



Architectural  
Services

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www.grcinc.com

# ADDENDUM ONE

Project: **Sullivan County Mary Hughes Elementary School HVAC Replacement**

Address: **240 Austin Springs Road, Piney Flats, Tennessee.**

April 5, 2023

This Addendum is part of the Contract Documents for the above referenced project and modifies the original drawings and/or specifications, dated **3/20/23**, as noted below. The bidder shall acknowledge receipt of this Addendum in the place provided in the Bid Form. The published bid date and time shall remain the same.

## GENERAL:

1. Please see attached Pre-Bid Attendance Record.
2. **Clarification:** Buy America - When purchased by federal entities for public use, the Act requires that these goods be produced in the U.S. To be considered as being produced in the U.S., goods must be manufactured in the U.S. and at least 50% of the cost of their components must come from the U.S.

## DRAWINGS:

1. **Lintel Schedule.** See attached Lintel Schedule for use with any new or enlarged wall openings.
2. **Drawing A-11** – See drawing for chain link fence and gates to surround exterior HVAC units.

## SPECIFICATIONS:

1. **Section 000101 – Table of Contents** – Revised to include Section 323113 Chain Link Fencing and Gates.
2. **Section 004113 – Bid Form** – See attached revised bid form to include the Owner's Contingency within the Base Bid, the project completion deadline, and allowance.
3. **Section 012100 – Allowances** – See revised section to include an allowance for building electrical service revisions.
4. **Section 230900 – HVAC Controls** – Part 2 item 2.01 Acceptable Manufacturers: Include Trane as an acceptable manufacturer for HVAC Controls. All controls systems are required to be compatible with the current District wide Building Automation System.

**5. Section 231000 – HVAC** The following manufacturers are acceptable provided the equipment meet the performance specification, listed manufacturers are not an indication of basis of design and are only listed for reference. All equipment must meet the performance requirements:

- a. RTU's JCI, AAON
- b. Unit Ventilators Magic Aire
- c. Fan Coils JCI, IEC
- d. Seismic Vibration Isolation Vibro-Acoustics
- a. **Section 231000 – HVAC** Item 2.02 C and D Clarification - the supply air ductwork from the ERV units to not have insulation if they are within the insulated building envelope. Item 2.02-D states that these duct types must have insulation if they are inside the building but above the insulated envelope (attic spaces). Item 2.02-G is a separate insulation spec for all ductwork located outside the building (on the roof, along the exterior wall, etc...).

**6. Section 323113 – Chain Link Fencing and Gates –** Specification section added.

**END OF ADDENDUM 1**

OFFICE OF THE SULLIVAN COUNTY PURCHASING AGENT  
 3411 HIGHWAY 126-SUITE 201  
 BLOUNTVILLE, TN 37617-0569

KRISTINIA DAVIS  
 PURCHASING AGENT

PHONE 423-323-6400  
 FAX 423-323-7249  
 kris.davis@sullivancountyttn.gov

PRE-BID ATTENDANCE RECORD

DATE: 03.28.2023 TIME: 2:00pm

PROJECT DESCRIPTION: Mary Hughes Elementary School HVAC Replacement

LOCATION OF PROJECT: Mary Hughes Elementary School

\*NOTE: MANDATORY PRE-BID MEETING REQUIRES REPRESENTATION OF COMPANY AGENT, VERIFIED BY REGISTRATION, TO AFFORD AN OPPORTUNITY FOR COMPANY TO OFFER A PRICED PROPOSAL.

