

Weston High School



Figure 1: View of High School main entrance

Weston High School was originally constructed in 1968. This one story building has received additions over the course of its lifetime, most notably in 2005. This project added on to the entire front of the building with classrooms, Media and cafeteria. Four art classrooms were added at the north and a new gym, locker rooms and the kitchen were added to the south. Additionally, a 2 story science wing addition was added at the southeast. Today, the building is approximately 223,539 net square feet. Weston High School is home to 9th through 12th grade serving 814 currently enrolled students and 111 staff members.

Site

Weston High School is located at 115 School Road on the 117-acre school campus site. It is centrally located on School road between Weston Intermediate school to the south and Weston Middle School to the north. Between the High school and the intermediate school, the track and football field sit with concession stands and bleachers. Additionally, 6 tennis courts boarder the field and wetlands to the east. A soccer field is located to the west across the road. The school main entrance is centrally located to the west, served by a ramp and set of stairs. Parking is located in front of the school with additional lots at the north. The loading dock is also located to the north. The original was located at the rear of the building.



Figure 2: Google Site Image

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Limited site issues were noted during the walkthrough. Various cracks are located through the asphalt parking lot and driveways however there was not any significant spider or alligator cracks. However, the asphalt area in the courtyard is severely cracked and uneven likely due to root growth. Brick pavers in the courtyards have moved and settled and are also in need of repair. These items can be a tripping hazard. Additionally, the threshold at the stage design garage door is cracked. The doors outside of the art rooms also have a bituminous path that appears to have had a drain added. This area then slopes up to the original portion of the sidewalk. Some doors also have greater than a ½” transition.

Architecture

Overall, Weston High School is in fairly good condition. The building has been well maintained throughout its lifetime. The school floor plan is laid out with a series of corridors running the long length of the building and numerous perpendicular corridors then break up the plan. Two large courtyards and two smaller ones break up the plan and allow daylight into many interior spaces. When entering the building under the waffle slab structure a large lobby with clearstory windows welcomes visitors. The security booth is to the right and the main office is just beyond across the corridor. The lobby expands to the north where the original auditorium sits within B-wing. Tables and chairs allow for students to congregate and even have lunch in this area. The classrooms that surround the auditorium are for music, drama and art classes. The exterior bound classrooms were all added in the 2005 project. The two music classrooms are original and in need of some improvements both aesthetically and acoustically. The loading dock is located in the alcove between this wing and the one beyond. The standard classrooms are organized into wings, C, D, E and G. A wing consists of administrative offices and the Media center and associated rooms to the front. The expansive athletic complex including numerous locker rooms, weight and fitness room, offices and 2 gyms occupy the southern portion of the building. The cafeteria and kitchen are located to the southwest in the front.

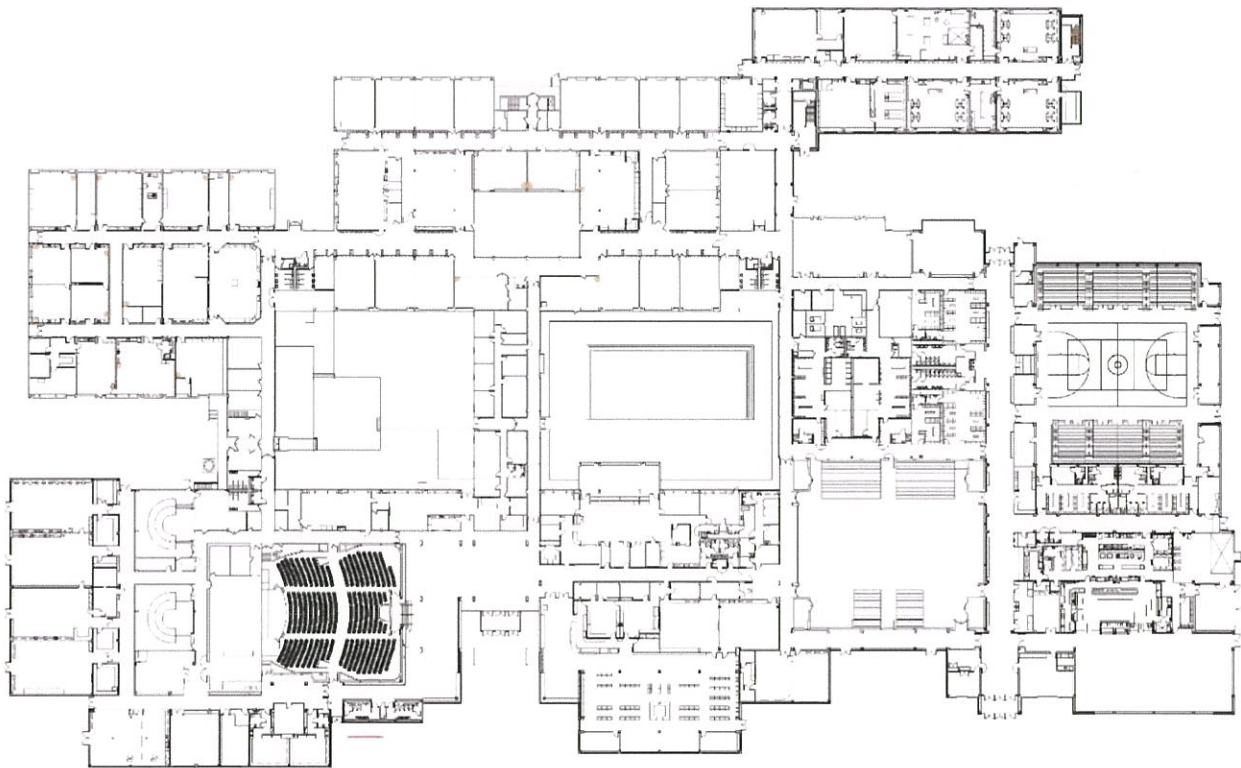


Figure 3: Overall Main floor plan

Interior

The interior of the building is maintained based on the existing conditions and existing systems. A visual inspection of the walls, floor and ceiling were reviewed during the building walkthrough. The interior walls consist mostly of concrete masonry units (CMU) along with sheetrock, most notably in the new additions. Ceramic tile in restrooms are in good condition. Most walls are in good condition. However, limited areas of sheetrock have some wear and tear. Additionally, rubber baseboard in the



Figure 4: Cracked VCT where expansion joint is needed

older portions of the school is in need of replacement. The majority of dropped ceilings are 2x2 acoustical ceilings. Many areas are exposed revealing the waffle slab structure. Some ceilings areas have various stains but overall ceilings are in good shape. Flooring throughout consists of a variety. Slate covers the lobbies and standard VCT covers much of the building. Most of the VCT flooring is good with limited areas of cracking or seams spreading. It appears that some areas did not receive a floor expansion joint and therefore these areas are cracking at the VCT. The older portions of the building have 9x9 floor tile which may likely contain some asbestos and should be remediated and replaced. Carpet in administration and media are in good condition. The tile in bathrooms, locker rooms, kitchen and cafeteria are in good shape too. The wood floors at the gyms are in good shape. Overall the interior walls, floor and ceiling are in good condition.

