

School Facility Evaluation Project
Part III - Space Adequacy

School Name:	Louis St. Laurent High School			School Code:	8409	
Location:	Edmonton			Facility Code:	2060	
Region:	Central			Superintendent:	Dr. Dale Ripley	
Jurisdiction:	Edmonton Catholic Regional Division No. 40			Contact Person:	Mr. Garnet Mc Kee	
				Telephone:	(780) 453-4500	
Grades:	7 to 12			School Capacity:	1475	
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	1966	2	3519.1	masonry construction, concrete framed structure, flat roof, brick cladding.	hot water heating, air handling units, air conditioning.	Junior high portion also called Cartier Mc Gee
Additions/ Expansions	1968	2	9652.30	masonry construction, concrete framed structure, flat roof, brick cladding.	hot water heating, air handling units, air conditioning.	High School portion
	1974	1	127.10	wood frame, flat roof.	hot water heating.	Corridor link between Junior and Senior High schools.
	1993	2	384.40	masonry construction, concrete framed structure, flat roof, brick cladding.	hot water heating, air handling units, air conditioning.	Addition to Gymnasium.
					Evaluator's Name:	Burgess Bredo
					& Company:	Burgess Bredo Architect Ltd.

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Upgrading/ Modernization (identify whether minor or major)	1981	1	79	Minor	
	1984	1	112.4	Minor	
	1987	1	112.9	Minor	
	1988	1	1685	Major: replace roofing on portion of 1966 phase.	
	1991	1	665	Major: replace roofing on portion of 1996 phase.	
	1992	1		Minor: upgrade computer network, replace stage acoustic wall panels and partition supply drop curtain in gymnasium.	
	1993	2	3519.1	Major: upgrading to portions of 1966 original building.	
	1994	1	436.6	Major: upgrading to portions of Industrial Arts area to convert to CTS.	
	1996	2		Minor: install elevator in 1968 portion. Upgrade chemical storage area with exhaust cabinets.	
	1997	1		Minor: convert classroom to bookstore and office.	
	1998	1		Minor: upgrade general office area. Replace carpet with vinyl tile in one classroom.	
	1999	1		Minor: renovations to phys. ed. department.	
	2000	1	680	Minor: modernize general office area in 1968 portion. Upgrade library.	
Portable Struct. (identify whether attached/perman. or free-standing/ relocatable)				No portables.	
List of Reports/ Supplementary Information	Fire Alarm System Annual Test: August 27, 1999 (Top Fire Safety).				

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	Evaluation Components	Summary Assessment	Estim. Cost
1	Site Conditions	Regrade and re-seed portions of site. Improve courtyard drainage. Replace damaged concrete sidewalks. Provide BFA curb cut.	\$20,500.00
2	Building Exterior	Partial roof replacement. Replace panic hardware. Replace windows. Miscellaneous repairs.	\$520,200.00
3	Building Interior	Mudjack slab in theatre. Upgrade finishes and washrooms. Upgrade/replace millwork. BFA and miscellaneous upgrades and repairs.	\$943,500.00
4	Mechanical Systems	Mechanical system is very old and well past expected life. The mechanical system should be upgraded to comply with present code standards and to maintain continued service.	\$2,496,500.00
5	Electrical Systems	The building electrical system is very old and well past expected life. The electrical system should be upgraded to comply with present code standards and to maintain continued service.	\$1,162,500.00
6	Portable Buildings	No portables.	N/A
7	Space Adequacy:		
	7.1 Classrooms	Deficient 552.9	-
	7.2 Science Rooms/Labs	Deficient 51.2	-
	7.3 Ancillary Areas	Excessive +325.6	
	7.4 Gymnasium	Deficient 226.7	-
	7.5 Library/Resource Areas	Deficient 251.5	-
	7.6 Administration/Staff Areas	Deficient 610.0	-
	7.7 CTS Areas	Deficient 732.8	-
	7.8 Other Non-Instructional Areas (incl. gross-up)	Deficient +1875.8	
	Overall School Conditions & Estim. Costs	Deficient 225.0	\$5,143,200.00

