

GENERAL REQUIREMENTS

SECURITY & VISUAL ACCESS REQUIREMENTS

6A.3.1 – 12a

SECURITY NARRATIVE

SECURITY & VISUAL
ACCESS REQUIREMENTS

NORTHEAST METROPOLITAN REGIONAL VOCATIONAL HIGH SCHOOL

SECURITY AND VISUAL ACCESS DESIGN

Multiple meetings were held, the latest on 7/27/22, to review and discuss the Security and Visual Access design for the new school building. In attendance were representatives from the Wakefield Police and Fire departments, the School Resource Officer, the School's Security Department, the Building Committee Chair, the Superintendent, and the Owner's Project Manager.

The following security design incorporates the comments and suggestions made by the stakeholders.

Vehicle Control and Routing

The site design includes three separate vehicle areas. Bus drop-off is on the plan south side of the School. Bus pick-up is on the plan north, and the parent drop-off/visitor entrance is on the plan west at the main entry. Access to the staff parking lots is separate from the bus and parent drop-off drives.

Electronically controlled lift barriers will be located at the entrances and exits of the student parking lots. Entry lift barriers are activated with proximity cards or fobs. Exit barriers are activated when the barrier senses a vehicle approaching

Fencing and automated sliding gates are being considered to restrict access to automotive vocational shops to authorized individuals.

All entrance lift barriers and sliding gates include a siren sensor or Opticom device to allow automatic activation for emergency vehicles.

The building design incorporates the placement of windows to provide visibility of entry doors and all approaches to the building.

All entry doors will be storefront glass doors, and delivery doors will have windows to provide visibility of visitors at the doors.

The project is considering, vehicle access to the shop area that may be gated and may have a video intercom to call the main office to have the gate open for entry. The gate/barrier if provided will be electronically controlled and will have remote release capability from the administration reception area.



Visitor Control and Routing

There are five main entrances to the School, the parent drop-off/visitor entrance at the administration wing, a customer entrance for public access to the cosmetology area, restaurant, and the bank, an event entrance at the auditorium/gymnasium wing, a preschool program entrance, and an entrance at the physical education wing for access to and from the playing fields.

The main entry, customer, and preschool program entrances will have audio/video intercoms. The vestibules are designed as sally ports. All visitors at the main entry, customer, and preschool doors will be challenged before being allowed entry into the vestibule and verified while in the sally port before being allowed into the School.

The building design includes "School Guard Glass" products at the main entrance, vestibule, and transaction window. Laminated glass will be utilized at the remaining entries.

The main entry door will be the one location where school visitors will be allowed to enter the building during school hours. The vestibule and main office transaction window will be glass to provide full visibility of the exterior and vestibule doors. Visitors would interact with School administrative staff at a transaction window. Visitors allowed into the building would be issued a visitor's badge and access the main lobby by entering through the main office or staff releasing the interior vestibule door. The door between the main vestibule and the main office reception area will be electronically controlled.


Administrative office staff would utilize the School's existing Visitor Management system relocated to the new building to ensure a visitor does not have any criminal history before being allowed to enter the School's main lobby. The visitor will be required to present a driver's license photo ID, and the system will check national registries/databases before a visitor pass with a photo is issued.

Delivery doors will have IP-based "door phone intercoms" (hands-free speakerphones) on the exterior wall adjacent to the delivery door, which will be included in the phone system design. Following best practices, the receiving doors will not have remote release capabilities. Deliveries will require physical verification and manual release of the doors. The door phone intercoms will allow for notification of deliveries by being programmed to call a specific phone location. If there is no answer, the call will roll over to other phones in the order programmed until the call is answered.

Electronic Building Security Systems

Building security will include the following electronic security systems.

- Intrusion Detection (perimeter and interior monitoring)
- Access Control
- Video Surveillance
- Existing Vape Detection to be relocated
- Existing Gunshot Detection to be relocated



The Intrusion Detection, Access Control, and Video Surveillance systems shall be integrated to perform in consort with each other. For example, if a door is breached, the Video Surveillance system will display the image from the CCTV camera at the door to the CCTV monitor screens at the SRO desk, and in the main office, a call to first responders would be initiated, on-premises alarms would be activated, and electronic release of latches at doors with card readers would be disabled. The incident will be linked to and searchable in any of the three security system databases.

All security devices and headend equipment will reside on a secure physical data network. This network will be separate from the School's production data network.

Intrusion Detection System

An addressable IP-based Intrusion Detection system will be installed. The system shall have door contacts on all exterior doors and motion sensors in all on-grade spaces with exterior doors or windows. Motion sensors will be located in stairwells and in corridors so that an intruder moving through the building can be tracked in real time.

