

ADDENDUM 02

Issue Date: February 25, 2025

Project Information

Client: Abla Griffin Partnership
Project Name: Houchin Elem HVAC Replacement
Project Location: Moore, OK
Owner: Moore Public Schools
Engineer: Salas O'Brien, LLC

Project No. 2024-03104-00



To Prospective Bidders

This Addendum forms a part of the Contract Documents and modifies the Bidding Documents dated August 9, 2024, (and previous Addenda), with amendments and additions noted below.

This Addendum consists of (2) attachments.

- Index of Attachments
 - E000
 - E301

Acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may disqualify Bidder.

CHANGES TO THE DRAWINGS

Revisions have been made to the following drawings and are issued in the form of full-size plans. Edits are indicated by a revision delta and a cloud surrounding the affected portion of the drawing.

E000 – ELECTRICAL TITLE SHEET

- Refer to clouds and deltas on plan.

E301 – ELECTRICAL SHEET SPECIFICATIONS

- Refer to clouds and deltas on plan.

END OF ADDENDUM [02]

LIGHT FIXTURE SCHEDULE				
TYPE	SYMBOL	DESCRIPTION	MANUFACTURER	REFERENCE CATALOG #
A		2X4 LED RECESSED TROFFER. 38W, 4000 LUMENS, 3500K CCT. 0-10V DIMMING.	LSI INDUSTRIES	LPASC24 LED 40L UNV DIM1 35
AE		2X4 LED RECESSED TROFFER. 38W, 4000 LUMENS, 3500K CCT. 0-10V DIMMING. 90 MIN BACK UP.	LSI INDUSTRIES	LPASC24 LED 40L UNV DIM1 35 EM10
B		2X2 LED RECESSED TROFFER. 38W, 3900 LUMENS, 3500K CCT. 0-10V DIMMING.	LSI INDUSTRIES	LPASC22 LED 39L UNV DIM1 35
C		4 INCH ROUND DOWNLIGHT. 22W, 2200 LUMENS, 3500K CCT. 0-10V DIMMING.	LSI INDUSTRIES	LAD4R LED 24L UNV DIM1 35 TR4B WH
EX		UNIVERSAL RECESSED EDGE-LIT LED EXIT SIGN.	ISOLITE	UEL-AC-G-1C2M-MTEBR

GENERAL NOTES:
EQUIVALENT ALTERNATE LIGHT FIXTURES MAY BE PROVIDED FOR BIDDING PURPOSES. THE ENGINEER DOES NOT TAKE RESPONSIBILITY FOR ENSURING ALTERNATE LIGHT FIXTURES USED FOR BIDDING ARE EQUAL; THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALTERNATE FIXTURES ARE EQUIVALENT TO THOSE SPECIFIED PRIOR TO BID. THE WINNING BID PACKAGE SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW IN ACCORDANCE WITH THE SPECIFICATIONS.

