

FINAL DESIGN PROGRAM

FIRE DEPARTMENT MEETING MINUTES

MEETING MINUTES

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

MEETING NO.: 01 MEETING DATE: June 15, 2021

LOCATION: Teams

ATTENDEES: Chief Michael Sullivan - Wakefield Fire Department
 Deputy Chief Thomas Purcell - Wakefield Fire Department
 Captain David Shinney - Wakefield Fire Department
 Nicholas Botts - Nitsch Engineering
 Mark J. Blundell - Bala Consulting Engineers
 Gilbert Castera - Bala Consulting Engineers

DISTRIBUTION: All Attendees
 Vladimir Lyubetsky - DRA
 David Conway - Nitsch Engineering
 Kevin J. Caddle - Bala Consulting Engineers
 Richard D. Rivera - Bala Consulting Engineers
 Sean Sullivan - Bala Consulting Engineers

PURPOSE: Preliminary Review of Proposed FP and FA Systems

DATE ISSUED: June 29 2021

Minutes of the meeting are as follows:

New Business:

- 1.1 New looped water system to be extended to the project site as part of the project scope. The system will be extended from (2) separate nearby existing streets; Hemlock and Old Nahant streets. The looped water system will also extend around the proposed main high school building.
- 1.2 The proposed looped system is to supply fire hydrants on site and the fire protection system for (2) of the (4) buildings on site: the main building and the Locker/Athletic Building. The other (2) buildings, the Maintenance and the Concession buildings, are both less than 7,500 square feet and are not required to be fire sprinkler protected and are not planned to be. Since the 6/15/2021 meeting with the Fire Department, it has been confirmed that the Locker/Athletic Building is planned to now be a 6,000 SF building and therefore is not to require a fire suppression system.
- 1.3 The main building is to include a combination sprinkler and standpipe system supplied with a fire pump system located in a dedicated fire pump room with two-hour fire rating and with direct access from the outside. The fire pump was determined to be required based on the modeled water supply by a separate Consultant for the Town. New water flow tests are being pursued by 6/22/21 for verification. Since the 6/15/2021 meeting, fire flow test results were obtained on 6/24/2021 and it has been confirmed that a fire pump system will be required.
- 1.4 The Locker Building is to only include a sprinkler system.

- 1.5 The main building system is to include (2) main system risers based on the overall area per floor and based on the overall configuration of the building that will also require one or two intermediate standpipe risers.
- 1.6 Fire department hose valve connections will be located at the main landing within each of the required exit stairways.
- 1.7 Each building fire protection water service will be equipped with a ground type valve box. A post indicating or a wall indicating valve will not be required.
- 1.8 The main building will be planned with (2) separate fire department connections. One will be near the main entry and the other one will be near the building rear by the fire pump room. Each fire department connection will be provided with a fire hydrant within 100 feet of each.
- 1.9 Each fire department connection is to be a 4" storz connection, of the quarter turn style with cap and chain and a screen.
- 1.10 Each fire hose valve connection will need to include iron-type threads.
- 1.11 Sprinklers in the Gym and similar spaces where they are subject to damage will be provided with protective cages.
- 1.12 For the various shop areas, the storing of gas cylinders for soldering and similar processes will need to be stored in designated code compliant locations.
- 1.13 All building fire protection systems are planned to be of the wet types with the understanding that all spaces are to be heated and that all Shop Area doors will be kept open only briefly as part of their operation.
- 1.14 Municipal Fire Alarm Service
 - a. Municipal connection/master box
 - 1) Low Energy type
 - 2) UL Central Station monitoring
- 1.15 Annunciator requirements
 - a. Remote annunciators will be provided in quantities and locations as determined by the fire department upon review of fire response scheme. Recommended locations are Main Entry, Admin Area and Shop Area.
 - b. Preferred remote annunciator type is remote LCD display similar to that in control panel with keypad for desired control functions.
 - c. Preferred annunciator locations will include graphic maps consisting of building floor plans with fire alarm device locations, under clear plastic sheet will be located adjacent remote annunciator.

- f. Fire alarm drawings will be located in plan cabinet at main fire alarm control panel.

1.16 Fire Alarm Control Panel

- a. System will be fully addressable with voice evacuation capabilities. Microphone will be provided to allow non-fire alarm voice announcements by authorized personnel.
- b. Location will be Main entry lobby or main emergency electric room with remote annunciators.
- c. Non-proprietary fire alarm manufacturers will be provided to permit service without involving a dedicated manufacturers' service apparatus. Acceptable manufacturers are FCI, EST or Notifier or equal.

