site utilities, excavation and backfill to foundation subgrade for utilities and foundations, and grading within five feet of the perimeter. The work shall include, but is not limited to, all materials, labor, equipment, and incidentals to construct the facility within the terms and conditions of the plans and specifications. This work also includes, but is not limited to: building excavation; backfill; foundation systems; gravel dry beds; concrete; pre-engineered metal storage buildings; and electrical systems. The full extent of this work is defined by the Contract Documents, including the Drawings and Project Manual, dated February 24, 2011 as well as any addenda issued during the bidding process. Work shall include, but is not limited to, providing labor, materials, equipment, and incidentals necessary to perform all items of work.

Measurement: Measurement will be based on completion of the work described and accepted by the Contracting Officer Technical Representative (COTR).

Payment: Payment for item will be in accordance with the specifications.

Bid Item 3: **Mobilization/Demobilization**

Unit: Lump Sum

Description: This work shall consist of the performance of construction preparatory operations, including the movement of personnel, equipment, and materials to and from the project site; payment of performance bond, guaranty bond, and other insurance premiums; establishment and removal of the contractor's field office and storage facilities, including fenced enclosure of staging area.

Measurement: Measurement will be based on completion of the work described, prorated from lump sum amounts according to the Basis of Payment below.

Payment: Payment for item will be in three installments. The first payment of 50 percent of the lump sum price will be made on the first estimate following partial mobilization including the placement or erection of the Contractor's office and storage facilities and the initiation of construction work. The second payment of 25 percent will be made on the next estimate following completion of substantial mobilization. The remaining 25 percent will be paid upon demobilization and satisfactory restoration of the contractor's staging and work area and final completion of the Project.

Bid Item 4: **General Administration**

Unit: Lump Sum

Description: This work shall consist of performing the construction administrative duties associated with managing the construction as stated in Division 1 and throughout the Specifications, providing construction layout, providing temporary utilities for the site and coordination of permanent utility installation and tie-in of site grading and access roads, administration and maintenance of all required permits for the project, including permit fees, and City of Morgantown Business and Occupation Taxes. In addition to any State and Federal permits, the City of Morgantown requires a Municipal Contractor's License.

Measurement: Measurement will be based on completion of the work described, prorated from lump sum amounts according to the Basis of Payment below.

Payment: This item will be paid for at the contract lump sum price, based on percentage of contract completion.

Bid Item 5: **Project Quality Control**

Unit: Lump Sum

Description: This work shall consist of establishing and maintaining a Quality Control Program throughout the duration of the project.

Measurement: There will be no direct measurement of materials, labor, and services provided by the Contractor in completing this item.

Payment: This item will be paid for at the contract lump sum price, based on percentage of completion.

Bid Item 6: **Site Preparation**

Unit: Lump Sum (LS)

Description: This work shall consist of the removal of trees and other vegetation, topsoil stripping and stockpiling, removal of existing utilities, installation of temporary utilities, demolition, temporary safety fence and barricades for taxiway closures, and clearing and grubbing of all areas disturbed by the Contractor. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.

Measurement: There will be no direct measurement of materials, labor, and services provided by the contractor in completing this item.

Payment: Payment shall be made at the contract unit price per lump sum.

Bid Item 7: **Sediment and Erosion Control**

Unit: Lump Sum (LS)

Description: This item shall consist of furnishing, installation, maintenance and subsequent removal of necessary storm water structures, best management practices, and other work required to prevent escape of sediment from disturbed areas of project site. Also included is the preparation of a modification to the existing WV NPDES permit, submission, and administrative maintenance of any permits required by the West Virginia Department of Environmental Protection (WVDEP) or other agencies. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.

Measurement: There will be no direct measurement of materials, labor, and services provided by the contractor in completing this item.

Payment: Payment for item shall be in three installments. The first payment of 50% of the lump sum price shall be made on the first estimate following issuance of a modification to the existing WV NPDES Construction Stormwater Permit and installation of best management practices required by the approved Stormwater Pollution Prevention Plan. The second payment of 25% shall be made on the next estimate following finish grading and stabilization of all waste and borrow areas. The remaining 25% shall be paid upon termination of the WV NPDES permit by the WVDEP for properly stabilizing the site, demobilization, and final completion of the Project.

Bid Item 8: **Retention Ponds**

Unit: Lump Sum (LS)

Description: This work shall consist of constructing the retention ponds as shown in the Plans. The work includes excavation, importation of soils, concrete, backfill, inlet and outlet structures, pipes, outlet protection, sediment removal and maintenance. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.

Measurement: There shall be no direct measurement of materials, labor, and services provided by the Contractor in completing this item.

Payment: Payment shall be made at the contract unit price per lump sum.

Bid Item 9: **Waste Disposal**

Unit: Ton (TN)

Description: This work shall include, but is not limited to, disposal of rubbish, trash, scrap, and other materials encountered at the site that require disposal at a sanitary landfill. The work includes sorting, loading, hauling, and disposal. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.

Measurement: The quantity of work completed shall be measured in tons as evidenced by weigh tickets from a legally operating sanitary landfill and certified by the contractor to be correct.

Payment: Payment shall be made at the contract unit price per ton.

Bid Item 10:	**AOA Fencing**
Unit:	Linear Foot (LF)
Description:	This work consists of furnishing and complete installation of chain link fencing. The price will include clearing vegetation, excavating, trenching, concrete footings, backfilling, grouting posts in place, grounding, bonding, barbed wire, and gate hardware. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.
Measurement:	Measurement shall be along the bottom wire of the fence from outside to outside of end posts for each continuous run of fence, excluding lengths occupied by vehicular gates.
Payment:	The accepted quantities of fencing materials shall be paid for at the contract unit price per linear foot complete in place.

Bid Items 11:	**Double Swing Gate, 30'**
Unit:	Each (EA)
Description:	This work consists of furnishing and complete installation of various types of gates for chain link fences. The price shall include excavating, trenching, concrete footings, backfilling, grouting posts in place, grounding, bonding, barbed wire, and locks. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.
Measurement:	Measurement shall be per each gate completely installed.
Payment:	The accepted quantities of gates shall be paid for at the contract unit price per each complete in place.

Bid Item 12:	**Monitoring Well Removal**
Unit:	Lump Sum (LS)
Description:	This item shall consist of the removal of an existing monitoring well in accordance with West Virginia Department of Environmental Protection regulations. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.
Measurement:	There will be no direct measurement of materials, labor, and services provided by the contractor in completing this item.
Payment:	Payment shall be made at the contract unit price per lump sum.

Bid Item 13: **Unclassified Excavation**

Unit: Lump Sum (LS)

Description: This work shall consist of, but is not limited to, unclassified excavation, loading and hauling of excavated material, placement and compaction, and shall include final grading, shaping and contouring of the excavation and fill areas. The terms for earthwork used in the remainder of this Section imply excavation in native materials. The Contractor, with approval of the COTR, shall adjust the final grades as necessary to create a finished project. The Contractor shall excavate to the lines and grades shown on the Plans. The Contractor shall perform all excavation of every description and of whatever materials encountered to the depths indicated on the Plans. No additional compensation shall be considered for rock excavation. Over-excavation and/or fill not shown on the Plans or specified herein shall be at the Contractor's expense, unless approved by the COTR prior to commencing such work. If unsuitable materials exist below the grades shown on the Plans, this material shall be removed with the prior approval of the COTR and shall be paid per the unit price for "Overexcavation".

Except at locations where excavation of unsuitable material is required, care shall be taken not to excavate below the depths specified. Final shaping and contouring of the areas shall be performed to the satisfaction of the COTR.

This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.

Measurement: There shall be no direct measurement of materials, labor, and services provided by the Contractor in completing this item.

Payment: Payment shall be made at the contract unit price per lump sum.

Bid Item 14: **Subgrade Preparation**

Unit: Square Yard (SY)

Description: This work shall include, but is not limited to, excavation, scarification, and recompaction of the top 24 inches of in-place subgrade under structures, building slabs, steps, and pavements in excavated areas. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work. Manipulation of the excavated material to achieve optimum moisture content shall be considered incidental to the work. If additional satisfactory soil fill is required to achieve subgrade elevations after compaction, it shall be considered incidental to the work.

Measurement: Measurement shall be based on square yards of area completed for the work described. Material prepared beyond approved limits shall not be included in the measured quantity. Subgrade preparation of other areas, such as walkways and lawn areas, is incidental to earthwork and shall not be paid for by this bid item.

Payment: Payment shall be made at the contract unit price per square yard.

Bid Item 15:	**Soil Drying**
Unit:	Ton (TN)
Description:	This work shall include, but is not limited to, quicklime application and mixing of stockpiles of existing satisfactory soils with high moisture content. The required demonstration of proposed techniques is incidental. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.
Measurement:	The quantity of work completed shall be measured in tons of quicklime used as evidenced by weigh tickets for bulk loads or delivery slips for packaged materials certified by the contractor to be correct.
Payment:	Payment shall be made at the contract unit price per ton.

Bid Item 16:	**Soil Conditioning**
Unit:	Square Yard (SY)
Description:	This work shall include, but is not limited to, scarifying, lime application, mixing, compacting and rolling areas of existing satisfactory soils with high moisture content to a depth of 12" in locations directed by the COTR. The required demonstration of proposed techniques on test pads is incidental. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.
Measurement:	Measurement shall be based on square yards of area completed for the work described. Excess material or material placed beyond approved limits shall not be included in the measured quantity.
Payment:	Payment shall be made at the contract unit price per square yard.

Bid Item 17:	**Over-Excavation**
Unit:	Square Yard (SY)
Description:	This work shall include, but is not limited to, excavation below subgrade, transportation and disposal of unsuitable materials, placement of geogrid and AASHTO #1 stone, and proof-rolling areas of unsuitable soils in locations directed by the COTR. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.
Measurement:	Measurement shall be based on square yards of area completed for the work described. Excess material or material placed beyond approved limits shall not be included in the measured quantity.
Payment:	Payment shall be made at the contract unit price per square yard.

Bid Item 18:	**6" Subsurface Drains**
Unit:	Linear Foot (LF)
Description:	This work shall consist of installation of 6" subsurface drains in locations specified on the plans or directed by the COTR. The drains are to be installed in locations that will intercept the maximum amount of seepage. Subsurface drain work includes dewatering, excavation, drainage fabric, stone, pipe, fittings, cleanouts and backfill. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.
Measurement:	Measurement shall be based on linear feet of drains in place, completed, and accepted by the COTR. It shall be measured along the centerline and shall include all fittings as typical pipe section in the pipe being measured.
Payment:	This item shall be paid for at the contract price per linear foot.

Bid Item 19:	**7" Concrete Paving**
Unit:	Square Yard (SY)
Description:	This work consists of furnishing and complete installation of Portland cement concrete pavement, reinforcing, joints, and sealants at the areas as shown on the plans. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.
Measurement:	Measurement shall be based on square yards of area completed for the work described. Excess material or material placed beyond approved limits shall not be included in the measured quantity.
Payment:	Payment shall be made at the contract unit price per square yard.

Bid Item 20: **HMA Wearing Course**

Unit: Ton (TN)

Description: This work shall consist of furnishing and installing designated scratch course and wearing course asphalt in accordance with the Plans and Specifications. The completed pavement shall be accepted, with respect to compaction, on a lot-to-lot basis. Each lot shall consist of approximately 2,000 SF of each layer or course by shall be taken at a random location of each of the five sub-lots.

The target percentage of density shall be 96 percent.

The compaction density of the asphalt shall be considered satisfactory so long as the averages of all the five consecutive compaction results equal to or exceed the specified compaction percent of 96% and no individual strength test result falls below the specified compaction by more than 5 percent. If the average of five consecutive compaction results is below the 96 percent, then a payment adjustment shall be made for that tonnage of asphalt representing the area of placement.

This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.

Measurement: The quantities of work done shall be measured in tons as designated. The quantity shall be determined by the Contractor from the total weigh slips for each vehicle load weighed upon automatic batching plant, and certified by the Contractor to be correct. Each weigh slip shall indicate the contract item numbers for the material being delivered.

Payment: Payment shall be made at the contract unit price per ton.

The quantities, determined as provided per the specifications, shall be paid for at the Contract unit prices bid for the items listed, which prices and payments shall be full compensation for furnishing all materials and doing all the work prescribed in a workmanlike and acceptable manner, including all labor, tools, equipment, field laboratory, supplies and incidentals necessary to complete the work.

Adjustment of Price: Bituminous concrete found not in compliance with the tolerance requirements shall be paid for at an adjusted contract price specified

The payment adjustment to tonnage of work places is as follows with percentages rounded to the nearest tenth:

Average Compaction % for a Lot	Percent of Contract Price Paid
96	100
94-95.9	98
92-93.9	93
89-91.9	90
Less than 89	No acceptance

Bid Item 21: **HMA Base Course**

Unit: Ton (TN)

Description: This work shall consist of furnishing and installing designated base course asphalt in accordance with the Plans and Specifications. Scratch course is incidental to the overlaying wearing course. The completed pavement shall be accepted, with respect to compaction, on a lot-to-lot basis. Each lot shall consist of approximately 2,000 SF of each layer or course by shall be taken at a random location of each of the five sub-lots.

The target percentage of density shall be 96 percent.

The compaction density of the asphalt shall be considered satisfactory so long as the averages of all the five consecutive compaction results equal to or exceed the specified compaction percent of 96% and no individual strength test result falls below the specified compaction by more than 5 percent. If the average of five consecutive compaction results is below the 96 percent, then a payment adjustment shall be made for that tonnage of asphalt representing the area of placement.

This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.

Measurement: The quantities of work done shall be measured in tons as designated. The quantity shall be determined by the Contractor from the total weigh slips for each vehicle load weighed upon automatic batching plant, and certified by the Contractor to be correct. Each weigh slip shall indicate the contract item numbers for the material being delivered.

Payment: Payment shall be made at the contract unit price per ton.

The quantities, determined as provided per the specifications, shall be paid for at the Contract unit prices bid for the items listed, which prices and payments shall be full compensation for furnishing all materials and doing all the work prescribed in a workmanlike and acceptable manner, including all labor, tools, equipment, field laboratory, supplies and incidentals necessary to complete the work.

Adjustment of Price: Bituminous concrete found not in compliance with the tolerance requirements shall be paid for at an adjusted contract price specified

The payment adjustment to tonnage of work places is as follows with percentages rounded to the nearest tenth:

Average Compaction % for a Lot	Percent of Contract Price Paid
96	100
94-95.9	98
92-93.9	93
89-91.9	90
Less than 89	No acceptance

Bid Item 22:	**Free Draining Base**
Unit:	Ton (TN)

Description: This work consists of furnishing and complete installation of open graded free draining base course for pavements. Aggregate, compaction, binder material, and curing are included with this item. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.

Measurement: The quantities of work done shall be measured in tons as designated. The quantity shall be determined by the Contractor from the total weigh slips for each vehicle load weighed on an approved standard scale or from digital print-out slips from an automatic batching plant, and certified by the Contractor to be correct. Each weigh slip shall indicate the contract item numbers for the material being delivered. Only work accepted by the COTR shall be included, any work rejected or materials used for other items or purposes shall be deducted.

Payment: Payment shall be made at the contract price per ton.

Bid Item 23:	**Free Draining Base Trench and Piping**
Unit:	Linear Foot (LF)

Description: This work shall consist of constructing free draining base trenches and outlet pipes in reasonably close conformity with the lines, grades, dimensions, and locations shown on the Plans or established by the COTR. Excavation, perforated pipe, filter material, outlet pipe, aggregate backfill, and disposing of all surplus material is included with this item. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.

Measurement: The quantity of work done shall be measured by the linear foot of free draining base trench installed, complete in place and accepted. The perforated pipe, geotextile, and aggregate backfill is a component of the free draining base trench. Length shall be determined from actual measurements once the free draining base trench is in place. No deductions shall be made for placement of the drop connection required at outlet pipe locations. Outlet pipes required from the free draining base trench to daylight or another drainage structure are incidental to this item.

Payment: The quantities, determined as provided above, shall be paid for at the contract unit price per linear foot.

Bid Item 24:	**Fabric Separation**
Unit:	Square Yard (SY)

Description: This work shall consist of furnishing and installing geotextile fabric of designated types in pavement sections as directed by the COTR. This includes performing all work

prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.

Measurement: Measurement shall be based on square yards of area completed for the work described. Excess material or material placed beyond design limits shall not be included in the measured quantity. Fabric used in free draining base trench is not included in this pay item.

Payment: Payment shall be made at the contract unit price per square yard.

Bid Item 25: **Class 1 Stone**

Unit: Ton (TN)

Description: This work includes, but is not limited to, furnishing and complete installation of Class 1 aggregate course for pavements and the MEP gravel apron or as directed by the COTR. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.

Measurement: The quantities of work done shall be measured in tons as designated. The quantity shall be determined by the Contractor from the total weigh slips for each vehicle load weighed on an approved standard scale or from digital print-out slips from an automatic batching plant, and certified by the Contractor to be correct. Each weigh slip shall indicate the contract item numbers for the material being delivered. Only work accepted by the COTR shall be included, any work rejected or materials used for other items or purposes shall be deducted.

Payment: Payment shall be made at the contract unit price per ton.

Bid Item 26: **Pavement Marking, On-Site Roads and Paving**

Unit: Lump Sum (LS)

Description: Pavement markings shall consist of furnishing and installing various types of markings, as shown on the plans and an additional 1,000 sq ft for miscellaneous marking as directed by the COTR. It shall include, but is not limited to, edge lines, center lines, handicapped symbols, parking lines, shoulders, stop lines and pedestrian crossing markings. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.

Measurement: There will be no direct measurement of labor, materials and services provided by the contractor in completing this item.

Payment: This item shall be paid for at the contract lump sum price upon satisfactory completion of all pavement markings shown on the plans.

Bid Item 27:	**Wheel Stops**
Unit:	Each (EA)
Description:	This work includes, but is not limited to, furnishing and complete installation of plastic wheel stops as directed by the COTR. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.
Measurement:	The quantity of work done shall be measured per each wheel stop completely installed.
Payment:	Payment shall be made at the contract unit price per each.

Bid Item 28:	**Concrete Curbing**
Unit:	Linear Foot (LF)
Description:	This work shall includes, but is not limited to, the construction of cast-in-place concrete curbing at the locations shown on the Plans, or as directed by the COTR. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.
Measurement:	Curbing shall be measured along the front face of the section at the finish grade elevation.
Payment:	Payment shall be made at the contract unit price per linear foot.

Bid Item 29:	**Signage**
Unit:	Lump Sum (LS)
Description:	This item includes, but is not limited to, furnishing and installing miscellaneous signs, stop, parking, informational, etc. as noted on the Plans or as directed by the COTR. Signs, posts, foundations, and necessary hardware are included. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.
Measurement:	Measurement shall be based on completion of work described.
Payment:	Payment shall be made at the contract unit price for lump sum.

Bid Item 30:	**Pavement Marking, Off-Site Roads and Paving**
Unit:	Lump Sum (LS)
Description:	Pavement markings shall consist of furnishing and installing various types of markings, as shown on the plans and an additional 500 sq ft for miscellaneous marking as directed by the COTR. It shall include, but is not limited to, edge lines, center lines, shoulders, stop lines and pedestrian crossing markings. This includes performing all work prescribed in a

workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.

Measurement: There will be no direct measurement of labor, materials and services provided by the contractor in completing this item.

Payment: This item shall be paid for at the contract lump sum price upon satisfactory completion of all pavement markings shown on the plans.

Bid Item 31: Sidewalk

Unit: Square Yard (SY)

Description: This work shall consist of furnishing and installing welded wire mesh reinforcing, 4,000 psi air-entrained concrete, Class 1 stone, formwork and incidentals associated with concrete sidewalks and pads as detailed on the Plans. The areas adjacent to the building shall also include drainage fill and foam insulation. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.

Measurement: Measurement shall be based on square yards of area completed for the work described. Excess material or material placed beyond approved limits shall not be included in the measured quantity.

Payment: Payment shall be made at the contract unit price per square yard.

Bid Items 32–33: Type I and II Lawns; Type III Ground Cover for Slopes

Unit: Lump Sum (LS)

Description: This work shall consist of various types of lawns and ground cover as shown on the Drawings and specified in Section 02920, "Lawns and Grasses". The bid item shall include fine grading and preparing lawn areas, furnishing and applying soil amendments and fertilizers, seeding lawn areas, protection and maintenance of lawn areas. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.

Measurement: Measurement shall be based on completion of work described.

Payment: Payment shall be made at the contract unit price for lump sum.

Bid Items 34–36: Force Protection Gate, 24' Sliding Gate (BID ITEM 35 – NOT USED)

Unit: Each (EA)

Description: This work consists of furnishing and complete installation of various types of gates for chain link fences and site security. The price shall include excavating, trenching, concrete footings, backfilling, grouting posts in place, grounding, bonding, barbed wire,

and locks. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.

Measurement: Measurement shall be per each gate completely installed.

Payment: The accepted quantities of gates shall be paid for at the contract unit price per each complete in place.

Bid Item 37: **Security Fencing**

Unit: Linear Foot (LF)

Description: This work consists of furnishing and complete installation of chain link fencing and personnel gates. The price will include excavating, trenching, concrete footings, backfilling, grouting posts in place, grounding, bonding, barbed wire, and gate hardware. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.

Measurement: Measurement shall be along the bottom wire of the fence from outside to outside of end posts for each continuous run of fence, excluding lengths occupied by vehicular gates.

Payment: The accepted quantities of fencing materials shall be paid for at the contract unit price per linear foot complete in place.

Bid Item 38: **40' Flagpole**

Unit: Each (EA)

Description: This item includes furnishing and installing the 40' aluminum flagpole in front of the facility. The foundation, including excavation, aggregate, concrete and miscellaneous hardware are incidental to this item. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.

Measurement: There shall be no direct measurement of materials, labor, and services provided by the Contractor in completing this item.

Payment: Payment shall be made at the contract unit price for each.

Bid Item 39: **Retaining Wall**

Unit: Linear Foot (LF)

Description: This item of work is a masonry clad concrete block retaining wall. Excavation, backfill, brick facing, capstone, and associated subsurface drainage are incidental. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor,

tools, equipment, supplies, material, incidentals, and quality control required to complete the work.

Measurement: Measurement shall be by the linear foot along the front face of the wall at the finished grade elevation.

Payment: Payment shall be made at the contract unit price for linear foot.

Bid Item 40: **Loading Dock Wall**

Unit: Lump Sum (LS)

Description: This item of work is a pour in place concrete retaining wall. Excavation, backfill, handrail, concrete finishing, and associated subsurface drainage are incidental. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.

Measurement: There shall be no direct measurement of materials, labor, and services provided by the Contractor in completing this item.

Payment: Payment shall be made at the contract unit price for lump sum.

Bid Item 41: **Vehicle Wash Rack**

Unit: Lump Sum (LS)

Description: This work shall consist of adding a Vehicle Wash Rack as shown in the Plans. Excavation, concrete, aggregate base, waterstops, associated drainage structures, piping, conduits, post hydrant, hose reels and hose, and other ancillary equipment within the boundary created by the edge of the concrete pad are incidental to this item of work. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.

