# School Facility Evaluation Project

## Part I - Facility Profile and Summary



School Name: Glenbrook Elementary School
Location: 4725 33 Ave S.W.

School Code: 9122
Facility Code: 1448

Region: South
Jurisdiction: Calgary

Superindendent: Dr. Donna Micheals
Contact Person: Leanne Soligo
Telephone: 214-1121

Grades: K - 6

School Capacity: 700

| Building Section | Year of Compl. | No. of Floors | Gross Bldg Area (Sq.M.) | Type of Construction (i.e., structure, roof, cladding) | Description of Mechanical Systems (incl. major upgrades) | Comments/Notes |
|---|---|---|---|---|---|---|
| **Original Building** | 1959 | 1 | 2270.7 | Wood frame, sloped and flat roofs,wood siding and stucco | low pressure steam boiler | |
| **Additions/ Expansions** | 1963 | 1 | 635.4 | Same as original | as above | |
| | 1967 | 1 | 2427.6 | Concrete block, flat roof, brick and stucco | as above | |
| **Total** | | | 5333.7 | | | |

Evaluator's Name: Bob Passmore
& Company: Building Science Specialists

| | | | | | | |
|---|---|---|---|---|---|---|
| **Upgrading/ Modernization (identify whether minor or major)** | | | | Minor upgrading of finishes in Staff Room and Administration Offices | | |
| **Portable Struct. (identify whether attached/perman. or free-standing/ relocatable)** | NA | | | | | |

| | |
|---|---|
| **List of Reports/ Supplementary Information** | CBE Facility Asbestos Database, February 23, 1999. |

| | Evaluation Components | Summary Assessment | | Estim. Cost |
|---|---|---|---|---|
| 1 | **Site Conditions** | - patch asphalt parking lot | | |
| 2 | **Building Exterior** | - paint exterior of original building and perimeter of windows in addition<br>- replace weather-stripping in windows of addition | | $120,700 |
| 3 | **Building Interior** | - replace flooring in washrooms of addition. Install new carpet in Library<br>- provide new toilet partitions in washrooms of addition<br>- provide handicapped access throughout building and handicapped washroom. | | $179,000 |
| 4 | **Mechanical Systems** | - provide two new hot water tanks<br>- provide new boiler in original school<br>- provide relief ventilation openings in both boiler rooms<br>- provide two new expansion tanks<br>- provide new components to ventilation unit<br>- provide new corridor exhaust in addition | | $118,800 |
| 5 | **Electrical Systems** | - provide addition exterior lighting<br>- install new fire alarm system<br>- provide new emergency lighting<br>- new exit signs connected to emergency power<br>- provide new lighting in tunnel and boiler room<br>- provide ventilation to computer/telephone distribution hub -<br>upgrade to T-8 lamps throughout | | $180,000 |
| 6 | **Portable Buildings** | | | $0.00 |
| 7 | **Space Adequacy:** | | | |
| | **7.1 Classrooms** | - slightly excessive | 412.8 | |
| | **7.2 Science Rooms/Labs** | - deficient | -201.4 | |
| | **7.3 Ancillary Areas** | - deficient | -313.5 | |
| | **7.4 Gymnasium** | - deficient | -192.1 | |
| | **7.5 Library/Resource Areas** | - deficient | -99.8 | |
| | **7.6 Administration/Staff Areas** | - deficient | -143.8 | |
| | **7.7 CTS Areas** | | 0 | |
| | **7.8 Other Non-Instructional Areas (incl. gross-up)** | - slightly excessive | 361.5 | |
| | **Overall School Conditions & Estim. Costs** | | -176.3 | $598,500 |

| Section 1 | Site Conditions | Rating | Comments/Concerns | Estim. Cost |
|---|---|---|---|---|
| **1.1** | **General Site Condions** | | | |
| 1.1.1 | Overall site size. | 4 | 2.52 hectares | |
| 1.1.2 | Outdoor athletic areas. | 4 | Two soccer pitches to south of school, Two P & R ball diamonds to east. Creative play area to SW. Basketball hoops on pavement to east. | |
| 1.1.3 | Outdoor playground areas, including condition of equipment and base. | 4 | Newer creative play area Large concreted area in south courtyard and at ends of east and west wings. Some asphalt topping where concrete is worn, large area of asphalt to east with 3 outdoor basketball courts | |
| 1.1.4 | Site landscaping. | 4 | Mature | |
| 1.1.5 | Site accessories (i.e., perimeter and other fencing, guard rails, bike stands, flag poles). | 4 | Perimeter chain link fence to south &, west of site. East side from playgrounds enters into Parks & Recreation ball diamonds. The north side is bordered by street and parking lot. | |
| 1.1.6 | Surface drainage conditions (i.e., drains away from building, signs of ponding). | 4 | Drainage is away from building on all sides. Rather flat to west side, water ponds on grass area next to playground. Water sits on gravel to south. | |
| 1.1.7 | Evidence of sub-soil problems. | 4 | No evidence of problems noted. | |
| 1.1.8 | Safety and security concerns due to site conditions. | 4 | None noted. | |
| Other | | | | |

| Section 1 | Site Conditions | Rating | Comments/Concerns | Estim. Cost |
|---|---|---|---|---|
| **1.2** | **Access/Drop-Off Areas/Roadways/Bus Lanes** | | | |
| 1.2.1 | Vehicular and pedestrian access points (i.e., size, number, visibility, safety). | n/a | city streets | |
| 1.2.2 | Surfacing of on-site road network (note whether asphalt or gravel). | 4 | Teacher/visitor parking to north is paved. | |
| 1.2.3 | Bus lanes/drop-off areas (note whether on-site or off-site). | n/a | One bus parking spot on site in parking lot, gravel/paved. City streets | |
| 1.2.4 | Fire vehicle access. | 4 | City street, lane, parking lot to north, with fire access to west on concrete apron. Access to east side has been blocked by chain link fence. | |
| 1.2.5 | Signage. | 4 | Wall mounted sign on north elevation at main entry. | |
| Other | | | | |