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Section 1	Site Conditions	Rating	Comments/Concerns	Estim. Cost
1.1	General Site Conditions			
1.1.1	Overall site size.	5	Very large site adjoining Confederation Swimming Pool, Confederation Arena, Harry Ainley High School and district recreation park.	
1.1.2	Outdoor athletic areas.	3	Hard surface and rough grasses. Needs topsoil and seeding in areas adjacent school.	\$4,000.00
1.1.3	Outdoor playground areas, including condition of equipment and base.	4	Softball diamonds with chain link backstops; football and soccer fields. Tennis courts in adjoining park.	
1.1.4	Site landscaping.	4	Some trees and lawn area at front of school.	
1.1.5	Site accessories (i.e., perimeter and other fencing, guard rails, bike stands, flag poles).	4	Chain link fencing around site at basketball courts and around secure outdoor storage. Bike stands and flag poles. Wood railings at parking lots.	
1.1.6	Surface drainage conditions (i.e., drains away from building, signs of ponding).	3	Isolated areas slope towards building; re-grade. Drainage in courtyard is problematic, water drains under and through corridor link. Introduce additional catch basin and re-grade.	\$8,000.00
1.1.7	Evidence of sub-soil problems.	4	No problems evident.	
1.1.8	Safety and security concerns due to site conditions.	4	No problems evident.	
Other				
1.2	Access/Drop-Off Areas/Roadways/Bus Lanes			
1.2.1	Vehicular and pedestrian access points (i.e., size, number, visibility, safety).	4	Vehicular access from City streets to the south and west as well as from adjacent Confederation Arena. Pedestrian access from City sidewalks along south and west edges of site. No problems evident.	

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Section 1	Site Conditions	Rating	Comments/Concerns	Estim. Cost
1.2.2	Surfacing of on-site road network (note whether asphalt or gravel).	4	Asphalt driveways with concrete curbs from 43 Avenue to the south and 114 Street to the west; good condition.	
1.2.3	Bus lanes/drop-off areas (note whether on-site or off-site).	4	Bus drop off zone located off site along 43 Avenue; remote from school but no problems evident.	
1.2.4	Fire vehicle access.	4	Fire vehicle access to all perimeter of school via driveways, athletic fields and lawns.	
1.2.5	Signage.	4	Building signed. Parking signed.	
Other				

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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	South parking lot: 10 visitor stalls, 1 BFA stall. North parking lot: 74 energized stalls, 3 visitor stalls.	
1.3.2	Layout and safety of parking lots.	4	Well laid out and no conflicts with pedestrians. South lot is quite distant from entrance.	
1.3.3	Surfacing and drainage of parking lots (note whether asphalt or gravel).	4	Asphalt surfacing with concrete curbs; good drainage.	
1.3.4	Layout and safety of sidewalks.	4	Sidewalks well laid out and functional.	
1.3.5	Surfacing and drainage of sidewalks (note type of material).	3	Concrete sidewalks in most areas; significant cracking and displacement at south side of school, replace. Concrete sidewalk blocks cracked and settled; replace broken blocks and re-seat balance.	\$8,000.00
1.3.6	Curb cuts and ramps for barrier free access.	3	Curb cut required at BFA parking stall.	\$500.00
Other				
	Overall Site Conditions & Estimated Costs			\$20,500.00

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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).	3	1966,93 1968	Structural concrete assembly to suspended floors, concrete slab on grade; chronic cracking in slab on grade. Structural study to determine cause and appropriate repair. Costs also include structural stabilization (mud jacking, drainage). Precast concrete tees for suspended floors, concrete slab on grade; no problems evident.	\$25,000.00
2.1.2	Wall structure and columns (i.e., signs of bending, cracking, settlement, voids, rust, stains).	3	1966,93 1968	Concrete block and concrete columns; chronic cracking in some areas. Precast concrete columns and concrete block walls; no problems evident.	Costed in 2.1.1
2.1.3	Roof structure (i.e., signs of bending, cracking, voids, rust, stains).	4	1966,93 1968	Structural concrete and open web steel joist assemblies; no problems evident. Precast concrete tees; no problems evident.	
Other					

Section 2	Building Exterior	Rating	Comments/Concerns	Estim. Cost
2.2	Roofing and Skylights <i>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</i>			
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).			
		1966	Portions of roof have been replaced in 1998 and 1991 (2350 sq.m.).	
		1968	Conventional BUR has history of leaks and has reached end of effective design life; replace (5832 sq.m.).	
		2	1993 Conventional BUR in good condition. No roof inspection report available.	\$320,000.00
2.2.2	Roof accessories (i.e., ladders, stairs, hatches, masts, exhaust hoods, chimneys, gutters, downspouts, splashpads).	4	All All portions of roof accessible by doors and ladders.	
2.2.3	Control of ice and snow falling from roof.	4	All No problems evident.	
2.2.4	Skylights (i.e., signs of distress, leaks, ice build-up, condensation, deteriorated materials/seals).	4	1966 New skylights/clerestories added; good condition.	
Other				

