

# BALTIMORE COUNTY PUBLIC SCHOOLS

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## ADDENDUM NUMBER \_\_4\_\_

DATE: December 12, 2016  
BID NAME: REPLACEMENT OF VICTORY VILLA ELEMENTARY SCHOOL  
BID NUMBER: ARA-209-17  
DUE DATE: **DECEMBER 21, 2016**  
DUE TIME: **2:00 P.M.**

TOTAL PAGES: 121 (to include 33 sketches)

The following revisions and responses to questions are made to the original bid document. This addendum forms a part of the Contract Documents and modifies the Original Solicitation Documents accordingly and as noted below. Acknowledge receipt of this Addendum in the space provided on the "Addenda" form within the Form of Proposal.

## SPECIFICATIONS

**REMOVE ORIGINAL 00400 FORM OF PROPOSAL AND REPLACE WITH 00400 FORM OF PROPOSAL – ADDENDUM 4 REVISION (ATTACHED).**

**REVISE:** TABLE OF CONTENTS in accordance with the following:

**ADD:** Section 10 53 CANTILEVER CANOPY (Service Entrance) (attached)

**DELETE:** Section 11 68 00 PLAYGROUND EQUIPMENT

**ADD:** Section 12 24 13 ROLLER WINDOW SHADES (attached)

**ADD:** Section 28 23 00 VIDEO SURVEILLANCE SYSTEM (attached)

**ADD:** Section 28 13 00 ACCESS CONTROL (attached)

**ADD:** Section 31 50 00 PORTLAND CEMENT STABILIZED SUB GRADE (attached)

**REVISE:** Section 01 21 00 ALLOWANCES to replace the Article 3.3 Schedule of Allowances with the following:

**A.** Allowance No. 1: (Quantity Allowance):

1. Include 300 Linear Feet of Concrete Curb and Gutter.
2. This allowance includes material cost, receiving, handling, installation and Contractor overhead and profit.
3. Provide unit price and total price costs on SECTION 00 4000 - FORM OF PROPOSAL.

**B.** Allowance No. 2: (Quantity Allowance):

1. This allowance includes 2,000 square feet of Concrete Sidewalk
2. Unit of Measurement: Square Feet.
3. Provide unit price and total price costs on SECTION 00 4000 - FORM OF PROPOSAL.

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C. Allowance No. 3: (Quantity Allowance):

1. This allowance includes 6,000 cubic yards of unsatisfactory soil excavation and disposal off site and replacement with satisfactory fill material or engineered fill from off site in accordance with specification section 31 20 00 EARTHWORK.
2. Unit of Measurement: Cubic Yard of soil excavated.
3. Provide unit price and total price costs on SECTION 00 4000 - FORM OF PROPOSAL.

D. Allowance No. 4: (Quantity Allowance):

1. This allowance includes 6,000 cubic yards of unsatisfactory soil excavation and disposal off site and replacement with Soil Cement (5% Soil Cement 12" deep) in accordance with Specification 31 50 00 Portland Cement Stabilized Subgrade.
2. Unit of Measurement: Cubic Yard of soil excavated.
3. Provide unit price and total price costs on SECTION 00 4000 - FORM OF PROPOSAL.

**REPLACE:** Section UNIT PRICES 01 22 00 with the attached document.

**REVISE:** Section 07 81 00 - SPRAYED FIRE-RESISTIVE MATERIALS to stipulate for provision of wet mixed product in accordance with inquiry response in general items below, as follows:

Change spec to a cementitious wet mix material "mixed with water at Project site to form a slurry or mortar before conveyance and application". Acceptable cementitious fireproofing systems include: 1) Cafco 300 2) Monokote MK-6, 3) or equal. Provide a warranty per the specification. No allowances.

**ADD:** Section 10 53 00 CANTILEVER CANOPY (Service Entrance) (attached)

**REVISE:** Section 116620 GYMNASIUM EQUIPMENT

DELETE Paragraph 1.4.A Performance Requirements

REVISE Paragraph 1.5 Submittals Item D as follows in bold text:

Structural analysis data signed and sealed by the qualified professional engineer **(registered in the State of Maryland)** responsible for their preparation including loads, point reactions, and locations for attachment of gymnasium equipment to structure.

ADD Paragraph 2.2.O Cargo Climbing Net (Indoor): Climbing Net shall be fabricated using rugged 3/4" diameter poly rope with 1/2" diameter poly rope vertical lanyards for better grip and maximum strength. Provide 9" square mesh openings more suitable for smaller legs or using on an incline. Provide "non-slip" hitch design at all mesh intersections. Provide 4' of lanyard at Top of each net for tying net. Steel pipe suspended from structure above (Approx. 24' from floor to bottom of structure) shall be suspended with chains. Provide RN-1 lockable Metal Box to secure cargo net when not in use. Color: From manufacturer's full range.

1. Representative Product: CN-Series, Model No. CN9-1212. 12'W x 12'H 32 lbs by Jammarmfg Co. Inc, P.O. Box 392, Uncasville, CT 06382. Tel: 866-848-1113. Website: <http://jammarmfg.com/>
2. Equal product.

**DELETE:** Section 11 68 00 PLAYGROUND EQUIPMENT

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**ADD:** Section 12 24 13 ROLLER WINDOW SHADES (attached)

**REVISE:** Section 27 1000 LOW-VOLTAGE STRUCTURED CABLING SYSTEM as follows:

ADD: Paragraph 2.1.F to read as follows:

“F. Voice / Data Horizontal wiring: All horizontal cabling within the building will be CAT6 UTP Plenum solid conductor. Voice / Data cable shall be Hubbell NextSpeed C6 Cable or approved equal.”

ADD: Paragraph 2.2B to read: “Patch Panels shall be 48 port, Category 6. Modular Patch Panels shall be Hubbell NextSpeed 6 System or approved equal.”

ADD: 2Paragraph 2.3 to read as follows:

### “2.3 EQUIPMENT RACKS/CABINETS

#### A. Wiring closets and main data room:

1. Equipment racks shall provide EIA standard mounting provisions, with pre-drilled, pre-tapped holes to accommodate industry standard 19” patch panels and rack mounted equipment.
2. For wall enclosure mounting: Provide an APC AR100 or approved equal, 13 rack unit enclosure, fully enclosed with hinged, locking, safety glass front door, black, and hinged locking rear door. Rack shall include 120-volt, 100-cfm ventilation fan. Locate where indicated on drawings. (Must be pre-approved prior to use within building – use #3 below as standard.)
3. For floor enclosure mounting: Provide a Middle Atlantic ERK-4425 (enclosure for servers/switches) or approved equal, 42-44 rack unit enclosure, complete with all front and side panels, and all required accessories. Rack shall include 120-volt, 100-cfm ventilation fan. Or Middle Atlantic RL10-45 or approved equal 2-post racks for patch panels. Locate where indicated on drawings.
4. Provide complete horizontal and vertical cable management facilities in each rack. Vertical wire management shall be Hubbell VC75H, and horizontal wire management Hubbell HC219ME3N or approved equals. Each IDF shall be connected to the MDF. Provide a minimum of four (4) rows of 5C count split front “D” ring horizontal cable management panels per rack. Provide power outlet strips in the equipment racks as shown on Drawings. Power Outlet surge strip shall be Wiremold Part Number JT06B2B or approved equal.
5. Provide APC NET9RMBLK 120-volt power strip with minimum (9) NEMA 5-15R plug-in ports, within cabinet, as appropriate.
6. UPS will be provided by BCPS DOT – requires at least (1) L5-30 outlet per rack/enclosure located within 6-feet of mounting location of UPS units, above the enclosures – see section 3.7 for more details on room layouts.
7. All IDFs/MDFs, including the AC units within the rooms, must be on building wide generator.

- B. See 3.7 Data/wiring closet room layout for HVAC, additional electrical, lighting, cable tray, spacing, and other specifications.”

DELETE: Paragraph 2.4 in its entirety.

ADD: Paragraph 2.4 to read as follows:

### “2.4 FIBER OPTIC SYSTEM CABLING AND TERMINATIONS

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- A. Backbone: All wiring closets (IDF) will be interconnected to the main Data/Telco Equipment room (MDF) by 24-strand, multi-mode fiber optic cable (OM3 – 50/125 micron) and 24-strand, single-mode (9/125 micron) terminating into enclosures marked “Wiring”. Fiber optic cables shall be Amp/Pirelli, Berk-Teck or approved equal.
- B. All fibers shall terminate into rack mounted enclosures marked “Wiring”, with “LC” connector fiber patch panels.
  - 1. Furnish and install rack-mounted fiber optic cable distribution enclosures at all Telecommunications Rooms (MDF and IDF Room locations). Capacity shall be as required to rinate all strands of fiber.
  - 2. Provide strain relief for fiber optic cabling system.
  - 3. The Fiber Optic Distribution Enclosure (FODE) shall be Hubbell FCR350SP36R and FCR525SPR rack mounted enclosures with Hubbell FSP adaptor plates.
  - 4. The Fiber Optic Distribution Enclosure (FODE) shall have connector panels that snap into the side of the module and accommodate SC connectors.
- C. Fiber Optic Connectors shall be LC type. Fiber Optic Connectors shall be Hubbell 2Quick LC, or approved equal.
- D. Fiber Optic Patch Cords shall be provided for each fiber terminated. Fiber patch cords shall be Hubbell OptiChannel LC type paired cord patch cords or approved equal. Fiber patch cords shall each be 3 meters in length.

DELETE: Paragraph 2.5.A sentence: “This is in preparation for a future VoIP phone system.”

DELETE: Paragraph 2.5.B in its entirety.

ADD: Paragraph 2.5.B: “Voice backbone cables shall be Hitachi 39053-50, Berk-Tek power sum Cable Part number 530354, Helix/Hi-Temp Super CAT100E Number 803308, or approved equal.”

DELETE: Paragraph 2.6 in its entirety.

ADD: Paragraph 2.6 to read as follows:

“2.6 VIDEO OUTLETS, CABLES, AND MISCELLANEOUS EQUIPMENT

- A. Provide input cable from Utilities Demarq to MDF. Input cable shall be Time Fiber TX Series Flexible Feeder model # 02852V TX15AQ-VBV Flame Retardant Quad Shield terminated with Amphenol ACC-15BAFFT10U or Gilbert G-15Q-BAFF TX Quad connectors specific to this cable. Coil twenty (20) feet slack cable at CATV/telephone backboard for connection to cable television service by Comcast Cable Television or Verizon.
- B. Video Drop Cable shall be a plenum rated, quad shielded RG-6 coaxial cable with an 18 AWG solid copper center conductor, a 100% Bifoil shield and a 65% aluminum braid shield. Video drop cable shall be West Penn or approved equal. Video (RF) Jacks shall be standard “F” connector feed-through type jacks, Ortronics 6090017 or approved equal. Video System RG-6 Connector shall be a two-piece crimp-on type. Provide Blonder-Tongue BTF-561 or approved equal.
- C. Coaxial cable for system trunk line distribution from MDF shall be Commscope RG-11 (Series 11) Quad Shield Plenum Series #2287K. Commscope is specified due to its construction characteristics of a copper clad steel center conductor and aluminum braid over aluminum tape shielding. Coaxial cable for

- drop cable from system tap offs shall be Commscope RG-6 (Series 6) Quad Shield Plenum Series #2227V and K.
- D. Trunk lines of RG-11 (Series 11) coaxial cable shall not exceed 500 feet. Classroom distribution lines (drop cables) of RG-6 (Series 6) shall not exceed 150 feet.
  - E. System Tap offs shall be Toner Model TGT four (4) and/or eight (8) port Tap offs or Blonder-Tongue Model SRT-4A four (4) and SRT-8A eight (8) port Tap offs.
  - F. All terminators shall be Blonder-Tongue stock #4670 BTF-TP, Gilbert GRT-59A or equivalent and be installed on all unused ports throughout the plant.
  - G. CATV system outlets shall be configured into the designated Technology wall plate by providing, one (1) CATV system outlet with one (1) AMP part #133912-1 "F" Series Coupler Insert, color TBD. Hubbell also approved."

DELETE: Paragraph 2.7 in its entirety.

ADD: Paragraph 2.7 to read as follows:

**"2.7 VIDEO PROJECTOR – CABLING AND CEILING PLATE MOUNTS**

- A. Provide all rough-in and provisions for wall mounted interactive projector installation, provide projector high drop mounted on the wall adjacent to the projector wall bracket. In some cases, the projector high drop will be mounted in the ceiling just above the wall mounted interactive projector. Provide a double gang plate with a 1" grommet (2) 1 ½" conduits stubbed to accessible ceiling space) from the wall projector to accessible ceiling space for cables provided by the Owner.

**ADD:** Section 28 23 00 VIDEO SURVEILLANCE SYSTEM (attached)

**ADD:** Section 28 13 00 ACCESS CONTROL (attached)

**ADD:** Section 31 50 00 PORTLAND CEMENT STABILIZED SUB GRADE (attached)

**REVISE:** Section 31 66 13 AGGREGATE PIER SOIL REINFORCEMENT to delete Article 1.5.B.1 concerning Aggregate Piers.

## **DRAWINGS**

### **ADDENDUM 3 SKETCHES – RE-ISSUED**

- a. **REPLACE:** Sketches issued with the previous Addendum 3 with revised Sketches attached to this Addendum 4, that have been assigned new identification numbers and assigned to the document/s they modify.

### **SHEET C0.01**

- a. **ADD:** Note number 3

### **SHEET C1.02**

- a. **REVISE:** C-28 "Proposed canopy".
- b. **DELETE:** C-27 callout in parent drop-off area.
- c. **DELETE:** C-31 callout in bus loop.
- d. **REVISE:** Note C-18, to read "Proposed playground equipment provided and installed by owner for Pre-K & K (Base Bid)"

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### **SHEET C1.05**

- a. **ADD:** 6" pvc storm drain at main entrance for canopy downspout connection.

### **SHEET C2.01**

- a. **ADD:** "Refer to Geotech Report for proper application" to details 1, 2 and 5.

### **SHEET C3.01**

- a. **ADD:** New 6" pvc storm drain to profile 13.

### **SHEET A0.01**

- a. Revise Plan Note at 2" Expansion Joint to read, "2" Building Expansion Joint and 2-hour Building Fire Separation Assembly, horizontal extent indicated. Provide extending from foundation through roof. Fire Separation Assembly includes 1-hour fire-separation assembly at lower roof plane to 4 feet from wall. See Architectural & Structural Drawing Details and Specifications."

### **SHEET A1.05**

- a. Add note at roof access stair shown in Mechanical 144 - "Roof Access Ships Ladder – See 9/A412". Refer to **Sketches A412 and A501, 2 and 3 of 9**.
- b. Add Canopy north of Mechanical 144/Can Wash 154, with note – "Canopy - See 2/A103". Refer to **Sketch A103 8 of 9**
- c. At wall enclosure around Operable Partition storage pocket at Gym. 140/Caf.141, change Wall Type from B1 to C1 (8" CMU) per Structural Dwgs. Maintain interior dimension of pocket, align Corridor 007 face of CMU wall with continuing frame and GWB wall in Corridor, and adjust dimension of PE-Inst. 140E as necessary.
- d. Add note at stair landing outside Door 143B from Elec. 143 – "Conc. Stair and landing – See 2/A105". Refer to **Sketch A105 9 of 9**

### **SHEET A1.06**

- a. Add note at roof access stair shown in Custodial 215 to read, "Roof Access Ships Ladder – See 9/A412". Refer to **Sketches A412 and A501, 2 and 3 of 9**. Note: Ships ladder for this installation is similar to that shown for Mechanical 144, but floor-roof dimension is nominally less at +/-14'.

### **SHEET A1.07**

- a. Add motorized roller shades to clerestory windows SE-23 (2 locations) in Cafeteria.

### **SHEET A3.04**

- a. At Section 1 (and typical for all other wall section details on A3.04-A3.13) add Keynote 09 29 55 "Densdeck Sheathing" as a recovery/cover board between insulation and roofing system assembly.
- b. At Section 1 (and typical for all other wall section details on A3.04-A3.13) with face brick cavity wall construction add/indicate the following:
  - 1) Mortar net in wall cavity and thru-wall flashing at base of wall and heads of masonry openings.
  - 2) Brick head joint weep vents as specified at 24" o.c. just above base of wall thru-wall flashing.
  - 3) Weep tubes as specified at 24" o.c. just above thru-wall flashing at heads of masonry openings.
  - 4) Brick head joint weep vents as specified at 24" o.c. in first full brick head joint below top-of-wall copings and fasciae, to function as cavity wall convectional flow relief vents.



- c. At Section 3, Revise the Composite Metal Wall Panel Assembly (Keynote 07 42 30) in accordance with Addendum 4 Sketches **Sketches 6 & 7 of 9**. Note: Increase/adjust board insulation thickness and wall panel fastener unit length as required to relate face of metal wall panels with face of adjoining brick and/or storefront/curtainwall window framing assemblies as indicated. This applies also to Composite Metal Wall Panel Assemblies show at Sections 1 and 2 on this sheet and for similar conditions shown in Sections on Sheets A3.05 – A3.12.

#### **SHEET A3.07**

- a. At Section 2, revise position of the upper aluminum fascia construction so that face of aluminum fascia aligns with finished wall (09 29 55) face below.
- b. At Section 3, indicate treated wood blocking and cant strips at roof interface with parapet wall. Provide likewise at Section 4 on this sheet, and at similar conditions (ie: roof edges and interfaces) on subsequent sheets A3.08 – A3.13
- c. Remove reference to Roller Shade from Section 4.
- d. At Wall Section 4, change detail reference at Display Case outside Gym to 4/A407.6.

#### **SHEET A3.12**

- a. At Section 3, add notes to indicate “Fire-safing insulation with clips” and “Fire Caulk” between the edge of the second floor slab and the curtainwall framing/spandrel panel.

#### **SHEET A4.02.1**

- a. DELETE references to P-LAM paneling on walls in Drawings 2, 6, 12, and 13.

#### **SHEET A4.02.3**

- a. At Sections 6 and 7, add (2) 15”x15” metal counter support brackets, as specified, under the transition points between desktop profiles.
- b. At Section 8, add (1) 24”x29” metal counter support bracket, as specified, at mid-span under the countertop curve.

#### **SHEET A4.08.1**

- a. Revise Drawing 2 to show wall padding behind basketball hoop to be 6’-0” high.

#### **SHEET A4.08.2**

- a. Add motorized roller shades to (2) clerestory windows in Cafeteria labeled SE-23 in Interior Elevation Drawing 1 and 2.
- b. Revise Interior Elevation Drawing 1 and 2 on Sheet A4.08.2 to show side court basketball hoops mounted at 10’-0” above finished floor.

#### **SHEET A4.09**

- a. At Drawing 7: Remove Note “Glazed CMU”

#### **SHEET A4.12**

- a. At Detail 7, add note to indicate that “Wall and ceiling enclosure of Storage 158 under Stair ST2 shall be 1-hour UL-rated assemblies.
- b. Add Mech. 144 Ships Ladder Detail and similar Custodial 229 Ships Ladder Detail, per Addendum 4 **Sketch 2 of 9** to this Sheet as Detail 9.

#### **SHEET A5.02**

- a. At Typical Classroom Door (Plan) Detail 7, add note: “Schluter corner moulding profile Diadec 10” in Satin Anodized Aluminum at the outside corner of tackable wall surface behind door.

- b. Add Section and Details for Alternate Wood Paneling in Corridors in lieu of ceramic tile, per Sketch A502/Alt 1 of 1.

#### **SHEET A5.03**

- a. Revise Roof (Curb) Detail 4 in accordance with **Sketch 4 of 9**.
- b. Revise Roof (Bench. Planter) Details 5 and 6 in accordance with **Sketch 5 of 9**.

#### **SHEET A5.07**

- a. Revise North Patio Stair Detail 2 in accordance with **Sketch A503 1 of 9**.

#### **SHEET A6.08**

- a. Add "G5" Wall Type - Section and Details for Alternate Wood Paneling in Corridors in lieu of ceramic tile, per **Sketch A608/Alt 1 of 1**.

#### **SHEET S1.01**

- a. **Revise per attached sketch**
- b. Revise FOUNDATION SYSTEM NOTE per Sketch S1.01/S1.02 1of 1 attached to this Addendum to read:  
Foundations shall consist of footings over rammed aggregate pier improved soils. **ALL WALL FOOTINGS** designed for 2.5 KSF allowable soil bearing and **ALL SPREAD FOOTINGS** designed for 5 KSF allowable soil bearing pressure. Refer to the Geotechnical Report Addendum 15228.D. by D.W. Kozera, Inc. dated November 1, 2016 for foundation system requirements and specification section 31 66 13.
- c. Revise Foundation Note 1 as follows (changes are in bold text):
  - 1. SLAB ON GRADE SHALL CONSIST OF 5" CONCRETE SLAB REINFORCED WITH 6x6-W2.9xw2.9 WWF POURED OVER 10 MIL POLY VAPOR BARRIER **OVER 4" OPEN GRADED STONE (No. 57)** OVER 12" GRANULAR FILL. INSTALL SLAB SUBGRADE PER THE FOLLOWING CONSTRUCTION SEQUENCE AND REFER TO GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION:

##### **IN SITUATIONS REQUIRING CUT:**

- a) EXCAVATE TO WITHIN 12 INCHES ABOVE THE PROPOSED FINISHED FLOOR UNDERSLAB STONE SUBGRADE ELEVATION TO ALLOW INSTALLATION OF FOOTINGS AND UTILITIES.
- b) IMMEDIATELY PRIOR TO POURING THE FLOOR SLAB, EXCAVATE TO 12 INCHES BELOW THE PROPOSED FLOOR SLAB STONE SUBGRADE AND COVER WITH A LAYER OF POLYETHYLENE SHEETING HAVING A MINIMUM THICKNESS OF 10 MIL.
- c) PLACE A MINIMUM OF 12 INCHES OF GRANULAR COMPACTED STRUCTURAL FILL OR CRUSHED STONE TO REACH THE ELEVATION OF THE OPEN-GRADED STONE SUBGRADE BENEATH THE FLOOR SLAB.
- d) PLACE 4 INCHES OF OPEN GRADED STONE (No. 57 SIZE) AS A CAPILLARY BREAK, PLACE FLOOR REINFORCING STEEL, AND POUR THE CONCRETE FLOOR SLAB.

##### **IN SITUATIONS REQUIRING SUITABLE FILL:**

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- A) REFER TO DRAWING C1.01 EXISTING CONDITIONS, FOR APPROXIMATE ELEVATIONS OF EXISTING GRADES AS THEY WILL LEFT TO BY THE DEMOLITION CONTRACTOR.
- B) EXISTING GRADES UNDER THE NEW BUILDING FOOTPRINT WILL RANGE BETWEEN EL. 41 TO EL 46.

**SHEET S1.04:**

- a. Revise plan note #10 to read:  
FOR RTU SUPPORT FRAMING SEE TYPICAL DETAILS 6, 7, AND 8 ON S3.02.  
MAXIMUM WEIGHT OF RTU=500 POUNDS AND ARE LOCATED AS SHOWN.  
CONTACT ENGINEER IF FINAL UNIT LOCATIONS OR WEIGHTS DIFFER FROM THOSE SHOWN PRIOR TO JOIST FABRICATION.
- b. Revise per Sketch S1.04 1 of 1 attached to this Addendum

**SHEET S1.05**

Revise plan note #4 to read:  
FOR RTU SUPPORT FRAMING SEE TYPICAL DETAILS 6, 7, AND 8 ON S3.02.  
MAXIMUM WEIGHT OF RTU=500 POUNDS AND ARE LOCATED AS SHOWN.  
CONTACT ENGINEER IF FINAL UNIT LOCATIONS OR WEIGHTS DIFFER FROM THOSE SHOWN PRIOR TO JOIST FABRICATION.

**SHEET S1.06**

Revise plan note #5 to read:  
FOR RTU SUPPORT FRAMING SEE TYPICAL DETAILS 6, 7, AND 8 ON S3.02.  
MAXIMUM WEIGHT OF RTU=500 POUNDS AND ARE LOCATED AS SHOWN.  
CONTACT ENGINEER IF FINAL UNIT LOCATIONS OR WEIGHTS DIFFER FROM THOSE SHOWN PRIOR TO JOIST FABRICATION.

**SHEET S2.01**

Revise Drawing 1 to eliminate reference to granular fill with drain tile.

**SHEET S4.05**

Revise per Sketch S4.05 1 of 1 attached to this Addendum

**SHEET ME0.01:**

Revise per the attached sketches **ME0.01 (1 of 2) and ME0.01 (2 of 2)**.

**SHEET M1.03:**

Add note to indicate that the horizontal duct run to chase at SW corner of Gymnasium 140 shall "Step under the steel beam at nominal 2<sup>nd</sup> floor elevation before entering the vertical chase."

## **GENERAL**

Responses to solicitations received prior to the issuance of this addendum are as follows:

1) **INQUIRY:** On Drawing A4.10.1 Detail 5 Lobby Int. Elev. – Media Center and Admin. Wall. Note reinstall salvaged lettering. Where is this salvaged lettering located and what are they made of and how do they get installed. Could you supply more information on this signage that will need to be reinstalled if required.

**RESPONSE: See Elevation Detail 3/A6.11 for salvaged aluminum lettering. This lettering is connected together by an aluminum channel at the bottom which is to be mechanically fastened to the salvaged wood wall. This signage is being stored by BCPS.**

2) **INQUIRY:** On Drawing A4.10.1 Details 1,2,3 & 5 Has a Note No. 024121 Salvaged Maple Flooring. (1) Where is this Salvaged Maple Flooring located. (2) Is there enough of this Salvaged Maple Flooring to do all of these areas.(3) What condition is this Salvaged Maple Flooring in. (4) Will all of this Salvaged Maple Flooring need to be sanded and refinished before it's installed. (5) Will the General Contractor need to pick up this Salvaged Maple Flooring. Please advise.

**RESPONSE: 1,500 SF has been salvaged and is being stored by BCPS which is within a couple of miles from the site. See spec. Spec 099100 for refinishing existing wood flooring.**

3) **INQUIRY:** In Specification Section 012300 -3 Alternates M Add Alternate # 13 – Wood Veneer Wall Panels in Corridors in lieu of Tile. Furnish and install wood veneer on corridor walls. I did not see any details, elevations or type of material for the Wood Veneer Wall Panels. Please provide.

**RESPONSE: See attached sketch A6.08 ALT 1 OF 1 for details.**

4) **INQUIRY:** On Drawing A6.11 Salvage Details: Have these two items already been salvaged by others and if so where are they being stored and in what condition are they in. If stored at a location is it the General Contractors responsibility to go pick them up. Please advise.

**RESPONSE: These items have been salvaged by the demolition contractor and are being stored by BCPS. Contractor is to pick up the materials from 9610 Pulaski Park Drive, Suite 301, Middle River, Maryland 21220. Contractor is to coordinate with BCPS project manager.**

5) **INQUIRY:** On Drawing A6.10 Detail 11 Sign Display Elevation. If alternate No. 8 LED Site Sign Insert is accepted will Detail 7 & 11 Masonry Sign Display still be require. Please advise.

**RESPONSE: If Add Alternate is selected, Detail 7 & 11**

6) **INQUIRY:** On Drawing S2.01 Detail 1 Typical CMU Retaining Wall shows granular fill w/drain tile. None of the Architectural retaining wall details on A5.10 show any granular fill w/drain tile. Also none of the Civil Drawings show where the drain tile would discharge or tie into. Please advise.

**RESPONSE: DELETE reference to granular fill w/ drain tile from Drawing 1/S2.01 TYPICAL CMU RETAINING WALL. Do provide weeps in the wall above the lower**

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**grade and granular fill behind those weeps. This applies to the retaining wall details on A5.10.**

7) **INQUIRY:** Now that this project has been extended per Addendum No. 3 to December 22, 2016 at 2:00 P.M. What is the last day for RFI's to be sent in now. Please advise.

**RESPONSE:** The bid due date and time were revised per Addendum #3 to **December 21, 2016 at 2:00 P.M.**. Therefore, the last day to submit inquiries is Monday December 12, 2016 by 4:30 P.M..

8) **INQUIRY:** Could you provide Riser Diagram drawings for Plumbing Systems: Stormwater, Sanitary/Vent and Domestic Water.

**RESPONSE:** **As the riser diagrams are not required for permitting by Baltimore County and are not essential for bid pricing, the riser diagrams for plumbing systems will be provided at a later date after bidding.**

9) **INQUIRY:** Will you provide Riser Diagram Drawings for Plumbing Systems: Stormwater, Sanitary / Vent and Domestic Water, this is standard for plumbing design? Please clarify

**RESPONSE:** **See response to Inquiry #8.**

10) **INQUIRY:** Please clarify. The spec is written for 2" and 1" blinds – the drawing shows roller shades installed. Which product are we to bid?

**RESPONSE:** **Provide and install Horizontal Louver Blinds per Specification Section 12 21 13. Additionally, motorized roller shades are to be provided in the (2) clerestory windows of the cafeteria labeled SE-23 in Interior Elevation Drawing 1 and 2 on Sheet A4.08.2. REMOVE reference to Roller Shade in Drawing 4/A3.07.**

11) **INQUIRY:** If the blinds are 2" and 1" blinds, where are they going? 2" for exterior and 1" for interior? Please clarify.

**RESPONSE:** **Per Specification Section 12 21 13 Section 1.2 SUMMARY Operable Horizontal Louver Blinds (Venetian) with aluminum slats (as described in Section 2.2.B) for all exterior window locations and Operable Horizontal Louver Blinds (Mini) with aluminum louver slats (as described in Section 2.2.C) for all interior sidelights.**

12) **INQUIRY:** Doors Marked ST2-B and 001 A-A are noted as 1 hour fire rated. Please confirm.

**RESPONSE:** **This was clarified in Addendum #3. These doors are not to be fire-rated.**

13) **INQUIRY:** Per specifications section 06 40 23 – Interior Architectural Woodwork, 2.1 – Materials, Part G, is an add alternate. However, drawing A4.02.1 calls out for p-lam paneling on several of the walls in the media center. Is this panel the same product as the wood veneer wall panels and therefore, this would not be considered as an add alternate.

**RESPONSE:** **There is to be no plastic laminate wall paneling in the Media Center. DELETE all references to plastic laminate (p-lam) paneling on walls from Drawing 2/A4.02.1, 6/A4.02.1, 12/A4.02.1, and 13/A4.02.1.**

14) **INQUIRY:** Please provide a specification section for 07 33 65 for the Concrete Roof Paver System for Vegetated Modular as there is none.

**RESPONSE:** This was included with Addendum #3.

15) **INQUIRY:** Please provide a specification section for the bifacial photovoltaic panel system as there is none.

**RESPONSE:** This will be included in Addendum #5.

16) **INQUIRY:** Refer to detail 1/A3.11. Please specify the type of insulation shown above the roller shades behind the steel I-beam. Also refer to 1/A3.06, 3/A3.08 and 3&4/A3.09.

**RESPONSE:** Install 1 5/8" stl studs within exterior side of steel beam space with 09255 1/2" dens glass sheathing and 071326 air barrier. Air barrier system shall include manufacturer's transition strip bridging face of CMU above and face of sheathing. Fill cavity between studs with spray insulation typical locations listed above.

17) **INQUIRY:** Please confirm if wood blocking and sheathing needs to be fire-rated. Both specification section 06 10 00 – Rough Carpentry, Part 2.3-A and 06 16 00 – Sheathing, Part 2.4-A calls out to use fire-retardant-treated materials where indicated or required. Drawings to not call out for any rough carpentry or sheathing to be fire-treated.

**RESPONSE:** Follow specifications for fire-retardant-treated materials. Type 2 construction is non-combustible, however, Fire-retardant-treated wood is permitted in non-bearing partitions where the fire resistance rating is 2 hours or less, and non-bearing exterior walls where the fire resistance rating is not required.

18) **INQUIRY:** A4.04 Art Room 214 shows the North and East wall elevations as Glazed CMU. The Floor Plans show these walls as drywall. Which is correct?

**RESPONSE:** Drywall.

19) **INQUIRY:** A4.09 Vocal/Chorus 138 shows Glazed CMU on the south wall. Do rooms 136 and 139 receive glazed CMU on the south walls as well?

**RESPONSE:** CMU walls in the Vocal/Chorus Room 138 are to be painted CMU. CMU walls in rooms 136 and 139 are also to be painted CMU.

20) **INQUIRY:** On the Bid Form, it is asking for the "Package Number: \_\_\_\_\_." I could not find any information on what the package number is supposed to be. Please clarify what is to be entered in this spot on the Bid Form.

**RESPONSE:** Please see attached revised section 00400 Form of Proposal. The Package Number has been deleted.

21) **INQUIRY:** On drawing A4.02.3, Detail 15 of the Storytelling Seating at the wall shows a cushion. Is this cushion to be furnished by the G.C. or owner? If by the G.C., please provide a spec for the cushion.

**RESPONSE: Cushion is not in contract.**

22) **INQUIRY:** Ref: Wall Tile. All restroom elevations show a 6" x 6" wall tile, but in the specs they call for 4" x 8" wall tile in the public restrooms. What is considered a public restroom?

**RESPONSE: Public restrooms are all those that are not entered directly from within a classroom. Public restrooms are to have 4"x8" wall tile as defined in Specification Section 09 31 00. Children's Restrooms (those restrooms entered directly from within a classroom) are to have 6"x6" wall tile, and include Toilet 109A, Toilet 111A, Toilet 112A, Toilet 114A, Toilet 113A, Toilet 122A, Toilet 124A, Toilet 125A, Toilet 127A, Toilet 128A, Toilet 130A, Toilet 131A, and Toilet 133A.**

23) **INQUIRY:** Ref: Wall Tile. On the finish schedule, the base in the restrooms is ceramic tile, but at least on the elevation in each restroom refers to vinyl base. Which is correct?

**RESPONSE: Ceramic tile base in all restrooms.**

24) **INQUIRY:** Ref: Wall Tile. They are calling out for patterns throughout the corridor and restroom wall tile. Please provide pattern details.

**RESPONSE: Patterns in restrooms to be determined. Presume 1 field tile color and up to 4 wall accent tile colors in public restrooms (as defined in Inquiry #22). Presume 1 wall field tile color and 2 wall accent tile colors in Children's Restrooms (as defined in Inquiry #22). Corridor wall tile to be horizontal 12"x24" tile to 4'-4" above finished floor wainscot height in running bond pattern offset by 1/3 tile.**

25) **INQUIRY:** The issued fireproofing section lists Cafco Blazeshield as the basis of design product, as well as the only listed option for spray fireproofing in a publicly funded project. This deems the specification to be proprietary, thus eliminating competitive bidding and likely increasing costs to the tax payer. Cafco Blazeshield is the only available inorganic dry mix mineral fiber based material which has been recognized by the industry to be vulnerable during its life span due to its poor durability. In order to receive a cementitious wet mix material offered by all manufacturers, the material description must read "mixed with water at Project site to form a slurry or mortar before conveyance and application". Will the friable, easily damaged, inorganic dry-mix mineral fiber fireproofing material as currently written be allowed or is the intent to provide a cementitious material like Cafco 300 or Monokote MK-6? If so, will a warranty still be required per the specification and will allowances be made for increased patching costs?

**RESPONSE: Change spec to a cementitious wet mix material "mixed with water at Project site to form a slurry or mortar before conveyance and application". Acceptable cementitious fireproofing systems include: 1) Cafco 300 2) Monokote MK-6, 3) or equal. Provide a warranty still be required per the specification. No allowances. All patching required shall be included in the base bid.**

26) **INQUIRY:** Drawing C2.01 Details 1,2 & 5 Calls out for Compacted Subgrade with Cement Modified Soil 12" Depth. 1. What type of material is to be used to modify the soil ? 2. What will the application rate be ? 3. How many lbs./sy is needed ? Please advise.

**RESPONSE: Refer to geotechnical report for proper application rates and Addendum #4. Final soil conditions will require laboratory tested prior to soil cement application to determine if rates need to be modified.**

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27) **INQUIRY:** On Drawing A2.01 Overall South Elevation: Note Solar Array (Add Alternate #1) See sheet A5.05. Sheet A5.05 is the Mechanical Enclosure Plan, Elevations and Sections. Please advise.

**RESPONSE: This was addressed in Addendum #3. REVISE Note “SOLAR ARRAY (ADD ALTERNATE #1); SEE SHEET A5.05” to “PHOTOVOLTAIC INSTALLATION ON GREEN ROOF (ADD ALTERNATE); SEE SHEET A5.04”.**

28) **INQUIRY:** On Drawing A3.07 Wall Section 2 West Gym Wall in Corridor 002 Built-in-bench(See detail 3/A4.07.2) There is no detail for this bench on drawing A4.07.2. Please advise.

**RESPONSE: REVISE note to read “BUILT-IN BENCH (SEE BENCH DETAIL 15/A4.02.3).**

29) **INQUIRY:** On Drawing A3.11 Detail 3 Wall Section at 1<sup>st</sup> and second floor storefronts shows a precast conc. mow strip. Could you supply details showing size, lengths and is there expansion at the building with any type of joint sealant. Please advise.

