

SYSTEMS SPECIFICATIONS

• Intercom 12" Analog Clock shall be hard wired and may not use battery power for its primary power source. Clock must be compatible with existing clock system.

• If site does not have an existing working clock system, stand-alone battery powered clocks shall be used. Stand-alone wall clock shall be American Time E56BAGD304BP

Stand-alone dual face hallway clock shall be American Time E93BAGD204BP
An 110v electric clock receptacle shall be installed at each clock location for future devices.

1.03 Systems Installation

- All devices shall be mounted according to the manufactures specifications.
- All devices shall be properly adjusted and tested prior to job completion.
- All extra wire taps shall be insulated.
- Protective grommets shall be installed on all conduits to protect wire.
- All wire shall be run in J hooks above ceiling with a minimum space of 4" from ceiling deck. All wire shall be in separate pathways 6" from other system wiring. No wire ties allowed.
- All wire ran between building shall be in conduit and shall be direct burial cable. It shall be a minimum of 5 conductor 18 AWG copper.
- Installer shall supply the electrical and or masonry contractors with specialty back boxes such as clock 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 NFPA-70 National Electric Code, Edition 2008.
- Follow and adhere to installation practices specified by the Manufacturers.

1.04 Quality Assurance

1.04.01 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.

1.04.02 Bidder/Installer Qualifications

- Bidding contractor shall have a minimum of 5 years experience installing school intercom systems.
- Bidding contractor shall be able to provide insurance at the request of the owner.

1.05 Delivery, Storage, and Protection

- Contractor shall ensure that materials delivery to work area shall be coordinated with construction site manager responsible for materials distribution to all trades.
- Contractor is responsible for all materials, tools and vehicles left on the job site.
- Follow Manufacturer's recommendations for handling of materials.

1.06 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.

1.07 Warranty

- Contractor shall provide a 1 year parts and labor warranty against defective workmanship and/or system component failure.

End of Section

End of Section

1.04 Submittals

1.04.01 Prior to installation

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

End of Section

Clock System Installation Completion Check List

Part 1 - General

1.01 Section Includes

- Clock System Completion Check List

1.02 Completion Check List

- All Clocks have been tested for proper operation and synchronization.

End of Section

Security System Specifications

Part 1 - General

2.01 Manufacturers

- Security System Manufacturer shall be DSC. (No Substitutions)
- Peripheral device Manufacturers shall be according to equipment list. (No Substitutions)
- Cable Manufacturer shall be Genesis. (Or Equivalent)

Security Systems Equipment

- Security alarm control shall be DSC Model # PC4020. (No Substitutions)
- Security alarm keypad shall be DSC Model # LCD4501. (No Substitutions)
- Security alarm 8 zone hardwire expander shall be DSC Model # PC4108 (No Substitutions)
- Security alarm 16 zone hardwire expander shall be DSC Model # PC4116 (No Substitutions)
- Security alarm power supply shall be DSC Model # PC4204. (No Substitutions)
- Security alarm power supply cabinet shall be DSC Model # PC4051C (No Substitutions)
- Security alarm cabinet locks shall be DSC Model # L1. (No Substitutions)
- Security alarm 35"x35" motion detector shall be Honeywell Model # DT-8035. (No Substitutions)
- Security alarm 50"x60" motion detector shall be Honeywell Model # DT-8050. (No Substitutions)
- Security alarm window glass break sensor shall be Honeywell Model # FG-730. (No Substitutions)
- Security alarm recessed 3/4" wide gap door contact shall be GE Model # 1078CWM. (No Substitutions)
- Security alarm recessed 1" wide gap door contact shall be GE Model # 1076D-M. Double Pole Double Throw for doors with access control (No Substitutions)
- Security alarm C channel door magnets shall be GRI Model # MC180
- Security alarm surface window contact shall be Aleph Model # PS-1541. (Or equivalent approved by MPS)
- Security alarm overhead door contact shall be Amseco Model # ODC-59A or for roll mount applications Intergox GEZ315AL. (No Substitutions)
- Security alarm indoor siren shall be Ademco Model # WaveZEX. (No Substitutions)
- Security alarm outdoor siren shall be ATW Model # DS301SET. (No Substitutions)
- Security alarm outdoor strobe shall be Amseco Model # SL401C. (No Substitutions)