1.17 Miscellaneous

- a. Exterior beacons will be typically located at annunciator locations and at each remote building to signal fire alarm response point to building for Fire Department.
- b. Key lock-boxes (Knox box or equal) will be typically located at annunciator locations and at each remote building.
- c. Gymnasium and Auditorium sound system overrides will disable sound systems upon activation of fire alarm system.
- d. Auditorium theatrical lighting system override with house lights returned to full output upon activation of fire alarm system.

1.18 Automatic Alarm Stations

- a. Smoke/heat detector coverage requirements beyond proposed with fully sprinklered building. Smoke detectors coverage as follows:
 - 1) Corridors, stairwells, electric closets, IT closets.
 - 2) Elevator machine rooms and lobbies.
 - 3) Duct detectors as required by code in HVAC
 - 4) Duct detectors as required by code in fire-rated construction at smoke and fire damper locations.
- b. Remote alarm indicators are required to indicate device in alarm behind locked doors and closets.
- c. Activation of fire suppression systems in Kitchen and Culinary areas will annunciate as an alarm on the fire alarm system.
- d. Carbon monoxide detectors with sounder bases will be provided in science classrooms, boiler rooms, water heater locations, Pre-K and after-school program spaces.
- e. Audio/visual strobes with "carbon monoxide alarm" labels and green lenses will be provided in attended locations such as Administration and fire alarm annunciators to

signal alarm activation. Carbon monoxide detection system will annunciate as a supervisory condition on the fire alarm system.

- e. Activation of carbon monoxide detectors with sounder bases at Kitchen and Culinary appliances under hood will provide automatic gas solenoid valve shutdown.
- f. Activation of carbon monoxide detectors with sounder bases at gas-fired mechanical and plumbing equipment will provide automatic gas solenoid valve shutdown and manually via emergency power OFF switches.
- g. Activation of carbon monoxide detectors with sounder bases at gas-fired Science Lab equipment will provide automatic gas solenoid valve shutdown and manually via emergency power OFF switches.

1.19 Manual Stations

- a. Manual pull stations will be located at all egress doors and other locations as required to meet code.
- b. Stopper covers with integral local alarm will be required to prevent tampering.

1.20 Audio/visual, Audio only, Visual only Device Locations

- a. Speaker/strobe combination units will be provided throughout building.
- b. Based on location, ceiling mounted speaker strobe units will be provided in areas with accessible ceilings such as corridors, classrooms and multi-gang toilets. Devices will be located to meet audibility requirements.
- c. Wall mounted speaker strobe units will be provided in higher ceiling areas such as shops, Auditorium and Gymnasium and mechanical rooms. Devices will be located to meet audibility requirements.
- d. Visual only units will be provided in meeting/conference rooms, single gang toilets, smaller offices, and/or single occupancy spaces.
- e. Audio only units (no visual) will be provided in all stairwells.
- f. Wire guards on fire alarm devices will be provided in Gymnasium, shops and all areas subject to damage by impacts.

1.21 Fire Protection Interconnections

- a. All fire protection devices (flow switches, tamper switches, low pressure switches) will be tied into fire alarm system.
- b. Operation of tamper switch will annunciate as a supervisory condition on the fire alarm system.
- c. Operation of flow switch will annunciate as an alarm condition on the fire alarm system.

1.22 Wiring Requirements.

- a. Conduit and wire are acceptable

- b. Fire alarm armored cable with red jacket is acceptable.

1.23 Fire Department Requirements/Comments

- a. A specific programming sequence will be required once system is installed. Upon approaching fire alarm control panel in alarm, pressing the "acknowledge" button on the fire alarm control panel will silence all alarms and reset the master box, to await another alarm.
- b. A fire alarm drill switch will be provided and arranged as to not activate the master box during a fire drill.
- d. All installations require compliance with applicable NFPA codes for fire alarm and fire protection.

1.24 Emergency and Exit Lighting

- a. Emergency and exit lighting will be provided throughout the facility to meet code requirements via emergency generator. Emergency lighting control override will be provided in all paths of egress and exterior lighting at exit discharge locations.
- b. Green illuminated exit signs are acceptable.

1.25 Bi-Directional Amplifier System

- a. Equipment will be located in 2-hour fire rated room
- b. Annunciator will be located at main FACP or main annunciator

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.



Gilbert Castera
Plumbing/Fire Protection Department Manager