Purchasing Spt: Michelle Ramsey

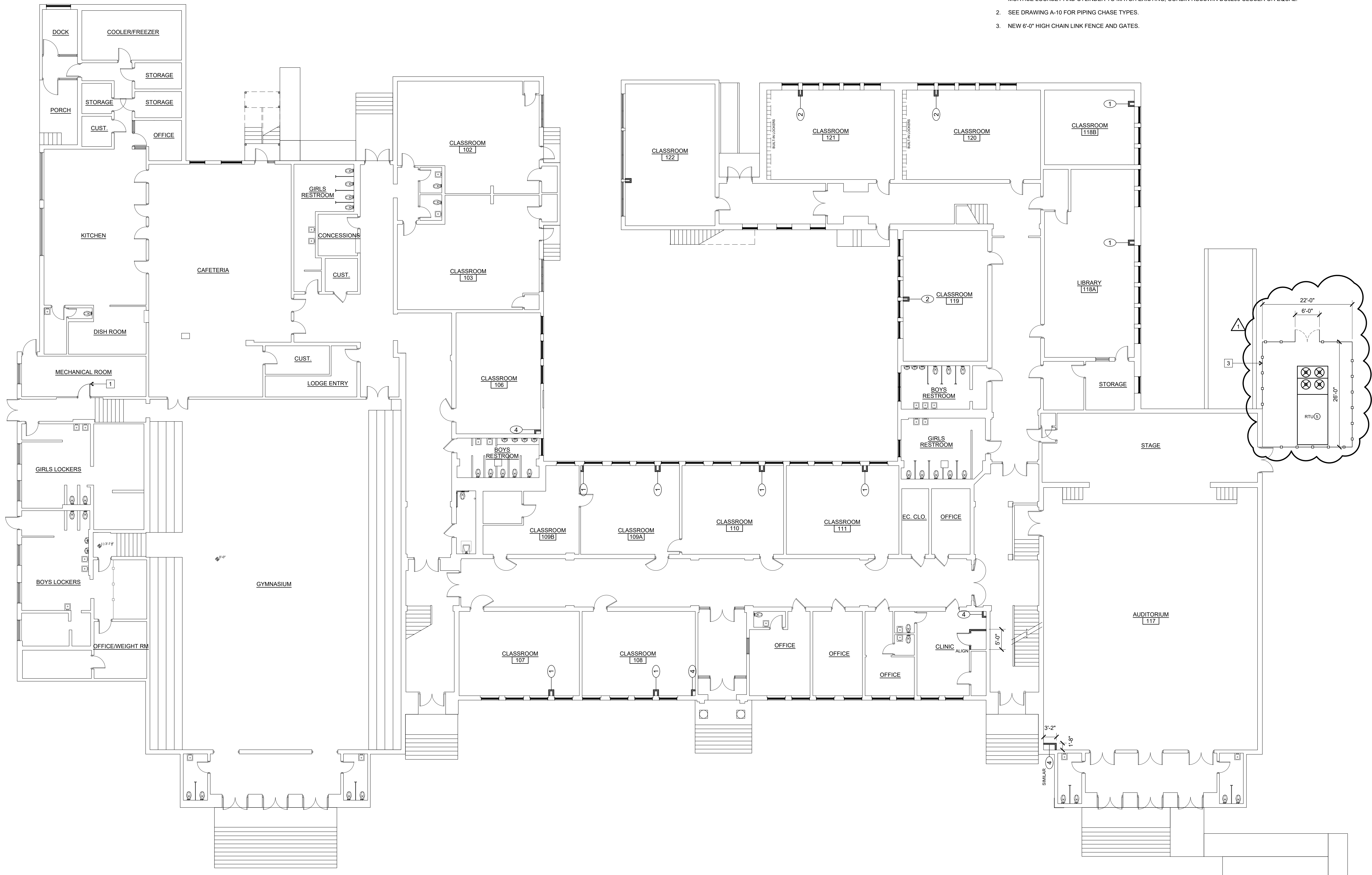
YOUR NAME	COMPANY / AGENCY	PHONE NUMBER	EMAIL ADDRESS
Brent Harrell	Four Seasons, Inc.	865-219-7730	brent@fourseasons.com
DAVID MCKINNEY	S.B. WHITE CO. INC.	423-926-8127	dmckinney@sbnwhiteco.com
Marcus Fowler	Nor-well Company Inc.	423-543-4373	Shane@nor-well.com
MILTON LIETZKE	CRW	423-383-5430	MILT@GRCINC.COM
CHARLES HUBBARD	SCDE	423-354-1151	CHARLES.HUBBARD@SULLIVAN-K12.NET
Quincy Perkins	HVAC	423-361-9520	qperkins@HVAC-inc.com
Steven Zimny	BCE	865-399-3428	Steven.z@bce1946.com