1.01 Systems Installation

- All alarm junctions and or splices shall be soldered and insulated.
- All circuits and wiring shall be labeled at all terminating ends.
- All devices shall be mounted according to the manufactures specifications.
- All devices shall be properly adjusted and tested prior to job completion.
- All DSC PC4108 & PC4116 zone expanders shall be installed with power supply DSC PC4204 and cabinet DSC PC4051C
- All cabinets shall be labeled outside with their corresponding module and zone numbers and installed with lock.
- All cabinets shall be labeled inside with module number by the corresponding module and zone list definitions.
- Main control panel shall have a CAT 6 cable ran between the main control and the phone company DMARC for monitoring purposes.
- Each expansion cabinets shall have two non-shielded 16 gauge 4 conductor cables ran from the main control to the expansion cabinet.
- All devices such as motion detectors, glass break detectors, door contacts, Keypads etc. shall be labeled with their corresponding module and zone number. Label shall be visible from the floor.
- All motion detectors shall be sealed to prevent air and insects from entering.
- All steel doors shall have wide gap contacts installed.
- All door contacts shall be recessed and door magnets shall be glued in place.
- All devices such as door contact (double doors wire as one), motion detectors, glass break detectors, etc. shall be wired individually on separate zones with end of line resistors at the devices.
- All air conditioning condensers accessible from the outside and roof shall have pressure switches installed on the high pressure side and be connected to the security alarm.
- Protective grommets shall be installed on all conduits to protect wire.
- All devices shall be wired with NON shielded cable.
- All panels, power supplies and modules shall be grounded.
- All wire shall be run in J hooks above ceiling with a minimum space of 4" 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.
- All wire visible from the finished floor shall be covered in decorative wire molding.
- 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.
- Installer shall have a commercial burglar technician on the job site at all times during installation.
- Installer will work closely with the electrical and or masonry contractors to ensure conduit, back boxes, door frame access conduit, etc. are in the proper locations and accessible.
- 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 Burglar Alarm Company with licensed Commercial Burglar Alarm technician(s) on staff.
- Bidding contractor shall have at least one year experience installing DSC equipment.
- Bidding contractor shall have a minimum of 5 years experience installing commercial burglar alarms.
- Bidding contractor shall be able to provide insurance at the request of the owner.
- Bidding contractor shall have a commercial burglar technician on the job site at all times during installation.

1.04 Delivery, Storage, and Protection

- Contractor shall ensure that materials delivery to work area shall be coordinated with construction site manager responsible for materials distribution to all trades.
- Contractor is responsible for all materials, tools and vehicles left on the job site.
- Follow Manufacturer's recommendations for handling of materials.

1.05 Project Conditions

1.05.01 Environmental Requirements

- Contractor shall ensure that any pollutants produced during the Work are disposed of according to local, state or national regulations. Follow the most stringent guidelines.
- It is preferred that the Contractor recycle any used or un-used components during the course of the construction project.

1.06 Sequencing

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

1.07 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.

1.08 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 Cleaning

- Contractor shall sweep and mop the floors of all equipment rooms or connection point closets prior to turnover to the Owner.

3.04 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.

3.05 Schedules

- Coordinate work with Owner's project manager and follow scheduling sequence as established by Owner's project manager.
- It is recommended that the Contractor schedule closely with any other systems contractor to ensure turnover date is met.
- Contractor bidding will work closely with the electrical and or masonry contractors to ensure conduit, back boxes, door frame access conduit, etc. are in the proper locations and accessible.

End of Section

1.02 Submittals

1.03.01 Prior to installation

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

Security System Installation Completion Check List

Part 1 - General

1.01 Section Includes

- Security System Completion Check List

1.02 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 zones have been tested to verify they are in their proper partition(s).
- All sirens and strobes have been tested for proper operation.
- All motion detectors have been adjusted for proper sensitivity and have been walk tested.
- All motion detectors have been sealed to prevent air and insects from entering.
- All glass break detectors have been adjusted for proper sensitivity and tested.
- All cabinets are labeled on the outside with module numbers and zone numbers.
- All cabinets are labeled on the inside with module numbers by the corresponding module and zone descriptions.
- All user codes have been programmed and tested for proper partition access.
- The monitoring station has the correct account information such as call list, zone descriptions etc.