The Intrusion Detection system will include keypad locations for arming and disarming the entire building or specific portions of the building. The Intrusion Detection system will include an automatic dialer for notification to an alarm monitoring service company,

The system will include interior sirens and strobes and beacon/strobes installed on the building exterior walls at locations affording line of sight from the street.

Access Control System

All doors shall be locked during school hours. Building entry will be limited to designated doors. Student entry at arrival time will be via the entrances close to bus and parent drop-off locations. General school visitor entry will be limited to one door at the main entry.


An addressable IP-based door audio/video call station will be installed at the exterior visitor entry door. Master stations for remote door release after visitors are challenged will be located at the main office reception counter. Master stations will also be installed in designated offices, such as the school resource officer's desk, secretary areas, and the principal's office, to provide the ability to remotely release the visitor door after school hours.

Customers entering the cosmetology shop, restaurant, or bank shall be limited to the customer entry door. Door release shall be controlled by Master stations located in each area.

An addressable IP-based door audio/video call station will be installed at the preschool exterior entry door and the interior entrance to the preschool area. The preschool instructors shall control public access to daycare program.

The main administrative office shall control the gates (if provided) for public access for delivery and pickup of vehicles at the automotive shops.

Proximity/Card Readers will be installed at designated doors, including the main entry exterior doors, custodial entry door, including the vocational shop exterior personnel doors.



Proximity/Card Readers will be installed at sally port vestibule interior doors allowing authorized staff card holders to pass directly through into the School.

Proximity / Card readers will be located at doors used for re-entry from the playing fields.

The Access Control system will notify administrators if any door is propped open.

Proximity / Card readers will also be located at technology closet doors for tracking access to sensitive technology and electronic security equipment.

An IP-based door phone intercom (hands-free speakerphone) will be installed at the Culinary and general receiving doors. Delivery persons will press the “call” button, and the system will call the first phone programmed. The call will roll over to other phones in the order programmed if there is no answer. According to best practices, school personnel will not be able to release the receiving door lock/latch remotely but will be required to verify the delivery before manually opening the door physically

The School’s existing Visitor Management system will be installed at the transaction window counter in the main office reception area. Visitors will be issued photo ID passes which will automatically expire after four to six hours. The visitor management system will provide the ability to scan a visitor’s photo ID, check the visitor’s identity against national registries, and print a pass with a photo. The system will allow visitors to check out electronically, automatically updating the Visitor Management system’s database.

CCTV Video Surveillance System

Multi-sensor 360-degree High-Resolution IP Video Surveillance cameras will be installed on various site lighting poles to provide coverage of parking lots, vehicle approaches, driveway entrances and exits, and playing fields. License Plate Recognition (LPR) CCTV cameras will be installed at driveway entrances.

High-Resolution IP Video Surveillance cameras will be located on the building’s exterior and interior. Cameras will be placed at strategic exterior wall locations to monitor all entry/exit doors, bus drop-off, and loading areas. Cameras will provide coverage of all corridors and potential problem areas such as the gymnasium, cafeteria, stairwells, and gang toilet entrances.


Live feed from all CCTV cameras will be viewable at large screen monitors installed in designated offices and at authorized computer stations. Live feed from all CCTV cameras will also be viewable by the police department.

Recorded images shall be assessable via the system console and from authorized computer stations.

The system’s Network Video Recorder shall be sized to provide a minimum of thirty days of image retention.

Vape Detection System

The current school building has an existing IP-based Power over Ethernet Vape detection system. Vape detectors are installed in vocational shop locker rooms and gang toilets. The existing detection devices will be relocated to the new building, and additional detectors



shall be installed to provide coverage in all locker rooms and gang toilets, including those in the Locker and the Concession Buildings outbuildings.

Gunshot Detection System

The existing school building has an IP-based Power over Ethernet Gunshot Detection system. The existing gunshot detection devices will be relocated to the new building. The system shall be expanded with additional detectors to cover the larger new building and outbuildings.

Duress Alert System

The School is evaluating what level of integration a Duress Alert system can provide between building systems such as the overhead PA and IPTV video with the electronic security systems, including the Gunshot Detection, Fire Alarm, and handheld radio systems.

The School is interested in the possibility of real-time two-way communications between the School and First Responders during an incident.

Additional Security Related Items

Exterior Building Identifiers

First Responders requested the ability to identify physical building information from the exterior of the building. The following identifiers will be installed.

- Each wing shall have large Identifiers on the exterior such as A, B, C, D, etc.
- All doors, including exit-only doors, will have identifying number decals on their exterior and interior sides.
- All classrooms and vocational shops will have identifying room number decals installed on windows.

Knox Boxes

- The building design includes Knox Boxes for door keys and high-priority proximity cards/fobs for first responder agencies.