LINTEL SCHEDULE FOR WALL OPENINGS		
This Schedule shall apply for all Masonry Wall Lintels as shown and noted on the Drawings and shall also apply where Masonry Wall Lintels are not shown and noted on the drawings.		
MASONRY OPENING	MINIMUM BEARING LENGTH	LINTEL: WHERE PLATES (½") ARE SCHEDULED THEIR WIDTHS SHALL BE THE TOTAL WALL WIDTH (-) 1".
0" thru 4'-0" Mk. L-1	8"	Exterior Wall: Pre-cast Masonry Lintel or continuation of Typ. Bond Beam w/ L5x5x <sup>5</sup> / <sub>16</sub> for Brick Interior Wall: "U-Block" Bond Beam
4'-1" thru 6'-4" Mk. L-2	8"	W8x10 w/ Plate
6'-5" thru 8'-4" Mk. L-3	10"	W8x18 w/ Plate
8'-5" thru 10'-4" Mk. L-4	12"	W8x24w/ Plate
10'-5" thru 12'-4" Mk. L-5	12"	W8x31 w/ Plate
Block cores at bearing ends of lintels shall be filled full height of wall to brng. w/ 4,000 psi grout. Grout length = brng. plus 8". At all Masonry and Lintels bearing on Masonry provide 4,000 psi grout full ht. w/ 1 - #5 Vert. each of 2 cores min., and dowel to Footing Typ. each Bearing End, except as noted.		

MASONRY LINTEL SCHEDULE FOR WALL OPENINGS		
Where masonry wall lintels are not shown and noted on the drawings, this Schedule shall also apply.		
MASONRY OPENING	MINIMUM BEARING LENGTH	LINTEL DESCRIPTION
0" thru 4'-0" Mk. M-1	8"	Exterior wall: Pre-cast Masonry Lintel plus L5x5x <sup>5</sup> / <sub>16</sub> for Brick Interior wall: Pre-cast Masonry Lintel or "U-Block" Bond Beam or Pre-cast Masonry Lintel w/ 2 - #6 T.F. & B.F.
4'-1" thru 6'-4" Mk. M-2	8"	8" (or 12") x 16" High Pre-cast Masonry Lintel or 2 course "U-Block" Bond Beam w/ 2 - #6 T.F., 2 - #6 B.F.
6'-5" thru 8'-4" Mk. M-3	10"	8" (or 12") x 16" High Pre-cast Masonry Lintel or 2 course "U-Block" Bond Beam w/ 3 - #6 T.F., 3 - #7 B.F.
8'-5" thru 10'-4" Mk. M-4	12"	8" (or 12") x 24" High Pre-cast Masonry Lintel or 3 course "U-Block" Bond Beam w/ 3 - #6 T.F., 3 - #7 B.F.
10'-5" thru 12'-4" Mk. M-5	12"	8" (or 12") x 24" High Pre-cast Masonry Lintel or 3 course "U-Block" Bond Beam w/ 3 - #7 T.F., 3 - #8 B.F.
12'-5" thru 14'-4" Mk. M-6	12"	8" (or 12") x 24" High Pre-cast Masonry Lintel or 3 course "U-Block" Bond Beam w/ 3 - #7 T.F., 3 - #8 B.F.
Block cores at bearing ends of lintels shall be filled full height of wall to brng. w/ 4,000 psi grout. Grout length = brng. plus 8". At all Masonry and Lintels bearing on Masonry provide 4,000 psi grout full ht. w/ 1 - #5 Vert. each of 2 cores min., and dowel to Footing Typ. each Bearing End, except as noted.		