Measurement: There will be no direct measurement of materials, labor, and services provided by the Contractor in completing this item.

Payment: Payment shall be made at the contract unit price for lump sum.

Bid Item 42: **Oil/Water Separator**

Unit: Each (EA)

Description: This work consists of furnishing and complete installation of an underground separator designed for gravity separation of free oils (hydrocarbons and other petroleum products) and settable solids from wastewater. Excavation, backfill, concrete pad, bedding material, manways, piping and fittings to a point beyond the outline of the tank, alarm and control panel, electrical and data wiring, and vent piping are incidental. This

includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.

Measurement: Measurement shall be based on completion of the work described according to the Basis of Payment below.

Payment: Payment shall be made at the contract unit price for each.

Bid Item 43: Loading Ramp

Unit: Lump Sum (LS)

Description: This item of work is a cast-in-place reinforced concrete loading ramp with two levels. The aggregate, backfill, dock bumpers, excavation and soil backfill, and any other ancillary equipment required are incidental. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.

Measurement: There shall be no direct measurement for materials, labor, and services provided by the Contractor in completing this item.

Payment: Payment shall be made at the contract unit price for lump sum.

Bid Items 44–46: Bollards 8", 12", and Removable

Unit: Each (EA)

Description: This work consists of furnishing and complete installation of bollards. The unit price shall include furnishing and installing metal posts, and associated hardware, concrete footings, excavation, backfill, and compensation for doing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, and incidentals required to complete the work.

Measurement: The quantity of work done shall be measured per each bollard completely installed and accepted by the COTR.

Payment: Payment shall be made at the contract unit price per each.

Bid Item 47: Trash Enclosure

Unit: Lump Sum (LS)

Description: This work shall consist of constructing a pad and walls at the back of the main building as shown in the Plans. Excavation, concrete, aggregate base, walls, associated drainage structures, piping, pipe sleeves, conduits, and other ancillary equipment are incidental to this item of work. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.

Measurement: There will be no direct measurement of materials, labor, and services provided by the Contractor in completing this item.

Payment: Payment shall be made at the contract unit price for lump sum.

Bid Item 48: **Fuel Truck Pad**

Unit: Lump Sum (LS)

Description: This work shall consist of a cast-in-place concrete fuel truck pad as shown in the Plans. This shall include excavation, concrete, reinforcing, grounding hardware, aggregate base and any other incidentals necessary for a complete and functional pad. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.

Measurement: There will be no direct measurement of materials, labor, and services provided by the Contractor in completing this item.

Payment: Payment shall be made at the contract unit price for lump sum.

Bid Items 49–53: **Water Line, PVC – 2", 6", and 10"; Waterline, DIP – 6" and 10"**

Unit: Linear Foot (LF)

Description: This work shall consist of furnishing and installing various sizes of water line. These prices shall fully compensate the Contractor for providing pipe, fittings, valves, bedding, excavation, backfill, concrete thrust blocks, concrete encasement, steel casing pipe, asphalt repair, curb stops, flushing, testing, coordination with the City of Morgantown and agencies having jurisdiction for acceptance. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.

Measurement: Measurement shall be based on linear feet of water line in place, completed, and accepted by the COTR. It shall be measured along the centerline and shall include all fittings and appurtenances associated with the water line.

Payment: Payment shall be made at the contract unit price per linear foot.

Bid Item 54: **PIV**

Unit: Each (EA)

Description: This work consists of furnishing and complete installation of Post Indicator Valves. The unit price shall include furnishing and installing the valves, fittings, excavation, bedding, backfill, concrete thrust blocks, saw-cutting of pipe, and testing and inspection. This includes performing all work prescribed in a workmanlike and acceptable manner,

including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.

Measurement: The quantity of work done shall be measured per unit PIV acceptably installed.

Payment: Payment shall be made at the contract unit price per each.

Bid Item 55: **Fire Hydrant**

Unit: Each (EA)

Description: This work consists of furnishing and complete installation of exterior fire hydrants. The unit price shall include furnishing and installing a fire hydrant, fittings, excavation, bedding, backfill, concrete thrust blocks, saw-cutting of pipe, and testing and inspection. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.

Measurement: The quantity of work done shall be measured per unit fire hydrant acceptably installed.

Payment: Payment shall be made at the contract unit price per each.

Bid Item 56: **Water Vault**

Unit: Each (EA)

Description: This work consists of furnishing, placing and installing the precast concrete vault, bedding, backfill, water meter, backflow preventer and associated valves and appurtenances as detailed in the Plans. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.

Measurement: Measurement shall be per water meter pit installed and accepted by the COTR and authorities having jurisdiction.

Payment: Payment shall be made at the contract price per each.

Bid Item 57: **Manholes, Sanitary Sewer**

Unit: Vertical Foot (VF)

Description: This work shall include, but is not limited to, installing pre-cast concrete manholes at the locations specified in the plans. Excavation, bedding, manhole section and grade ring installation, backfill, and testing and inspection are included in this item. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.

Measurement: Measurement shall be based on vertical feet of manhole in place, as measured from the invert to the top of concrete or spacer ring, completed and accepted by the COTR and authorities having jurisdiction.

Payment: Payment shall be made at the contract unit price per vertical foot.

Bid Item 58: **Frame & Cover, Sanitary Sewer**

Unit: Each (EA)

Description: This work consists of furnishing, placing and installing the frame and cover for sanitary manholes as detailed in the Plans. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.

Measurement: Measurement shall be per frame and cover installed and accepted by the COTR.

Payment: Payment shall be made at the contract price per each.

Bid Items 59-62: **PVC Sanitary Sewer, 4", 6", and 8"; DIP, 8"**

Unit: Linear Foot (LF)

Description: This work shall consist of furnishing and installing various sizes of sanitary sewer piping. These prices shall fully compensate the Contractor for providing pipe, bedding, excavation, backfill, fittings, cleanouts, casing pipes, pavement repairs, testing and coordination with the Morgantown Utility Board for acceptance. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.

Measurement: Measurement shall be based on linear feet of sanitary sewer piping in place, completed, and accepted by the COTR. It shall be measured along the centerline and shall include all fittings, appurtenances, and cleanouts associated with the sanitary sewer piping.

Payment: Payment shall be made at the contract unit price per linear foot.

Bid Item 63: **4" Gas Service Line**

Unit: Linear Foot (LF)

Description: This work shall consist of furnishing and installing 4" gas lines from the building to point of connection on the Plans. These prices shall fully compensate the Contractor for providing pipe, bedding, excavation, backfill, valves, existing utility tie-ins, pavement restoration, and casing pipes. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.

Measurement: Measurement shall be based on linear feet of gas line in place, completed, and accepted by the COTR. It shall be measured along the centerline and shall include all fittings and appurtenances associated with the gas line.

Payment: Payment shall be made at the contract unit price per linear foot of line in service.

Bid Items 64–65: Storm Line, PVC – 6" and 12"

Unit: Linear Foot (LF)

Description: This work consists of the furnishing and complete installation of PVC pipe for storm drainage outside the building. This price shall fully compensate the Contractor for providing pipe, bedding, excavation, backfill, fill, fittings, and pavement repairs. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.

Measurement: Conduit of the different types and sizes, shall be measured by the linear foot in place, the measurement being made along the centerline of each pipe installed. Branch connections, tees, wyes, and elbows shall be measured along their centerlines and these lengths included in the total lengths of the appropriate conduit. Wyes, tees, and other branch connections shall be measured along the centerlines to points of intersection. The portion of pipe extending through to the inside face of headwalls of all types, manholes, inlets, boxes, or other structures shall be included in the measurement.

Payment: Payment shall be made at the contract unit price per linear foot.

Bid Items 66–69: Storm Line, HDPE – 12", 18", 24" and 30"

Unit: Linear Foot (LF)

Description: This work consists of the furnishing and complete installation of high density polyethylene pipe for storm drainage. Pipe, bedding, excavation, backfill, fill, fittings, and pavement repairs, are included in this item. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.

Measurement: Conduit of the different types and sizes, shall be measured by the linear foot in place, the measurement being made along the centerline of each pipe installed. Branch connections, tees, wyes, and elbows shall be measured along their centerlines and these lengths included in the total lengths of the appropriate conduit. Wyes, tees, and other branch connections shall be measured along the centerlines to points of intersection. The portion of pipe extending through to the inside face of headwalls of all types, manholes, inlets, boxes, or other structures shall be included in the measurement.

Payment: Payment shall be made at the contract unit price per linear foot.

Bid Items 70-71:	**Type 1 Ditch, Type 2 Ditch**
Unit:	Linear Foot (LF)
Description:	This work shall consist of the construction of open flow ways for surface drainage, using geotextile fabric, riprap and grout. Excavation, shaping and lining and geotextile fabric are incidental.
Measurement:	The quantity of work done shall be measured along the flow line of the ditch, from the first point of design depth to the point where the ditch breaks the plane of the drainage structure it empties into.
Payment:	Payment shall be made by the contract unit price per linear foot.

Bid Item 72:	**Type 4 Ditch**
Unit:	Linear Foot (LF)
Description:	This work shall consist of the construction of open flow ways for surface drainage, using permanent erosion control matting. Excavation, shaping, seeding, and lining are incidental. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.
Measurement:	The quantity of work done shall be measured along the flow line of the ditch, from the first point of design depth to the point where the ditch breaks the plane of the drainage structure it empties into.
Payment:	Payment shall be made by the contract unit price per linear foot.

Bid Item 73:	**Junction Box**
Unit:	Each (EA)
Description:	This work shall consist of installing pre-cast or cast-in-place concrete junction boxes for storm drainage. Pipe connection, bedding, excavation, backfill, fill, fittings, frames and covers, and pavement repairs, are included in this item. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.
Measurement:	Measurement shall be based on each junction box in place completed, and accepted by the COTR.
Payment:	Payment shall be made at the contract unit price for each.

Bid Items 74–75:	**Type "B" and "G" Drop Inlets**
Unit:	Each (EA)
Description:	This work shall consist of installing pre-cast or cast-in-place concrete inlets for storm drainage. Pipe connection, bedding, excavation, backfill, fill, fittings, grates, frames, and pavement repairs, are included in this item. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.
Measurement:	Measurement shall be based on each drain inlet in place completed, and accepted by the COTR.
Payment:	Payment shall be made at the contract unit price per each.

Bid Item 76:	**Stormwater Treatment Unit**
Unit:	Each (EA)
Description:	This work shall consist of installing pre-cast concrete stormwater treatment units for storm drainage. Pipe connection, bedding, excavation, backfill, fill, and fittings, are included in this item. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.
Measurement:	Measurement shall be based on each stormwater treatment unit in place completed, and accepted by the COTR.
Payment:	Payment shall be made at the contract unit price per each.

Bid Item 77:	**12" In-Line Inlets**
Unit:	Each (EA)
Description:	This work shall consist of installing inlets for storm drainage. Inlets, grates, pipe, excavation, bedding, backfill, fill, fittings and pavement repairs are included in this item. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.
Measurement:	Measurement shall be based on each drain inlet in place completed, and accepted by the COTR
Payment:	Payment shall be made at the contract unit price for each.

Bid Item 78:	**Trench Drain & Grate**
Unit:	Linear Foot (LF)
Description:	This work shall consist of installing a vehicular trench drain for storm drainage. Pipe connection, bedding, excavation, backfill, reinforcement, concrete, fittings, frames and grates are included in this item. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.
Measurement:	Measurement shall be based on linear foot of trench drain installed and accepted by the COTR, measured along the center-line from end of grate to end of grate.
Payment:	Payment shall be made by the contract unit price per linear foot.

Bid Item 79:	**Concrete Headwall**
Unit:	Each (EA)
Description:	This work shall consist of installing cast-in-place concrete headwalls for storm drainage. Excavation, forming, reinforcement, concrete, pipe connection, aggregate bedding, backfill, and concrete finishing are included in this item. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.
Measurement:	Measurement shall be for each headwall completely installed.
Payment:	Payment shall be made at the contract unit price for each complete and in place.

Bid Item 80:	**Electrical Duct Bank Type 1**
Unit:	Linear Foot (LF)
Description:	This work shall consist of trenching and backfill, vaults, handholes, pedestals, conduit, concrete, and pull ropes required for the installation of underground primary. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.
Measurement:	Measurement shall be based on transformer pad and linear feet of underground primary constructed in conformance with the plans and specifications.
Payment:	Payment shall be made at the contract unit price per linear foot.

Bid Item 81:	**Electrical Duct Bank Type 2**
Unit:	Linear Foot (LF)
Description:	This work shall consist of trench and backfill, vaults, handholes, pedestals, conduit, concrete, pull ropes, and conductors required for the installation of underground secondary between the transformer and the AFRC building. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.
Measurement:	Measurement shall be based on linear feet of underground secondary constructed in conformance with the plans and specifications.
Payment:	Payment shall be made at the contract unit price per linear foot.

Bid Item 82:	**Electrical Duct Bank Type 3**
Unit:	Linear Foot (LF)
Description:	This work shall consist of trench and backfill, vaults, handholes, pedestals, conduit, concrete, pull ropes, conductors, and control wires required for the installation of underground secondary between the AFRC and the maintenance building. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.
Measurement:	Measurement shall be based on linear feet of underground secondary constructed in conformance with the plans and specifications.
Payment:	Payment shall be made at the contract unit price per linear foot.

Bid Item 83:	**Combined Duct Bank Type 1**
Unit:	Linear Foot (LF)
Description:	This work shall consist of furnishing and installing conduits from the building or the point of origin to the point of connection on the Plans. These prices shall fully compensate the Contractor for providing pipe, fiber, wires, conductors, extra pull ropes, vaults, handholes, pedestals, concrete, excavation, backfill, and sleeves. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.
Measurement:	Measurement shall be based on linear feet of duct bank in place, completed, and accepted by the COTR. It shall be measured along the centerline and shall include all fittings, and appurtenances associated with the duct bank.
Payment:	Payment shall be made at the contract unit price per linear foot of line in service.

Bid Item 84:	**Communications Duct Bank Type 1**
Unit:	Linear Foot (LF)
Description:	This work shall consist of furnishing and installing conduits from the building or the point of origin to the point of connection on the Plans. These prices shall fully compensate the Contractor for providing pipe, fiber, wires, extra pull ropes, vaults, handholes, pedestals, concrete, excavation, backfill, and sleeves. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.
Measurement:	Measurement shall be based on linear feet of duct bank in place, completed, and accepted by the COTR. It shall be measured along the centerline and shall include all fittings, and appurtenances associated with the duct bank.
Payment:	Payment shall be made at the contract unit price per linear foot of line in service.

Bid Item 85:	**Transformer Pad**
Unit:	Lump Sum (LS)
Description:	This work shall consist of a cast-in-place concrete pad for the electrical transformer(s). The pad must meet the requirements of Appalachian Power Company for the transformer(s) used. This shall include excavation, concrete, reinforcing, grounding hardware, bollards for vehicular protection, aggregate base and any other incidentals necessary for a complete and functional pad. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.
Measurement:	There will be no direct measurement of materials, labor, and services provided by the Contractor in completing this item.
Payment:	Payment shall be made at the contract unit price for lump sum.

Bid Item 86:	**Emergency Generator Pad**
Unit:	Lump Sum (LS)
Description:	This work shall consist of a cast-in-place concrete pad for the emergency generator. The pad must meet the requirements of the generator manufacturer. This shall include excavation, concrete, reinforcing, grounding hardware, bollards for vehicular protection, aggregate base and any other incidentals necessary for a complete and functional pad. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.

Measurement: There will be no direct measurement of materials, labor, and services provided by the Contractor in completing this item.

Payment: Payment shall be made at the contract unit price for lump sum.

Bid Item 87: **Pipe Gate**

Unit: Each (EA)

Description: This work consists of furnishing and complete installation of a Pipe Gate for vehicular access through the field fence. The price shall include excavating, trenching, concrete footings, backfilling, grouting posts in place, and locks. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.

Measurement: Measurement shall be per each gate completely installed.

Payment: The accepted quantities of gates shall be paid for at the contract unit price per each complete in place.

Bid Item 88: **Fencing/Gate Upgrade**

Unit: Lump Sum (LS)

Description: This work shall consist of upgrading all security fencing, swing gates, sliding gates, and alternate bid items to an eight foot chain-link fabric height. Force Protection Gate is not included. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.

Measurement: There will be no direct measurement of materials, labor, and services provided by the Contractor in completing this item.

Payment: Payment shall be made at the contract unit price for lump sum.

Bid Item 89: **Canopy**

Unit: Lump Sum (LS)

Description: The item shall consist of any and all material, equipment, and labor for items required by the contract documents to provide complete and functional Canopy as shown under Alternate Bid #3 in the Drawings and Specifications.

This item shall include any additional items related to Site Construction where a unit cost has not been requested. The item shall consist of any and all material, equipment, and labor for items required by the contract documents to provide a complete and functional walkway canopy connecting Corridor 1016 and Corridor 1063. This work includes, but is not limited to: structural steel; carpentry and decking; waterproofing; roofing; as well as lighting. The walkway is base bid. Additionally, this work shall include site utilities, excavation and backfill to foundation subgrade for utilities and foundations, and grading within five feet of the walkway perimeter. The work shall include, but is not limited to, all materials, labor, equipment, and incidentals to construct the canopy within the terms and conditions of the plans and specifications. The full extent of this work is defined by the Contract Documents, including the Drawings and Project Manual, dated December 1, 2010 as well as any addenda issued during the bidding process. Work shall include, but is not limited to, providing labor, materials, equipment, and incidentals necessary to perform all items of work.

Measurement: Measurement will be based on completion of the work described and accepted by the Contracting Officer Technical Representative (COTR).

Payment: Payment for item will be in accordance with the specifications.

Bid Item 90: **Lockers**

Unit: Lump Sum (LS)

Description: The item shall consist of any and all material, equipment, and labor for items required by the contract documents to provide complete and functional Lockers as shown under Alternate Bid #4 in the Drawings and Specifications. This work shall consist of manufactured lockers, as well as all anchoring devices necessary for a complete and functional installation of the locker. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.

Measurement: There will be no direct measurement of materials, labor, and services provided by the Contractor in completing this item.

Payment: Payment shall be made at the contract unit price for lump sum.

Bid Item 91: **Resilient Isolated Gypsum Board Ceilings**

Unit: Lump Sum (LS)

Description: The item shall consist of any and all material, equipment, and labor for items required by the contract documents to provide complete and functional isolated gypsum board ceilings as shown under Alternate Bid #5 in the Drawings and Specifications. This work shall consist of an isolated gypsum board ceiling in the practice rooms, as well as in the large and small rehearsal rooms. The work shall include all of the required gypsum board, framing, and miscellaneous framing members required for a complete and functional installation. The work shall also include additional sprinkler heads and piping that will be required to provide automatic fire protection to the area above the isolated ceiling. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.

Measurement: There will be no direct measurement of materials, labor, and services provided by the Contractor in completing this item.

Payment: Payment shall be made at the contract unit price for lump sum.

Bid Item 92, 93, 94:Acoustical Treatment

Unit: Lump Sum (LS)

Description: The item shall consist of any and all material, equipment, and labor for items required by the contract documents to provide complete and functional acoustical wall and ceiling treatment as shown under Alternate Bids #6, #7, and #8 in the Drawings and Specifications. This work shall consist of various types of acoustical wall and ceiling treatment, including wood fiber absorptive panels, fabric wrapped panels, convex foam panels, draperies (manual and automatic), and geometric ceiling panels. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.

Measurement: There will be no direct measurement of materials, labor, and services provided by the Contractor in completing this item.

Payment: Payment shall be made at the contract unit price for lump sum.

Bid Item 95:	**Acoustic Reflectors**
Unit:	Lump Sum (LS)
Description:	The item shall consist of any and all material, equipment, and labor for items required by the contract documents to provide complete and functional suspended acoustic reflectors as shown under Alternate Bid #9 in the Drawings and Specifications. The acoustical reflectors consist of suspended drywall, acoustical tile, foam panels, geometric ceiling panels, as well as the grid and supporting devices. The work shall include all miscellaneous framing members required for a complete and functional installation. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.
Measurement:	There will be no direct measurement of materials, labor, and services provided by the Contractor in completing this item.
Payment:	Payment shall be made at the contract unit price for lump sum.

Bid Item 96:	**Additional Kitchen Equipment**
Unit:	Lump Sum (LS)
Description:	The item shall consist of any and all material, equipment, and labor for items required by the contract documents to provide complete and functional kitchen equipment as shown under Alternate Bid #10 in the Drawings and Specifications. The scope of this bid item is identified on the Kitchen Equipment Schedule. Items designated as 'Alternate' shall be included in the Kitchen Equipment Alternate, and all other items are base bid. The full extent of this work is defined by the Contract Documents, including the Drawings and Project Manual, dated July 18, 2010 as well as any addenda issued during the bidding process. Work shall include, but is not limited to, providing labor, materials, equipment, and incidentals necessary to perform all items of work.
Measurement:	Measurement will be based on completion of the work described and accepted by the Contracting Officer Technical Representative (COTR).
Payment:	Payment for item will be in accordance with the specifications.

Bid Item 97:	**Landscaping**
Unit:	Lump Sum (LS)
Description:	This item includes furnishing and installing all plant materials including but not limited to Shade Trees, Flowering Trees, Evergreen Trees, Shrubs, Groundcover and Perennials as noted on the plans and as specified as Alternate Bid #11 in the Drawings and Specifications. These prices shall fully compensate the contractor for providing all planting and incidentals necessary to complete the item.

Measurement: Measurement shall be based on completion of work described and accepted by the COTR.

Payment: Payment shall be made at the contract unit price for lump sum.

Bid Item 98: **Dock Lift**

Unit: Lump Sum (LS)

Description: The item shall consist of any and all material, equipment, and labor for items required by the contract documents to provide a complete and functional dock lift as shown under Alternate Bid #12 in the Drawings and Specifications. This work shall consist of the dock lift, as well as all work necessary for a complete and functional installation of the dock lift. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.

Measurement: Measurement shall be based on completion of work described and accepted by the COTR.

Payment: Payment shall be made at the contract unit price for lump sum.

Bid Item 99: **Power and Data on Fixed Audience Seating for Auditorium**

Unit: Lump Sum (LS)

Description: The item shall consist of any and all material, equipment, and labor for items required by the contract documents to provide power and data service package as shown under Alternate Bid #13 in the Drawings and Specifications. This work shall consist of the service package, as well as all work necessary for a complete and functional installation of the power and data on the fixed audience seating. This includes performing all work prescribed in a workmanlike and acceptable manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.

Measurement: Measurement shall be based on completion of work described and accepted by the COTR.

Payment: Payment shall be made at the contract unit price for lump sum.