**RESPONSE: Mow Strip to be continuous along building perimeter, 12” wide. Provide caulk at space between mow strip to building and in between mow strips. Mow strip to be set on 4” crushed stone base.**

30) **INQUIRY:** In Specification 015000-2 2.2 Temporary Facilities: Will the Common - Use – Field office require any type of phone or internet service for the BCPS inspector. Please advise.

**RESPONSE: A phone and internet service at the field office dedicated for the BCPS inspector is not required.**

31) **INQUIRY:** On Drawing C1.01 Demolition Notes No. D-18 Remove existing Playground Equipment Sub-Drainage and wood mulch surface (Add Alternate # 11) Is this note correct. Please advise.

**RESPONSE: Yes, only if the add-alternate is selected.**

32) **INQUIRY:** On Drawing C1.02 Construction Notes No. C-14. It is pointing to a Dark Line that looks to be the Property Line is this correct. Please advise.

**RESPONSE: This item has been addressed in Addendum #3.**

33) **INQUIRY:** On Drawing C1.02 At the top left side of the proposed Bus Loop, above that by the Drop-Off & Pick-Up and by the Service Area there is a note C-27. Install Trench Drain if Synthetic Dual-Density Seamless Play Surface is used. Is this note correct. Please advise.

**RESPONSE: This item has been addressed in Addendum #3.**

34) **INQUIRY:** On Drawing C1.02 At the Play Area Drawing by Honeycomb Rd. it has a note N0.37. Permanent Plunge pool/Level Spreader. Please advise.

**RESPONSE: This item has been addressed in Addendum #3.**



35) **INQUIRY:** On Drawing C1.02 At the Play Area Drawing by Honeycomb Rd. it has a note NO. 39. There is not a Note NO. 39 listed in the Construction Notes. Please advise.

**RESPONSE: This note was removed in Addendum #3.**

36) **INQUIRY:** On Drawing C1.02 Just under the words Proposed Bus Loop there is a Construction Note No. C-31. Is this note correct. Please advise.

**RESPONSE: Remove Note C-31.**

37) **INQUIRY:** On Drawing C1.02 Construction Notes No. C-24 Salvage Wood Steps from previous Dumpster Location on old school. See detail 12 on C2.01. See detail 12 on C2.01. Note on detail 12 Karnel Incorporated or approved equal material: Aluminum. (Add Alternate: Steel w/black powder coated finish) (1) Are we to use the old salvaged wood steps. If we are where are they. (2) Are we to furnish Aluminum Steps by Karnel. (3) Are we to furnish you with an Alternate for steel steps. If we are to furnish you with an Alternate this Alternate is not in section 012300 3.1 Schedule od add Alternates. Please advise.

**RESPONSE: The reference to wood steps was removed in Addendum #3. Aluminum steps are specified. There is no alternate for steel steps.**

38) **INQUIRY:** On Drawing C1.02 At the Service Area it has a Construction Note C-28 Proposed Entry Canopy. Is this note correct. Please advise.

**RESPONSE: Remove Note C-28.**

39) **INQUIRY:** On Drawing C2.02 Detail 1 Flag Pole Mounting Detail: It has a note ADD-ALT Base Bid: Install flagpole salvaged from original Victory Villa P.S. Could you clarify what is required for the flag pole on this project. Are we to install a salvaged flag pole, salvaged by who and where is it or a new Flag Pole, Please advise.

**REPOSENSE: Provide and Install new flag pole. See specification 10 75 00.**

40) **INQUIRY:** Specification Section 018113 Sustainable Design Requirements: Is this project already registered as a Project 2009 or Version 3 or will this project fall under Version 4. Please advise.

**RESPONSE: Project is registered under LEED 2009.**

41) **INQUIRY:** In Specification Section 08113 1.2 Summary A. 3. A copy of the LEED Project checklist is attached at the end of this Section for information only. The checklist was not attached please provide checklist.

**RESPONSE: Checklist has been provided with this Addendum.**

42) **INQUIRY:** Please advise if Tabco would be an approved alternate manufacturer for the custom fabricated stainless food service equipment.

**RESPONSE: Contractor shall bid the project with manufacturers identified in the contract documents. Substitution requests may be considered after the contractor has received Notice to Proceed, as identified in Specification Section 00 20 00, paragraph 16.**

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43) **INQUIRY:** Please advise where the spray-applied fireproofing is to be located?

**RESPONSE: Apply to achieve 1-hour roof assembly rating in 4' band along the Building Fire Separation Wall at the lower roof.**

44) **INQUIRY:** Please advise if we can use Metal Panel Fabricators other than the two (2) listed in Metal Composite Wall Panels Spec Section 074230-3, 2.2.A.3, as long as we use one of the specified products listed in paragraph 2.2.A.2?

**RESPONSE: This was addressed in Addendum #3.**

45) **INQUIRY:** According to the spec for Metal Composite Wall Panels, two colors are required. However, the drawings (elevations) do not differentiate the colors. It is impossible to price a second color without knowing what quantities are involved with each. Please advise.

**RESPONSE: This was addressed in Addendum #3. Provide only one color.**

46) **INQUIRY:** After review by a geopier company, it appears that piers will be required for column footings only, and that wall footings will bear on unreinforced soil. Can you confirm that wall footings do not require aggregate pier reinforcement?

**RESPONSE: This was clarified in Addendum #3. ALL footings shall bear on aggregate pier reinforced soil, having a minimum safe bearing capacity of 5,000 PSF for spread footings and 2,500 PSF for wall footings.**

47) **INQUIRY:** The Aggregate Pier Specification 316613-4, section 1.5.B.1 requires that the installer be licensed by the Geopier Foundation Company, which would limit the available approved bidders to one installer. Can this requirement be waived?

**RESPONSE: DELETE Aggregate Pier Specification 316613-4, section 1.5.B.1.**

48) **INQUIRY:** Can the AWI certification for architectural woodwork be waived, as long as we manufacture to their standards?

**RESPONSE: No.**

49) **INQUIRY:** We cannot find a specification for the solar panels in Alternate #1, or associated electrical work on the drawings. Please advise.

**RESPONSE: See response to Inquiry #15.**

50) **INQUIRY:** Please confirm that under Alternate #3 for the Green Roof, the following items are included: standard hot applied built-up roofing, vegetated green roof assembly, vegetated roof system pavers, wood curb, wood benches, and wood planters – all per drawing A5.03. The Base Bid will included a hybrid hot applied built-up roofing, and none of the above mentioned systems or amenities.

**RESPONSE: Alternate #3 for the Green Roof shall have 07 52 10 HOT APPLIED BUILT-UP HYBRID ROOFING (with no aggregate), vegetated green roof assembly, vegetated roof system pavers, built-in curb, built-in benches, and composite panel planters – all per drawing A5.03. The Base Bid will included a standard 07 52 00 HOT APPLIED BUILT-UP ROOFING (with aggregate), and none of the above mentioned systems or amenities.**

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51) **INQUIRY:** Please provide a riser diagram for the plumbing systems: stormwater, sanitary/vent and domestic water.

**RESPONSE: See response to Inquiry #8.**

52) **INQUIRY:** Addendum #3, inquiry 40, addressed 1/2" densdeck sheathing and it is understood that only 1 layer of sheathing is required, directly attached to metal studs. In addition: Wall sections similar to 4/A3.10 refer to 092955 1/2" densdeck sheathing, keynote 04 20 25 on A1.04 (and similar floor plans) call for 1/2" dens glass sheathing, detail 3/A5.02 (column A-1 first floor) calls for "1/2" plywood sheathing". Specification section 061600 "Sheathing" lists glass mat sheathing, 5/8" dens glass (as well as other manufacturers), Specification section 092900 "Gypsum Board Assemblies" refers to glass mat sheathing, 5/8" dens glass only. "Dens deck" and "Dens glass" are two different products with substantial differences in cost. It is my belief that dens deck is primarily used as a roofing underlayment and dens glass is used as wall sheathing. There are multiple other conflicts between 1/2" plywood vs. 1/2" sheathing (i.e. 2/A3.04 at parapet detail and 2/A5.01). Please clarify.

**RESPONSE: All exterior wall sheathing shall be 5/8" DensGlass Type X Sheathing (Not DensDeck) by Georgia Pacific or approved equal. Glass mesh mortar units specified Specification section 092900 "Gypsum Board Assemblies" are for tile wall backers. 3/4" exterior Grade Plywood is to be used at the roof side of parapet walls.**

53) **INQUIRY:** Will BCPS issue a bid form for the construction testing and inspection services or should the testing agencies submit their own bid form/proposal?

**RESPONSE: Construction testing and inspection services will be completed by the owner. Refer to Specification Section 014000.**

54) **INQUIRY:** Drawing C1.04 shows a stormwater pond/outfall drainage area where the new electric transformer is to be indicated to be located. And the adjacent area is graded so to form the slope of the pond area. We have generally plotted the location as shown on the ME0.01 on the civil drawing C1.04 and feel there is a reasonable expectation that there will be a conflict. Also there is an incoming water service and fire hydrant shown in this area and also a stormwater line.

**RESPONSE: The electrical utility service transformer will be relocated as indicated in the attached sketch to avoid the conflict with the stormwater pond/outfall drainage area, the incoming water service line, the stormwater line, and the fire hydrant.**

55) **INQUIRY:** Section 116620, paragraph 1.4.A. specifies Seismic Performance requirements. These are an expensive option and were not required on the Lansdowne ES project. Will these be required for this project?

**RESPONSE: DELETE paragraph 1.4.A Seismic Performance requirements. REVISE Paragraph 1.5 Submittals Item D as follows in bold text: D. Structural analysis data signed and sealed by the qualified professional engineer (registered in the State of Maryland) responsible for their preparation including loads, point reactions, and locations for attachment of gymnasium equipment to structure.**

56) **INQUIRY:** Section 116620, paragraph 2.2.M specifies both fixed and break-away goals. Which is to be provided fixed or break-away (break-away is recommended)?

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**RESPONSE: Break-way goals.**

57) INQUIRY: Section 116620, paragraph 2.4..F.3. specifies the padding to be not less than 72” inches but drawing A4.08.1, detail 2 indicates the wall padding to be 5’-0” high. Which is required 5’-0” or 6’-0” high padding (6’-0” high is recommended)?

**RESPONSE: Revise Drawing A4.08.1 detail 2 to show wall padding to be 6’-0” high.**

58) INQUIRY: Drawing A4.08.2 indicates item 116626, which is a cargo net but one is not specified in Section 116620, only the rope hoist to lift the cargo net. Can a specification be provided for the cargo net itself?

**RESPONSE: ADD to Specification Section 11 66 26 GYMNASIUM EQUIPMENT, Paragraph 2.2.O Cargo Climbing Net (Indoor): Climbing Net shall be fabricated using rugged 3/4” diameter poly rope with 1/2” diameter poly rope vertical lanyards for better grip and maximum strength. Provide 9” square mesh openings more suitable for smaller legs or using on an incline. Provide “non-slip” hitch design at all mesh intersections. Provide 4’ of lanyard at Top of each net for tying net. Steel pipe suspended from structure above (Approx. 24’ from floor to bottom of structure) shall be suspended with chains. Provide RN-1 lockable Metal Box to secure cargo net when not in use. Color: From manufacturer’s full range.**

1. **Representative Product: CN-Series, Model No. CN9-1212. 12’W x 12’H 32 lbs by Jammarmfg Co. Inc, P.O. Box 392, Uncasville, CT 06382. Tel: 866-848-1113. Website: <http://jammarmfg.com/>**
2. **Equal product.**

59) INQUIRY: Drawing A4.08.2 indicates the side court basketball hoops to be mounted at a height of 8’-0”. These basketball hoops will also have height adjusters, which allow 2’-0” of movement. This would mean if these are set at 8’-0”, the rim can be lowered to 6’-0”. Are these side court units to be mounted at 8’-0” or 10’-0” (10’-0” is recommended)?

**RESPONSE: Revise Drawing 1 and 2 on Sheet A4.08.2 to show side court basketball hoops mounted at 10’-0” above finished floor.**

All other specifications and terms remain as stated in original document. This addendum is hereby made a part of the Contract Documents, on which the contract is based and is intended to modify, explain, correct and/or add to the original Contract Documents.

**END OF ADDENDUM NUMBER 4**

Anita Randall  
Purchasing Agent  
Baltimore County Public Schools - Office of Purchasing

Katy Angstadt, Project Manager  
Bid file

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# BALTIMORE COUNTY PUBLIC SCHOOLS

6901 Charles Street, Building "E", 1st Floor  
Towson, Maryland 21204

Division of Support Services

Office of Purchasing

Creating a Culture of Deliberate Excellence - An Affirmative Action Employer

## **SECTION 00400 "FORM OF PROPOSAL" - REVISED**

Bidders shall complete and return all the following forms with their bid.  
(\*except this form)

Cover Page	00400-1
Base Bid	00400-2
Alternates	00400-3-5
Unit Price Schedule	00400-6
Unit Prices	00400-7
Ancillary Items (Certificates, Bonding, etc.)	00400-8
Warranty To The Lump Sum	00400-9
Addenda	00400-10
Proposal Sheet	00400-11
State of Maryland Anti-Bribery Affidavit & Tax Certification	00400-12
Certification Regarding U.S. Government Debarment	00400-13
References	00400-14
Board of Directors - Diversity Affidavit	00400-15
Attachment A: CERTIFIED MINORITY BUSINESS ENTERPRISE UTILIZATION AND FAIR SOLICITATION AFFIDAVIT (Page 1)	00400-16
Attachment A: CERTIFIED MINORITY BUSINESS ENTERPRISE UTILIZATION AND FAIR SOLICITATION AFFIDAVIT (Page 2)	00400-17
Attachment B: MBE PARTICIPATION SCHEDULE	00400-18
*No Bid Page	00400-19

SECTION 00400 - FORM OF PROPOSAL - **REVISED**

DATE: \_\_\_\_\_

PROJECT TITLE: REPLACEMENT SCHOOL FOR VICTORY VILLA ELEMENTARY SCHOOL

BCPS BID NUMBER: ARA-209-17

BID SUBMITTED BY: \_\_\_\_\_  
(Company Name)

REGISTERED MARYLAND CONTRACTOR NO: \_\_\_\_\_

SUBMITTED TO: Baltimore County Public Schools  
Office of Purchasing  
6901 Charles Street, Building "E", 1st Floor  
Towson, Maryland 21204

The undersigned BIDDER proposes and agrees, if this Bid is accepted, to enter into an Agreement with the OWNER in the form included in the Contract Documents to complete all Work as specified or indicated in the Contract Documents for the Contract Price and within the Contract Time indicated in this Bid and in accordance with the Contract Documents.

BIDDER has examined the site and locality where the Work is to be performed, the legal requirements (federal, state and local laws, ordinances, rules and regulations) and the conditions affecting cost, progress, or performance of the Work and has made such independent investigations, as BIDDER deems necessary.

BIDDER hereby agrees to furnish all labor, materials, equipment, and services required to complete the project in strict accordance with the Contract Documents for the following price:

\_\_\_\_\_  
(Signature of Bidder) (Date)



BASE BID

TOTAL BASE BID consisting of the cost of asbestos abatement, demolition, and new construction, including the related architectural, mechanical, electrical, and other requirements incidental to the project.

**Bidders shall include the following allowance(s) in their BASE BID: N/A**

**TOTAL BASE BID**

Lump Sum Item for all work specified on plans and/or specifications consisting of the cost of demolition, and new construction, including the related architectural, structural, electrical, and other requirements incidental to the project, should be listed below.

**PART A LUMP SUM ITEM: \$ \_\_\_\_\_ (IN DOLLARS)**

**PART A LUMP SUM ITEM: \_\_\_\_\_ (IN WRITING)**

Part B consisting of the total cost of the Unit Price Items (see page 6 of 20)

**PART B UNIT PRICE ITEMS: \$ \_\_\_\_\_ (IN DOLLARS)**

**PART B UNIT PRICE ITEMS: \_\_\_\_\_ (IN WRITING)**

**Total for Base Bid: Sum of PART A and PART B**

**BASE BID: \$ \_\_\_\_\_ (IN DOLLARS)**

**BASE BID: \_\_\_\_\_ (IN WRITING)**

If a BASE BID amount contains contradictory terms, handwritten terms prevail over typewritten terms, and words prevail over numbers. The dollar amount expressed in words shall govern.

\_\_\_\_\_  
(Signature of Bidder) (Date)

ALTERNATES

To be considered for award, bidders shall include a response for ALL ALTERNATES listed below. Failure to provide a response for all Alternates listed in this solicitation shall result in the bidder's entire proposal being deemed non-responsive and ineligible for award. The dollar amount shall be expressed in numbers and words. If an Alternate amount contains contradictory terms, handwritten terms prevail over typewritten terms, and words prevail over numbers. The dollar amount expressed in words shall govern.

The cost of each ALTERNATE shall be valid for the period specified in Part II: Specifications--General Requirements, Section 8.0 Bid Alternates. Any ALTERNATE may be ADDED or DEDUCTED to/from the BASE BID within the award period at the discretion of the Owner. NO COST Alternates, where the bidder agrees to perform the specified Alternate work at no charge to BCPS, shall be recorded by bidder as \$0.00 (zero dollars). Bidders shall be advised that in some instances the proposed Alternate requests a difference in bid price by adding to or deducting from the BASE BID price. Please read alternate descriptions carefully.

The undersigned BIDDER proposes and agrees to ADD or DEDUCT to/from the BASE BID the cost of any of the ALTERNATES.

- 1. **Alternate No. 1 ADD PHOTOVOLTAIC INSTALLATION ON GREEN ROOF:** Furnish and install complete Photovoltaic Installation including steel structure, roof penetrations and fully operational bifacial photovoltaic panel system and all associated electrical work at location where shown on the drawings:

\$ \_\_\_\_\_ Dollars

\_\_\_\_\_  
(IN WRITING)

- 2. **Alternate No. 2 ADD WEATHER STATION:** Furnish and in install complete fully operational weather station system as specified and provide electrical power and data at location where shown on the drawings.:

\$ \_\_\_\_\_ Dollars

\_\_\_\_\_  
(IN WRITING)

- 3. **Alternate No. 3 ADD GREEN ROOF:** Furnish and install green roof system over top of the built-up roofing system in lieu of standard roofing system as indicated on the drawings. Provide and install standard hot applied built-up roofing system in lieu hybrid hot applied built-up roofing system.:

\$ \_\_\_\_\_ Dollars

\_\_\_\_\_  
(IN WRITING)

4. **Alternate No. 4 ADD AWNING VENT WINDOWS:** Furnish and install Awning vent windows in all storefront as indicated on the drawings.

\$ \_\_\_\_\_ Dollars

\_\_\_\_\_  
(IN WRITING)

5. **Alternate No. 5 ADD EXTERIOR SUN CONTROL DEVICES:** Furnish and install fixed exterior sun control devices where shown in glazed aluminum storefront and curtain wall. Manufacturer shall be the same as the storefront and curtain wall manufacturer.

\$ \_\_\_\_\_ Dollars

\_\_\_\_\_  
(IN WRITING)

6. **Alternate No. 6 ADD MECHANICAL SCREEN WALL:** Furnish and install "Mechanical Screen Wall" for the rooftop equipment as indicated on the drawings.

\$ \_\_\_\_\_ Dollars

\_\_\_\_\_  
(IN WRITING)

7. **Alternate No. 7 ADD ENTRANCE CANOPY:** Furnish and install complete entrance canopy including structural system, roofing system, metal fascias and ceilings and lighting fixtures.

\$ \_\_\_\_\_ Dollars

\_\_\_\_\_  
(IN WRITING)

8. **Alternate No. 8 ADD LED SITE SIGN INSERT:** Furnish and install complete two (2) sided LED sign panels and aluminum enclosure with power and data connections as shown on the drawings.

\$ \_\_\_\_\_ Dollars

\_\_\_\_\_  
(IN WRITING)

9. **Alternate No. 9 ADD QUARTZ TILE FLOORING:** Furnish and install quartz tile flooring in lieu of VCT at all locations.

\$ \_\_\_\_\_ Dollars

\_\_\_\_\_  
(IN WRITING)

10. **Alternate No. 10 ADD PLAYGROUND EQUIPMENT:** Contractor shall remove existing playground equipment. Contractor shall accomplish all earthwork and grading and shall furnish and install all drainage, concrete mow strips and fence enclosures at Playground. The Owner shall furnish and install the New Playground Equipment.

\$ \_\_\_\_\_ Dollars

\_\_\_\_\_  
(IN WRITING)

11. **Alternate No. 11 ADD NEW FENCE FABRIC:** Furnish and install new fence fabric for the existing multipurpose court.

\$ \_\_\_\_\_ Dollars

\_\_\_\_\_  
(IN WRITING)

12. **Alternate No. 12 ADD PLAYGROUND SURFACE:** Furnish and install a complete unitary synthetic poured rubber seamless surface for the kindergarten playground instead of wood fiber mulch. Stabilization and preparation of subgrade shall be included.

\$ \_\_\_\_\_ Dollars

\_\_\_\_\_  
(IN WRITING)

13. **Alternate No. 13 ADD WOOD VENEER WALL PANELS IN CORRIDORS IN LIEU OF TILE:** Furnish and install wood veneer on corridor walls.

\$ \_\_\_\_\_ Dollars

\_\_\_\_\_  
(IN WRITING)

14. **Alternate No. 14 ADD TACKABLE SURFACE IN CORRIDORS:** Furnish and install tackable surface in corridors.

\$ \_\_\_\_\_ Dollars

\_\_\_\_\_  
(IN WRITING)

\_\_\_\_\_  
(Signature of Bidder) (Date)

**UNIT PRICE SCHEDULE**

Bidders shall determine and provide Unit Pricing in the spaces below based on the quantity listed for each allowance. The Bidder's base bid shall include the allowance total for this Bid Package being bid. Unit Prices include all costs associated with the work. Bidder shall insert Unit Price and Item Bid Price at each allowance identified with the Bidder's Bid Package number. Do not leave blank. The Bidder's Unit Prices established on the Bid Form will be used for adding work or establishing a credit for work not performed. Any unused allowance will be credited to the Owner via change order. Unit Prices are considered not to exceed unit prices and shall be used where applicable to adjust the cost of work of this Contract. ALL Unit Prices shall be complete in-place prices and include all costs for overhead, profit, all applicable Federal, State, Municipal or local taxes, bonds, labor, fringes, materials, equipment, insurance, and any other incidentals related to the completion of work and shall remain firm for the period of the contract. Unit Prices listed are applicable to added or deleted work. The undersigned acknowledges the Unit Prices as part of this bid proposal and agrees to add or delete items for the Unit Prices identified below as directed by the Owner. The Owner reserves the right to negotiate Unit Prices depending upon the quantities to which the Unit Prices become applicable. Unit Prices do not include any allowances required as referenced in specification section.

**UNIT PRICE ITEMS TO BE INCLUDED IN BASE BID LUMP SUM PROPOSAL**

No.	Unit Price Item	Unit	Quantity	Unit Price	Total Price
1	Furnish and install new curb and gutter	Linear Feet	300		
2	Furnish and install new concrete sidewalk	Square Feet	2,000		
3	Labor, material and equipment for unsatisfactory soil excavation and disposal off site and replacement with satisfactory fill material or engineered fill from off site, as required, according to Section 312000 "Earth Moving."	Cubic Yard	6,000		
4	Labor, material and equipment for unsatisfactory soil excavation and disposal off site and replacement with Soil Cement as required, according to Section 315000 "Portland Cement Stabilized Subgrade."	Cubic Yard	6,000		

**Total for PART B: Sum of total prices No. 1 + 2 + 3 + 4 above:**

\$ \_\_\_\_\_ (In Dollars)

**Total for PART B: Sum of total prices No. 1 + 2 + 3 + 4 above:**

\$ \_\_\_\_\_ (In Writing)

\_\_\_\_\_  
(Signature of Bidder) (Date)

UNIT PRICES

Unit prices are for both extra Work and credits. This list of prices will be submitted with the Bid in duplicate and shall become a part of the Contract upon its award. Unit prices listed below are applicable to all work in this project involving extra materials/services performed by the General Contractor or his subcontractors and/or credits to the Owner for materials/services deleted from the project. Unit price includes all overhead and profit for the Subcontractor. General Contractor mark-up is to be applied per Article 7 of General Conditions. Prices as stated shall remain in effect through the end of the Contract warranty period. The undersigned acknowledges the unit price values as part of this bid proposal and agrees to add or delete items for the unit prices identified when directed to do so by the Owner.

1. Riprap Class 1 -	\$75.00 per Ton
2. Earth Excavation Onsite (machine)	\$6.00 per cubic yard
3. Earth Excavation Onsite (hand)	\$90.00 per cubic yard
4. Trench Excavation Onsite	\$15.00 per cubic yard
5. Contaminated Soil (excavate, legally dispose)	\$650.00 per cubic yard
6. MSHA #2 or #57 stone at trench areas	\$45.00 per cubic yard
7. CR-6 or CR-1 at trench areas	\$42.00 per cubic yard
8. MSHA #2 or #57 stone in open areas	\$42.00 per cubic yard
9. CR-6 or CR-1 in open areas	\$40.00 per cubic yard
10. Imported Screened Topsoil	\$50.00 per cubic yard
11. Sodding	\$5.00 per square yard
12. Permanent Seeding and Mulch	\$2.25 per square yard
13. Temporary Seeding and Straw	\$1.50 per square yard
14. Mirafi 500x (furnish and install)	\$2.75 per square yard
15. Stabilization Fabric (furnish and install)	\$2.00 per square yard
16. Stabilization Fabric and Filter Cloth (furnish and install)	\$40.00 per square yard
17. Super Silt Fence (furnish, install, maintain, remove)	\$12.00 per linear foot
18. Silt Fence (furnish, install, maintain, remove)	\$4.50 per linear foot
19. Soil Cement (furnish and install)	\$325.00 per ton
20. Trench Rock (remove, haul, legally dispose)	\$350.00 per cubic yard
21. Open Rock (remove, haul, legally dispose)	\$200.00 per cubic yard
22. Existing sidewalk and spoil (remove, legally dispose, replace)	\$8.50 per square foot
23. Existing Curb and Gutter (saw cut, legally dispose, replace)	\$25.00 per linear foot
24. Saw-cut and remove damaged paving	\$50.00 per square yard
25. Concrete curb and gutter	\$18.00 per linear foot
26. Concrete Slab on grade 5"TH	\$0.85 per square foot
27. 4" CMU wall	\$10.00 per square foot
28. 6" CMU wall	\$11.00 per square foot
29. 8" CMU wall	\$12.00 per square foot
30. 12" CMU wall	\$14.00 per square foot
31. Tooth single doorframe (furnish and install)	\$800.00 per opening
32. Tooth double doorframe (furnish and install)	\$900.00 per opening
33. Receptacle	\$240.00 per location
34. Data Outlet	\$255.00 per location
35. Concrete Sidewalk	\$5.50 per square foot
36. Heavy Duty Bituminous Paving	\$45.00 per square yard
37. Imported fill material	\$37.00 per cubic yard
38. Removal of unsuitable material	\$30.00 per cubic yard
39. Reinforced concrete footing	\$325.00 per cubic yard

---

 (Signature of Bidder)

(Date)



PROJECT CONSTRUCTION SCHEDULE AND LIQUIDATED DAMAGES

The undersigned agrees to complete Work in strict accordance with the Contract Documents and be substantially complete by not later than the date specified within this solicitation. The Owner may retain the sums as set forth within this solicitation.

MBE SUBMITTALS

The Bidder shall include minority business enterprise material as provided herein **with their proposal**. Bidders failing to submit the minority business enterprise material as provided herein, including the “Attachment A: CERTIFIED MINORITY BUSINESS ENTERPRISE UTILIZATION AND FAIR SOLICITATION AFFIDAVIT” and “Attachment B: MBE PARTICIPATION SCHEDULE” may result in the bid being determined non-responsive.

BID BOND

Bidder must include Bid Bond in the form specified within this solicitation.

CERTIFICATE OF PREQUALIFICATION

Bidder must include a copy of the Certificate of Prequalification, as issued by the BCDPW.

ADDENDA

Receipt of Addenda to the Drawings and Specifications shall be acknowledged on the ADDENDA form within this Form of Proposal.

CONTRACT

If the undersigned receives written notice of award of the Contract, at his designated address, within one-hundred twenty (120) calendar days after bid opening (or later if bid has not been withdrawn), the undersigned agrees to execute and deliver a Contract and Bonds in accordance with the bid as accepted, within ten (10) business days from receipt of the Contract, or forfeit the amount of the Bid Bond.

\_\_\_\_\_  
(Signature of Bidder) (Date)

WARRANTY TO THE LUMP SUM

The undersigned affirms that the above Lump Sum Base Bid and Add Alternates represents the entire cost of the Project in accordance with the Bid Documents and that no claim will be made on account of any indexes or any other rate affecting the construction industry and/or this project.

NOTE: Bidder to select one.

If a corporation, give the state of incorporation using the phrase, "A corporation organized under the laws of \_\_\_\_\_."

If an individual using a trade name, give individual name, using the phrase, "An individual doing business under the firm name of \_\_\_\_\_."

If a partnership, give name of the partners using also the phrase, "Co-partners trading and doing business under the firm name of \_\_\_\_\_."

Respectfully submitted,

(COMPANY NAME OF BIDDER)

By \_\_\_\_\_

\_\_\_\_\_  
(Official title)

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

\_\_\_\_\_  
Contractor's Maryland Registration Number

\_\_\_\_\_  
(Phone)

ADDENDA

(If applicable) Please complete and return with your bid response.

I, the undersigned, acknowledge receipt of the following addenda to this solicitation.

Addendum #1 - Date Issued \_\_\_\_\_

Addendum #2 - Date Issued \_\_\_\_\_

Addendum #3 - Date Issued \_\_\_\_\_

Addendum #4 - Date Issued \_\_\_\_\_

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

\_\_\_\_\_  
Contractor Name

**PROPOSAL SHEET**

\_\_\_\_\_ I / We certify that to the best of my/our knowledge, that neither this firm, nor any of its officers, directors to partners nor any of its employees directly involved in obtaining contracts with Federal, State or Local Agencies have been found in violation or attempting to violate procurement articles of the Annotated Code of Maryland (S.F. Section 16.202).

\_\_\_\_\_ I / We certify that this bid is made without any previous understanding, agreement, or connection with any person, firm or corporation making a bid for the same supplies, materials, and equipment, and (contracted) services, and is in all respects fair and without collusion or fraud.

\_\_\_\_\_ I / We certify that all material and equipment bid by this firm, to be supplied to the Baltimore County Public Schools meets all safety and health standards as prescribed by the rules and regulations of the Maryland Occupational Safety and Health Act (MOSHA). MOSHA STANDARDS 29 CFR 1910.

\_\_\_\_\_ I / We certify that all materials delivered to, and/or used or brought on to BCPS property is accompanied by a manufacturer's certification verifying/confirming item(s) to be "asbestos free."

\_\_\_\_\_ I / We certify that this firm adheres to or follows non-discriminatory practices with respect to the employment or promotion of personnel without regard to color, creed, race, sex, or national origin.

\_\_\_\_\_ I / We propose to furnish, package, mark, and deliver to the Baltimore County Public Schools, the supplies, materials or equipment as required in the accompanying specifications at the unit prices indicated.

\_\_\_\_\_ I / We certify that this firm is aware of and adheres to Section 11-722(c) of the Criminal Procedure Article, of the Annotated Code of Maryland; and, Md. Ed. Code Ann., §6-113.

Is your company a certified Minority Business Enterprise with the State of Maryland? \_\_\_Yes \_\_\_No MDOT # \_\_\_\_\_

Please indicate which group qualifies the business as a Minority Business Enterprise:

(African American) (Alaskan Native) (Asian) (Women) (Hispanic) (American Indian) (Physical or Mental Disabled Individual)

Is your company a small business with less than fifty (50) employees which generates annual revenue less than ten (10) million dollars? \_\_\_yes \_\_\_No

Is your business located within Baltimore County, Maryland? \_\_\_Yes \_\_\_No

As the duly authorized representative of the bidder and having the legal authority to make this proposal, I hereby declare that I have carefully examined Terms, Conditions, Requirements, Specifications and Drawings (including all Addenda), forming a part of the Contract and agree to furnish all permits, inspections, labor, equipment, and materials to complete work as specified for the price as indicated for the Baltimore County Public Schools.

COMPANY: \_\_\_\_\_ FEDERAL ID#-\_\_\_\_\_

ADDRESS: \_\_\_\_\_  
\_\_\_\_\_

SIGNATURE: \_\_\_\_\_

TYPED NAME/TITLE: \_\_\_\_\_

TELEPHONE: \_\_\_\_\_ FAX \_\_\_\_\_ DATE \_\_\_\_\_

E-MAIL: \_\_\_\_\_

RETURN BID TO: Office of Purchasing  
6901 Charles Street, Building "E", 1st Floor  
Towson, Maryland 21204  
Include Solicitation Number

**STATE OF MARYLAND ANTI-BRIBERY AFFIDAVIT**

I HEREBY CERTIFY that

1. I am the \_\_\_\_\_ and the duly authorized representative of the firm  
of \_\_\_\_\_ who address is \_\_\_\_\_  
\_\_\_\_\_, and that I possess the legal authority to make this affidavit  
on behalf of myself and the firm for which I am acting.
2. Except as described in paragraph 3 below, neither I, nor to the best of my knowledge, the above firm, nor any of its officers, directors, or partners, or any of its employees directly involved in obtaining contracts with the State or any county, bi-county, or multi-county agency, or subdivision of the State have been convicted of, or have pleaded nolo contendere to a charge of, or have during the course of official investigation or other proceeding admitted in writing or under oath acts or omissions committed after July 1, 1997, which constitute bribery, attempted bribery, or conspiracy to bribe under the provisions of Article 27 of the Annotated code of Maryland or under the laws of any state or federal government.
3. (State "none" or, as appropriate, list any conviction, please, or admission described in paragraph 2 above, with the date; court, official, or administrative body; and the sentence or disposition, if any.)

I acknowledge that this affidavit is to be furnished to the requesting agency, to the Secretary of Budget and Fiscal Planning of Maryland, and, where appropriate, to the Board of Public Works and the Attorney General under 16-202, S.F. of the Annotated Code of Maryland. I acknowledge that if the representations set forth in this affidavit are not true and correct, the State may terminate any contract awarded and take any other appropriate action. I further acknowledge that I am executing this affidavit in compliance with 16-203, S.F. of the Annotated Code of Maryland, which provides that certain persons who have been convicted or have admitted to bribery, attempted bribery, or conspiracy to bribe may be disqualified, either by operation of law or after a hearing, from entering into contracts with the State or any of its agencies or subdivisions.

I do solemnly declare and affirm under the penalties of perjury that the contents of this affidavit are true and correct.

Witness	Signature
	Date

**STATE OF MARYLAND TAX CERTIFICATION**

At the time a bid or proposal for a State procurement contract of \$10,000 or more is submitted, the bidder or offeror shall certify to the procurement officer that the bidder or offeror has paid all taxes, unemployment insurance contribution, reimbursement payments, and interest not barred by limitations and payable to the comptroller, the Department of Assessments and Taxation or the Department of Economic and Employment Development or has provided for payment in a manner satisfactory to the unit responsible for collection; and if the bidder or offeror is a vendor of tangible personal property, the bidder or offeror possesses a valid sales and use tax license under Title 11, Subtitle 7 of the Tax - General Article.

I acknowledge that this certificate is to be furnished to the requesting agency, and to the Comptroller of the Treasury, Sales and Use Tax Division under 13-222, S.F. of the Annotated Code of Maryland. I acknowledge that, if the representations set forth in this certificate are not true and correct, the State may terminate any contract awarded and take any other appropriate action.

**BIDDERS SHALL PROVIDE STATE OF MARYLAND TAX CERTIFICATION NUMBER ON THE LINE DIRECTLY BELOW:**

\_\_\_\_\_

I do solemnly declare and affirm under the penalties of perjury that the contents of this certificate are true and correct.

Witness	Signature	Date
Name/Title (please type or print)	Name/Title (please type or print)	Date

CERTIFICATION REGARDING U.S. GOVERNMENT DEBARMENT, SUSPENSION,  
INELIGIBILITY, AND VOLUNTARY EXCLUSION

This certification is required by the regulations implementing Executive Order 12549, Debarment and Suspension, 34 CFR, part 85, Section 85.510, Participants' responsibilities. The regulations were published as Part VII of the May 26, 1988, Federal Register (pages 19160-19211).

(1) The prospective participant certifies, by submission of this proposal, that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

(2) Where the prospective participant is unable to certify to any of the statement in this certification, such prospective participant shall attach an explanation to this proposal.

---

Name and Title of Authorized Agency/Organization Representative

---

Signature

Date

---

Agency/Organization

\*Above certification instituted by the U.S. Department of Education for all grantees and sub grantees as of fiscal year 1990.



REFERENCES

List at least 3 projects (preferably school systems) -- one may be with BCPS, completed by your organization in the last eighteen (18) months. References--should include projects of similar scope and size for which your firm has provided similar service.