End of Section

1.09 References

- NFPA-70 National Electrical Code 2008 edition
- NFPA-72 National Fire Alarm Code
- UL 1666 - Standard for Safety of Flame Propagation Height
- NFPA 262 - Flame Travel and Smoke of Wires and Cables
- Local Authority Having Jurisdiction

1.10 Definitions

AWG - American Wire Gauge
BICSI - Building Industry Consulting Service International
EIA - Electronics Industry Alliance
FCC - Federal Communications Commission
NECA - National Electrical Contractors Association
NFPA - National Fire Protection Agency
UL - Underwriters Laboratory

Access Control System Specifications

Access Control Equipment

Part 1 - Manufacture

- Access Control Manufacturer shall be Keyscan. (No Substitutions)
- Peripheral device Manufacturers shall be according to equipment list. (No Substitutions)
- Cable Manufacturer shall be Genesis. (Or Equivalent)

1.01 Access Control Equipment Description

- Access Control System Manufacture shall be Keyscan (No Substitutions)
- Access Control Management Software = Aurora (This software is already installed and in use. It is listed for information purposes only)
- Reader Control Panels shall be (No Substitutions)
Keyscan CA 250 = 2 Door
Keyscan CA 4500 = 4 Door
Keyscan CA 8500 = 8 Door
- Each Reader Control Panel shall be equipped with (2) 16VAC 40VA Transformer
- Each Reader Control Panel shall be equipped with (1) 12V 7AH Battery
- One 2.4 or 8 Door Reader Control Panel per site shall be equipped with (1) Keyscan Netcom2p module. If the site has an existing 2.4 or 8 Door Control Panel with a Netcom2P already installed, then a Netcom 2P is not needed and CIM or CIM-Link modules shall be used to connect the new Control Panel to the existing Control Panel.
- All Reader Control Panels shall be linked together with either CIM or CIM-Link modules.
- Each new Reader Control Panel shall be capable of 2 doors minimum

Elementary School Card Readers shall be (No Substitutions)

- HID 13.56 MHz SINGLE GANG BACK BOX MOUNT READ ONLY CONTACTLESS SMART CARD READER - KEYSKAN HIGH SECURITY FORMAT C/W 36 BIT WIEGAND OUTPUT- Part # KR40SE (For use in all locations except where mullion mount reader size is required to fit)
- HID 13.56 MHz MULLION MOUNT READ ONLY CONTACTLESS SMART CARD READER - KEYSKAN HIGH SECURITY FORMAT C/W 36 BIT WIEGAND OUTPUT- Part # KR10SE (For use on mullion mount locations where single gang reader KR40SE is too large)
- HID 13.56 MHz SINGLE GANG BACK BOX MOUNT READ ONLY C/W KEYPAD CONTACTLESS SMART CARD READER HIGH SECURITY FORMAT C/W 36 BIT WIEGAND OUTPUT- Part # KRK40SE (Do not use unless noted)

Jr High & High School Card Readers shall be (No Substitutions)

- HID 13.56 MHz SINGLE GANG BACK BOX MOUNT READ ONLY CONTACTLESS SMART CARD READER - HID ICLASS SE R40 Part # 920NTNNEK00000 (For use in all locations except where mullion mount reader size is required to fit)
- HID 13.56 MHz MULLION MOUNT READ ONLY CONTACTLESS SMART CARD READER - FULL MULLION HID ICLASS SE R15 Part # 910NTNNEK00000 or MINI-MULLION HID ICLASS SE R10 Part # 900NTNNEK00000 (For use on mullion mount locations where single gang reader R40 is too large)

- All Readers require 226 STR OAS Wire

Elementary, Jr High & High School Access Control Cards shall be (No Substitutions)

- HID SEOS Part # 506PGGMN 48-bit HID Global Corporate 1000 format. (Cards must be ordered from ADI or Antiker. MPS shall provide the Format & Facility Code to winning bidder.)
- Provide Moore Public Schools with 100 Cards

Access Control Strikes and locks shall be (No Substitutions unless approved by Moore Public Schools)

RCI 0163X32D 1/2 inch Rim
RCI 0162X32D 3/4 inch Rim
RCI F0162X32D 1/4 inch Rim Fire Rated
RCI F2164X32D

- Where storm doors are installed, install compatible power motor and power supply to activate door hardware unless installed by door contractor.
- Egress Motions shall be (No Substitutions)

Bosch DS160 or Honeywell IS310

- Door Contacts shall be GE Model # 1076D-M Double Pole Double Throw (To be utilized for Access Control and Security Alarm) (See security alarm specs)
- Power Supply for locking hardware
**Power supply in Keyscan Controller is for the Control and Readers only.
- Power Supplies shall be sized to meet requirements of Strikes and locks with a maximum of 80% amp load.
- Power Supply shall have form "C" contacts for supervision that is connected to Keyscan Control Aux Input.
- 24 VDC Securitron-AccuPower- AQM20-8C/16C, AQDS-8C or equal.