Bid Item 100: **Grouting**

Unit: Lump Sum (LS)

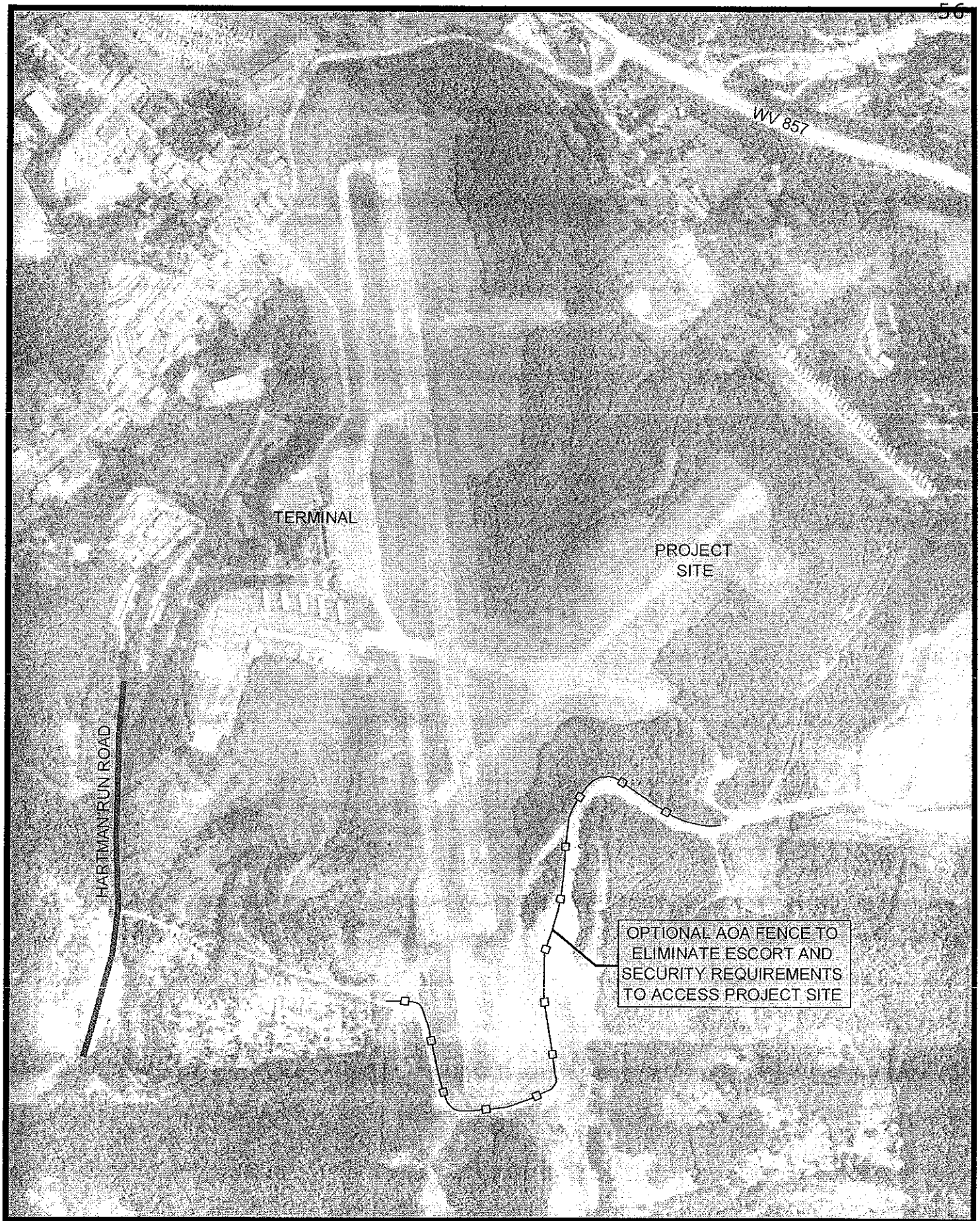
Description: This work consists of furnishing and complete installation of grout to fill any voids found within the project area and directed by the COTR. 10,000 lf of rotary drilling, 1,000 cy of grout, grout placement and grout testing in accordance with Specification Section 02751. This includes performing all work prescribed in a workmanlike and acceptable

manner, including labor, tools, equipment, supplies, material, incidentals, and quality control required to complete the work.

Measurement: There will be no direct measurement of materials, labor, and services provided by the Contractor in completing this item.

Payment: Payment shall be made at the contract unit price for lump sum.

END OF SECTION



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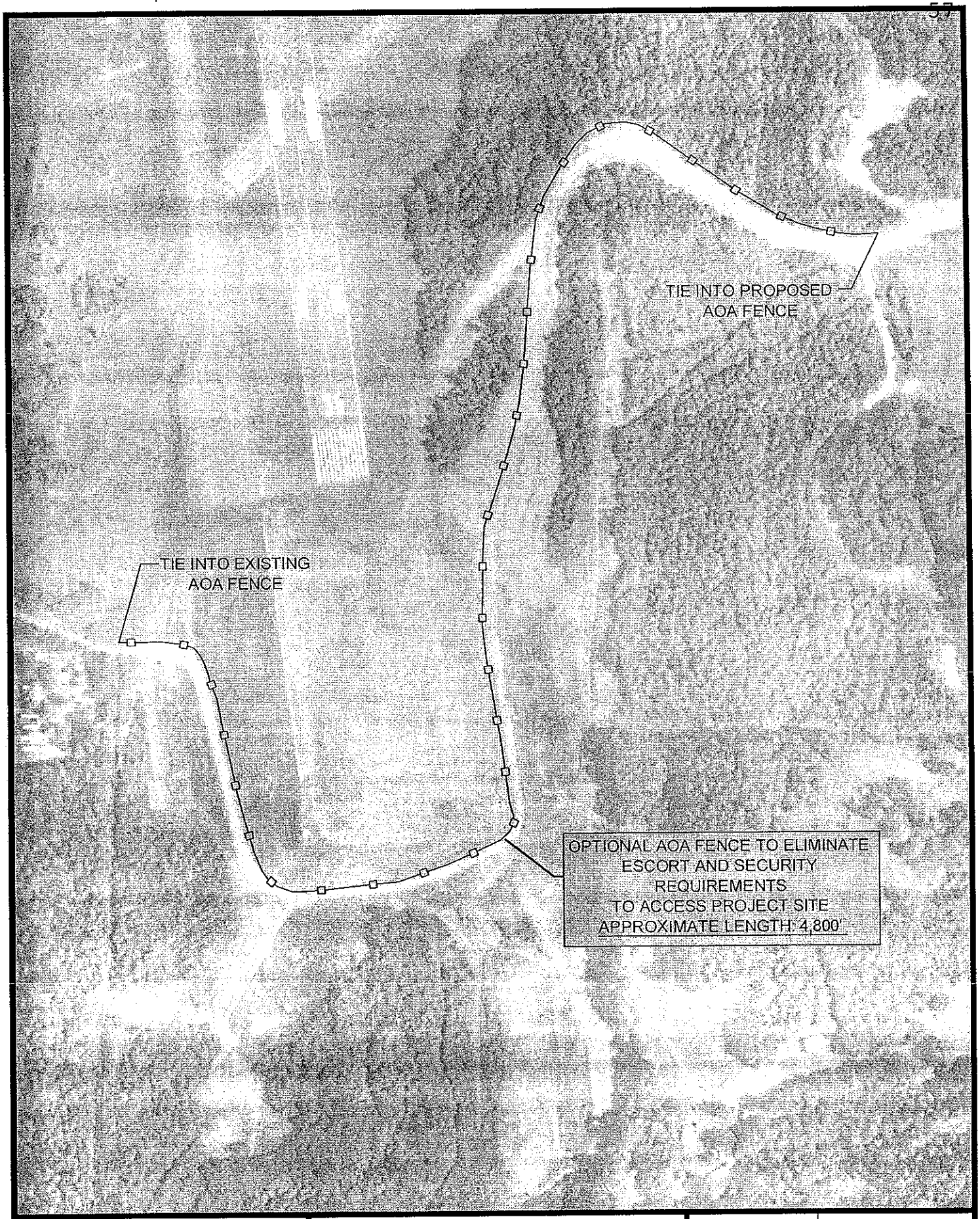

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		SCALE: N.T.S.	2

SECTION 02300

EARTHWORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Preparing subgrades for slabs-on-grade walks pavements and turf and grasses.
2. Excavating and backfilling for buildings and structures.
3. Drainage course for concrete slabs-on-grade.
4. Free draining base trench and outlet piping.
5. Subbase course for concrete walks and pavements.
6. Subbase course and base course for asphalt paving.
7. Subsurface drainage backfill for walls and trenches.
8. Excavating and backfilling trenches for utilities and pits for buried utility structures.
9. Excavating and backfilling trenches within building lines.
10. Excavating and backfilling trenches for buried mechanical and electrical utilities and pits for buried utility structures.

B. Related Sections:

1. Division 1 Section "Photographic Documentation" for recording preexcavation and earth moving progress.
2. Division 1 Section "Temporary Facilities" for temporary controls, utilities, and support facilities; also for temporary site fencing if not in another Section.
3. Division 2 Section "Site Clearing" for site stripping, grubbing, stripping and stockpiling topsoil, and removal of above- and below-grade improvements and utilities.
4. Division 2 Section "Lawns and Grasses" for finish grading in lawn and grass areas, including preparing and placing planting soil for lawn areas.

1.3 UNIT PRICES

A. Work of this Section is affected by unit prices for earth moving specified in Division 1 Section "Unit Prices."

1.4 DEFINITIONS

A. Backfill: Soil material or controlled low-strength material used to fill an excavation.

1. Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support sides of pipe.

2. Final Backfill: Backfill placed over initial backfill to fill a trench.

B. Base Course: Layer placed between the geotextile fabric and the surface treatment for the Hardstand pavement.

C. Bedding Course: Aggregate layer placed over the excavated subgrade in a trench before laying pipe.

D. Borrow Soil: Satisfactory soil imported from off-site for use as fill or backfill.

E. Drainage Course: Aggregate layer supporting the slab-on-grade that also minimizes upward capillary flow of pore water.

F. Durable Rock: Limestone or sandstone having a maximum weighted loss of 30 percent when subjected to five cycles of the sodium sulfate soundness test (WVDOH MP 703.00.22) or passing the slake durability test (Modified ASTM D4644).

G. Excavation: Removal of material encountered above subgrade elevations and to lines and dimensions indicated.

1. Authorized Additional Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions as directed by the COTR with recommendations from Architect/Engineer. Authorized additional excavation and replacement material will be paid for according to Contract provisions for unit prices.
2. Bulk Excavation: Excavation more than 10 feet in width and more than 30 feet in length.
3. Unauthorized Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions without direction by COTR. Unauthorized excavation, as well as remedial work directed by COTR, shall be without additional compensation.

H. Fill: Soil materials used to raise existing grades.

I. Rock: Rock material in beds, ledges, unstratified masses, conglomerate deposits, and boulders of rock material that exceed 1 cu. yd. for bulk excavation or 3/4 cu. yd. for footing, trench, and pit excavation that cannot be removed by rock excavating equipment equivalent to the following in size and performance ratings, without systematic drilling, ram hammering, ripping, or blasting, when permitted:

1. Excavation of Footings, Trenches, and Pits: Late-model, track-mounted hydraulic excavator; equipped with a 42-inch- wide, maximum, short-tip-radius rock bucket; rated at not less than 138-hp flywheel power with bucket-curling force of not less than 28,700 lbf and stick-crowd force of not less than 18,400 lbf with extra-long reach boom; measured according to SAE J-1179.
2. Bulk Excavation: Late-model, track-mounted loader; rated at not less than 230-hp flywheel power and developing a minimum of 47,992-lbf breakout force with a general-purpose bare bucket; measured according to SAE J-732.

J. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.

K. Subbase Course: Aggregate layer placed between the subgrade and free draining base course for hot-mix asphalt pavement and cement concrete pavement. Also the layer between subgrade and cement concrete for sidewalks and equipment pads.

L. Free draining base course: Course placed between the subgrade course and first course of hot-mix asphalt paving.

M. Subgrade: Uppermost surface of an excavation or the top surface of a fill or backfill immediately below subbase, drainage fill, drainage course, or topsoil materials.

N. Surface Treatment: Top layer of aggregate in the Hardstand pavement.

O. Utilities: On-site underground pipes, conduits, ducts, and cables, as well as underground services within buildings.

P. Waterproof Coating: Liquid membrane for use as a below-grade water barrier.

1.5 SUBMITTALS

A. Product Data: For each type of the following manufactured products required:

1. Geotextiles.
2. Geofoam.
3. Warning tapes.
4. Lime types.

B. Samples for Verification: For the following products, in sizes indicated below:

1. Geotextile: 12 by 12 inches.
2. Warning Tape: 12 inches long; of each color.

C. Qualification Data: For qualified testing agency.

D. Material Test Reports: For each on-site and borrow soil material proposed for fill and backfill as follows:

1. Classification according to ASTM D 2487.
2. Laboratory compaction curve according to ASTM D 1557.
3. Sulfur Fractionation according to ASTM D2492-84 and EPA 600/2-78-054, Section 3.2.6 (Modified).
4. Slake Durability according to ASTM D 4644.

E. Preexcavation Photographs or Videotape: Show existing conditions of adjoining construction and site improvements, including finish surfaces, that might be misconstrued as damage caused by earth moving operations. Submit before earth moving begins.

F. Minutes from Pre-Excavation Conference.

1.6 QUALITY ASSURANCE

A. Geotechnical Testing Agency Qualifications: Qualified according to ASTM E 329 and ASTM D 3740 for testing indicated.

B. Preexcavation Conference: Conduct conference at Project site.

1.7 PROJECT CONDITIONS

A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during earth moving operations.

1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
2. Provide alternate routes around closed or obstructed traffic ways if required by Owner or authorities having jurisdiction.

B. Improvements on Adjoining Property: Authority for performing earth moving indicated on property adjoining Owner's property will be obtained by Owner before award of Contract.

1. Do not proceed with work on adjoining property until directed by the COTR.

C. Utility Locator Service: Notify "Miss Utility" for area where Project is located before beginning earth moving operations.

D. Do not commence earth moving operations until temporary erosion- and sedimentation-control measures, specified in Division 2 Section "Site Clearing," are in place.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

A. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.

B. Satisfactory Soils: Soil Classification Groups GW, GP, GM, GC, SW, SP, SM, SC, CL, and ML according to ASTM D 2487, free of rock or gravel larger than 4 inches in any dimension, debris, waste, frozen materials, vegetation, and other deleterious matter and with Atterberg Limits meeting the criteria below.

1. Liquid Limit: Less than 45.
2. Plasticity Index: Less than 23.

C. Unsatisfactory Soils: Satisfactory soils not maintained between -2 and +3 percent of optimum moisture content at time of compaction. Granular material may be between -3 and +3 percent of optimum moisture content.

D. Unsuitable Soils: Soil Classification Groups OL, CH, MH, OH, and PT according to ASTM D 2487, or a combination of these groups, and any soil containing greater than .20% pyritic sulfur.

E. Coal Waste: Mixture of coal, coal fines, soil, and other carbonaceous or organic materials, with a darker than normal soil appearance or the presence of pyrites. Any excavated material with greater than 3% organics that visually appears to contain coal remnants or any material that contains greater than .20% pyritic sulfur.

F. Subbase Material: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 90 percent passing a 1-1/2-inch sieve and not more than 12 percent passing a No. 200 sieve.

G. Base: Naturally or artificially graded mixture of crushed stone meeting the requirement of AASHTO No. 1.

H. Engineered Fill: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 90 percent passing a 1-1/2-inch sieve and not more than 12 percent passing a No. 200 sieve.

I. Bedding Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; except with 100 percent passing a 1-inch sieve and not more than 8 percent passing a No. 200 sieve.

J. Drainage Course: Narrowly graded mixture of washed crushed stone, or crushed or uncrushed gravel; ASTM D 448; coarse-aggregate grading Size 57; with 100 percent passing a 1-1/2-inch sieve and 0 to 5 percent passing a No. 8 sieve.

K. Filter Material: Narrowly graded mixture of natural or crushed gravel, or crushed stone and natural sand; ASTM D 448; coarse-aggregate grading Size 67; with 100 percent passing a 1-inch sieve and 0 to 5 percent passing a No. 4 sieve.

L. Open Graded Free Draining Base: Washed, narrowly graded mixture of crushed stone, or crushed or uncrushed gravel; ASTM D 448; coarse-aggregate grading Size 57.

M. Surface Treatment: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone; meeting the requirement of Class 1 Stone from the WVDOH Standard Specifications.

N. Sand: ASTM C 33; fine aggregate.

O. Impervious Fill: Clayey gravel and sand mixture capable of compacting to a dense state.

P. Agricultural Lime: ASTM C 602, Class T, agricultural limestone containing a minimum 90 percent calcium carbonate equivalent, with a minimum 99 percent passing a No. 8 sieve and a minimum 75 percent passing a No. 60 sieve.

Q. Quick Lime: ASTM C 5, containing a minimum of 95% calcium carbonate equivalent, with a minimum 99 percent passing a No. 8 sieve and a minimum 75 percent passing a No. 60 sieve.

R. Lean Concrete: Low permeability mixture of Portland Cement, fine aggregate, fly ash, and water with a minimum compressive strength of 1,500 psi designed to prevent moisture intrusion into the underlying strata.

2.2 GEOTEXTILES

A. Subsurface Drainage Geotextile: Nonwoven needle-punched geotextile, manufactured for subsurface drainage applications, made from polyolefins or polyesters; with elongation greater than 50 percent; complying with AASHTO M 288 and the following, measured per test methods referenced:

1. Survivability: Class 2; AASHTO M 288.
2. Grab Tensile Strength: 157 lbf; ASTM D 4632.
3. Sewn Seam Strength: 142 lbf; ASTM D 4632.
4. Tear Strength: 56 lbf; ASTM D 4533.
5. Puncture Strength: 56 lbf; ASTM D 4833.
6. Apparent Opening Size: No. 80 sieve, maximum; ASTM D 4751.
7. Permittivity: 0.5 per second, minimum; ASTM D 4491.

8. UV Stability: 50 percent after 500 hours' exposure; ASTM D 4355.

B. Separation Geotextile: Woven geotextile fabric, manufactured for separation applications, made from polyolefins or polyesters; with elongation less than 50 percent; complying with AASHTO M 288 and the following, measured per test methods referenced:

1. Survivability: Class 2; AASHTO M 288.
2. Grab Tensile Strength: 247 lbf; ASTM D 4632.
3. Sewn Seam Strength: 222 lbf; ASTM D 4632.
4. Tear Strength: 90 lbf; ASTM D 4533.
5. Puncture Strength: 90 lbf; ASTM D 4833.
6. Apparent Opening Size: No. 60 sieve, maximum; ASTM D 4751.
7. Permittivity: 0.02 per second, minimum; ASTM D 4491.
8. UV Stability: 50 percent after 500 hours' exposure; ASTM D 4355.

C. Woven (Heavy Duty) Geotextile Fabric: Woven geotextile, specifically manufactured for use as an engineered geotextile; made from polyester; and with the following minimum properties determined according to ASTM D 4355 and referenced standard test methods:

1. Grab Tensile Strength: 600/500; ASTM D 4632.
2. Grab Elongation: 15%; ASTM D 4632.
3. Mullen Burst: 1,350 psi; ASTM D 3786.
4. Puncture Resistance: 140 lb; ASTM D 4833.
5. Water Flow Rate: 10 gal/min/ft^2.
6. Apparent Opening Size: No. 50; ASTM D 4751.
7. UV Resistance: 80% @ 500 hrs; ASTM D 4355.
8. Trapezoidal Tear: 250 lb; ASTM D 4533.

D. Biaxial Geogrid: Geogrid, biaxial, specifically manufactured for use as an engineered geotextile; made from polyester or polypropylene; and with the following minimum properties determined according to ASTM D 4355 and referenced standard test methods:

1. Tensile Strength @ 2% Strain: 1,000 lb/ft in both directions.
2. Tensile Strength @ 5% Strain: 2,000 lb/ft in both directions.

2.3 ACCESSORIES

A. Detectable Warning Tape: Acid- and alkali-resistant, polyethylene film warning tape manufactured for marking and identifying underground utilities, a minimum of 6 inches wide and 4 mils thick, continuously inscribed with a description of the utility, with metallic core encased in a protective jacket for corrosion protection, detectable by metal detector when tape is buried up to 30 inches deep; colored as follows:

1. Red: Electric.
2. Yellow: Gas, oil, steam, and dangerous materials.
3. Orange: Telephone and other communications.
4. Blue: Water systems.
5. Green: Sewer systems.

PART 3 - EXECUTION

3.1 PREPARATION

A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earth moving operations.

B. Protect and maintain erosion and sedimentation controls during earth moving operations.

C. Protect subgrades and foundation soils from freezing temperatures and frost. Remove temporary protection before placing subsequent materials.

3.2 DEWATERING

A. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.

B. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.

1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.

3.3 EXPLOSIVES

A. Explosives: Blasting is not authorized.

3.4 EXCAVATION, GENERAL

A. Unclassified Excavation: Excavate to subgrade elevations regardless of the character of surface and subsurface conditions encountered. Unclassified excavated materials may include rock, soil materials, and obstructions. No changes in the Contract Sum or the Contract Time will be authorized for rock excavation or removal of obstructions.

1. If excavated materials intended for fill and backfill include unsatisfactory soil materials and rock, replace with satisfactory soil materials.

3.5 EXCAVATION FOR WALKS AND PAVEMENTS

A. Excavate surfaces under walks and pavements to indicated lines, cross sections, elevations, and subgrades.

3.6 EXCAVATION FOR UTILITY TRENCHES

A. Excavate trenches to indicated gradients, lines, depths, and elevations.

1. Beyond building perimeter, excavate trenches to allow installation of top of pipe below frost line.

B. Excavate trenches to uniform widths to provide the following clearance on each side of pipe or conduit. Excavate trench walls vertically from trench bottom to 12 inches higher than top of pipe or conduit unless otherwise indicated.

1. Clearance: 12 inches each side of pipe or conduit.

C. Trench Bottoms: Excavate and shape trench bottoms to provide uniform bearing and support of pipes and conduit. Shape subgrade to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits. Remove projecting stones and sharp objects along trench subgrade.

1. For pipes and conduit less than 6 inches in nominal diameter, hand-excavate trench bottoms and support pipe and conduit on an undisturbed subgrade.
2. For pipes and conduit 6 inches or larger in nominal diameter, shape bottom of trench to support bottom 90 degrees of pipe or conduit circumference. Fill depressions with tamped sand backfill.
3. For flat-bottomed, multiple-duct conduit units, hand-excavate trench bottoms and support conduit on an undisturbed subgrade.
4. Excavate trenches 6 inches deeper than elevation required in rock or other unyielding bearing material to allow for bedding course.

3.7 APPROVAL OF SUBGRADE

A. Notify COTR when excavations have reached required subgrade.

1. If COTR determines that unsatisfactory soil is present, prepare subgrade in accordance with Section 3.9 "Moisture Control" as directed.

2. If COTR determines that unsuitable soil is present, continue excavation as directed and replace with geogrid and AASHTO #1 stone in accordance with "Over-excavation".