PROJECT #1

---

Project #1--Brief Description of Type of Project

---

Organization's name for Public Project #1

\_\_\_\_\_  
Representative's Name                      (\_\_\_\_\_)\_\_\_\_\_  
Representative's Phone #                      (\_\_\_\_\_)\_\_\_\_\_  
Fax Number

PROJECT #2

---

Project #2--Brief Description of Type of Project

---

Organization's name for Public Project #2

\_\_\_\_\_  
Representative's Name                      (\_\_\_\_\_)\_\_\_\_\_  
Representative's Phone #                      (\_\_\_\_\_)\_\_\_\_\_  
Fax Number

PROJECT #3

---

Project #3--Brief Description of Type of Project

---

Organization's name for Public Project #3

\_\_\_\_\_  
Representative's Name                      (\_\_\_\_\_)\_\_\_\_\_  
Representative's Phone #                      (\_\_\_\_\_)\_\_\_\_\_  
Fax Number

---

(Signature of Bidder)                      (Date)

**BOARD OF DIRECTORS - DIVERSITY AFFIDAVIT**

This documentation is required by the statutory regulation, Bids, §5-112, Annotated Code of Maryland. Education enacted July 1, 2000. All bidders interested in submitting proposals on school construction projects shall provide information that identifies the diversity of its Board of Directors. Said diversity shall be identified by completion of this form. Failure to provide said documentation may be cause for rejection of the bidder's proposal as non-responsive.

Name of Corporation/Business	BCPS Bid No.

**List of Board of Directors**

Name of Individual	Title	Diversity (See Legend)

Diversity Legend: (1) African Americans; (2) Alaskan Native; (3) American Indian/Native Americans; (4) Asians; (5) Hispanics; (6) Physically or mentally disabled individuals; (7) Women; or (8) A non-profit entity organized to promote the interests of physically or mentally disabled individuals; (9) Caucasian.  
 Note: It is understood that an Individual may qualify for more than one designation. Multiple designations shall be so noted on the form.

**Attachment A (page 1 of 2)**

**CERTIFIED MINORITY BUSINESS ENTERPRISE  
UTILIZATION AND FAIR SOLICITATION AFFIDAVIT**

**NOTE: You must include this document with your bid or offer. If you do not submit the form with your bid or offer, the procurement officer shall deem your bid non-responsive or your offer not reasonably susceptible of being selected for award.**

\* \* \* \* \*

**Part I.**

I acknowledge the:

- Overall certified MBE subcontract participation goal of 30 %; and
- The subgoals, if applicable, of:
  - 7 % for certified African American-owned businesses and
  - 4 % for certified Asian American-owned businesses.

I have made a good-faith effort to achieve this goal. If awarded the contract, I will continue to attempt to increase MBE participation during the project.

**Part II.**  
Check ONE Box

**NOTE: FAILURE TO CHECK ONE OF BOXES 1, 2, or 3 BELOW WILL RENDER A BID NON-RESPONSIVE OR AN OFFER NOT REASONABLY SUSCEPTIBLE OF BEING SELECTED FOR AWARD**

**NOTE: INCONSISTENCY BETWEEN THE ASSERTIONS ON THIS FORM AND THE INFORMATION PROVIDED ON THE *MBE PARTICIPATION SCHEDULE* (ATTACHMENT B) MAY RENDER A BID NON-RESPONSIVE OR AN OFFER NOT REASONABLY SUSCEPTIBLE OF BEING SELECTED FOR AWARD**

1  I have met the overall MBE goal and MBE subgoals for this project. I submit with this Affidavit [Attachment A] the *MBE Participation Schedule* [Attachment B], which details how I will reach that goal.

**or**

2  After having made a good-faith effort to achieve the overall MBE goal and MBE subgoals for this project, I can achieve partial success only. I submit with this Affidavit [Attachment A] the *MBE Participation Schedule* [Attachment B], which details the MBE participation I have achieved.

I request a partial waiver as follows:

- Waiver of overall MBE subcontract participation goal: \_\_\_\_ %
- Waiver of MBE subcontract participation subgoals, if applicable:
  - \_\_\_\_ % for certified African American-owned businesses and
  - \_\_\_\_ % for certified Asian American-owned businesses.

Within 10 days of being informed that I am the apparent awardee, I will submit *MBE Waiver Documentation* [Attachment F] (with supporting documentation).

**Attachment A (page 2 of 2)**

**or**

- 3  After having made a good faith effort to achieve the overall MBE goal and MBE subgoals for this project, I am unable to achieve any portion of the goal or subgoals. I submit with this Affidavit [Attachment A] the *MBE Participation Schedule* [Attachment B].

I request a full waiver.

Within 10 days of being informed that I am the apparent awardee, I will submit *MBE Waiver Documentation* [Attachment F] (with supporting documentation).

**Part III.**

I understand that if I am the apparent awardee or conditional awardee, I must submit **within 10 working days** after receiving notice of the potential award or within 10 days after the date of conditional award – whichever is earlier – the:

- *Outreach Efforts Compliance Statement* (Attachment C)
- *Subcontractor Project Participation Statement* (Attachment D)
- *Minority Subcontractors Unavailability Certificate* (Attachment E) (if applicable)
- Any other documentation the Procurement Officer requires to ascertain my responsibility in connection with the MBE participation goal and subgoals

I acknowledge that if I fail to timely return complete documents, the Procurement Officer may determine that I am not responsible and therefore not eligible for contract award. If the contract has been awarded, the award is voidable.

I acknowledge that the MBE subcontractors/suppliers listed in the *MBE Participation Schedule* and any additional MBE subcontractor/suppliers identified in the *Subcontractor Project Participation Statement* will be used to accomplish the percentage of MBE participation that I intend to achieve.

In the solicitation of subcontract quotations or offers, MBE subcontractors were provided the same information and amount of time to respond as were non-MBE subcontractors.

The solicitation process was conducted in such a manner so as to not place MBE subcontractors at a competitive disadvantage to non-MBE subcontractors.

**I solemnly affirm under the penalties of perjury that this Affidavit is true to the best of my knowledge, information, and belief.**

\_\_\_\_\_  
Bidder/Offeror Name

\_\_\_\_\_  
Affiant Signature

\_\_\_\_\_  
Address

\_\_\_\_\_  
Printed Name & Title

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

\_\_\_\_\_  
Date

September 2008

**Attachment B  
MBE PARTICIPATION SCHEDULE**

This document must be included with the bid or offer. If the bidder or offeror fails to submit this form with the bid or offer as required, the procurement officer shall deem the bid non-responsive or shall determine that the offer is not reasonably susceptible of being selected for award.

1. Prime Contractor's Name	2. Prime Contractor's Address and Telephone Number
3. Project/School Name	4. Project/School Location
5. LEA Baltimore County Public Schools PSC No. _____	6. Base Bid Amount: \$ _____
7a. Minority Firm Name	Minority Firm Address
Minority Firm Telephone Number _____ Minority Firm Fax Number _____ MDOT Certification Number _____	Minority Group Type <input type="checkbox"/> (African American) <input type="checkbox"/> (Women ) <input type="checkbox"/> (Asian ) <input type="checkbox"/> (Hispanic) <input type="checkbox"/> (American Indian) <input type="checkbox"/> (Disabled)
Work to be Performed and Subcontract Dollar Amount	Percent of Total Contract
7b. Minority Firm Name	Minority Firm Address
Minority Firm Telephone Number _____ Minority Firm Fax Number _____ MDOT Certification Number _____	Minority Group Type <input type="checkbox"/> (African American) <input type="checkbox"/> (Women ) <input type="checkbox"/> (Asian ) <input type="checkbox"/> (Hispanic) <input type="checkbox"/> (American Indian) <input type="checkbox"/> (Disabled)
Work to be Performed and Subcontract Dollar Amount	Percent of Total Contract
7c. Minority Firm Name	Minority Firm Address
Minority Firm Telephone Number _____ Minority Firm Fax Number _____ MDOT Certification Number _____	Minority Group Type <input type="checkbox"/> (African American) <input type="checkbox"/> (Women ) <input type="checkbox"/> (Asian ) <input type="checkbox"/> (Hispanic) <input type="checkbox"/> (American Indian) <input type="checkbox"/> (Disabled)
Work to be Performed and Subcontract Dollar Amount	Percent of Total Contract
<b>8. MBE Total Dollar Amount</b>	<b>9. Total MBE Percent of Entire Contract</b>
10. Form Prepared by: Name: _____ Title: _____ Date: _____	11. Reviewed and Accepted by Board of Education MBE Liaison Name: _____ Title: _____ Date: _____

Total MBE Participation: (See Boxes 8 & 9)	_____ %	\$ _____	
Total African-American MBE Participation:	_____ %	\$ _____	
Total Asian American-Owned MBE Particip:	_____ %	\$ _____	
Total Other Participation:	_____ %	\$ _____	

**NO BID SHEET (use only when **not** participating in bid)**

PLEASE CHECK THE APPROPRIATE ITEM/S

\_\_\_\_ 1. We wish to submit a NO BID at this time. The reason for submitting a NO BID is:

\_\_\_\_\_

\_\_\_\_\_  
\*Failure to complete the above and return this form to the Purchasing Office may result in your removal from the Baltimore County Public School approved vendor list for this bid.

\_\_\_\_ 2. Please include our name to RECEIVE FUTURE BIDS for the FOLLOWING GOODS/SERVICES:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_ 3. Please DELETE our name from future bids for this commodity.

\_\_\_\_ 4. Please COMPLETE the following:

**Is your company a certified Minority Business Enterprise with State of Maryland? \_\_\_Yes\_\_\_ No MDOT#\_\_\_\_\_**

**Please indicate which group qualifies the business as a Minority Business Enterprise.**

**African American Asian Women Hispanic American Indian Physically or Mentally disabled individual**

**Is your company a small business with less than fifty (50) employees which generates an annual revenue less than ten (10) million dollars? \_\_\_Yes\_\_\_ No**

**Is your business located within Baltimore County, Maryland? \_\_\_Yes\_\_\_ No**

**COMPANY** \_\_\_\_\_  
**AUTHORIZED SIGNATURE** \_\_\_\_\_  
**TYPED NAME/TITLE** \_\_\_\_\_  
**ADDRESS** \_\_\_\_\_  
**CITY/STATE/ZIP** \_\_\_\_\_  
**PHONE** \_\_\_\_\_ **FAX** \_\_\_\_\_

**Return to: Baltimore County Public Schools  
Purchasing Agent  
6901 Charles Street, Building "E", 1st Floor  
Towson, Maryland 21204**

SECTION 01 21 00 - ALLOWANCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements governing allowances.
  - 1. Certain items are specified in the Contract Documents by allowances. Allowances have been established in lieu of additional requirements and to defer selection of actual materials and equipment to a later date when direction will be provided to Contractor. If necessary, additional requirements will be issued by Change Order.
- B. Types of allowances include the following:
  - 1. Quantity allowances.
- C. Related Requirements:
  - 1. Section 012200 "Unit Prices" for procedures for using unit prices.

1.3 SELECTION AND PURCHASE

- A. At the earliest practical date after award of the Contract, advise Architect of the date when final selection and purchase of each product or system described by an allowance must be completed to avoid delaying the Work.
- B. At Architect's request, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the Work.
- C. Purchase products and systems selected by Architect from the designated supplier.

1.4 ACTION SUBMITTALS

- A. Submit proposals for purchase of products or systems included in allowances, in the form specified for Change Orders.

1.5 INFORMATIONAL SUBMITTALS

- A. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.
- B. Submit time sheets and other documentation to show labor time and cost for installation of allowance items that include installation as part of the allowance.
- C. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

1.6 COORDINATION

- A. Coordinate allowance items with other portions of the Work. Furnish templates as required to coordinate installation.

1.7 QUANTITY ALLOWANCES

- A. Allowance shall include cost to Contractor of specific products and materials ordered by Owner or selected by Architect under allowance and shall include taxes, freight, and delivery to Project site.
- B. Unused Materials: Return unused materials purchased under an allowance to manufacturer or supplier for credit to Owner, after installation has been completed and accepted.
  - 1. If requested by Architect, retain and prepare unused material for storage by Owner. Deliver unused material to Owner's storage space as directed.

1.8 ADJUSTMENT OF ALLOWANCES

- A. Allowance Adjustment: To adjust allowance amounts, prepare a Change Order proposal based on the difference between purchase amount and the allowance, multiplied by final measurement of work-in-place where applicable. If applicable, include reasonable allowances for cutting losses, tolerances, mixing wastes, normal product imperfections, and similar margins.
  - 1. Include installation costs in purchase amount only where indicated as part of the allowance.
  - 2. If requested, prepare explanation and documentation to substantiate distribution of overhead costs and other margins claimed.
  - 3. Submit substantiation of a change in scope of work, if any, claimed in Change Orders related to unit-cost allowances.
  - 4. Owner reserves the right to establish the quantity of work-in-place by independent quantity survey, measure, or count.
- B. Submit claims for increased costs because of a change in scope or nature of the allowance described in the Contract Documents, whether for the purchase order amount or Contractor's handling, labor, installation, overhead, and profit.



1. Do not include Contractor's or subcontractor's indirect expense in the Change Order cost amount unless it is clearly shown that the nature or extent of work has changed from what could have been foreseen from information in the Contract Documents.
2. No change to Contractor's indirect expense is permitted for selection of higher- or lower-priced materials or systems of the same scope and nature as originally indicated.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

3.2 PREPARATION

- A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

3.3 SCHEDULE OF ALLOWANCES (**Addm. #4**)

- ~~A. Allowance No. 1 (Lump-Sum Allowance): Include the sum of \$20,000.00 for removal of unsatisfactory soil and replacement with satisfactory soil material.~~

- ~~1. This allowance includes material cost, receiving, handling, installation and Contractor overhead and profit.~~

**A. Allowance No. 1: (Quantity Allowance):**

- 2. Include 300 Linear Feet of Concrete Curb and Gutter.**
- 3. This allowance includes material cost, receiving, handling, installation and Contractor overhead and profit.**
- 4. Provide unit price and total price costs on SECTION 00 4000 - FORM OF PROPOSAL.**

**B. Allowance No. 2: (Quantity Allowance):**

- 1. This allowance includes 2,000 square feet of Concrete Sidewalk**
- 2. Unit of Measurement: Square Feet.**
- 3. Provide unit price and total price costs on SECTION 00 4000 - FORM OF PROPOSAL.**

**C. Allowance No. 3: (Quantity Allowance):**

1. This allowance includes 6,000 cubic yards of unsatisfactory soil excavation and disposal off site and replacement with satisfactory fill material or engineered fill from off site in accordance with specification section 31 20 00 EARTHWORK.
2. Unit of Measurement: Cubic Yard of soil excavated.
3. Provide unit price and total price costs on SECTION 00 4000 - FORM OF PROPOSAL.

**D. Allowance No. 4: (Quantity Allowance):**

1. This allowance includes 6,000 cubic yards of unsatisfactory soil excavation and disposal off site and replacement with Soil Cement (5% Soil Cement 12" deep) in accordance with Specification 31 50 00 Portland Cement Stabilized Subgrade.
2. Unit of Measurement: Cubic Yard of soil excavated.
3. Provide unit price and total price costs on SECTION 00 4000 - FORM OF PROPOSAL.

END OF SECTION 01 21 00

SECTION 01 22 00 - UNIT PRICES (**Addm. #4**)

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Measurement and payment criteria applicable to Work performed under a unit price payment method.
- B. The scope of work under this contract consists of BASE BID and Add Alternates 1-14. Base Bid consists of PART A and PART B. PART A consists of Lump Sum Item for all work specified on plans and/or specifications. PART B consists of Unit Price Items specified in Section 004000 (Unit Price Items does not include work specified on plans and/or specifications).

1.2 RELATED SECTION

- A. Section 01 21 00 Allowances for Quantity Allowances.
- B. Section 004000 Form of Proposal for bidding Quantity Allowances

1.2 COSTS INCLUDED

- A. Unit Prices included on the Bid Form shall include full compensation for all required labor, products, tools, equipment, plant, transportation, services and incidentals; erection, application or installation of an item of the Work; overhead and profit.

1.3 MEASUREMENT OF QUANTITIES

- A. Measurement methods delineated in the individual specification sections complement the criteria of this section. In the event of conflict, the requirements of the individual specification section govern.
- B. Take all measurements and compute quantities. Measurements and quantities will be verified by Architect.
- C. Assist by providing necessary equipment, workers, and survey personnel as required.

1.4 PAYMENT

- A. Payment for Work governed by unit prices will be made on the basis of the actual measurements and quantities of Work that is incorporated in or made necessary by the Work and accepted by the Architect, multiplied by the unit price.

1.5 SCHEDULE OF UNIT PRICES FOR ALLOWANCES

- A. Unit Price 1: Furnish and Install New Curb and Gutter.
  - 1. Description: Furnish and Install New Curb and Gutter according to Section 32 13 13 "Portland Cement Concrete Pavement."
  - 2. Unit of Measurement: Linear Feet.
  - 3. Quantity Allowance: Coordinate unit price with allowance adjustment requirements in Section 01 21 00 "Allowances."
- B. Unit Price 2: Furnish and Install New Concrete Sidewalk.

1. Description: Furnish and Install New Concrete Sidewalk according to Section 32 13 13 "Portland Cement Concrete Pavement." Detail 1, Sheet C2.01, complete in place including excavation and stone base
2. Unit of Measurement: Square Feet.
3. Quantity Allowance: Coordinate unit price with allowance adjustment requirements in Section 01 21 00 "Allowances."

C. Unit Price 3: Removal of unsatisfactory soil and replacement with satisfactory soil material.

1. Description: Unsatisfactory soil excavation and disposal off site and replacement with satisfactory fill material or engineered fill from off site, as required, according to Section 31 20 00 "Earth Moving."
2. Unit of Measurement: Cubic Yard of soil excavated, based on survey of volume removed.
3. Quantity Allowance: Coordinate unit price with allowance adjustment requirements in Section 01 21 00 "Allowances."

D. Unit Price 4: Removal of unsatisfactory soil and replacement with Soil Cement.

1. Description: Unsatisfactory soil excavation and disposal off site and replacement with Soil Cement (5% Soil Cement 12" deep) as required in accordance with Specification 31 50 00 "Portland Cement Stabilized Subgrade".
2. Unit of Measurement: Cubic yard of soil excavated, based on survey of volume removed.
3. Quantity Allowance: Coordinate unit price with allowance adjustment requirements in Section 01 21 00 "Allowances."

#### 1.6 SCHEDULE OF FIXED UNIT PRICES

A. Unit Price No. 1 - Riprap Class 1:

1. Description: Furnish and install riprap Class 1
2. Unit of Measurement: Ton
3. Price per Unit of Measurement: \$75.00

B. Unit Price No. 2 - Earth Excavation Onsite:

1. Description: Earth excavation-machine and disposal onsite
2. Unit of Measurement: Cubic yard
3. Price per Unit of Measurement: \$6.00

C. Unit Price No. 3 - Earth Excavation Onsite:

1. Description: Earth excavation-hand and disposal onsite
2. Unit of Measurement: Cubic yard
3. Price per Unit of Measurement: \$90.00

D. Unit Price No. 4 - Trench Excavation Onsite:

1. Description: Trench excavation and soil disposal onsite
2. Unit of Measurement: Cubic yard
3. Price per Unit of Measurement: \$15.00

E. Unit Price No. 5 - Contaminated Soil:

1. Description: Excavate and legally dispose offsite petroleum contaminated soil
2. Unit of Measurement: Cubic yard
3. Price per Unit of Measurement: \$650.00

F. Unit Price No. 6 - MSHA #2 or #57 stone at trench areas:

1. Description: Undercut, dispose onsite, refill with MSHA #2 or #57 stone and compact per specified requirements at trench areas only
2. Unit of Measurement: Cubic yard

3. Price per Unit of Measurement: \$45.00
- G. Unit Price No. 7 - CR-6 or CR-1 at trench areas:
  1. Description: Undercut, dispose onsite, refill with CR-6 or CR-1 and compact per specified requirements at trench areas only
  2. Unit of Measurement: Cubic yard
  3. Price per Unit of Measurement: \$42.00
- H. Unit Price No. 8 - MSHA #2 or #57 stone in open areas:
  1. Description: Undercut, dispose offsite, refill with MSHA #2 or #57 stone and compact per specified requirements in open areas only
  2. Unit of Measurement: Cubic yard
  3. Price per Unit of Measurement: \$42.00
- I. L. Unit Price No. 9 - CR-6 or CR-1 in open areas:
  1. Description: Undercut, dispose offsite, refill with CR-6 or CR-1 and compact per specified requirements in open areas only
  2. Unit of Measurement: Cubic yard
  3. Price per Unit of Measurement: \$40.00
- J. Unit Price No. 10 - Imported Screened Topsoil:
  1. Description: Imported screened topsoil and fine graded in place - no material larger than  $\frac{3}{4}$ " in mix
  2. Unit of Measurement: Cubic yard
  3. Price per Unit of Measurement: \$50.00
- K. Unit Price No. 11 - Sodding:
  1. Description: Sodding
  2. Unit of Measurement: Square yard
  3. Price per Unit of Measurement: \$5.00
- L. Unit Price No. 12 - Permanent Seeding and Mulch:
  1. Description: Permanent seeding and mulch
  2. Unit of Measurement: Square yard
  3. Price per Unit of Measurement: \$2.25
- M. Unit Price No. 13 - Temporary Seeding and Straw:
  1. Description: Temporary seeding and straw
  2. Unit of Measurement: Square yard
  3. Price per Unit of Measurement: \$1.50
- N. Unit Price No. 14 - Mirafi 500x:
  1. Description: Furnish and install Mirafi 500x or equal
  2. Unit of Measurement: Square yard
  3. Price per Unit of Measurement: \$2.75
- O. Unit Price No. 15 - Stabilization Fabric:
  1. Description: Furnish and install stabilization fabric Mirafi 160n or equal
  2. Unit of Measurement: Square yard
  3. Price per Unit of Measurement: \$2.00
- P. Unit Price No. 16 - Stabilization Fabric and Filter Cloth:
  1. Description: Furnish and install Mirafi 500x or equal stabilization fabric, MSHA #2 stone 2' deep, and Mirafi 160n or equal filter cloth
  2. Unit of Measurement: Square yard
  3. Price per Unit of Measurement: \$40.00
- Q. Unit Price No. 17 - Super Silt Fence:
  1. Description: Furnish, install, maintain, and remove super silt fence and grade/restabilize
  2. Unit of Measurement: Linear Foot

3. Price per Unit of Measurement: \$12.00
- R. Unit Price No. 18 - Silt Fence:
  1. Description: Furnish, install, maintain, and remove silt fence and grade/restabilize
  2. Unit of Measurement: Linear Foot
  3. Price per Unit of Measurement: \$4.50
- S. Unit Price No. 19 - Soil Cement:
  1. Description: Furnish and install 5% soil cement 1' deep
  2. Unit of Measurement: Ton
  3. Price per Unit of Measurement: \$325
- T. Unit Price No. 20 - Trench Rock:
  1. Description: Remove trench rock haul and dispose of legally offsite
  2. Unit of Measurement: Cubic Yard
  3. Price per Unit of Measurement: \$350.00
- U. Unit Price No. 21 - Open Rock:
  1. Description: Remove open rock, haul and dispose of legally offsite
  2. Unit of Measurement: Cubic Yard
  3. Price per Unit of Measurement: \$200.00
- V. Unit Price No. 22 - Existing Sidewalk and Spoil:
  1. Description: Removal of existing sidewalk and spoil as necessary, dispose of legally offsite, install new 5" sidewalk with W20 x 20 mesh.
  2. Unit of Measurement: Square Foot
  3. Price per Unit of Measurement: \$8.50
- W. Unit Price No. 23 - Existing Curb and Gutter:
  1. Description: Saw, cut and removal of existing curb and gutter and dispose of legally offsite, install new curb and gutter to match existing.
  2. Unit of Measurement: Linear Foot
  3. Price per Unit of Measurement: \$25.00
- X. Unit Price No. 24 - Damaged Paving:
  1. Description: Saw, cut and remove damaged paving, dispose of legally offsite, replace with 4" base course and 1-1/2" surface course.
  2. Unit of Measurement: Square Yard
  3. Price per Unit of Measurement: \$50.00
- Y. Unit Price No. 25- Concrete curb and gutter:
  1. Description: Concrete curb and gutter
  2. Unit of Measurement: Linear Foot
  3. Price per Unit of Measurement: \$18.00
- Z. Unit Price No. 26 - Concrete Slab:
  1. Description: Labor, equipment, material, and mark-up to repair out of tolerance or defective concrete slab.
  2. Unit of Measurement: Square Foot
  3. Price per Unit of Measurement: \$0.85
- AA. Unit Price No. 27 - 4" CMU wall:
  1. Description: Unit masonry per Sq/ft of wall surface includes mortar/joint reinforcement, bull nose corners, labor, scaffold, and all incidentals. This price does not include grout infill. CMU units to be regular hollow for purpose of unit price.
  2. Unit of Measurement: Square Foot
  3. Price per Unit of Measurement: \$10.00
- AB. Unit Price No. 28 - 6" CMU wall:

1. Description: Unit masonry per Sq/ft of wall surface includes mortar/joint reinforcement, bull nose corners, labor, scaffold, and all incidentals. This price does not include grout infill. CMU units to be regular hollow for purpose of unit price.
  2. Unit of Measurement: Square Foot
  3. Price per Unit of Measurement: \$11.00
- AC. Unit Price No. 29 - 8" CMU wall:
1. Description: Unit masonry per Sq/ft of wall surface includes mortar/joint reinforcement, bull nose corners, labor, scaffold, and all incidentals. This price does not include grout infill. CMU units to be regular hollow for purpose of unit price.
  2. Unit of Measurement: Square Foot
  3. Price per Unit of Measurement: \$12.00
- AD. Unit Price No. 30 - 12" CMU wall:
1. Description: Unit masonry per Sq/ft of wall surface includes mortar/joint reinforcement, bull nose corners, labor, scaffold, and all incidentals. This price does not include grout infill. CMU units to be regular hollow for purpose of unit price.
  2. Unit of Measurement: Square Foot
  3. Price per Unit of Measurement: \$14.00
- AE. Unit Price No. 31 - Tooth single doorframe
1. Description: Furnish and install extra CMU lintel as necessary and infill. Grout CMU and frame after frames is set.
  2. Unit of Measurement: Per opening
  3. Price per Unit of Measurement: \$800.00
- AF. Unit Price No. 32 - Tooth double doorframe:
1. Description: Furnish and install extra CMU lintel as necessary and infill. Grout CMU and frame after frame is set.
  2. Unit of Measurement: Per opening
  3. Price per Unit of Measurement: \$900.00
- AG. Unit Price No. 33 - Receptacle:
1. Description: Provide 120-volt, 20-Ampere (NEMA.5-20R) receptacle, and 100--Ln/ft 2# 12 and 12G in 3/4" conduit, and other materials as needed for a complete receptacle addition.
  2. Unit of Measurement: Per location
  3. Price per Unit of Measurement: \$240.00
- AH. Unit Price No. 34 - Data Outlet:
1. Description: Provide 300-Ln/ft of CAT-6 cabling and CAT-6 RJ-45 jack and faceplate and back box. Provide all terminations, testing, and labeling.
  2. Unit of Measurement: Per location
  3. Price per Unit of Measurement: \$255.00
- AI. Unit Price No. 35 - Concrete Sidewalk:
1. Description: 6 inch thick concrete sidewalk on top of 4" aggregate.
  2. Unit of Measurement: Square Foot
  3. Price per Unit of Measurement: \$5.50
- AJ. Unit Price No. 36- Heavy Duty Paving:
1. Description: Heavy Duty Bituminous Paving consisting of one 2 inch layer and one 4 inch layer of paving on top of 12 inches of aggregate.
  2. Unit of Measurement: Square Yard
  3. Price per Unit of Measurement: \$45.00
- AK. Unit Price No. 37 - Imported Fill Material:
1. Description: Furnish, deliver, spread, and compact imported fill material.
  2. Unit of Measurement: Cubic Yard
  3. Price per Unit of Measurement: \$37.00

AL. Unit Price No. 38 - Unsuitable Material:

1. Description: Excavation and removal of unsuitable material.
2. Unit of Measurement: Cubic Yard
3. Price per Unit of Measurement: \$30.00

AM. Unit Price No. 39 - Reinforced Concrete Footing:

1. Description: Reinforced Concrete Footing.
2. Unit of Measurement: Cubic Yard
3. Price per Unit of Measurement: \$325.00

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

**END OF SECTION**



SECTION 10 53 00 – CANTILEVER CANOPY (SERVICE ENTRANCE) (Addm. #4)

**PART 1 - GENERAL**

1.1 DESCRIPTION OF WORK

1. Work in this section includes furnishing and installation of extruded aluminum overhead cantilever supported canopies as manufactured by Mapes Industries Inc. or equal.
2. Related Items and Considerations
  1. Flashing of various designs may be required. Generic flashing supplied by Mapes. Specialty flashing to be supplied by installer.
  2. Determine wall construction, make-up and thickness.
  3. Ensure adequate wall condition to carry canopy loads where required.
  4. Consider water drainage away from canopy where necessary.
  5. Any necessary removal or relocation of existing structures, obstructions or materials.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. LEED Submittals:
  1. Product Data for Credit IEQ 4.1: For sealants used inside the system, documentation including printed statement of VOC content.
  2. Product Data for Credit MR 4.1 and Credit MR 4.2: For products having recycled content, documentation indicating percentages by weight of postconsumer and pre-consumer recycled content.
    - a. Aluminum extrusions that contain at least 60% post-industrial recycled content
    - b. Regional Materials MR Credit 5.1: Use a minimum of 20 percent of building materials and products (cost) that are manufactured regionally, within a 500-mile radius.
- C. Shop Drawings: Include fabrication and installation layouts of metal composite material panels; details of edge conditions, joints, panel profiles, corners, anchorages, attachment assembly, trim, flashings, closures, and accessories; and special details.
- A. Samples: For each type of metal composite material panel indicated.

2. INFORMATIONAL SUBMITTALS

- A. Product test reports.
- B. Warranties: Samples of special warranties.

3. CLOSEOUT SUBMITTALS

- A. Maintenance data.

1.3 QUALITY ASSURANCE

- A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.

1.4 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of metal composite material panel systems that fail in materials or workmanship within specified warranty period.

1) Warranty Period: Two years from date of Substantial Completion.

- B. Special Warranty on Panel Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace metal composite material panels that show evidence of deterioration of factory-applied finishes within specified warranty period.

1) Finish Warranty Period: 10 years from date of Substantial Completion.

1.5 FIELD MEASUREMENT

1. Confirm dimensions prior to preparation of shop drawings when possible.
2. If requested, supply manufacturer s standard literature and specifications for canopies.
3. Submit shop drawings showing structural component locations/positions, material dimensions and details of construction and assembly.
- 4.

1.6 PERFORMANCE REQUIREMENTS

1. Canopy must conform to local building codes.
2. PE Stamped calculations are required and must be signed and sealed by an engineer licensed within the state canopy is installed.

1.5 DELIVER, STORAGE, HANDLING

1. Deliver and store all canopy components in protected areas.

PART 2: PRODUCTS

2.1 MANUFACTURERS

1. Mapes Canopies, Lincoln, Nebraska  
Phone: 1-888-273-1132.  
Fax: 1-877-455-6572.
2. Mitchell Metals, 1761 McCoba Dr., SE Smyrna, GA
3. Rusco Custom Canopies, Knoxville TN
4. Equal product.

## 2.2 MATERIALS

1. Decking shall consist of 3" extruded flat soffit .078 decking.
2. Intermediate framing members shall be extruded aluminum, alloy 6063-T6, in profile and thickness shown in current Mapes brochures.
3. Cantilever supported brackets shall be standard finish.
4. Fascia shall be standard extruded 12" Smooth Face style.

## 2.3 FINISHES

1. Finish type shall be -- Class II Clear Anodized.

## 2.4 FABRICATION

1. All Mapes Super Lumideck extruded aluminum canopies are shipped with the materials precut to size for field assembly.
2. All connections shall be mechanically assembled utilizing 3/16 fasteners with a minimum shear stress of 350 lb. Pre-welded or factory-welded connections are not acceptable.
3. Decking shall be designed with interlocking roll-formed aluminum members.
4. Concealed drainage. Water shall drain from covered surfaces into intermediate trough and be directed to Downspout From Fascia.

## PART 3: EXECUTION

### 3.1 INSPECTION

1. Confirm that surrounding area is ready for the canopy installation.
2. Installer shall confirm dimensions and elevations to be as shown on drawings provided by Mapes Industries.
3. Erection shall be performed by an approved installer and scheduled after all concrete, masonry and roofing in the area is completed

### 3.2 INSTALLATION

1. Installation shall be in strict accordance with manufacturer's shop drawings. Particular attention should be given to protecting the finish during handling and erection.
2. After installation, entire system shall be left in a clean condition.

END OF SECTION 10 53 00

SECTION 12 24 13 – ROLLER WINDOW SHADES

PART 1 - GENERAL

1.1 SUMMARY

- A. Provide window shades where shown on the Drawings, as specified herein, and as needed for a complete and proper installation.
- B. Section Includes:
  - 1. Motorized Window Shades.
  - 2. 2% Openness Shade Material.
- C. Related Documents/Sections: Carefully examine the Contract Documents for requirements which affect work of this Section. Documents and specification sections containing requirements which relate to this Section include, but are not necessarily limited to:
  - 1. General and Supplementary Conditions and sections in Division 1 of these Specifications.
  - 2. Section 06105 - Miscellaneous Carpentry: Wood blocking.

1.2 SUBMITTALS

- A. General:
  - 1. Identify proposed changes, differences, and discrepancies, including verbiage, terms, and definitions, between Contract Documents and submittals.
- B. Product Data:
  - 1. For each type of product indicated, submit manufacturer's specifications and other data needed to prove compliance with the specified requirements.
- C. Shop Drawings:
  - 1. Submit drawings in sufficient detail to show fabrication, installation, anchorage, and interface of the work of this Section with the work of adjacent trades.
    - a. Include elevations indicating shade units.
    - b. Indicate location of shade controls.
  - 2. Submit drawings prepared under the supervision of a professional engineer currently licensed to practice in jurisdiction in which the Project is located.
  - 3. Templates and Diagrams: Furnish installation templates, diagrams, and other data to fabricators and installers of related work as necessary for coordination of the installation.
- D. Samples:
  - 1. Samples for Verification Purposes:
    - a. Window Shades: One complete window shade unit.

- b. Shade samples.

**E. Quality Control Submittals:**

1. Certificates:

- a. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.

2. Qualification Data:

- a. Submit data for firms and persons specified under "Quality Assurance" article to demonstrate their capabilities and experience. Include list of completed projects with project name(s), address (es), names of Architect(s) and Owner(s), plus other specified information.

3. Manufacturer's Instructions:

- a. Submit manufacturer's recommended installation procedures which, when reviewed by the Architect, may become the basis for accepting or rejecting actual installation procedures used on the work.

**F. Contract Closeout Submittals:**

- 1. Upon completion of this portion of the Work, and as a condition of its acceptance, deliver to the Architect requisite copies of the following.

- a. Project Record Documents.
- b. Operation and Maintenance Data.

**1.3 QUALITY ASSURANCE**

- A. Installer Qualifications: Engage an experienced Installer who has specialized in installing horizontal louver blinds similar to those required for this Project.

- B. Surface Burning Characteristics: Provide blinds identical to those tested for the following fire performance characteristics as determined by UL or another testing and inspecting agency acceptable to authorities having jurisdiction.

- 1. Test Method: NAPA 701, Small Scale Vertical Burn Test.

- C. Single-Source Responsibility: Obtain horizontal louver blinds from one source of a single manufacturer.

- D. Field-Constructed Mockup: Prior to installation of blinds, prepare mockups for each form of construction and finish required to verify selections made under sample submittals to demonstrate aesthetic effects and to establish application quality standards. Comply with the following requirements:

- 1. Place mockups on site in location and size indicated or, if not indicated, as directed by Architect.
- 2. Erect mockups in presence of Architect.
- 3. Retain and maintain mockups during construction in undisturbed condition as a standard for judging completed Work.

- a. Accepted mockups in undisturbed condition at time of Substantial Completion may become part of completed Work.

#### 1.4 PROJECT CONDITIONS

- A. Field Measurements: Check openings by field measurements before fabrication. Show recorded measurements on shop drawings. Coordinate fabrication schedule with construction progress to avoid delay in the Work.

#### 1.5 EXTRA MATERIALS

- A. Extra Materials: Furnished from same production run as materials installed, packaged with protective covering for storage, and identified with labels describing contents. Deliver extra materials to Owner.
  - 1. Full Units: Furnish quantity of full-size units with mounting brackets and hardware equal to 5 percent of amount installed.

### PART2 - PRODUCTS

#### 2.1 MANUFACTURERS

- A. Acceptable Products and Manufacturers:

- 1. Window Shades:

- a. Listed products establish standard of quality and are manufactured by Lutron.
    - b. Equivalent products by the following may be acceptable provided they comply with requirements of Contract Documents:
      - 1) Lutron Shading Solutions by Vimco.
      - 2) MechoShade Systems Inc.
      - 3) Hunter Douglas, Inc.