The facility consists of a variety doors, frames and hardware. Most doors are wood doors within painted hollow metal frames. However, many doors in the older portions are painted hollow metal doors. Many doors have a glazing opening within the leaf. Door hardware appears to meet code. Most doors have hand levers and panic devices. Overall the interior doors are in good condition. The interior of the windows appears to be in good condition however some caulk and mortar at sills is beginning to wear.

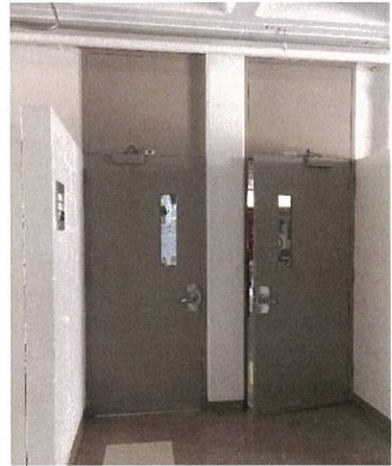


Figure 5: Original classroom doors without required push pull clearance

Most casework and built-in shelving throughout is plastic laminate and updated in 2005. However, some casework in the original classrooms is dated or lacking and should be replaced or added. It also doesn't appear that an ADA accessible lab station exists in all the science labs. Many of the sink knee spaces throughout the school is blocked with furniture or supplies and should be moved. Overall the casework is in good condition.

Many ADA accessibility and code issues were noted at this facility. This is a common occurrence given the age of the building and its renovations. These items should be included in the long term capital plan. Many of the doors within the original structure do not have the required push and pull clearances. All of the courtyards do not appear to meet the required egress as dictated by the code. All of the required grab bars do not exist in any of the handicap restrooms as they are all missing the vertical grab bar. Some gang toilet rooms are missing a handicap stall all together. As previously mentioned, in addition to these toilet rooms other ADA noncompliance items there is also the noncompliant casework.

Exterior



Figure 7: Window head condition



Figure 6: Window sill condition

The brick walls of the school are generally in good condition, with limited areas of settling and spalling. The original building is constructed with brick “veneer” and concrete masonry unit interior. The energy efficiency of the original construction is very low, and typical in the 1960s (“pre energy crisis”), and not one that is easily corrected. Some of the larger volumes contain a precast concrete panel instead of the brick. The original deep overhangs consist of the same panels. The additions were constructed with brick “veneer” and a metal stud backup with sheetrock. Overall, the mortar is in good condition with limited areas in need of repointing. Some of the brick low to the driveway in B wing are damaged around the unit ventilator louver. The original concrete panels are dirty and should be power washed and sealed. The overhangs, once painted are wearing away the finish with flaking paint. Some of the window sills on the newer portions of the building also have staining of the concrete. A few sills seemed to have moved slightly out of plumb and have loose mortar joints. Overall the masonry appears to be in good condition.

When evaluating the energy efficiency of a building, it is known that nearly 25–40% of all heat energy is lost through windows. The new additions have received new double-glazed aluminum frame windows. They appear to be in good condition. However, many of the old windows are still in place today. These older steel windows with a single pane of glass are not efficient at all. Many go all the way to the floor. There are also clearstory windows throughout the school too. Many of these windows are deteriorating and should be replaced with new energy efficient systems. The exterior doors seemed to have all be replaced. A few utility doors may still be existing from the original construction and should be replaced. There are a variety of roofs at this school. Ballast roofs are on the additions and a variety of EPDM roofs are on the existing building. The ballast roof appears to be in good shape. The roof was believed to be replaced in 2000 so it is approaching the end of its warranty period.



Figure 8: Original Window condition

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Plumbing

Overall, the plumbing systems for the school are in good condition.

The Domestic cold water is provided by water supply wells that supply water to multiple buildings on the property. The location of the water service for the building was not observed.

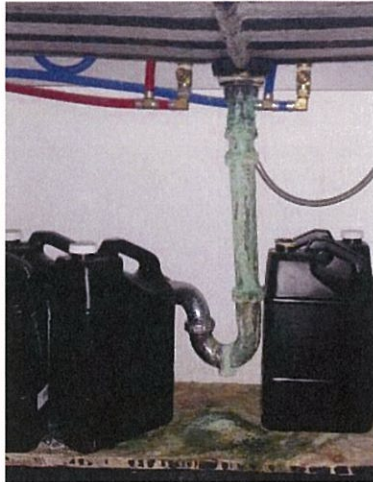
Domestic hot water is produced by two gas-fired water heaters. The first water heater, located in one of the boiler rooms, has an input rating of 199,000 BTUH and feeds two large storage tanks with unknown volumes. The water heater was manufactured in 1985 and is 32 years old. The system should have an average life expectancy of approximately 20-25 years, so this system has reached the end of its useful life. The second water heater, located in the other boiler room, has an input rating of 1,010,000 BTUH and a storage volume of 750 gallons. The system is approximately 12 years old. The system should have an average life expectancy of approximately 20-25 years and remaining life expectancy it about 10 years, however, there is some severe corrosion on some of the piping and this should be repaired/replaced.



To maximize service life, the Water Heater should be regularly serviced per the manufacturer's maintenance recommendations including, but not limited to, draining and flushing, testing relief valve, and inspecting/replacing anode. Refer to manufacturer's O&M literature.

Plumbing fixtures for the building appear to be good condition. The urinals are wall mount with manual flush valves. The building has water closets that are wall mounted with manual flush valves. The lavatories are a combination of wall hung lavatories, counter top mounted and wall hung wash stations with single control metered faucets, single lever faucets and sensor faucets (on single station wash stations only). The sinks in the art classrooms have solids interceptors on their drainage piping. The interceptors should be checked periodically and cleared of any solids that have been collected in them. Various styles of electric water coolers are provided throughout the building. The faucets for the science classrooms have integral vacuum breakers. The science sink drains are piped correctly with acid waste piping. The neutralization tank is that this piping is running into is located below the greenhouse.