### KEY NOTES

1. REMOVE EXISTING DOOR AND FRAME IN THE MECHANICAL ROOM AND REPLACE WITH A NEW 1 HOUR RATED 3'-0" x 7'-0" HOLLOW METAL DOOR AND FRAME. PROVIDE (3) MCKINNEY OR EQUAL TA2714 HINGES, SCHLAGE MORTISE LOCKSET AND CYLINDER TO MATCH EXISTING, CORBIN RUSSWIN DC6200 CLOSER OR EQUAL.
2. SEE DRAWING A-10 FOR PIPING CHASE TYPES.
3. NEW 6'-0" HIGH CHAIN LINK FENCE AND GATES.



HVAC Replacement for

MARY HUGHES  
ELEMENTARY SCHOOL

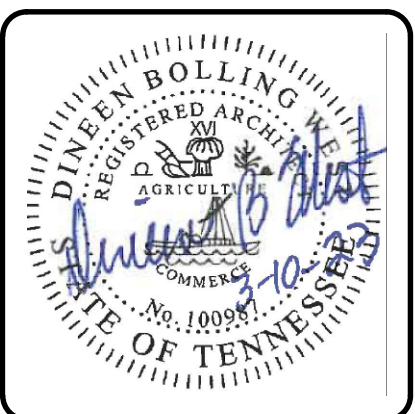
Piney Flats, Tennessee

**Cain  
Rash  
West**  
Architects

130 Regional Park Dr.  
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www.grcinc.com

THIS DRAWING AS PREPARED BY CainRashWest Architects SHALL BE USED FOR THE SPECIFIC IDENTIFIED PROJECT ONLY. THIS DRAWING IS THE PROPERTY OF CainRashWest Architects AND SHALL BE RETURNED PER THEIR REQUEST

no.	date	rev.	description
1	4-6-23		ADDENDUM #1



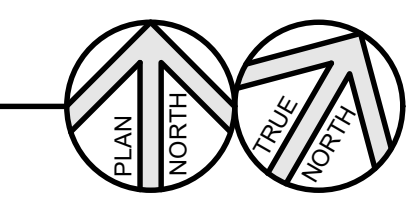
issued	3/10/2023
checked	RDL
drawn	RDL
project no.	202287

MAIN FLOOR  
PLAN

A-11

### MAIN FLOOR PLAN

SCALE: 3/32" = 1'-0"



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- SECTION 002113 – BID ENVELOPE COVER
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- SECTION 002215 - INSURANCE REQUIREMENTS FOR CONSTRUCTION PROJECTS UP TO \$1 MILLION
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***DIVISION 02 - EXISTING CONDITIONS***

- SECTION 024119 – SELECTIVE DEMOLITION

***DIVISION 03- CONCRETE***

- NOT USED

***DIVISION 04- MASONRY***

- NOT USED

***DIVISION 05- METALS***

- NOT USED

***DIVISION 06- WOOD, PLASTICS, AND COMPOSITES***

- NOT USED

***DIVISION 07- THERMAL AND MOISTURE PROTECTION***

- SECTION 079200 – JOINT SEALANTS

***DIVISION 08- OPENINGS***

- NOT USED

***DIVISION 09- FINISHES***

- SECTION 092216 – NON-STRUCTURAL METAL FRAMING
- SECTION 092900 – GYPSUM BOARD
- SECTION 095123 – ACOUSTICAL TILE CEILINGS
- SECTION 096513 – RESILIENT BASE AND ACCESSORIES
- SECTION 099123 – INTERIOR PAINTING

***DIVISION 10 - SPECIALTIES***

- NOT USED

***DIVISION 21 - FIRE PROTECTION***

- NOT USED

***DIVISION 22 - PLUMBING***

- NOT USED

***DIVISION 23 - HEATING, VENTILATING AND AIR CONDITIONING (HVAC)***

- SECTION 230500 – BASIC HVAC SYSTEM MATERIALS AND METHODS
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- SECTION 260100 – GENERAL ELECTRICAL
- SECTION 260200 – SUPPORTING DEVICES
- SECTION 260300 – EQUIPMENT IDENTIFICATION
- SECTION 260400 – POWER SERVICE
- SECTION 260401 – GROUNDING
- SECTION 260519 – CONDUCTORS
- SECTION 260533 – CONDUIT