Building Zoning

- The addressable Intrusion Detection system shall provide building zoning so that specific areas can be unarmed while others are armed, allowing the School to have public events during off-school hours.
- The building design includes security doors to separate building areas for flexible after hours use. The security doors would normally be held open by magnetic hold-open devices. Individual security doors can be closed and locked electronically to isolate specific sections of the building.
- In case of an active shooter or duress situation, all security doors can be closed and locked automatically.



Classroom Security

- All classroom doors will have locks with intruder prevention features. The door locks will be keyed on the outside and the inside. The doors can be locked from the outside with a key to lock the outside trim. The inside keyway will also lock the outside trim from the inside allowing the doors to be secured without someone having to go outside the safety of the classroom. The doors will always allow for free egress out.
- Classroom doors will have laminated glass sidelights for visibility from corridors yet will allow for students and staff to shelter in a corner and not be visible from the corridors.
- The sidelights will have pull shades inside to block all visibility into the classroom from the corridor.
- The sidelight frame will be divided into three sections by two horizontal bars, making it difficult for an intruder to enter a classroom through a sidelight if the laminated glass is broken out.

Vocational Shop Security

- Overhead doors in on-grade vocational shops will be equipped with security grates/gates, allowing overhead doors to remain open for airflow but preventing an intruder from entering.

6A.3.1 – 12b

FIRE DEPART. MEETING NOTES

SECURITY & VISUAL
ACCESS REQUIREMENTS

MEETING MINUTES

PROJECT: Northeast Metro Tech High School PROJECT NO.: 60-20-409

MEETING NO.: 02 MEETING DATE: August 29, 2022

LOCATION: Teams

ATTENDEES:

Chief Michael Sullivan	-	Wakefield Fire Department
Marissa Valentino	-	Nitsch Engineering
Vladimir Lyubetsky	-	DRA
Joseph Desantis	-	PMA Consultants
Donald Contois	-	R.W. Sullivan
Sean Sullivan	-	Bala Consulting Engineers
KiJana Haney	-	Bala Consulting Engineers
Gilbert Castera	-	Bala Consulting Engineers

DISTRIBUTION:

All Attendees		
David Conway	-	Nitsch Engineering
Richard D. Rivera	-	Bala Consulting Engineers
Sean Sullivan		Bala Consulting Engineers
Dino D. Boro	-	Bala Consulting Engineers
Zachary Barrett	-	Bala Consulting Engineers

PURPOSE: Review of Proposed FP and FA Systems and Code Analysis

DATE ISSUED: August 01, 2022

Minutes of the meeting are as follows:

New Business:

- 1.1 Fire department connections will be coordinated with the locations of fire hydrants to ensure that fire department connections are provided less than 100 feet from the nearest fire hydrant.
- 1.2 Chief Sullivan noted desire to have improve fire department access to the roof by providing other means of access in lieu of ladders.
- 1.3 Chiefs wants the annunciator to have the function to silence and reset the Fire Alarm system as needed.
- 1.4 Roof hydrants will be provided a minimum of 10'-0" away from the roof edge.
- 1.5 Fire Department connections shall have a cap and chain.
- 1.6 Weatherproof combination speaker/strobes will be provided within the courtyard.

- 1.7 Fire Hose Valve Cabinets (FHVC) will be provided for hose connections for each of the two (2) intermediate standpipes on each level within the vocational school building.
- 1.8 Chief Sullivan noted a desire to have a means of ventilation from the top of the events entry. Some ideas suggest were to use a smoke hatch or to use the ventilation system to exhaust air from this area.
- 1.9 Each "out" building will be provided with a separate fire alarm system thus, the duct bank from the vocational high school building FACP to the "out" buildings will not be provided.
 - a. The concessions building and the maintenance building will be provided with the following:
 - Fixed heat detectors set at 155 F.
 - Manual Pull Stations.
 - Fire Alarm Control Panel. This panel is permitted to not have voice capability.
 - Digital Alarm Communication Transmitter to transmit signals offsite.
 - b. The locker room building will be provided with fully supervised, analog addressable, voice evacuation system with the following:
 - Manual pull stations at exit doors (with tamperproof covers)
 - Visual units in small toilets and meeting rooms.
 - Audible/visual units in corridors, locker rooms, large restrooms, and kitchen area.
 - Smoke detector coverage in LULA lobby and machine room for elevator recall.
 - Smoke detector coverage will be provided within electrical type utility rooms.
 - Digital Alarm Communication Transmitter to transmit signals offsite.
 - Connections to sprinkler water flow and supervisory switches.
 - Knox boxes and exterior beacon will be provided.

We believe these minutes accurately represent what transpired at the meeting. If you take exception to any items, have any concern, or would like to add to the record, notify the writer within ten (10) calendar days of the date of these minutes. If no changes are requested, these minutes will then stand as the final record of this meeting.

Respectfully submitted,

BALA CONSULTING ENGINEERS, INC.



Kijana Haney
Fire Protection Engineer