#### 2.2 WINDOW SHADES

- A. Description: Electrically operated motorized roller screen window shading system.
- B. Standard Bracket/Pocket: Extruded aluminum (smooth) pocket to be recessed into drywall bulkhead with pocket closure with baked enamel finish.
  - 1. QED 100 Roller Shade with removable closure fascia. Pocket size = (4-3/4"w x 5"h). By Lutron or approved equal.
  - 2. ElectroShade II with SnapLoc Fascia. Pocket size = (5-3/8"w x 5"h). By Mecho Shade or approved equal.
- C. Motor:
  - 1. Shall be tubular asynchronous and concealed inside an extruded aluminum tube.
  - 2. Roller shades with 24-volt AC microprocessor intelligent motor system.

3. The electronic drive unit to operate without exceeding a 44dBA (SPL) measured 3 feet from motor.
4. System to make no audible clicks when motor starts or stops.
5. System controls to have a 10-year power failure memory for preset positions, open and close limits, shade grouping and system configuration.
6. Electronic Drive Unit will position the shade fabric to 1/16" of preset positions.

D. Control System: Manufacturers standard system customized to project requirements as follows:

1. Shades shall be zoned in groups for each room.
2. Power Panel equivalent to Lutron SVQ10PNL or equal. Provide 1 per every 10 shades.
3. One low voltage switch per room with low voltage momentary contacts.
4. Motor controller shall have low voltage control port for AV control system contact closure to operate in parallel with low voltage wall switch.
5. Shades shall be tied back to the Smart Lectern in each space. Shade controls from touch screen at smart lectern shall include the following: Open/Close and Raise/Lower.

E. Sunscreen Material:

1. Solar Shade:
  - a. Lutron Basketweave 90. Color: Beige pearl grey SQ21-90 or as selected from manufacturer's full range of colors.
  - b. Thermoveil 1000 Group Sunscreen Dense vertical weave; 2% openness factor.

## 2.3 ACCESSORIES

- A. Provide mounting brackets, anchors and other accessories as required for complete installation

## 2.4 MATERIALS AND FABRICATION

- A. Unit Sizes: Obtain units fabricated in sizes to fit window openings as follows, measured at 74 deg F (23 deg C):
- B. Installation Fasteners: Not less than two fasteners per bracket, fabricated from metal non-corrosive to blind hardware and adjoining construction and to support blind units under conditions of normal use.

## 2.5 SHADE SCHEDULE:

- A. Shade Schedule: Refer to Drawing A9.11 Window Schedule and Types for Shade Schedule for motorized and manual shades.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine openings where horizontal louver blinds will be installed prior to beginning installation. Verify that critical dimensions are correct and surface conditions acceptable.
  1. Complete all finishing operations, including painting, before beginning installation.
- B. Do not proceed with installation until unsatisfactory conditions have been corrected.



**3.2 INSTALLATION**

- A. Install blinds level, plumb, and located so exterior slat edges in any position are not closer than 1 inch to interior face of glass lites, gaps between slat ends and jambs do not exceed 1/4 inch plus or minus 1/8 inch, and bottom rail in fully lowered position is within 1/2 inch of bottom of window or other opening.

**3.3 CLEANING**

- A. After completing the installation, clean blind surfaces according to the manufacturer's instructions.
- B. Remove surplus materials, packaging, rubbish and debris resulting from the installation. Leave areas where installation occurred neat, clean, and ready for use.

END OF SECTION 12 24 13

31 50 00 - PORTLAND CEMENT STABILIZED SUB GRADE (**Addm. #4**)

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Foundation course of Portland cement stabilized natural subgrade material.

1.02 BASE BID

1. Portland cement stabilized subgrade material shall provided and installed compacted in place to proper density where shown on the drawings as issued in Addendum No.4.
  - a. Limits of measurement shall match actual limits, but no greater than maximum limits shown on Drawings.

1.03 ADDITIONAL MATERIAL – ALLOWANCES / UNIT PRICES

1. Refer to Section 01 21 00 – Allowances for Quantity Cost Allowance for removal of unsatisfactory soil and Replacement with Soil Cement In accordance with this specification.
2. Refer to Section 01 22 00 – Unit Prices for unit price procedures for removal of unsatisfactory soil and Replacement with satisfactory soil material by the following:
  - a. Quantity Cost Allowance
  - b. Fixed Unit Cost
3. Where additional Portland cement stabilized subgrade is required that over and above the Quantity Cost Allowance, the Fixed Unit Cost shall be used for the additional amount.

1.03 REFERENCES

- A. ASTM C 150- Standard Specification for Portland Cement.
- B. ASTM D 558- Standard Test Method for Moisture-Density Relations of Soil-Cement-Mixtures.
- C. ASTM D 1556- Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method.
- D. ASTM D 2922- Standard Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
- E. ASTM D 4318 - Standard Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.

1.04 SUBMITTALS

- A. Conform to requirements of Section 01 33 00 - Submittal Procedures.
- B. Submit certification that Portland cement complies with these specifications.

PART 2 PRODUCTS

2.01 WATER

- A. Water: clean, clear and free from oil, acids, alkali, or organic matter.

2.02 PORTLAND CEMENT

- A. ASTM C 150 Type I; bulk or sacked.

2.03 SOIL

- A. Soil consisting of approved material free from vegetation or other objectionable matter.

2.04 TESTS

- A. Tests and analysis of soil materials will be performed in accordance with ASTM D 4318.
- B. Soil will be evaluated to establish ratio of cement to soil to obtain desired stability. Ratio is 5 percent by weight.
- C. The percentage of moisture in soil, at time of cement application, will be determined by ASTM D 558. Moisture will not be allowed to exceed quantity that will permit uniform, complete mixture of soil and cement during dry mixing operations nor specified optimum moisture content for soil cement mixture, as determined.

PART 3 EXAMINATION

3.01 EXAMINATION

- A. Verify compacted subgrade is ready to support imposed loads.
- B. Verify subgrade lines and grades are correct.

3.02 EQUIPMENT

- A. Apply Portland cement treatment with machine or combination of machines and auxiliary equipment to produce specified results. Mixing may be accomplished by multiple-pass traveling mixing plant or single-pass traveling mixing plant. Provide sufficient equipment

to enable continuous prosecution of work

3.03 PREPARATION

PORTLAND CEMENT STABILIZED SUB GRADE

31 50 00 - 3

- A. Backfill for utilities below future grade.
- B. Verify subgrade is firm and able to support, without displacement, construction equipment at specified density. Correct soft or yielding subgrade and stabilize by scarifying and aerating or by adding cement and compacting to uniform stability.
- C. Grade, shape, and compact, as required, to allow construction of Portland cement treatment for in-place materials to lines, grades, thickness, and typical cross section shown on Drawings. Remove unsuitable soil or material and replace with acceptable material.
- D. Pulverize soil to a depth of 12 inches so that at completion of moist-mixing, 100 percent by dry weight passes 1-inch sieve, and minimum of 80 percent passes No.4 sieve, exclusive of gravel or stone retained on these sieves.

#### 3.04 MIXING

- A. Do not place and mix cement when temperature is below 40 degrees F and falling. Place base when temperature taken in shade and away from artificial heat is above 35 degrees F and rising.
- B. Spread cement uniformly on soil at rate specified by Engineer. When bulk cement spreader is used, position it by string lines or other approved method to ensure uniform distribution of cement. Apply cement only to area where operations can be continuous and completed in daylight, within 1 hour of application. Amount of moisture in soil at time of cement placement shall not exceed quantity that will permit uniform mixture of soil and cement during dry mixing operations. Do not exceed specified optimum moisture content for soil cement mixture.
- C. Do not allow equipment other than that used in spreading and mixing, to pass over freshly spread cement until it is mixed with soil.
- D. Dry mix cement with soil after cement application. Continue mixing until cement has been sufficiently blended with soil to prevent formation of cement balls when water is applied. Mixture of soil and cement that has not been compacted and finished shall not remain undisturbed for more than 30 minutes.
- E. Immediately after dry mixing is complete, uniformly apply water as necessary and incorporate it into mixture. Pressurized equipment must provide adequate supply to ensure continuous application of required amount of water to sections being processed within 3 hours of cement application. Ensure proper moisture distribution at all times. After last increment of water has been added, continue mixing until thorough and uniform mix has been obtained.

- F. Ensure percentage of moisture in mixture, based on dry weights, is within 3 percentage points of specified optimum moisture content prior to compaction. When uncompacted soil cement mixture is wetted by rain indicating that average moisture content exceeds tolerance given at time of final compaction, reconstruct entire section in accordance with this Section.

3.05      **COMPACTION**

- A. Prior to beginning compaction, ensure mixture is in loose condition for its full depth to ensure a twelve inch compacted depth. Install two- 6 inch layers for a total of 12 inches of soil cement.  
Uniformly compact loose mixture to specified density, (95% of Maximum Dry Density per ASTM D698), lines, and grades.
- B. After soil and cement mixture is compacted, apply water uniformly as needed and mix thoroughly. Then reshape surface to required lines, grades, and cross section and lightly scarify to loosen imprints left by compacting or shaping equipment.

Roll resulting surface with pneumatic-tired roller and "skin" surface with power grader. Thoroughly compact with pneumatic roller, adding small increments of moisture, as needed. When aggregate larger than No. 4 sieve is present in mixture, make one complete coverage of section with flat-wheel roller immediately after skinning operation. When approved by Engineer, surface finishing methods may be varied from this procedure, provided dense uniform surface, free of surface compaction planes, is produced. Maintain moisture content of surface material at its specified optimum during finishing operations. Compact and finish surface within period not to exceed 2 hours, to produce smooth, closely knit surface, free of cracks, ridges, or loose material, conforming to crown, grade, and line shown on Drawings within period not to exceed 2-hours.

3.06      **CONSTRUCTION JOINTS**

- A. At end of each day's construction form straight transverse construction joint by cutting back into total width of completed work to form true 2-inch depth vertical face free of loose and shattered material. Construct cement treatment for large wide areas in series of parallel lanes of convenient length and width approved in advance by Engineer.

END OF SECTION 31 50 00

SECTION 281300 - ACCESS CONTROL

PART 1 -GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes:

1. Access Control Cabling
2. Card Readers
3. Door Catches
4. Controllers
5. Software
6. Accessories
7. All materials, terminations, equipment, labeling, and associated cable performance testing.
8. Access control system and card reader system refer to the same system and are used interchangeably.
9. Terms referring to cabling system are included in this specification section and in Section 26 05 19.

- B. Related Requirements:

1. 260519 Low-Voltage Electrical Power Conductors and Cables
2. 280513 Conductors and Cables for Electronic Safety and Security
3. 282329 Video Surveillance Devices

1.3 SYSTEM DESCRIPTION

- A. Design Requirements

1. Provide labor, materials, equipment, services and operations required for complete installation of access control system cabling, card readers, catches, controllers, associated power wiring.
2. The system shall be fully operational prior to acceptance by the Engineer and Owner.

#### 1.4 REFERENCE STANDARDS

- A. Specified cabling system derived from recommendations in approved telecommunications industry codes, standards and methods, including the following documents:
  - 1. National Fire Protection Agency (NFPA-70)
  - 2. National Electrical Code (NEC)
- B. Recommendations from industry codes, standards and methods, including the following organizations:
  - 1. Underwriters Laboratory – UL
  - 2. Federal Communications Commission – FCC
  - 3. Interference Causing Equipment Standard – ICES (Canada)
  - 4. Institute of Electronic and Electrical Engineers – IEEE
  - 5. International Standards Organization – ISO
  - 6. International Electrotechnical Commission – IEC
  - 7. Restriction of Hazardous Substances Directive (RoHS)

#### 1.5 ADMINISTRATIVE REQUIREMENTS

- A. Coordination: Ensure Access Control System installation is fully coordinated with provisions of Division 01, Section 013100 – Project Management and Coordination.
- B. Scheduling: Ensure pre-installation of cabling, mounting hardware and equipment installation is fully coordinated with completion requirements in other Sections.

#### 1.6 SUBMITTALS

- A. General: In compliance with Conditions of the Contract and Division 01, Section 01 33 00 Submittal Procedures.
- B. Product and Technical Data:
  - 1. Manufacturers technical data sheets and bulletins
  - 2. Manufacturers installation and operation manuals
  - 3. Manufacturer Maintenance data
- C. Shop Drawings:
  - 1. Wiring diagrams
  - 2. Equipment placement locations
  - 3. Schedules and tables: Product quantity and placement



D. As-Builts:

1. Contractor shall supply as-built drawings in hardcopy and electronic CAD (2010 or newer) format that clearly shows:
  - a. Device locations
  - b. Wiring runs
  - c. Labeling schemes
  - d. System interconnections

E. Quality Control Submittal:

1. Test Reports: Submit complete sample test data and reports with exact labels used on cables and patch panels.
2. Certificates:
  - a. Manufacturer Certification: Submit certification from manufacturer of products to be installed under this contract certifying that either the Contractor or the Installation Subcontractor is authorized by the manufacturer to install specified products.
  - b. Installation Subcontractor Experience: Submit list of at least 5 completed projects.

F. Contract Closeout Submittal: Comply with requirements of Division 01, including submission of operating and maintenance instructions as item in "Operation and Maintenance Data" manual described in that Section.

G. O&M Manuals:

1. Operation and Maintenance manuals must be provided by the Contractor to the Owner prior to completion.
2. O&M manuals shall be reviewed with the Owner for verification of the sequence of operations and troubleshooting instructions.
3. All passwords and relevant codes shall be included with the O&M manuals.

1.7 QUALITY ASSURANCE

A. The system shall be manufactured for the intended purpose in an educational, 24 hour day, 7 days per week, and 365 days per year operating environment

B. Manufacturer Qualifications:

1. Obtain systems and products from a manufacturer experienced in the engineering, production and support of an access control system, and, with sufficient production capability to meet the required project schedule.
2. Manufacturer shall be capable of providing field representation during design, installation, and commissioning of systems.
3. Installer shall be a Lenel Certified VAR.
  - a. Lenel International A part of UTC Climate, Controls, & Security A unit of United Technologies Corporation Tel: 585-248-9720  
  
www.lenel.com

#### 1.8 DELIVERY, STORAGE AND HANDLING

- A. General: Comply with manufacturers recommended procedures for receiving and protection of the equipment.
- B. Storage and Protection: Store materials protected from exposure to extreme or harmful environmental conditions and at temperature and humidity levels recommended by the manufacturer:
  1. Deliver individual components in the manufacturers original packaging and labeling.
  2. Prevent physical damage, soiling or wetting.
  3. Provide secure storage prior to and during installation.

#### 1.9 WARRANTY

- A. Provide original equipment manufacturers warranty documentation for acceptance by the Owner
  1. Warranty Period: Provide manufacturer's system warranty against electrical or mechanical defects for 2-years commencing with the Date of Substantial Completion.

### PART 2 -PRODUCTS

#### 2.1 CARD READERS

- A. Manufacturer:
  1. HID Global Corporation An ASSA ABLOY Group brand  
  
www.hidglobal.com
- B. Manufactured Units:
  1. Provide multi class Readers:
    - a. RP40

#### 2.2 DOOR STRIKES – REQUEST-TO-EXIT

A. Manufacturer:

1. Bosch Security Systems, Inc. 130 Perinton Parkway Fairport, NY 14450 Tel: 800-289-0096  
[www.boschsecurity.us](http://www.boschsecurity.us)

B. Manufactured Units:

1. Provide request-to-exist Detectors:
  - a. DS160 Series

2.3 DOOR STRIKES – ELECTRIC STRIKES

A. Manufacturer:

1. HES An ASSA ABLOY Group brand  
[www.hesinnovagtions.com](http://www.hesinnovagtions.com)

B. Manufactured Units:

1. Provide surface mounted electric strikes:
  - a. 8500 Series Genesis™ -Finish to match door frame.
  - b. 9500 Series

2.4 DISCONNECT CABLE (Mullion Installation)

A. Manufacturer

1. Ademco

B. Manufactured Units

1. Disconnecting Door Cord Model 69

2.5 MAGLOCK

A. Manufacturer

1. Securitron an ASSA ABLOY Company

B. Manufactured Units:

1. M62 Series Magnalock

2.6 ACCESS CONTROL CONTROLLER

A. Manufacturer:

1. Lenel International A part of UTC Climate, Controls, & Security A unit of United Technologies Corporation Tel: 585-248-9720  
[www.lenel.com](http://www.lenel.com)

B. Manufactured Units:

1. Provide access control controller
  - a. M3PPMSP – Secure Perfect M3000 PXNplus 2) 8RP Board
  - b. WIU 4 Reader Interface

### PART 3 -EXECUTION

#### 3.1 EXAMINATION

##### A. Verification of Conditions:

1. Visit Site to identify and become familiar with existing field conditions and specific requirements of each Site.
2. Verify all dimensions in field and confirm condition of existing hardware to be utilized.
3. Confirm space requirements and physical confines of all work areas to ensure that all materials can be installed in indicated spaces. Engineer and Owner in writing of any discrepancies or issues in Design described in Contract Documents.
4. Examine conditions under which cabling and equipment and related components are to be and notify Engineer and Owner in writing of any conditions detrimental to proper and timely installation. Do not proceed with installation until unsatisfactory conditions have been corrected to ensure a safe and timely installation.
5. When Installer confirms conditions as acceptable to ensure proper and timely installation and to ensure requirements for applicable warranty or guarantee can be satisfied, submit to Engineer and Owner written confirmation. Failure to submit written confirmation and subsequent installation will be assumed to indicate conditions are acceptable to Contractor.

#### 3.2 PREPARATION

- A. Protection: Provide adequate protection of equipment and hardware before and after installation.
- B. Existing Communications Services: Ensure all telecommunications systems (voice, video, and data) remain operational throughout the project.
  1. Identify any circuits and/or wiring at the site not shown on Drawings and interfering with installation of specified Equipment.

#### 3.3 FIELD QUALITY ASSURANCE

- A. Provide Manufacturer Field Engineering Support for engineering, installation, testing and commissioning assistance.
- B. Installer Qualifications:
  1. Installer shall have completed factory approved training and be certified by the manufacturer as qualified to install, operate and maintain product(s) specified

- C. Contractor must collaborate with BCPS Security, DoIT, and the current programming vendor for programming, testing and commissioning in the central station for all security systems.
- D. Ensure system and network configuration is fully coordinated with the Owner's Department of Information Technology and Department of Physical Facilities, Office of Maintenance – Security.

### 3.4 INSTALLATION

- A. Provide and install all components necessary to install complete cabling and equipment systems, including (but is not limited to) patch cables, connectors, terminators, card swipes, catches, controllers, etc.
  - 1. Install the system and equipment in accordance with the equipment manufacturers recommended procedures.
    - a. WIU 4 Boards shall be installed in their own enclosure located above the ceiling near the door.
  - 2. Install system using generally acceptable industry practices for network appliances.
- B. Ensure system and network configuration is fully coordinated with the Owner's Department of Information Technology and Department of Physical Facilities, Office of Maintenance – Security.
- C. Ensure system and all related components are configured to support Owner's performance requirements.
- D. Install all exposed cabling in surface raceway by Wiremold, Hubbell, or Panduit where in-wall conduit has not been provided. Follow all manufacturers' guidelines requirements regarding bending radius and slack.
- E. Install all cable in accordance with National, state and local codes and TIA/EIA Standards, and BICSI methods.
  - 1. Follow manufacturer's guidelines and requirements for all cable termination.
- F. Properly terminate all cables at card swipes and controllers. Provide and install a diode to all strikes and mag-locks. Permanently identify all cables in pullboxes, transition points, and termination points by affixing pre-marked self-adhesive wraps similar to Brady "B-500+ Plastic Cloth Markers."
- G. Permanently identify all system components.
- H. Magnetic Locks (Maglocks) shall be tied into fire alarm system.
  - 1. Programming of Fire Alarm and Modules shall be provided by Ark Systems Inc.
    - a. Installer shall contract directly with Ark Systems Inc.

### 3.5 CONTROLLER PROGRAMMING

A. Programming:

Contractor to program card readers and controllers per manufacturer instructions.

Contractor to provide a checklist to Owner requesting information necessary to program card reader and controller units.

B. System Update:

Owner will contract directly with Kratos Public Safety and Security (Kratos PS&SS) to integrate the new access control system into the Owner's existing multi-building system.

Provide necessary information to Owner so Kratos PS&SS can update programming.

3.6 COMMISSIONING

A. Testing: Ensure system operates to manufacturer's specifications.

1. Upon completion of work, all parts of the installation shall be tested by the Contractor and demonstrated free of any defects. Preliminary testing will be permitted but shall not be accepted in lieu of obtaining final test results. Final test results shall be accomplished by the use of proper test equipment for the system being tested.

B. Ensure system and all related components are configured to and comply with Owner's performance requirements.

C. Training:

1. None.

D. Documentation: Provide manufacturer's hardware installation and software user guides for each level of authorized users.

1. Provide 2 sets of printed guides.

2. Provide set in PDF format on a DVD.

3.7 ACCEPTANCE

A. Accurate as-built drawings shall be provided in electronic and hard copy format.

1. 1 copy of electronic (CAD) drawings shall be distributed on DVD or memory stick to the Owner.

2. 1 hard copy of CAD drawings shall be plotted on full size sheets and test results of every installed cable have been given to the Owner.

B. Contractors work shall be considered complete after the following conditions have been met:

1. Cable, Card Swipe, Catches, and Controller installation is complete and all cable runs have been tested and documented to be installed according to specifications and drawings.
2. Representatives of the DoIT and Office of Maintenance – Security have successfully tested the “LIVE” system.
3. All punch list items have been reconciled.
4. All disturbed ceiling panels, covers, etc. have been properly reinstalled.
5. All materials and trash have been removed from the site.

END OF SECTION 281300

## SECTION 282300 – VIDEO SURVEILLANCE SYSTEM

### PART 1. GENERAL

#### 1.1 SUMMARY

- A. Section Includes
  - 1. CCTV Cabling
  - 2. CCTV Cameras
  - 3. CCTV Recording Equipment
  - 4. CCTV Hardware
  - 5. CCTV Software
  - 6. CCTV Accessories
  - 7. All materials, terminations, equipment, labeling and associated cable performance testing.

#### 1.2 DEFINITIONS

- A. Refer to section 01100 for applicable definitions and terms.
- B. CCTV and video surveillance refer to the same system and are used interchangeably. Terms refer to cabling system included in this specification section.

#### 1.3 SYSTEM DESCRIPTION

- A. Design Requirements
  - 1. Provide labor, materials, equipment, services and operations required for complete installation of LAN compatible Category 6 copper horizontal (camera) wiring for the CCTV system and associated power wiring.
    - a. All horizontal UTP wiring employs a star topology.
      - 1) Category 6 UTP “Yellow” wiring terminates in Category 6 RJ-45 male connector jack at camera locations and the Work Stations and on Category 6 rack-mounted patch panel dedicated for security cameras in telecommunications room. Connections wired per TIA/EIA-568A.
      - 2) Power for interior fixed cameras shall be provided via Power Over Ethernet switches.
      - 3) Power for interior PTZ cameras shall be provided via a multi camera power supply located in the nearest IDF/MDF.
      - 4) Power for exterior cameras shall be provided shall be provided via a multi/individual camera power supply (as per manufacturer recommendation) located in the nearest IDF/MDF.
      - 5) Power wiring shall be homerun from end device location to headend/LAN equipment location without breaks or splices.
    - b. Network cables routed from distribution racks throughout building as shown on T-Drawings.



- 1) Refer to notes on each drawing to determine exact installation methods.
  - 2) Note and record all cable lengths to the nearest foot.
  - 3) Replace any UTP cable exceeding 90 meters (295 feet) and route to reduce length to a minimum of 90 meters. Complete all cable rerouting for compliance at no additional cost to Authority.
  - 4) Identify to Design consultant prior to installation of any UTP cables that cannot be reduced to 90 meters or less in total length (rise and run).
  - 5) Strictly adhere to most current version of TIA/EIA Telecommunications cabling standards.
- c. Category 6 rated RJ-45 type connectors with all four copper pairs terminated and tested in accordance with EIA 568B wiring standard.
  - d. Permanently identify and label all cables and termination devices, at distribution rack and workstation in accordance with ANSI TIA/EIA-606 Standard or as agreed by Design consultant and Authority.
  - e. Remove and replace any cables failing to meet end-to-end testing requirements; do not abandon cable in place. All cable shall be terminated at both ends, unless noted in T-Drawings.
2. Provide labor, materials and equipment for a complete electronics installation including all servers, cameras, software and hardwired components.
    - a. The system shall be fully operational prior to acceptance by the designer and owner.
- B. Performance Requirements**
1. The CCTV system shall use IP protocols to transmit signal information and images.
  2. The CCTV system shall provide 24/7 recording capability on all cameras.
  3. Cameras shall employ Video Motion Recording (VMR).
  4. Cameras (fixed) shall be powered inline
  5. Cameras (PTZ) shall be powered off power supplies.
  6. Cameras shall be IP type cameras.
  7. Cameras shall have varifocal lenses and auto iris.
  8. Cameras shall have a selectable recording frame rate.
  9. Cameras shall be enclosed within vandal proof enclosures/domes.
  10. Network Video Recording equipment shall provide uninterrupted recording.
  11. NVRs/Servers shall allow simultaneous recording and playback
  12. The system shall be accessible onsite via the LAN and offsite via IP communications.
  13. The system shall employ user access levels and password protections.
  14. Onsite archiving and DVD/CD transfer

15. Comply with applicable requirements in Local, State and Federal Codes, TIA/EIA Standards, and BICSI methodology.
16. Specified cabling system derived from recommendations in approved telecommunications industry codes, standards and methods, including the following documents:
  - a. Articles 250, 725, 760, 770, 800,810 and 820 of the current National Electrical Code.
  - b. ANSI/TIA/EIA-568-B.1: Commercial Building Telecommunications Cabling Standard Part 1 – General Requirements
  - c. ANSI/TIA/EIA-568-B.2: Commercial Building Telecommunications Cabling Standard Part 2 – Balanced Twisted Pair Cabling Components and subsections.
  - d. ANSI/TIA/EIA-568-B.3: Commercial Building Telecommunications Cabling Standard Part 3 – Optical Fiber Cabling Components
  - e. ANSI/TIA/EIA-569-A: Commercial Building Standard for Telecommunications Pathways and Spaces
  - f. ANSI/TIA/EIA-606: Administration Standard for Telecommunications Infrastructure of Commercial Buildings
  - g. ANSI/TIA/EIA-607: Commercial Building Grounding and Bonding Requirements for Telecommunications
  - h. ANSI/TIA/EIA-758: Customer-Owned Outside Plant Telecommunications Cabling Standard
  - i. BICSI Telecommunications Distribution Methods Manual (TDMM), Tenth Edition
  - j. National Fire Protection Agency (NFPA-70): National Electrical Code (NEC)

#### 1.4 SUBMITTALS

- A. Comply with requirements of Division 0 and Division 1 - Submittals and as modified below.
- B. Product Data: Submit manufacturer's product literature, technical specifications and similar information for the following items demonstrating compliance with the specified requirements.
  1. Copper cable, patch cables and termination devices.
  2. Fiber
  3. Power conductors
  4. Power Supplies
  5. Cameras
  6. NVRs
  7. Work Stations
  8. Software
  9. Inner duct and accessories.

10. Wiring diagrams.
  11. Sample of each cable test report.
  - C. Samples: Provide samples of assemblies and connections as described below, prior to installation, for approval by designer.
    1. CCTV cables and connections – Submit samples of cables and terminations to be provided including following components and characteristics:
      - a. Provide all components in colors selected by Design consultant.
  - D. As-Builts
    1. Contractor shall supply as-built drawings in hardcopy and electronic CAD (2008 or newer) format that clearly shows:
      - a. Device locations
      - b. Wiring runs
      - c. Labeling schemes
      - d. System interconnections.
  - E. Quality Control Submittal
    1. Test Reports: Submit complete sample test data and reports with exact labels used on cables and patch panels
    2. Certificates
      - a. Manufacturer Certification: Submit certification from manufacturer of products to be installed under this contract certifying that Installer is authorized by manufacturer to install specified products.
      - b. Installer Experience Listing: Submit list of at least 5 completed projects as specified below in “Quality Assurance – Qualifications – Installer.”
  - F. Contract Closeout Submittal: Comply with requirements of Division 0, including submission of operating and maintenance instructions as item in “Operation and Maintenance Data” manual described in that Section.
  - G. O&M manuals
    1. Operation and Maintenance manuals must be provided by the contractor to the owner prior to job completion.
    2. O&M manuals shall be reviewed by the design consultant and owner for verification of the sequence of operations and troubleshooting instructions.
    3. All passwords and relevant codes shall be included with the O&M manuals.
- 1.5 QUALITY ASSURANCE
- A. All Work shall be installed in a first class, neat and workmanlike manner by skilled Technicians. The quality of the workmanship shall be subject to inspection and approval by authorized owner personnel. Any work found to be of inferior quality and/or workmanship shall be replaced and/or reworked until the approval of owner is obtained.
  - B. Qualifications
    1. Installer

a. Installer shall be one of the following current BCPS on-call Security contractors:

- 1) ARK Systems, Inc.  
9176 Red Branch Road  
Columbia, MD 21045  
Shari Coccia, Sales Manager  
[scoccia@arksysinc.com](mailto:scoccia@arksysinc.com)  
410-997-0188
- 2) ASG Security, LLC  
12301 Kiln Court, Suite A  
Beltsville, MD 20705  
Jeff Stroh, Sr. Sales Representative  
[jstroh@asgsecurity.com](mailto:jstroh@asgsecurity.com)  
301-623-3186
- 3) Kratos Public Safety & Security Solutions, Inc  
7020 Troy Hill Drive, Suite A  
Elkridge, MD 21075  
Tobe Henry, Senior Security Consultant  
[tobe.henry@kratos-hbe.com](mailto:tobe.henry@kratos-hbe.com)  
410-379-2748 ext.1206
- 4) HP Secure, Inc.  
2615A Willow Ave  
Baltimore, MD 21227  
Tod Connor,  
[tod.connor@hpsecure.net](mailto:tod.connor@hpsecure.net)  
443-568-0180

b. Qualified to cable, terminate and test data network cabling system, coaxial cable system and associated power wiring specified in this Section and section 16755, certified by manufacturer of products to be installed, and completed at least 5 installations of similar size, nature and complexity as specified for this project.

C. Conditions for Consideration of "Or Equal" Products: Where products are specified by name and accompanied by the term "or equal", the proposed "or equal" product will be considered when the following conditions are satisfied. If all the following conditions are not satisfied, Design Consultant will return requests without action, except to record noncompliance with these requirements:

1. Proposed product does not require extensive revisions to the Contract Documents.
2. With the exception of the product name or number and manufacturer's name, proposed product conforms with requirements indicated on the Drawings and in the Specifications in every respect and will produce indicated results.
3. Proposed product is fully documented and properly submitted.
4. Proposed product has received necessary approvals of authorities having jurisdiction.
5. Proposed product is compatible with AND has been coordinated with other portions of the Work.
6. Proposed product provides specified warranty.

7. If proposed product involves more than one contractor, proposed product has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
8. Submission is accompanied with detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
9. Submission is accompanied with a list of similar installations for completed projects with project names and addresses and names and addresses of design consultants and authorities, if requested.
10. Submission is accompanied with proposed product's Manufacturer signed written statement on Manufacturer's letterhead, certifying that manufacturer complies with requirements in the Contract Documents.

## 1.6 WARRANTY

- A. Installer's Warranty: Provide manufacturer's system warranty against electrical or mechanical defects for 2 year from date of final acceptance.
- B. A fifteen (15) year Extended Product Warranty and Systems Assurance Warranty for UTP camera wiring system shall be provided by the Manufacturer as follows:
  1. Extended Product Warranty: The Extended Product Warranty shall ensure against product and workmanship defects, that all approved cabling components exceed the specifications of TIA/EIA 568B and Addenda for fiber link/channels and copper components, for a fifteen (15) year period. The warranty shall apply to all passive components, including both cable and connecting hardware as a combined system. Any claims cover replacement costs on any defective product, both material and labor. Extended warranties beyond fifteen (15) years will be considered.
  2. System Assurance: The System Assurance shall cover the failure of the wiring system to support the application which it was designed to support as well as additional application(s) introduced in the future by recognized standards or user forums that use the TIA/EIA 568B component and link/channel specifications for cabling, for a fifteen (15) year period.
  3. System Certification: Upon successful completion of the installation and subsequent inspection, the Authority shall be provided with a numbered certificate, from the manufacturing company, registering the installation.
- C. Manufacturer warranty coverage for cable systems associated with the CCTV System.
- D. Products shall be warranted for a 2 year period of time from the date of completion if not covered by the 15 year cable warranty.

## PART 2. PRODUCTS

### 2.1 MATERIALS

- A. Copper Cabling Components for video surveillance systems
  1. **UTP Camera Cabling**
    - a. Requirements: Complete balanced, twisted-pair compliant with current Category 6 provisions under TIA/EIA 568B Telecommunications Cabling Standard, including but not limited to:

- 1) "Component compliant" components certified to meet all requirements of TIA/EIA-568-B.2 "Balanced Twisted Pair Cabling Components."
  - 2) After assembly into completed cabling channel, all components meet performance requirements as specified in TIA/EIA-568-B.1 and B.2, meet cable manufacturer's and outlet manufacturer's performance requirements and are performance certified for Category 6 as a complete channel system.
  - 3) Shall meet specified physical and transmission characteristics requirements.
  - 4) Exceed minimum performance requirements of TIA/EIA-568-B. Cabling solutions not demonstrating performance greater than minimum requirements are not acceptable.
- b. Physical Characteristics
- 1) 100 Ohm Category 6 Unshielded Twisted Pair Cable (UTP)
  - 2) Meeting requirements of ANSI/ICEA S-80-576. For cables not specified in "Approved Components" paragraph, all 4 pairs insulated with F.E.P. providing maximum 0.023-inch diameter of insulated conductor.
  - 3) Cable shall be unique in color from voice and other data cabling. (see section 27 12 50)
  - 4) Acceptable Cable
    - a) Berk-Tek 10033817(PVC)-Cat 6
    - b) Or Approved Equivalent
  - 5) Consists of four 22 - 26 AWG twisted pairs.
  - 6) Cable shall be plenum rated.
  - 7) Color coding of pairs:
    - a) Pair 1.....W-BL; BL
    - b) Pair 2.....W-O; O
    - c) Pair 3.....W-G; G
    - d) Pair 4.....W-BR; BR
  - 8) Overall diameter not exceeding 0.250 inches for a single cable.
  - 9) Ultimate Breaking Strength (ASTM D 4565): 400 N minimum
  - 10) Withstands 1-inch bend radius at -20 degrees Celsius without jacket or insulation cracking.
- c. Third-party verified to meet TIA/EIA Category 6 requirements. All completed cabling channels fully backwards compatible with requirements of Category 5 and 5e cabling systems.
- d. Transmission Characteristics
- 1) DC resistance of any conductor not exceeding 9.38 Ohms per 100m max. at 20 degrees Celsius measured in accordance with ASTM D4566.

- 2) Mutual capacitance of any pair at 1 kHz for 100 m. of cable not exceeding 5.6nF.
- 3) DC resistance unbalance between any two conductor of any pair not exceeding 5 percent when measured at or corrected to 20 degrees Celsius in accordance with ASTM D 4566.
- 4) Capacitance unbalance to ground at 1 kHz of any pair not exceeding 330 pF per 100 m.
- 5) Delay skew not exceeding 25 ns at 100 MHz.
- 6) Propagation delay of any pair at 10 MHz not exceeding 5.7 ns/m.
- 7) Maximum Attenuation of any pair not exceeding values given in TIA/EIA-568-B.2-1.
- 8) NEXT coupling loss, PSNEXT loss, ELFEXT loss, PS-ELFEXT loss and Return Loss meeting requirements of TIA/EIA-568-B.2-1.

**2. Fiber**

- a. 4 Strand 50 micron MM Fiber with sc connectors.
- b. Fiber shall be identical in performance to the fiber installed as part of section 27 12 50.

**3. Patch Panels for CCTV Cabling**

- a. Shall meet requirements for category 6e performance requirements.
- b. Panels shall contain the number of termination ports required to terminate all jacks in service area, plus 20% spare capacity.
- c. Acceptable units:
  - 1) OR-PHD6E6U xx (24 or 48 cat 6e)
  - 2) Or approved equivalent.

**4. Patch Cables for CCTV Cabling**

- a. Factory terminated and tested UTP patch cables at workstation and equipment cross-connect meeting requirements of ANSI/TIA/EIA-568-B for patch cable testing.
  - 1) Meet all requirements of ANSI/TIA/EIA-568-B.2 standard.
  - 2) Contact plating of minimum of 50 micro inches of gold in contact area over 50 micro inch of nickel, compliant with FCC part 68.5.
  - 3) Use 8-position connector, unkeyed.
  - 4) Modular connector maintaining paired construction of cable to facilitate minimum untwisting of wires.
  - 5) Factory assembled and constructed to 100 ohm, 4-pair UTP per ANSI/TIA/EIA-568-B for minimum, Category 6 compliance.
  - 6) Performance marking indelibly labeled on jacket by manufacturer.