| Section 1 | Site Conditions | Rating | Comments/Concerns | Estim. Cost |
|---|---|---|---|---|
| **1.3** | **Parking Lots and Sidewalks** | | | |
| 1.3.1 | Number of parking spaces for staff, students and visitors (including stalls for disabled persons). | 4 | 32 stalls, no designated handicapped stall. Provide handicapped stall. | $3,000 |
| 1.3.2 | Layout and safety of parking lots. | 4 | Fenced from play area. No pedestrian route through the parking area. | |
| 1.3.3 | Surfacing and drainage of parking lots (note whether asphalt or gravel). | 3 | Asphalt area is sloped to an area drain. Some cracking of asphalt noted. Seal asphalt cracks | $2,000 |
| 1.3.4 | Layout and safety of sidewalks. | 4 | Sidewalk from north avenue approaches the main entry (middle north side) and east end of east wing. Other walkways are city sidewalks. | |
| 1.3.5 | Surfacing and drainage of sidewalks (note type of material). | 4 | Concrete, slope well to east away from building | |
| 1.3.6 | Curb cuts and ramps for barrier free access. | 4 | Curb cut in city sidewalk, with one ramp to the main entry. It is a steep ramp, attendant would be required. | |
| Other | | | | |
| | **Overall Site Conditions & Estimated Costs** | | | $5,000 |

| Section 2 | Building Exterior | Rating | Comments/Concerns | | Estim. Cost |
|---|---|---|---|---|---|
| **2.1** | **Overall Structure** | | **Bldg. Section** | **Description/Condition** | |
| 2.1.1 | Floor structure and beams (i.e., signs of bending, cracking, heaving, settlement, voids, rust, stains). | 4 | 1960 - 1964 | Minor cracking in terrazzo and tile floor finishes at washrooms and entry Classroom wood floors have shrunk relative to corridor concrete slabs. | |
| | | 4 | 1967 | Minor cracks in slab on grade and suspended slabs, which have telegraphed through "poured linoleum" finish | |
| 2.1.2 | Wall structure and columns (i.e., signs of bending, cracking, settlement, voids, rust, stains). | 4 | 1960 - 1964 1967 | No evidence of problems. | |
| 2.1.3 | Roof structure (i.e., signs of bending, cracking, voids, rust, stains). | 4 | 1960 - 1964 1967 | No evidence of problems | |
| Other | | | | | |
| **2.2** | **Roofing and Skylights** ***Identify the availability of an up-to-date inspection report or roofing program. Note if roof sections are of different ages and/or in varying states of repair.*** | | | **Description/Condition/Age** | |
| 2.2.1 | Based on the inspection report (and to the extent possible, direct observation), assess and rate roof conditions and estimate costs for required improvements (i.e., covering materials, membrane, insulation, other components). | FI | 1960 - 1964 1967 | Not reviewed, snow on roof. | |
| 2.2.2 | Roof accessories (i.e., ladders, stairs, hatches, masts, exhaust hoods, chimneys, gutters, downspouts, splashpads). | FI | 1960 - 1964 1967 | | |
| 2.2.3 | Control of ice and snow falling from roof. | 5 | 1960 - 1964 | Roofs slope to inside and drain internally. | |
| | | 4 | 1968 | Roof is flat with internal drains to municipal system | |
| 2.2.4 | Skylights (i.e., signs of distress, leaks, ice build-up, condensation, deteriorated materials/seals). | n/a | 1960 - 1964 1968 | | |
| Other | | | | | |

| Section 2 | Building Exterior | Rating | | Comments/Concerns | Estim. Cost |
|---|---|---|---|---|---|
| **2.3** | **Exterior Walls/Building Envelope** | | | **Description/Condition** | |
| 2.3.1 | Exterior wall finishes (i.e., signs of deterioration, cracks, brick spalling, efflorescence, water stains). | 3 | 1960 - 1964 | Extensive cracking noted in painted finish on stucco. Lower perimeter of school is finished in horizontal wood siding. Nail heads are rusting. Painting of the exterior wood and stucco is recommended. Block firewalls penetrating through the roof show signs of cracking and paint pealing and splitting. | $18,500.00 |
| | | 4 | 1967 | Brick exterior, with stucco panels. Some minor cracking of the stucco finish | |
| 2.3.2 | Fascias, soffits, parapets (i.e., signs of looseness, stains, rust, peeling paint). | 4 | 1960 - 1964 1967 | Fascia appears to be new break shaped metal. | |
| 2.3.3 | Building envelope (i.e., evidence of air infiltration/ exfiltration through the exterior wall or ice build up on wall, eaves, canopy). | 4 | 1960 - 1964 1968 | No evidence of problems | |
| 2.3.4 | Interface of roof drainage and ground drainage systems. | 4 | 1960 - 1964 1968 | Roof drains internally into storm system | |
| 2.3.5 | Inside faces of exterior walls (i.e., signs of cracks, water stains, dust spots). | 4 | 1960 - 1964 1967 | No evidence of problems | |
| Other | | 3 | 1960- 1964 | Scope of work required for removal and replacement of boiler. Cash allowance for architectural repairs required for removal and replacement of boiler. | $100,000.00 |

