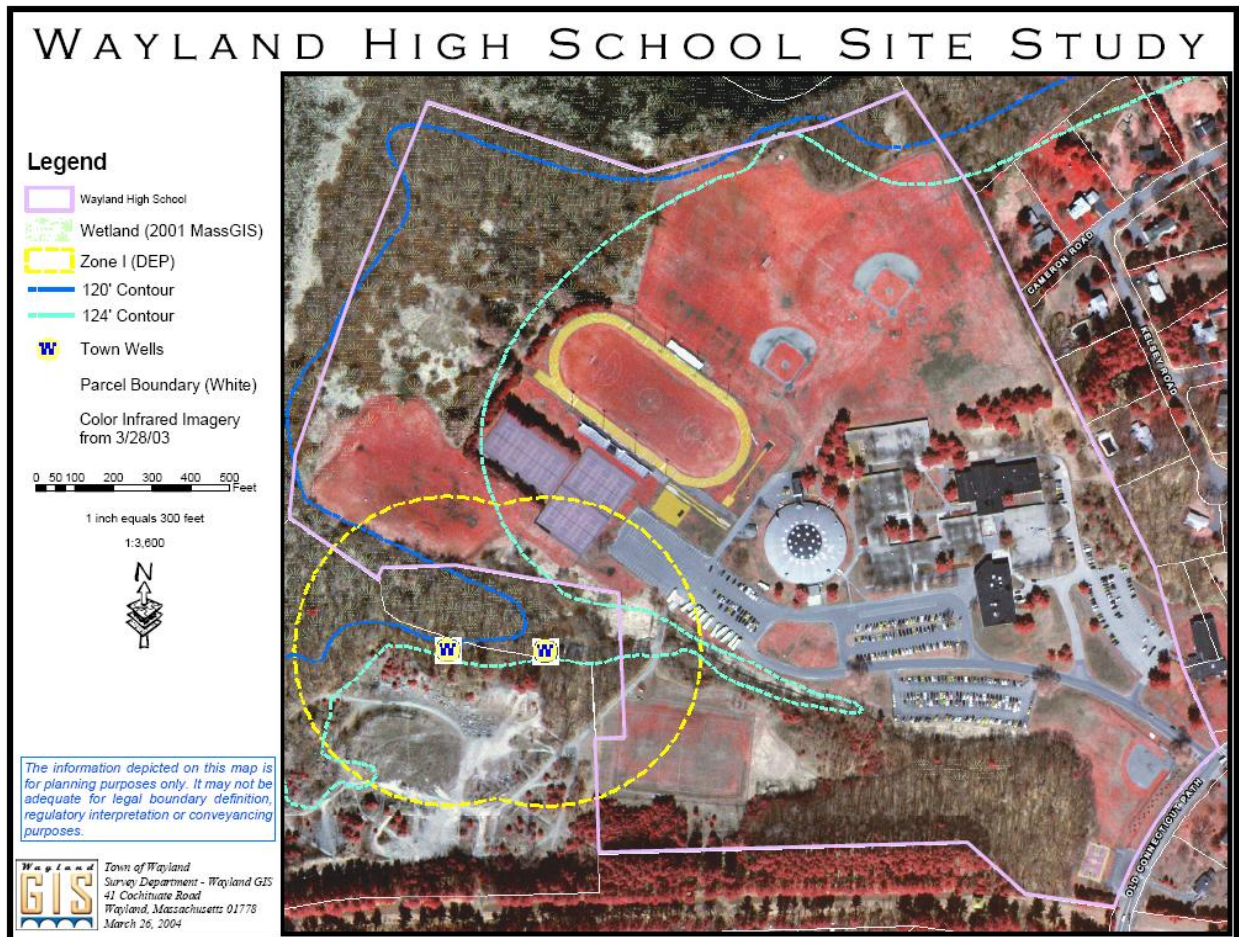


Wayland High School Site



http://www.waylandschoolcommittee.org/whs/hsbc/WHS_sitemap.pdf



General Description

The site is shown on Wayland Assessors' Maps as Map 37, Parcel 34. It is approximately 77.5 acres in size, and it is located on Old Connecticut Path/Route 126, a major connecting road between the centers of Wayland and Framingham. Surrounding uses are the Town Pool and a residential neighborhood. The site abuts the Massachusetts MWRA Weston Aqueduct and Drain Easement. Plans provided by the Town Surveyor also show a Town of Wayland 15' drain easement, a right of way $\pm 20 - 40'$ from the corner of the existing field house, a "Water Easement" crossing the front of the property (toward and beneath the Town Pool building), an MDC drain pipe, a 12" C.I. blowoff pipe from the Weston Aqueduct and proximity of U.S. Fish & Wildlife land.

The site is now occupied by eight (8) buildings linked by covered walkways, plus a field house, several athletic fields, vehicle access road and parking areas. It is zoned Single Residence (SR).