- 7) Accepts color-coded labels to comply with TIA/EIA-606 labeling requirements at both ends.
- 8) Manufactured by ISO 9001 Company.
- b. Patch cords shall be “yellow” in color and without boots.
- c. Patch cord length shall be as follows:
  - 1) LAN outlet, station end shall be 15 feet.
5. **Switching Equipment**
  - a. NS3702-24P-4S 24 Port 4 GigE SFP POE Stackable Managed Switch
    - 1) Part number NS3702-24P-4S 24
    - 2) No Substitutes.
  - b. Interlogix SFP 1000 BASE-SX Mini GBIC-2MM
    - 1) Part number **S30-2MLC / S30-2MLC-2**
    - 2) No Substitutes
6. **Power Supplies**
  - a. Interlogix Individual Power Supply
    - 1) Part Number Interlogix KTP-24
    - 2) No Substitutes
  - b. Interlogix Multi Power Supply
    - 1) Part Number Interlogix KTP-24—4- 400
    - 2) No Substitutes
7. **Recording Equipment**
  - a. Interlogix TruVision NVR 21P for 32 IP Cameras w/ 16TB Storage
    - 1) Part Number Interlogix TVN-2132P-16T
    - 2) No Substitutes
8. **CCTV Cameras**
  - a. **Interior Fixed Camera**
    - 1) TruVision 1.3MPX WDR IP Open STD, Progressive Scan CMOS Outdoor Vandal Dome, True Day/Night, 2.8-12mm Motorized
      - a) 1.3MPX
      - b) UTP,
      - c) 2.8-12mm Motorized
      - d) True Day/Night



- e) Smoked Dome
- f) Part Number **TVD-3203**
- g) POE

b. **Interior PTZ Camera**

- 1) Interlogix TruVision IP PTZ, 20X, WDR, 1.3 MP, Pan/Tilt/Zoom, Indoor/Outdoor, Wall-Mount Ready, NTSC (Req. Mount GEA-102, or GEA-105)
  - a) 20X Day/Night
  - b) WDR
  - c) Image Stabilizer
  - d) Rugged Housing with HTR/Fan unit
  - e) NTSC
  - f) Ethernet
  - g) Smoked Dome
  - h) Part Number: TVP-3101
- 2) TruVision 1.3MPX PTZ, NTSC, Pan/Tilt/Zoom, CMOS, True D/N, DWDR, Motorized IR Cut Filter, H.264, ONVIF/PSIA, 20X Optical Zoom, SD Card Slot, PoE+/24VAC
  - a) 1.3MPX
  - b) DWDR
  - c) Motorized IR Cut Filter H.264,
  - d) 20X Optical Zoom True Day/Night
  - e) Smoked Dome
  - f) POE
  - g) Part Number: **TVP-3103 / TVP-3101**

c. **Exterior Fixed Camera**

- 1) TruVision 1.3MPX WDR IP Open STD, Progressive Scan CMOS Outdoor Vandal Dome, True Day/Night, 2.8-12mm Motorized
  - a) 1.3MPX
  - b) UTP,
  - c) 2.8-12mm Motorized
  - d) True Day/Night
  - e) Clear Dome

- f) Part Number TVD-3203
- g) POE
- d. **Exterior PTZ Camera**
  - 1) TruVision 1.3MPX PTZ, NTSC, Pan/Tilt/Zoom, CMOS, True D/N, DWDR, Motorized IR Cut Filter, H.264, ONVIF/PSIA, 20X Optical Zoom, SD Card Slot, PoE+/24VAC
    - a) 1.3MPX
    - b) DWDR
    - c) Motorized IR Cut Filter H.264,
    - d) 20X Optical Zoom True Day/Night
    - e) Smoked Dome
    - f) POE
    - g) Part Number: **TVP-3101**

9. **Mount Types**

- a. Ceiling Mount Kits - **TVD-M2-WM**
- b. Wall mount – **TVD-CB5; TVD-SNB**
- c. Wall Mount **GEA-102**
- d. Corner Mount - **GEA-105**
- e. Parapet Mount – **GEA-104**

10. **CCTV Software and applications**

- a. GE-NAV v5, or higher.
- b. System must be license free style software.

11. **CCTV Workstation Hardware**

- a. If not specified, Work Station Unit must meet “recommended” requirements for TruVision Navigator v5 (or latest) system.
  - 1) See TruVision Navigator v5 (or latest) cut sheet for requirements.
  - 2) Provide 4 to 5 workstations (see drawings for quantities and locations).
  - 3) Dedicated Cat 6 home run from Work Stations to nearest camera switch (IDF/MDF).

- b. Work Stations must meet or exceed following requirements for TruVision Navigator v5 system:
- 1) Work Stations shall be Dell units with the following specifications:
    - a) Base Unit – Optiplex Desktop Base, Standard PSU (225-0772)
    - b) Processor – Core i7 2600 Processor (3.4GHz, 8M) (317-6642)
    - c) Memory – 8 GB, Non-ECC, 1333 MHz DDR3, 2x4 GC, Dell OptiPlex 990 (317-6782)
    - d) Keyboard – Dell USB Entry Keyboard, No Hot Keys, English, OptiPlex (331-2024)
    - e) Monitor – CFI, Standard Option Ultra View 22” monitor
    - f) Video Card – 1 GB AMD RADEON HD 7470 Graphics w/ Single DP/DVI, Low Profile, Dell OptiPlex 790 Small Form Factor and Desktop (320-2219)
    - g) Hard Drive – 500 GB SATA 6.0 Gb/s and 16 MB Data Burst Cache, Dell OptiPlex 790 (342-2494)
    - h) Operating System – Windows 7 Professional, SP1, No Media, 64-bit, OptiPlex, English (421-5606)
    - i) Operating System – Windows 7 Label, OptiPlex, Fixed Precision, Vostro Desktop (330-6228)
    - j) Mouse – Dell MS111 USB Optical Mouse, OptiPlex and Fixed Precision (330-9458)
    - k) NIC – Intel Standard Manageability, Dell OptiPlex 790 (331-2680)
    - l) CD-ROM or DVD-ROM Drive – 16X DVD-ROM SATA, Data Only, Dell OptiPlex 790 Desktop and Minitower (318-0622)
    - m) CD-ROM or DVD-ROM Drive – Cyberlink Power DVD 9.5, No Media, Dell OptiPlex, Latitude and Precision Workstation (421-4370)
    - n) Sound Card – Heat Sink, Performance, Dell OptiPlex 790 Desktop (317-6621)
    - o) Speakers – Speaker, OptiPlex Standard Speakers
    - p) Cable – Enable Low Power Mode for EUP Compliance, Dell OptiPlex (330-7422)
    - q) Cable – Dell Data Protection Access, OptiPlex (421-5078)
    - r) Cable – OptiPlex 790 Desktop Standard Power Supply (318-0872)
    - s) Cable – Regulatory Label, Dell OptiPlex 790 Desktop (331-2678)
    - t) Documentation Diskette – Documentation, English, Dell OptiPlex (331-2030)
    - u) Documentation Diskette – Power Cord, 125V, 2 M, C13, Dell OptiPlex (330-1711)

- v) Bundled Software – No Productivity Software, Dell OptiPlex, Precision and Latitude (421-3872)
- w) Factory Installed Software – Dell Energy Smart Power Management Settings Enabled OptiPlex (330-4817)
- x) Feature – No Resource DVD for Dell OptiPlex, Latitude, Precision (313-3673)
- y) Service – Basic Hardware Service – Next Business Day Limited Onsite Service After Remote Diagnosis 2 Year Extended (938-7662)
- z) Service – Basic Hardware Service – Next Business Day Limited Onsite Service After Remote Diagnosis Initial Year (951-7510)
- aa) Service – Dell Limited Hardware Warranty Plus Service Extended Year(s) (935-2476)

**12. Accessories**

- a. Keyboard and monitor connections shall be provided for each viewing station associated with the system.

**13. Power Wiring**

- a. Power wiring shall be approved by the CCTV manufacturer for use with the CCTV system.
- b. 14/2 AWG copper cable.
- c. Power source to be located at the closest network closet (IDF / MDF).

**14. UPS Equipment**

- a. APC RS3000 unit shall be provided at each rack to power NVRs, POE switches and camera power supplies. (Refer to Section 00100 for the additional information)
- b. Provide quantity for each device to have a dedicated connection.
- c. Each CCTV workstation shall have an APC RS1500 unit for the client PC (if applicable, refer to Section 00100 for the additional information)

**PART 3. EXECUTION**

**3.1 EXAMINATION**

- A. Verification of Conditions: Examine conditions under which CCTV cabling and equipment and related components are to be installed in coordination with Installer of materials and components specified in this Section and notify affected Prime Contractors and Design consultant in writing of any conditions detrimental to proper and timely installation. Do not proceed with installation until unsatisfactory conditions have been corrected to ensure a safe and timely installation.
  - 1. When Installer confirms conditions as acceptable to ensure proper and timely installation and to ensure requirements for applicable warranty or guarantee can be

satisfied, submit to Design consultant written confirmation from applicable Installer. Failure to submit written confirmation and subsequent installation will be assumed to indicate conditions are acceptable to Installer.

2. Visit Site to identify and become familiar with existing field conditions and specific requirements of each Site.
3. Verify all dimensions in field and confirm condition of existing hardware to be utilized.
4. Confirm space requirements and physical confines of all work areas to ensure that all materials can be installed in indicated spaces.
5. Confirm all outlet locations and cable pathways and advise Design consultant in writing of any discrepancies or issues in Design described in Contract Documents.

### 3.2 PREPARATION

- A. Protection: Provide adequate protection of equipment and hardware before and after installation.
- B. Existing Communications Services: Ensure all telecommunications systems (voice, video and data) remain operational throughout the project.
  1. Identify any circuits and/or wiring at the site not shown on T-Drawings and interfering with installation of specified Equipment.
  2. Remove all accessible portions of abandoned communications cabling per NEC 800.52. Tag all communications cabling not terminated at both ends but retained for future use.

### 3.3 INSTALLATION

- A. Contractor must collaborate with BCPS Security, IT and/or the current vendor for programming, testing and commissioning in the central station for all security systems.
- B. Provide and install all components necessary to install complete CCTV cabling and equipment systems, including (but is not limited to) connectors, patch cables, terminators, cameras, servers, etc...
  1. Cable runs shall be continuous and unbroken from end to end. Splicing of any LAN, Fiber or coaxial video distribution cable is prohibited.
  2. Secure all horizontal cables within ceiling cavities to building structure.
  3. Loosely bundle all cables and support from structure at unequal intervals from 5 to 6 feet with spring steel fasteners and cable clip rated for use with high performance cables where cable tray or other support structure has not been provided as indicated on Drawings. All mounting clips shall be seismic type as per BOCA.
  4. Do not violate manufacturer's recommended loadings. Leave 30% capacity for future use of pathway.
  5. Verify all horizontal cable run lengths prior to installation. Re-distribute horizontal cabling to maintain distance requirements and maintain pathway route accessibility.
  6. Do not support cables from ceiling grid T-Bars, grid wire supports or bridle rings. Do not allow cables to touch ceiling grid.

7. Install cables in EMT in all unfinished, exposed areas as shown in Design consultant and Architectural roof plans and/or T-Drawings, unless alternate pathways are noted.
  8. Do not secure cables with permanent cable ties. Do not tighten cable bundles in such a way as to cause jacket deformation or damage.
  9. Provide a minimum of 16' of cable slack at camera location and 24 inches at patch panels, unless noted otherwise.
  10. Place cables in compliance with TIA/EIA-568.B standards and BICSI recommended methods.
  11. Tight 90-degree bends are unacceptable, and use of plastic "cinch-type" tie-wraps are not permitted, in order to prevent damage to cable jacket and compromise the cable's electrical or optical characteristics.
  12. Cable bundles shall be neatly routed with a service loop to provide 10 feet of slack at the cross-connect end and as noted in the T-drawings. Cable bundles shall be secured using only black Velcro cable wraps.
  13. Install all software on all workstations.
- C. Determine allowable cable proximity to other electrical power sources of 480 Volts or less using TIA/EIA-569A "Cabling Pathway Standard" for UTP cable separations from sources of EMI:
1. Minimum separation distance form Power Source at 480 V or less:

CONDITION	<u>&lt; 2kVA</u>	<u>2-5 Kva</u>	<u>&gt; 5 kVA</u>
a. Unshielded power lines or electrical equipment in proximity to open or non-metal pathways	6 in.	12 in.	24 in.
b. Unshielded power lines or electrical equipment in proximity to open or non-metal pathways	3 in.	6 in.	12 in.
c. Power lines enclosed in a grounded metal conduit (or equivalent shielding) in proximity to grounded metal conduit pathway	3 in.	6 in.	12 in.
d. Transformers & Elec. Motors	40 in.	40 in.	40 in.
e. Fluorescent Lighting	12 in.	12 in.	12 in.
- D. Install all exposed cabling in surface raceway by Wiremold, Hubbell or Panduit where in-wall conduit has not been provided. Follow all manufacturers' guidelines requirements regarding bending radius and slack. All bends, offsets and fittings shall be appropriately sized to provide 30% capacity after installation.
- E. Install all cable in accordance with National, state and local codes and TIA/EIA Standards, and BICSI methods.
1. Follow manufacturer's guidelines and requirements for all cable termination.

- F. Properly terminate all cables at camera locations and distribution racks. Permanently identify all cables in pullboxes, transition points, and termination points by affixing pre-marked self-adhesive wraps similar to Brady "B-500+ Plastic Cloth Markers."
- G. Permanently identify all system components following TIA/EIA-606A "Administration Standard for Commercial Telecommunications Infrastructure" with identification format:
  - 1. Identification: Provide permanent identification labels for patch panels, access panels and entrance facilities.

### 3.4 TESTING

- A. CCTV, LAN, Video Cabling System, and Electronics
  - 1. CCTV Field of View must be verified onsite and with the properly installed lens. Any camera view that is blocked, blurry, unclear or unusable for its intended purpose shall be corrected and reinstalled using the proper lens and camera.
  - 2. Upon completion of work, all parts of the CCTV installation shall be tested by the CCTV Contractor and demonstrated free of any defects. Preliminary testing will be permitted but shall not be accepted in lieu of obtaining final test results. Final test results shall be accomplished by the use of proper test equipment for the system being tested.
  - 3. Re-terminate and re-test any cables or pairs of cables failing end-to-end testing requirements. Replace any faulty cables/pairs or termination devices. Remove all defective cables completely from pathways.
  - 4. Accurate as-built drawings shall be provided in electronic and hard copy format.
    - a. 3 copies of electronic (CAD) drawings shall be distributed on appropriate media: 1 to construction management, 1 to designers and 1 to the school.
    - b. 3 hard copies of CAD drawings shall be plotted on full size sheets and test results of every installed cable have been given to the construction management for appropriate distribution.

### 3.5 Training

- A. Training shall be provided in blocks of 8 hours for staff.
  - 1. Provide a minimum of 16 hours of training
  - 2. Record all sessions for owner use at a later date.

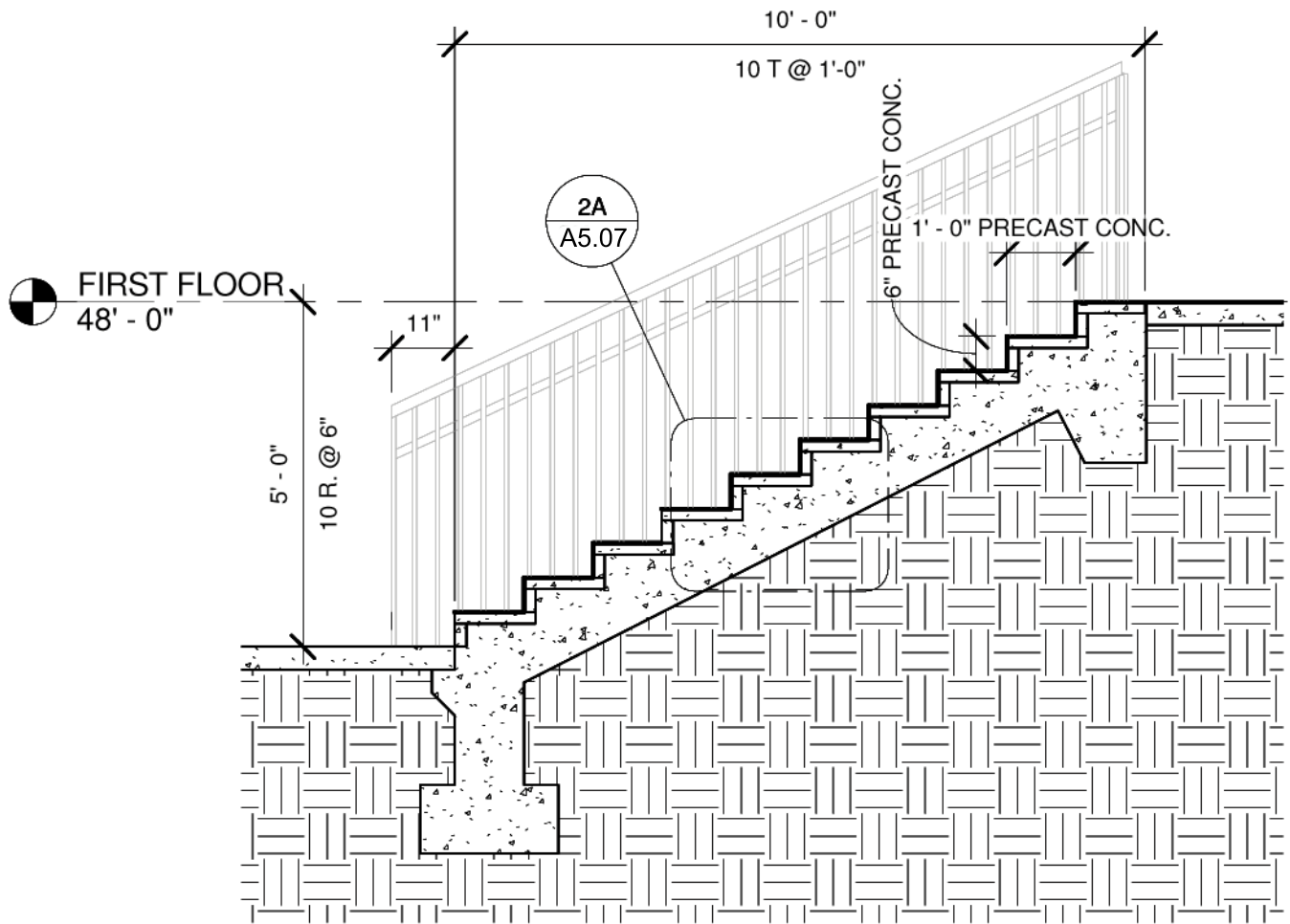
### 3.6 ACCEPTANCE

- A. Contractors work shall be considered complete after the following conditions have been met:
  - 1. Cable, Cameras and Electronics installation is complete and all cable runs have been tested and documented to be installed according to specifications and drawings.
  - 2. A school technology representative has successfully tested the "LIVE" system.
  - 3. All punch list items have been reconciled.
  - 4. All disturbed ceiling panels, covers, etc. have been properly reinstalled.
  - 5. All materials and trash have been removed from the site.

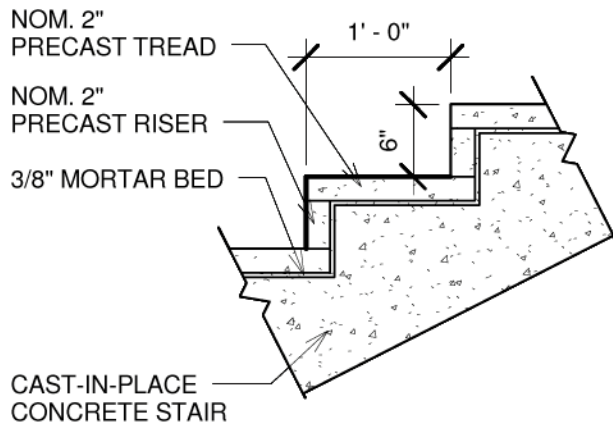
6. A 2-Year Installers warranty has been given to a school district Security or Technology representative.
7. Submit Manufacturers Extended Warranty Application.

END OF SECTION 282300



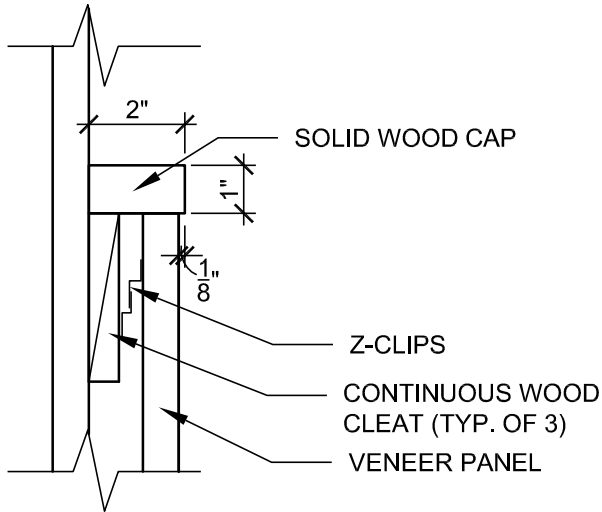


2 SEATING AREA STAIR SECTION (NORTH PATIO)  
 3/8" = 1'-0"

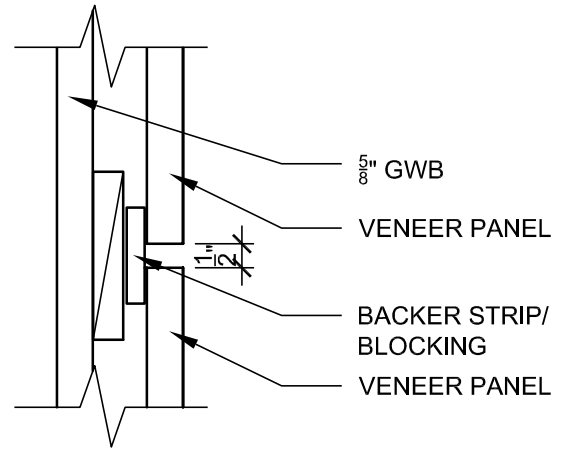


2A NORTH PATIO STAIR DETAIL  
 3/4" = 1'-0"

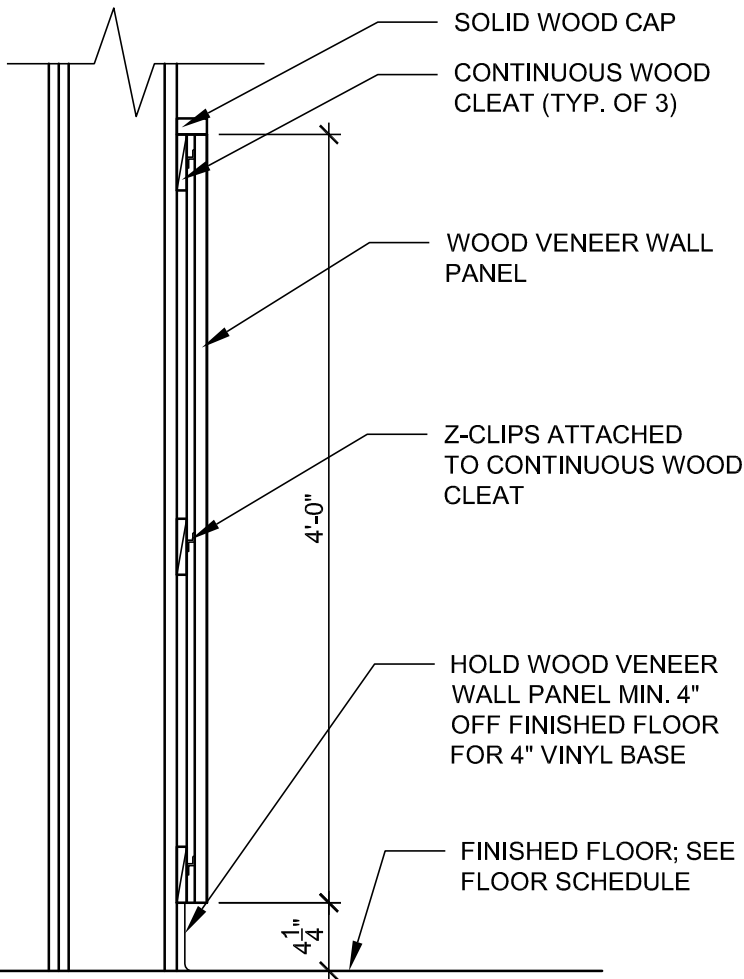
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	M&D Proj.#: 15123	Drawn By: BPG	Checked By: BRJ



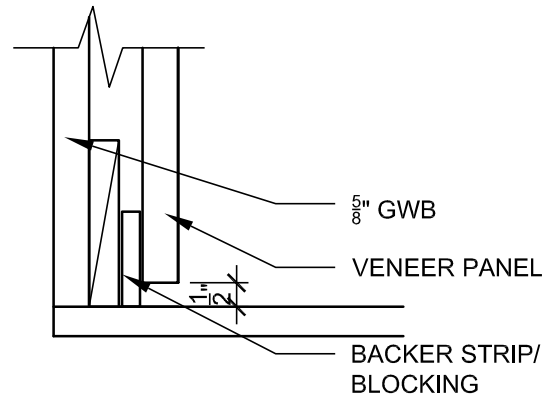
G5 WALL CAP DETAIL  
SCALE: 3" = 1'-0"



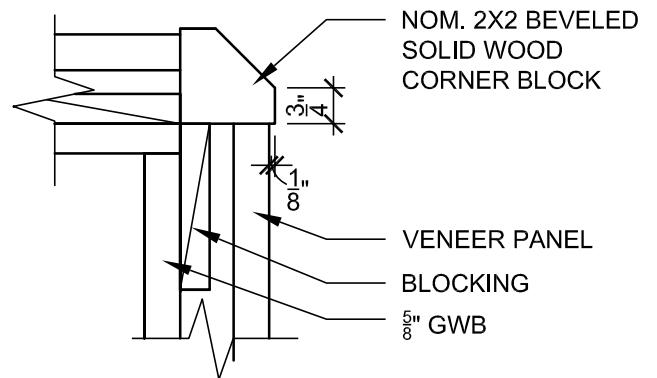
G5 WALL INTERMEDIATE DETAIL  
SCALE: 3" = 1'-0"



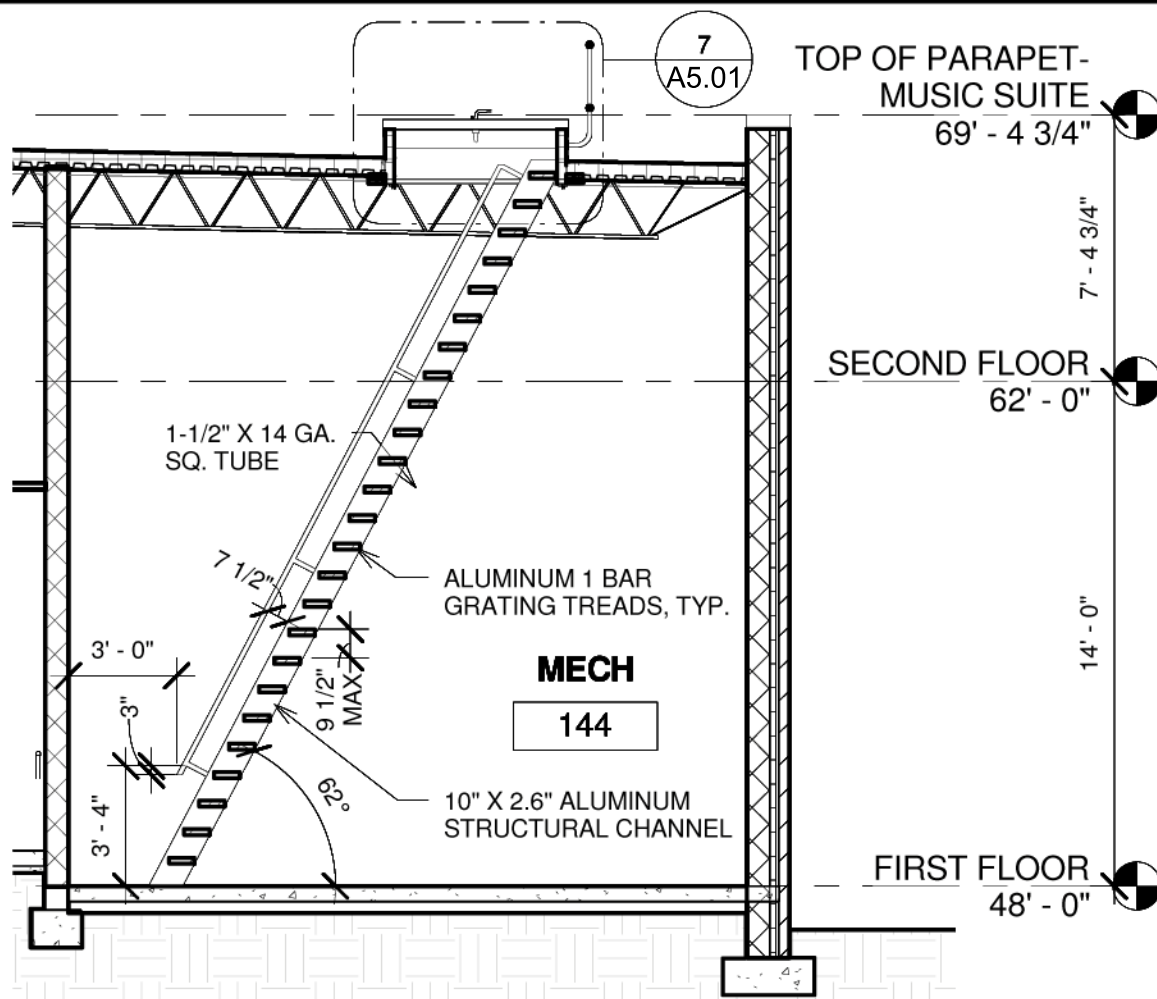
G5 WALL TYPE AND DETAILS  
SCALE: 1" = 1'-0"



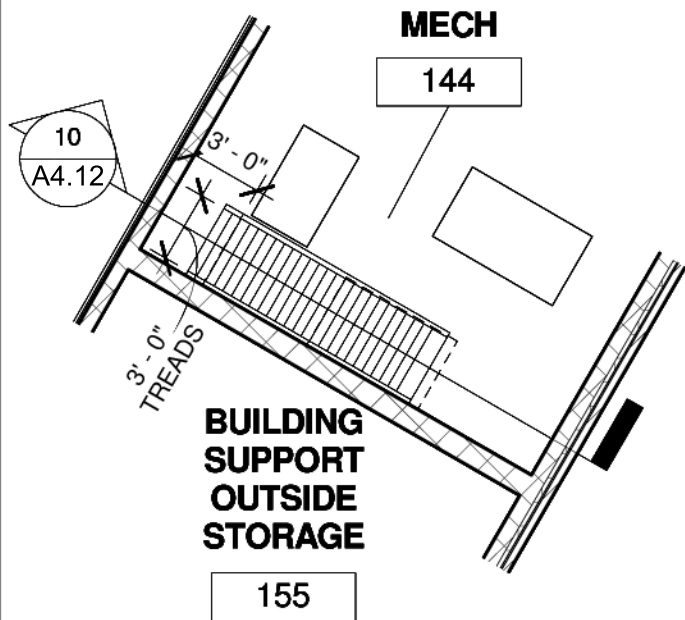
G5 WALL INSIDE CORNER DETAIL  
SCALE: 3" = 1'-0"



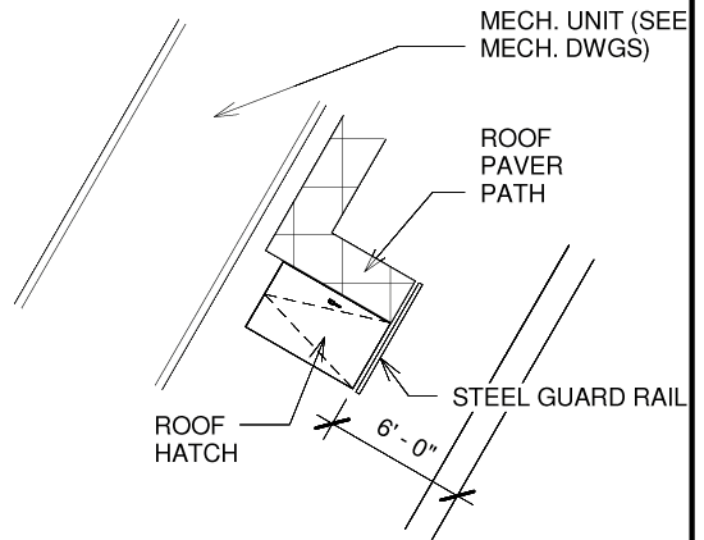
G5 WALL OUTSIDE CORNER DETAIL  
SCALE: 3" = 1'-0"



10 MECH. 144 SHIP'S LADDER - SECTION  
3/16" = 1'-0"

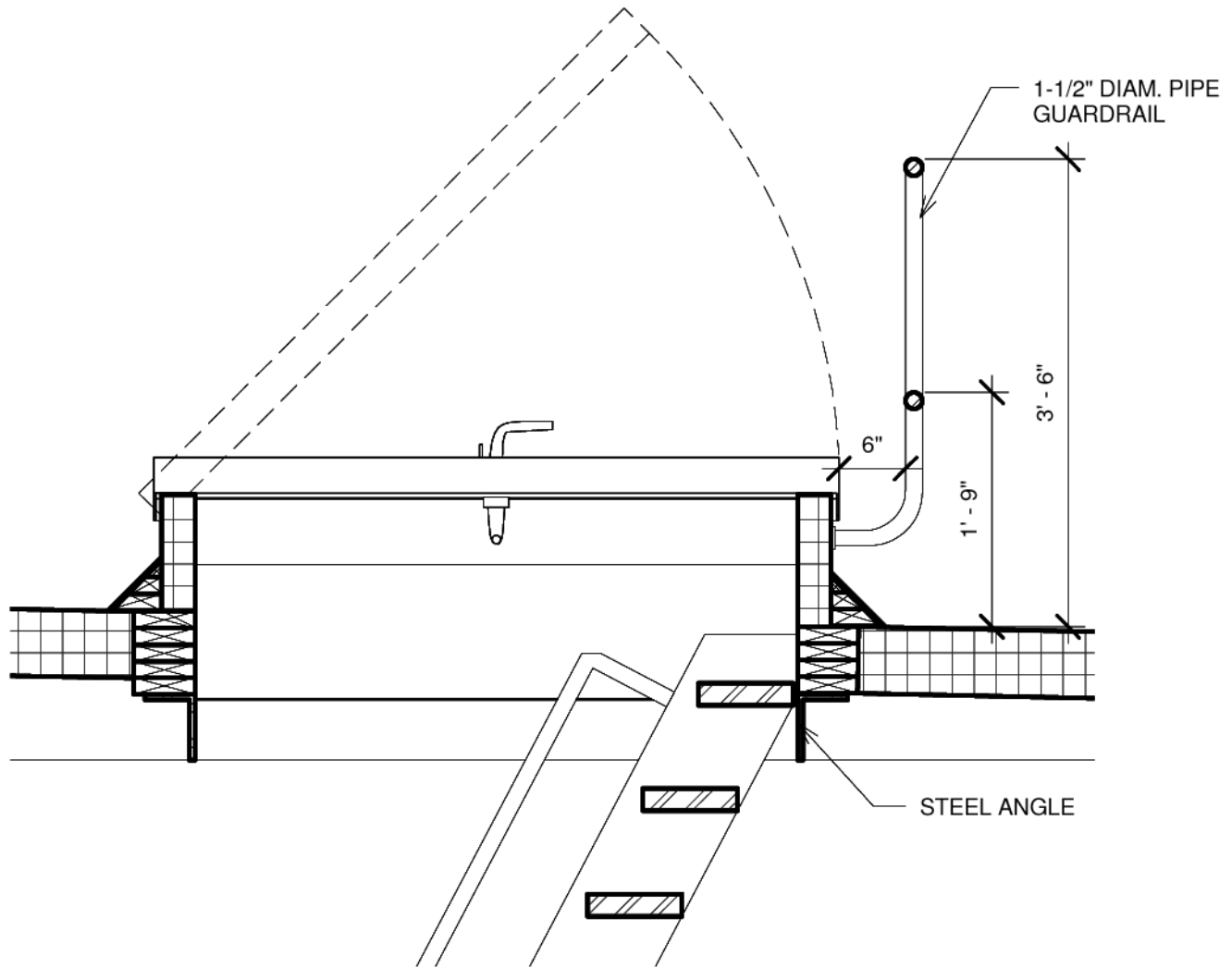


9 MECH. 144 FLOOR PLAN @ SHIP'S LADDER  
1/8" = 1'-0"



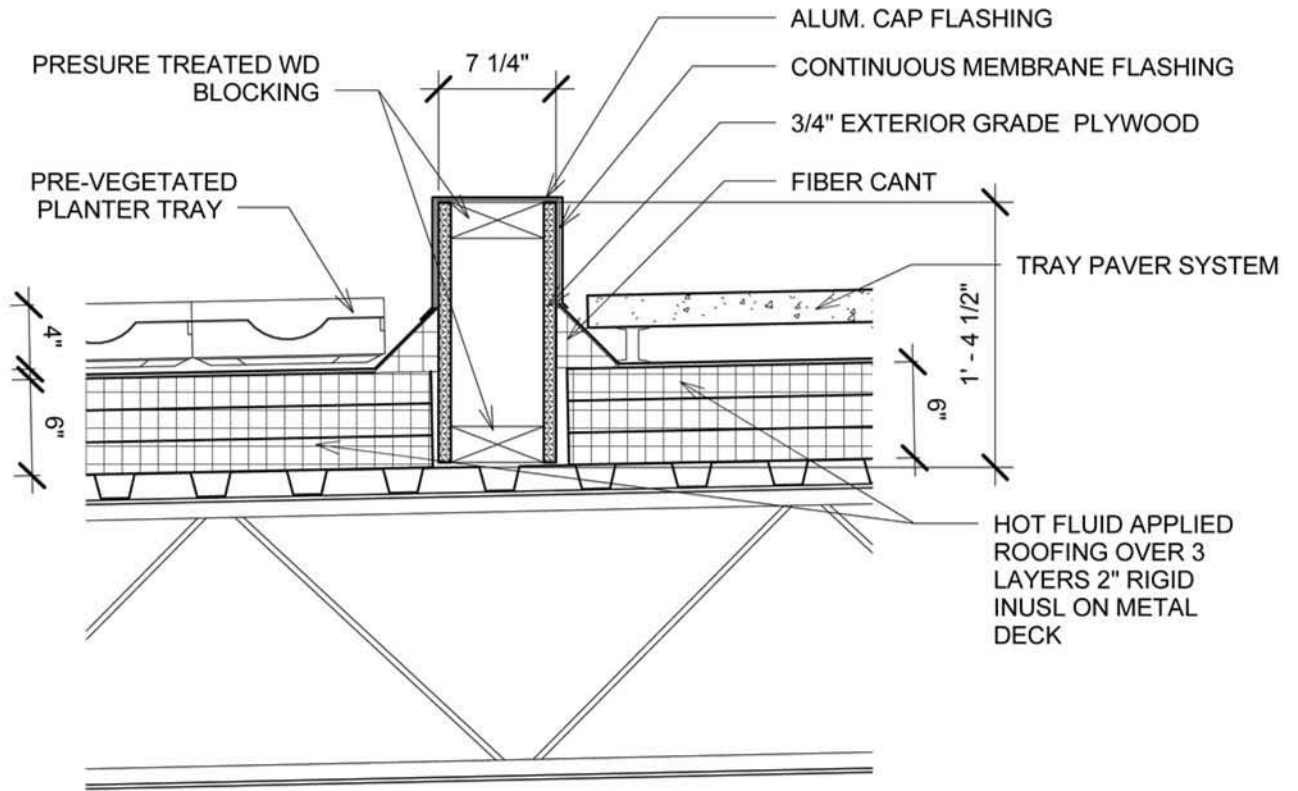
11 ROOF PLAN @ ROOF HATCH  
1/8" = 1'-0"