B. Proof roll subgrade with heavy pneumatic-tired equipment (a tandem-axle dump truck of at least 20 tons) to identify soft pockets and areas of excess yielding. Do not proof roll wet or saturated subgrades.

C. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by COTR.

D. Over-excavation will be used to "bridge" soft areas of unsuitable soils. The soft area and an additional 48" around it will be excavated 18" below subgrade and the material hauled to the waste area for disposal. A biaxial geogrid will be installed per the manufacturers guidelines and backfilled with 18" of AASHTO No. 1 stone. The stone will then be rolled to lock it in place. Any damage to the geogrid during installation will be removed and replaced at the contractor's expense.

3.8 MOISTURE CONTROL

A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill layer before compaction to within 3 percent of optimum moisture content for granular material and -2 to +3 percent for other suitable soil and shale materials.

1. Do not place backfill or fill material on surfaces that are muddy, frozen, or contain frost or ice.

2. Scarify and air-dry, otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight. If approved by the COTR, soil drying or soil conditioning may be used for subgrade preparation.

3. Soil Drying

    a. Description. This work shall consist of drying stockpiled fill with an admixture of ground quick lime.
    b. Materials. Ground quick lime shall meet the requirements of ASTM C 5. Weight of the lime used shall depend on the wetness of the subgrade soil. Contractor may perform testing at his expense to determine lime application rates required to achieve optimum moisture content in the stockpiled soil.
    c. General. Soil drying shall be performed when the air temperature is 5° C (40° F) or above and the material to be treated is not frozen. No work shall be done during wet or unsuitable weather.
    d. Spreading. The lime shall be spread uniformly.
    e. Dry lime shall be spread in such a manner to minimize dusting. The dry lime shall not be applied when wind conditions, in the opinion of the Engineer, are such that blowing lime becomes objectionable to traffic or adjacent property owners.
    f. Mixing. The spreading of the lime shall be followed immediately by a mixing operation consisting of the use of a spring tooth or disc harrow. Mixing shall be continued until the lime has been thoroughly incorporated into the mix, all soil clods have been reduced to a maximum size of 50 mm (2 inches), and the mixture is a uniform color.

4. Soil Conditioning

    a. Description. This work shall consist of constructing a 12" thick lime stabilized subgrade consisting of an admixture of ground quicklime with the subgrade soil constructed, mixed, shaped, compacted, fine graded, and finished.
    b. Materials. Weight of the lime used shall be 3 to 4 percent of the dry weight of the subgrade soil as directed by the Engineer based on soil types encountered.
    c. General. Lime stabilization work shall be performed when the air temperature is 5° C (40° F) or above and the material to be treated is not frozen. No work shall be done during wet or unsuitable weather.
    d. Spreading. The lime shall be spread uniformly on the subgrade by using distributors or equipment approved by the Engineer.
    e. Dry lime shall be spread in such a manner to minimize dusting. The dry lime shall not be applied when wind conditions, in the opinion of the Engineer, are such that blowing lime becomes objectionable to traffic or adjacent property owners.
    f. Lime slurry shall be prepared and distributed using equipment or procedures capable of keeping the slurried lime in suspension and spreading the slurry uniformly over the area to be stabilized.
    g. Mixing. The spreading of the lime shall be followed immediately by a mixing operation consisting of the use of a spring tooth or disc harrow followed by an approved power driven rotary type mixer. During this mixing operation, water shall be added if necessary to bring the mixed material to 3% above optimum. Mixing shall be continued until the lime has been thoroughly incorporated into the mix, all soil clods have been reduced to a maximum size of 50 mm (2 inches), and the mixture is a uniform color.
    h. Following the initial mixing, the material shall be lightly compacted with a steel-wheeled or pneumatic-tired roller to seal it against rain or excessive drying. The partially mixed material shall cure for a period of not less than 4 hours nor more

than 2 days prior to final mixing. If conditions during construction are such that more than 7 days elapse between initial mixing and final compaction, an additional ½ percent of lime shall be added during the final mixing. The added lime shall be furnished at the Contractor's expense unless the delay beyond the 2-day limit is caused by conditions beyond the control of the Contractor.

i. The final mixing shall be done with approved power driven rotary type equipment until the soil has become completely pulverized with all clods reduced to a maximum size of 25 mm (1 inch) and at least 60 percent of the clods reduced to such a size that they will pass the 4.75 mm (No. 4) sieve. Mixing shall be continued until the lime has been uniformly distributed throughout the pulverized soil.

j. Compaction. The mixture shall again be brought to 2% to 4% above optimum moisture content during the final mixing and the mixture shall then be shaped and compacted. The maximum laboratory dry density of the lime-soil stabilized subgrade shall not be less than 1440 kg/m3 (90 pounds per cubic foot). All lime-soil stabilized subgrade shall be compacted to 95 percent of the laboratory maximum dry density (ASTM D1557). Final rolling shall be performed using a steel-wheeled roller.

k. The compacted lime-soil stabilized subgrade shall cure for a period of at least 5 days prior to placement of any overlying fill. The surface shall be lightly sprinkled during hot, dry weather through the curing period to prevent excessive moisture loss, as directed by the Engineer. During the curing period, heavy equipment shall be kept off the treated subgrade.

3.9 STORAGE OF SOIL MATERIALS

A. Stockpile borrow soil materials and excavated satisfactory soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.

1. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.

3.10 BACKFILL

A. Place and compact backfill in excavations promptly, but not before completing the following:

1. Construction below finish grade including, where applicable, subdrainage, dampproofing, waterproofing, and perimeter insulation.
2. Surveying locations of underground utilities for Record Documents.
3. Testing and inspecting underground utilities.
4. Removing concrete formwork.
5. Removing trash and debris.
6. Removing temporary shoring and bracing, and sheeting.
7. Installing permanent or temporary horizontal bracing on horizontally supported walls.

B. Place backfill on subgrades free of mud, frost, snow, or ice.

3.11 UTILITY TRENCH BACKFILL

A. If excavation extended into bedrock, the bottom must be excavated an additional 6" and sealed with a 6" minimum concrete mud mat.

B. Place backfill on subgrades free of mud, frost, snow, or ice.

C. Place and compact bedding course on trench bottoms and where indicated. Shape bedding course to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits.

D. Trenches under or within 10 feet of structures, pavements, or building slabs: Seal sidewalls with waterproof coating. Backfill trenches excavated under footings and within 18 inches of bottom of footings with lean concrete. Concrete is specified in Division 3 Section "Cast-in-Place Concrete."

E. Trenches under Roadways: Provide 4-inch- thick, concrete-base slab support for piping or conduit less than 30 inches below surface of roadways. After installing and testing, completely encase piping or conduit in a minimum of 4 inches of concrete before backfilling or placing roadway subbase course. Concrete is specified in Division 3 Section "Cast-in-Place Concrete."

F. Backfill voids with satisfactory soil while removing shoring and bracing.

G. Place and compact initial backfill of satisfactory soil, free of particles larger than 1 inch in any dimension, to a height of 12 inches over the pipe or conduit.

1. Carefully compact initial backfill under pipe haunches and compact evenly up on both sides and along the full length of piping or conduit to avoid damage or displacement of piping or conduit. Coordinate backfilling with utilities testing.

H. Install warning tape directly above utilities, 12 inches below finished grade, except 6 inches below subgrade under pavements and slabs.

3.12 DURABLE ROCK FILL

A. Rock occurring in the excavation that meets the criteria for durable rock may be used to form drainage systems, the outer edges of embankments, or as a lining for drainage channels. In the case of drainage channels, the dimensions of the rock may be as large as the thickness of the lining will permit.

B. Durable rock shall be placed in separate areas from soil materials and at least 30 feet outside of proposed footings or buildings. Durable rock fill will not be placed within 36" of pavement subgrades or finish grade at any location. Durable rock fill shall be placed in lifts not to exceed 24 inches and with a maximum particle size of 12 inches. The lift thickness shall be as thin as the excavated material will permit. Rock fills should be compacted using a minimum of six passes per lift of a 15-ton static weight vibratory roller. There should be at least a 30% overlap between compactor passes. Each lift shall be proof rolled upon completion (tandem axle dump of at least 20 tons).

C. When used on the outer slopes of embankments, the large rocks shall be placed at the outer face and the smaller rocks and spalls near the center. The rock shall not be dumped in placed but shall be distributed and placed the full width of the lift being formed by blading or dozing in a manner to assure proper placement in the final position in the embankment. The larger rock shall be well distributed and the voids, pockets, and bridging reduced to ensure minimum deformation and still permit drainage where required. Material that is too wet to be properly compacted shall not be used to fill the voids of previously placed rock. Satisfactory material that meets moisture requirements may be blended with rock and shall be placed in the embankment in lift thickness as prescribed.

D. To the extent that it is available and needed, sufficient suitable material shall be reserved from the unclassified excavation for use in filling voids in the top of the rock fill. Where rock is placed on an embankment of other material, the top of the other material shall be sloped from the center to the sides at a rate of approximately 4%.

3.13 SOIL FILL

A. Plow, scarify, and bench sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing material.

B. Place and compact fill material in layers to required elevations as follows:

1. Under grass and planted areas, use satisfactory soil material.
2. Under walks and pavements, use satisfactory soil material free of particles greater than 4" in any dimension.
3. Under steps and ramps, use satisfactory soil material free of particles greater than 4" in any dimension.
4. Fill type: Rock Fill (durable sandstone and limestone). Acceptable location for placement: Up to 3 feet below pavement subgrades or finish grade.
5. Only lean concrete shall be used as fill under buildings and other structures.

C. Place soil fill on subgrades free of mud, frost, snow, or ice.

3.14 STOCKPILES

A. Soil Stockpiles: Soil stockpiles shall be placed in 12" maximum loose lifts and each lift shall be tracked in with a D-7 or larger bulldozer to ensure material is of uniform density and is stable. Soil stockpile materials shall be free from any rocks 6" or larger in any dimension.

3.15 COMPACTION OF SOIL BACKFILLS AND FILLS

A. Place backfill and fill soil materials in layers not more than 8 inches in loose depth for material compacted by heavy compaction equipment, and not more than 4 inches in loose depth for material compacted by hand-operated tampers.

B. Place backfill and fill soil materials evenly on all sides of structures to required elevations, and uniformly along the full length of each structure.

C. Compact soil materials to not less than the following percentages of maximum dry unit weight according to ASTM D 1557:

1. All areas, scarify and recompact top 12 inches of existing subgrade and each layer of backfill or fill soil material at 95 percent.
2. For utility trenches, compact each layer of initial and final backfill soil material at 95 percent.

3.16 GRADING

A. General: Uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.

1. Provide a smooth transition between adjacent existing grades and new grades.
2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.

B. Site Rough Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to required elevations within the following tolerances:

1. All Areas: Plus or minus 1 inch.

3.17 SUBSURFACE DRAINAGE

A. Subdrainage Pipe: Specified in Division 2 Section "Storm Utility Drainage Piping."

B. Subsurface Drain: Place subsurface drainage geotextile around perimeter of subdrainage trench. Place a 6-inch course of filter material on subsurface drainage geotextile to support subdrainage pipe. Encase subdrainage pipe in a minimum of 12 inches of filter material, placed in compacted layers 6 inches thick, and wrap in subsurface drainage geotextile, overlapping sides and ends at least 6 inches.

1. Compact each filter material layer with a minimum of two passes of a plate-type vibratory compactor.

C. Drainage Backfill: Place and compact filter material over subsurface drain, in width indicated, to within 12 inches of final subgrade, in compacted layers 6 inches thick. Overlay drainage backfill with one layer of subsurface drainage geotextile, overlapping sides and ends at least 6 inches.

1. Compact each filter material layer with a minimum of two passes of a plate-type vibratory compactor.
2. Place and compact impervious fill over drainage backfill in 6-inch- thick compacted layers to final subgrade.

3.18 FREE DRAINING BASE COURSE

A. Installation shall follow requirements of WVDOH Standard Specifications Section 311.

B. Composition of Optional Stabilizing Mixtures:

1. If the asphalt stabilized alternative is used, the asphalt cement shall be confined to 2.0%, plus or minus 0.5% by weight of the mix if Blast Furnace Slag is used the asphalt cement may be increased.
2. If the Portland cement stabilized alternative is chosen, the cement shall be Type 1 and shall have a cement content of 150 ± 5 pounds per cubic yard.

C. Weather and Seasonal Limitations:

1. Weather and seasonal limitations shall be in accordance with Section 02741 (for asphalt applications) or Section 02751 (for Portland cement applications).

D. Preparation and Batching of Materials:

1. Preparation of materials for asphalt applications shall conform to the requirements of 401.7 of the Specifications except that the asphalt cement shall be heated within a

temperature range of 250° - 275° F and temperature of the mix shall be within the range of 200° - 250° F.

2. Preparation of materials for Portland cement applications shall conform to the requirements of WVDOH Standard Specification Section 501.7.

E. Mixing and Transporting Requirements:

1. The materials used in asphalt mixes shall be mixed in an asphalt concrete mixing plant that has been inspected and approved by the Division. Transportation of such mixes shall be in accordance with 401.10 of the WVDOH Standard Specifications.
2. The materials used in Portland cement mixes may be mixed at a central mix plant, in a transit mix truck or a pugmill type mixer. Regardless of which type of equipment is used, the mixing time shall be a minimum of two minutes once all component materials are batched.

F. Placing, Spreading, and/or Compacting:

1. Placement of the stabilized material shall be by acceptable spreading equipment to the appropriate line, grade and thickness. Acceptable equipment includes asphalt pavers for asphalt stabilized bases and spread boxes, self propelled spreaders or conventional concrete placing equipment for Portland cement stabilized bases.
2. A four to ten ton steel wheel tandem roller shall be used to compact the asphalt stabilized free draining base material. The number of roller passes shall be two or three unless otherwise directed. In the case of the asphalt stabilized aggregate, the mat temperature, at the time of initial rolling, shall be between 150° and 175° F unless otherwise directed. In the case of the asphalt stabilized aggregate, the purpose of the rolling is to compact the base sufficiently to support the weight of the equipment that will place the next layer or pavement. The compacted base is to be porous so that water will drain through it. The base is not to be compacted to the point that it is not free draining or that the aggregate is crushed.

G. Curing:

1. Portland cement stabilized bases, immediately following spreading, shall be cured with the use of white polyethylene sheeting.

H. Tolerance:

1. Base tolerance shall meet the requirements of Section 02741 for asphalt stabilized bases and Section 02751 for Portland cement stabilized bases.

I. Maintenance:

1. The Contractor shall maintain the base course porous and free from being contaminated or clogged by deleterious material, transported and deposited by construction equipment, traffic, etc., until the next layer of the pavement is placed. The Contractor shall also maintain the final surface of the base course true to specified line, grade and cross section until such time that the pavement is placed.

3.19 FREE DRAINING BASE TRENCH

A. Trenching: The free draining base trench shall be excavated to the width and depth as detailed on the plans. Trench walls shall be as nearly vertical as practicable.

B. Bedding and Placing Perforated Pipe: After excavating the trench, geotextile fabric shall be placed in the trench in reasonable conformance with the shape of the trench. The fabric shall be smooth and free of tension, stress, folds, wrinkles, or creases. The fabric shall be installed so that any splice joints have a minimum overlap of at least 1 foot any direction. Enough fabric will be placed in order to properly tie to the mainline placement of fabric.

1. A 2 inch bedding layer of crushed stone or gravel conforming to free draining base course aggregate shall be placed in the bottom of the trench for its full width and length.
2. The pipe shall then be placed in the trench. The pipe sections shall be joined with couplings or bands as recommended by the manufacturer.
3. After pipe installation, the remainder of the trench will be backfilled with crushed stone or gravel conforming to free draining base course aggregate.

3.20 OUTLET PIPE

A. Connection to Perforated Pipe: At locations designated on the plans or as directed by the Engineer, rigid outlet pipe will be connected to the perforated pipe. A drop connection utilizing a tee or wye or other means as satisfactory to the Engineer will be used for this connection. This operation may be performed concurrently with the placement of the perforated pipe or separately.

B. Trenching: The outlet pipe trench shall be excavated to the depth of the flow line of the outlet pipe. Minimum slope of the outlet pipe is to be 3%. Width of the trench will be that width which will allow proper room for pipe placement and backfilling operations.

C. Placing and Backfilling Pipe: The outlet pipe shall be placed in the trench with all ends firmly joined by couplings or bands as recommended by the manufacturer. The outlet pipe shall be backfilled with satisfactory soil in accordance with Section 3.12, "Utility Trench Backfill".

D. Pipe End Treatment: The outlet end of all outlet pipes not tied to drainage structures shall be equipped with a slopewall and animal screen. Outlet pipes shall be tied to inlets or culverts by the use of pipe saddles, grouting cementing, or other means satisfactory to the Engineer.

3.21 SUBBASE AND BASE COURSES UNDER PAVEMENTS AND WALKS

A. Place subbase course and base course on subgrades free of mud, frost, snow, or ice.

B. On prepared subgrade, place subbase course and base course under pavements and walks as follows:

1. Install separation geotextile on prepared subgrade according to manufacturer's written instructions, overlapping sides and ends.
2. Place base course material over subbase course under hot-mix asphalt pavement.
3. Shape subbase course and base course to required crown elevations and cross-slope grades.
4. Place subbase course and base course 6 inches or less in compacted thickness in a single layer.
5. Place subbase course and base course that exceeds 6 inches in compacted thickness in layers of equal thickness, with no compacted layer more than 6 inches thick or less than 3 inches thick.
6. Compact subbase course and base course at optimum moisture content to required grades, lines, cross sections, and thickness to not less than 95 percent of maximum dry unit weight according to ASTM D 1557.

C. Pavement Shoulders: Place shoulders along edges of subbase course and base course to prevent lateral movement. Construct shoulders, at least 12 inches wide, of satisfactory soil materials and compact simultaneously with each subbase and base layer to not less than 95 percent of maximum dry unit weight according to ASTM D 1557.

3.22 DRAINAGE COURSE UNDER CONCRETE SLABS-ON-GRADE

A. Place drainage course on subgrades free of mud, frost, snow, or ice.

B. On prepared subgrade, place and compact drainage course under cast-in-place concrete slabs-on-grade as follows:

1. Place drainage course 6 inches or less in compacted thickness in a single layer.
2. Place drainage course that exceeds 6 inches in compacted thickness in layers of equal thickness, with no compacted layer more than 6 inches thick or less than 3 inches thick.
3. Compact each layer of drainage course to required cross sections and thicknesses to not less than 95 percent of maximum dry unit weight according to ASTM D 1557.

3.23 FIELD QUALITY CONTROL

A. Special Inspections: Contractor will engage a qualified independent special inspector to perform the following special inspections:

1. Determine prior to placement of fill that site has been prepared in compliance with requirements.
2. Determine that fill material and maximum lift thickness comply with requirements.
3. Determine what is suitable soil, coal waste, durable rock, unsuitable soil, pyritic material and coal fines by visual inspection and to order tests as required to ensure compliance with the specifications regarding the use and/or disposal of the different materials.
4. Determine, at the required frequency, that in-place density of compacted fill complies with requirements.

B. Testing Agency: Contractor will engage a qualified geotechnical engineering testing agency to perform tests and inspections.

C. Allow testing agency to inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earth moving only after test results for previously completed work comply with requirements.

D. Testing agency will test compaction of soils in place according to ASTM D 1556, ASTM D 2167, ASTM D 2922, and ASTM D 2937, as applicable. Tests will be performed at the following locations and frequencies:

1. Fill Areas: At subgrade and at each compacted fill and backfill layer, at least one test for every 4000 sq. ft. or less, but in no case fewer than three tests.
2. Trench Backfill: At each compacted initial and final backfill layer, at least one test for every 150 feet or less of trench length, but no fewer than two tests.

E. When testing agency reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil materials to depth required; recompact and retest until specified compaction is obtained.

F. Areas of Soil Conditioning: At least one test for every 100 square yards of area treated will be performed to verify bearing capacity is at least five tons per square foot, and one test of an in-place conditioned soil for every 1,000 square yards installed will be tested for swelling.

G. Durable Rock: Slake durability test (ASTM D 4644) for each type of rock and one per 5,000 cubic yards of excavated rock.

H. Lean Concrete: Compressive strength tests in accordance with Section 033000, "Cast-in-Place Concrete".

3.24 PROTECTION

A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.

B. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.

1. Scarify or remove and replace soil material to depth as directed by the COTR; reshape and recompact.

C. Where settling occurs before Project correction period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.

1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

3.25 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. Remove waste materials, including unsuitable soil, trash, and debris, and legally dispose of them off Owner's property.

B. Transport surplus satisfactory soil to designated storage areas on Owner's property. Stockpile or spread soil as directed by the COTR.

1. Remove waste materials, including trash, and debris, and legally dispose of them off Owner's property.

END OF SECTION

SECTION 08346

ARMORY DOORS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes steel armory door assemblies, complete with door, frame, and associated door hardware.

B. Related Sections:

1. Division 03 Section "Cast-in-Place Concrete" for building anchors into concrete construction for armory door frames.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, finishes, and operating characteristics for armory door assemblies.

B. Shop Drawings: For armory door assemblies. Include plans, elevations, sections, details, and attachments to other work. Show operational clearances and coordination of adjustable frame with designed wall thicknesses.

C. Setting Drawings: For anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors that are to be embedded in concrete.

D. Samples for Initial Selection: For units with factory-applied color finishes.

E. Samples for Verification: For each type of exposed finish required, in manufacturer's standard sizes.

F. Qualification Data: For qualified Installer.

G. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for armory door assemblies.

H. Operation and Maintenance Data: For armory door assemblies to include in emergency, operation, and maintenance manuals. In addition to items specified in Division 01 Section "Operation and Maintenance Data," include keying and combination information.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for installation of units required for this Project.

B. Source Limitations: Obtain armory door assembly all from single source from single manufacturer.

C. Standards:

1. Comply with U.S. General Services Administration (GSA) standard No. AA-D-600D with Amendment 2.

D. Preinstallation Conference: Conduct conference at Project site.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver armory door assemblies wrapped and crated to provide protection during transit and Project-site storage. Use vented plastic.

B. Deliver keys to Owner by registered mail or overnight package service.

1. Obtain Owner's mailing address from Architect.

1.6 PROJECT CONDITIONS

A. Environmental Limitations: Do not deliver or install armory door assemblies until spaces are enclosed and weathertight, wet work in spaces is complete and dry, and temporary HVAC system is operating and maintaining ambient temperature and humidity conditions at occupancy levels during the remainder of the construction period.

1.7 COORDINATION

A. Coordinate installation of anchorages for armory door frames. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Subject to compliance with requirements, provide one of the following vault door assemblies:

1. Diebold General Services Administration-Approved Class 5 High Security Armory Door (Basis Of Design).

2. Equivalent products as manufactured by Schwab Corporation.

2.2 MATERIALS

A. Steel Plate, Shapes, and Bars: ASTM A 36/A 36M.

B. Steel Sheet: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B.

C. Stainless-Steel Sheet: ASTM A 666, Type 304.

D. Aluminum Extruded Bar and Tube: ASTM B 221.

E. Aluminum Plate and Sheet: ASTM B 209.

2.3 VAULT DOOR AND FRAME ASSEMBLY

A. Door: Fabricated from all-welded, insulated steel sheet construction; with jambs and head shaped to interlock with frame.