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- SECTION 264313 – SURGE PROTECTIVE DEVICES
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- SECTION 280000 – GENERAL ELECTRONIC SAFETY & SECURITY
- SECTION 283100 – FIRE ALARM SYSTEM EXPANSION

***DIVISION 31 - EARTHWORK***

- NOT USED

***DIVISION 32 – EXTERIOR IMPROVEMENTS***

- SECTION 323113 – CHAIN LINK FENCING AND GATES



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## B I D F O R M 0 0 4 1 1 3

TO:                   OWNER:           Sullivan County Tennessee  
                          ADDRESS:         3411 Highway 126  
  Blountville, TN 37617

BID TRANSMITTED IN CARE OF:   Michelle Ramey, Assistant Purchasing Agent  
  Sullivan County Courthouse  
  3411 Highway 126  
  Blountville, TN 37617

FROM: BIDDER: \_\_\_\_\_

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

CITY/STATE/ZIP: \_\_\_\_\_

TELEPHONE: \_\_\_\_\_

TN. LICENSE NO: \_\_\_\_\_

LICENSE EXPIRATION DATE: \_\_\_\_\_

THE ABOVE STATED BIDDER IS:

\_\_\_\_\_ AN INDIVIDUAL

\_\_\_\_\_ A CORPORATION

\_\_\_\_\_ A PARTNERSHIP

\_\_\_\_\_ A JOINT VENTURE CONSISTING OF:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

AND IS LICENSED TO DO BUSINESS IN THE STATE OF TENNESSEE,

Mary Hughes Elementary School  
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FOR THE WORK SPECIFIED.

GENTLEMEN:

1. Having examined the plans and specifications, having visited the site of the proposed work, and being completely familiar with the local conditions affecting the cost of the work, and having carefully examined the construction bidding documents with addenda prepared by Cain Rash West Architects and entitled "SULLIVAN COUNTY MARY HUGHES ELEMENTARY SCHOOL HVAC REPLACEMENT"

2. I, (We) propose to execute the portion of the work identified as "**Sullivan County Mary Hughes Elementary School HVAC Replacement**" for the stipulated sum of: (sums shall be in written and numerical form)

Lump Sum Base Bid \_\_\_\_\_ DOLLARS

(\$ \_\_\_\_\_).

Proposed Project Duration \_\_\_\_\_ ( \_\_\_\_\_ ) Days

**Base Bid shall include an Owner's Contingency of 5% which shall be listed as a line item on the Schedule of Values. Liquidated Damages shall be \$200 per day after September 30, 2024 if not substantially Complete. Note: Owner is aware of material availability issues – if all reasonable efforts to obtain materials have been made and documented and are not available to complete the project on time, the contractor will not be penalized.**

3. Allowance No. One (1): Lump-Sum Power Company Aid to Construction Allowance:  
a. Base bid will include Aid to Construction charges from Brightridge for modifications to the building electrical power service.

Allowance #1 Unit Cost Thirty Eight Thousand DOLLARS

(\$38,000.00)

4. The undersigned agrees to complete all of the work described by the "Contract Documents" and have the space fully ready for occupancy, including any Alternates.

5. The undersigned agrees to commence work under this contract within three working days of receipt of Notice to Proceed.

6. The undersigned agrees that this bid shall be good and may not be withdrawn for a period of (30) thirty calendar days after the scheduled closing time for receiving bids.

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7. The undersigned, upon receipt of written notice of the acceptance of this bid, agrees to deliver, to the owner or his agent, the architect, the required performance bond, labor and material payment bond and certificate of insurance in accordance with the specifications and instructions to bidders.