		BALTIMORE COUNTY PUBLIC SCHOOLS VICTORY VILLA ELEMENTARY SCHOOL BALTIMORE, MARYLAND		SUBMISSION: ADDENDUM #4 <b>A4.12</b> 2/9
M&D Proj.#: 15123	Drawn By: BPG	Checked By: BRJ	Date: 12/7/2016	



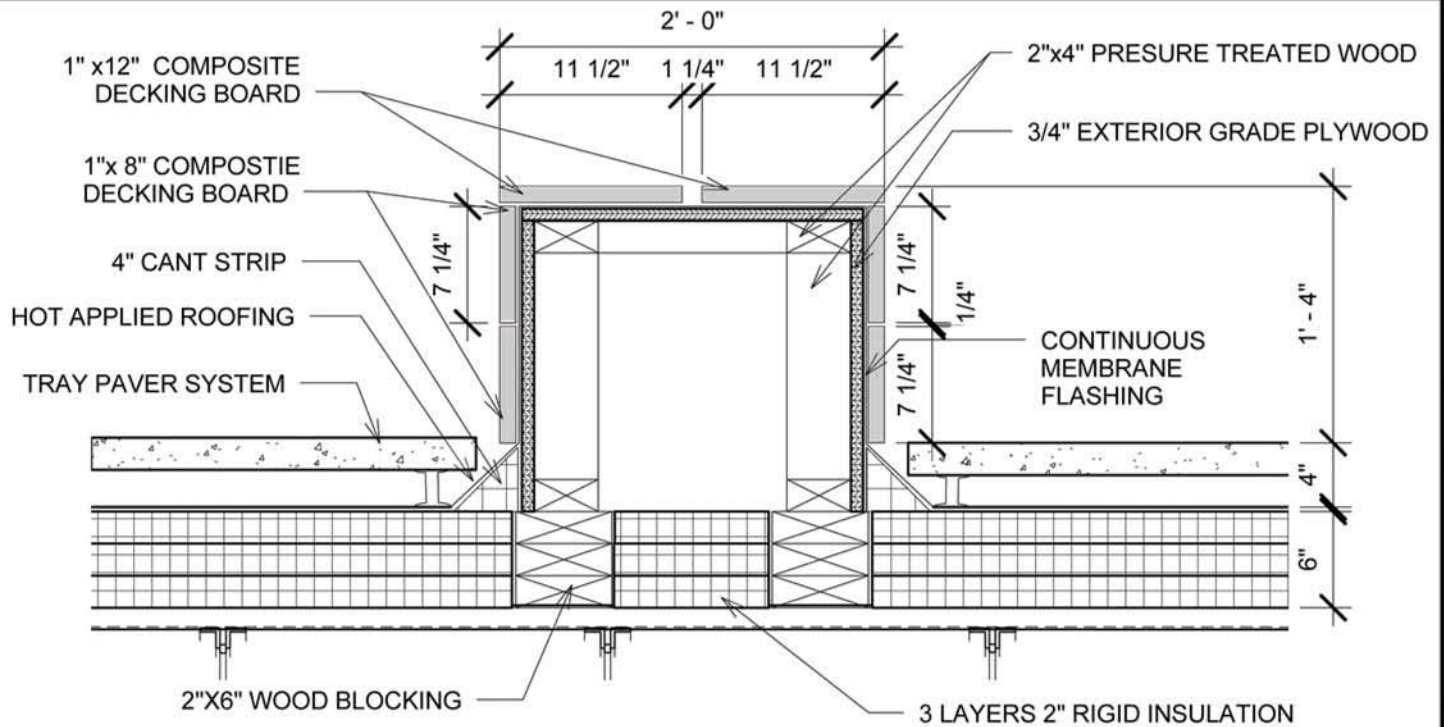
7 ROOF HATCH DETAIL  
 3/4" = 1'-0"

		BALTIMORE COUNTY PUBLIC SCHOOLS VICTORY VILLA ELEMENTARY SCHOOL BALTIMORE, MARYLAND		SUBMISSION: ADDENDUM #4 <b>A5.01</b> <b>3/9</b>
M&D Proj.#: 15123	Drawn By: BPG	Checked By: BRJ	Date: 12/7/2016	

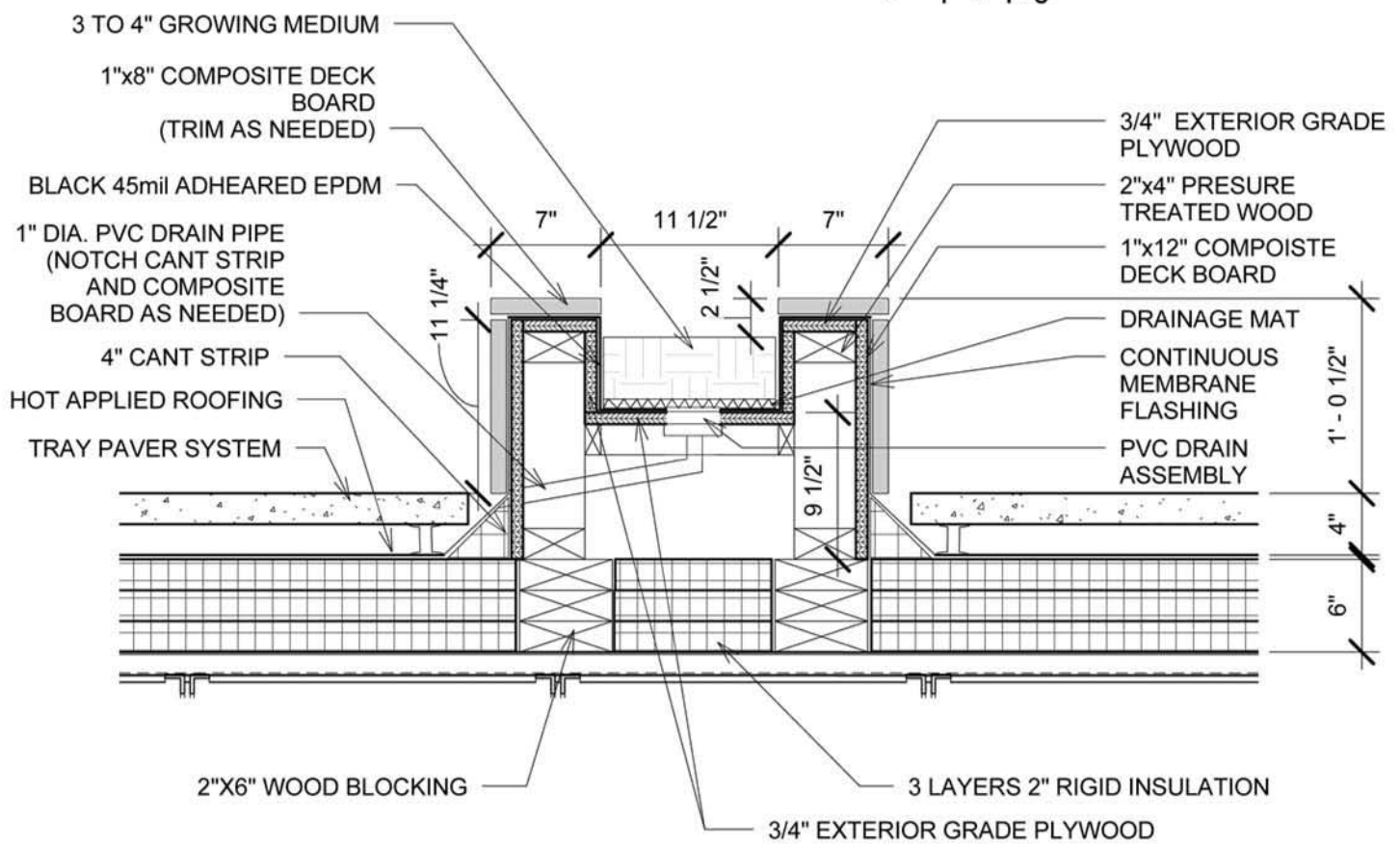


4 Curb Detail REVISED  
1" = 1'-0"

	BALTIMORE COUNTY PUBLIC SCHOOLS VICTORY VILLA ELEMENTARY SCHOOL BALTIMORE, MARYLAND		SUBMISSION: ADDENDUM #4 <b>A5.03</b>
	M&D Proj.#: 15123	Drawn By: MBD	Checked By: BRJ

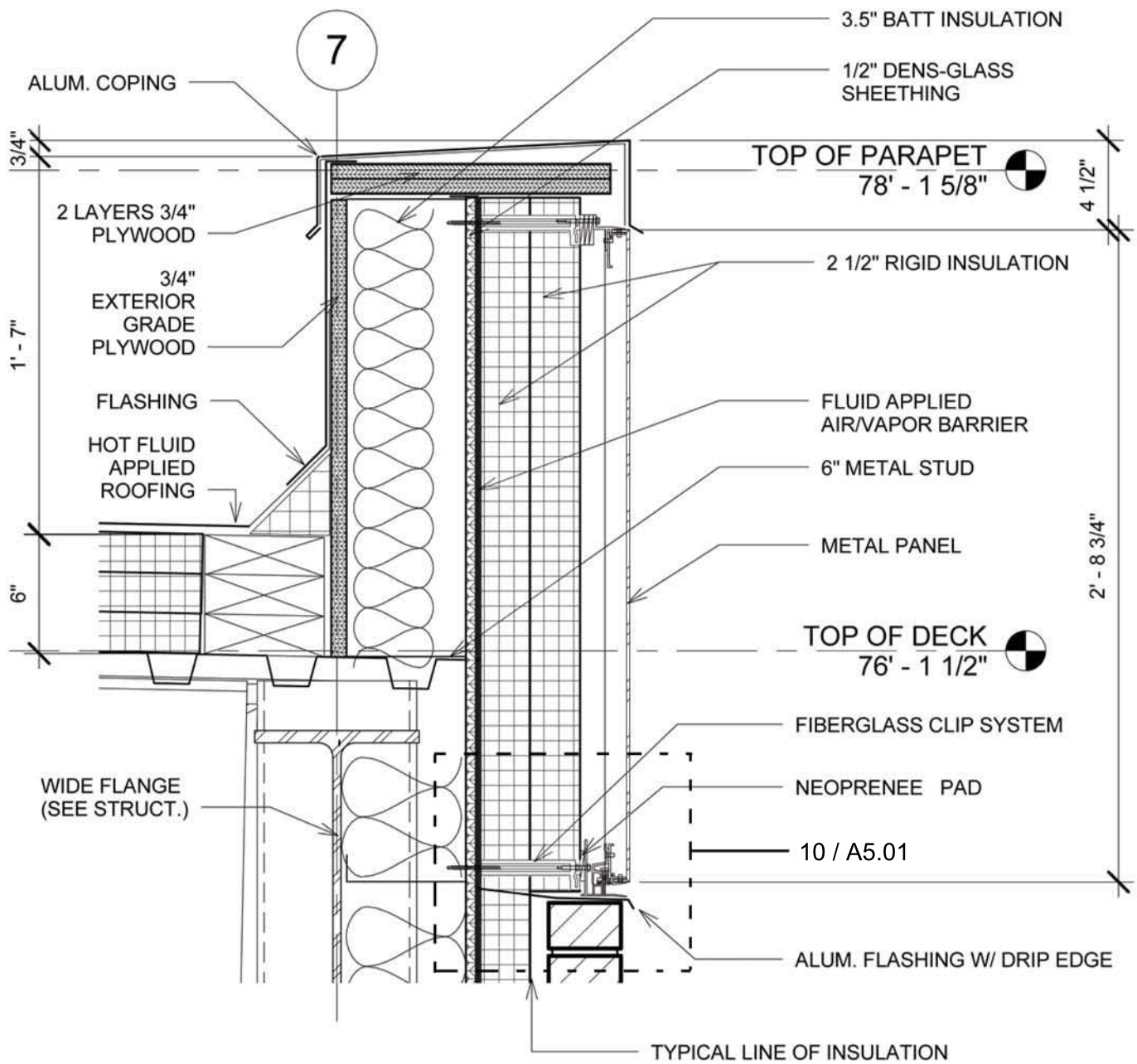


5 BUILT-IN BENCH DETAIL REVISED  
1" = 1'-0"



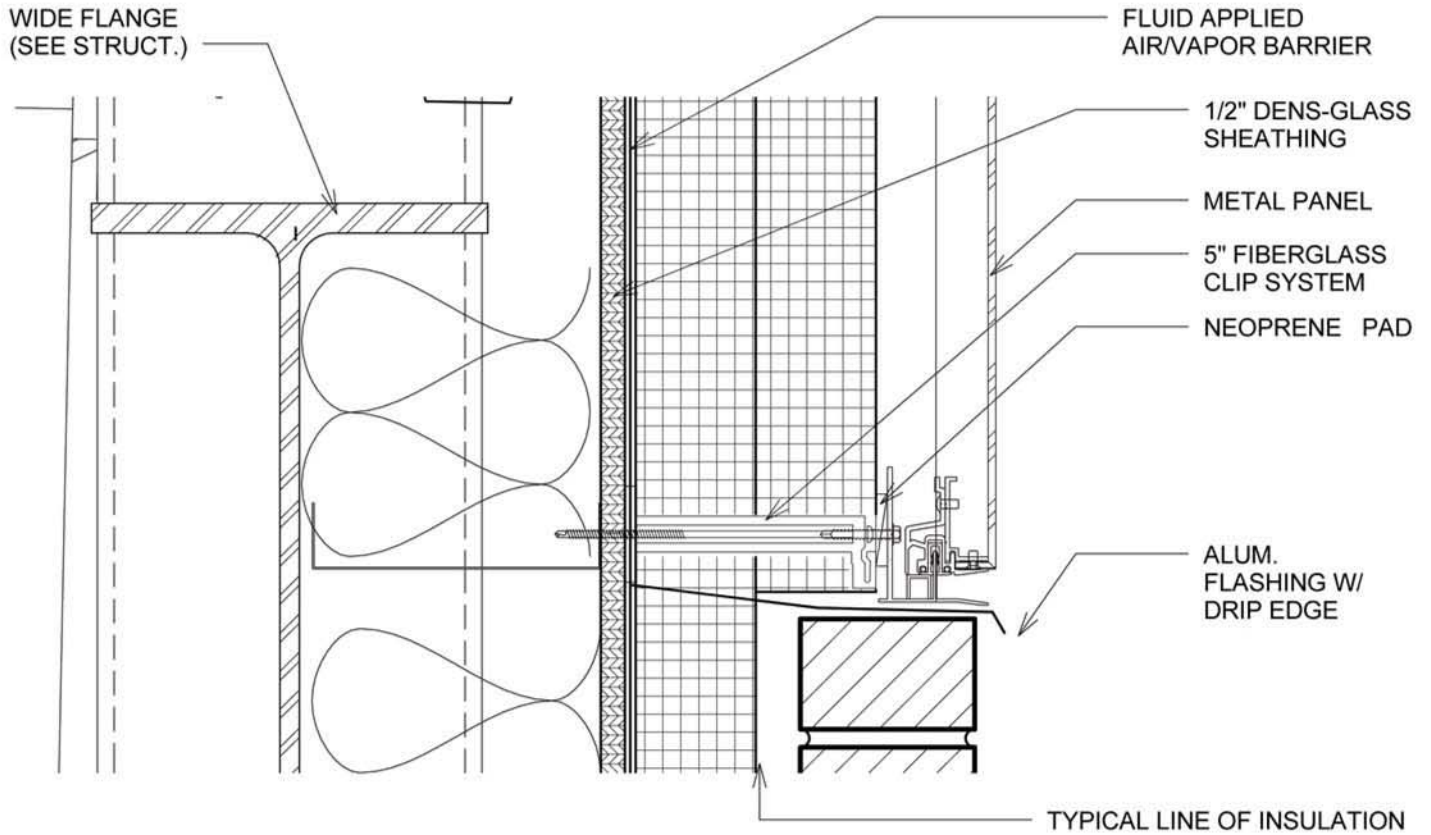
6 BUILT-IN PLANTER DETAIL REVISED  
1" = 1'-0"



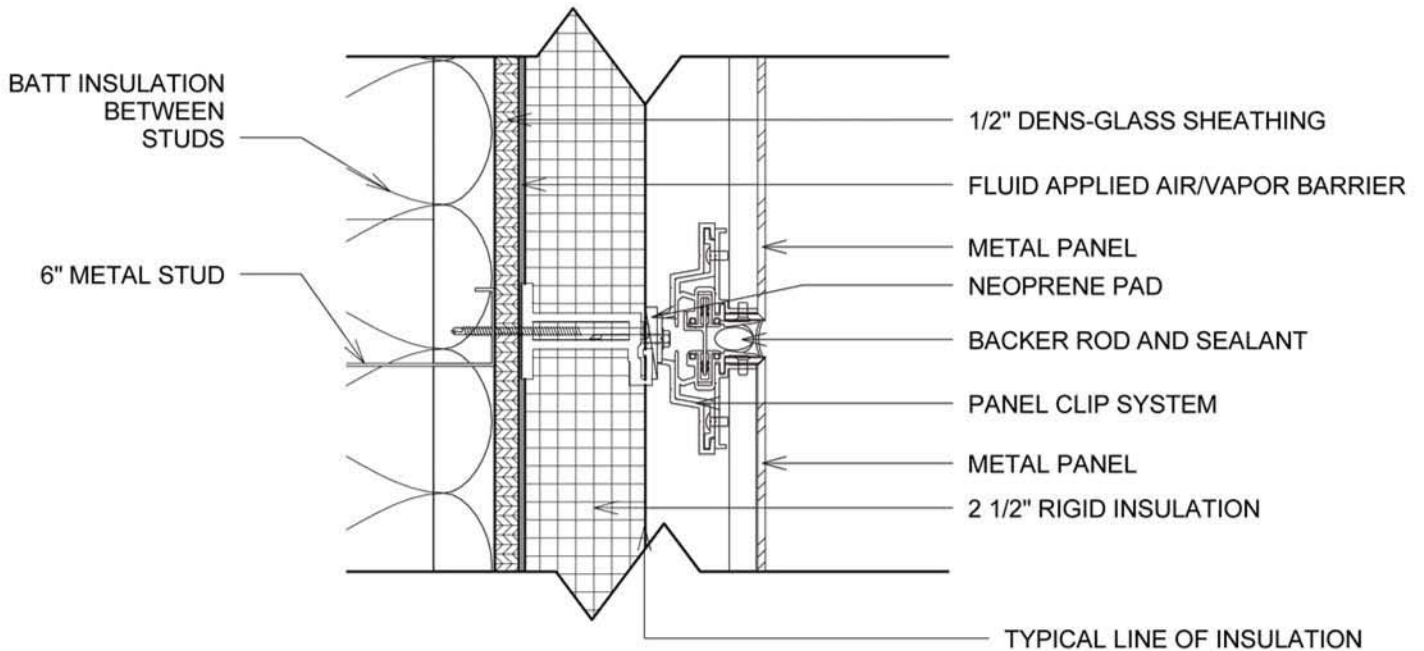


3 CLASSROOM WING PARAPET (TYP) REVISED  
 1 1/2" = 1'-0"

		BALTIMORE COUNTY PUBLIC SCHOOLS VICTORY VILLA ELEMENTARY SCHOOL BALTIMORE, MARYLAND		SUBMISSION: ADDENDUM #4 <b>A5.01</b>
M&D Proj.#: 15123	Drawn By: MBD	Checked By: BRJ	Date: 12/7/2016	6 OF 9

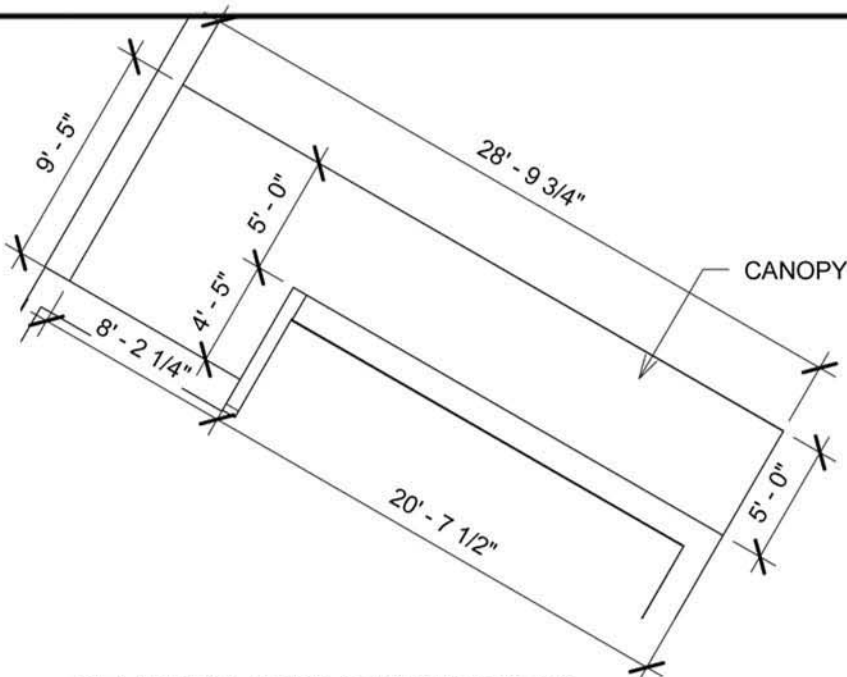


10 METAL PANEL DETAIL (TYP)  
3" = 1'-0"



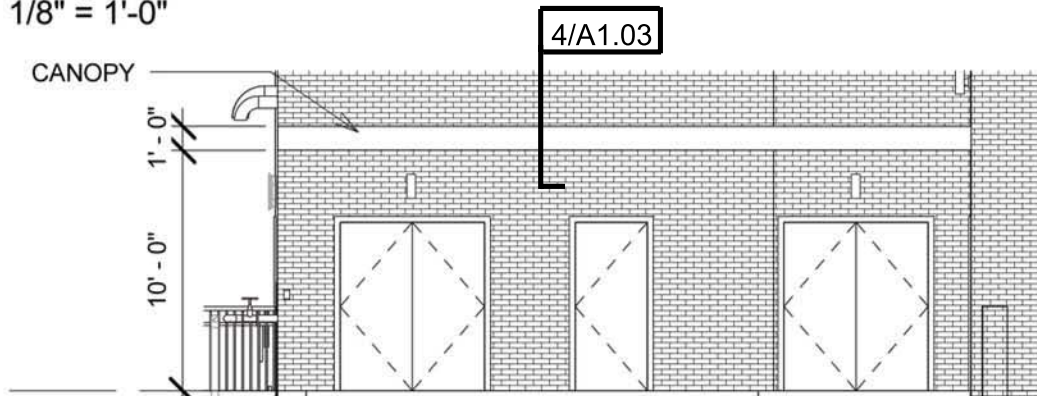
11 METAL PANEL JOINT DETAIL (TYP. , REF. 2/A5.01)  
3" = 1'-0"





2 DELIVERY AREA CANOPY PLAN (DETAIL PLAN)

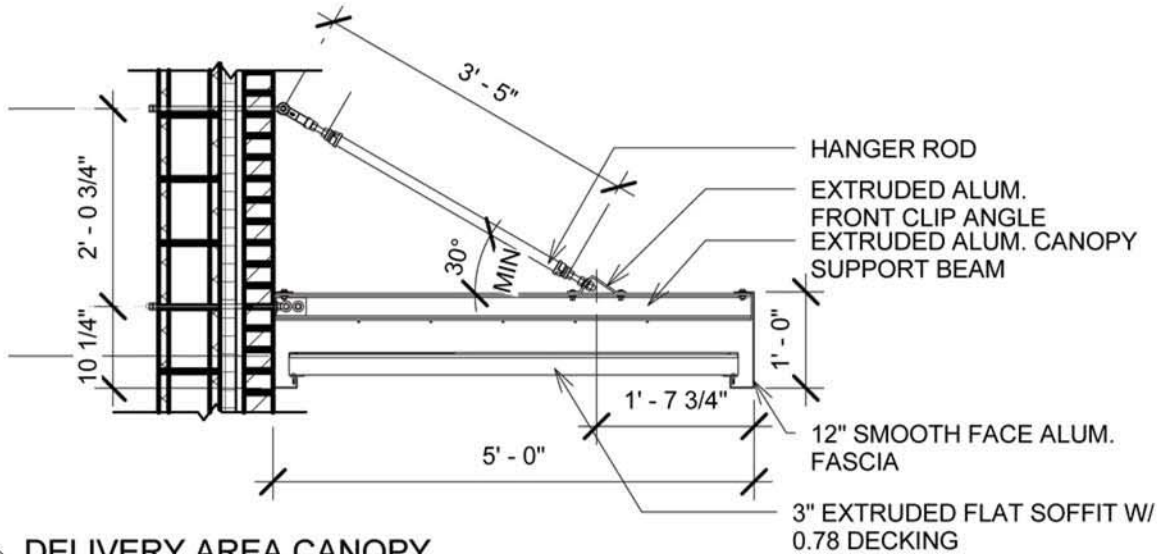
1/8" = 1'-0"



FIRST FLOOR  
48' - 0"

3 DELIVERY AREA CANOPY ELEVATION

1/8" = 1'-0"



4 DELIVERY AREA CANOPY

1/2" = 1'-0"

*Murphy & Dittenhafer*  
ARCHITECTS

BALTIMORE COUNTY PUBLIC SCHOOLS  
VICTORY VILLA ELEMENTARY SCHOOL  
BALTIMORE, MARYLAND

SUBMISSION:  
ADDENDUM #4  
**A1.03**

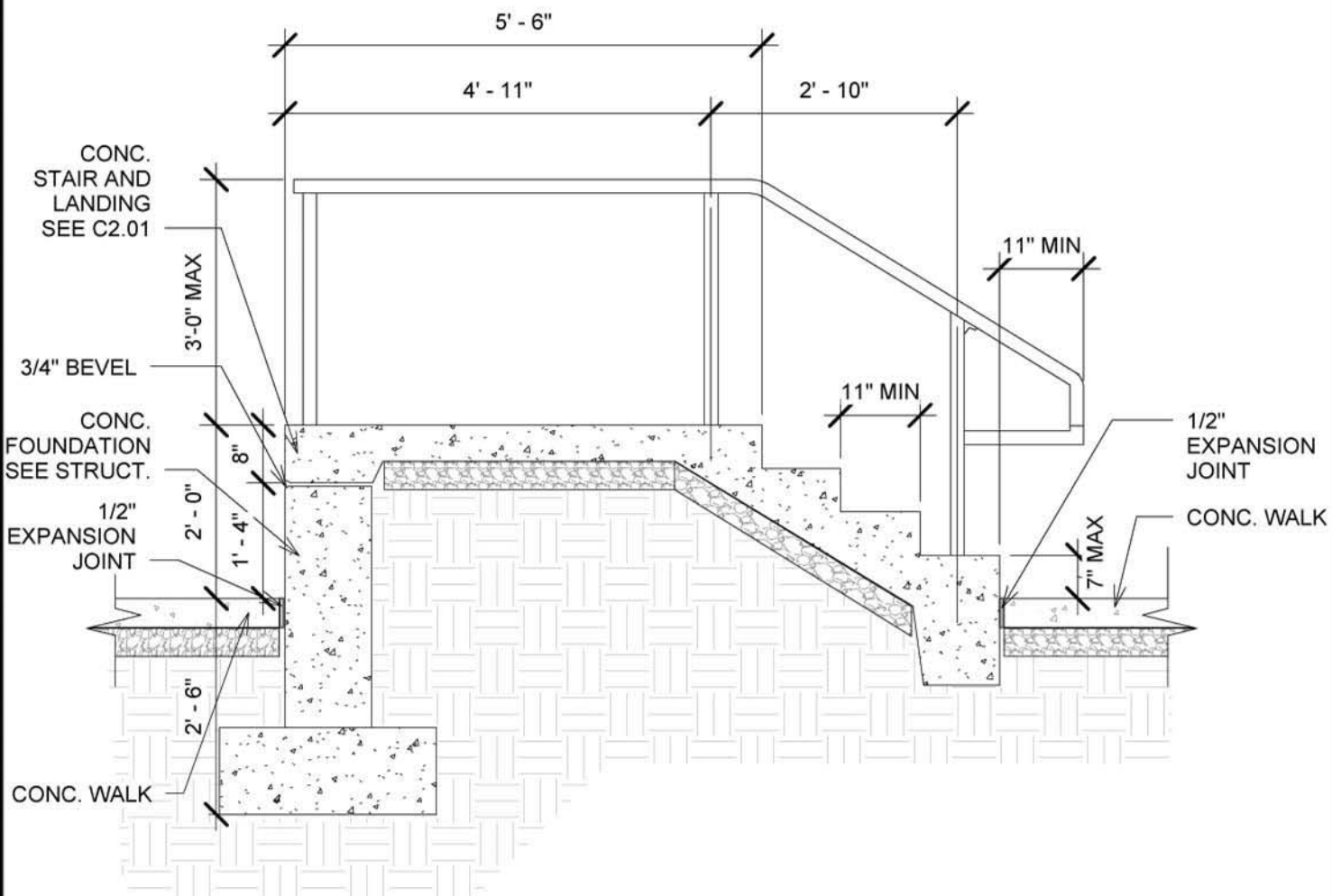
M&D Proj.#: 15123

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Checked By: BRJ

Date: 12/7/2016

8 OF 9



2 SECTION - EXTERIOR STAIR AT ELECTRICAL ROOM  
 1/2" = 1'-0"

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 ADDENDUM #4  
**A1.05**

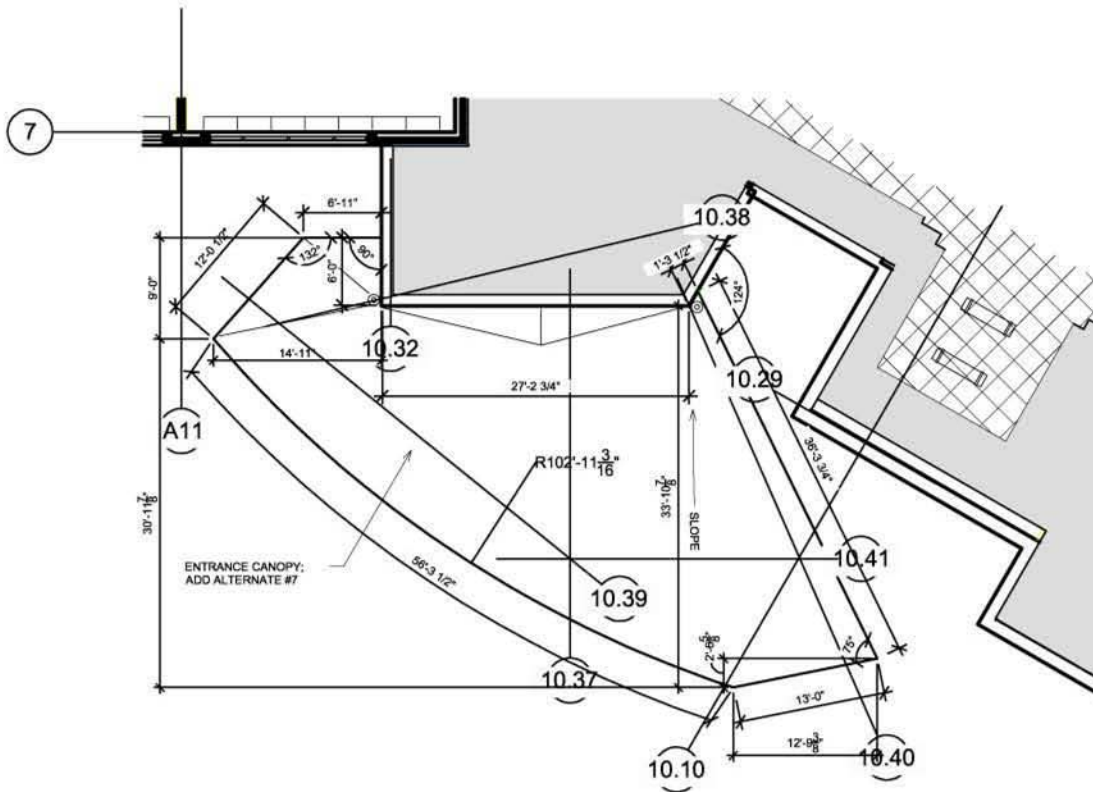
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Checked By: BRJ