1. Type: Armory door.
2. Clear Opening Size: As indicated on Drawings.

B. Frame: Beveled entrance frame, tapered no more than 10 degrees, fabricated from steel sheet of thickness required by UL listing, and designed for non-grout installation; with removable rear architrave and adjustable wall flange to accommodate wall thicknesses indicated, fabricated from steel sheet and finished to match frame.

2.4 HARDWARE AND ACCESSORIES

A. General: Provide hardware components as required for specified UL listing.

B. Hinges: No fewer than three roller-thrust-bearing hinges of design, size, and weight required for smooth operation of door and to allow full, clear door opening; with hinge cover(s).

C. Door Bolts: Permanently lubricated, not less than 11/16 inches in diameter, and fabricated from nickel-plated steel. On each vertical side of door, provide five door bolts that engage frame when extended. Bolts shall automatically retract when handle is operated and automatically extend when door closes.

D. Handle: Manufacturer's standard.

E. Combination Lock: Manufacturer's UL Group 1 mechanical lock.

1. Provide drill-resistant metal plate for protection of lock case and locking mechanism.

F. Relocking Device: UL 140 listed, designed to automatically lock door bolts when door is subjected to mechanical or torch attack.

G. Escape Mechanism: Provide emergency operation of lock from vault side of door by means of inside door release fabricated from stainless-steel rod.

H. Sill: Reinforced formed-steel or flat-steel plate.

2.5 FABRICATION

A. Fabricate armory door assemblies rigid, neat in appearance, and free of defects, warp, or buckle. Accurately form metal to required sizes and profiles, with minimum radius for thickness of metal. Weld exposed joints continuously; grind, fill, dress, and make smooth, flush, and invisible. Where practical, fit and assemble units in manufacturer's plant. To ensure proper assembly at Project site, clearly identify work that cannot be permanently factory assembled before shipment.

B. Factory-prepare armory door assemblies and frames to receive hardware and accessories, including cutouts, reinforcements, mortising, drilling, and tapping.

2.6 GENERAL FINISH REQUIREMENTS

A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

C. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

2.7 PAINT FINISHES

A. Finish: Manufacturer's standard factory-applied, baked-on paint finish applied to door, frame, and wall flanges. Include manufacturer's prime and finish coats on all metal components.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance of the Work.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Provide temporary shoring or bracing of floors while transporting armory door assemblies to final location, as required to prevent surface damage to floors or deflections in excess of design loads.

3.3 INSTALLATION

A. Install armory door assemblies complete with doors, frames, and accessories and according to requirements of armory door assemblies' UL listing.

B. Set armory door frames accurately in position; plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is complete, remove temporary braces and spreaders, leaving surfaces smooth and undamaged.

3.4 ADJUSTING AND CLEANING

A. Adjust vault door hardware and operating mechanism to function smoothly, and lubricate as recommended by manufacturer.

B. Remove and replace work that cannot be successfully cleaned and repaired to permanently eliminate evidence of damage, including dented and bent units.

C. Touchup Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas of shop paint; paint exposed areas with same material as used for shop painting to comply with SSPC-PA 1 for touching up shop-painted surfaces.

END OF SECTION

SECTION 09310 - TILING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Ceramic tile.
2. Porcelain Tile.
3. Waterproof membrane.
4. Tile backing panels.
5. Metal edge strips.

B. Related Sections:

1. Division 07 Section "Joint Sealants" for sealing of expansion, contraction, control, and isolation joints in tile surfaces.

1.3 DEFINITIONS

A. General: Definitions in the ANSI A108 series of tile installation standards and in ANSI A137.1 apply to Work of this Section unless otherwise specified.

B. ANSI A108 Series: ANSI A108.01, ANSI A108.02, ANSI A108.1A, ANSI A108.1B, ANSI A108.1C, ANSI A108.4, ANSI A108.5, ANSI A108.6, ANSI A108.8, ANSI A108.9, ANSI A108.10, ANSI A108.11, ANSI A108.12, ANSI A108.13, ANSI A108.14, ANSI A108.15, ANSI A108.16, and ANSI A108.17, which are contained in "American National Standard Specifications for Installation of Ceramic Tile."

C. Module Size: Actual tile size plus joint width indicated.

D. Face Size: Actual tile size, excluding spacer lugs.

1.4 SUBMITTALS

A. Product Data: For each type of product indicated.

B. LEED Submittal:

1. Product Data for Credit EQ 4.1: For adhesives and sealants, including printed statement of VOC content and Greenguard Certification.
2. Credit MR 5.1 and Credit MR 5.2: Product data indicating location of material manufacturer for regionally manufactured materials. Include statement indicating cost for

each regionally manufactured material and for each regionally extracted and manufactured material.

a. Include statement indicating distance from manufacturer to Project for each regionally manufactured material.
b. Include statement indicating location of and distance from Project to point of extraction, harvest, or recovery for each raw material used in regionally extracted and manufactured materials.

C. Shop Drawings: Show locations of each type of tile and tile pattern. Show widths, details, and locations of expansion, contraction, control, and isolation joints in tile substrates and finished tile surfaces.

D. Samples for Initial Selection: For each type of tile and grout indicated. Include Samples of accessories involving color selection.

E. Samples for Verification:

1. Full-size units of each type and composition of tile and for each color and finish required. For ceramic mosaic tile in color blend patterns, provide full sheets of each color blend.
~~2. Assembled samples mounted on a rigid panel, with grouted joints, for each type and composition of tile and for each color and finish required. Make samples at least 12 inches square, but not fewer than 4 tiles. Use grout of type and in color or colors approved for completed Work.~~
~~3. Full-size units of each type of trim and accessory for each color and finish required.~~
~~4.~~2. Stone thresholds in 6-inch lengths.
~~5.~~3. Metal edge strips in 6-inch lengths.

F. Qualification Data: For qualified Installer.

G. Master Grade Certificates: For each shipment, type, and composition of tile, signed by tile manufacturer and Installer.

H. Product Certificates: For each type of product, signed by product manufacturer.

I. Material Test Reports: For each tile-setting and -grouting product.

1.5 QUALITY ASSURANCE

A. Source Limitations for Tile: Obtain tile of each type and color or finish from one source or producer.

1. Obtain tile of each type and color or finish from same production run and of consistent quality in appearance and physical properties for each contiguous area.

B. Source Limitations for Setting and Grouting Materials: Obtain ingredients of a uniform quality for each mortar, adhesive, and grout component from one manufacturer and each aggregate from one source or producer.

C. Source Limitations for Other Products: Obtain each of the following products specified in this Section from a single manufacturer for each product:

1. Stone thresholds.

2. Waterproof membrane.
3. Joint sealants.
4. Cementitious backer units.
5. Metal edge strips.

~~D. Mockups: Build mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.~~

~~1. Build mockup of each type of floor tile installation.~~
~~2. Build mockup of each type of wall tile installation.~~
~~3. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.~~

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store packaged materials in original containers with seals unbroken and labels intact until time of use. Comply with requirements in ANSI A137.1 for labeling tile packages.

B. Store tile and cementitious materials on elevated platforms, under cover, and in a dry location.

C. Store aggregates where grading and other required characteristics can be maintained and contamination can be avoided.

D. Store liquid materials in unopened containers and protected from freezing.

E. Handle tile that has temporary protective coating on exposed surfaces to prevent coated surfaces from contacting backs or edges of other units. If coating does contact bonding surfaces of tile, remove coating from bonding surfaces before setting tile.

1.7 PROJECT CONDITIONS

A. Environmental Limitations: Do not install tile until construction in spaces is complete and ambient temperature and humidity conditions are maintained at the levels indicated in referenced standards and manufacturer's written instructions.

1.8 EXTRA MATERIALS

A. Furnish extra materials that match and are from same production runs as products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Tile and Trim Units: Furnish quantity of full-size units equal to 3 percent of amount installed for each type, composition, color, pattern, and size indicated.
2. Grout: Furnish quantity of grout equal to 3 percent of amount installed for each type, composition, and color indicated.

PART 2 - PRODUCTS

2.1 PRODUCTS, GENERAL

A. ANSI Ceramic Tile Standard: Provide tile that complies with ANSI A137.1 for types, compositions, and other characteristics indicated.

1. Provide tile complying with Standard grade requirements unless otherwise indicated.

B. ANSI Standards for Tile Installation Materials: Provide materials complying with ANSI A108.02, ANSI standards referenced in other Part 2 articles, ANSI standards referenced by TCA installation methods specified in tile installation schedules, and other requirements specified.

C. Factory Blending: For tile exhibiting color variations within ranges, blend tile in factory and package so tile units taken from one package show same range in colors as those taken from other packages and match approved Samples.

D. Mounting: For factory-mounted tile, provide back- or edge-mounted tile assemblies as standard with manufacturer unless otherwise indicated.

E. Factory-Applied Temporary Protective Coating: Where indicated under tile type, protect exposed surfaces of tile against adherence of mortar and grout by precoating with continuous film of petroleum paraffin wax, applied hot. Do not coat unexposed tile surfaces.

2.2 TILE PRODUCTS

A. Tile Type: Porcelain Tile

1. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:

   a. Stone Peak Ceramics
   b. American Olean; Division of Dal-Tile International Inc.
   c. Daltile; Division of Dal-Tile International Inc.

2. Composition: Impervious natural clay or porcelain.
3. Module Size: As indicated on Drawings.
4. Thickness: As indicated on Drawings.
5. Grout: 'SpectraLOCK Pro Grout' Water-Cleanable Epoxy Grout: ANSI A118.3.
6. Trim Units: Coordinated with sizes and coursing of adjoining flat tile where applicable and matching characteristics of adjoining flat tile. Provide shapes selected from manufacturer's standard shapes:

B. Tile Type CT-4: Glazed wall tile.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   a. American Olean; Division of Dal-Tile International Inc.
   b. Daltile; Division of Dal-Tile International Inc.
   c. Crossville.

2. Module Size: 3 inches by 6 inches.
3. Thickness: 5/16 inch (8 mm).

4. Face: Pattern of design indicated, with manufacturer's standard edges.
5. Finish: Mat, opaque glaze.
6. Tile Color and Pattern: As indicated by manufacturer's designations.
7. Grout Color: As selected by Architect from manufacturer's full range.
8. Mounting: Factory, back mounted.
9. Trim Units: Coordinated with sizes and coursing of adjoining flat tile where applicable. Provide shapes as follows, selected from manufacturer's standard shapes:
   a. External Corners for Thin-Set Mortar Installations: Surface bullnose, same size as adjoining flat tile.
   b. Internal Corners: Field-butted square corners. For coved base and cap use angle pieces designed to fit with stretcher shapes.

~~6.~~C.

~~B. Tile Type: Factory-Mounted Unglazed Ceramic Mosaic Tile.~~

~~1. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:~~

~~a. Stone Peak Ceramics~~
~~b. American Olean; Division of Dal-Tile International Inc.~~
~~c. Daltile; Division of Dal-Tile International Inc.~~

~~2. Composition: Impervious natural clay or porcelain.~~
~~3. Module Size: As indicated on Drawings.~~
~~4. Thickness: As indicated on Drawings.~~
~~5. Grout Color: As selected by Architect from manufacturer's full range.~~
~~6. Trim Units: Coordinated with sizes and coursing of adjoining flat tile where applicable and matching characteristics of adjoining flat tile. Provide shapes as follows, selected from manufacturer's standard shapes:~~

~~a. Base Cove: Cove, module size: Match field tile.~~
~~b. Wainscot Cap for Thin-Set Mortar Installations: Surface bullnose, module size As indicated.~~
~~c. Wainscot Cap for Flush Conditions: Regular flat tile for conditions where tile wainscot is shown flush with wall surface above it, same size as adjoining flat tile.~~
~~d. External Corners for Thin-Set Mortar Installations: Surface bullnose, module size As indicated.~~
~~e. Internal Corners: Cove, module size As indicated.~~

~~C.~~D. Trim Units: Provide tile trim units to match characteristics of adjoining flat tile and to comply with the following requirements:

1. Size: As indicated, coordinated with sizes and coursing of adjoining flat tile where applicable.
2. Shapes: As follows, selected from manufacturer's standard shapes:

   a. Base: Coved.
   ~~b. Wainscot Cap: Bullnose cap.~~
   ~~c.~~b. External Corners: Bullnose.
   ~~d.~~c. Internal Corners: Coved base and cap angle pieces designed to member with stretcher shapes.

2.3 THRESHOLDS

A. General: Fabricate to sizes and profiles indicated or required to provide transition between adjacent floor finishes.

1. Bevel edges at 1:2 slope, with lower edge of bevel aligned with or up to 1/16 inch above adjacent floor surface. Finish bevel to match top surface of threshold. Limit height of threshold to 1/2 inch or less above adjacent floor surface.

B. Marble Thresholds: ASTM C 503, with a minimum abrasion resistance of 10 per ASTM C 1353 or ASTM C 241 and with honed finish.

1. Description: Uniform, grey marble.
2. Description: Match Architect's sample.

2.4 TILE BACKING PANELS

A. Cementitious Backer Units: ANSI A118.9 or ASTM C 1325, in maximum lengths available to minimize end-to-end butt joints.

1. Products: Subject to compliance with requirements, provide one of the following:

a. C-Cure; C-Cure Board 990.
b. Custom Building Products; Wonderboard.
c. FinPan, Inc.; Util-A-Crete Concrete Backer Board.
d. USG Corporation; DUROCK Cement Board.

2. Thickness: As indicated.

B. Fiber-Cement Underlayment: ASTM C 1288, in maximum lengths available to minimize end-to-end butt joints.

1. Products: Subject to compliance with requirements, provide one of the following:

a. CertainTeed Corp.; FiberCement Underlayment orBackerBoard.
b. James Hardie; Hardiebacker.

2. Thickness: As indicated.

2.5 WATERPROOF MEMBRANE

A. General: Manufacturer's standard product, selected from the following, that complies with ANSI A118.10 and is recommended by the manufacturer for the application indicated. Include reinforcement and accessories recommended by manufacturer. Fluid-Applied Membrane: Liquid-latex rubber or elastomeric polymer.

1. Products: Subject to compliance with requirements, provide one of the following.

a. Bonsal American; an Oldcastle company; B 6000 Waterproof Membrane.
b. Bostik, Inc.; Durabond D-222 Duraguard Membrane.
c. Custom Building Products; Redgard Waterproofing and Crack Prevention Membrane.
d. Laticrete International, Inc.; Latapoxy 24hr HydroProofing.

e. MAPEI Corporation; Mapelastic HPG.
f. TEC; a subsidiary of H. B. Fuller Company; HydraFlex - Waterproofing Crack Isolation Membrane.

2.6 SETTING MATERIALS

A. Portland Cement Mortar (Thickset) Installation Materials: ANSI A108.02.

1. Cleavage Membrane: Asphalt felt, ASTM D 226, Type I (No. 15); or polyethylene sheeting, ASTM D 4397, 4.0 mils thick.
2. Reinforcing Wire Fabric: Galvanized, welded wire fabric, 2 by 2 inches by 0.062-inch diameter; comply with ASTM A 185 and ASTM A 82 except for minimum wire size.
3. Expanded Metal Lath: Diamond-mesh lath complying with ASTM C 847.

   a. Base Metal and Finish for Interior Applications: Uncoated or zinc-coated (galvanized) steel sheet, with uncoated steel sheet painted after fabrication into lath.
   b. Base Metal and Finish for Exterior Applications: Zinc-coated (galvanized) steel sheet.
   c. Configuration over Studs and Furring: Flat.
   d. Configuration over Solid Surfaces: Self furring.
   e. Weight: 2.5 lb/sq. yd..

4. Latex Additive: Manufacturer's standard water emulsion, serving as replacement for part or all of gaging water, of type specifically recommended by latex-additive manufacturer for use with field-mixed portland cement and aggregate mortar bed.

B. Latex-Portland Cement Mortar (Thin Set): ANSI A118.4.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

   a. Bonsal American; an Oldcastle company.
   b. Bostik, Inc.
   c. Laticrete International, Inc.
   d. Summitville Tiles, Inc.

2. Provide prepackaged, dry-mortar mix containing dry, redispersible, vinyl acetate or acrylic additive to which only water must be added at Project site.
3. For wall applications, provide mortar that complies with requirements for nonsagging mortar in addition to the other requirements in ANSI A118.4.

C. Chemical-Resistant Furan Mortar: ANSI A118.5, with carbon filler.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

   a. Atlas Minerals & Chemicals, Inc.
   b. Additional Manufactures as approved by Architect.

2.7 GROUT MATERIALS

A. Sand-Portland Cement Grout: ANSI A108.10, composed of white or gray cement and white or colored aggregate as required to produce color indicated.

B. Standard Cement Grout: ANSI A118.6.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

   a. Bonsal American; an Oldcastle company.
   b. Bostik, Inc.
   c. Laticrete International, Inc.
   d. Summitville Tiles, Inc.

C. Water-Cleanable Epoxy Grout: ANSI A118.3.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

   a. 'SpectraLOCK Pro Grout'
   b. Bonsal American; an Oldcastle company.
   c. Bostik, Inc.
   d. Laticrete International, Inc.
   e. Summitville Tiles, Inc.

2. Provide product capable of withstanding continuous and intermittent exposure to temperatures of up to 140 deg F and 212 deg F, respectively, and certified by manufacturer for intended use.

D. Chemical-Resistant Furan Grout: ANSI A118.5, with carbon filler.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

   a. Atlas Minerals & Chemicals, Inc.
   b. Additional manufacturers approved by Architect..

E. Grout for Pregrouted Tile Sheets: Same product used in factory to pregrout tile sheets.

2.8 ELASTOMERIC SEALANTS

A. General: Provide sealants, primers, backer rods, and other sealant accessories that comply with the following requirements and with the applicable requirements in Division 07 Section "Joint Sealants."

1. Use sealants that have a VOC content of 250 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
2. Use primers, backer rods, and sealant accessories recommended by sealant manufacturer.

B. Colors: Provide colors of exposed sealants to match colors of grout in tile adjoining sealed joints unless otherwise indicated.

2.9 MISCELLANEOUS MATERIALS

A. Trowelable Underlayments and Patching Compounds: Latex-modified, portland cement-based formulation provided or approved by manufacturer of tile-setting materials for installations indicated.

B. Metal Edge Strips: Angle or L-shape, height to match tile and setting-bed thickness, metallic or combination of metal and PVC or neoprene base, designed specifically for flooring applications; stainless-steel, ASTM A 666, 300 Series exposed-edge material.

1. Exposed Face Width: 1/4-inch.

C. Temporary Protective Coating: Either product indicated below that is formulated to protect exposed surfaces of tile against adherence of mortar and grout; compatible with tile, mortar, and grout products; and easily removable after grouting is completed without damaging grout or tile.

1. Petroleum paraffin wax, fully refined and odorless, containing at least 0.5 percent oil with a melting point of 120 to 140 deg F per ASTM D 87.
2. Grout release in form of manufacturer's standard proprietary liquid coating that is specially formulated and recommended for use as temporary protective coating for tile.

D. Tile Cleaner: A neutral cleaner capable of removing soil and residue without harming tile and grout surfaces, specifically approved for materials and installations indicated by tile and grout manufacturers.

2.10 MIXING MORTARS AND GROUT

A. Mix mortars and grouts to comply with referenced standards and mortar and grout manufacturers' written instructions.

B. Add materials, water, and additives in accurate proportions.

C. Obtain and use type of mixing equipment, mixer speeds, mixing containers, mixing time, and other procedures to produce mortars and grouts of uniform quality with optimum performance characteristics for installations indicated.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions where tile will be installed, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of installed tile.

1. Verify that substrates for setting tile are firm, dry, clean, free of coatings that are incompatible with tile-setting materials including curing compounds and other substances that contain soap, wax, oil, or silicone; and comply with flatness tolerances required by ANSI A108.01 for installations indicated.
2. Verify that concrete substrates for tile floors installed with bonded mortar bed or thin-set mortar comply with surface finish requirements in ANSI A108.01 for installations indicated.

a. Verify that surfaces that received a steel trowel finish have been mechanically scarified.

b. Verify that protrusions, bumps, and ridges have been removed by sanding or grinding.

3. Verify that installation of grounds, anchors, recessed frames, electrical and mechanical units of work, and similar items located in or behind tile has been completed.
4. Verify that joints and cracks in tile substrates are coordinated with tile joint locations; if not coordinated, adjust joint locations in consultation with Architect.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Fill cracks, holes, and depressions in concrete substrates for tile floors installed with thin-set mortar with trowelable leveling and patching compound specifically recommended by tile-setting material manufacturer.

B. Where indicated, prepare substrates to receive waterproofing by applying a reinforced mortar bed that complies with ANSI A108.1A and is sloped 1/4 inch per foot toward drains.

C. Blending: For tile exhibiting color variations, verify that tile has been factory blended and packaged so tile units taken from one package show same range of colors as those taken from other packages and match approved Samples. If not factory blended, either return to manufacturer or blend tiles at Project site before installing.

D. Field-Applied Temporary Protective Coating: If indicated under tile type or needed to prevent grout from staining or adhering to exposed tile surfaces, precoat them with continuous film of temporary protective coating, taking care not to coat unexposed tile surfaces.

3.3 TILE INSTALLATION

A. Comply with TCA's "Handbook for Ceramic Tile Installation" for TCA installation methods specified in tile installation schedules. Comply with parts of the ANSI A108 Series "Specifications for Installation of Ceramic Tile" that are referenced in TCA installation methods, specified in tile installation schedules, and apply to types of setting and grouting materials used.

1. For the following installations, follow procedures in the ANSI A108 Series of tile installation standards for providing 95 percent mortar coverage:

   a. Exterior tile floors.
   b. Tile floors in wet areas.
   c. Tile swimming pool decks.
   d. Tile floors in laundries.
   e. Tile floors composed of tiles 8 by 8 inches or larger.
   f. Tile floors composed of rib-backed tiles.

B. Extend tile work into recesses and under or behind equipment and fixtures to form complete covering without interruptions unless otherwise indicated. Terminate work neatly at obstructions, edges, and corners without disrupting pattern or joint alignments.

C. Accurately form intersections and returns. Perform cutting and drilling of tile without marring visible surfaces. Carefully grind cut edges of tile abutting trim, finish, or built-in items for straight aligned joints. Fit tile closely to electrical outlets, piping, fixtures, and other penetrations so plates, collars, or covers overlap tile.

D. Jointing Pattern: Lay tile in grid pattern unless otherwise indicated. Lay out tile work and center tile fields in both directions in each space or on each wall area. Lay out tile work to minimize the use of pieces that are less than half of a tile. Provide uniform joint widths unless otherwise indicated.