Section 2	Building Exterior	Rating	Comments/Concerns	Estim. Cost
2.3	Exterior Walls/Building Envelope			
2.3.1	Exterior wall finishes (i.e., signs of deterioration, cracks, brick spalling, effluorescence, water stains).	4	1966 Predominantly face brick with small stucco panels. 1968 Face brick and precast concrete.	
2.3.2	Fascias, soffits, parapets (i.e., signs of looseness, stains, rust, peeling paint).	4	All Pre-finished metal flashings at parapets.	
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	All Painted concrete block and conventional BUR are primary components in building envelope. No evidence of air infiltration/exfiltration.	
2.3.4	Interface of roof drainage and ground drainage systems.	3	All Roof drains tied in to City storm sewer system in most areas. Downspouts from corridor link feed into courtyard and drains under/through link corridor.	Costed in 1.1.6
2.3.5	Inside faces of exterior walls (i.e., signs of cracks, water stains, dust spots).	3	All Cracking in concrete block walls in limited area.	Costed in 2.1.1
Other				
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).	2	All Aluminum entrances and sidelites at main entrances. Hollow metal with and without glazing set in pressed steel frames. Glazed sidelites on north side of school prone to vandalism; replace with laminated glass.	\$5,200.00

Section 2	Building Exterior	Rating	Comments/Concerns	Estim. Cost
2.4.2	Door accessories (i.e., latches, hardware, screens, locks, alarms, holders, closers, security devices).	4	All Dull chrome finish hardware and closers performing as required. No problems evident.	
2.4.3	Exit door hardware (i.e., safety and/or code concerns).	3	1966 Panic hardware breaking down with new parts no longer available; replace. 1968 Panic hardware upgraded during 1993 modernization.	\$55,000.00
2.4.4	Windows (i.e., signs of deterioration, rusting metal, glass cracks, peeling paint, damaged seals, sealed unit failure).	2	1966,68 Aluminum framed field glazed with vents; drafty and water leakage. Vent hardware and internal louvers problematic; replace windows. 1993 Aluminum curtain wall with sealed units; good condition.	\$115,000.00
2.4.5	Window accessories (i.e., latches, hardware, screens, locks, alarms, holders, closers, security devices).	2	All Push bars and claw latches worn out and require replacement. Windows louvres between panes of site glazing do not function in most windows. Replace all.	Costed in 2.4.4
2.4.6	Building envelope (i.e., signs of heavy condensation on doors or windows).	4	All Glazed hollow metal and aluminum doors, aluminum windows; no problems evident.	
Other				
	Overall Bldg Exterior Condition & Estim Costs			\$520,200.00

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).	3	1966	Cracking in concrete block partitions. Conduct study and undertake program of repairs.	Costed in 2.1.1
3.1.2	Floors (i.e., signs of cracks, heaving, settlement).	3	1968	Settlement of concrete slab in theatre; mud jack slab and seal perimeter.	\$5,000.00
Other					
3.2	Materials and Finishes				
3.2.1	Floor materials and finishes.	2	1966 1968 1993	Ceramic and quarry tile in entrances and locker rooms, vinyl tiles in classrooms, hardwood in gym; good condition. Sheet vinyl in halls has bubbles, joints opening up; replace. Poor carpet in Administration area and Library to be replaced by August 2000. Carpet in CTS in good condition. Hardwood in gym requires sanding, repair and re-finishing. Vinyl tile in 4 classrooms in good condition. Vinyl tile and sheet vinyl in balance in poor condition, replace. Sheet vinyl in link between phases and lunch room in poor condition, replace.	\$260,000.00
3.2.2	Wall materials and finishes.	3	1966 1968 1993	Painted concrete block and gypsum board in good condition. Painted concrete block and gypsum board will require re-painting soon. Painted concrete block and gypsum board in good condition.	\$116,000.00
3.2.3	Ceiling materials and finishes.	3	1966 1968 1993	Acoustic tile in T-bar grid and gypsum board; replace 10% of tiles due to damage and water stains. Damaged acoustic tiles and T-bar grid in approx. 70%; replace. Acoustic tile in T-bar grid; good condition.	\$120,000.00

