

PLUMBING AND FIRE PROTECTION

A. PLUMBING

GENERAL:

- The Wayland High School is a campus setting consisting of several detached buildings.
- Presently, the plumbing systems serving the school are cold water, hot water, sanitary waste, and vent system, storm drain piping, and natural gas. Science building has acid waste system.
- The School is serviced by a Septic System and Town Water. Storm drainage from flat roof areas is disposed of by a system of roof drains, & rain water conductors which discharge to a piped storm drainage system on the exterior.

FIXTURES:

- Fixtures in the buildings are of mixed vintage representing the date of installation or retrofit. Water closets in the newer buildings are wall hung, flush valve vitreous china, with elongated bowls but, some floor mounted water closets. In general, most of the flush valves have been replaced during renovation projects.
- Urinals are wall hung, flush valve, vitreous china some are extended shield and others are straddle type urinals.
- Lavatories are generally wall hung vitreous china, two handle type faucets in the older buildings.
- Drinking fountains are various types and styles.
- Janitor's sink are generally wall hung, cast iron sinks.
- Generally acceptable condition and repair; flush valves have been replaced in most areas. However, most fixtures are generally non-accessible and non-water conserving. Because of recent MAAB revisions, some of the accessibility modifications made in the early nineties do not fully meet current standards. Retrofit with full compliance is required throughout in event of a significant renovation. In general, the A.D.A. upgrades focused on providing fixtures to meet accessibility requirements. Generally the remaining fixtures do not meet water conservation standards.
- All fixtures should be upgraded to meet water conservation standards which would include all new water closets and urinals and metering faucets on lavatories. Some areas

such as the science building B currently meet conservation standards Building G, however does not.

- Kitchen area fixtures: Good condition, pot and pan sink is fitted with grease trap. Dishwasher is not fitted with grease trap.
- Science area: Emergency shower and eyewash exist but do not fully meet A.D.A Vacuum breakers are missing in lab faucets.
- Field House: Field House renovations provided new fixtures only for Accessibility Standards. Gang column Showers for Boy's area, modesty modules for Girl's shower area. Master mixing valve is provided for tempered water.
- The Field House showers are typically not used in Girl's area. Gang shower area needs complete renovation to provide access and to provide flow control devices for water and energy conservation.

DRAINAGE SYSTEMS:

- Cast iron is used for sanitary and storm drainage. Where exposed, the cast iron pipe appears to be in acceptable condition.
- In general the site appears to have ground water issues. The boiler room area appears to flood. The main switchgear appears to be at risk.
- Boiler Room floor drainage is connected to the storm drainage system which is a DEP violation. All new floor drainage system is required. A ground water control system is required as well.
- Science area drainage systems in B building have local neutralizers under sinks and are piped with polypropylene piping. Glass piping is used in Building G. Science area has been cited by DEP for improper handling of hazardous materials.
- The science areas require a piping system which directs all piping to a containment tank and all science sink waste need to be transported off-site.
- Art room areas have been cited for use of solvents.
- The Field House renovation included a subsoil drainage system below the basement slab and a sump pump system.
- Media Center and Field House are both fitted with sewage ejector systems.

- A dedicated exterior grease trap is required for the Kitchen area.

WATER SYSTEMS:

- Domestic water piping is copper, insulated. Insulation on valves and fittings are cementations and need to be evaluated for asbestos. Given the life of the copper piping an extensive renovation will dictate all new piping systems except for the Field House.
- There are several services to the buildings. Water pressure is generally above 90 PSI and there are several pressure reducing valve stations.
- Generally hot water is generated at individual buildings with electric gas or oil fired units. Generally all water heaters need to be fitted with thermostatic mixing valves.

NATURAL GAS:

- There is a gas service to a gas meter located outside the main boiler room.
- Gas feeds the kitchen and is used for boiler ignition system, cooking in the kitchen, heating in the media center and also for the science area.

B. FIRE PROTECTION

- There is a fire protection system which completely covers the Field House installed during the 1991 renovation. The system appears to be fully compliant.
- The Boiler Room building had a fire service installed in 1991 to service the auditorium. The service appears compliant.
- There is an older sprinkler system in the boiler room which is a cross connection violation as this system is taken off the domestic system.
- The stage area sprinkler system is in violation due to removal of ceiling tiles which expose the ceiling space above.

Substantial renovation will require all new fire protection systems throughout. It appears that the municipal system can adequately serve the needs.