2.01 Systems Installation

- All junctions and or splices shall be soldered and insulated.
- All circuits and wiring shall be labeled at all terminating ends.
- All devices shall be mounted in accordance to the manufactures specifications.
- All devices shall be properly adjusted and tested prior to job completion.
- All controllers shall be labeled outside with their corresponding modules and installed with lock.
- All controllers shall have a Cat 6 network cable Blue in color ran from the nearest network cabinet and labeled with drop number.
- All card readers shall be labeled with their corresponding reader number.
- All doors with access control shall have contacts installed for door status indication. Steel doors shall have wide gap door contacts installed.
- All doors with access control shall have egress motions installed to allow system to detect proper egress. (including doors with panic exit hardware.)
- Protective grommets shall be installed on all conduits to protect wire.
- All panels, power supplies and modules shall be grounded.
- 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.
- All wire visible from the finished floor shall be covered in decorative wire molding.
- All wire ran between building shall be in conduit and shall be direct burial cable.
- Installer shall have a licensed Access Control technician on the job site at all times during installation.
- Installer will work closely with the electrical and or masonry contractors to ensure conduit, back boxes, door frame access conduit, etc. are in the proper locations and accessible.
- 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.

3.01 Bidder/Installer Qualifications

- Bidding contractor shall be a local licensed Access Control Company with licensed Access Control technician(s) on staff.
- Bidding contractor shall have at least one year experience installing Keyscan Access Control Systems.
- Bidding contractor shall have a minimum of 5 years experience installing commercial Access Control Systems.
- Bidding contractor shall be able to provide insurance at the request of the owner.
- Bidding contractor shall have a commercial Access Control technician on the job site at all times during installation.

3.01.1 Submittals

3.01.2 Prior to installation

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

3.01.3 Prior to final acceptance

- Provide a soft CAD copy As-Built showing layout of Controller Panel, Card Readers, Power Supplies 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.

3.02 Quality Assurance

3.02.1 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.

Access Control Installation Completion Check List

Part 4 - General

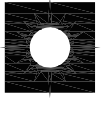
4.01 Section Includes

- Access Control System Completion Check List

4.02 Completion Check List

- A map of the entire system showing device numbers and wire routes has been left inside the main controller panel and a copy has been given to Rodney Cobb with MPS.
- All system programming has been checked and is correct.
- Panel(s) has been tested for proper operation.
- All card readers are labeled with reader number and have been tested to verify proper operation.
- All user card and key fobs have been programmed into system and tested to verify proper operation.
- All egress motion detectors have been adjusted for proper sensitivity and have been walk tested.
- All controllers are labeled on the outside with module numbers.
- All controllers are labeled on the inside with module numbers by the corresponding module.

End of Section


SALAS O'BRIEN
[expect a difference]
 2600 Van Buren St., Suite 2635
 Norman, Oklahoma 73072
 P: 405.364.9926 CA#:7058 Expiration Date: 6/30/2023
 Salas O'Brien Project No.: 2021-02035-00



201 N. BROADWAY
 SUITE 210
 MOORE, OK. 73160
 405.735.3477
 AGP@theAGP.net
 www.theAGP.net

KFC ENGINEERING
 STRUCTURAL
SALAS O'BRIEN
 MECHANICAL / ELECTRICAL

NY
 drawn by
 JL
 checked by
 SEPTEMBER 2021
 date
 revisions

MOORE PUBLIC SCHOOLS
BOARD OF EDUCATION
MOORE, OKLAHOMA



CLASSROOM ADDITION
HIGHLAND EAST
JUNIOR HIGH SCHOOL

sheet no:

T402

OWNERSHIP USE OF DOCUMENTS:
 AGP EXPRESSLY RESERVES ITS
 COPYRIGHT AND OTHER PROPERTY
 RIGHTS OF ALL PLANS AND DRAWINGS
 DESIGNED AND/OR PRODUCED. PLANS
 AND DRAWINGS ARE NOT TO BE
 REPRODUCED IN ANY FORM OR MANNER
 WITHOUT THE EXPRESSED WRITTEN
 CONSENT OF AGP.