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Section 3	Building Interior - Overall Conditions	Rating	Comments/Concerns		Estim. Cost
3.2	Materials and Finishes (cont'd)				
3.2.4	Interior doors and hardware.	3	1966 Hollow metal and wood doors set in pressed steel frames, with and without glazing; good condition. Hardware in poor condition; replace. 1968 Hollow metal and wood doors set in pressed steel frames with and without glazing; replace 24 damaged doors, hardware in poor condition; replace.		\$54,500.00
3.2.5	Millwork	3	1966 Clear finish wood with plastic laminate in upgraded areas. Repair and re-finish clear finish wood cabinets in balance. 1968 Plastic laminate clad work stations in CTS in poor condition; replace plastic laminate. Home EC and Art room in poor condition; replace. Bookshelves and storage cabinets in classrooms require replacement. Replace tables in 2 computer labs with purpose built millwork.		\$184,000.00
3.2.6	Fixed/wall mounted equipment (i.e., writing boards, tackboards, display boards, signs).	3	All Program to replace chalkboards with whiteboards underway, should be finished by August 2001. Additional tackboards required in classrooms.		\$6,000.00
3.2.7	Any other fixed/mounted specialty items (i.e., CTS equipment, gymnasium equipment).	2	All Basketball backboards and bleachers in gym in good condition. Overcrowded commercial kitchen requires new dishwasher and salad table. Wide variety of CTS equipment for Home EC and Industrial Arts.		\$14,000.00
3.2.8	Washroom materials and finishes.	2	1966 Floors: ceramic tile; good condition. Walls: painted concrete block and ceramic tile; good condition. Ceilings: painted gypsum board; good condition. 1968 Floors: cracked seamless flooring; replace. Walls: painted concrete block, provide ceramic tile at urinals. Ceilings: painted gypsum board; good condition.		\$27,000.00
Other		3	1966 Metal toilet partitions and metal lockers in good condition. 1968 Metal toilet partitions in poor condition; replace. Acoustic wall panels in Lunchroom and Theatre in poor condition; replace. 780 metal lockers, 200 new; remaining 580 in poor condition; replace.		\$106,000.00

Section 3	Building Interior - Overall Conditions	Rating	Comments/Concerns	Estim. Cost
3.3	Health and Safety Concerns --- <i>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</i>			
3.3.1	Building construction type - combustible or non-combustible, sprinklered or non-sprinklered.	4	All	Non-combustible, non-sprinklered. Major modernization may require sprinklers throughout.
3.3.2	Fire separations (i.e., between buildings, wings, zones if non-sprinklered).	4	All	School separated into zones with doors on electromagnetic hold opens.
3.3.3	Fire resistance rating of materials (i.e., corridor walls and doors).	4	All	Appears to comply.
3.3.4	Exiting distances and access to exits.	4	All	Storage of materials adjacent Library exit should be rectified after summer 2000 renovation to library, otherwise appears to comply.
3.3.5	Barrier-free access.	3	All	Path of travel: appears to comply, 2 elevators provided with one elevator in poor condition; replace. Doors and doorways: power assisted doors required at entrance. Washrooms: construct washroom on each floor of 1968 phase.
3.3.6	Availability of hazardous materials audit (i.e., evidence of safety concerns with respect to asbestos, PCB's, chemicals).	3	All	No asbestos report available, provide.
3.3.7	Other health and safety concerns (i.e., evidence of excessive noise conditions, air quality problems)	4	All	No concerns
Other				
	Overall Bldg Interior Condition & Estim Costs			\$943,500