MECHANICAL EQUIPMENT SCHEDULE										
CALLOUT	DESCRIPTION	VOLTS	KVA	MCA	MOCF	WIRE CALLOUT	DISCONNECT	DISC PROV BY	DISC INST BY	
CU-1	CONDENSING UNIT	208/120V 2P 3W	1.63	17	30	3/4"C,2#10,#10N,#10G	NON-FUSED	EC	EC	
CU-2	CONDENSING UNIT	208/120V 2P 3W	1.63	17	30	3/4"C,2#10,#10N,#10G	NON-FUSED	EC	EC	
CU-3	CONDENSING UNIT	208/120V 2P 3W	1.63	17	30	3/4"C,2#10,#10N,#10G	NON-FUSED	EC	EC	
CU-4	CONDENSING UNIT	208/120V 2P 3W	1.63	17	30	3/4"C,2#10,#10N,#10G	NON-FUSED	EC	EC	
CU-5	CONDENSING UNIT	208/120V 2P 3W	1.63	17	30	3/4"C,2#10,#10N,#10G	NON-FUSED	EC	EC	
CU-6	CONDENSING UNIT	208/120V 2P 3W	1.63	17	30	3/4"C,2#10,#10N,#10G	NON-FUSED	EC	EC	
CU-7	CONDENSING UNIT	208/120V 2P 3W	1.63	17	30	3/4"C,2#10,#10N,#10G	NON-FUSED	EC	EC	
CU-8	CONDENSING UNIT	208/120V 2P 3W	1.63	17	30	3/4"C,2#10,#10N,#10G	NON-FUSED	EC	EC	
CU-9	CONDENSING UNIT	208/120V 2P 3W	1.63	17	30	3/4"C,2#10,#10N,#10G	NON-FUSED	EC	EC	
CU-10	CONDENSING UNIT	208/120V 2P 3W	2	12	15	3/4"C,2#10,#10N,#10G	NON-FUSED	EC	EC	
CU-11	CONDENSING UNIT	208/120V 2P 3W	2	12	15	3/4"C,2#10,#10N,#10G	NON-FUSED	EC	EC	
CU-12	CONDENSING UNIT	208/120V 2P 3W	2.83	17	30	3/4"C,2#10,#10N,#10G	NON-FUSED	EC	EC	
CU-13	CONDENSING UNIT	208/120V 2P 3W	2.83	17	30	3/4"C,2#10,#10N,#10G	NON-FUSED	EC	EC	
CU-14	CONDENSING UNIT	208/120V 2P 3W	2	12	15	3/4"C,2#10,#10N,#10G	NON-FUSED	EC	EC	
CU-15	CONDENSING UNIT	208/120V 2P 3W	2	12	15	3/4"C,2#10,#10N,#10G	NON-FUSED	EC	EC	
CU-16	CONDENSING UNIT	208/120V 2P 3W	2	12	15	3/4"C,2#10,#10N,#10G	NON-FUSED	EC	EC	
F-1	FURNACE	120V 1P 2W	1.18	9.8	15	3/4"C,1#10,#10N,#10G	DUPLEX RECEPTACLE	EC	EC	
F-2	FURNACE	120V 1P 2W	1.18	9.8	15	3/4"C,1#10,#10N,#10G	DUPLEX RECEPTACLE	EC	EC	
F-3	FURNACE	120V 1P 2W	1.18	9.8	15	3/4"C,1#10,#10N,#10G	DUPLEX RECEPTACLE	EC	EC	
F-4	FURNACE	120V 1P 2W	1.18	9.8	15	3/4"C,1#10,#10N,#10G	DUPLEX RECEPTACLE	EC	EC	
F-5	FURNACE	120V 1P 2W	1.18	9.8	15	3/4"C,1#10,#10N,#10G	DUPLEX RECEPTACLE	EC	EC	
F-6	FURNACE	120V 1P 2W	1.18	9.8	15	3/4"C,1#10,#10N,#10G	DUPLEX RECEPTACLE	EC	EC	
F-7	FURNACE	120V 1P 2W	1.18	9.8	15	3/4"C,1#10,#10N,#10G	DUPLEX RECEPTACLE	EC	EC	
F-8	FURNACE	120V 1P 2W	1.18	9.8	15	3/4"C,1#10,#10N,#10G	DUPLEX RECEPTACLE	EC	EC	
F-9	FURNACE	120V 1P 2W	1.18	9.8	15	3/4"C,1#10,#10N,#10G	DUPLEX RECEPTACLE	EC	EC	
F-10	FURNACE	120V 1P 2W	1.18	9.8	15	3/4"C,1#10,#10N,#10G	DUPLEX RECEPTACLE	EC	EC	
F-11	FURNACE	120V 1P 2W	1.18	9.8	15	3/4"C,1#10,#10N,#10G	DUPLEX RECEPTACLE	EC	EC	
F-12	FURNACE	120V 1P 2W	1.18	9.8	15	3/4"C,1#10,#10N,#10G	DUPLEX RECEPTACLE	EC	EC	
F-13	FURNACE	120V 1P 2W	1.18	9.8	15	3/4"C,1#10,#10N,#10G	DUPLEX RECEPTACLE	EC	EC	
F-14	FURNACE	120V 1P 2W	1.18	9.8	15	3/4"C,1#10,#10N,#10G	DUPLEX RECEPTACLE	EC	EC	
F-15	FURNACE	120V 1P 2W	1.18	9.8	15	3/4"C,1#10,#10N,#10G	DUPLEX RECEPTACLE	EC	EC	
F-16	FURNACE	120V 1P 2W	1.18	9.8	15	3/4"C,1#10,#10N,#10G	DUPLEX RECEPTACLE	EC	EC	
RTU-1	ROOFTOP UNIT	208V 3P 3W	23.06	80	90	1-1/4"C,3#2,#8G	NON-FUSED	MFR	EC	