The undersigned hereby acknowledges receipt of:

ADDENDUM NO.	DATE
_____	_____
_____	_____
_____	_____

This proposal is respectfully submitted

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

Title: \_\_\_\_\_

Firm name: \_\_\_\_\_

\_\_\_\_\_

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

\_\_\_\_\_

\_\_\_\_\_  
(Seal if this bid is submitted by a Corporation)

This Bid Form consists of three (3) pages.  
END OF BID FORM 004113

## SECTION 012100 - ALLOWANCES

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. Section includes administrative and procedural requirements governing allowances.
- B. Types of allowances include the following:
  - 1. Contingency allowances.

#### 1.2 ACTION SUBMITTALS

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

#### 1.3 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.

#### 1.4 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. Unless otherwise indicated, Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and materials ordered by Owner or selected by Architect under allowance shall be included as part of the Contract Sum and not part of the allowance.

#### 1.5 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.

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2. If requested, prepare explanation and documentation to substantiate distribution of overhead costs and other markups.
  3. 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

- A. Allowance No. 1: Lump-Sum Electrical Aid to Construction Allowance:
  1. Project will include \$38,000.00 Aid to Construction cost from Brightridge for electrical service modifications.

END OF SECTION 012100

Mary Hughes Elementary School  
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SECTION 32 31 13 - CHAIN LINK FENCE AND GATES

**PART 1 GENERAL**

1.01 WORK INCLUDED

- A. Chain link fence and gates as shown on the Drawings and specified herein.

1.02 RELATED WORK

- A. Specified elsewhere:

- 1. Section 01 10 00 – Summary

1.03 QUALITY ASSURANCE

- A. Installer shall have a minimum of two (2) years experience in installing similar fencing, which shall be confirmed in writing and accompanied by a list of installations.

1.04 REFERENCES

- A. American Society for Testing Materials (ASTM); latest edition:

- 1. A116 Standard Specification for Zinc-Coated (Galvanized) Steel Woven Wire Fence Fabric
- 2. A53 Standard Specification for Pipe, Steel, Black and Hot-Dipped zinc-Coated (Galvanized) Welded and Seamless, for Ordinary Uses
- 3. A123 Standard Specifications for Zinc (Hot Galvanized) Coatings on Iron and Steel Products
- 4. A153 Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware
- 5. C150 Standard Specification for Portland Cement

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6. ASTM F668 Specification for Polymer Coated Chain Link Fence Fabric
7. ASTM F900 Specification for Industrial and Commercial Swing Gates
8. ASTM F934 Specification for Standard Colors for Polymer-Coated Chain Link
9. ASTM F1083 Specification for Pipe, Steel, Hot-Dipped Zinc-Coated (Galvanized) Welded, for Fence Structures
10. ASTM F1184 Specification for industrial and Commercial Horizontal Slide Gates
11. ASTM F626 Specification for Fence Fittings
12. ASTM 1043 Specification for Strength and Protective Coatings of Steel Industrial Chain Link Fence Framework

B. Federal Specifications (FS):

1. RR-F-191/GEN 22 Jul 81 Fencing, Wire and Post Metal (and Gates, Chain-Link Fence Fabric and Accessories) (General Specification)

1.05 SUBMITTALS

A. Submit the following in accordance with Section 01 33 00:

1. Manufacturer's Literature: Materials description and installation instructions.
2. Shop Drawings: Show layout of fencing, dimensions, height, footings, sizes members, connections, etc.
3. Samples: 6-inch x 6-inch piece of chainlink fabric.

1.06 DELIVERY, STORAGE AND HANDLING

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- A. Deliver all materials in manufacturer's original packaging with tags and labels intact. Handle and store materials in such a manner as to avoid damage. Damaged or otherwise unsuitable material when so ascertained shall be immediately removed from the job site.

## **PART 2 PRODUCTS**

### **2.01 MATERIALS**

All fencing framework, wire fabric, and components to be black coated PVC.