Section 4	Mechanical Systems	Rating	Comments/Concerns		Estim. Cost
4.1	Mechanical Site Services				
4.1.1	Site drainage systems (i.e., surface and underground systems, catch basins).	4	All	Catch basins to parking lot and surface drainage to field. No problems noted.	
4.1.2	Exterior plumbing systems (i.e., irrigation systems, hose bibs).	4	All	A few hose bibbs at building exterior. No irrigation. No problems noted.	
4.1.3	Outside storage tanks.	N/A			
Other					
4.2	Fire Suppression Systems				
4.2.1	Fire hydrants and siamese connections.	4	All	Siamese connections for fire hydrant.	
4.2.2	Fire suppression systems (i.e., pumps, sprinklers, piping, reservoirs, hoses, stand pipes, CO2 systems).	4	All	Fire hose standpipes in school. No problems noted.	
4.2.3	Hand extinguishers, blankets and showers (i.e., in CTS areas).	3	All	ABC type multi-purpose as well as pump type water fire extinguishers. Units are old and should be replaced with new in order to maintain service to building and to comply with code.	\$21,000.00
4.2.4	Other special situations (e.g., flammable storage areas, science labs, CTS areas).	3	1968	Kitchen range hood. Installation is old and should be upgraded to maintain continued service.	\$8,500.00
Other					

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Section 4	Mechanical Systems	Rating	Comments/Concerns		Estim. Cost
4.3	Water Supply and Plumbing Systems				
4.3.1	Domestic water supply (i.e., pressure, volume, quality note whether municipal or well supply).	4	1966 51 mm water service with 51 mm water meter and connection to fire line. 1968 101 mm water service with 51 mm water meter and connection to fire line. No problems noted.		
4.3.2	Water treatment system(s).	N/A			
4.3.3	Pumps and valves (including backflow prevention valves).	4	All No pumps. Valves all appear OK. Backflow prevention provided to domestic water and fire lines. No problems noted.		
4.3.4	Piping and fittings.	4	All Copper water piping. All piping appears in good shape with no problems noted.		
4.3.5	Plumbing fixtures (i.e., toilets, urinals, sinks)	3	All Recessed stainless steel lavatories, floor mounted urinals with flush valves, and floor mounted water closets with flush valves. Some fixtures are old and should be replaced with new in order to maintain continued service.		\$89,000.00
4.3.6	Domestic hot water system (i.e., heater, storage tanks, failure alarms, pressure, volume, recirculation).	4	1966 75 gal Rheem hot water tanks with Armstrong pump. 1968 Two State 75 hot water tanks and Armstrong pumps. No problems noted.		
4.3.7	Sanitary and storm sewers, including sumps and pits (note whether sewage system is municipal or septic).	4	All Municipal service connection to building with no problems noted.		
Other					

Section 4	Mechanical Systems	Rating	Comments/Concerns		Estim. Cost
4.4	Heating Systems				
4.4.1	Heating capacity and reliability (including backup capacity).	3	1966 1968	Two ASMOR 3325 MBH input boilers. Two Cleaver Brooks 4185 MBH input each boilers. All boilers appear original and should be replaced along with new circulating pumps in order to maintain continued service.	\$335,000.00
4.4.2	Heating controls (including use of current energy management technology).	4	All	Boilers controlled by building energy management system with no problems noted.	
4.4.3	Fresh air for combustion and condition of the combustion chimney.	3	All	Combustion air appears adequate. Remove damper from combustion air ducts. Chimney constructed of galvanized steel. No problems noted.	\$1,000.00
4.4.4	Treatment of water used in heating systems.	4	All	Heating water treated with chemicals on a regular basis with no problems noted.	
4.4.5	Low water cutoff/pressure relief valves and failure alarms (i.e., hot water heating).	4	All	Low water cut-off and pressure relief provided to boilers. Boiler alarm provided through building energy management system. All appears in good shape with no problems noted.	
4.4.6	Heating air filtration systems and filters.	4	All	Ventilation systems have replaceable media type filters in metal racks. No problems noted.	
4.4.7	Heating humidification systems and components.	N/A		None provided and none requested.	

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Section 4	Mechanical Systems	Rating	Comments/Concerns		Estim. Cost
4.4	Heating Systems (cont'd)				
4.4.8	Heating distribution systems (i.e., piping, ductwork) and associated components (i.e., diffusers, radiators).	3	All	Schedule 40 steel piping provided for hot water heating and ductwork for ventilation air. Installation is very old and should be replaced in order to maintain continued service to building.	\$420,000.00
4.4.9	Heating piping, valve and/or duct insulation.	3	All	Insulation provided to piping and ductwork. Insulation in poor shape and should be replaced along with new piping and ductwork.	\$85,000.00
4.4.10	Heat exchangers.	N/A			
4.4.11	Heating mixing boxes, dampers and linkages.	N/A			
4.4.12	Heating distribution/circulation in larger spaces (i.e., user comfort, temperature of outside wall surfaces).	4	All	Even heating throughout building. No problems noted.	
4.4.13	Zone/unit heaters and controls.	3	All	Force flow units in entrances, perimeter radiation in classrooms and unit heaters in mechanical rooms. Installation is very old and should be replaced with new in order to maintain continued service.	\$420,000.00
Other					