ELECTRICAL ABBREVIATIONS		
AC	ABOVE COUNTERTOP	MC MECHANICAL CONTRACTOR
AFF	ABOVE FINISH FLOOR	MCA MINIMUM CIRCUIT AMPS
AFG	ABOVE FINISH GRADE	MDP MAIN DISTRIBUTION PANEL
ANNC	ANNUNCIATOR	MTD MOUNTED
CC	CONTROLS CONTRACTOR	NIC NOT IN CONTRACT
DF	DRINKING FOUNTAIN	OCC OCCUPANCY
EC	ELECTRICAL CONTRACTOR	PC PLUMBING CONTRACTOR
EF	EXHAUST FAN	PNL PANEL
EX	EXISTING	SPST SINGLE POLE SINGLE THROW
EXR	EXISTING RELOCATED	TTB TELEPHONE TERMINAL BOARD
GC	GENERAL CONTRACTOR	TYP TYPICAL
GFI	GROUND FAULT INTERRUPT	WG WIRE GUARD
HP	HORSEPOWER	WP WEATHER PROOF
IBC	INTERNATIONAL BUILDING CODE	20A 20 AMP
IG	ISOLATED GROUND	Ø PHASE
LV	LOW VOLTAGE	3W 3 WIRE
LVRP	LV RELAY PANEL	1P20A SINGLE POLE 20 AMP

ELECTRICAL LEGEND	
	PANEL BOARD
	DISTRIBUTION PANEL BOARD
	TRANSFORMER
	UTILITY METER
	SEPARATE CIRCUIT BREAKER
	DISCONNECT
	FUSED DISCONNECT SWITCH
	EMERGENCY FUSED DISCONNECT SWITCH
	MOTOR STARTER/CONTRACTOR
	COMBINATION MOTOR STARTER
	PUSH BUTTON STATION AS NOTED
	PULL BOX, SIZE AS REQUIRED BY CODE
	ELECTRICAL CONNECTION
	MOTOR CONNECTION
	HOME RUN TO PANEL BOARD

FIRE ALARM NOTES	
1.	FIRE ALARM SCOPE: A. REPLACE ALL EXISTING SD PROTOCOL DEVICES WITH SK PROTOCOL DEVICES. B. REPLACE EXISTING SILENT KNIGHT 5820XL MAIN CONTROL AND 5815XL SLC EXPANDER WITH SILENT KNIGHT 6820XL MAIN CONTROL AND 6815 SLC EXPANDER. IF VOICE EVAC IS REQUIRED, USE SILENT KNIGHT 6820EVS MAIN CONTROL. C. REFERENCE MECHANICAL AND ELECTRICAL PLANS FOR ADDITIONAL FIRE ALARM SCOPE.
2.	COORDINATE WITH OWNERS LICENSED FIRE ALARM INSTALLERS FOR FINAL DEVICE LAYOUT. QUANTITIES AND LOCATIONS AS REQUIRED BY FIRE ALARM CONTRACTOR.
3.	BUILDING DOES HAVE AN AUTOMATIC SPRINKLER SYSTEM.
4.	BASIC SPECIFICATIONS ARE INCLUDED TO GIVE GUIDANCE FOR BIDDING BY OTHER THAN THE EC, BECAUSE EC RESPONSIBILITY IS ROUGH IN ONLY.
5.	COORDINATE WITH FIRE ALARM CONTRACTORS AHJ APPROVED SHOP DRAWINGS FOR ROUGH IN LOCATIONS.
6.	THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL WIRING, COMPONENTS, AND DEVICES REQUIRED TO MEET THE LOCAL CODE. THE FIRE ALARM SYSTEM SHOULD BE DESIGNED BY THE FIRE ALARM CONTRACTOR.