While the overall condition of the fixtures is good, there are a few issues noted during the visit. The drain for the sink in the darkroom has severe corrosion and should be replaced or repaired (See photo below left). Some of the emergency showers that are installed are not accessible or in working order due to items being stored in the area that should be clear for the shower or in one case, the handle for the emergency shower has been removed (See photos below center and right).



All of the fixtures in the kitchen are connected to a grease interceptor. No sanitary or storm piping issues were observed during the visit. If there are any areas with known issues, it is recommended that the pipes in that area get scoped with a camera to see if the root of the issue can be determined.

Fire Protection

The facility is fully sprinklered. The sprinkler piping and components appear to be in good condition. There is a check valve and flow switch on the supply. This feeds 5 alarm valve risers that provide multi-zoned sprinkler coverage for the building. This main is fed from a pump house on the campus that serves multiple buildings. It is not known if the stage platform is wood-framed, as there was no visible way to access the area below the stage. Due to this, it is unknown if sprinkler protection has been provided under the stage or if it is required due to the type of construction materials used. The stage has been provided with standpipes. Overall, the sprinkler system for the school appears to be in good condition.



Mechanical



Heat for the facility is provided by two separate Hot Water Boiler Plants. The 1968 portion is served by two Smith Model 28HE-W-18 Boilers installed in 2011. The boilers are fitted with Power-Flame dual fuel burners. The Boilers appear to be well maintained and in good condition with likely 25 to 30 years of useful life remaining. The Hot Water Pumps, system valves and accessories appear to date back to the original 1968 construction. The pumps should be considered near the end of useful life but appear to be serviceable and may remain in service with continued Maintenance. Recommend planning for eventual replacement. Provision for combustion air appears adequate.

Water was observed on the floor of the Boiler Room which is reported by maintenance staff to be seepage through the walls rather than leakage from equipment. No equipment leakage was observed.

The 2005 addition is served by three Weil-McLain model 1488 Hot Water Boilers equipped with Power Flame Dual Fuel Burners. The Boilers appear to be well maintained and in good condition with likely 20 to 25 years of useful life remaining. Provision for combustion air appears adequate.



Since Boiler life can be affected by poor water quality and inconsistent maintenance, it is recommended that the boiler water be periodically tested. Regular preventive maintenance should be performed to maximize the service life of Boilers and related equipment.

Pump life can be maximized by continued service, including periodic inspection, with repacking, lubrication, and replacement of bearings and motors as required.

The facility is served by two fiberglass Underground Fuel Storage Tanks (USTs). The UST serving the original 1968 portion is 10,000 gallons, installed in 1990, last inspected in 2009 and is scheduled for removal in 2020. The UST serving the 2005 additions is 15,000 gallons, installed in 2004, last inspected in 2009 and is scheduled for removal in 2035. The Tank Inventory and Leak Detection Systems should be periodically tested for proper operation.

HVAC for the facility is provided by a combination of Packaged Rooftop Air Conditioning Units, Air Handling Units, Unit Ventilators and Split System Air Conditioning. Most of the systems were installed as part of the 2005 Additions and Renovations.

Areas of the 2005 Additions and Renovations are mostly served by Packaged Rooftop Air Conditioning Units, except for original perimeter classrooms, served by the original Classroom Unit Ventilators.

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Packaged Rooftop Air Conditioning Units installed as part of the 2005 project serve interior spaces and the 2005 Additions. The units appear to be in good condition with 10 to 15 years of useful life likely remaining.

The Auditorium is served by an Air Handling Unit located in the Mezzanine Mechanical Room with a pair of roof mounted Condensing Units. The Unit was installed as part of the 2005 renovations and appears to be in good condition with 10 to 15 years of useful life remaining.



Auditorium Control Booths are provided with Air Conditioning by Ductless Split Systems. The units appear to be in good condition with 10 to 15 years of useful life remaining.



An original 1968 Air Handling Unit serves a portion of C-Wing. The unit is at the end of its useful life and should be budgeted for replacement. The unit is currently running with an exposed drive and no belt guard which is a hazard to personnel.

The Old Gymnasium is served by four original Air Handling Units installed in 1968. The units have exceeded their useful life expectancy and should be budgeted for replacement.

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The New Gymnasium is served by a roof mounted Air Handling Unit installed at the time of construction in 2005. A 60 Ton Chiller was added to serve the Gym Air Handling Unit in 2015. The Air Handling Unit is in good condition with 15 to 20 years of useful life remaining. The chiller likely has 25 or more years of useful life remaining.



E-Wing Classrooms were provided with Air Conditioning in 2014. E-Wing Classrooms are served by Variable Refrigerant Flow (VRF) Systems with roof mounted Condensing Units and Fan Coil Units installed in the Classrooms. The system is in good condition with a remaining life expectancy of approximately 20 years.

The Weight Room and Dance Studio are served by a Packaged Rooftop Unit serving other spaces of the Athletic Department. The Weight Room and Dance Studio are at the end of the duct run, the supply duct appears to be small for the space and ventilation of the spaces is not adequate. Recommend installing a unit dedicated to the Weight Room and Dance Studio.

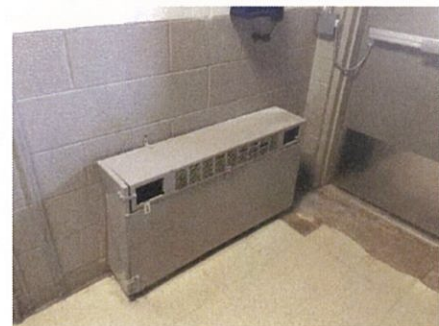


Classrooms B-6 thru B-9 of the 2005 B-Wing addition are served by a Packaged Rooftop Air Conditioning Unit. The Classrooms have large north facing windows and there have been complaints of poor heating in those spaces. Recommend further investigation and possible installation of supplemental heating.



The original Classroom Unit Ventilators serving the 1968 Classrooms have been well maintained but should be considered at the end of useful life. Recommend replacing Unit Ventilators with ducted roof mounted equipment.

The original Finned Tube Radiation, Unit Heaters and Convectors installed in 1968 are near end of useful life. The enclosures are aged with some damage and the heating elements are likely providing diminished heating capacity having exceeded their useful life expectancy. Recommend planning for replacement as part of any major HVAC improvements.