1. For tile mounted in sheets, make joints between tile sheets same width as joints within tile sheets so joints between sheets are not apparent in finished work.
2. Where adjoining tiles on floor, base, walls, or trim are specified or indicated to be same size, align joints.
3. Where tiles are specified or indicated to be whole integer multiples of adjoining tiles on floor, base, walls, or trim, align joints unless otherwise indicated.

E. Joint Widths: Unless otherwise indicated, install tile with the following joint widths:

1. Ceramic Mosaic Tile: 1/16 inch.
2. Quarry Tile: 1/4 inch.
3. Paver Tile: 1/4 inch.
4. Glazed Wall Tile: 1/16 inch.
5. Decorative Thin Wall Tile: 1/16 inch.

F. Lay out tile wainscots to dimensions indicated or to next full tile beyond dimensions indicated.

G. Expansion Joints: Provide expansion joints and other sealant-filled joints, including control, contraction, and isolation joints, where indicated. Form joints during installation of setting materials, mortar beds, and tile. Do not saw-cut joints after installing tiles.

1. Where joints occur in concrete substrates, locate joints in tile surfaces directly above them.
2. Prepare joints and apply sealants to comply with requirements in Division 07 Section "Joint Sealants."

H. Stone Thresholds: Install stone thresholds in same type of setting bed as adjacent floor unless otherwise indicated.

1. At locations where mortar bed (thickset) would otherwise be exposed above adjacent floor finishes, set thresholds in latex-portland cement mortar (thin set).
2. Do not extend waterproofing under thresholds set in latex-portland cement mortar. Fill joints between such thresholds and adjoining tile set on waterproofing with elastomeric sealant.

I. Metal Edge Strips: Install at locations indicated where exposed edge of tile flooring meets carpet, wood, or other flooring that finishes flush with top of tile, where exposed edge of tile flooring meets carpet, wood, or other flooring that finishes flush with or below top of tile and no threshold is indicated.

3.4 TILE BACKING PANEL INSTALLATION

A. Install cementitious backer units and fiber-cement underlayment and treat joints according to ANSI A108.11 and manufacturer's written instructions for type of application indicated. Use latex-portland cement mortar for bonding material unless otherwise directed in manufacturer's written instructions.

3.5 WATERPROOFING INSTALLATION

A. Install waterproofing to comply with ANSI A108.13 and manufacturer's written instructions to produce waterproof membrane of uniform thickness and bonded securely to substrate.

B. Do not install tile or setting materials over waterproofing until waterproofing has cured and been tested to determine that it is watertight.

3.6 CLEANING AND PROTECTING

A. Cleaning: On completion of placement and grouting, clean all ceramic tile surfaces so they are free of foreign matter.

1. Remove epoxy and latex-portland cement grout residue from tile as soon as possible.
2. Clean grout smears and haze from tile according to tile and grout manufacturer's written instructions but no sooner than 10 days after installation. Use only cleaners recommended by tile and grout manufacturers and only after determining that cleaners are safe to use by testing on samples of tile and other surfaces to be cleaned. Protect metal surfaces and plumbing fixtures from effects of cleaning. Flush surfaces with clean water before and after cleaning.
3. Remove temporary protective coating by method recommended by coating manufacturer and that is acceptable to tile and grout manufacturer. Trap and remove coating to prevent drain clogging.

B. Protect installed tile work with kraft paper or other heavy covering during construction period to prevent staining, damage, and wear. If recommended by tile manufacturer, apply coat of neutral protective cleaner to completed tile walls and floors.

C. Prohibit foot and wheel traffic from tiled floors for at least seven days after grouting is completed.

D. Before final inspection, remove protective coverings and rinse neutral protective cleaner from tile surfaces.

END OF SECTION

SECTION 13125 – PRE-ENGINEERED METAL STORAGE BUILDING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Pre-engineered metal multiple storage unit assembly.
2. Doors and frames.
3. Accessories.

B. Related Sections:

1. 03300 – Cast In Place Concrete.

1.3 SUBMITTALS

A. Product Data: For each type of metal building system component. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for the following:

1. Metal building system
2. Doors.
3. Accessories.

B. LEED Submittals:

1. Product Test Reports for Credit SS 7.2: For roof panels, documentation indicating that panels comply with Solar Reflectance Index requirement.

C. Shop Drawings: For the following metal building system components. Include plans, elevations, sections, details, and attachments to other work.

1. Anchor-Bolt Plans: Submit anchor-bolt plans and templates before foundation work begins. Include location, diameter, and projection of anchor bolts required to attach metal building to foundation. Indicate column reactions at each location.
2. Metal Roof and Wall Panel Layout Drawings: Show layouts of metal panels including methods of support. Include details of edge conditions, joints, panel profiles, corners, anchorages, trim, flashings, closures, and special details. Distinguish between factory- and field-assembled work; show locations of exposed fasteners.
3. Accessory Drawings: Include details of the following items, at a scale of not less than 1-1/2 inches per 12 inches:
   a. Flashing and trim.

b. Gutters.
c. Downspouts.

D. Samples for Initial Selection: For units with factory-applied color finish.

E. Samples for Verification: For each type of exposed finish required, prepared on Samples of sizes indicated below:

1. Metal Panels: Nominal 12 inches long by actual panel width. Include fasteners, closures, and other exposed panel accessories.
2. Flashing and Trim: Nominal 12 inches long. Include fasteners and other exposed accessories.
3. Accessories: Nominal 12-inch- long Samples for each type of accessory.

F. Door Schedule: For doors and frames. Use same designations indicated on Drawings. Include details of reinforcement.

1. Door Hardware Schedule: Include details of fabrication and assembly of door hardware. Organize schedule into door hardware sets indicating complete designations of every item required for each door or opening.

G. Delegated-Design Submittal: For metal building systems indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by a professional engineer registered in the State Of West Virginia responsible for their preparation.

H. Qualification Data: For qualified professional engineer.

I. Welding certificates.

J. Metal Building System Certificates: For each type of metal building system, from manufacturer.

1. Letter of Design Certification: Signed and sealed by a professional engineer registered in the State Of west Virginia. Include the following:
   a. Name and location of Project.
   b. Order number.
   c. Name of manufacturer.
   d. Name of Contractor.
   e. Building dimensions including width, length, height, and roof slope.
   f. Indicate compliance with AISC standards for hot-rolled steel and AISI standards for cold-rolled steel, including edition dates of each standard.
   g. Governing building code and year of edition.
   h. Design Loads: Include dead load, roof live load, collateral loads, roof snow load, deflection, wind loads/speeds and exposure, seismic design category or effective peak velocity-related acceleration/peak acceleration, and auxiliary loads (cranes).
   i. Load Combinations: Indicate that loads were applied acting simultaneously with concentrated loads, according to governing building code.
   j. Building-Use Category: Indicate category of building use and its effect on load importance factors.
   k. AISC Certification for Category MB: Include statement that metal building system and components were designed and produced in an AISC-Certified Facility by an AISC-Certified Manufacturer.

K. Erector Certificates: For each product, from manufacturer.

L. Manufacturer Certificates: For each product, from manufacturer.

M. Material Test Reports: For each of the following products:

N. Bolts, nuts, and washers including mechanical properties and chemical analysis.

1. Tension-control, high-strength, bolt-nut-washer assemblies.
2. Shop primers.
3. Nonshrink grout.

O. Product Test Reports: Based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified testing agency, for insulation and vapor-retarder facings. Include reports for thermal resistance, fire-test-response characteristics, water-vapor transmission, and water absorption.

P. Source quality-control reports.

Q. Maintenance Data: For metal panel finishes to include in maintenance manuals.

R. Warranties: Sample of special warranties.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: A qualified manufacturer and member of MBMA.

1. AISC Certification for Category MB: An AISC-Certified Manufacturer that designs and produces metal building systems and components in an AISC-Certified Facility.
2. Engineering Responsibility: Preparation of Shop Drawings and comprehensive engineering analysis by a qualified professional engineer.

B. Erector Qualifications: An experienced erector who specializes in erecting and installing work similar in material, design, and extent to that indicated for this Project and who is acceptable to manufacturer.

C. Source Limitations: Obtain metal building system components, including primary and secondary framing and metal panel assemblies, from single source from single manufacturer.

D. Welding Qualifications: Qualify procedures and personnel according to the following:

1. AWS D1.1/D1.1M, "Structural Welding Code - Steel."
2. AWS D1.3, "Structural Welding Code - Sheet Steel."

E. Cold-Formed Steel: Comply with AISI's "North American Specification for the Design of Cold-Formed Steel Structural Members" for design requirements and allowable stresses.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver components, sheets, panels, and other manufactured items so as not to be damaged or deformed. Package metal panels for protection during transportation and handling.

B. Unload, store, and erect metal panels in a manner to prevent bending, warping, twisting, and surface damage.

C. Stack metal panels horizontally on platforms or pallets, covered with suitable weathertight and ventilated covering. Store metal panels to ensure dryness, with positive slope for drainage of

water. Do not store metal panels in contact with other materials that might cause staining, denting, or other surface damage.

1.6 PROJECT CONDITIONS

A. Weather Limitations: Proceed with installation only when weather conditions permit metal panels to be installed according to manufacturers' written instructions and warranty requirements.

B. Field Measurements:

1. Established Dimensions for Foundations: Comply with established dimensions on approved anchor-bolt plans, establishing foundation dimensions and proceeding with fabricating structural framing without field measurements. Coordinate anchor-bolt installation to ensure that actual anchorage dimensions correspond to established dimensions.
2. Established Dimensions for Metal Panels: Where field measurements cannot be made without delaying the Work, either establish framing and opening dimensions and proceed with fabricating metal panels without field measurements, or allow for field trimming metal panels. Coordinate construction to ensure that actual building dimensions, locations of structural members, and openings correspond to established dimensions.

1.7 COORDINATION

A. Coordinate sizes and locations of concrete foundations and casting of anchor-bolt inserts into foundation walls and footings. Concrete, reinforcement, and formwork requirements are specified in Division 3 Section "Cast-in-Place Concrete."

B. Coordinate metal panel assemblies with rain drainage work, flashing, trim, and construction of supports and other adjoining work to provide a leakproof, secure, and noncorrosive installation.

1.8 WARRANTY

A. Special Warranty on Metal Panel Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace metal panels that show evidence of deterioration of factory-applied finishes within specified warranty period.

1. Exposed Panel Finish: Deterioration includes, but is not limited to, the following:
   a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
   b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
   c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.

2. Finish Warranty Period: 20 years from date of Substantial Completion.

B. Special Weathertight Warranty for Metal Roof Panels: Manufacturer's standard form in which manufacturer agrees to repair or replace standing-seam metal roof panel assemblies that leak or otherwise fail to remain weathertight within specified warranty period.

1. Warranty Period: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Butler Manufacturing (Basis Of Design).
2. Regency Storage Systems, Inc.
3. BETCO, Inc.
4. Olympia Storage Buildings.
5. Whirlwind Building Systems.

2.2 METAL BUILDING SYSTEMS

A. Description: Provide a complete, integrated set of metal building system manufacturer's standard mutually dependent components and assemblies that form a metal building system capable of withstanding structural and other loads, thermally induced movement, and exposure to weather without failure or infiltration of water into building interior.

1. Provide metal building system of size indicated on Drawings and as noted below.

   a. Eave Height: 12'-8"
   b. Roof Slope: 1 in 12, minimum.
   c. Bay Spacing: 16'-0" o.c.

2. Roof and wall panels – 26 gauge Galvalume panel.
3. Standard trim package consists of painted 26 gauge simple eave trim, rake trim, door jamb, and header trim.
4. Framed with manufacturer's standard 16 gauge red oxide factory-primed steel.
5. Interior partitions - 29 gauge Galvalume

B. Materials:

1. Galvalume steel to have coating of 55% Zinc-Aluminum alloy.
2. Prime-painted steel to be coated with rust inhibiting primer.

2.3 METAL BUILDING SYSTEM PERFORMANCE

A. Delegated Design: Design metal building system, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated on Drawings.

2.4 DOORS AND FRAMES

A. Manufacturer's standard upward-acting rolling doors, frames, and locking hardware.

2.5 ACCESSORIES

A. General: Provide accessories as standard with metal building system manufacturer and as specified. Fabricate and finish accessories at the factory to greatest extent possible, by manufacturer's standard procedures and processes. Comply with indicated profiles and with dimensional and structural requirements.

B. Gutters: Formed from 0.022-inch (0.56-mm) nominal-thickness, metallic-coated steel sheet or aluminum-zinc alloy-coated steel sheet prepainted with coil coating; finished to match roof fascia and rake trim. Match profile of gable trim, complete with end pieces, outlet tubes, and other special pieces as required. Fabricate in minimum 96-inch- (2438-mm-) long sections, sized according to SMACNA's "Architectural Sheet Metal Manual."

1. Gutter Supports: Fabricated from same material and finish as gutters.
2. Strainers: Bronze, copper, or aluminum wire ball type at outlets.

C. Downspouts: Formed from 0.022-inch nominal-thickness, zinc-coated (galvanized) steel sheet or aluminum-zinc alloy-coated steel sheet prepainted with coil coating; finished to match metal wall panels. Fabricate in minimum 10-foot- long sections, complete with formed elbows and offsets.

1. Mounting Straps: Fabricated from same material and finish as gutters.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with erector present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. Before erection proceeds, survey elevations and locations of concrete- and masonry-bearing surfaces and locations of anchor rods, bearing plates, and other embedments to receive structural framing, with erector present, for compliance with requirements and metal building system manufacturer's tolerances.

1. Engage land surveyor to perform surveying.

C. Proceed with erection only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Provide temporary shores, guys, braces, and other supports during erection to keep structural framing secure, plumb, and in alignment against temporary construction loads and loads equal in intensity to design loads. Remove temporary supports when permanent structural framing, connections, and bracing are in place unless otherwise indicated.

3.3 METAL PANEL INSTALLATION, GENERAL

A. Examination: Examine primary and secondary framing to verify that structural-panel support members and anchorages have been installed within alignment tolerances required by manufacturer.

1. Examine roughing-in for components and systems penetrating metal panels, to verify actual locations of penetrations relative to seams before metal panel installation.

B. General: Anchor metal panels and other components of the Work securely in place, with provisions for thermal and structural movement.

1. Field cut metal panels as required for doors, windows, and other openings. Cut openings as small as possible, neatly to size required, and without damage to adjacent metal panel finishes.
   a. Field cutting of metal panels by torch is not permitted unless approved in writing by manufacturer.
2. Install metal panels perpendicular to structural supports unless otherwise indicated.
3. Flash and seal metal panels with weather closures at perimeter of openings and similar elements. Fasten with self-tapping screws.
4. Locate and space fastenings in uniform vertical and horizontal alignment.
5. Locate metal panel splices over, but not attached to, structural supports with end laps in alignment.
6. Lap metal flashing over metal panels to allow moisture to run over and off the material.

C. Metal Protection: Where dissimilar metals contact each other or corrosive substrates, protect against galvanic action by painting contact surfaces with corrosion-resistant coating, by applying rubberized-asphalt underlayment to each contact surface, or by other permanent separation as recommended by metal roof panel manufacturer.

3.4 METAL ROOF PANEL INSTALLATION

A. General: Provide metal roof panels of full length from eave to ridge unless otherwise indicated or restricted by shipping limitations.

1. Install ridge caps as metal roof panel work proceeds.
2. Flash and seal metal roof panels with weather closures at eaves and rakes. Fasten with self-tapping screws.

B. Lap-Seam Metal Roof Panels: Fasten metal roof panels to supports with exposed fasteners at each lapped joint, at location and spacing recommended by manufacturer.

1. Provide metal-backed sealing washers under heads of exposed fasteners bearing on weather side of metal roof panels.
2. Provide sealant tape at lapped joints of metal roof panels and between panels and protruding equipment, vents, and accessories.
3. Apply a continuous ribbon of sealant tape to weather-side surface of fastenings on end laps and on side laps of nesting-type metal panels, on side laps of ribbed or fluted metal panels, and elsewhere as needed to make metal panels weatherproof to driving rains.
4. At metal panel splices, nest panels with minimum 6-inch end lap, sealed with butyl-rubber sealant and fastened together by interlocking clamping plates.

C. Metal Fascia Panels: Align bottom of metal panels and fasten with blind rivets, bolts, or self-drilling or self-tapping screws. Flash and seal metal panels with weather closures where fasciae meet soffits, along lower panel edges, and at perimeter of all openings.

D. Metal Roof Panel Installation Tolerances: Shim and align metal roof panels within installed tolerance of 1/4 inch in 20 feet on slope and location lines as indicated and within 1/8-inch offset of adjoining faces and of alignment of matching profiles.

3.5 METAL WALL PANEL INSTALLATION

A. General: Install metal wall panels in orientation, sizes, and locations indicated on Drawings. Install panels perpendicular to girts, extending full height of building, unless otherwise indicated. Anchor metal wall panels and other components of the Work securely in place, with provisions for thermal and structural movement.

1. Unless otherwise indicated, begin metal panel installation at corners with center of rib lined up with line of framing.
2. Shim or otherwise plumb substrates receiving metal wall panels.
3. When two rows of metal panels are required, lap panels 4 inches minimum.
4. When building height requires two rows of metal panels at gable ends, align lap of gable panels over metal wall panels at eave height.
5. Rigidly fasten base end of metal wall panels and allow eave end free movement due to thermal expansion and contraction. Predrill panels.
6. Flash and seal metal wall panels with weather closures at eaves, rakes, and at perimeter of all openings. Fasten with self-tapping screws.
7. Install screw fasteners in predrilled holes.
8. Install flashing and trim as metal wall panel work proceeds.
9. Apply elastomeric sealant continuously between metal base channel (sill angle) and concrete, and elsewhere as indicated; or, if not indicated, as necessary for waterproofing.
10. Align bottom of metal wall panels and fasten with blind rivets, bolts, or self-drilling or self-tapping screws.
11. Provide weatherproof escutcheons for pipe and conduit penetrating exterior walls.

3.6 DOOR AND FRAME INSTALLATION

A. General: Install doors and frames plumb, rigid, properly aligned, and securely fastened in place according to manufacturers' written instructions. Coordinate installation with wall flashings and other components. Seal perimeter of each door frame with elastomeric sealant used for metal wall panels.

3.7 ACCESSORY INSTALLATION

A. General: Install accessories with positive anchorage to building and weathertight mounting, and provide for thermal expansion. Coordinate installation with flashings and other components.

1. Install components required for a complete metal roof panel assembly, including trim, copings, ridge closures, seam covers, flashings, sealants, gaskets, fillers, closure strips, and similar items.
2. Install components for a complete metal wall panel assembly, including trim, copings, corners, seam covers, flashings, sealants, gaskets, fillers, closure strips, and similar items.
3. Where dissimilar metals contact each other or corrosive substrates, protect against galvanic action by painting contact surfaces with corrosion-resistant coating, by applying rubberized-asphalt underlayment to each contact surface, or by other permanent separation as recommended by manufacturer.

B. Flashing and Trim: Comply with performance requirements, manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, and set units true to line and level as indicated. Install work with laps, joints, and seams that will be permanently watertight and weather resistant.

1. Install exposed flashing and trim that is without excessive oil-canning, buckling, and tool marks and that is true to line and levels indicated, with exposed edges folded back to

form hems. Install sheet metal flashing and trim to fit substrates and to result in waterproof and weather-resistant performance.

2. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at a maximum of 10 feet with no joints allowed within 24 inches of corner or intersection. Where lapped or bayonet-type expansion provisions cannot be used or would not be sufficiently weather resistant and waterproof, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with mastic sealant (concealed within joints).

C. Gutters: Join sections with riveted-and-soldered or lapped-and-sealed joints. Attach gutters to eave with gutter hangers spaced as required for gutter size, but not more than 36 inches o.c. using manufacturer's standard fasteners. Provide end closures and seal watertight with sealant. Provide for thermal expansion.

D. Downspouts: Join sections with 1-1/2-inch telescoping joints. Provide fasteners designed to hold downspouts securely 1 inch away from walls; locate fasteners at top and bottom and at approximately 60 inches o.c. in between.
1. Provide elbows at base of downspouts to direct water away from building.
2. Tie downspouts to underground drainage system indicated.

E. Pipe Flashing: Form flashing around pipe penetration and metal roof panels. Fasten and seal to panel as recommended by manufacturer.

3.8 ADJUSTING

A. Doors: After completing installation, test and adjust doors to operate easily, free of warp, twist, or distortion.

B. Door Hardware: Adjust and check each operating item of door hardware and each door to ensure proper operation and function of every unit. Replace units that cannot be adjusted to operate as intended.

3.9 CLEANING AND PROTECTION

A. Repair damaged galvanized coatings on galvanized items with galvanized repair paint according to ASTM A 780 and manufacturer's written instructions.

B. Remove and replace glass that has been broken, chipped, cracked, abraded, or damaged during construction period.

C. Touchup Painting: After erection, promptly clean, prepare, and prime or reprime field connections, rust spots, and abraded surfaces of prime-painted structural framing and accessories.

1. Clean and prepare surfaces by SSPC-SP 2, "Hand Tool Cleaning," or by SSPC-SP 3, "Power Tool Cleaning."
2. Apply a compatible primer of same type as shop primer used on adjacent surfaces.

D. Touchup Painting: Cleaning and touchup painting are specified in Division 9 painting Sections.

E. Metal Panels: Remove temporary protective coverings and strippable films, if any, as metal panels are installed. On completion of metal panel installation, clean finished surfaces as recommended by metal panel manufacturer. Maintain in a clean condition during construction.
   1. Replace metal panels that have been damaged or have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

F. Doors and Frames: Immediately after installation, sand rusted or damaged areas of prime coat until smooth and apply touchup of compatible air-drying primer.

   1. Immediately before final inspection, remove protective wrappings from doors and frames.

END OF SECTION

GENERAL NOTES

1. FLOOR FINISH CONTINUES UNDER ALL OPEN COUNTERS, FURNITURE, FIXTURES AND EQUIPMENT. FLOOR PATTERNS ON THE DRAWINGS ARE SHOWN FOR VISUAL CLARITY ONLY.
2. WHERE FLOOR MATERIAL CHANGES IN DOORWAYS, PLACE TRANSITION UNDER/WITH DOOR LEAF.
3. PROVIDE RUBBER COVE BASE AT ALL RESILIENT FLOORING. PROVIDE RUBBER STRAIGHT BASE AT ALL CARPET.
4. SEE REFLECTED CEILING PLANS FOR TYPE, LOCATION AND COLOR OF CEILING MATERIALS.
5. SEE INTERIOR ELEVATIONS FOR CLARIFICATION OF FINISH LOCATIONS.
6. ALL WALL AND CEILING PAINT TO BE EGGSHELL FINISH UNLESS OTHERWISE NOTED.
7. SEE SHEET A2-6 FOR FINISH LEGEND AND SCHEDULE.
8. SEE SHEET A7-3 FOR TRANSITION DETAILS.