With the exception of open water (Sudbury River), there are no other known potential hazards (cliffs, power lines, etc.) or nuisances associated with the site.

<http://www.waylandschoolcommittee.org/hsfsc/files/F.SiteAssessment.PDF>

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Feasibility Study

Existing constraints to the site's development include the following:

- The site's location is adjacent to the Sudbury River, a National Wildlife Refuge and Priority Habitat of Rare Species, and near a Certified Vernal Pool.
- Portions of the site are within the 100-year and 500-year flood plains.
- Public sewer is not available; area of suitable soils/adequate offset to groundwater and floodplain for subsurface sewage disposal appears to be limited.
- Site lies entirely within Zone II and partially within Zone I of the Town water supply (existing subsurface sewage disposal system is ± 530 feet of the well head).

Sewer: The site is not currently served by public sewer. Two subsurface sewage disposal systems (SDS) now exist on the site; these passed an inspection in 2001. Both are pumped to knolls/plateaus in order to accommodate offsets to groundwater elevation. A new SDS including a package treatment plant would be needed to accommodate the increased flows as a result of the "new construction" at this site. The elevated gravel esker where the existing systems are located is limited in area. More study is required to determine whether another suitable location exists on the site. The Overlay Districts, previously noted, further limit available area. Please also see **Environmental**.

Environmental

Wetlands: As previously mentioned, the site is adjacent to the Sudbury River. If any work is proposed within areas protected under the Wetlands Protection Act or the local Wetlands Protection Bylaw, filings with the Wayland Conservation Commission will be necessary. The Wetlands Protection Act Rivers Regulations would apply, requiring a 200' riverfront buffer area that limits the use of areas within the riverfront buffer.

Please also see *Endangered Species*.

Floodplain: Portions of the site are within the 100-year and the 500-year floodplains. Some existing facilities (playing fields, parking) are below floodplain elevation.

Groundwater: Seasonal high groundwater level is estimated between 120' and 121' based upon existing flood plain data and discussions with school personnel regarding the wetness and flooding of the rear athletic field. Groundwater elevation will affect

many aspects of the project, e.g. sewage disposal, building foundations, grading, drainage.

As noted elsewhere, the entire site is within the Zone II wellhead protection areas of the Wayland public water supply groundwater wells, and part of the site is within the Zone I. The existing SDS is ± 530 feet from the wellhead.

Endangered Species and Habitat: The Massachusetts Division of Fisheries and Wildlife, Natural Heritage & Endangered Species Program (NHESP) most recently published Natural Heritage Atlas (1999 – 2001) shows the Sudbury River as Rare Species Priority Habitat. Should NHESP determine that this site “intersects” with the estimated habitat area, the suitability of the site for school expansion may be affected, depending upon the range of the species identified with the site; a filing under 321 CMR 10.00 (MESA) may be required.

Underlying Soil Suitability (Structural): David E. Ross Associates, Inc. does not provide structural soils analyses. This office recommends that some preliminary test pits be excavated to confirm its structural suitability.

Underlying Soil Suitability (SDS & Drainage): Based upon record data, soils on site are sands and gravels associated with the outwash plain from the Sudbury River, along with some clayey silt (impervious) layers overlying sands/gravels. The silty soil layers are likely to have an impact on the construction costs, depending on location and elevation.

Slopes: As noted, the site is of generally low elevation, with gravel eskers. The site features a predominantly southeastern exposure.

Hazardous Waste: In April 2002, Wayland High School received a Notice of Noncompliance from Massachusetts Department of Environmental Protection (DEP) for illegal discharge of industrial effluent to groundwater without a permit and plan approval. The illegal discharge consisted of chemistry lab wastes, spent photo-processing chemicals and rinses and art rooms wastewater, which were discharged via the school’s septic system. In June, the state Office of Technical Assistance provided a report and suggestions to assist the school to reduce the use of toxic chemicals and improve safety conditions. Among the suggestions was separation of waste streams and installation of a holding tank for hazardous or potentially hazardous discharges. The school is in the process of implementing this plan and bringing the school into compliance. Copies of relevant correspondence are attached to this report.

There is no other known contamination present at the site nor is there any known past use of the site that would suggest contamination.

Regulations

Local regulations:

The site is also within the following Overlay Districts: Aquifer Protection Overlay District, Watershed Protection District, Floodplain District, and Federal Flood Protection District.

Wetlands (ANORAD & NOI) – Filings with the Wayland Conservation Commission, under the Massachusetts Wetlands Protection Act and the Town of Wayland Wetlands Protection By-law, will be necessary for any work proposed within protected resource areas. These include an Abbreviated Notice of Request for Resource Area Delineation (for consensus/confirmation of wetlands resource area limits) and Notices of Intent for work proposed within protected areas.