Some of the School's corridors are lacking ventilation. Recommend adding Rooftop Units to provide ventilation as required.

Air Handling Equipment should receive continued preventative maintenance including regular lubrication, filter and fan belt replacement, and motor and bearing replacement as required. Condensate pans and drains should be cleaned and valves and dampers, including actuators, should be periodically checked for proper operation. DX Cooling Equipment should be checked for proper refrigerant charge, and compressor and condenser fan operation. Touch-up painting should be done as required.

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Consideration may be given to inspection and cleaning of the ductwork interior to ensure good indoor air quality. Flushing and cleaning of piping, coils and strainers will help maintain good fluid flow and heat transfer.

Automatic Temperature Controls for the facility are a combination of original pneumatic controls, and electric/electronic controls which are part of a Direct Digital Control (DDC) Building Automation System by Alerton as part of the 2005 Additions and Renovations. The pneumatic controls are now obsolete and it is recommended that the facility eventually be upgraded to all DDC Controls.

If the facility was not commissioned, or has not been recommissioned since the original construction, there is likely to be a significant improvement in operating efficiency by recommissioning/retro-commissioning of the HVAC systems. Since the school requires large volumes of outside air and air economizer (100% outside air for free cooling), verifying proper function of HVAC Equipment, Automatic Temperature Controls and especially Outside Air Dampers and Economizer Controls, could yield energy savings resulting in a good return on investment.

Energy-Star reports a median energy savings of 15% annually when recommissioning/retro-commissioning is performed.

Electrical Interior Lighting



The existing luminaires are a mix of recessed, surface and pendant mounted fixtures, mostly fluorescent with some LED and metal Halide lamps. In the Main Office, Guidance and Lobby there are recessed 2'x2' & 2'x4' parabolic fixtures, recessed 2'x2 & 2'x4' center basket fixtures, surface mounted cylinder fixtures, recessed down lights, surface mounted track light fixtures and recessed down lights with decorative drop concentric metal rings. The Classrooms are a mix of recessed 2'x4' 18 cell parabolic fluorescent fixtures, surface mounted lensed 2'x2 fixtures, pendant mounted round direct/indirect fluorescent tube fixtures and some

pendant mounted lensed LED 2'x2' fixtures. The Corridors have both recessed 2'x4' center basket fixtures and recessed 2'x4' 18 cell parabolic fixtures. The Cafeteria has pendant mounted decorative spherical metal halide fixtures and linear fluorescent wall wash fixtures and recessed 2'x2' center basket fixtures. The Auditorium has recessed down lights as the main "house light" fixtures with 4' industrial



fluorescent fixtures with wire guards on the stage. There are also theatrical lights installed on the Stage, three rows on motorized rails along with fixed mounted lights on pipes at the sides of the auditorium. The Kitchen and Serving area has recessed mounted lensed 2'x4' fixtures and pendant mounted



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direct/indirect light fixtures. The Corridor running along the Gymnasiums and the Cafeteria has recessed linear wall wash pointed up along the length of the sky light. Both Gymnasiums have pendant mounted industrial high bay 3/4-lamp fluorescent fixtures with wire guards. The Media Center/Library has pendant mounted decorative spherical metal halide fixtures and linear fluorescent wall wash fixtures and recessed down light fixtures. The Science classrooms have recessed 2'x4' 18 cell parabolic fixtures. The main Courtyard has three frosted sphere fixtures mounted on 8' poles along with a few lights up under the canopies the other courtyards do not have lighting in them. The Computer Labs have pendant mounted round direct/indirect tube fixtures installed. The Locker rooms for both Gymnasiums have recessed 1'x4' & 2'x4' lensed fluorescent fixtures along with recessed fluorescent cove light fixtures in the bath rooms and wall mounted "jelly jar" fixtures in the showers. The utility spaces are typically illuminated by pendant mounted fluorescent wraparound or industrial fluorescent fixtures with wire guards. Most fixtures were working at the time of the walk through, but some of the fluorescent fixtures are near the end of their useful life and should be replaced with new efficient LED fixtures.



Exterior Lighting



The existing luminaires throughout the exterior consist of surface mounted square metal halide/LED light fixtures and surface mounted round cylinder fixtures in the canopies. Building mounted "full cutoff" compact fluorescent/LED sconce type fixtures, two sizes, small and large. There are also ground mounted small LED flood lights aimed at the exterior of the building in some areas. The courtyards have frosted spherical fixtures on an 8ft. pole with some incandescent sockets. The parking lot lighting is provided by pole mounted



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(approximately 20' high) LED low profile full cutoff fixtures. There are also bollard fixtures around the building, illuminating walkways. The pole mounted fixtures are all in good condition and should not need to be replaced or upgraded. The lights were not on at the time of the walk through since it was late morning early afternoon, so their operation could not be verified. It appears that all the exterior egress doors have both normal and emergency light fixtures installed at them, but without more information we cannot determine if the minimum light levels required are meeting the current code to allow for proper egress away from the building.



Exit signs & Emergency Lighting



The existing emergency lighting is provided by self-contained battery powered normally off fixtures (twin heads, squares & recessed round fixtures) in addition to emergency battery ballasts in some of the general lighting fixtures. There are also normal building fixtures on the generator distribution; these are areas used for as part of the emergency shelter. This meets the requirements for a standby distribution system. If the school wishes to use the generators for emergency lighting, a second transfer switch will need to be added to each generator, and only code approved emergency systems can be wired to this system. We were not able to

determine the extent of the existing battery emergency lighting system, to determine if it meets the current code required light levels. This should be reviewed further, to determine if any area requires more emergency fixtures or replacement of units not operating. There are remote mounted normally off single & twin head emergency fixtures and exit signs in the Main Courtyard, some of these fixtures appear to be broken and are hanging by their wires. We could not determine if all the exit signs are working and it do not appear that the emergency light fixtures will provide the current code required light levels to properly exit the courtyard. Additional emergency light fixtures



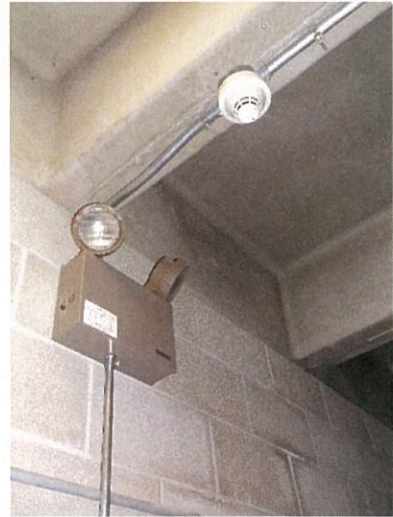
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should be installed to meet the current code requirements. The two smaller courtyards did not have emergency lights or exits signs in them, these should be added in order for the area to meet code and continued to be used by students and staff. We were not able to determine if there are enough normal or emergency fixtures to properly illuminate all the egress paths from the building to meet the current code.