SYMBOLS LEGEND

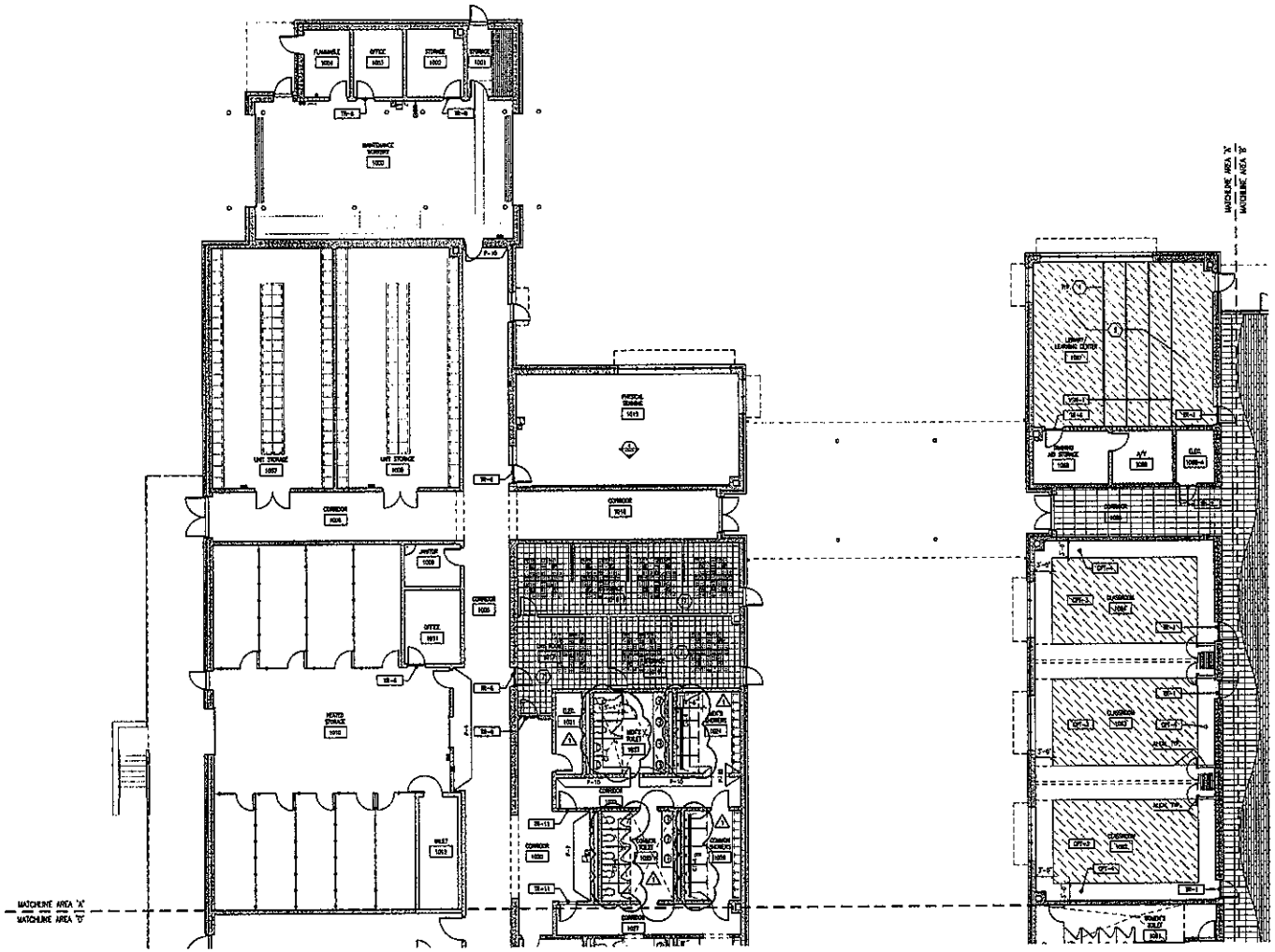
PRIVATE OFFICE 1001 — ROOM NAME / ROOM NUMBER

TR-1 — FLOOR COVERING TRANSITION TYPE

30" — WORKING POINT

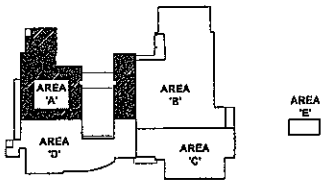
KEYED NOTES

1. SEE SHEET A7-6 FOR FLOOR LAYOUT DIAGRAM
2. SEE INTERIOR ELEVATIONS FOR LOCATIONS OF ACOUSTICAL WALL TREATMENTS.
3. PAINT DOORS AND FRAMES ON MAIN ASSEMBLY SIDE TO MATCH WALL.
4. CPT-3 ON STAIR RISERS, USE MANUFACTURER'S RECOMMENDED ADHESIVE.
5. INSTALL CARPET TILE WITH MANUFACTURER'S RECOMMENDED ADHESIVE.
6. CUSTOM 3-COLOR PORCELAIN TILE PATTERN - WATER JET CUT, 8'-0" DIAMETER, MADE PROVIDED BY OWNER.
7. SEE FINISH LEGEND FOR VCT COLOR SPECIFICATION.



AREA 'A' FINISH PLAN

SCALE: 1/8" = 1'-0"



KEY PLAN

NOT TO SCALE

REVISIONS NO.	DATE	DESCRIPTION
1	4.13.11	ADDENDUM #3

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www.zmm.com

The New
MORGANTOWN READINESS CENTER
The West Virginia Army National Guard
Morgantown, West Virginia

BIDDING DOCUMENTS

FINISH PLAN
AREA 'A'

DRAWN	CHECKED
JMW	ARC
DATE	2.24.2011
COMM. NO.	0618

A2-2R1

GENERAL NOTES

1. FLOOR FINISH CONTINUES UNDER ALL OPEN COUNTERS, FURNITURE, FIXTURES AND EQUIPMENT. FLOOR PATTERNS ON THE DRAWINGS ARE SHOWN FOR VISUAL CLARITY ONLY.
2. WHERE FLOOR MATERIAL CHANGES IN DOORWAYS, PLACE TRANSITION UNDERNEATH DOOR LEAF.
3. PROVIDE RUBBER COVE BASE AT ALL RESILIENT FLOORING. PROVIDE RUBBER STRAIGHT BASE AT ALL CARPET.
4. SEE REFLECTED CEILING PLANS FOR TYPE, LOCATION AND COLOR OF CEILING MATERIALS.
5. SEE INTERIOR ELEVATIONS FOR CLARIFICATION OF FINISH LOCATIONS.
6. ALL WALL AND CEILING PAINT TO BE EGGSHELL FINISH UNLESS OTHERWISE NOTED.
7. SEE SHEET A2-4 FOR FINISH LEGEND AND SCHEDULE.
8. SEE SHEET A7-5 FOR TRANSITION DETAILS.

SYMBOLS LEGEND

- PRIVATE OFFICE 100 — ROOM MARK / ROOM NUMBER
- TR-1 — FLOOR COVERING TRANSITION TYPE
- WORKING POINT

KEYED NOTES

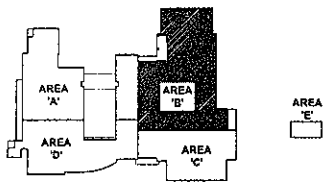
1. SEE SHEET A7-6 FOR FLOOR LAYOUT DIAGRAM.
2. SEE INTERIOR ELEVATIONS FOR LOCATIONS OF ACOUSTICAL WALL TREATMENTS.
3. PAINT DOORS AND FRAMES ON MAIN ENTRANCE SIDE TO MATCH WALL.
4. CPT-3 ON STAIR RISERS. USE MANUFACTURER'S RECOMMENDED ADHESIVE.
5. INSTALL CARPET TILE WITH MANUFACTURER'S RECOMMENDED ADHESIVE.
6. CUSTOM 2-COLOR PORCELAIN TILE PATTERN - WATER JET CUT, 8'-0" DIAMETER, BASIS PROVIDED BY OWNER.
7. SEE FINISH LEGEND FOR VCT COLOR SPECIFICATION

MATCHLINE AREA 'A'
MATCHLINE AREA 'B'

AREA 'B' FINISH PLAN
SCALE: 1/8" = 1'-0"

PLAN NORTH

MATCHLINE AREA 'B'
MATCHLINE AREA 'C'



KEY PLAN
NOT TO SCALE

REVISIONS NO.	DATE	DESCRIPTION
1	4.13.11	ADDENDUM #3

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The New
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The West Virginia Army National Guard
Morgantown, West Virginia

BIDDING DOCUMENTS

FINISH PLAN
AREA 'B'

DRAWN	CHECKED
JMW	APK
DATE	2.24.2011
COMM. NO.	0516.1

A2-3R1

GENERAL NOTES

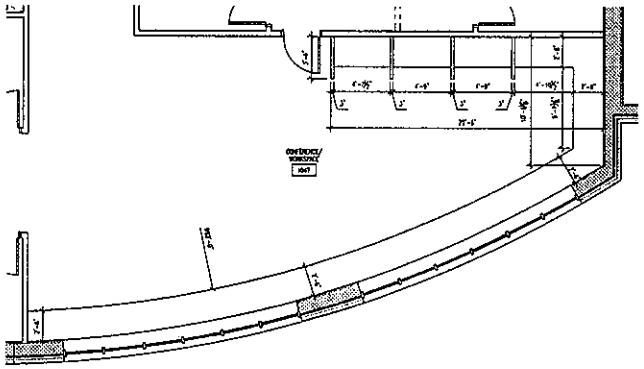
1. FLOOR FINISH CONTINUOUS UNDER ALL OPEN COUNTERS, FURNITURE, FIXTURES AND EQUIPMENT. FLOOR PATTERNS ON P/C DRAWINGS ARE SHOWN FOR VISUAL CLARITY ONLY.
3. WHERE FLOOR MATERIAL CHANGES IN DOORWAYS, PLACE TRANSITION STRIP UNDER DOOR LEAF.
2. PROVIDE RUBBER COVE BASE AT ALL RESILIENT FLOORING. PROVIDE RUBBER STRAIGHT BASE AT ALL CARPET.
4. SEE REFLECTED CEILING PLANS FOR TYPE, LOCATION AND COLOR OF CEILING MATERIALS.
5. SEE INTERIOR ELEVATIONS FOR CLARIFICATION OF FINISH LOCATIONS.
6. ALL WALL AND CEILING PAINT TO BE EGGSHELL FINISH UNLESS OTHERWISE NOTED.
7. SEE SHEET A2-8 FOR FINISH LEGEND AND SCHEDULE.
8. SEE SHEET A7-5 FOR TRANSITION DETAILS.

SYMBOLS LEGEND

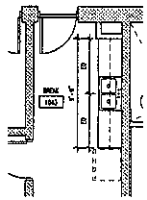
PRIVATE — ROOM NAME
OFFICE 1015 — ROOM NUMBER
TR-1 — FLOOR COVERING TRANSITION TYPE
— BORDING POINT

KEYED NOTES

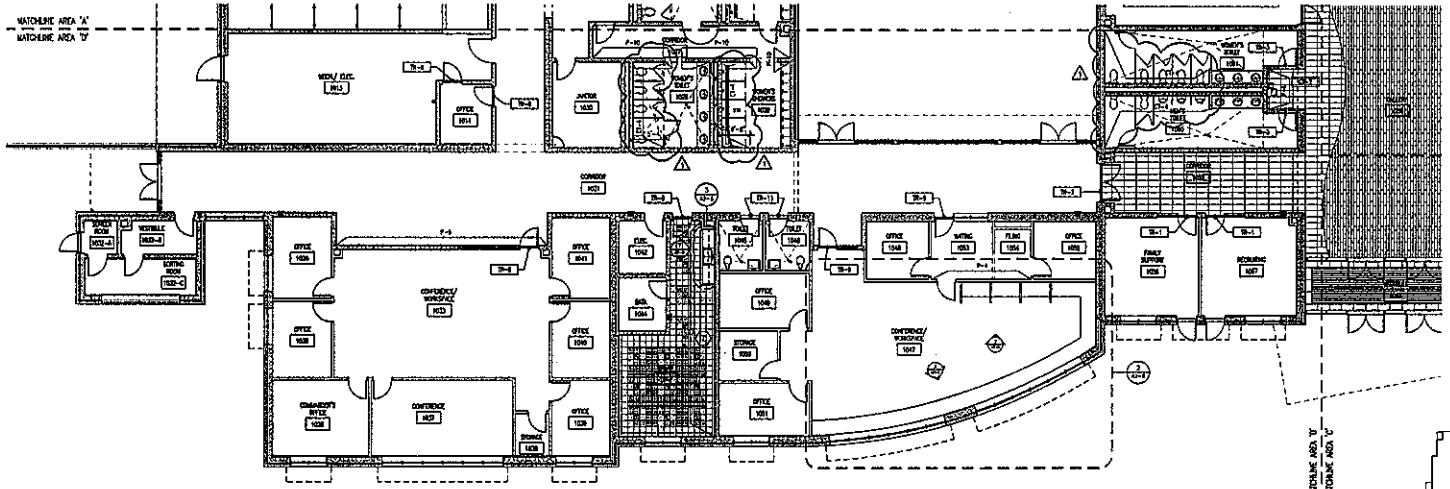
1. SEE SHEET A7-8 FOR FLOOR LAYOUT DIAGRAM.
2. SEE INTERIOR ELEVATIONS FOR LOCATIONS OF ACOUSTICAL WALL TREATMENTS.
3. PAINT DOORS AND FRAMES ON MAIN RECEPTACLE SIDE TO MATCH WALL.
4. CPT-3 ON STAIR BRISERS, USE MANUFACTURER'S RECOMMENDED ADHESIVE.
5. INSTALL CARPET TILE WITH MANUFACTURER'S RECOMMENDED ADHESIVE.
6. CUSTOM 3-COLOR PORCELAIN TILE PATTERN - WATER JET CUT, 8'-0" DIAMETER, MADE PROVIDED BY OWNER.
7. SEE FINISH LEGEND FOR WET COLOR SPECIFICATION.



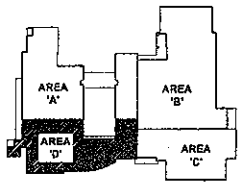
1 / A2-5 ENLARGED CASEWORK PLAN
SCALE: 1/4" = 1'-0"



3 / A2-5 ENLARGED CASEWORK PLAN
SCALE: 1/4" = 1'-0"



AREA 'D' FINISH PLAN
SCALE: 1/8" = 1'-0"



KEY PLAN
NOT TO SCALE

REVISIONS		
NO.	DATE	DESCRIPTION
1	4.15.11	ADDENDUM #3

ZMM ARCHITECTS & ENGINEERS
223 Lee Street, West
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The New
MORGANTOWN READINESS CENTER
The West Virginia Army National Guard
Morgantown, West Virginia

BIDDING DOCUMENTS

FINISH PLAN
AREA 'D'

DRAWN	CHECKED
JMW	ARK
DATE	
3.24.2011	
COMM. NO.	
0810	

A2-5R1

GENERAL NOTES

1. FLOOR FINISH CONTINUES UNDER ALL OPEN COUNTERS, FURNITURE, FIXTURES AND EQUIPMENT. FLOOR PATTERNS ON THE DRAWINGS ARE SHOWN FOR VISUAL CLARITY ONLY.
2. WHERE FLOOR MATERIAL CHANGES IN DOORWAYS, PLACE TRANSITION UNDERNEATH DOOR LEAF.
3. PROVIDE RUBBER COVE BASE AT ALL RESILIENT FLOORING. PROVIDE RUBBER STRAIGHT BASE AT ALL CARPET.
4. SEE REFLECTED CEILING PLANS FOR TYPE, LOCATION AND COLOR OF CEILING MATERIALS.
5. SEE INTERIOR ELEVATIONS FOR CLARIFICATION OF FINISH LOCATIONS.
6. ALL WALL AND CEILING PAINT TO BE EGGSHELL FINISH UNLESS OTHERWISE NOTED.
7. SEE SHEET A2-6 FOR FINISH LEGEND AND SCHEDULE.
8. SEE SHEET A7-5 FOR TRANSITION DETAILS.

SYMBOLS LEGEND

PRIVATE OFFICE — ROOM NAME
100 — ROOM NUMBER
TR-1 FLOOR COVERING TRANSITION TYPE
WORKING POINT

KEYED NOTES

(1) SEE SHEET A7-6 FOR FLOOR LAYOUT DIAGRAM.
(2) SEE INTERIOR ELEVATIONS FOR LOCATIONS OF ACOUSTICAL WALL TREATMENTS.
(3) PAINT DOORS AND FRAMES ON WAN REHEARSAL SIDE TO MATCH WALL.
(4) CPT-3 ON STAIR RISERS, USE MANUFACTURER'S RECOMMENDED ADHESIVE.
(5) INSTALL CARPET TILE WITH MANUFACTURER'S RECOMMENDED ADHESIVE.
(6) CUSTOM 2-COLOR PORCELAIN TILE PATTERN - WATER JET CUT, 8'-0" DIAMETER, IMAGE PROVIDED BY OWNER.
(7) SEE FINISH LEGEND FOR VCT COLOR SPECIFICATION.

ROOM FINISH LEGEND

CODE	TYPE	MANUFACTURER / STYLE	STYLE NUMBER / COLOR
ACT-1	ACOUSTICAL CEILING TILE CEILING GRID	ARMSTRONG - ULTIMA HRC ARMSTRONG - 15/16" PRELUDE HRC	2'x2' REGULAR, WHITE WHITE
ACT-2	ACOUSTICAL CEILING TILE CEILING GRID	ARMSTRONG - ULTIMA HRC ARMSTRONG - 15/16" PRELUDE HRC	2'x2' LAY-IN, WHITE WHITE
ACT-3	ACOUSTICAL CEILING TILE CEILING GRID	ARMSTRONG - OPTIMA OPEN PLAN ARMSTRONG - 15/16" PRELUDE HRC	2'x2' LAY-IN, WHITE, NRC 0.90 WHITE
ACT-4	ACOUSTICAL CEILING TILE CEILING GRID	ARMSTRONG - OPTIMA OPEN PLAN #3907 ARMSTRONG - 15/16" PRELUDE HRC	2'x6' VECTOR, WHITE WHITE
ACT-5	ACOUSTICAL CEILING TILE CEILING GRID	ARMSTRONG - CERAMAGUARD UNPERF'D ARMSTRONG - 15/16" PRELUDE HRC	2'x4' LAY-IN, WHITE WHITE
ACT-6	ACOUSTICAL CEILING PANEL CONCEALED FRAMING	DECOUSTICS - 2" THK. FABRIC-WRAPPED DIRECT MOUNT SYSTEM	2'x2', FR701 #144 OCONELL -
AFT-1	ATHLETIC INTERLOCKING FLOOR TILE	ECOSURFACES - ECOMENTS FOR SPORT	601 BLUE MOOD
CB-1	6x12 PORCELAIN COVE BASE	STONEPEAK - QUARTZITE COLLECTION	LIME
CB-2	6x12 PORCELAIN COVE BASE	STONEPEAK - SKY COLLECTION	NIGHT
CB-3	6x12 PORCELAIN COVE BASE	STONEPEAK - QUARTZITE COLLECTION	IRON
CT-1	12x12 PORCELAIN TILE	STONEPEAK - SKY COLLECTION	NIGHT
CT-2	12x24 PORCELAIN TILE	STONEPEAK - QUARTZITE COLLECTION	LIME
CT-3	6x24 PORCELAIN TILE	STONEPEAK - QUARTZITE COLLECTION	IRON
CT-4	3x6 CERAMIC WALL TILE	AMERICAN OLEAN - MATTE PROFILES	C081 DESIGNER WHITE
	INTERFACE CONTACT:	ERIC PERSCHAU, (305) 523-7030	
CPT-1	CARPET TILE (50 CM)	INTERFACE: REMAKE W/CLASSIC RE INSTALLATION: TACTILES, ASHLAR	4925 ALUMINUM
CPT-2	CARPET TILE (50 CM)	INTERFACE: RECYCLED W/CLASSIC RE INSTALLATION: TACTILES, ASHLAR	2943 ALUMINUM
CPT-3	CARPET TILE (50 CM)	INTERFACE: CUBIC W/CLASSIC RE INSTALLATION: TACTILES, NON-DIRECTIONAL	4382 DIMENSION
CPT-4	CARPET TILE (50 CM)	INTERFACE: DOODLE W/CLASSIC RE INSTALLATION: TACTILES, MONOLITHIC	107083 MANATEE
CPT-5	CARPET TILE (50 CM)	INTERFACE: SURREAL #10049, CLASSIC RE INSTALLATION: TACTILES, QUARTER-TURN	101050 ALLEGORY
EP-1	EPOXY FLOORING (RESINOUS)	DEX-O-TEX DECOR-FLOR TROWELED	TG 04
LMC-1	LINEAR METAL CEILING CEILING GRID	ARMSTRONG - METALWORKS LINEAR ARMSTRONG - LINEAR SUSPENSION SYSTEM	6"x8" MICROPERF W/ACOUSTICAL FLEECE & FIBERGLASS INFILL, EFFECTS MAPLE N/A
P-1	FIELD	BENJAMIN MOORE	1536 FIELDSTONE
P-2	FIELD/CEILINGS	BENJAMIN MOORE	OC-57 WHITE HERON
P-3	FIELD	BENJAMIN MOORE	OC-46 HAZY SKIES
P-4	ACCENT	BENJAMIN MOORE	2063-10 POLO BLUE
P-5	FIELD	BENJAMIN MOORE	1535 WINTER ORCHARD
P-6	FIELD	BENJAMIN MOORE	2062-30 BLUE DANUBE
P-7	FIELD	BENJAMIN MOORE	2062-50 BLUE JEAN
P-8	ACCENT	BENJAMIN MOORE	HC-143 WYTHE BLUE
P-9	ACCENT	BENJAMIN MOORE	2076-10 ROSEATE
P-10	ACCENT	BENJAMIN MOORE	HC-8 DORSET GOLD
PLAM-1	PLASTIC LAMINATE	NEVAMAR	UX7001T STUDIO WHITE MATRIX
PLAM-2	PLASTIC LAMINATE	WILSONART	4820-38 CARBON MESH
PLAM-3	PLASTIC LAMINATE	WILSONART	4876-38 SHEER MESH
RB-1	6" RUBBER WALL BASE	JOHNSONITE	24 GREY HAZE
RB-2	6" RUBBER WALL BASE	JOHNSONITE	18 NAVY BLUE (P-4 & P-8 WALLS)
RB-3	6" RUBBER WALL BASE	JOHNSONITE	41 SEA BREEZE (ON P-6 WALLS)
RB-4	6" RUBBER WALL BASE	JOHNSONITE	134 GOLD RUSH (ON P-10 WALLS)
RF-1	RUBBER FLOOR TILE	ECOSURFACES - ECOSTARS	1100 SPACE INVADERS
RST-1	RUBBER STAIR TREADS/RISERS RUBBER TILE AT STAIR LANDINGS	JOHNSONITE - BAMBOO W/MTR JOHNSONITE - BAMBOO 2'x2' TILES	24 GREY HAZE (40 BLACK INSERT) 24 GREY HAZE
SC-1	SEALED CONCRETE		
SS-1	1/2" SOLID SURFACE MATERIAL	DUPONT CORIAN	MOSAIC
SS-2	1/2" SOLID SURFACE MATERIAL	DUPONT CORIAN	DOVE
TR-X	RUBBER TRANSITIONS & REDUCERS	JOHNSONITE	20 CHARCOAL
VCT-1	VINYL COMPOSITION TILE	AZROCK - CORTINA COLORS	V837-3 TEAL MIST
VCT-2	VINYL COMPOSITION TILE	AZROCK - CORTINA COLORS	V800-3 ANTIQUE WHITE
VCT-3	VINYL COMPOSITION TILE	AZROCK - CORTINA COLORS	V837-3 TRUE BLUE
VCT-4	VINYL COMPOSITION TILE	AZROCK - CORTINA COLORS	V880-3 EVENING
VCT-5	VINYL COMPOSITION TILE	AZROCK - CORTINA COLORS	V862-3 MAPLE SUGAR
VSN-1	VINYL STAIR NOSING	JOHNSONITE	24 GREY HAZE
WB-1	MAPLE WOOD BASE	FINISH TO MATCH ARCHITECT'S SAMPLE	
WD-1	FLOATING SOLID HARDWOOD FLOOR	REVECK MILLWORKS, (304) 487-9900 RECLAIMED WIDE PLANK FLOORING	AMERICAN HERITAGE OAK, FSC-CERTIFIED, RESAWN-TYPE PATINA
WO-1	WALK-OFF GRID	CS-GROUP ENTRANCE FLOORING	GROUND 66 (3/8")