GENERAL ELECTRICAL NOTES	
1.	CONTRACTOR TO VERIFY EXISTING ELECTRICAL CONDITIONS AND NOTIFY ARCHITECT/ENGINEER OF ANY ELECTRICAL OR CODE ISSUES PRIOR TO BID. CONTRACTOR IS RESPONSIBLE FOR PROVIDING A COMPLETE AND OPERATIONAL CODE COMPLIANT SYSTEM.
2.	ALL WORK SHALL BE IN CONFORMANCE WITH NATIONAL, STATE, AND LOCAL CODES AND/OR ORDINANCES.
3.	ELECTRICAL CONTRACTOR SHALL COORDINATE WORK WITH ALL OTHER CONTRACTORS & LOCAL UTILITY. E.C. SHALL CONTACT LOCAL UTILITY FOR EXACT SERVICE REQUIREMENTS TO INCLUDE BUT NOT LIMITED TO TRANSFORMER, METERS AND CABLING. LOCAL UTILITY REQUIREMENTS SUPERSEDE DRAWINGS AND SPECIFICATIONS.
4.	SEE ARCHITECTURAL, MECHANICAL, & PLUMBING DRAWINGS FOR ADDITIONAL REQUIREMENTS.
5.	WHERE NEW OR EXISTING WIRING FOR INTERIOR DATA OR POWER WILL BE EXPOSED, SURFACE MOUNTED RACEWAY EQUAL TO WIREMOLD SERIES 5400 SHALL BE USED. SURFACE BOXES SHALL MATCH SURFACE RACEWAY. ALL PARTS AND ACCESSORIES SHALL BE INSTALLED FOR A COMPLETE SYSTEM. WHERE BOTH DATA AND POWER WIRING SHARE THE SAME RACEWAY, POWER WIRING SHALL BE SEPARATED FROM DATA WIRING AS PER NEC.
6.	ELECTRICAL DRAWINGS ARE DIAGRAMMATIC ONLY. THEY ARE INTENDED TO GIVE APPROXIMATE LOCATIONS AND OVERALL DESIGN INTENT. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PRODUCTS, MATERIALS, AND ELECTRICAL METHODS WHICH HAVE NOT BEEN SHOWN OR INDICATED BUT ARE REQUIRED FOR A COMPLETE SYSTEM TO THE STANDARDS OF THE INDUSTRY.
7.	INSTALL LIGHTING FIXTURES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. PROVIDE SUPPORTING DEVICES FOR ADEQUATE SUPPORT OF FIXTURES FROM STRUCTURE.
8.	UPON COMPLETION OF THE ELECTRICAL WORK, THE INSTALLATION SHALL BE TESTED FOR CONTINUITY, GROUNDS, AND SHORT CIRCUITS. THE ELECTRICAL CONTRACTOR SHALL DEMONSTRATE PROPER PERFORMANCE OF ALL SYSTEMS. ALL DEFECTIVE WORK OR MATERIALS SHALL BE REPLACED OR REPAIRED AS NECESSARY AND RETESTED.
9.	ELECTRICAL RACEWAYS THAT PENETRATE FIRE RATED ASSEMBLIES SHALL BE SLEEVED AND SEALED AS PER THE LOCAL BUILDING CODE.
10.	THE ELECTRICAL CONTRACTOR SHALL PROVIDE A TEMPORARY ELECTRICAL SYSTEM FOR THE PROJECT. AT LEAST ONE 120 VOLT SINGLE PHASE RECEPTACLE SHALL BE PROVIDED FOR EACH 500 SQUARE FEET OF FLOOR SPACE. SUFFICIENT TEMPORARY LIGHTING SHALL BE PROVIDED TO ALLOW ALL CONTRACTORS TO COMPLETE THEIR WORK. TEMPORARY ELECTRICAL CIRCUITS SHALL BE EQUIPPED WITH COMBINATION GROUND FAULT INTERRUPTER AND CIRCUIT BREAKER PER NEC. TEMPORARY ELECTRICAL SYSTEM SHALL BE INCLUDED IN THIS BID. USAGE CHARGES SHALL BE PAID FOR BY THE GENERAL CONTRACTOR.