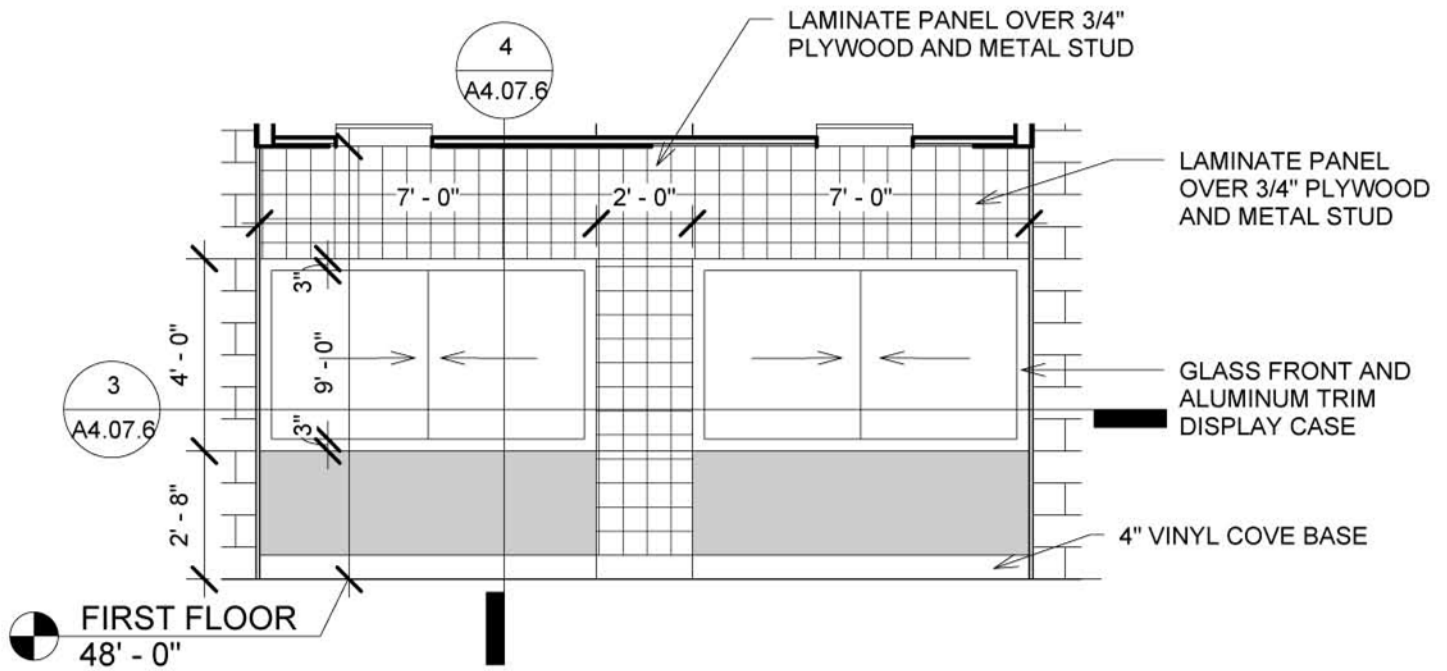
Date: 12/7/2016

9 OF 9

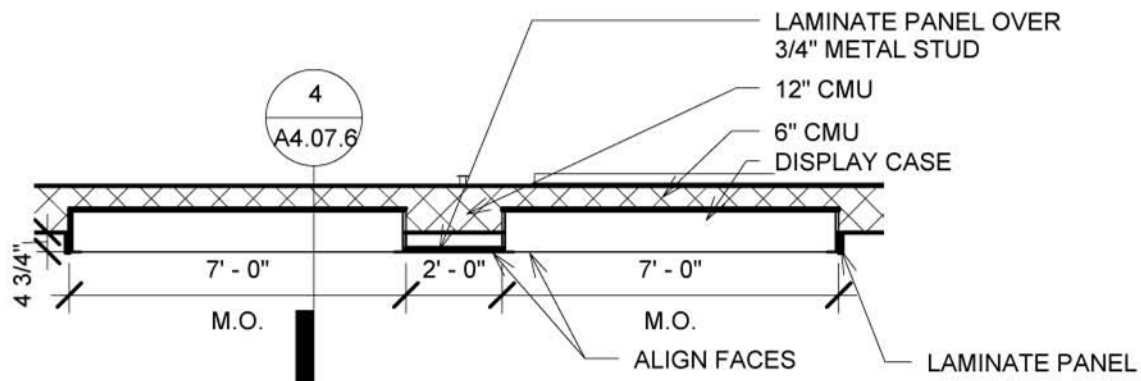


5 EXTERIOR ENTRANCE CANOPY PLAN REVISED  
 1/8" = 1'-0"

		BALTIMORE COUNTY PUBLIC SCHOOLS VICTORY VILLA ELEMENTARY SCHOOL BALTIMORE, MARYLAND		SUBMISSION: ADDENDUM #3 <b>A3.06</b>
M&D Proj.#: 15123	Drawn By: MBD	Checked By: BRJ	Date: 12/7/2016	1 OF 8



2 TYPICAL TROPHY DISPLAY WALL ELEVATION Revised  
1/4" = 1'-0"



3 TYPICAL TROPHY DISPLAY PLAN DETAIL Revised  
1/4" = 1'-0"

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ADDENDUM #3  
A4.07.6

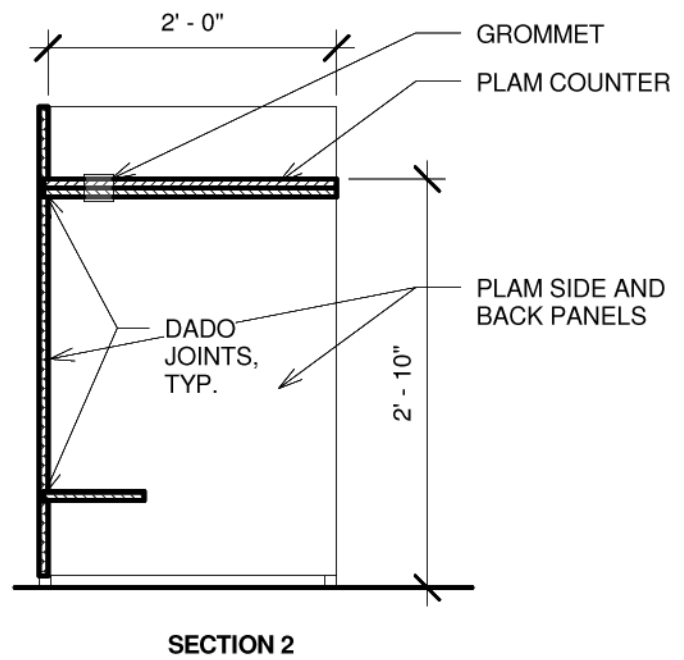
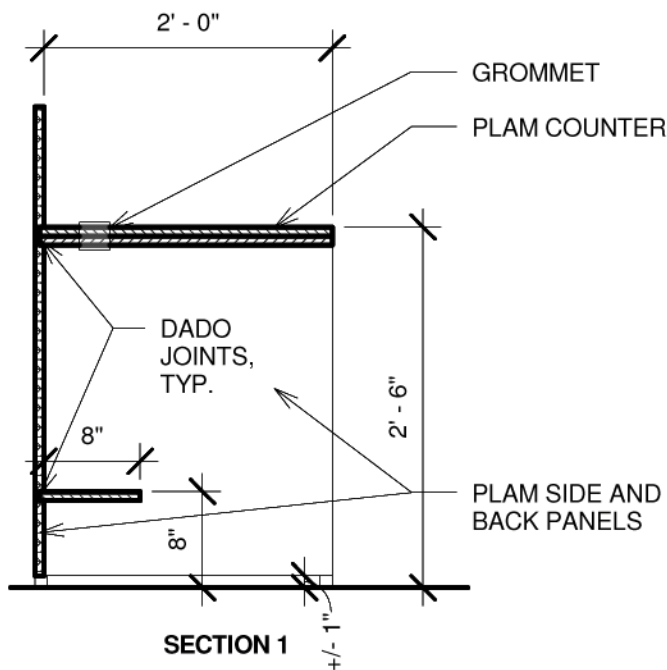
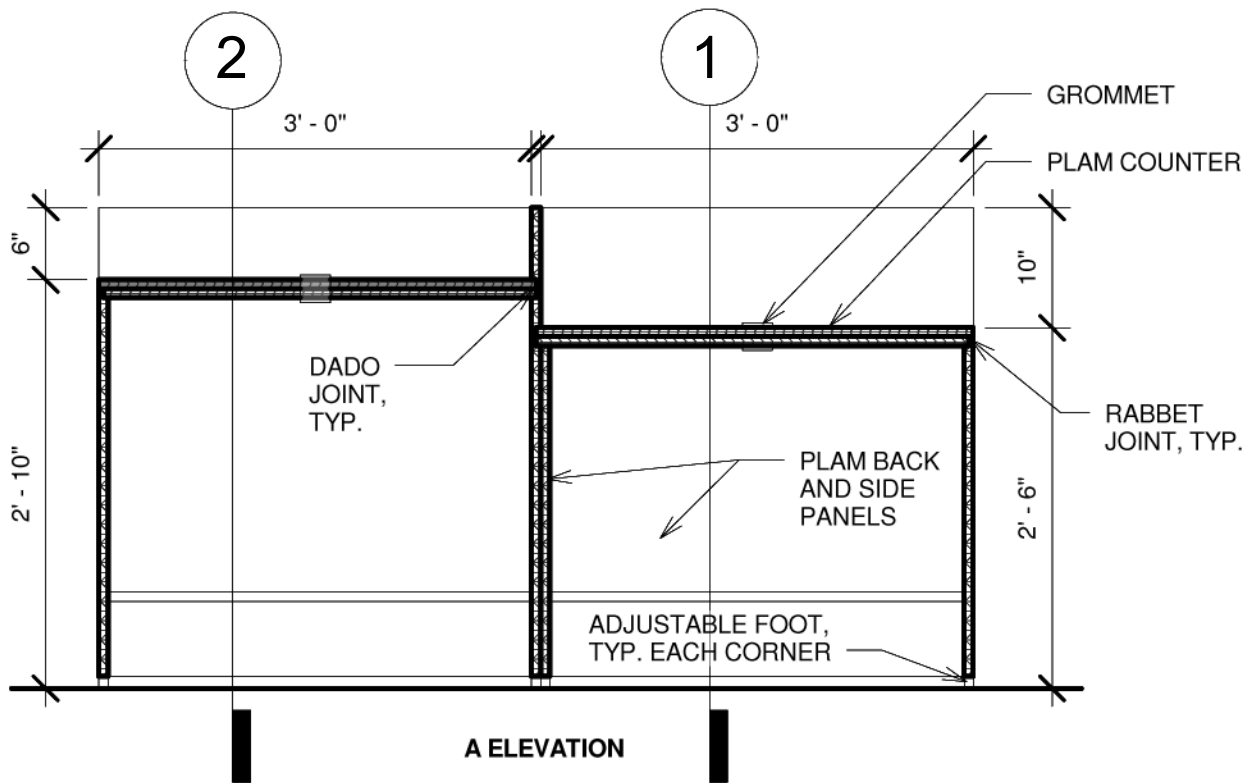
M&D Proj.#: 15123

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Checked By: BRJ

Date: 12/7/2016

2 OF 8



1 DETAILS - MEDIA CENTER 103 CHECK-OUT STATION (SHOWN LEFT OF CIRC DESK)  
 3/4" = 1'-0"

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 ADDENDUM #3

**A8.01**

**3/8**

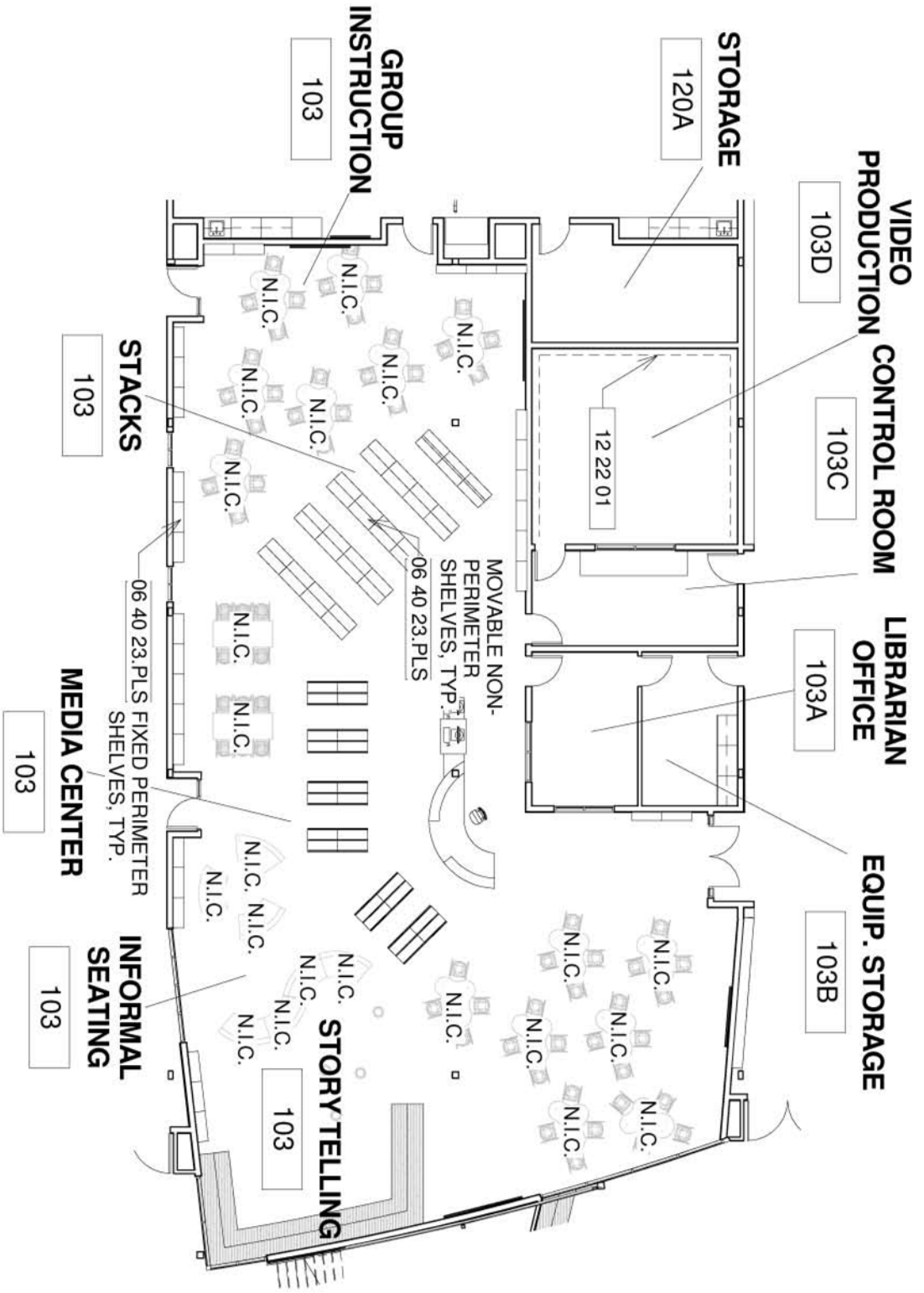
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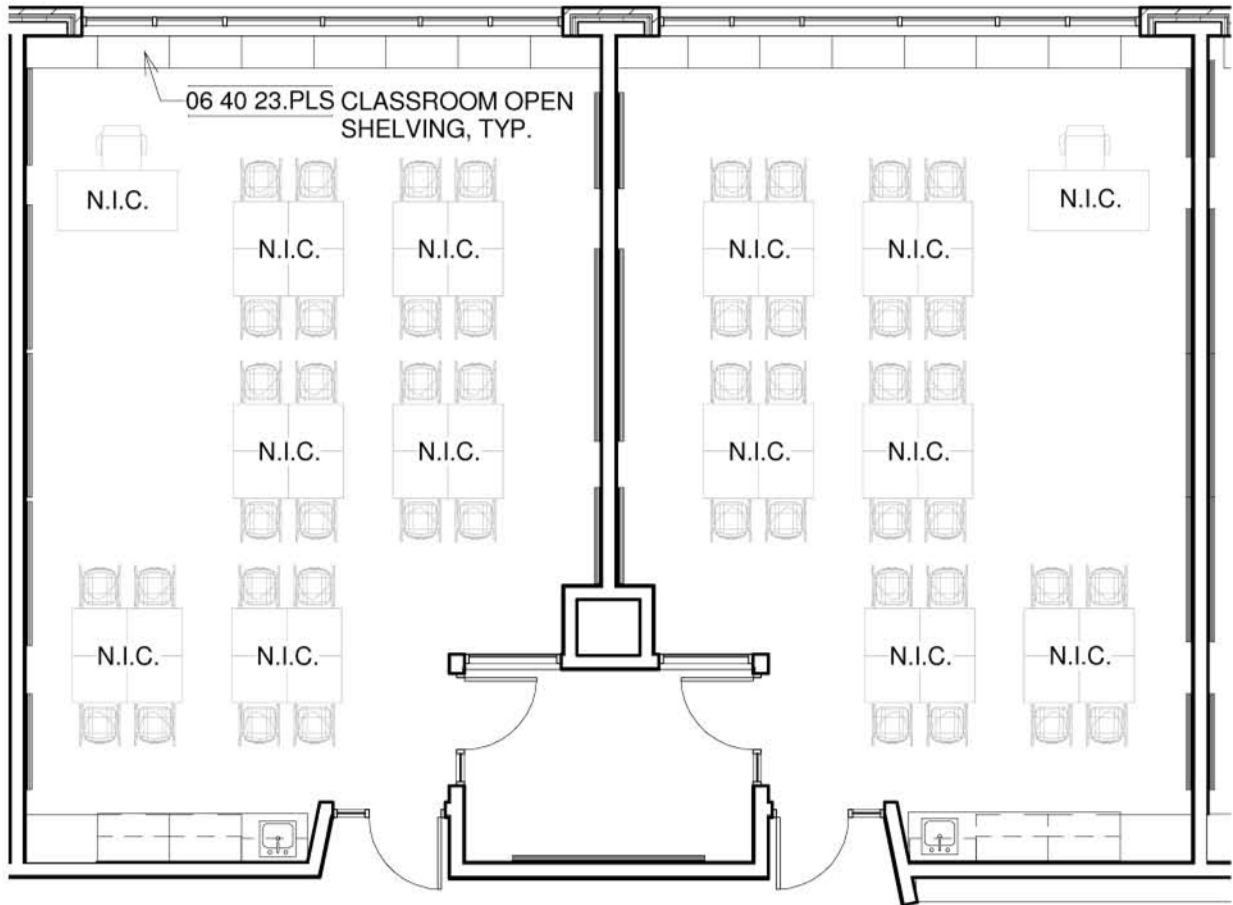
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Checked By: BRJ

Date: 12/7/2016

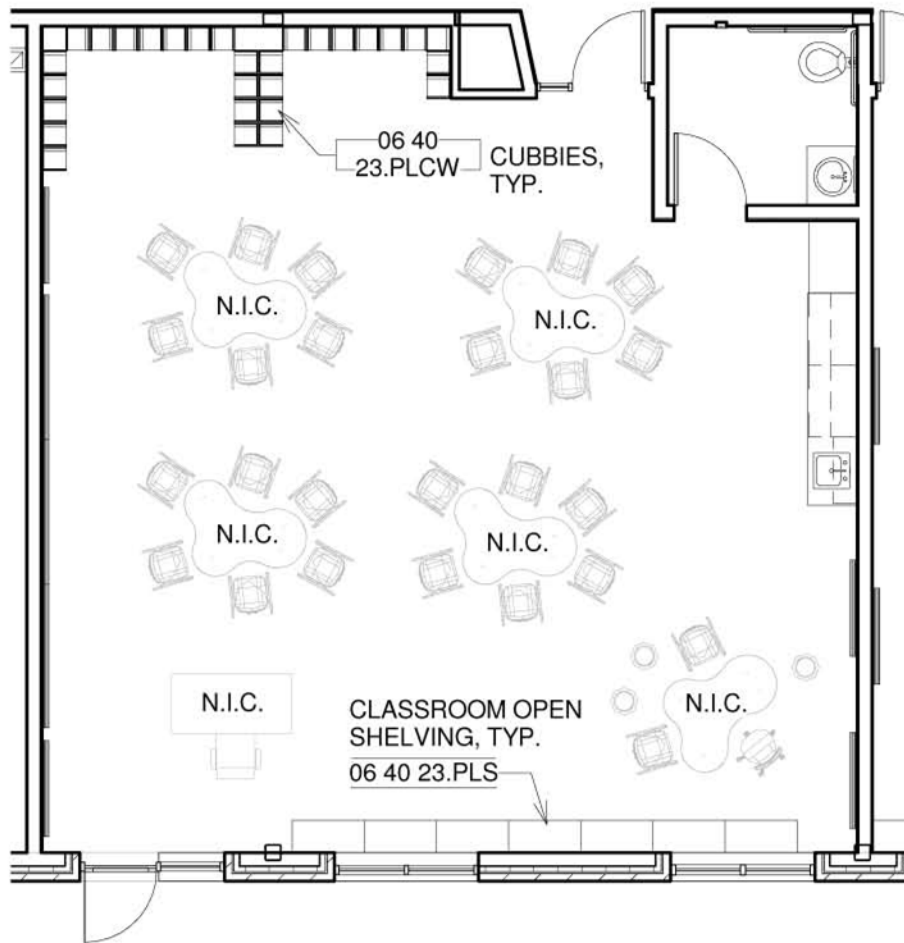
1A MEDIA CENTER FLOOR PLAN (DESIGNATED FURNITURE NIC)  
 1/16" = 1'-0"





1A TYPICAL CLASSROOM LAYOUT (DESKS & CHAIRS NIC)  
 1/8" = 1'-0"

		BALTIMORE COUNTY PUBLIC SCHOOLS <b>VICTORY VILLA ELEMENTARY SCHOOL</b> BALTIMORE, MARYLAND		SUBMISSION: ADDENDUM #3
				A8.01 A8.02 5 OF 8
M&D Proj.#: 15123	Drawn By: BPG	Checked By: BRJ	Date: 12/7/2016	

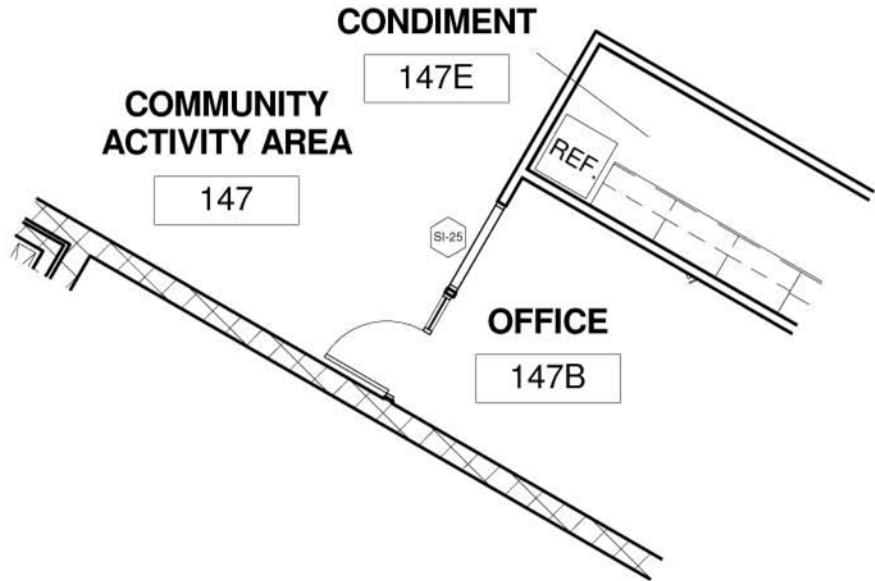


TYPICAL KINDERGARTEN CLASSROOM LAYOUT  
(DESKS, TABLES, & CHAIRS NIC)

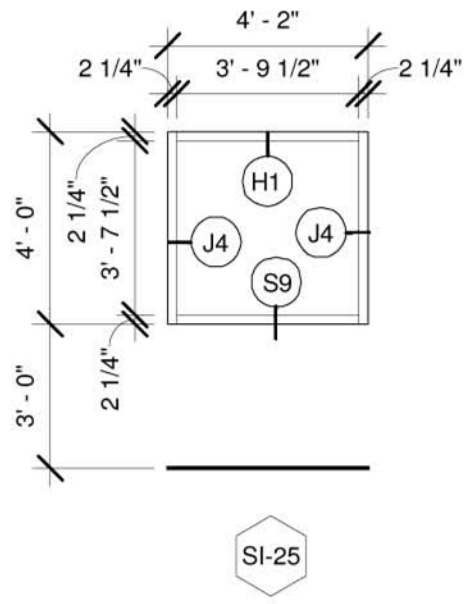
1A 1/8" = 1'-0"

	BALTIMORE COUNTY PUBLIC SCHOOLS VICTORY VILLA ELEMENTARY SCHOOL BALTIMORE, MARYLAND		SUBMISSION: ADDENDUM #3 <b>A8.01</b>
	M&D Proj.#: 15123	Drawn By: BPG	Checked By: BRJ





INTERIOR STOREFRONT TYPE 25 REFERENCE PLAN (SEE A1.05)  
 1/8" = 1'-0"



ADD INTERIOR STOREFRONT TYPE 25  
 1/4" = 1'-0"

KEYNOTE LEGEND

Key Value	Keynote Text
06 40 23.PLCT	PLASTIC LAMINATE COUNTERTOP
06 40 23.PLCW	PLASTIC LAMINATE CASEWORK
09 51 13.A1	24" x 48" ACOUSTICAL PANEL CEILINGS
09 65 20	VINYL COVE BASE
10 10 00.4	4' PORCELAIN STEEL MARKER BOARD
10 10 00.6	6' PORCELAIN STEEL MARKER BOARD
10 22 26	OPERABLE PARTITION
11 54 00	SMARTBOARD - NIC
22 00 01	PLUMBING EQUIPMENT - SEE PLUMB DRWGS

ADD KEYNOTE LEGEND - SHEET 4.02.2

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ADDENDUM #3  
**A4.02.2**

M&D Proj.#: 15123

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Date: 12/7/2016

8 OF 8

Z:\15150998-BC\PS\_Victory Villa ES\04-DWG\PH 2 C0.01 Cover Sheet.dwg-ADD 4-1 Dec 07, 2016 02:43pm rsw

- 29. The project is within 3.3 miles of Martin State Airport which requires approvals for the use of a crane. Contractor is responsible for obtaining required permits, determinations and/or variances from the Maryland Aviation Administration and the Federal Aviation Administration in order to use a crane.
- 30. During construction period, all standing water within the limit of disturbance shall be removed within 24 hours of occurrence in accordance with Erosion and Sediment Control Plan Details and Specifications.

31. The Phase One demolition contractor was responsible for capping the proposed building pad area with 12 inches of compacted granular structural fill.

The Phase Two building contractor shall furnish and install soil cement 12 inches deep at a minimum of 5 percent by weight in the subgrade left by the Phase One demolition contractor.

The Phase Two building contractor shall also furnish and install soil cement 12 inches deep at a minimum of 5 percent by weight below all proposed pavement, curbs and gutters, and site retaining wall surfaces not previously covered with 12 inches of granular fill. No soil cement should be present in proposed landscape, lawn or stormwater management facility areas. If so, the contractor shall remove and replace with suitable fill or topsoil as required.

4



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**C0.01**

1 OF 1

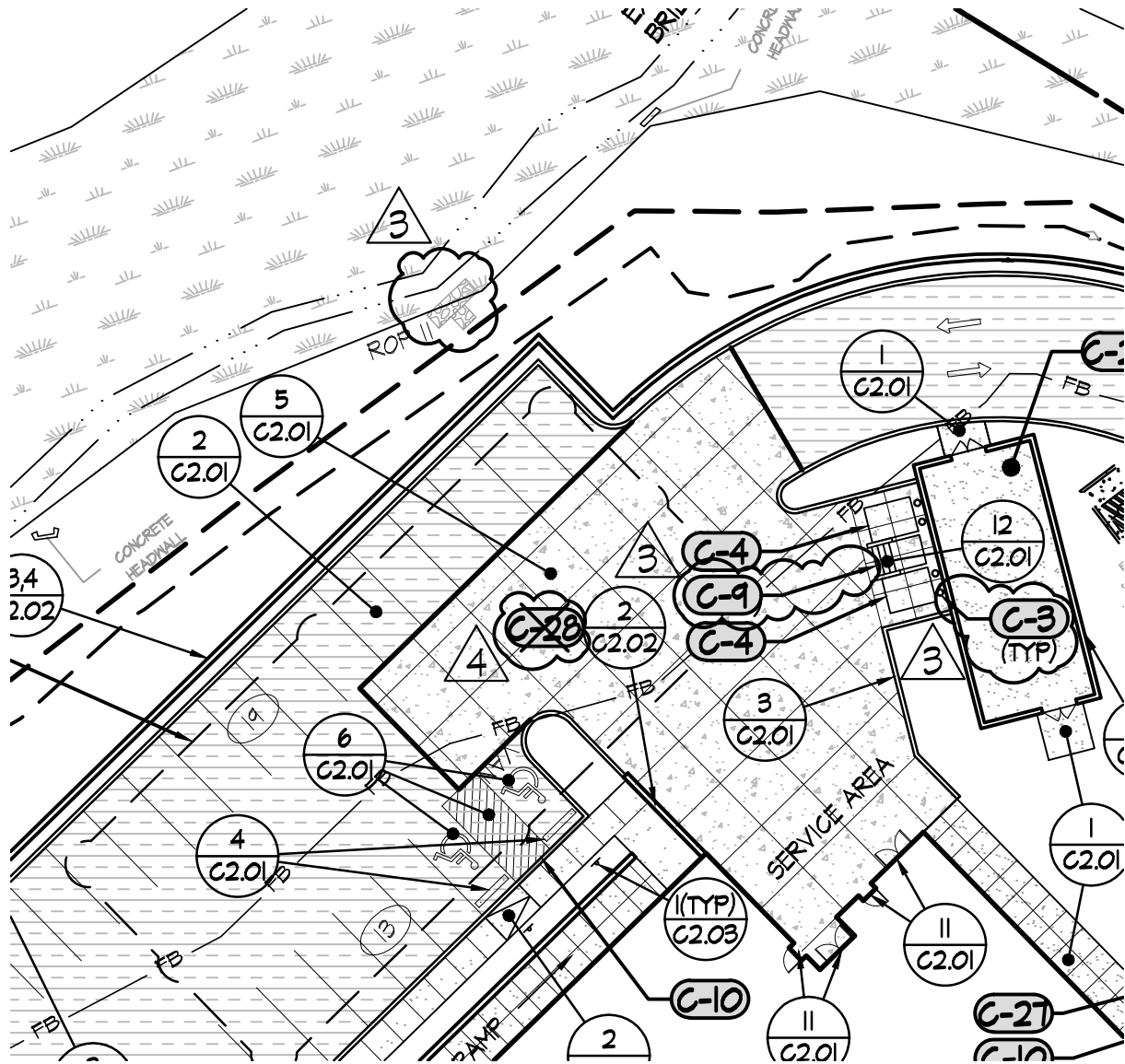
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Checked By: FPB

Date: 12/1/16

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ADDENDUM #4

**C1.02**  
1 OF 4

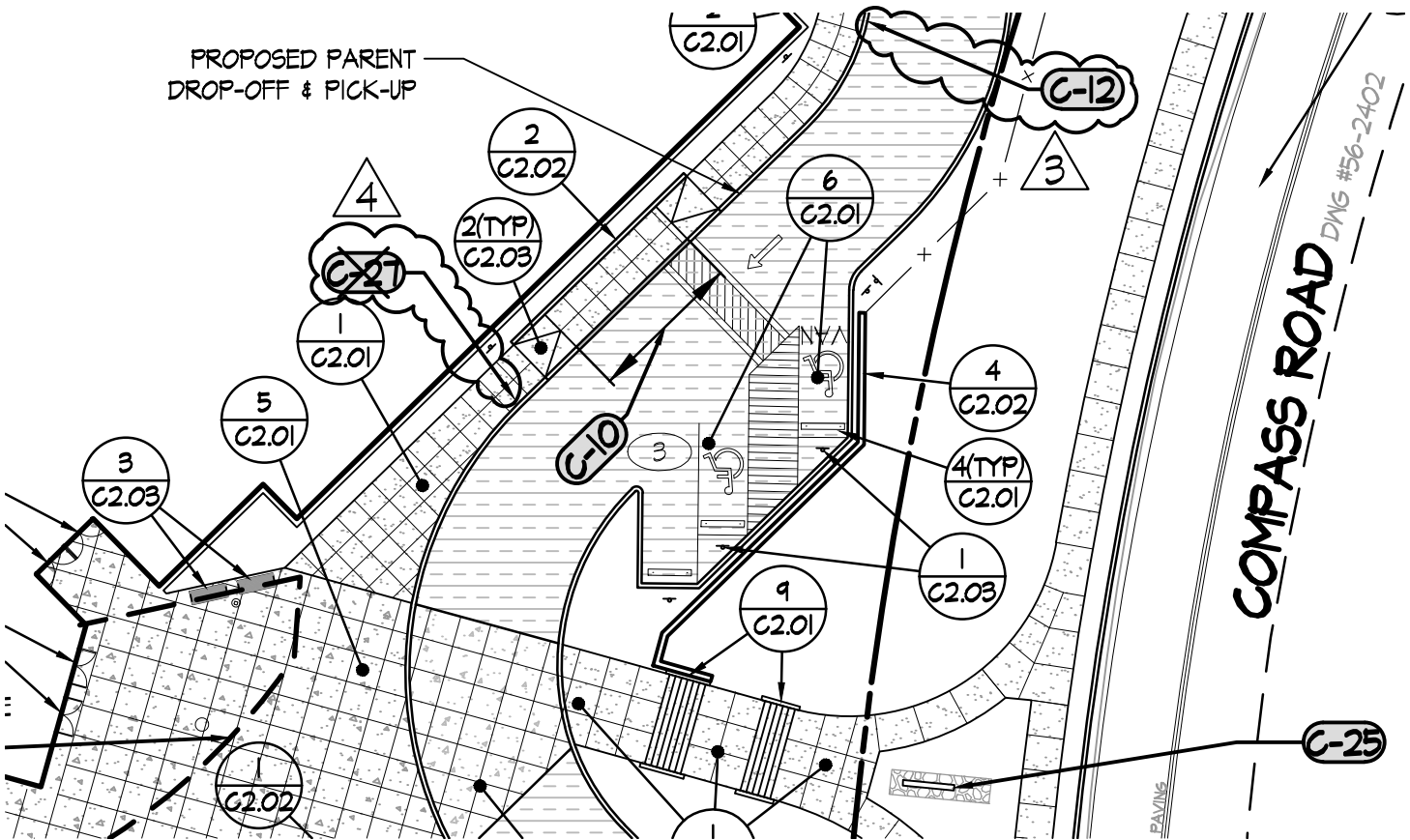
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ADDENDUM #4

**C1.02**  
2 OF 4

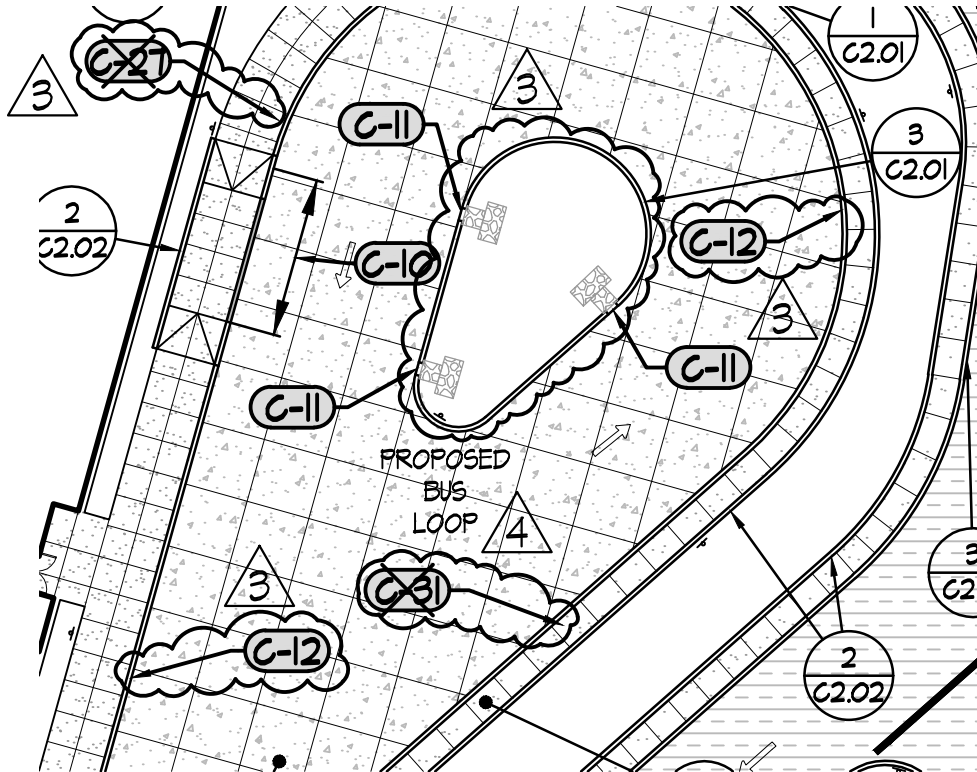
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Date: 12/1/16

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ADDENDUM #4

**C1.02**

3 OF 4

M&D Proj.#: 15123

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Date: 12/1/16

Z:\1515098-BCPS Victory Villa ES\04-DWG\PH 2 C.1.02 Detail Ref Plan.dwg-ADD 4-4 Dec 07, 2016 02:46pm\_rsw

4

C-17

PROPOSED PLAYGROUND EQUIPMENT PROVIDED AND INSTALLED BY OWNER FOR GRADES 1-5, CONTRACTOR SHALL ACCOMPLISH ALL EARTHWORK AND GRADING AND SHALL FURNISH AND INSTALL ALL DRAINAGE, CONCRETE MOW STRIPS AND FENCE ENCLOSURES AT PLAYGROUND (ADD-ALT #10) (ADD-ALT #10)

C-18

PROPOSED PLAYGROUND EQUIPMENT PROVIDED AND INSTALLED BY OWNER FOR PRE-K & K (BASE BID)

C-19

EXTEND NEW TIMBER EDGING SO THAT PLAYGROUND SAFETY ZONE FITS WITHIN PLAY AREA (ADD-ALT)

C-20

MECHANICAL EQUIPMENT AREA - SEE MEP AND ARCH PLANS FOR LAYOUT



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ADDENDUM #4

C1.02

4 OF 4

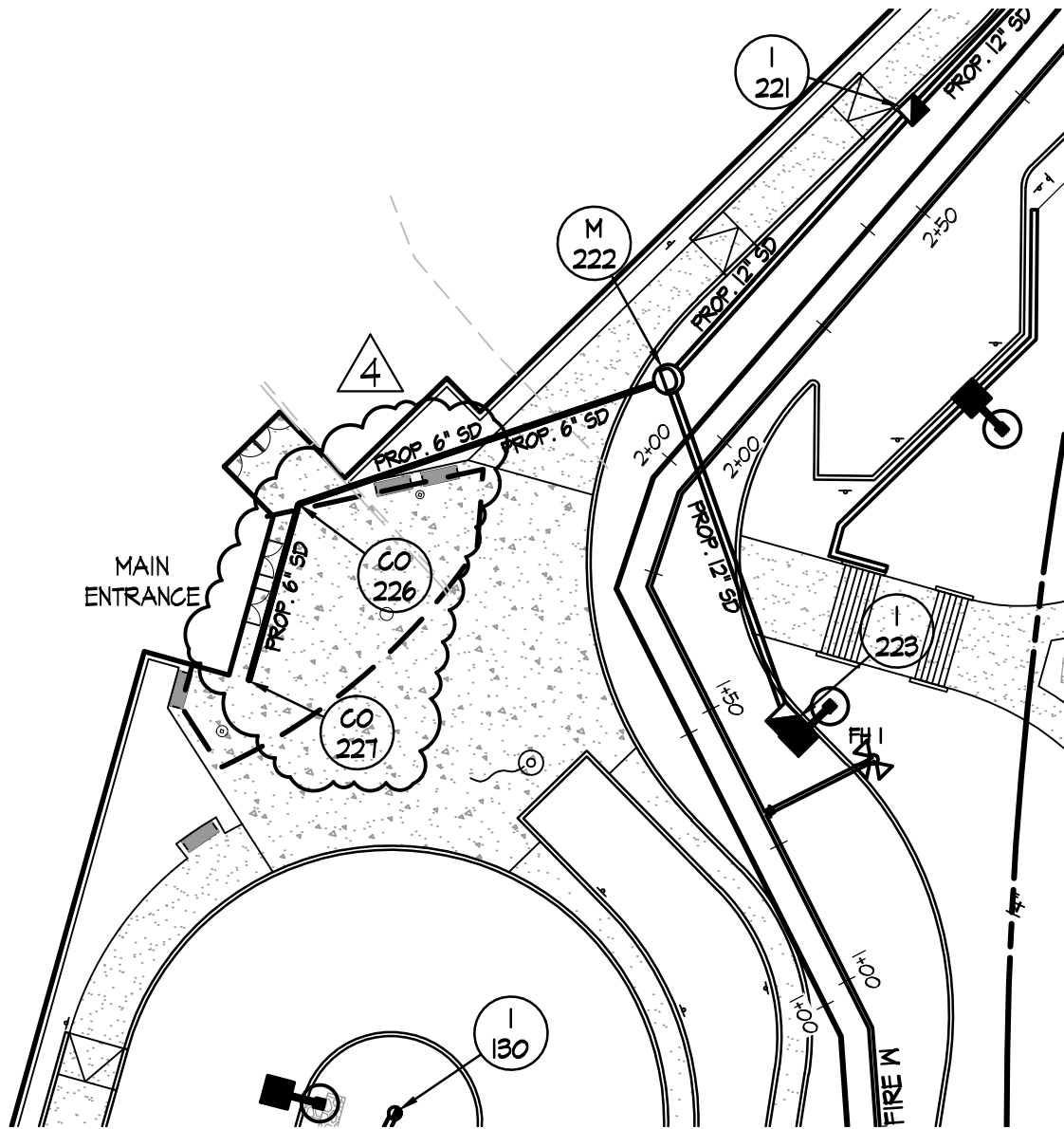
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**C1.05**  
 1 OF 1

M&D Proj.#: 15123

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**C2.01**  
1 OF 3

M&D Proj.#: 15123

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Date: 12/1/16

5" THICK MSHA MIX NO. 3 CONCRETE  
WITH LIGHT BROOM FINISH.

