

FIRE ALARM SPEICIFCATIONS - 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 Manufacture 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-Lite 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 RTS151KEY. 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 # P2RK. (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 manufacturer'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 del.)
- 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**.
- 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 ran between the main control and the phone company DMARC for monitoring purposes.
- All wire ran 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 unused 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.

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 horns/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

IP CAMERA SYSTEM SPECIFICATIONS

IP CAMERA MANUFACTURE IS AVIGILON (NO SUBSTITUTIONS).

AVIGILON EQUIPMENT

INDOOR DOME SINGLE HEAD CAMERA REQUIRED EQUIPMENT LIST

4.0C-H6A-D1-IR

ACC7-ENT LICENSE - 1 per camera

INDOOR MULTI-HEAD 2 HEAD CAMERA REQUIRED EQUIPMENT LIST

10.0C-H6D-HD01-IR

ACC7-ENT LICENSE - 1 per camera

INDOOR FISHEYE CAMERA REQUIRED EQUIPMENT LIST

12.0C-H6A-FE-360-D01-IR

ACC7-ENT LICENSE - 1 per camera

INDOOR MULTI-HEAD 3 HEAD CAMERA REQUIRED EQUIPMENT LIST

9C-H5A-3MH (3x3MP)

Axis T8134 Midspan 60W Power Injector

ACC7-ENT LICENSE - 1 per camera

HSAMH-AD-DOME1

HSAMH-DC-COVR1

HSAMH-AD-IRL1

INDOOR MULTI-HEAD 4 HEAD CAMERA REQUIRED EQUIPMENT LIST

12C-H5A-3MH (4x3MP)

Axis T8134 Midspan 60W Power Injector

ACC7-ENT LICENSE - 1 per camera

HSAMH-AD-DOME1

HSAMH-DC-COVR1

HSAMH-AD-IRL1

OUTDOOR DOME SINGLE HEAD CAMERA REQUIRED EQUIPMENT LIST

6.0C-H6A-D01-IR

ACC7-ENT LICENSE - 1 per camera

OUTDOOR MULTI-HEAD 2 HEAD CAMERA REQUIRED EQUIPMENT LIST

16.0C-H6AD-HD01-IR

NPTA-1201

WLMT-1021

ACC7-ENT LICENSE - 1 per camera

OUTDOOR MULTI-HEAD 3 HEAD CAMERA CORNER MOUNT REQUIRED EQUIPMENT LIST

15C-H5A-3MH (3x5MP)

Axis T8134 Midspan 60W Power Injector

ACC7-ENT LICENSE - 1 per camera

HSAMH-AD-PEND1

HSAMH-DC-COVR1

HSAMH-AD-IRL1

WLMT-1001

OUTDOOR MULTI-HEAD 3 HEAD CAMERA WALL MOUNT REQUIRED EQUIPMENT LIST

15C-H5A-3MH (3x5MP)

Axis T8134 Midspan 60W Power Injector

ACC7-ENT LICENSE - 1 per camera

HSAMH-AD-PEND1

HSAMH-DC-COVR1

HSAMH-AD-IRL1

WLMT-1001

CAMERA SERVER INFORMATION, CONTRACTOR TO PROVIDE, INSTALL AND CONFIGURE THE FOLLOWING AT NEW BUILDINGS OR AS

NEEDED TO ACCOMMODATE ADDITIONAL CAMERAS TO EXISTING SYSTEM:

1 - Dell Server part# NVR6-PRM-FORM-D-721B-S22

1 - SFP fiber connector, part# NVR6-AINVR2-FORM-D-SFPPLUS-SR

1 - Cyber Power UPS Model QL1500RTXL2UN in the MDF dedicated for each new camera server

The contractor shall be responsible for the complete installation, configuration, and programming of the video surveillance system, including all cameras and the video surveillance server. The contractor shall ensure the system is fully operational, integrated, and tested prior to project closeout. The contractor responsible for installing the video surveillance cameras shall also perform all system programming, including configuration of the video surveillance server. No secondary subcontractors or sub-tiers shall be used for any portion of the installation or programming work.

INSTALLATION

- Install cameras on adjacent walls were possible. If it must be mounted on ceiling, it shall be on a water-resistant non-stainable ceiling tile. **MPS to have final determination of camera location and field of view) (Call Jack Phillips for final location and view phone 473-5225)**
- Any cameras installed on ceiling shall be mounted on a water-resistant non-stainable ceiling tile. (BIDDING CONTRACTOR SHALL PROVIDE NON-STAINABLE TILE)
- Each installed camera needs a camera license.
- All network drops shall be connected with patch cords to a switch at each rack location.
- No Substitutions.

Horizontal Cabling

Requirements

- See MPS Structured Cabling Specifications for camera network cabling installation, labelling and testing requirements.

Warranty

- Communications Contractor shall provide a 1 year parts and labor warranty against defective workmanship and/or system component failure.
- Communications Contractor shall execute a Lifetime Applications Assurance Warranty for parts and labor to support stated applications from the connectivity Manufacturer.

End of Section

Audio Visual Systems for Instructional Spaces Specifications

Part 1 - General

1.01 Instructional Spaces

- Reference technology drawings and detail sheets for classroom configuration and part numbers.

1.02 Special Spaces

- Reference technology drawings and one line diagrams.

1.03 Flat Panel Displays

- All non interactive Flat Panel displays shall be 43" Samsung BE Series.

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REVISIONS

Δ	DESCRIPTION	DATE



SOUTHGATE
ELEMENTARY
KITCHEN UPGRADES
and ADDITION

sheet no:

T603

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