| Section 2 | Building Exterior | Rating | Bldg. Section | Description/Condition | Comments/Concerns | Estim. Cost |
|---|---|---|---|---|---|---|
| **2.4** | **Exterior Doors and Windows** | | | | | |
| 2.4.1 | Doors (i.e., signs of deterioration, rusting metal, glass cracks, peeling paint, damaged seals, sealed unit failure). | 3 | 1960 - 1964 | | Doors and hardware are original to building. Paint as part of 2.3.1. | |
| | | 4 | 1967 | | Doors and hardware are original to building. | |
| 2.4.2 | Door accessories (i.e., latches, hardware, screens, locks, alarms, holders, closers, security devices). | 4 | 1960 - 1964 1967 | | No evidence of problems, hardware appears to be original. | |
| 2.4.3 | Exit door hardware (i.e., safety and/or code concerns). | 4 | 1960 - 1964 1967 | | Hardware functions as required | |
| 2.4.4 | Windows (i.e., signs of deterioration, rusting metal, glass cracks, peeling paint, damaged seals, sealed unit failure). | 4 | 1960 - 1964 | | Windows are original to building, single glazed, with storms. All operable window locations are single glazed only, hopper type units with screens and security screening. | |
| | | 3 | 1967 | | Windows are sealed units in aluminum frames in wood surrounds. Operable awning windows have screens, but weather-stripping requires replacement. Wood frames require painting (see. 2.3.1 above) Office windows (2) have been upgraded to PVC | $1,200 |
| 2.4.5 | Window accessories (i.e., latches, hardware, screens, locks, alarms, holders, closers, security devices). | 4 | 1960 - 1964 | | No problems noted. | |
| | | 3 | 1967 | | Weather-stripping requires replacement | $1,000 |
| 2.4.6 | Building envelope (i.e., signs of heavy condensation on doors or windows). | 4 | 1960 - 1964 1968 | | No problems noted. | |
| Other | | | | | | |
| | **Overall Bldg Exterior Condition & Estim Costs** | | | | | $120,700 |

| Section 3 | Building Interior - Overall Conditions | Rating | Comments/Concerns | | Estim. Cost |
|---|---|---|---|---|---|
| **3.1** | **Interior Structure** | | **Bldg. Section** | **Description/Condition** | |
| 3.1.1 | Interior walls and partitions (i.e., signs of cracks, spalling, paint peeling). | 4 | 1960 - 1964 1967 | Walls are wood frame with plaster finish or painted concrete block. No problems noted. | |
| 3.1.2 | Floors (i.e., signs of cracks, heaving, settlement). | 4 | 1960-1964 | Floors are concrete in core, and corridors, wood frame in classrooms. Minor cracking noted in basement concrete floor. | |
| | | 4 | 1967 | Floors are concrete slab on grade with tunnels running under the corridors. Minor cracking noted throughout with a substantial crack in the poured epoxy finish in the Boy's washroom on the upper level and in the corridor at the boiler room. | |
| Other | | | | | |
| **3.2** | **Materials and Finishes** | | Bldg. Section | **Description/Condition** | |
| 3.2.1 | Floor materials and finishes. | 4 | 1960-1964 | Floor finishes are 9" VAT in corridors, new sheet lino in classrooms with area carpets in some. Hardwood floor in Gymnasium. Staff areas are carpeted. Music room is carpeted Terrazzo floors in courtyard entries and science room. Ceramic tile floors in children's washrooms. Cracking noted in terrazzo and ceramic tile floors, but are maintainable. | |
| | | 3 | 1967 | Floor finishes in corridors are poured epoxy (see 3.1.2 above). Office and Library are carpeted. Classrooms are VT with some area carpets. Replace epoxy flooring with sheet vinyl in washrooms. Replace carpet in Library and computer area | $15,500 |
| 3.2.2 | Wall materials and finishes. | 4 | 1960-1964 | Walls are wood frame with painted plaster finish or painted concrete block. Walls in Gymnasium are finished with stipple (contains asbestos) Lower ten feet are protected with wood paneling. | |
| | | | 1967 | Walls are painted concrete with some demountable partitions in offices and Library | |

| Section 3 | Building Interior - Overall Conditions | Rating | Comments/Concerns | | Estim. Cost |
|---|---|---|---|---|---|
| **3.2** | **Materials and Finishes (cont'd)** | | Bldg. Section | **Description/Condition** | |
| 3.2.3 | Ceiling materials and finishes. | 4 | 1960-1964 | Ceilings in classroom are sloped with 12 x 12 fibrous ceiling tiles. Gymnasium and corridors finished the same way. Library, lunch/science room, Shelter rooms have stippled finish (contains asbestos) | |
| | | 4 | 1967 | Ceilings are suspended T-bar with 2 x 4 ceiling tiles | |
| 3.2.4 | Interior doors and hardware. | 4 | 1960-1964 1967 | Doors are wood throughout, except for metal doors at fire separations. All appear to be original, except in office which have been upgraded to metal in HM frames. | |
| 3.2.5 | Millwork | 4 | 1960-1964 1967 | Millwork is original, except for office and staffroom which have been upgraded | |
| 3.2.6 | Fixed/wall mounted equipment (i.e., writing boards, tackboards, display boards, signs). | 3 | 1960-1964 1967 | All tackboards and chalkboards are original - adequate. Replace all chalkboards with white boards. | $35,000 |
| 3.2.7 | Any other fixed/mounted specialty items (i.e., CTS equipment, gymnasium equipment). | 4 | 1960-1964 1967 | Gymnasium has fold out climbing wall. | |
| 3.2.8 | Washroom materials and finishes. | 4 | 1960-1964 | Sinks are wall hung, in good condition, partitions are original, but in good condition. | |
| | | 3 | 1967 | Sinks are wall hung, in good condition, partitions are original, and require replacement. | $3,500 |
| Other | | | | | |