Section 4	Mechanical Systems	Rating	Comments/Concerns		Estim. Cost
4.5	Ventilation Systems				
4.5.1	Air handling units capacity and condition.	3	1966 1968	One large built-up unit for service to both floors and one small Engineered Air unit for service to old Industrial Arts area. Units are old and should be replaced. One large built-up unit for service to both floors and one roof top mounted Engineered Air unit for service to gym. Units are old and should be replaced.	\$715,000.00
4.5.2	Outside air for the occupant load (if possible, reference CFM/occupant).	3	All	Design requirements unknown. Building in general appears very stuffy and in need of more fresh air. Upgrade required.	Costed in 4.5.1
4.5.3	Air distribution system (if possible, reference number of air changes/hour).	3	All	Design requirements unknown. Air flow in building appears very poor. Upgrade required.	Costed in 4.5.1
4.5.4	Exhaust systems capacity and condition.	3	All	Exhaust system capacity unknown. Exhaust system provided to washrooms, change rooms, and service rooms. Exhaust in washrooms and change rooms very poor and likely not up to present code standards. Upgrade required.	\$67,000.00
4.5.5	Separation of out flow from air intakes.	4	All	Appears to be good separation with no problems noted.	
4.5.6	Special/dedicated ventilation and/or exhaust systems (i.e., kitchen, labs, CTS areas).	3	1968	Exhaust system provided to kitchen and science chemical storage cabinets. Exhaust system to kitchen is very old and should be replaced with new in order to maintain continued service. Science storage cabinet exhaust is new and appears satisfactory.	
Other					

Section 4	Mechanical Systems	Rating	Comments/Concerns		Estim. Cost
4.5	Ventilation Systems (cont'd)				
	<i>Note: Only complete the following items if there are separate ventilation and heating systems.</i>				
4.5.7	Ventilation controls (including use of current energy management technology).	N/A			
4.5.8	Air filtration systems and filters.	N/A			
4.5.9	Humidification system and components.	N/A			
4.5.10	Heat exchangers.	N/A			
4.5.11	Ventilation distribution system and components (i.e., ductwork, diffusers, mixing boxes, dampers, linkages).	N/A			
Other					

Section 4	Mechanical Systems	Rating	Comments/Concerns		Estim. Cost
4.6	Cooling Systems				
4.6.1	Cooling system capacity and condition (i.e., chillers, cooling towers, condensers).	3	1966 1968	DX cooling system with Trane compressor unit and remote cooling tower. Chilled water system with Dunham Bush chiller and roof top cooling tower. Installations are original and should be replaced with new in order to maintain continued service.	\$210,000.00
4.6.2	Cooling distribution system and components (i.e., ductwork, diffusers, mixing boxes, dampers, linkages)	3	All	Cooling provided through building ventilation system. Ventilation system is well beyond expected life and should be replaced.	Costs in 4.5.1
4.6.3	Cooling system controls (including use of current energy management technology).	4	All	Controlled from building energy management system. No problems noted.	
4.6.4	Special/dedicated cooling systems (i.e., labs, CTS areas).	N/A			
Other					
4.7	Building Control Systems				
4.7.1	Building wide/system wide control systems and/or energy management systems.	3	All	Andover DDC control system. System should be upgraded along with new building heating and ventilation system.	\$125,000.00
	Overall Mech Systems Condition & Estim. Costs				\$2,496,500