FIXTURE LINE PHASE STYLES	
LINE STYLE	DESCRIPTION
	EXISTING FIXTURES TO REMAIN
	EXISTING FIXTURES TO BE REMOVED/DEMOLISHED
	NEW/REPLACEMENT FIXTURES

ELECTRICAL SHEET INDEX	
E-000	ELECTRICAL TITLE SHEET
ED-102	ELECTRICAL DEMOLITION PLAN
ED-201	ELECTRICAL DEMOLITION ROOF PLAN
E-101	ELECTRICAL LIGHTING PLAN
E-102	ELECTRICAL POWER PLAN
E-201	ELECTRICAL ROOF PLAN
E-301	SYSTEM SPECIFICATION
E-401	ELECTRICAL ONE-LINE DIAGRAM
E-501	ELECTRICAL DETAILS SHEET

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SALAS O'BRIEN
MECHANICAL / ELECTRICAL



SE
drawn by
TVO
checked by
AUGUST 2024
date
02/25/2025 AD 02
revisions



HOUCHIN ELEMENTARY
HVAC UPGRADE

sheet no:

E000

Salas O'Brien
2900 S. Telephone Road, Suite 120
Moore, OK 73160
Salas O'Brien Registration: CA# 7058
Expiration Date: 6/30/2025
Salas O'Brien Project Number: 2024-03104-00

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WITHOUT THE EXPRESSED WRITTEN
CONSENT OF AGP.



SE	_____
drawn by	_____
TVO	_____
checked by	_____
AUGUST 2024	_____
date	_____
02/25/2025 AD 02	_____
revisions	_____



SYSTEMS SPECIFICATIONS

Moore Public Schools Fire System Specifications SK Protocol Only

Part 1 - General

2.01 Manufacturers

- Fire System Manufacturer shall be Silent Knight. (No Substitutions)
- Notification Appliance Manufacturer shall be System Sensor. (No Substitutions)
- Device Manufacturer shall be as specified in equipment description. (No Substitutions)
- Cable Manufacturer shall be Genesis. (Or Equivalent)

1.03 Fire Systems Equipment Description

NOTE: Contractor shall use SK Protocol devices. If location has existing SD Protocol devices, contractor shall replace all SD Protocol devices with SK Protocol devices. Contractor shall not combine SD & SK protocol devices to one system.

- Fire alarm control shall be Silent Knight Model # 6820XL or 6820EVS (If voice evac is required). (No Substitutions) If location has an existing 5820XL, contractor shall replace with a 6820XL or 6820EVS.
- Fire alarm signaling line circuit expander shall be Silent Knight Model # 6815. (No Substitutions) If location has existing 5815XL, contractor shall replace with 6815 to support SK Protocol devices. Contractor shall not combine SD & SK protocol devices to one system.
- Fire alarm distributed power module NAC Expansion shall be Silent Knight SK-PS6 / SK-PS10 or Fire-Line Model #s FL-PS6 / FL-PS10. (No Substitutions)
- Fire alarm intelligent power supply shall be Silent Knight Model # 5895XL. (No Substitutions)
NOTE: The 5895XL NAC circuits will not sync with the main control panels NAC circuits. If new NAC circuit synchronization is required with existing NAC circuits, use the SK-PS6/FL-PS6 or SK-PS10/FL-PS10
- Fire alarm remote Annunciator shall be Silent Knight Model # 5860 (Grey) and surface mount trim ring 5860TG (Grey) shall be used if surface mounted. (No Substitutions)
- Fire alarm addressable manual pull station shall be Silent Knight Model # SK-PULL-DA. (No Substitutions)
- Fire alarm addressable photoelectric smoke detector shall be Silent Knight Model # SK-PHOTO-W. (No Substitutions)
- Fire alarm addressable heat detector shall be Silent Knight Model # SK-HEAT-W. (No Substitutions)
- Fire alarm base shall be Silent Knight Model # B300-6. (No Substitutions)
- Smoke Detectors in areas that require a CO Detector shall be SK-FIRE-CO-W. (No Substitutions)
- Fire alarm addressable input module shall be Silent Knight Model # SK-MONITOR or SK-MONITOR-2. (No Substitutions)
- Fire alarm addressable relay module shall be a Silent Knight Model # SK-RELAY. (No Substitutions)
- Fire alarm SLC line isolator shall be Silent Knight Model # SK-ISO. (No Substitutions)
- Fire alarm Duct detectors and Duct Detector Remote Test Stations shall be Silent Knight Model #s SK-DUCT and RTS15KEY. If a Form-C relay is required, please add an SK-RELAY. (No Substitutions)
- Fire alarm Horn / Strobe signaling device shall be System Sensor Model # P2WL. (Model PC2WL can be substituted if mounted on non-stainable ceiling tile. No other Substitutions)
- Fire alarm Strobe signaling device shall be System Sensor Model # SWL. (Model SCWL can be substituted if mounted on non-stainable ceiling tile. No other Substitutions)
- Fire alarm strobe synch module shall be System Sensor Model # MDL3. (Not needed on version 9 panels or newer) (No Substitutions)
- Fire alarm Outdoor strobe signaling device shall be System Sensor Model # P2RKC. (No Substitutions)
- Fire alarm Speaker / Strobe signaling device shall be System Sensor Model # SPSWL. (Model SPSCWL can be substituted if mounted on non-stainable ceiling tile. No other Substitutions)
- Fire alarm Speaker signaling device shall be System Sensor Model # SPWL. (No Substitutions)
- Fire alarm 50-watt Voice Evac expansion system shall be as needed Silent Knight SKE-450 (Single Zone), SKE-450-ZN4 (4 Zone) or SKE-450-ZN6 (6 Zone). (No Substitutions)