| Section 3 | Building Interior - Overall Conditions | Rating | Comments/Concerns | | Estim. Cost |
|---|---|---|---|---|---|
| **3.3** | **Health and Safety Concerns --- *Intent is to identify renovations considered necessary to meet applicable codes, primarily due to safety concerns. Basis of evaluation should be an up-to-date inspection report from the authority having jurisdiction together with direct observations as appropriate. Evaluator should note if in his opinion a comprehensive code evaluation is required.*** | | Bldg. Section | **Description/Condition** | |
| 3.3.1 | Building construction type - combustible or non-combustible, sprinklered or non-sprinklered. | 4 | 1960-1964 | Combination of combustible and non-combustible construction, Core area is mainly non-combustible, while classroom walls, floors and ceiling are combustible. Building is not sprinklered | |
| | | 4 | 1967 | Non combustible construction, building is not sprinklered | |
| 3.3.2 | Fire separations (i.e., between buildings, wings, zones if non-sprinklered). | 4 | 1960-1964 | 2 hour fire separations exists between west class wing and core. | |
| 3.3.3 | Fire resistance rating of materials (i.e., corridor walls and doors). | 4 | 1960-1964 | Walls are concrete block, doors are metal, Doors are not on hold devices, they are secured with hooks. | |
| 3.3.4 | Exiting distances and access to exits. | 4 | 1960-1964 1967 | Appear to be adequate. | |
| 3.3.5 | Barrier-free access. | 2 | 1960-1964 1967 | Facility is accessible, at front entry only. Ramp is short and steep with no continuous rails at proper height. There are no handicapped washroom facilities. There is no access between the upper and lower level. Extend ramp, provide automated handicapped access doors at entry, install unisex handicapped washroom (Nurses Office) and provide handicapped lift in same area. | $125,000 |
| 3.3.6 | Availability of hazardous materials audit (i.e., evidence of safety concerns with respect to asbestos, PCB's, chemicals). | 4 | 1960-1964 1967 | CBE Facility Asbestos database indicates the presence of asbestos in stipple finish on walls or ceiling in gymnasium, science/lunch room, library. Elbows on heating pipes in the lower level tunnels and storage and above ceiling tiles. The two boilers are wrapped in asbestos. The univent heaters contain asbestos transite board. Original fluorescent lights contain PCB ballasts. This must be a consideration as renovations are contemplated. | |
| 3.3.7 | Other health and safety concerns (i.e., evidence of excessive noise conditions, air quality problems) | 4 | 1960-1964 | No evidence of other problems | |
| Other | | | | | |
| | **Overall Bldg Interior Condition & Estim Costs** | | | | $179,000 |

| Section 4 | Mechanical Systems | Rating | | Comments/Concerns | Estim. Cost |
|---|---|---|---|---|---|
| **4.1** | **Mechanical Site Services** | | Bldg. Section | Description/Condition | |
| 4.1.1 | Site drainage systems (i.e., surface and underground systems, catch basins). | 4 | 1960 to 1964 to 1968 | The parking lot and the play area to the east have catch basins draining to city storm mains. | |
| 4.1.2 | Exterior plumbing systems (i.e., irrigation systems, hose bibs). | 4 | 1960 to 1964 to 1968 | Hose bibbs are provided on the north and west sides of the building. | |
| 4.1.3 | Outside storage tanks. | N/A | | none | |
| Other | | | | | |
| **4.2** | **Fire Suppression Systems** | | Bldg. Section | Description/Condition | |
| 4.2.1 | Fire hydrants and siamese connections. | | N/A | None | |
| 4.2.2 | Fire suppression systems (i.e., pumps, sprinklers, piping, reservoirs, hoses, stand pipes, CO2 systems). | 4 | 1960 to 1964 to 1968 | The 1968 section has a standpipe system with fire hoses in cabinets. The rest of the school has standpipes with hoses on reels. | |
| 4.2.3 | Hand extinguishers, blankets and showers (i.e., in CTS areas). | 4 | 1960 to 1964 to 1968 | Hand extinguishers are provided in the hose cabinets, adjacent to the standpipes and in the service rooms. Type ABC dry chemical, pressurized water and carbon dioxide extinguishers are used. | |
| 4.2.4 | Other special situations (e.g., flammable storage areas, science labs, CTS areas). | N/A | | None | |
| Other | | | | | |

| Section 4 | Mechanical Systems | Rating | | Comments/Concerns | Estim. Cost |
|---|---|---|---|---|---|
| **4.3** | **Water Supply and Plumbing Systems** | | Bldg. Section | Description/Condition | |
| 4.3.1 | Domestic water supply (i.e., pressure, volume, quality - note whether municipal or well supply). | 4 | 1960 to1964 to1968 | Water is supplied from city mains. Pressure volume and quality are good. | |
| 4.3.2 | Water treatment system(s). | N/A | | None | |
| 4.3.3 | Pumps and valves (including backflow prevention valves). | 4 | 1960 to 1964 to 1968 | Backflow protection with required valving is provided on the fire line, domestic water supply, boiler feedwater and ice rink flooding line. | |
| 4.3.4 | Piping and fittings. | 4 | 1960 to 1964 to 1968 | Water piping is original galvanized iron or is copper with soldered fittings. | |
| 4.3.5 | Plumbing fixtures (i.e., toilets, urinals, sinks) | 4 | 1960 to 1964 to 1968 | Water closets are flush valve type. Urinals are flush tank type. Lavatories are wall hung. Classrooms in the 1960 and 1964 sections have countertop enameled steel sinks. Slop sinks are wall hung vitreous china. Single bubbler wall hung drinking fountains are provided in the corridors.. Condition is good. | |
| 4.3.6 | Domestic hot water system (i.e., heater, storage tanks, failure alarms, pressure, volume, recirculation). | 3 | 1960 to 1964 to 1968 | An old gas fired 33 gallon hot water tanks is provided in each boiler room. Capacities are adequate. Both heaters should be replaced. | $800 |
| 4.3.7 | Sanitary and storm sewers, including sumps and pits (note whether sewage system is municipal or septic). | 4 | 1960 to 1964 to 1968 | Storm and sanitary lines are connected to city mains. Storm and sanitary piping is hub and spigot cast iron. The boiler room for the 1960 to 1964 section has a submersible pump equipped sump for lower level floor drainage. | |
| Other | | | | | |