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Section 5	Electrical Systems	Rating	Comments/Concerns	Estim. Cost
5.1	Site Services			
5.1.1	Primary service capacity and reliability (i.e., access, location, components, installation, bus sizes - note whether overhead or underground).	3	1966 Underground service from utility transformer to 1400 amp main circuit breaker and Westinghouse switchboard. 120/208V/3PH/4W. Installation is old, filled to capacity and needs to be upgraded. 1968 Underground service from utility transformer to 4000A fused Federal Pioneer switchboard, 120/208V/3PH/4W - installation appears satisfactory with spare spaces for future additions.	\$25,000.00
5.1.2	Site and building exterior lighting (i.e., safety concerns).	3	All High pressure sodium light fixtures provided to parking and along building perimeter. Additional lights required around building at dark locations for security purposes.	\$2,500.00
5.1.3	Vehicle plug-ins (i.e., number, capacity, condition).	4	All Approximatley 74 electrified stalls with no problems noted.	
Other				
5.2	Life Safety Systems			
5.2.1	Fire and smoke alarm systems (i.e., safety concerns, up-to-date technology, regularly tested).	3	All Two Simplex 4002 fire alarm systems with no visual strobe lights. Systems should be connected together such that fire bells ring throughout buildings if fire is detected. Presently, each building is operated separately. Also, many fire detection devices are old and should be replaced in order to maintain continued service.	\$95,000.00
5.2.2	Emergency lighting systems (i.e., safety concerns, condition).	4	All Emergency lighting provided from emergency generators to 120 volt corridor lights. No problems noted.	
5.2.3	Exit lighting and signage (i.e., safety concerns, condition).	3	All Exit signs are old incandescent type and generally in poor shape. Replace with new LED type exit signs.	\$35,000.00
Other				

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Section 5	Electrical Systems	Rating	Comments/Concerns		Estim. Cost
5.3	Power Supply and Distribution				
5.3.1	Power service surge protection.	N/A			
5.3.2	Panels and wireways capacity and condition.	2	All	Many panelboards are in very poor condition with most panelboards being filled to capacity with no spare spaces. Upgrade of panelboards required in order to maintain continued service to the building.	\$180,000.00
5.3.3	Emergency generator capacity and condition and/or UPS (if applicable).	3	1966 1968	Onan 15 KW, 120/208V/3PH/4W natural gas generator. Onan 30 KVA, 120/208V/3PH/4W natural gas generator. Generators appear to be in good shape, however, do not comply with present code requirements. Recommend that generators be replaced with UPS systems.	\$65,000.00
5.3.4	General wiring devices and methods.	2	1966,68	All of the buildings wiring is very old and well beyond expected life. Many devices appear original. There are insufficient receptacle outlets in classrooms. Recommend that wiring upgrade be provided.	\$260,000.00
5.3.5	Motor controls.	3	All	There is a mixture of motor starter brands provided throughout the building with starters being provided to major motor loads. Installation generally appears original and should be upgraded in order to provide continued service to the building.	\$90,000.00
Other					

Section 5	Electrical Systems	Rating	Comments/Concerns		Estim. Cost
5.4	Lighting Systems				
5.4.1	Interior lighting systems and components (i.e., illumination levels, conditions, controls).	3	All	Building lighting generally comprised of a mixture of and recess mounted fluorescent fixtures using T12 lamps. Most fixtures appear as original, are very old, and should be replaced with new T8 type light fixtures. Light levels in general appear good throughout the building with no problems noted.	\$250,000.00
5.4.2	Replacement of ballasts (i.e., health and safety concerns).	4	All	No health and safety concerns noted.	
5.4.3	Implementation of energy efficiency measures and recommendations.	3	All	Recommend that new fluorescent fixtures with T8 lamps be provided.	Costs in 5.4.1
Other					

Section 5	Electrical Systems	Rating	Comments/Concerns		Estim. Cost
5.5	Network and Communication Systems				
5.5.1	Telephone system and components (i.e., capacity, reliability, condition).	4	All	Standard telephone system with telephones provided in general office. No problems noted.	
5.5.2	Other communication systems (i.e., public address, intercom, CCTV, satellite or cable TV).	3	All	Older Petcom 2200 intercom system. Recommend system be upgraded in order to provide continued service.	\$90,000.00
5.5.3	Network cabling (if available, should be category 5 or better).	5	All	New category 5 installation is underway. No problems noted.	
5.5.4	Network cabling installation (i.e., in conduit, secured to walls or tables).	5	All	New installation is underway. Cables will be installed in wireways and conduit.	
5.5.5	Wiring and telecommunication closets (i.e., size, security, ventilation/cooling, capacity for growth).	4	All	Dedicated server room with room for growth. No problems noted.	
5.5.6	Provision for dedicated circuits for network equipment (i.e., hubs, switches, computers).	4	All	Power wiring to computers and equipment appears to be good with no problems noted.	
Other					