There are existing exit signs located throughout the facility, these signs are white thermoplastic housings with LED lamps and possibly some fluorescent lamps as well. These signs appear to be in good condition and were all operating properly, except for some of the signs in the Auditorium. The two stairs at the new Science addition are missing “area of rescue” signage. There are no low mounted exit signs in three assembly spaces (new Gym., old Gym. & Café.), required under the current code. We recommend added low signs to all doors in the three rooms. There are low exit signs in the Auditorium. There are approximately 20+ Classrooms that require two exits from the space, it does not appear

that these rooms have the required illuminated exit signs and emergency lights installed. Each room over 1K square feet should be confirmed that there is an illuminated sign at the two doors and emergency lighting, if they do not exist add as required to meet the code. The exit signs all appeared to be in good condition and working at the time of the walk through.



Power

The existing electrical service originates from a pad mounted utility transformer located to the south side of the building. From the utility transformer, the secondary feeder runs underground to a 3000 amp, 480Y/277V – 3 phase service rated switch in the Main Electric Room. The service switch intern feeds two distribution sections. The distribution sections of the switchboard feed panels throughout the building in local electrical closets and directly in rooms, in addition to back feeding the old 2000 amp, 480Y/277V – 3phase switchboard in the old main electric room on the north side of the building.



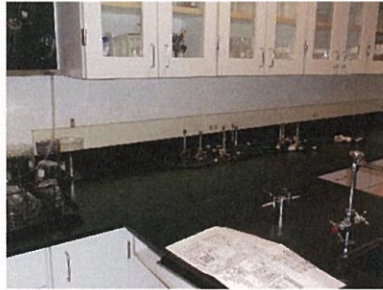
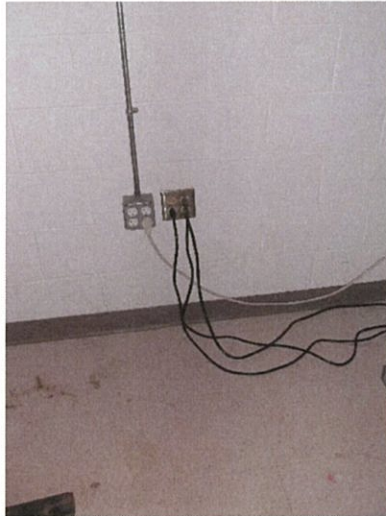
There are two generators, the newest is a 500 KW diesel generator by Caterpillar with base mounted fuel tank located outside of the south side main electric room. The generator has a single output breaker (800 amps) feeding a single automatic transfer switch in the main electric room (south side). The second generator is older and located inside the building near the loading dock on the north side of the building in a room adjacent to the old main electric room. The generator is a 85 KW natural gas unit by Onan with a single output breaker that serves two automatic transfer switches in the room with the generator. The newer transfer switch feeds a 480V disconnect switch and then a 30 KVA step down transformer and then a 208V disconnect switch. The older transfer switch also feeds a step-down transformer then a disconnect switch. The two generator panels serve some interior lighting, exterior lighting,

paging system, security system, fire alarm system, kitchen refrigeration, misc. power and some HVAC equipment (heating). The main electrical equipment and panels from the old distribution (north side of building) are nearing the end of its useful life and will need to be replaced in the future, also the location of the existing 2000-amp switchboard does not meet current code. This room only has one door in or out of the room, which would require double the working clearances in front of the equipment or an unobstructed path to the door which it does not have. When the equipment is going to be replaced, careful planning and coordination will be required to locate the new equipment and be code compliant.



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The existing power receptacles throughout the school are mostly recessed mounted duplex and quad receptacles with metal cover plates. There are some surface mounted devices that are fed by either surface mounted conduit or surface mounted raceway (wiremold). The Tech. Woodshop Room has ceiling mounted cord reels with a single receptacle on the end of the retractable cord. The Science Rooms and some other Classrooms have surface mounted dual channel raceway for both power and communication devices. The receptacles for the most part appear to be in good operating condition, there are a few locations that spotted that the devices should be replaced or remounted to the back box.

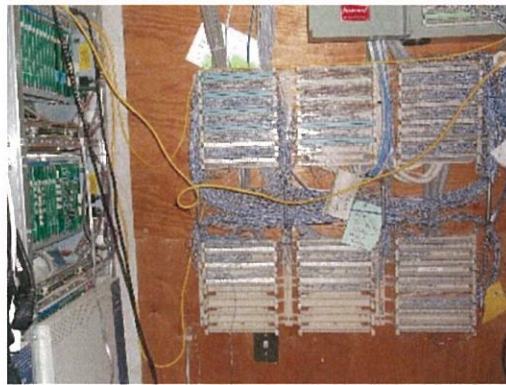
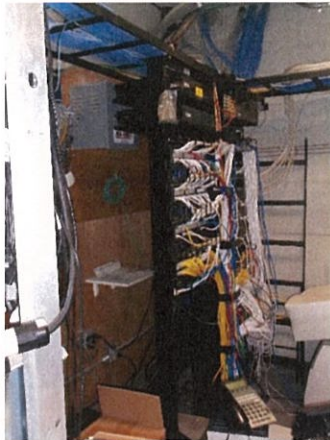


There is a lightning protection system installed on the roof of the building, with air terminals and cables. There is damage to both the air terminals and the cable along the south-east side of the North addition roof. There are cables that are broken apart, air terminals damaged or pull off the roof and a section of cables and terminals just sitting coiled up on the roof.