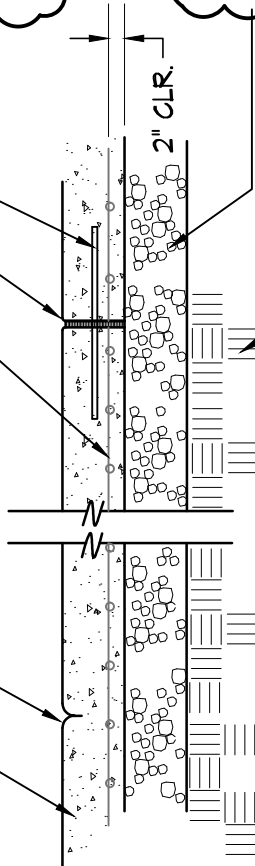
CONTRACTION JOINT (SCORE LINE) EDGE EACH  
SIDE W/ 1/8" RADIUS.

6" X 6" W 2.9 WELDED WIRE FABRIC, EPOXY COATED

1/2" PREFORMED EXPANSION JOINT, ASTM D-1751 OR  
D 1752. EDGE EACH SIDE W/ 1/8" RADIUS.

1/2" X 16" LONG SPEED DOWELS @ 24" O.C., EPOXY COATED  
COATED WITH GREASE WRAPPED WITH ASPHALT PAPER  
FOR 60% OF ITS LENGTH AT ALTERNATE SIDES.

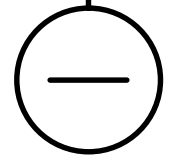
12" GRADED AGGREGATE BASE, ASTM D-2940  
ALT. 4" OF G.A.B. WITH 12" SUBGRADE OF CEMENT  
MODIFIED SOIL - REFER TO GEOTECH REPORT  
FOR PROPER APPLICATION  
COMPACTED SUBGRADE



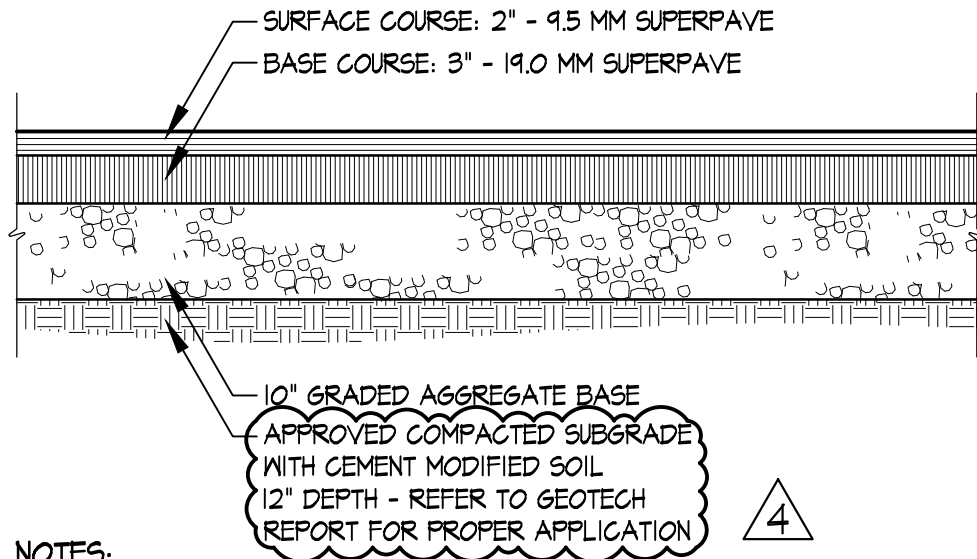
**NOTES**

1. PLACE EXPANSION JOINTS NOT MORE THAN 20'-25' APART AND AT THE END OF EACH CONTIGUOUS POUR.
2. PLACE CONTRACTION JOINTS AT INTERVAL MATCHING WIDTH OF SIDEWALK BUT NOT MORE THAN 6' APART.
3. PROVIDE EXPANSION JOINTS WHERE POUR MEETS EXISTING CONCRETE PAVING OR CURB.
4. EXPANSION JOINTS TO BE RECESSED 1/4" BELOW SURFACE OF SIDEWALK.
5. WHEN SIDEWALK ABUTS BACK OF STREET CURB, WALK SHALL BE 1/4" ABOVE TOP OF CURB.
6. WHEN SIDEWALK ABUTS EXISTING CONCRETE WALK, CORE DRILL AND INSTALL DOWELS PER DETAIL.
7. MATCH SCORE PATTERN OF ADJACENT SIDEWALK WHERE PRACTICAL.
8. UNLESS OTHERWISE SHOWN ON PLAN, CONTRACTOR TO SUBMIT LAYOUT OF PROPOSED CONTRACTION EXPANSION JOINTS FOR APPROVAL PRIOR TO POURING CONCRETE.

**SIDEWALK DETAIL**



NOT TO SCALE



**NOTES:**

1. A REPRESENTATIVE FROM THE ON-SITE GEO-TECHNICAL ENGINEER SHALL OBSERVE AND TEST ANY COMPACTED FILL TO BE USED FOR PAVEMENT SUPPORT, AND OBSERVE ANY PROOFROLLING OPERATIONS OF PAVEMENT SUBGRADES.

2

# BITUMINOUS PAVING DETAIL

NOT TO SCALE



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2 OF 3

M&D Proj.#: 15123

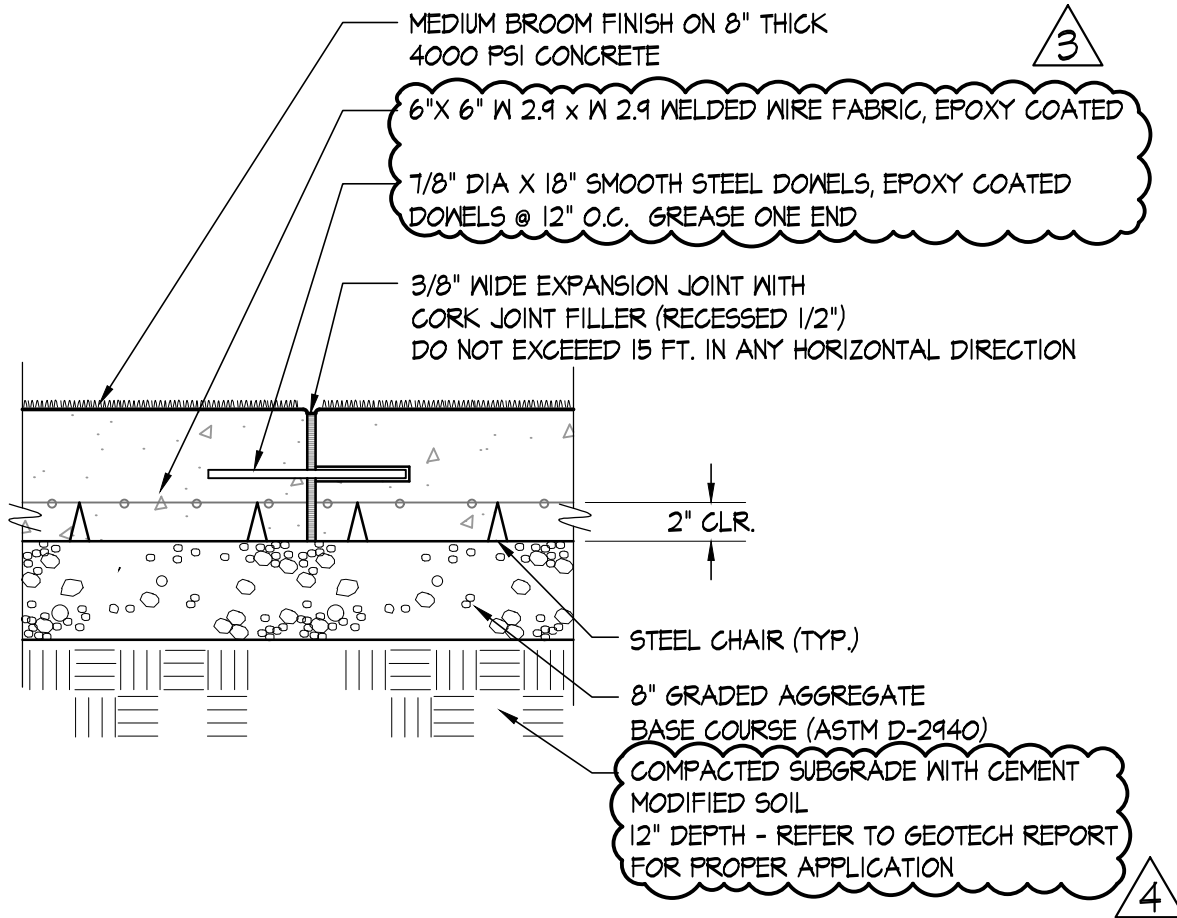
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Checked By: FPB

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**NOTE:**

1. APPLY CURING/SEALING COMPOUND AS INDICATED IN THE SPECIFICATIONS.



**5 HEAVY DUTY CONCRETE**  
NOT TO SCALE



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**C2.01**  
3 OF 3

M&D Proj.#: 15123

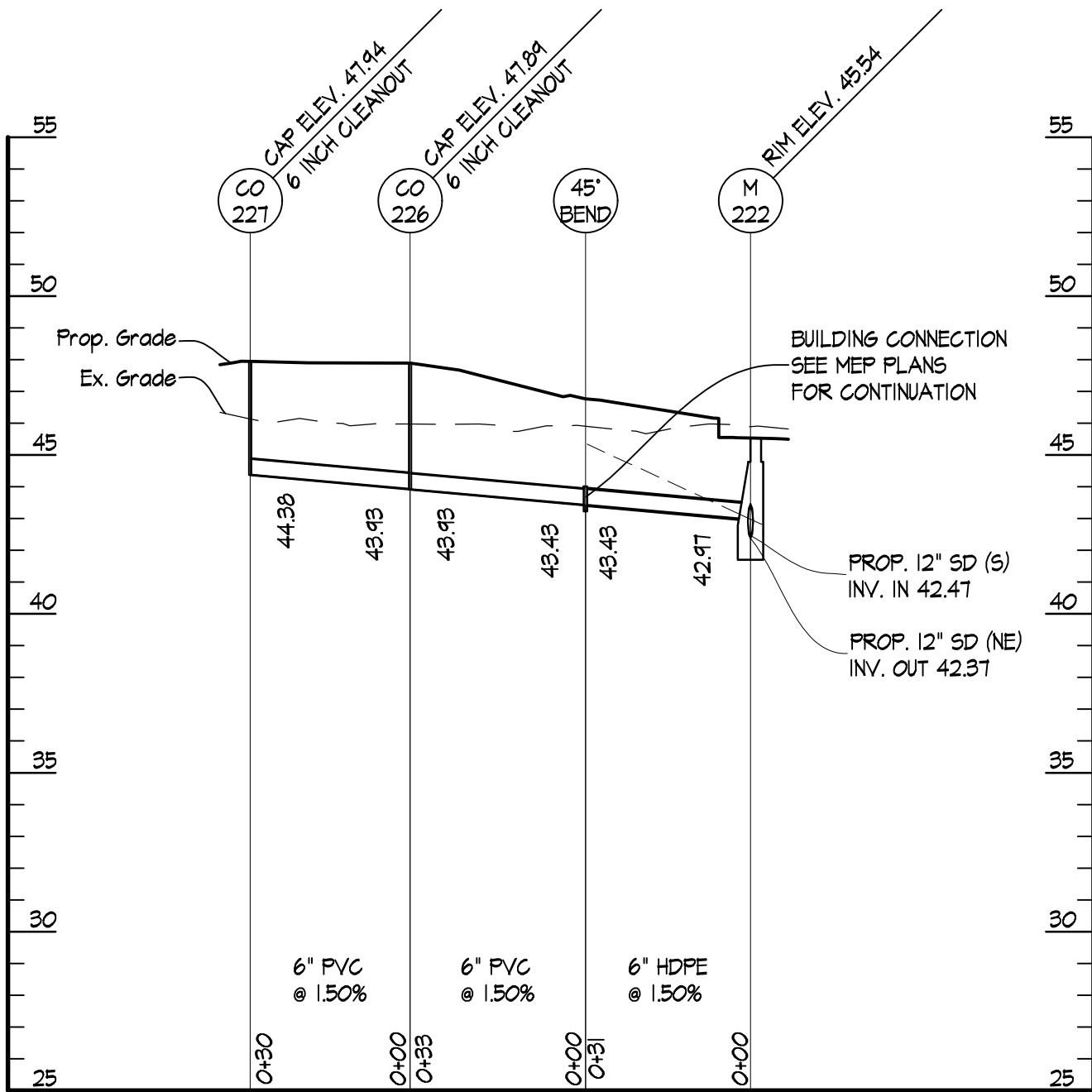
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Checked By: FPB

Date: 12/1/16

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Z:\1515098-BCPS Victory Villa ES\04-DWG\PH 2 C3.01 - Stormdrain Profiles.dwg-ADD 4-1 Dec 07, 2016 04:26pm rsw



13

### PROP. SD: RD to M-222

SCALES: HORIZ. 1" = 30'  
VERT. 1" = 5'

4



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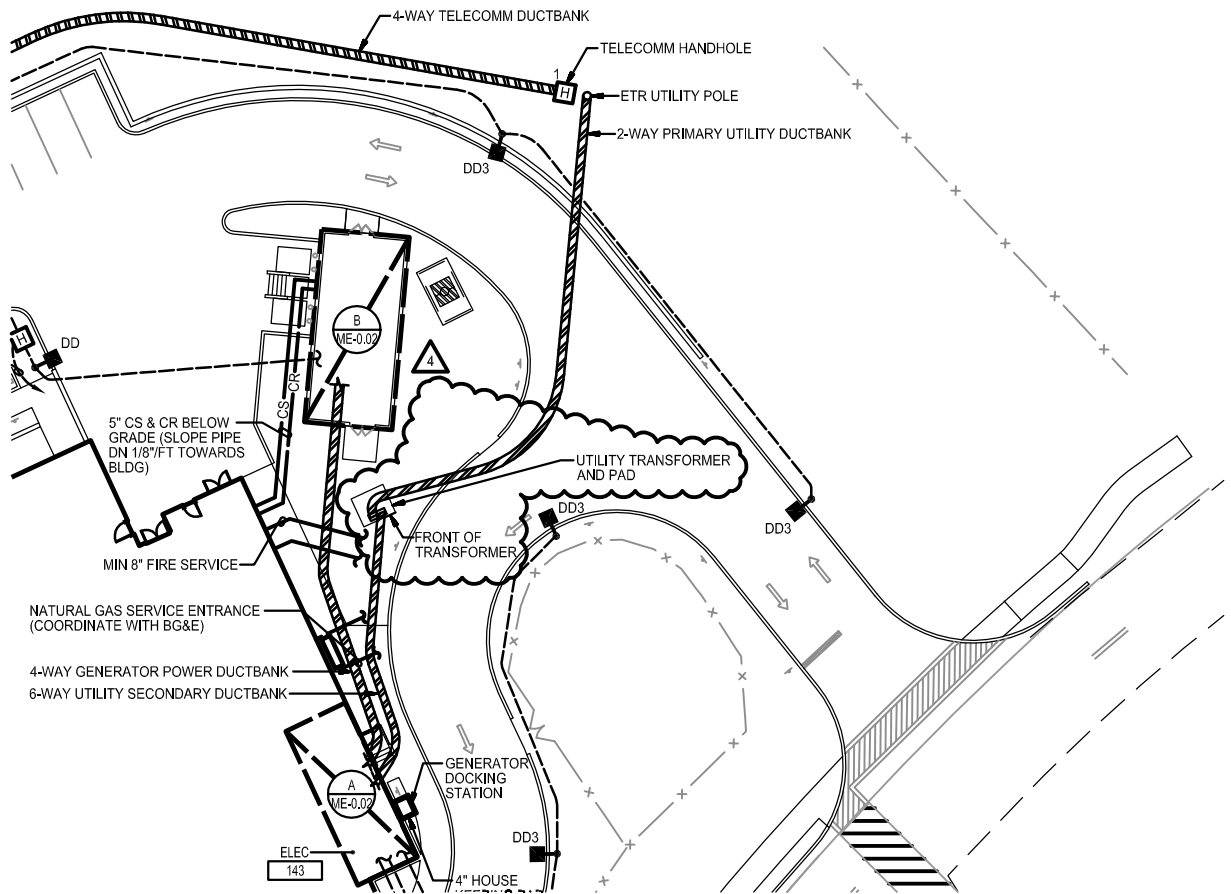
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1 OF 1

M&D Proj.#: 15123

Drawn By: RSW

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Date: 12/1/16

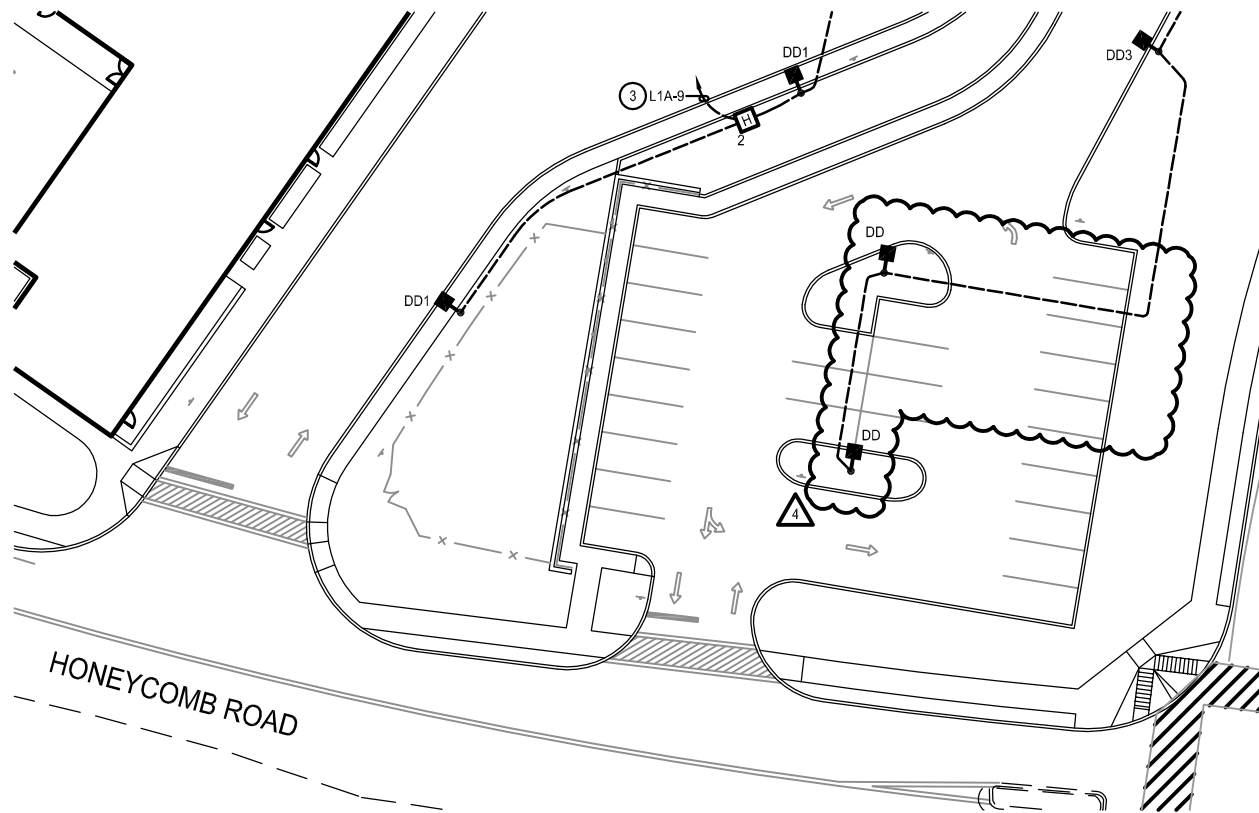


**SITE PLAN - MECHANICAL AND ELECTRICAL**

SCALE: 1"=30'-0"



		BALTIMORE COUNTY PUBLIC SCHOOLS VICTORY VILLA ELEMENTARY SCHOOL BALTIMORE, MARYLAND			SUBMISSION: ADDENDUM #4 <b>ME0.01</b>
		M&D Proj.#: 15123	Drawn By: MG	Checked By: BMM	Date: 12-08-16



**SITE PLAN - MECHANICAL AND ELECTRICAL**

SCALE: 1"=30'-0"



		BALTIMORE COUNTY PUBLIC SCHOOLS VICTORY VILLA ELEMENTARY SCHOOL BALTIMORE, MARYLAND			SUBMISSION: ADDENDUM #4 <b>ME0.01</b>			
							M&D Proj.#:	15123

FOUNDATION SYSTEM NOTE:

FOUNDATIONS SHALL CONSIST OF FOOTINGS OVER RAMMED AGGREGATE PIER IMPROVED SOILS. **ALL WALL FOOTINGS** DESIGNED FOR 2.5 KSF ALLOWABLE SOIL BEARING AND **ALL SPREAD FOOTINGS** DESIGNED FOR 5 KSF ALLOWABLE SOIL BEARING PRESSURE. REFER TO THE GEOTECHNICAL REPORT ADDENDUM 15228.D. BY D.W. KOZERA, INC. DATED NOVEMBER 1, 2016 FOR FOUNDATION SYSTEM REQUIREMENTS AND SPECIFICATION SECTION 31 66 13.

*Murphy & Dittenhafer*  
A R C H I T E C T S

800 North Charles Street, Baltimore, Maryland 21201  
410-625-4823 voice 410-625-4874 fax

226 West Market Street, York, Pennsylvania 17401  
717-326-9827 voice 717-603-2449 fax

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BALTIMORE, MARYLAND

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ADDENDUM #4

S1.01/

S1.02

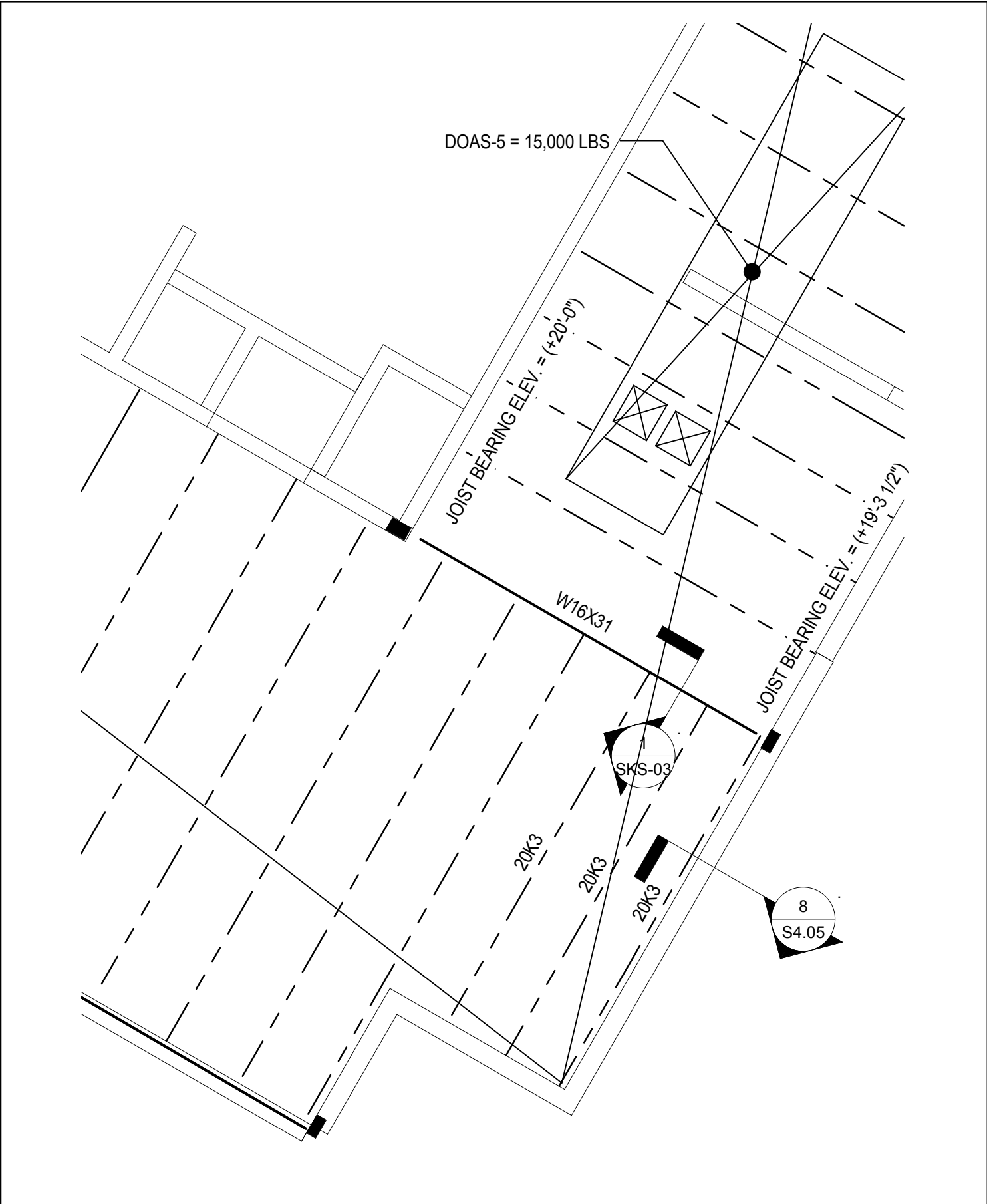
1 OF 1

M&D Proj.#: 15123

Drawn By: KLC

Checked By: KMM

Date: 12.8.2016



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800 North Charles Street, Baltimore, Maryland 21201  
 410-625-4823 voice 410-625-1874 fax

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 717-328-9827 voice 717-603-2449 fax

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**S1.04**

M&D Proj.#: 15123

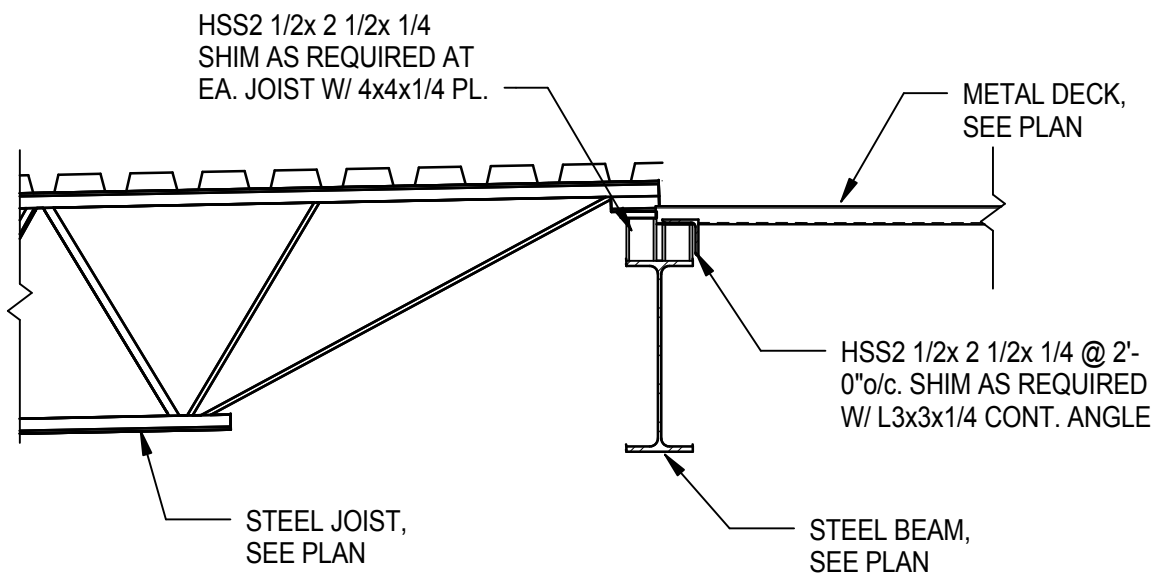
Drawn By: KLC

Checked By: KMM

Date: 12.8.2016

1 OF 1





SECTION

3/4" = 1'-0"

1	14
SKS-03	S4.05

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SUBMISSION:  
ADDENDUM #4

S4.05

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Checked By: KMM

Date: 12.8.2016

1 OF 1



# LEED 2009 for Schools New Construction and Major Renovations

BCPS Victory Villa Elementary School

## Project Checklist

Date

### 16 4 4 Sustainable Sites Possible Points: 24

Y	?	N			
Y			Prereq 1	Construction Activity Pollution Prevention	
Y			Prereq 2	Environmental Site Assessment	
		1	Credit 1	Site Selection	1
4			Credit 2	Development Density and Community Connectivity	4
		1	Credit 3	Brownfield Redevelopment	1
4			Credit 4.1	Alternative Transportation—Public Transportation Access	4
1			Credit 4.2	Alternative Transportation—Bicycle Storage and Changing Rooms	1
2			Credit 4.3	Alternative Transportation—Low-Emitting and Fuel-Efficient Vehicles	2
2			Credit 4.4	Alternative Transportation—Parking Capacity	2
		1	Credit 5.1	Site Development—Protect or Restore Habitat	1
1			Credit 5.2	Site Development—Maximize Open Space	1
	1		Credit 6.1	Stormwater Design—Quantity Control	1
	1		Credit 6.2	Stormwater Design—Quality Control	1
	1		Credit 7.1	Heat Island Effect—Non-roof	1
1			Credit 7.2	Heat Island Effect—Roof	1
	1		Credit 8	Light Pollution Reduction	1
	1		Credit 9	Site Master Plan	1
1			Credit 10	Joint Use of Facilities	1

### 6 3 2 Water Efficiency Possible Points: 11

Y	?	N			
Y			Prereq 1	Water Use Reduction—20% Reduction	
4			Credit 1	Water Efficient Landscaping	2 to 4
		2	Credit 2	Innovative Wastewater Technologies	2
2	2		Credit 3	Water Use Reduction	2 to 4
	1		Credit 3	Process Water Use Reduction	1

### 12 2 11 Energy and Atmosphere Possible Points: 33

Y	?	N			
Y			Prereq 1	Fundamental Commissioning of Building Energy Systems	
Y			Prereq 2	Minimum Energy Performance	
Y			Prereq 3	Fundamental Refrigerant Management	
8	2		Credit 1	Optimize Energy Performance	1 to 19
		7	Credit 2	On-Site Renewable Energy	1 to 7
		2	Credit 3	Enhanced Commissioning	2
2			Credit 4	Enhanced Refrigerant Management	1
		2	Credit 5	Measurement and Verification	2
2			Credit 6	Green Power	2

### 7 1 6 Materials and Resources Possible Points: 13

Y	?	N			
Y			Prereq 1	Storage and Collection of Recyclables	
		3	Credit 1.1	Building Reuse—Maintain Existing Walls, Floors, and Roof	1 to 2
		1	Credit 1.2	Building Reuse—Maintain 50% of Interior Non-Structural Elements	1
2			Credit 2	Construction Waste Management	1 to 2

### Materials and Resources, Continued

Y	?	N			
		2	Credit 3	Materials Reuse	1 to 2
2			Credit 4	Recycled Content	1 to 2
1	1		Credit 5	Regional Materials	1 to 2
1			Credit 6	Rapidly Renewable Materials	1
1			Credit 7	Certified Wood	1

### 11 4 1 Indoor Environmental Quality Possible Points: 19

Y	?	N			
Y			Prereq 1	Minimum Indoor Air Quality Performance	
Y			Prereq 2	Environmental Tobacco Smoke (ETS) Control	
Y			Prereq 3	Minimum Acoustical Performance	
		1	Credit 1	Outdoor Air Delivery Monitoring	1
		1	Credit 2	Increased Ventilation	1
1			Credit 3.1	Construction IAQ Management Plan—During Construction	1
1			Credit 3.2	Construction IAQ Management Plan—Before Occupancy	1
1			Credit 4	Low-Emitting Materials	1 to 4
1			Credit 5	Indoor Chemical and Pollutant Source Control	1
	1		Credit 6.1	Controllability of Systems—Lighting	1
	1		Credit 6.2	Controllability of Systems—Thermal Comfort	1
1			Credit 7.1	Thermal Comfort—Design	1
1			Credit 7.2	Thermal Comfort—Verification	1
2	1		Credit 8.1	Daylight and Views—Daylight	1 to 3
1			Credit 8.2	Daylight and Views—Views	1
	1		Credit 9	Enhanced Acoustical Performance	1
1			Credit 10	Mold Prevention	1

### 4 2 1 Innovation and Design Process Possible Points: 6

Y	?	N			
1			Credit 1.1	Innovation in Design: Green Cleaning	1
1			Credit 1.2	Innovation in Design: Specific Title	1
		1	Credit 1.3	Innovation in Design: Specific Title	1
		1	Credit 1.4	Innovation in Design: Specific Title	1
1			Credit 2	LEED Accredited Professional	1
1			Credit 3	The School as a Teaching Tool	1

### 1 2 1 Regional Priority Credits Possible Points: 4

Y	?	N			
1			Credit 1.1	SS 4.1 Alternative Transportation	1
		1	Credit 1.2	SS 6.2 Stormwater Design - Quality Control	1
		1	Credit 1.3	SS 5.1 Site Development Protect or Restore Habitat	1
		1	Credit 1.4	Regional Priority: Specific Credit	1

### 57 18 25 Total Possible Points: 110

Certified 40 to 49 points Silver 50 to 59 points Gold 60 to 79 points Platinum 80 to 110