| Section 4 | Mechanical Systems | Rating | | Comments/Concerns | Estim. Cost |
|---|---|---|---|---|---|
| **4.4** | **Heating Systems** | | Bldg. Section | Description/Condition | |
| 4.4.1 | Heating capacity and reliability (including backup capacity). | 3 | !960 to 1964 | A low pressure steam heating system is provided. The single low efficiency Lethbridge fire tube boiler is rated at 4,366 MBH. It is a coal fired unit converted to gas firing. Heating terminals are unit ventilators, radiation convectors and wall fin convectors. Capacity is adequate. There is no backup. The boiler should be replaced. | $45,000 |
| | | 3 | 1968 | A single low pressure Cleaver Brooks steam boiler rated at, 2,345 MBH, provides steam to a heat exchanger and to a ventilation unit heating coil. The heat exchanger provides hot water used to heat the building. No back-up is provided. Capacity is adequate. The boiler and heat exchanger are nearing the end of their lives and will require replacement. The room is hot and requires ventilation. | $40,000 |
| 4.4.2 | Heating controls (including use of current energy management technology. | 4 | 1960 to 1964 to 1968 | All heating controls are pneumatic t'stats controlling motorized valves on heating terminals. Many convectors have manual control. | |
| 4.4.3 | Fresh air for combustion and condition of the combustion chimney. | 3 | 1960 to 1964 to 1968 | Both boiler rooms have had modifications to their combustion air ducts and they now do not comply with gas code requirements. Relief ventilation openings are not provided in either boiler room. | $6,000 |
| 4.4.4 | Treatment of water used in heating systems. | 4 | 1960 to 1964 to 1968 | Chemical treatment is applied to the water in both condensate tanks. A chemical feeder is provided for the 1968 hot water system. | |
| 4.4.5 | Low water cutoff/pressure relief valves and failure alarms (i.e., hot water heating). | 4 | 1960 to 1964 to 1968 | Low water level feeders and cutoffs are provided on both boilers. The condensate tanks have float operated water feeders. Pressure relief valves are provided on both boilers | |
| 4.4.6 | Heating air filtration systems and filters. | 4 | 1960 to 1964 to 1968 | Unit ventilators have filters installed. | |
| 4.4.7 | Heating humidification systems and components. | 4 | 1960 to 1964 | No humidification systems are provided. | |

| Section 4 | Mechanical Systems | Rating | | Comments/Concerns | Estim. Cost |
|---|---|---|---|---|---|
| **4.4** | **Heating Systems (cont'd)** | | Bldg. Section | Description/Condition | |
| 4.4.8 | Heating distribution systems (i.e., piping, ductwork) and associated components (i.e., diffusers, radiators). | 4 | 1960 to 1964 | Steam at low pressure is distributed to the unit ventilators, wall fin convectors and convector radiators. Heating piping is black steel and is run in tunnels below the corridors. | |
| | | 4 | 1968 | Hot water is pumped from the heat exchanger to wall fin radiators, convector radiators and fan cabinet units. Heating piping is black steel and is run in tunnels below the corridors. | |
| 4.4.9 | Heating piping, valve and/or duct insulation. | 4 | 1960 to 1964 | The steam mains are insulated with asbestos. | |
| | | 4 | 1968 | The steam and hot water piping are insulated with fiberglass. The fresh air duct is insulated with interior fiberglass. The heat exchanger is insulated with fiberglass. | |
| 4.4.10 | Heat exchangers. | 3 | 1968 | A shell and tube heat exchanger is installed in the boiler room. It appears to be original and is nearing it's life expectancy. See 4.4.1 | |
| 4.4.11 | Heating mixing boxes, dampers and linkages. | N/A | | None | |
| 4.4.12 | Heating distribution/circulation in larger spaces (i.e., user comfort, temperature of outside wall surfaces). | 4 | 1960 to 1964 | Occupied areas have room T'stat control. No problems were reported. | |
| | | 4 | 1968 | Occupied areas have room T'stat control. No problems were reported. | |