Voice / Data

The existing telephone system demark is in the Data Room located near the loading dock on the north side of the building. There is an open rack, an enclosed cabinet and multiple telephone punch down blocks in the room. There are two other Data closets, one adjacent to the main electric room on the south side of the building and another in the Main Office area. The Rauland master clock headend equipment, and amplifier & cassette deck along with Sonitrol security panels are in the Data closet by the Main Office. The existing data outlets throughout the school are recessed mounted. There are desk mounted phones in all the classrooms, along with a wall mounted clocks and recessed ceiling speakers. There are a few rooms with wall mounted phones like the Gymnasium. There are speakers in all the hallways and utility rooms. There are desk phones in all the Offices. All equipment appears to be operating properly. There are wireless access point devices installed throughout the school. |



Fire Alarm



The existing fire alarm system is an addressable Edwards (EST3) system, with the control panel located in a room at the lower level Storage area by the elevator near the stair at the east side of the building. There is a remote alarm panel at the front entrance security desk along with multiple power supply panels (NAC panels) throughout.

There are three locations with remote alarm panels with emergency phones, both Gymnasiums and the Cafeteria. There are manual pull stations at all egress doors and in the Gymnasium. The pull stations in the Gym have “stopper” covers. There are audio/visual devices throughout the building including all the Classrooms, the Locker Rooms, the Gymnasiums and the Cafeteria. There are

carbon monoxide detectors in the mechanical rooms where there is fuel burning equipment. There are smoke detectors throughout the school, in the corridors, classrooms, stairs, etc. The devices throughout appear to be in good operating condition.



There is an existing security lock down system throughout the school, with emergency push button stations at the Main Office and Security Desk.

There is “area of rescue” system for the two stairs in the Science wing. In addition to the existing communication system, illuminated signs are required and need to be installed at each stair door.



WESTON SCHOOLS FACILITIES FEASIBILITY STUDY

WESTON HIGH SCHOOL - FACILITY CONDITIONS ANALYSIS

TAG NO.	ASSESSMENT	SYSTEM/ CODE REFERENCE	RANKING				CORRECTIVE ACTION	ESTIMATED COST	REMARKS
			4	3	2	1			
SITE CONDITIONS									
S1	Both courtyards brick patio is heaving - bricks are missing or failing apart	General			2		Remove, modify drainage, provide new base and new patio	\$ 118,500	Based on 3450 square feet of brick pavers
S2	Asphalt in courtyard is severely cracked due to tree roots	General			2		Cut down tree and provide new paved area with brick pavers to match other area	\$ 42,200	Based on 1,400 sq ft of asphalt removal
S3	Original loading area has remnants and layers of old concrete and asphalt	General		3			Remove old unused concrete area and reorganize, clean up area	\$ 15,000	Based on 500 sq ft
S4	Courtyard hill eroding	General		3			Add low retaining wall at these areas	\$ 12,000	
S5	Asphalt curbs are mangled and broken	General		3			Replace with concrete curbs	\$ 15,400	
S6	Asphalt parking cracks	General		3			Seal cracks	\$ 30,000	Allowance
SITE SUBTOTAL								\$	233,100
EXTERIOR CONDITIONS									
A1	Existing Windows are old, dated and inefficient			2			Replace with more energy efficient systems	\$ -	Understood that this is an ongoing project.
A2	Existing doors are old, dated and inefficient			2			Replace with more energy efficient systems	\$ -	Understood that this is an ongoing project.
A3	Brick is spalling or mortar is in need of repointing or signs of efflorescence	General		3			Patch, repair, or replace brick and repoint and wash as necessary.	\$ 30,000	
A4	Louvers are mangled			3			Remove and replace	\$ 10,000	Assumes 10 locations
A5	Door thresholds are missing or not adequate			3			Provide new and properly install	\$ 7,800	Assumes 12 locations

WESTON HIGH SCHOOL - FACILITY CONDITIONS ANALYSIS

TAG NO.	ASSESSMENT	SYSTEM/ CODE REFERENCE	RANKING	CORRECTIVE ACTION	ESTIMATED COST	REMARKS
A6	Door thresholds or concrete pads have a greater than 1/2" transition to grade	ANSI 1.17 (ADA)	3	Provide ramp or re-grade asphalt/concrete to allow for 1/2" maximum vertical transition.	\$ 19,200	
A7	Caulk or control joint at wall is missing or deteriorating		2	Provide caulk at these areas	\$ 15,000	
A8	Many sills have mildew		3	Wash and seal	\$ 9,000	
A9	Existing concrete panels have a lot of mildew		3	Wash and seal	\$ 27,000	
A10	Overhang paint peeling		3	Scrape, prime and paint as required to maintain lifespan	\$ 60,000	
A11	Riser at loading area is rusting		3	Scrape prime and paint	\$ 8,000	
A12	Bug screen at cow tongue roof drain missing		3	Provide and install new screen	\$ 500	
A13	Sill mortar is missing or deteriorating		2	Remove and provide new	\$ 5,000	
A14	Some exterior frames are in need of paint		3	Scrape, prime and paint	\$ 20,000	
A15	Roofs will be nearing the end of its useful life (based on warranty)		4	The roof is due for replacement in approximately 2025+/-	\$ 5,176,728	
EXTERIOR SUBTOTAL					\$	5,388,228

WESTON HIGH SCHOOL - FACILITY CONDITIONS ANALYSIS

TAG NO.	ASSESSMENT	SYSTEM/ CODE REFERENCE	RANKING	CORRECTIVE ACTION	ESTIMATED COST	REMARKS
INTERIOR CONDITIONS						
A16	The required clearance depth or approach or corridor width does not meet code requirements	413.6 (ADA) 1101.2 (IBC) ANSI 117.1	3	Reconfigure space if possible otherwise, supply push button door operator where required.	\$ 34,000	Removal of locker wing walls and flipping the door swing could also work
A17	All door push and/or pull maneuvering clearances do not meet code.	413.6 (ADA) 1101.2 (IBC) ANSI 117.1	3	Where obstruction is not furniture related, modify door swing and/or location to comply. Where the previous is not easily achieved, supply push button door operator where required.	\$ -	
A18	Toilet rooms do not have a handicap stall	(B)1108.0 (ANSI A117.1) 603-606	2	Reconfigure to provide one	\$ 300,000	Occurs in 6 locations
A19	The required toilet grab bars are not installed	(B)1108.0 (ANSI A117.1) 603-606	2	Install code required grab bars	\$ 16,000	
A20	Music rooms do not have accessibility throughout the space		3	Provide ramp or lift to lower portion of tiered floor	\$ 50,000	
A21	Music rooms do not have adequate acoustical wall and ceiling treatments		2	Apply acoustical treatments to wall and ceiling. Add carpet to one room.	\$ 23,500	
A22	Music rooms do not have any practice rooms		3	Convert hallway into practice rooms. This hall is not needed by code	\$ 120,000	600 sq ft
A23	There is no accessible ramp from seating area up to stage		3	Provide ramp or lift to each stage	\$ 50,000	
A24	Floors in original building have 9x9 tiles		3	These tiles likely contain asbestos- remove, remediate and replace with VCT	\$ 128,000	
A25	Some spaces do not have ceilings		4	Add dropped ceilings to conceal ductwork	\$ -	Understood that this is an ongoing project.
A26	Floor expansion joints are not installed causing VCT cracking		3	Install expansion	\$ 5,000	

