

Westport High School
Westport, MA
Electrical Existing Conditions Systems Report
J#680 012 00.00
L#52168/Page 1/May 16, 2016

ELECTRICAL

Executive Summary

In general, the electrical systems have reached their life expectancy and are in poor condition. Life safety lighting and exit signs are fed from the generator and are not compliant with today's codes.

The fire alarm system is in poor condition and requires complete replacement with the exception of the fire alarm communicator.

Lighting systems in general have been upgraded with lamps and ballasts to conserve energy. T8 lamps have been installed in most spaces. Light fixtures however are in poor condition in the majority of the building. The fixtures and should be upgraded with low glare LED.

The power for the facility is in poor condition, a new power distribution system should be provided.

The communications system wiring infrastructure for tel/data have been upgraded using wireless access points. A classroom intercom/paging system has been upgraded but is not up to present standards. The central clock system is operational. There is a dedicated headend room and remote IDF closets with a fiber optic back bone that is in good condition.

Electrical Distribution System

The service voltage is 120/208V rated at 2500 amps. The switch is manufactured by Westinghouse and is in poor condition and beyond its useful life. The clearance in front of switchboard is less than 3 feet.



Main Switch



Switchboard

There is a dedicated Eversource transformer pad mounted for the facility.

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There are sub-panels located throughout the facility and they are generally in corridors or closets and are circuit breaker type and are in poor condition due to useful life reached.

Branch Circuits/Wiring Devices

This quantity of receptacles appears minimal in most spaces. Additional receptacles for computers have been added in classrooms typically done using surface wiremold.



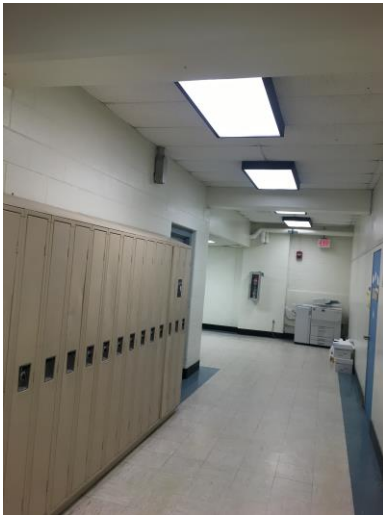
Typical wall receptacle added in classroom



Extension Cords Being Used

Interior Lighting System

Lighting in corridor varies but is generally recessed 2'x4' acrylic fluorescent fixtures. The T8 lamps and energy saving ballasts have been retrofitted into existing fixtures.



Typical Corridor Lighting



Classroom Lighting

Classroom lighting typically consists of 2'x4' and 4'x4' fixtures. The lighting system should be upgraded in all classrooms. The fixtures have gone through a T8 lamp and ballast upgrade.

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Lighting in mechanical spaces consists of fluorescent industrial fixtures.



Mechanical Area Lighting

Cafeteria and media center lighting consists of 4'x4' fluorescent fixtures.



Media Center Lighting



Cafeteria Lighting

Lighting in auditorium is industrial fluorescent high bay similar to gymnasium.



Auditorium Lighting

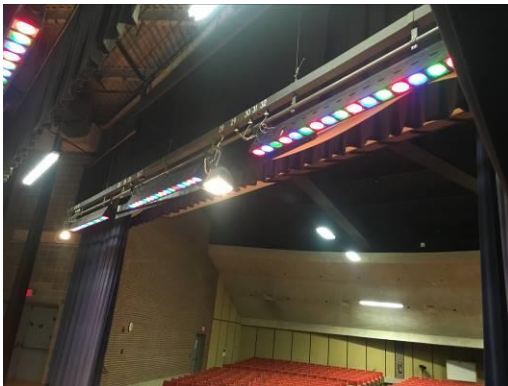
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Gym lighting consists of high bay fluorescent fixtures.



Gymnasium Lighting

Theatrical border and spot lights are in poor condition. The dimmer rack is in poor condition and should be replaced.



Theatrical Lighting



Dimmer Rack

Emergency Lighting System

The emergency lighting system throughout the facility is fed via the emergency generator. There is no separation of life safety and optional standby loads. The emergency generator is located outside of boiler room. The generator is well beyond its useful life but appears to be well maintained.

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Automatic Transfer Switch



150KW Generator

Site Lighting System

The lighting at the site consists of building mounted flood lighting around perimeter. The site lighting system should be upgraded with dark sky compliant lighting.



Site Lighting Pole Fixture

Fire Alarm System

The fire alarm panel is manufactured by Firelite. The system is conventional type and is obsolete. The fire alarm notification alarms are not code compliant. The fire alarm system should be replaced.

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FACP



Alarm Communicator

Data/Telephone/Classroom Intercom/Clock System/Security System

The Simplex master clock system is operational but beyond its life expectancy.



Clock System



Master Clock

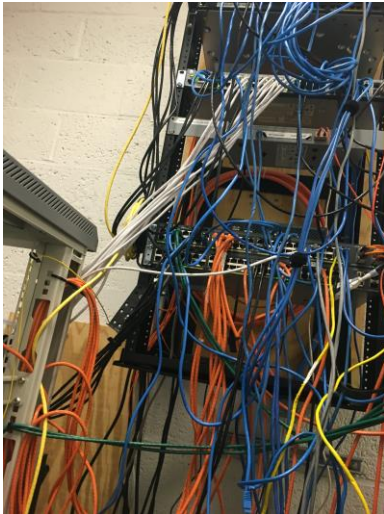
In the classrooms there are new wireless access points. The data infrastructure is being updated to present standards. The location of data outlets appears fine.

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Wireless Access Point

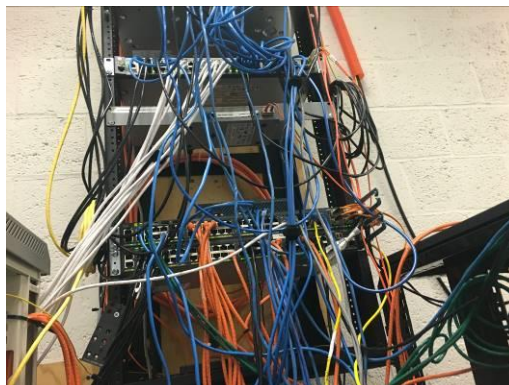
There is a head end room serves the high school and also town wide area network. The room also is not equipped with a dedicated air condition unit. There is wall mounted patch panels and Cisco Edge Switches and Core switch. All in fair condition but only 10/100 to the desktop.



MDF Rack



Wall Mounted Patch Panel with Switch



Samsung Telephone System

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There is a security system present.



Security Keypad