| Section 4 | Mechanical Systems | Rating | | Comments/Concerns | Estim. Cost |
|---|---|---|---|---|---|
| **4.4** | **Heating Systems (cont'd)** | | Bldg. Section | Description/Condition | |
| 4.4.13 | Zone/unit heaters and controls. | 4 | 1960 to 1964 to 1968 | Pneumatic thermostats control the unit ventilators and convectors in occupied rooms. Electric Thermostats control the fan cabinet heater in the 1968 section | |
| Other | Condensate tank and pump | 4 | 1960 to 1964 | A replacement condensate and tank is provided. They are in good condition | |
| | | 3 | 1968 | The condensate tank and pump will require replacement. See 4.4.1. | |
| Other | Expansion tanks | 3 | 1968 | Two standard expansion tanks with gauge glasses are installed. They are original and are nearing their life expectancy. | $3,000 |
| **4.5** | **Ventilation Systems** | | Bldg. Section | Description/Condition | |
| 4.5.1 | Air handling units capacity and condition. | N/A | 1960 to 1964 | None | |
| | | 3 | 1968 | A built-up ventilation unit introduces fresh air mixes it with return air, tempers and supplies air to all occupied areas. Air changes in the rooms is not known. The motor, heating coil, motorized valve and fan bearings will require replacement. | $9,000 |
| 4.5.2 | Outside air for the occupant load (if possible, reference CFM/occupant). | 3 | 1960 to 1964 | Most occupied areas including the gym., use outside air entering through the unit ventilators. Actual amount is not known. The gym. also has motorized dampers on outside wall louvers for summer make-up for the air exhausted. The administration area has opening windows and requires a new HVAC system | $12,000 |
| | | 4 | 1968 | The central ventilation unit can deliver tempered fresh air. Outside air per occupant is not known. It can be adjusted. | |

| Section 4 | Mechanical Systems | Rating | | Comments/Concerns | Estim. Cost |
|---|---|---|---|---|---|
| **4.5** | **Ventilation Systems (cont'd)** | | Bldg. Section | Description/Condition | |
| 4.5.3 | Air distribution system (if possible, reference number of air changes/hour). | 3 | 1960 to 1964 | Exhaust ventilation is provided for all areas. Make-up is provided by the unit ventilators. Air changes are not known but appear adequate. See 4.5.2 | |
| | | 4 | 1968 | Supply ductwork delivers ventilation air to all occupied areas Air changes are approximately 10 per hour based on design parameters of the day. | |
| 4.5.4 | Exhaust systems capacity and condition. | 4 | 1960 to 1964 | Central roof exhaust fans exhaust air from all occupied areas. The washrooms have central roof exhausters. Capacity is judged to be adequate. | |
| | | 3 | 1968 | Air is exhausted from the corridors and from the washrooms by roof exhaust fans. The corridor fan is noisy and will need replacement. Exhaust volumes are judged to be adequate. | $3,000 |
| 4.5.5 | Separation of out flow from air intakes. | N/A | | None | |
| | | 5 | 1968 | Good separation is provided. | |
| 4.5.6 | Special/dedicated ventilation and/or exhaust systems (i.e., kitchen, labs, CTS areas). | N/A | 1960 to 1964 to 1968 | None | |
| Other | | | | | |

| Section 4 | Mechanical Systems | Rating | | Comments/Concerns | Estim. Cost |
|---|---|---|---|---|---|
| **4.5** | **Ventilation Systems (cont'd)** | | Bldg. Section | Description/Condition | |
| | ***Note: Only complete the following items if there are separate ventilation and heating systems.*** | | | | |
| 4.5.7 | Ventilation controls (including use of current energy management technology). | 4 | !960 to 1964 | None. A chronotherm is used to lower building temperatures during unoccupied hours. | |
| | | 4 | 1968 | The ventilation unit uses pneumatic controls to adjust outdoor volume, mixed air temperature and the discharge air temperature. | |
| 4.5.8 | Air filtration systems and filters. | 4 | 1968 | Filters are provided on the unit ventilators. | |
| | | 4 | 1968 | A filter section is provided on the central ventilation unit with replaceable media. | |
| 4.5.9 | Humidification system and components. | N/A | 1960 to 1964 | None | |
| | | 4 | 1968 | A water spray humidification system is controlled by a return air humidistat. Operation was normal. | |
| 4.5.10 | Heat exchangers. | N/A | | None | |
| 4.5.11 | Ventilation distribution system and components (i.e., ductwork, diffusers, mixing boxes, dampers, linkages). | N/A | 1960 to 1964 | None | |
| | | 4 | 1968 | A supply and return duct system is run in the tunnels to each occupied room. Corridor wall supply grilles and return grilles are used in all areas. Distribution in the rooms is adequate. | |
| Other | | | | | |

| Section 4 | Mechanical Systems | Rating | | Comments/Concerns | Estim. Cost |
|---|---|---|---|---|---|
| **4.6** | **Cooling Systems** | | Bldg. Section | Description/Condition | |
| 4.6.1 | Cooling system capacity and condition (i.e., chillers, cooling towers, condensers). | N/A | | None | |
| 4.6.2 | Cooling distribution system and components (i.e., ductwork, diffusers, mixing boxes, dampers, linkages) | N/A | | None | |
| 4.6.3 | Cooling system controls (including use of current energy management technology). | N/A | | None | |
| 4.6.4 | Special/dedicated cooling systems (i.e., labs, CTS areas). | N/A | | None | |
| Other | | | | | |
| **4.7** | **Building Control Systems** | | Bldg. Section | Description/Condition | |
| 4.7.1 | Building wide/system wide control systems and/or energy management systems. | 4 | 1960 to 1964 to 1968 | None. A chronotherm is used to lower building temperatures during unoccupied hours. | |
| | **Overall Mech Systems Condition & Estim. Costs** | | | | $118,800 |