WESTON HIGH SCHOOL - FACILITY CONDITIONS ANALYSIS

TAG NO.	ASSESSMENT	SYSTEM/ CODE REFERENCE	RANKING			CORRECTIVE ACTION	ESTIMATED COST	REMARKS
			4	3	2			
A27	Nurse suite has no window		4			Demo wall and install window	\$ 15,000	
A28	A few bluestone tiles are cracked			3		Replace	\$ 3,000	
A29	VCT floor is damaged or missing			3		Repair and replace	\$ 1,500	
A30	Rubber baseboard in older portion is nearing the end of its life			3		Replace with new rubber base	\$ 12,800	
A31	Benches in locker room are damaged			3		Repair wood bench tops	\$ 3,000	
A32	Old gym could use a fresh coat of paint at walls and ceiling			3		Scrape, prime and paint	\$ 48,000	
A33	Wood countertop is not permitted in kitchen				2	remove and replace with SSSL	\$ 3,000	
A34	Joints at cafeteria sills are cracking				2	Repair	\$ 2,000	
A35	Leaks entering in the mechanical area at lower level				1	Further investigation is required to determine the source of the water infiltration	\$ 20,000	Allowance
INTERIOR SUBTOTAL							\$	834,800
PLUMBING/FIRE PROTECTION								
P-1	Periodically inspect, test and replace plumbing valves, pressure regulators, backflow preventers, thermostatic mixing valves, pumps, etc.	General		3		Replace faulty equipment as required.	\$ 10,000	Cost over next 10 years.
P-2	Water heater has reached the end of its useful life.	General			2	Replace water heater	\$ 50,000	
FP1	The Sprinkler/Standpipe System requires periodic inspection, testing and maintenance in accordance with NFPA 25.	NFPA 25		3		Include annual cost of \$1000 in budget.	\$ 10,000	Cost for inspection, testing and maintenance over next 10 years.
PLUMBING/FIRE PROTECTION SUBTOTAL							\$	70,000

WESTON HIGH SCHOOL - FACILITY CONDITIONS ANALYSIS

TAG NO.	ASSESSMENT	SYSTEM/ CODE REFERENCE	RANKING	CORRECTIVE ACTION	ESTIMATED COST	REMARKS
MECHANICAL SYSTEMS						
M1	Pumps in 1968 Boiler Room at near end of useful life	General	2	Replace pumps.	\$ 20,000	
M2	Air Handling Unit serving portion of C-Wing has exceeded life expectancy	General	3	Replace Air Handling Unit	\$ 35,000	
M3	Air Handling Units serving Old Gym have exceeded life expectancy	General	3	Replace Air Handling Units	\$ 275,000	
M4	HVAC serving the Weight Room and Dance Studio is insufficient	General	3	Install Packaged Rooftop Air Conditioning Unit dedicated to spaces.	\$ 90,000	
M5	Classrooms B-6 thru B-9 are not well heated.	General	3	Add supplemental heat	\$ 30,000	
M6	Original Classroom Unit Ventilators serving 1968 portion of School are at end of useful life	General	3	Replace Unit Ventilators with Packaged Rooftop Units.	\$ 330,000	
M7	Original Finned Tube Radiation serving 1968 portion of School at end of useful life	General	2	Replace Finned Tube as part of any major renovation.	\$ 100,000	
M8	Some corridors not ventilated per Code	IMC Chap 4	3	Install Rooftop Equipment for Corridor Ventilation	\$ 150,000	
M9	Pneumatic Automatic Temperature Controls are obsolete	General	3	Provide DDC Controls as part of other HVAC improvement projects.	\$ 160,000	
M10	Pumps require regular inspection and maintenance	General	2	Inspect and service pumps annually. Provide repairs as required.	\$ 30,000	Cost over 10 years
M11	Roof Exhaust Fans require continued maintenance.	General	3	Provide regular inspection for proper operation. Replace drive belts, damper actuators and motors as required.	\$ 20,000	Cost over 10 years
M12	Kitchen Grease Exhaust System requires regular cleaning and maintenance	NFPA 96	2	Regular cleaning and maintenance to consist of cleaning of hood, baffles, ductwork and fan. Inspect and test extinguishing system. Replace grease trough.	\$ 30,000	Cost over 10 years
M13	10,000 Underground Fuel Storage Tank is due for replacement in 2030	General	2	Replace UST, piping and accessories.	\$ 180,000	

WESTON HIGH SCHOOL - FACILITY CONDITIONS ANALYSIS

TAG NO.	ASSESSMENT	SYSTEM/ CODE REFERENCE	RANKING	CORRECTIVE ACTION	ESTIMATED COST	REMARKS
M14	Underground Fuel Storage Tank Inventory/Leak Detection Systems should be serviced regularly	General	3	Check operation of system console and sensors. Perform repairs as required. Service should be performed by factory authorized installer.	\$ 6,000	Cost over 10 years
M15	Boilers and related equipment should have continued preventive maintenance	General	2	Provide regular Boiler service, water testing.	\$ 15,000	Cost over 10 years
M16	Air Handling Equipment should have continued preventive maintenance	General	2	Check compressors, controls, refrigerant charge. Replace filters and fan belts, lubricate bearings and damper linkages, check damper and valve operation, clean coils, condensate pans and drains.	\$ 50,000	Cost over 10 years
M17	New Gym Chiller requires regular inspection and maintenance	General	3	Clean and inspect Chiller. Check Compressors, Controls, Evaporator Fans, Refrigerant Charge	\$ 6,000	Cost over 10 years
M18	VRF Systems require regular inspection and maintenance	General	3	Clean and inspect Chiller. Check Compressors, Controls, Evaporator Fans, Refrigerant Charge	\$ 15,000	Cost over 10 years
M19	Hot and Chilled Water Piping and components should be serviced	General	3	Flush piping and coils, clean strainers. Document conditions to plan future maintenance frequency.	\$ 5,000	Estimated Cost
M20	Clean duct systems is important to good indoor air quality	General	3	Inspect and clean interior of ductwork	\$ 25,000	Estimated Cost
M21	Recommissioning of facility HVAC systems	General	2	Perform functional testing of all equipment and Automatic Temperature Controls to ensure operation per original design.	\$ 60,000	Likely Cost Range: \$40k to \$80k depending on level of detail
MECHANICAL SUBTOTAL					\$	1,632,000