1.01 Systems Installation

- All fire alarm junctions and or splices shall be soldered and insulated.
- All Ceiling mounted devices shall be mounted on non-stainable ceiling tiles.
- All circuits and wiring shall be labeled at all terminating ends.
- All fire system wiring shall be RED in color and non-shielded.
- All devices shall be mounted according to the manufacture's specifications.
- All devices shall be properly adjusted and tested prior to job completion.
- All fire pulls shall be dual action.
- All Initiating Devices shall be labeled with their corresponding module and point number. Smoke detector label shall be on smoke detector and smoke detector base and be clearly visible from the finished floor.
- Each Initiating Device Circuits (IDC) shall have Line Isolator Modules Installed at the SLC Head End.
- All Initiating Device Circuits (IDC) shall be wired Class B (NFPA Style B).
- All Initiating Device Circuits (IDC) shall be wired with minimum 18 AWG gauge red **NON-Shielded cable**.
- All duct detectors shall be connected to fire system and shall have remote test stations installed accessible and visible from the finished floor. They shall be labeled with their corresponding module and point number.
- All duct detector ARM / AIM shall be installed adjacent to the remote test stations and shall be accessible and visible from the finished floor. They shall be labeled with their corresponding module and point number. (ARM/AIM should not be needed when using SD505-DUCTR duct det.)
- All modules shall have their corresponding module number.
- All notification devices shall be wall mounted where possible. Where wire is exposed decorative wire molding shall be installed from the ceiling to the device. If ceiling mount devices are used, they shall be mounted on a non-stainable ceiling tile.
- All notification devices shall be labeled with their corresponding module, circuit number and device number. Label shall be on the base and be clearly visible from the finished floor. EOL Device shall be labeled as such.
- All horn / strobes and strobes shall be synchronized.
- All Notification Appliance Circuits (NAC) shall be wired Class B (NFPA Style Y).
- All Notification Appliance Circuits (NAC) shall be wired with minimum 16 AWG gauge red **NON-Shielded cable**.
- Protective grommets shall be installed on all conduits to protect wire.
- All SBUS and SLC circuits shall be wired with red **NON-shielded cable**.

End of Section

- All wire shall be run in J hooks above ceiling with a minimum space of 6" from ceiling deck. All wire shall be in separate pathways 6" from other system wiring. No wire ties allowed. No wire shall be run between the red iron and roof deck.
- Main control panel shall have a CAT 6 cable run between the main control and the phone company DMARC for monitoring purposes.
- All wire run between building shall be in conduit and shall be **Non-shielded** direct burial cable. It shall be a minimum of 4 conductor 16 AWG copper. Wire shall have lightning suppression installed where it enters building.
- Installer shall have a commercial fire technician on the job site at all times during the installation.
- Installer shall supply the electrical and or masonry contractors with specialty back boxes such as remote annunciator recessed back boxes etc. and coordinate with them to ensure that all necessary conduits, back boxes, etc. are installed in the proper locations.
- Follow and adhere to installation practices specified by the applicable NFPA 72 standards.
- Follow and adhere to installation practices specified by NFPA-70 National Electric Code, Edition 2008.
- Follow and adhere to installation practices specified by the Manufacturers.