- A. Round Steel Pipe and Rail: ASTM F1083, Schedule 40.
- B. Polymer Coated Pipe: Polymer coated pipe shall have a PVC coating fused and adhered to the exterior zinc coating of the galvanized pipe in accordance with ASTM F1043. The minimum thickness of the PVC coating shall be 10-mils (0.254 mm). Color to match fabric black per ASTM F934.
- C. The color of all framework shall be black in accordance with ASTM F934.
- D. Polymer Coated Color Fittings: In compliance with ASTM F626, PVC coating minimum thickness 0.006 in. (0.152 mm) fused and adhered to the zinc coated fittings. Match color to fence system, black, per ASTM F934.
- E. Polymer Coated End, Corner and Pull Posts:
  - 1. Fence up to and including 6 feet in height:
    - a. 3.0 inch outside diameter pipe weighing 9.11 pounds per lineal foot,
- F. Polymer Coated Line Posts: (10 feet maximum spacing)
  - 1. Fabric up to 9 feet in height:
    - a. 2.0 inch outside diameter pipe weighing 3.65 pounds per lineal foot.
- G. Polymer Coated Gate Posts:
  - 1. Gate leaves 6 feet wide:



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- a. 3.0 inches outside diameter pipe weighing 9.11 pounds per lineal foot.
- H. Polymer Coated Top Rail:
1. 1.660 inch outside diameter pipe weighing 2.27 pounds per lineal foot. Furnish in manufacturer's standard lengths, of approximately 21 feet with couplings approximately 6 inches long for each joint, one coupling in each 5 to have expansion spring. Provide means for attaching top rail securely to each gate, corner, pull and end posts. Top rail shall form continuous brace from end to end of each run of fence.
- I. Polymer Coated Tension Wire: Shall be provided at top and bottom of fabric except where rails are required.
1. 7-gauge polymer coated coil spring wire.
- J. Polymer Coated Center Rails between Line Posts:
1. 1.660 inch outside diameter pipe weighing 2.27 pounds per lineal foot.
- K. Polymer Coated Post Bracing Assembly: (Shall match top rail)
1. 1.660 inch outside diameter pipe weighing 2.27 pounds per lineal foot. (For horizontal braces) 3/8-inch diameter rod with adjustable take-up (For diagonal truss).
- L. Polymer Coated Chain Link Fabric:
1. The material for chain link fence fabric shall be manufactured from galvanized steel wire. The weight of zinc shall meet the requirements of ASTM F668, Table 4. Galvanized wire shall be PVC-coated to meet the requirements of ASTM F668. The class of the fence fabric shall be Class 2A – Extruded and Bonded.
  2. Selvage: Top and bottom of fabric shall have twisted and barbed selvage.
  3. Color: The coating color for the fence fabric shall be black. Reference ASTM F668 and ASTM F934.

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4. Wire Size: The size of the steel wire core shall be 8 gauge. The finished size of the coated wire shall be 7 gauge.
  5. Height and Mesh Size: the fabric height shall be 6 feet or 4 feet (as shown on the plans) high with a mesh size 2 inches.
- M. Privacy Slats – NOT USED
- N. Polymer Coated Posts Tops:
1. Polymer Coated Pressed steel, or malleable iron, designed as a weathertight closure cap (for tubular posts). Provide one cap for each post unless equal protection is afforded by combination post top cap and barbed wire supporting arm where barbed wire is required. Where top rail is used provide tops to permit passage of top rail.
- O. Polymer Coated Stretcher Bars: (For tubular end, corner, pull or gate posts only)
1. One piece lengths equal to full height of fabric with a minimum cross-section of 3/16 inch x 3/4 inch. Provide one stretcher bar for each gate and end post, and 2 for each corner and pull post.
- P. Polymer Coated Stretcher bar bands:
1. Heavy pressed steel straps, to be spaced not over 15 inch on center to secure stretcher bars to tubular end, corner pull and gate post.
- Q. Polymer Coated Wire Ties:
1. For tying fabric to line posts, use 6-gauge steel wire clips for H-Section posts and minimum 9-gauge aluminum or steel wire ties for tubular posts spaced 14 inch on center. For tying fabric to rails and braces, use 9-gauge aluminum wire ties spaced 24 inch on center. For tying fabric to tension wire, use 11-gauge hog rings spaced 24 inches on center.
- R. Grounding: in accordance with VDOT Standard Detail FE-6 (included herein).
- 2.02 HORIZONTAL SLIDE GATES – Not Used