ROOM FINISH SCHEDULE

ROOM NO.	ROOM NAME	FLOOR		BASE		WALLS				CEILING			REMARKS / NOTES
		MATERIAL	FINISH	MATERIAL	FINISH	NORTH	EAST	SOUTH	WEST	MATERIAL	FINISH	HEIGHT	
1000	WAREHOUSE WORKBAY	SC	1	-	-	P-2	P-2	P-2	P-2	EXP.	P-2	-	-
1001	STORAGE	SC	1	-	-	P-2	P-2	P-2	P-2	GWB	P-2	SEE RCP	-
1002	STORAGE	VCT	1	-	-	P-2	P-2	P-2	P-2	ACT	2	9'-4"	-
1003	OFFICE	VCT	3	RB	1	P-6	P-6	P-6	P-5	ACT	1	8'-0"	-
1004	FLAMMABLE	SC	1	-	-	P-2	P-2	P-2	P-2	GWB	P-2	SEE RCP	-
1005	CORRIDOR	SC	1	CB	1	P-10	P-3	P-3	P-3/4	ACT	2	9'-4"	SEE FINISH PLAN
1006	CORRIDOR	SC	1	CB	1	P-3	P-3	P-3	P-3	ACT	1	9'-4"	-
1007	UNIT STORAGE	SC	1	-	-	P-2	P-2	P-2	P-2	EXP.	P-2	-	-
1008	UNIT STORAGE	SC	1	-	-	P-2	P-2	P-2	P-2	EXP.	P-2	-	-
1009	JANITOR	SC	1	-	-	P-2	P-2	P-2	P-2	EXP.	-	-	-
1010	HEATED STORAGE	SC	1	-	-	P-2	P-2	P-2	P-2	EXP.	-	-	-
1011	OFFICE	VCT	3	RB	1	P-6	P-6	P-6	P-6	ACT	2	8'-0"	-
1012	VAULT	SC	1	-	-	P-2	P-2	P-2	P-2	EXP.	P-2	-	-
1013	MECHANICAL / ELECTRICAL	SC	1	-	-	P-2	P-2	P-2	P-2	EXP.	-	-	-
1014	OFFICE	VCT	3	RB	1	P-5	P-5	P-5	P-5	ACT	2	8'-0"	-
1015	PHYSICAL TRAINING	AFT	1	RB	1	P-2	P-2	P-2	P-2	ACT	2	11'-4"	SEE INTERIOR ELEVATIONS
1016	CORRIDOR	SC	1	CB	1	P-3	P-3	P-3	P-3	ACT	2	9'-4"	-
1017	DAY ROOM	VCT	1,2,3,4,5	RB	1	P-2	P-2	P-2	P-2	ACT	2	9'-4"	SEE FINISH PLAN
1018	STORAGE	VCT	1,2,3,4,5	RB	1	P-2	P-2	P-2	P-2	ACT	2	9'-4"	SEE FINISH PLAN
1019	STORAGE	VCT	1,2,3,4,5	RB	1	P-3	P-3	P-2	P-2	ACT	2	9'-4"	SEE FINISH PLAN
1020	CORRIDOR	SC	1	CB	1	P-3	P-3/7	P-3	P-3	ACT	1	9'-4"	SEE FINISH PLAN
1021	ELECTRICAL	SC	1	-	-	P-2	P-2	P-2	P-2	EXP.	-	-	-
1022	CORRIDOR	CT	1	CB	2	P-10	P-2	P-2	P-3	GWB	P-2	8'-0"	-
1023	MEN'S TOILET	CT	1	CB	2	P-2/CT-4	P-2	P10/CT4	CT-4	GWB	P-2	8'-0"	-
1024	MEN'S SHOWERS	CT	1	CB	2	P-2/CT-4	P-2	P10/CT4	CT-4	GWB	P-2	8'-0"	-
1025	COMMON TOILET	CT	1	CB	2	P-2/CT-4	P-2	P10/CT4	CT-4	GWB	P-2	8'-0"	-
1026	COMMON SHOWERS	CT	1	CB	2	P-2/CT-4	P-2	P10/CT4	CT-4	GWB	P-2	8'-0"	-
1027	CORRIDOR	CT	1	CB	2	P-3	P-2	P-8	P-3	GWB	P-2	8'-0"	-
1028	WOMEN'S TOILET	CT	1	CB	2	P-2/CT-4	P-2	P10/CT4	CT-4	GWB	P-2	8'-0"	-
1029	WOMEN'S SHOWERS	CT	1	CB	2	P-2/CT-4	P-2	P10/CT4	CT-4	GWB	P-2	8'-0"	-
1030	JANITOR	SC	1	-	-	P-2	P-2	P-2	P-2	EXP.	-	-	-
1031	CORRIDOR	SC	1	CB	1	P-3	P-3	P-3/4	P-3	ACT	2	VARIES	SEE FINISH PLAN & RCP
1032-A	SCREEN ROOM	SC	1	CB	1	P-2	P-2	P-2	P-2	ACT	2	8'-0"	-
1032-B	VESTIBULE	SC	1	CB	1	P-2	P-2	P-2	P-2	ACT	2	8'-0"	-
1032-C	SORTING ROOM	SC	1	CB	1	P-2	P-2	P-2	P-2	ACT	2	8'-0"	-
1033	CONFERENCE / WORKSPACE	CPT	1	RB	1	P-5	P-5	P-5	P-5	ACT	1	9'-4"	-
1034	OFFICE	CPT	1	RB	1	P-6	P-6	P-6	P-6	ACT	1	9'-4"	-
1035	OFFICE	CPT	1	RB	1	P-5	P-5	P-5	P-5	ACT	1	9'-4"	-
1036	COMMANDER'S OFFICE	CPT	1	RB	1	P-6	P-6	P-5	P-5	ACT	1	9'-4"	-
1037	CONFERENCE	CPT	1	RB	1	P-5	P-6	P-6	P-5	ACT	1	9'-4"	-
1038	STORAGE	CPT	1	RB	1	P-6	P-6	P-6	P-5	ACT	1	9'-4"	-
1039	OFFICE	CPT	1	RB	1	P-5	P-5	P-5	P-5	ACT	1	9'-4"	-
1040	OFFICE	CPT	1	RB	1	P-5	P-6	P-5	P-5	ACT	1	9'-4"	-
1041	OFFICE	CPT	1	RB	1	P-6	P-5	P-6	P-6	ACT	1	9'-4"	-
1042	ELECTRICAL	SC	1	-	-	P-2	P-2	P-2	P-2	EXP.	-	-	-
1043	BREAK ROOM	VCT	1,2,3,4,5	RB	1/2	P-2	P-8	P-2	P-2	ACT	1	9'-4"	-
1044	DATA	VCT	6	RB	1	P-2	P-2	P-2	P-2	EXP.	P-2	-	-
1045	TOILET	CT	1	CB	2	P-2	P-3	CT-4	P-2	ACT	1	8'-0"	-
1046	TOILET	CT	1	CB	2	P-2	P-3	CT-4	P-2	ACT	1	8'-0"	-
1047	CONFERENCE / WORKSPACE	CPT	1	RB	1	P-5	P-6	P-6	P-5	ACT	1	9'-4"	-
1048	OFFICE	CPT	1	RB	1	P-6	P-6	P-6	P-6	ACT	1	9'-4"	-
1049	OFFICE	CPT	1	RB	1	P-6	P-6	P-6	P-6	ACT	1	9'-4"	-
1050	STORAGE	CPT	1	RB	1	P-6	P-6	P-6	P-6	ACT	1	9'-4"	-
1051	OFFICE	CPT	1	RB	1	P-5	P-6	P-6	P-5	ACT	1	9'-4"	-
1052	OFFICE	CPT	1	RB	1	P-5	P-5	P-6	P-5	ACT	1	9'-4"	-
1053	WAITING	CPT	1	RB	1/2	P-5	P-6	P-4	P-5	ACT	1	9'-4"	-
1054	FILING	CPT	1	RB	1/2	P-6	P-5	P-4	P-5	ACT	1	9'-4"	-
1055	CORRIDOR	CT	2	CB	1	P-1/3	P-1	P-1/3	P-1/3	GWB	P-2	9'-4"	SEE INTERIOR ELEVATIONS
1056	FAMILY SUPPORT	CPT	1	RB	1	P-6	P-6	P-6	P-5	ACT	1	9'-4"	-
1057	RECRUITING	CPT	1	RB	1	P-6	P-5	P-6	P-5	ACT	1	9'-4"	-
1058	VESTIBULE	CT/WO	3/1	CB	3	-	-	-	P-3	-	-	-	SEE FINISH PLAN
1059	GALLERY	CT	1/3	CB	1	P-1/3	P-1/2/3	P-1/3	P-1/2/3	ACT/LMC	4/1	VARIES	SEE FINISH PLAN, ELEVATIONS, RCP
1060	MEN'S TOILET	CT	1	CB	2	P-3/CT-4	P-3	P-7	CT-4	ACT	1	8'-0"	-

ROOM FINISH SCHEDULE

ROOM NO.	ROOM NAME	FLOOR		BASE		WALLS				CEILING			REMARKS / NOTES
		MATERIAL	FINISH	MATERIAL	FINISH	NORTH	EAST	SOUTH	WEST	MATERIAL	FINISH	HEIGHT	
1061	WOMEN'S TOILET	CT	1	CB	2	P-7	P-3	P-3/CT-4	CT-4	ACT	1	8'-0"	-
1062	CLASSROOM	CPT	3/4	RB	1	P-6	P-6	P-5	P-6	SEE RCP			SEE FINISH PLAN
1063	CLASSROOM	CPT	3/4	RB	1	P-5	P-6	P-6	P-6	SEE RCP			SEE FINISH PLAN
1064	CLASSROOM	CPT	3/4	RB	1	P-6	P-6	P-6	P-6	SEE RCP			SEE FINISH PLAN
1065	CORRIDOR	CT	2	CB	1	P-1/3	P-1/3	P-1/3	P-1/3	GWB	P-2	9'-4"	SEE INTERIOR ELEVATIONS
1066	A/V	CPT	3	RB	1	P-6	P-5	P-6	P-6	ACT	1	8'-0"	-
1067	LIBRARY / LEARNING CENTER	CPT	3	RB	1	P-5	P-6	P-6	P-5	ACT	1	9'-4"	SEE FINISH PLAN
1068	TRAINING AID STORAGE	CPT	3	RB	1	P-5	P-6	P-5	P-5	ACT	1	8'-0"	-
1068-A	ELECTRICAL	SC	1	RB	1	P-2	P-2	P-2	P-2	EXP.	-	-	-
1069	TROPHY ROOM	CT	2/3	CB	1/3	P-3/5	P-3/5	P-3/5	P-3/5	ACT/GWB	4/P-2	20'-8"	SEE FINISH PLAN, RCP, ELEVATIONS
1070	CORRIDOR	CPT	1	RB	1/1	P-6/10	P-6	P-3	P-6	ACT	1	9'-4"	SEE FINISH PLAN
1071	BAND LEADER	CPT	1	RB	1	P-6	P-6	P-6	P-6	ACT	1	9'-4"	-
1072	COMMANDER	CPT	1	RB	1	P-6	P-5	P-5	P-6	ACT	1	9'-4"	-
1073	WORKSPACE	CPT	1	RB	1	P-5	P-6	P-6	P-5	SEE RCP			-
1074	GROUP LEADERS	CPT	1	RB	1	P-5	P-6	P-6	P-5	ACT	1	9'-4"	ACCESS FLOORING MOCK-UP
1075	SMALL REHEARSAL	WF	1	RB	1	P-6	P-6	P-6	P-6	ACT	2	10'-0"	-
1076	STAGE	WD	1	RB	1	P-6	P-6	P-6	P-6	ACT	3	8'-0"	-
1077	INSTRUMENT REPAIR / CLEANING	SC	1	RB	1	P-2	P-2	P-2	P-2	ACT	2	8'-0"	-
1078	DATA	VCT	1	RB	1	P-2	P-2	P-2	P-2	EXP.	P-2	-	-
1079	LARGE REHEARSAL	WF	1	RB	1	P-6	P-5	P-5	P-5	ACT	2	16'-0"	-
1080	CORRIDOR	CPT	2	RB	1	P-3	P-6	P-5	P-5	ACT	1	9'-0"	-
1081	NOT USED												
1082	LARGE PRACTICE	CPT	2	RB	1	P-6	P-6	P-6	P-6	ACT	2	8'-0"	-
1083	LARGE PRACTICE	CPT	2	RB	1	P-6	P-6	P-6	P-6	ACT	2	8'-0"	-
1084	LARGE PRACTICE	CPT	2	RB	1	P-6	P-5	P-6	P-6	ACT	2	8'-0"	-
1085	NOT USED												
1086	NOT USED												
1087	SMALL PRACTICE	CPT	2	RB	1	P-6	P-6	P-6	P-6	ACT	2	9'-4"	-
1088	SMALL PRACTICE	CPT	2	RB	1	P-6	P-6	P-6	P-6	ACT	2	9'-4"	-
1089	SMALL PRACTICE	CPT	2	RB	1	P-6	P-6	P-6	P-6	ACT	2	9'-4"	-
1090	SMALL PRACTICE	CPT	2	RB	1	P-6	P-6	P-6	P-6	ACT	2	9'-4"	-
1091	SMALL PRACTICE	CPT	2	RB	1	P-5	P-6	P-6	P-6	ACT	2	9'-4"	-
1092	SMALL PRACTICE	CPT	2	RB	1	P-6	P-6	P-6	P-6	ACT	2	9'-4"	-
1093	SMALL PRACTICE	CPT	2	RB	1	P-6	P-5	P-5	P-6	ACT	2	9'-4"	-
1094	SMALL PRACTICE	CPT	2	RB	1	P-6	P-6	P-5	P-5	ACT	2	9'-4"	-
1095	SMALL PRACTICE	CPT	2	RB	1	P-6	P-6	P-6	P-5	ACT	2	9'-4"	-
1096	SMALL PRACTICE	CPT	2	RB	1	P-6	P-6	P-6	P-6	ACT	2	9'-4"	-
1097	NOT USED												
1098	VAULT	SC	1	RB	1	P-2	P-2	P-2	P-2	EXP.	P-2	-	-
1099	CASE / EQUIPMENT	SC	1	RB	1	P-2	P-2	P-2	P-2	EXP.	P-2	-	-
1100	UNIT STORAGE	SC	1	RB	1	P-2	P-2	P-2	P-2	EXP.	P-2	-	-
1101	INSTRUMENT LOCKERS	SC	1	RB	1	P-2	P-2	P-2	P-2	ACT	2	8'-0"	-
1102	WIND REHEARSAL	WF	1	RB/WB	1/2	P-4/5	P-4/5	P-4/5	P-4/5	SEE RCP			SEE FINISH PLAN & ELEVATIONS
1103	LIBRARY	CPT	3	RB	1	P-6	P-6	P-6	P-6	ACT	1	9'-4"	-
1104	AUDITORIUM	CPT	1	RB	1	P-1/3	P-1/3	P-1/3	P-1/3	SEE RCP			SEE FINISH PLAN & ELEVATIONS
1105	LOBBY	CPT	4/5	RB	1	P-6	P-6	P-6	P-5	ACT	1	11'-4"	SEE FINISH PLAN
1106	ASSEMBLY / DRILL HALL	SC	1	-	-	P-1/3	P-1/3	P-1/3	P-1/3	GWB	P-1/3	-	SEE RCP & ELEVATIONS
1107	ELECTRICAL	SC	1	-	-	P-2	P-2	P-2	P-2	EXP.	-	-	-
1108	TABLE STORAGE	SC	1	-	-	P-2	P-2	P-2	P-2	EXP.	P-2	-	-
1109	KITCHEN	EP	1	EP	1	P-2/CT-4	P-2	CT-4	CT-4	ACT	5	8'-0"	-
1110	DISHWASHING	EP	1	EP	1	P-2	P-2	P-2	P-2	ACT	5	8'-0"	-
1111	TOILET	CT	1	CB	2	P-2	CT-4	P-2	P-2	ACT	2	8'-0"	-
1112	OFFICE	VCT	3	RB	1	P-6	P-6	P-6	P-6	ACT	2	8'-0"	-
1113	STORAGE	VCT	1	RB	1	P-6	P-6	P-6	P-6	ACT	2	8'-0"	-
1114	FREEZER	SC	1	-	-	P-2	P-2	-	-	-	-	-	-
1115	REFRIGERATOR	SC	1	-	-	P-2	-	-	P-2	-	-	-	-
1116	MECHANICAL	SC	1	-	-	P-2	P-2	P-2	P-2	EXP.	-	-	-
1117	TELEPHONE	SC	1	-	-	P-2	P-2	P-2	P-2	GWB	P-2	12'-0"	-
1118	CONTROLLED WASTE	SC	1	-	-	P-2	P-2	P-2	P-2	EXP.	-	-	-
1119	PUMP ROOM	SC	1	-	-	-	-	-	-	EXP.	-	-	-
2001	[illegible]	CPT	3	RB	1	P-6	P-6	P-6	P-6	ACT	3	-	-
2002	CLOSET	CPT	3	RB	1	P-6	P-6	P-5	P-6	ACT	3	-	-
2003	MEZZANINE	SC	1	-	-	P-2	P-2	P-2	P-2	EXP.	-	-	-

REVISIONS NO.	DATE	DESCRIPTION
1	4.13.11	ADDENDUM #3

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The New
MORGANTOWN READINESS CENTER
The West Virginia Army National Guard
Morgantown, West Virginia

BIDDING DOCUMENTS

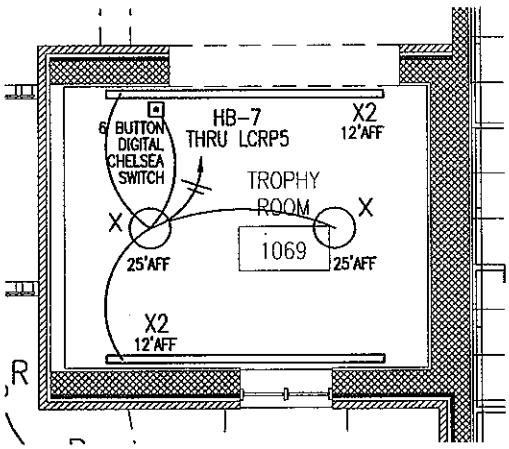
FINISH SCHEDULE

DRAWN	CHECKED	DATE	COMM. NO.
JMW	APK	2.24.2011	0616

A2-6R1

FIXTURE TYPE X2: WALL MOUNTED LINEAR FLUORESCENT, EXTRUDED ALUMINUM HOUSING, DIE-CAST ALUMINUM END CAPS, ROUNDED TOP, 4"Wx12' CONTINUOUS RUN, SEMI-SPECULAR BAFFLE, (1) T5HO FLUORESCENT LAMP PER SECTION, ELECTRONIC BALLAST, FINISH TO BE SELECTED BY ARCHITECT. PEERLESS TULIP SERIES TLWS-D-1-54T5HO-SSB-12FT-R12-277-GEB10-SCT-FINISH

6 BUTTON DIGITAL CHELSEA SWITCH FOR CONTROL OF TROPHY ROOM LIGHT FIXTURES. SWITCH SHALL ENABLE/DISABLE TROPHY ROOM FIXTURES WITH BUTTONS FOR THE FOLLOWING: FIXTURE 'X' UPLIGHT ON/OFF, FIXTURE 'X' DOWNLIGHT ON/OFF AND WALL MOUNTED FIXTURE 'X2' ON/OFF. UTILIZE RELAYS IN LIGHTING CONTROL PANEL LCRP5 AND COORDINATE UPLIGHT COMPONENT WITH TIME OF DAY SCHEDULING ILLUMINATING TOP OF TROPHY ROOM DURING NIGHT TIME HOURS.



PARTIAL LIGHTING PLAN

1/8" = 1'-0"

ZMM
Z M M , INC.
ARCHITECTS • ENGINEERS
222 LEE STREET W
CHARLESTON, WV 25302
PHONE (304) 342-0159
FAX (304) 345-8144

SUPPLEMENTAL DRAWING

☐ NEW DRAWING or DETAIL ____ on sheet ____
☒ REVISION OF DRAWING or DETAIL ____ on sheet E1-1
☐ CLARIFICATION OF DRAWING or DETAIL ____ on sheet ____

ATTACHMENT TO:
☒ ADDENDUM NO. 3
☐ CHANGE ORD. NO. ____
☐ C.C.D. NO. ____

BY: RSC

COMM. NO. 0616

MORGANTOWN READINESS
Morgantown, West Virginia

DWG. NO. E1-1R1

EXHIBIT 10

REQUISITION NO.: .....

ADDENDUM ACKNOWLEDGEMENT

I HEREBY ACKNOWLEDGE RECEIPT OF THE FOLLOWING CHECKED ADDENDUM(S) AND HAVE MADE THE NECESSARY REVISIONS TO MY PROPOSAL, PLANS AND/OR SPECIFICATION, ETC.

ADDENDUM NO.'S:

NO. 1 .....

NO. 2 .....

NO. 3 .....

NO. 4 .....

NO. 5 .....

I UNDERSTAND THAT FAILURE TO CONFIRM THE RECEIPT OF THE ADDENDUM(S) MAY BE CAUSE FOR REJECTION OF BIDS. 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.

.....
SIGNATURE

.....
COMPANY

.....
DATE

REV. 11/96