Section 5	Electrical Systems	Rating	Comments/Concerns		Estim. Cost
5.6	Miscellaneous Systems				
5.6.1	Site and building surveillance system (if applicable).	4	1968	System provided to monitor building exterior and corridors. No problem noted.	
5.6.2	Intrusion alarms (if applicable).	4	All	General type of security system using motion detectors, magnetic door contact switches, and alarm keypad. System monitored through central monitoring station with no problems noted.	
5.6.3	Master clock system (if applicable).	3	All	Simplex 2350 master clock system. Installation appears to be in good working order. System used for class change only. Upgrade to provide master clock system throughout school.	\$70,000.00
Other					
5.7	Elevators/Disabled Lifts (If applicable)				
5.7.1	Elevator/lift size, access and operating features (i.e., sensing devices, buttons, phones, detectors).	4	1966	Small 2 person lift is approximately 15 years old and in poor condition; replace.	Costed in 3.3.5
			1968	Small 2 person lift is approximately 3-4 years old and functioning as required.	
5.7.2	Condition of elevators/lifts.	3	All	Two handicap lift elevators provided, as manufactured by Ram Manufacturing, with one in 1966 section and one in 1968 section. Lift in 1966 section is approximately 15 years old and is in need of major servicing and repairs. 1968 lift appears in good shape.	
5.7.3	Lighting and ventilation of elevators/lifts.	4	All	Appears to be fluorescent lighting in elevator and incandescent lighting in shaft. No problems noted.	
Other					
Overall Elect. Systems Condition & Estim Costs					\$1,162,500

Section 6	Portable Buildings	Rating	Comments/Concerns	Estim. Cost
	<i>Note: Separate sheets can be completed, if necessary, for portable buildings of different ages and/or conditions.</i>		No Portables	
6.1.1	Foundation and structure (i.e., signs of bending, cracking, settlement, rust, voids, stains).			
6.1.2	Roof materials and components (i.e., signs of deterioration, leaks, ice build-up).			
6.1.3	Exterior wall finishes (i.e., signs of deterioration, cracks, water stains).			
6.1.4	Doors and windows (i.e., signs of deterioration, rusting hardware, glass cracks, peeling paint, damaged seals).			
6.1.5	Interior finishes (i.e., floors, walls, ceiling).			
6.1.6	Millwork (i.e., counters, shelving, vanities, cabinets).			
6.1.7	Fixed/wall mounted equipment (i.e., writing boards, tackboards, display boards, signs)			
6.1.8	Heating system.			
6.1.9	Ventilation system.			
6.1.10	Electrical, communication and data network systems.			
6.1.11	Health and safety concerns (i.e., fire and smoke alarms, fire protection systems, exiting, fire resistance rating of materials).			
6.1.12	Barrier-free access.			
	Overall Portable Bldgs Condition & Estim Costs			N/A

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Section 7	Space Adequacy	This Facility			Equiv. New Facility			Surplus/ Deficiency	Comments/Concerns
		No.	Size	Total Area	No.	Size	Total Area		
7.1	Classrooms	27	77.3	2087.1	33	80	2640	-552.9	Based on senior high tables, capacity 1375.
7.2	Science Rooms/Labs	8	113.6	908.8	8	120	960	-51.2	
7.3	Ancillary Areas (i.e., Art, Computer Labs, Drama, Music,)	12	101.3	1215.6	2 7	130 90	890	325.6	
7.4	Gymnasium (incl. gym storage)	1 1	556.5 991.8	1548.3		100 1675	1775	-226.7	Includes stage and showers.
7.5	Library/Resource Areas	1 1	260.1 152.4	412.5	1	664	664	-251.5	
7.6	Administration/Staff, Physical Education, Storage Areas	1 1	492.1 277.9	770	1 1 1	829 290 261	1380	-610	
7.7	CTS Areas								
	7.7.1 Business Education	4	112.3	449.2	5	115	575	-125.8	
	7.7.2 Home Economics	2	107.6	215.2	1 1	160 100	260	-44.8	
	7.7.3 Industrial Arts	3	272.6	817.8	1 1 1	300 510 570	1380	-562.2	
	7.7.4 Other CTS Programs								
7.8	Other Non-Instructional Areas (i.e., circulation, wall area, crush space, wc area)			5132.8	1 1 1 1	1866 896 330 165	3257	1875.8	
	Overall Space Adequacy Assessment			13,556			13,781	-225	