| Section 5 | Electrical Systems | Rating | | Comments /Concerns | Estim. Cost |
|---|---|---|---|---|---|
| **5.1** | **Site Services** | | Bldg. Section | Description/Condition | |
| 5.1.1 | Primary service capacity and reliability (i.e., access, location, components, installation, bus sizes - note whether overhead or underground). | 4 | 1960 to 1964 to 1968 | Underground service at 1 phase 120/240 volt to an 800 ampere main switch. The demand reading is 320 kva. Capacity is adequate. | |
| 5.1.2 | Site and building exterior lighting (i.e., safety concerns). | 3 | 1960 to 1964 to 1968 | Exterior is poorly lighted. Three HID fixtures are provided on the north side to illuminate the parking lot and main entry. | $5,000 |
| 5.1.3 | Vehicle plug-ins (i.e., number, capacity, condition). | 4 | 1960 to 1964 to 1968 | 16 duplex plug-ins are provided on the sides of the parking lot. They do not operate above a set temperature. Condition is good. All parking spaces do not have a plug-in. | |
| Other | | | | | |
| **5.2** | **Life Safety Systems** | | Bldg. Section | Description/Condition | |
| 5.2.1 | Fire and smoke alarm systems (i.e., safety concerns, up-to-date technology, regularly tested). | 3 | 1960 to1964 to 1968 | Electrical circuits feed the fire alarm devices in all sections of the building. Fire drills are carried out. A new fire alarm system is require. | $20,000 |
| 5.2.2 | Emergency lighting systems (i.e., safety concerns, condition). | 3 | 1960 to 1964 | The corridors and the gymnasium have inadequately spaced emergency lights. The tunnels have no emergency lighting. The system should be replaced. | $5,000 |
| | | 3 | 1968 | Emergency lights are provided in the corridors and the library. The tunnels do not have emergency lighting. Add emergency lights. | $1,000 |
| 5.2.3 | Exit lighting and signage (i.e., safety concerns, condition). | 3 | 1960 to 1964 | Illuminated exit signs are provided at some of the corridor exits and from the gymnasium exits. The corridor exit signs are not connected to emergency power. The signs should be replaced. | $4,000 |
| | | 4 | 1968 | Illuminated exit signs are provided at all exits and are connected to emergency power. | |
| Other | | | | | |

| Section 5 | Electrical Systems | Rating | Comments /Concerns | | Estim. Cost |
|---|---|---|---|---|---|
| **5.3** | **Power Supply and Distribution** | | Bldg. Section | Description/Condition | |
| 5.3.1 | Power service surge protection. | 4 | 1960 to 1964 to 1968 | Only the recently installed computer system has surge protection. | |
| 5.3.2 | Panels and wireways capacity and condition. | 4 | 1960 to 1964 to 1968 | Most panelboards have spare circuits. Wiring is in good condition and of adequate capacity. | |
| 5.3.3 | Emergency generator capacity and condition and/or UPS (if applicable). | N/A | | None | |
| 5.3.4 | General wiring devices and methods. | 4 | 1960 to 1964 to 1968 | Receptacles are grounded type and devices are in good condition. | |
| 5.3.5 | Motor controls. | 4 | 1960 to 1964 to 1968 | Magnetic motor starters are provided on larger motors. Exhaust fans in the 1960 to 1964 section have fused disconnects. Small motors are switched. | |
| Other | | | | | |
| **5.4** | **Lighting Systems** | | Bldg. Section | Description/Condition | |
| 5.4.1 | Interior lighting systems and components (i.e., illumination levels, conditions, controls). | 3 | 1960 to 1964 to 1968 | The occupied area and most service rooms are provided with fluorescent lighting. Incandescent lighting is provided in the storage rooms, tunnels and 1968 section vestibules .Light levels were recorded as follows: gymnasium - 430 lux, storage rooms - 215 lux, 1960 to 1964 classrooms - 646 lux, 1968 classrooms - 538 lux, 1960 to 1964 corridors - 323 lux, 1968 corridors - 215 lux, library - 430 lux, computer lab - 323 lux, office - 538 lux, The tunnel and boiler room lighting should be replaced. Included in 5.4.3. | |
| 5.4.2 | Replacement of ballasts (i.e., health and safety concerns). | 3 | 1960 to 1964 to 1968 | Most fluorescent fixtures have ballasts with P.C.Bs. Included in 5.4.3. | |
| 5.4.3 | Implementation of energy efficiency measures and recommendations. | 3 | 1960 to 1964 to 1968 | The car plug-ins have a temperature limit cutoff. Fluorescent fixtures have 34 watt lamps. All fluorescent fixtures should be upgraded to T-8 lamps. | $144,000 |
| Other | | | | | |

| Section 5 | Electrical Systems | Rating | Bldg. Section | Comments /Concerns<br>Description/Condition | Estim. Cost |
|---|---|---|---|---|---|
| **5.5** | **Network and Communication Systems** | | | | |
| 5.5.1 | Telephone system and components (i.e., capacity, reliability, condition). | 4 | 1960 to 1964 to 1968 | The telephone system has adequate capacity and is reliable | |
| 5.5.2 | Other communication systems (i.e., public address, intercom, CCTV, satellite or cable TV). | 4 | 1960 to 1964 to 1968 | An telephone intercom is installed throughout the building. A public address system is installed with speakers in all locations | |
| 5.5.3 | Network cabling (if available, should be category 5 or better). | 5 | 1960 to 1964 to 1968 | A new computer system with internet access and outlets in all classrooms and a computer lab is provided. | |
| 5.5.4 | Network cabling installation (i.e., in conduit, secured to walls or tables). | 5 | 1960 to 1964 to 1968 | Cabling is in conduit and is concealed in walls and above ceilings. | |
| 5.5.5 | Wiring and telecommunication closets (i.e., size, security, ventilation/cooling, capacity for growth). | 3 | 1960 to 1960 to 1968 | Telephone and the computer network service and distribution hubs are located in a storage room. Ventilation is poor. Add ventilation. | $1,000 |
| 5.5.6 | Provision for dedicated circuits for network equipment (i.e., hubs, switches, computers). | 5 | 1960 to 1964 to 1968 | Dedicated circuits for the computer hub are provided. Computers are not on dedicated circuits. | |
| Other | | | | | |