1.02 Products Installed but not Supplied Under This Section

- All conduit and EMT required for Fire cabling pathway in/out of closets and in/out of wall cavities at the work area. EMT or Conduit for pathways shall have no more than two 90-degree sweeps and no continuous section over 100'.
- All core holes and poke through devices in the floor for the installation of Fire cabling.
- All core holes and EMT sleeves between floors for the routing of Fire cabling.
- Back boxes for the mounting of Fire Devices.
- Drag line or pull string at the back boxes fished through EMT or conduit to the other end for installing Fire Cabling.

1.03 Quality Assurance

1.03.01 Qualifications

- Install all components as directed by Manufacturer's installation guidelines.
- All products shall bear the mark of UL or ETL for performance level.
- System installation shall meet all applicable Local/State codes and safety requirements where project is located.
- All products shall be new and un-used in original packaging.

1.03.02 Bidder/Installer Qualifications

- Bidding contractor shall be a local licensed Commercial Fire Alarm Company with licensed Commercial Fire Alarm technician(s) on staff.
- Bidding contractor shall have a minimum of one year experience installing Silent Knight Addressable fire panels.
- Bidding contractor shall have a minimum of 5 years experience installing commercial fire alarms.
- Bidding contractor shall be able to provide insurance at the request of the owner.
- Bidding contractor shall have a commercial fire technician on the job site at all times during the installation.

1.04 Sequencing

- Contractor shall coordinate with Owner's project manager on sequencing of various trades and construction teams for the lifecycle of the project.

1.05 Scheduling

- Contractor shall provide a detailed construction schedule with hard dates for completion of roughing in cables, terminations and testing once scheduling sequence has been determined to the Owner's Project Manager.

1.06 Warranty

- Contractor shall provide a 1-year parts and labor warranty against defective workmanship and/or system component failure. (1-year warranty shall begin at job completion)

Part 2 - Products

2.02 Source Quality Control

- Materials shall be purchased from Distributors authorized by system Manufacturers to sell new and unused components.

Part 3 -

3.01 Field Quality Control

- Contractor shall make available all ceiling and termination work for inspection by Manufacturer's representative or owner's representative.
- Contractor shall replace all defective components.

3.02 Adjusting

- No additional work outside of the contract scope of work shall be completed without the approval of the Owner or Owner's representative.

3.03 Protection

- It is the responsibility of the Contractor to ensure equipment is protected from dust and water during the project with appropriate materials.
- Remove all protective covers and protective materials from equipment prior to turnover to Owner.

End of Section

1.04 Submittals

1.04.01 Prior to installation

- Show complete map of system design for approval by Owner.

1.04.02 Prior to final acceptance

- Provide a soft CAD copy As-Built showing layout of panel, initiating devices, notification devices and all mounted equipment upon Substantial Completion.
- Ensure all warranties specify that the Owner is entitled to all rights guaranteed by the warranty for various components.

Fire System Installation Completion Check List

Part 1 - General

- Fire System Completion Check List

1.01 Completion Check List

- A map of the entire system showing device numbers and wire routes has been left inside the main control panel and a copy has been given to Jack Phillips with MPS.
- All panel programming has been checked and is correct.
- Panel(s) has been tested for proper operation.
- All zones have been tested to verify proper description at keypad.
- All zones have been tested to verify proper reporting to the monitoring station.
- All points have been tested to verify proper description at the keypad.
- All horn/strobes and strobes have been tested for proper operation.
- All smoke detectors have been tested and dust covers removed.
- All devices have been tested for proper operation.
- All cabinets are labeled on the outside with module numbers and point numbers.
- All cabinets are labeled on the inside with module numbers by the corresponding module and point descriptions.
- A list of all zone numbers and zone descriptions have been provided to Moore Public Schools for alarm monitoring purposes.

End of Section