2.03 SWING GATES

- A. Polymer Coated Swing Gates: Galvanized steel pipe welded fabrication in compliance with ASTM F900. Gate frame members 1.900 in. OD (48.3 mm) ASTM F 1083 schedule 40 galvanized steel pipe Frame members spaced no greater than 8 ft. (2440 mm) apart vertically and horizontally. Welded joints protected by applying zinc-rich paint in accordance with ASTM Practice A780. Positive locking gate latch, pressed steel galvanized after fabrication. Galvanized malleable iron or heavy gauge pressed steel post and frame hinges. Provide lockable drop bar and gate holdbacks with double gates. Match gate fabric to that of the fence system. Gateposts per ASTM F1083 schedule 40 galvanized steel pipe.
- B. Polymer coated swing gates and posts shall match the coating type and color as that specified for the fence framework. Reference ASTM F668 and ASTM F934.

2.04 CONCRETE

- A. Provide concrete consisting of Portland cement complying with ASTM C150, aggregates complying with ASTM C33 and clean water. Mix materials to obtain concrete with a minimum 28-day compressive strength of 3000 psi, using at least 5 sacks of cement per cubic yard, 1-inch maximum size aggregate, 3 maximum slump, and 4 to 6 percent entrained air.

2.05 Landowner swing gates shall be V-Series barrier gates by Hoover Fence Company, or approved equal.

**PART 3 EXECUTION**

3.01 INSTALLATION

- A. Installation of fencing shall be in accordance with ASTM F567, and shall not begin prior to completion of final grading. Drill holes for post footings in firm, undisturbed or compacted soil. Hole shall have a diameter of 10 inches for line posts and 12 inches for other posts. Excavate hole depths approximately six (6) inches deeper than post bottom, with bottom of posts set not less than 42 inches below surface when in firm, undisturbed soil. Excavate deeper as required for adequate support in soft and loose soils.

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1. Metal in contact with concrete shall be coated with bitumastic. Place concrete around posts in a continuous pour, tamp for consolidation. Check each post for vertical and top alignment, and hold in position during placement and finishing operations.
  2. Trowel finish tops of footings, and slope or dome to direct water away from posts. Extend footings for gate posts to the underside of bottom hinge. Set keepers, stops, sleeves and other accessories into concrete as required. Concrete shall be allowed to cure 14 days or until 3000 psi strength is attained.
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- B. Install braces so posts are plumb when diagonal rod is under proper tension.
  - C. Install tension wires before stretching fabric and tie to each post with ties or clips.
  - D. Leave approximately one (1) inch between finish grade and bottom fabric selvage. Pull fabric taut and tie to posts, rails, and tension wires. Install fabric on security side of fence, and anchor to framework so that fabric remains in tension after pulling force is released.
  - E. Thread stretcher bars through fabric and secure to posts with metal bands spaced not over 15 inches on center.
  - F. Install gates plumb, level and secure for full opening without interference. Install ground-set items in concrete for anchorage, as recommended by the fence manufacturer. Adjust hardware for smooth operation and lubricate where necessary.
  - G. In securing fabric use U-shaped clip or wire, securely fastened around pipe to which attached, clasping pipe and fabric firmly. Bend ends of wire to minimize hazard to persons or clothing.
  - H. Install nuts for tension band and hardware bolts on side of fence opposite fabric side.
  - I. Ground fence at each side of each gate, corners, and at points below overhead power lines.

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- J. Install stretcher arms and barbed wire so wire is taut, with arms extending out from area to be protected.
- K. Install material carefully. Damaged coatings shall be repaired or coated items replaced.

END OF SECTION