| Section 5 | Electrical Systems | Rating | Comments /Concerns | Estim. Cost |
|---|---|---|---|---|
| **5.6** | **Miscellaneous Systems** | | Bldg. Section / Description/Condition | |
| 5.6.1 | Site and building surveillance system (if applicable). | N/A | None | |
| 5.6.2 | Intrusion alarms (if applicable). | 4 | 1960 to 1964 to 1968 — A security system with motion detectors is installed in all areas. A central station connection is provided for unoccupied hours. | |
| 5.6.3 | Master clock system (if applicable). | 4 | 1960 to 1964 to 1968 — A controller for the master clock system is located in the general office. | |
| Other | Program co-ordinator | 4 | 1960 to 1964 to 1968 — A program controller is located in the general office to sound the call bells automatically. | |
| **5.7** | **Elevators/Disabled Lifts (If applicable)** | | | |
| 5.7.1 | Elevator/lift size, access and operating features (i.e., sensing devices, buttons, phones, detectors). | N/A | None | |
| 5.7.2 | Condition of elevators/lifts. | N/A | None | |
| 5.7.3 | Lighting and ventilation of elevators/lifts. | N/A | None | |
| Other | | | | |
| | **Overall Elect. Systems Condition & Estim Costs** | | | $180,000 |

| Section 6 | Portable Buildings | Rating | Comments/Concerns | Estim. Cost |
|---|---|---|---|---|
| | ***Note: Separate sheets can be completed, if necessary, for portable buildings of different ages and/or conditions.*** | **N/A** | **None** | |
| 6.1.1 | Foundation and structure (i.e., signs of bending, cracking, settlement, rust, voids, stains). | **N/A** | **None** | |
| 6.1.2 | Roof materials and components (i.e., signs of deterioration, leaks, ice build-up). | **N/A** | **None** | |
| 6.1.3 | Exterior wall finishes (i.e., signs of deterioration, cracks, water stains). | **N/A** | **None** | |
| 6.1.4 | Doors and windows (i.e., signs of deterioration, rusting hardware, glass cracks, peeling paint, damaged seals). | **N/A** | **None** | |
| 6.1.5 | Interior finishes (i.e., floors, walls, ceiling). | **N/A** | **None** | |
| 6.1.6 | Millwork (i.e., counters, shelving, vanities, cabinets). | **N/A** | **None** | |
| 6.1.7 | Fixed/wall mounted equipment (i.e., writing boards, tackboards, display boards, signs) | **N/A** | **None** | |
| 6.1.8 | Heating system. | **N/A** | **None** | |
| 6.1.9 | Ventilation system. | **N/A** | **None** | |
| 6.1.10 | Electrical, communication and data network systems. | **N/A** | **None** | |
| 6.1.11 | Health and safety concerns (i.e., fire and smoke alarms, fire protection systems, exiting, fire resistance rating of materials). | **N/A** | **None** | |
| 6.1.12 | Barrier-free access. | **N/A** | **None** | |
| | **Overall Portable Bldgs Condition & Estim Costs** | | | $0.00 |

| Section 7 | Space Adequacy | This Facility | | | Equiv. New Facility | | | Surplus/ Deficiency | Comments/Concerns |
|---|---|---|---|---|---|---|---|---|---|
| | | No. | Size | Total Area | No. | Size | Total Area | | |
| 7.1 | Classrooms | 23 | | 2012.8 | 20 | 80 | 1600 | 412.8 | |
| | | | 83.6 | | | | | | |
| | | | 111.5 | | | | | | |
| | | | 79.8 | | | | | | |
| 7.2 | Science Rooms/Labs | 1 | 83.6 | 83.6 | 3 | 95 | 285 | -201.4 | |
| 7.3 | Ancillary Areas (i.e., Art, Computer Labs, Drama, Music,) | | | 216.5 | 3 | 90 | 270 | -53.5 | |
| | Ancillary | 1 | 68.3 | | 2 | 130 | 260 | -260 | |
| | Art | 1 | 83.6 | | | | | | |
| | Music | 1 | 64.6 | | | | | | |
| 7.4 | Gymnasium (incl. gym storage) | | | 434.9 | | | 627 | -192.1 | |
| | Gymnasium | | 345.7 | | | | | | |
| | Storage | | 32.5 | | | | | | |
| | Stage | | 56.7 | | | | | | |
| 7.5 | Library/Resource Areas | | 200.2 | 200.2 | | | 300 | -99.8 | |
| 7.6 | Administration/Staff, Physical Education, Storage Areas | | | 535.2 | | | 679 | -143.8 | |
| | Sub-Total | | | 3483.2 | | | 4021 | -537.8 | |
| 7.7 | CTS Areas | | | | | | | | |
| | 7.7.1 Business Education | | | | | | | 0 | |
| | 7.7.2 Home Economics | | | | | | | 0 | |
| | 7.7.3 Industrial Arts | | | | | | | 0 | |
| | 7.7.4 Other CTS Programs | | | | | | | 0 | |
| 7.8 | Other Non-Instructional Areas (i.e., circulation, wall area, crush space, wc area) | | | 1850.5 | | | 1489 | 361.5 | |
| | **Overall Space Adequacy Assessment** | 27 | | 5333.7 | 28 | | 5510 | -176.3 | |

| Evaluation Component/ Sub-Component | Additional Notes and Comments |
|---|---|
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| Evaluation Component/ Sub-Component | Additional Notes and Comments |
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