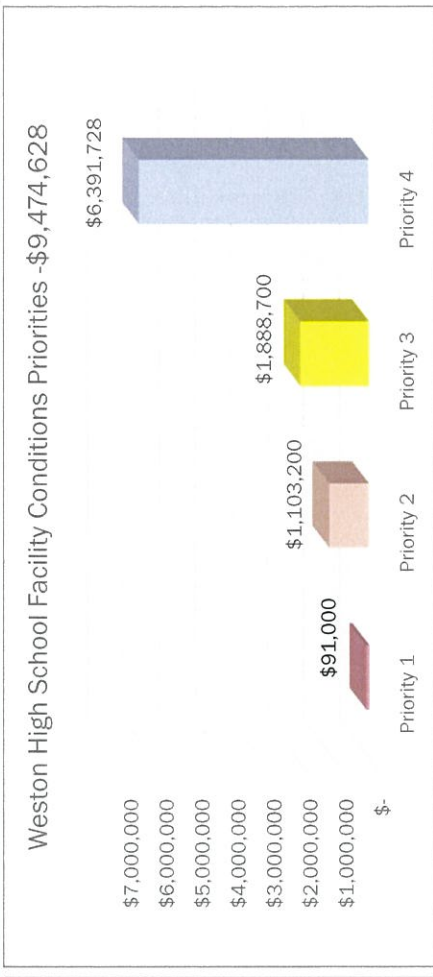
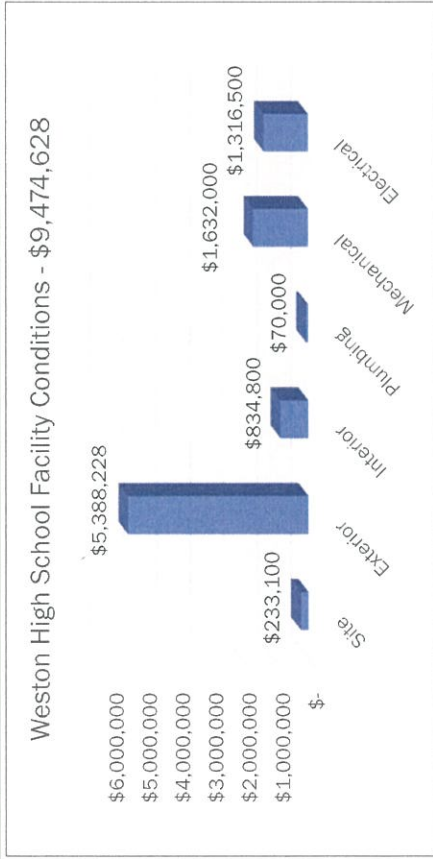
WESTON HIGH SCHOOL - FACILITY CONDITIONS ANALYSIS

TAG NO.	ASSESSMENT	SYSTEM/ CODE REFERENCE	RANKING	CORRECTIVE ACTION	ESTIMATED COST	REMARKS
ELECTRICAL SYSTEMS						
E1	Currently the emergency lighting is provided by stand alone battery units (normally off) & Battery Ballasts in the general light fixtures. There are areas that don't appear to have sufficient emergency lighting to meet the current code and should be reviewed further with the AHJ.		1	Install a code approved emergency lighting system throughout the school, there are a few options to achieve this (new AC inverter system, stand alone battery devices, battery ballast in general light fixtures or generator via emergency transfer switch.	\$ 71,000	\$71K is for a replacing or adding to 60% of the schools existing twin head & battery ballast distribution, it will cost approx. \$130K to modify the existing generator distribution, the third option would fall somewhere in between
E2	It does not appear to be sufficient normal and emergency lighting in the Courtyards to meet current code for egress		2	Install new LED sconce fixture with emergency battery ballast	\$ 7,500	approximately \$500 per fixture
E3	Existing fluorescent & incandescent fixtures throughout the school, appear fully operational but not very efficient		4	Replace all existing fluorescent and incandescent fixtures with new energy efficient LED fixtures. Existing LED fixtures shall remain	\$ 1,200,000	allowance
E4	A portion of the existing lightning protection system is damaged and partial removed		3	Replace damaged wire and reinstall existing lightning rods and cable after wall/parapet has been repaired.	\$ 2,500	
E5	There are no "low" mounted exit signs in three assembly spaces (2-Gym's. & Café.) to meet the current code		2	Install new self-illuminating exit sign on the kick plate of each pair of egress doors out of these rooms, plus 2 additional in the Gym.	\$ 4,500	
E6	There is no illuminated signage for the "area of rescue" at the two stairs in the Science wing to meet the current code		2	Install new illuminated "area of rescue" signage and two-way communication system at each level of the stairwell across from the new Gym.	\$ 1,000	
E7	Possible missing exit signs and emergency lights in rooms over a thousand square feet		2	Add two exit signs, one at each door and emergency lights per room.	\$ 30,000	approximately \$1500 per room
ELECTRICAL SUBTOTAL						\$ 1,316,500

WESTON HIGH SCHOOL - FACILITY CONDITIONS ANALYSIS						
TAG NO.	ASSESSMENT	SYSTEM/ CODE REFERENCE	RANKING	CORRECTIVE ACTION	ITIMIZED ESIMATED COST	REMARKS
TOTAL ESTIMATED COSTS					\$	9,474,628

LEDGEND PRIORITY - RANK

- 1 Urgent priority - These items should be corrected as soon as possible and most likely encompass code, health and life safety issues.
- 2 High priority - These items should be corrected within a reasonable amount of time after the highest priorities referenced above. These may be associated with high priority maintenance issues or accessibility issues for the physically challenged. Maintenance items have a remaining useful life from 1-3 years.
- 3 Moderate priority - These items may be associated with aesthetic or general maintenance issues. Remaining useful life of 3-5 years.
- 4 Low priority - These items include maintenance and aesthetic issues that are not in current need of replacement, but should continue to be monitored on a regular basis. These items typically have a remaining useful life of 5-10 years or greater.







NORTH

SECOND FLOOR PLAN

SCALE: NTS

2

WHS2