Aquifer Protection District - This overlay district is defined as that area designated “Zone II” by the Commonwealth of Massachusetts; this includes the high school site

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Feasibility Study

in its entirety. Based upon Article 16 of the Code of Wayland (Aquifer Protection District), we anticipate the need for Special Permits from the Planning Board for sewage disposal, the laboratory/art/photo processing holding tank, and rendering impervious 15% of the lot or 2,500 s.f. (requiring groundwater recharge).

Watershed Protection District – The site is not located within this district being located in the more restrictive Aquifer Protection District, as noted above.

Floodplain District & Federal Flood Protection District – Portions of the site is located in the Town’s floodplain district, as defined by the 124 contour elevations, and in the Federal Floodplain District based on the Zone A and B identified on the FIRM maps. If the project involves work within these areas, a Special Permit from the Zoning Board of Appeals is required.

Other regulatory filings

NPDES - This filing consists of a confirmation that the site is able to meet the federal and Massachusetts criteria for storm water management. This filing requires the applicant to confirm, to both the Commonwealth of Massachusetts and to the Federal Government, that no pollution will be discharged to surface waters, and that any spills or potential contaminants will be addressed prior to entering the storm water stream and thereby possibly polluting any waters or areas. This type of filing may be necessary depending on the proposed activities to take place on the site. In general this is not a rigorous filing to permit.

Summary

Is the site able to meet the program requirements for the proposed improvement, enlargement and modernization of the Wayland High School physical plant?

It is this office's opinion that no clear impediment exists that would prohibit the use of this site for an improved, enlarged, modernized Wayland High School. However, as noted in this report, there are features of the site that will require creative attention to site design and have the potential to complicate design and permitting processes.

The major constraints of this site relate to its location within Zone I/Zone II of the public water supply and the limited area with suitable soils and offsets to groundwater and floodplain elevation. Further investigations are needed to further assess these and other issues identified in this report. Additional research also is needed to substantiate the specifics of infrastructure, sewer system capacity, environmental permitting and related standards; this research typically is performed as part of the design-development process.

<http://www.waylandschoolcommittee.org/hsfsc/files/F.SiteAssessment.PDF>

AREAS OF CONCERN FOR RENOVATION AND NEW CONSTRUCTION

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Field House Building F

- A Boiler Room is located at the rear of the Field House. Three boilers are present. Two of the boilers are dual fuel but utilize fuel oil only due to insufficient line pressure from the available natural gas supply lines. These two boilers supply heat for the Field House. The third boiler is a gas-fired boiler used to provide hot water for the locker rooms. All three boilers were installed in 1991. One 10,000-gallon UST is located west side of the Field House Boiler Room. The tank monitor for this UST was new in 1991; however the tank sensors failed approximately 4 years ago (approximately 1998) and the tank monitor system was replaced. No report of problems with the UST that were not resolved with the installation of the new tank monitoring system. The in-use UST appears to meet existing standards for overfill and spill protection. No details were provided on tank construction.
- A sump pump is located in a grated sump area located behind the two main boilers. This sump reportedly discharges to a storm drain of uncertain location. No specific indication of discharge of oil or hazardous material to the sump; however, the sump could not be inspected directly without removal of the grates. A floor drain is within the Field House Boiler Room near the entry doorway. This floor drain reportedly discharges to the sump.

3. Past history of discharge of hazardous materials (including waste chemicals and heavy metals) to the onsite drains and ultimately to two onsite septic systems. Recommend that investigation of soil and groundwater quality at the leaching fields and pits, determination of potential receptors, and possible excavation and disposal of impacted materials be performed.
4. Presence of two vents and indications of two fuel oil supply lines associated with pre-1991 UST at the Fine Arts Building (Building A). Recommend determination of the presence of absence of an abandoned UST in this area.
5. No documentation provided regarding conditions associated with the removal of two USTs (one at Fine Arts Building and one at Field House) that was undertaken in 1991. Recommend attempt to obtain documentation. If not available, recommend subsurface investigation of soil and groundwater quality to determine if impacts are currently present.
6. Tank construction details, if available, should be obtained to document compliance of the two in use USTs with current tank regulations.
7. The interiors of the garage attached to the Field House and the two wooden storage sheds were not observed. Hazardous material storage and use in these areas may be an issue.

11. Standing water in sumps in the Fine Arts Building A Boiler Room and the Field House Boiler Room may require testing and disposal. Recommend determination of discharge points for the sumps and determination of whether oil or hazardous material has been discharged through the sump and impacted soil and/or groundwater quality at the site.
12. Transformers at the Fine Arts Building and the Field House may contain PCBs and require special disposal. Recommend determining PCB content prior to removal and disposal. Determine if releases from the transformers have stained the concrete floors and if PCB contamination of the slab is present.

<http://www.waylandschoolcommittee.org/hsfsc/files/G.HazardousMaterials.PDF>

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.

<http://www.waylandschoolcommittee.org/hsfsc/files/K.Plumbing%20and%20FireProtection%20Assessment.PDF>
