	School Name:	James Fowler High School				School Code:	9825
	Location:	4004 - 4th St. NW				Facility Code:	1653
	Region:	South				Superindendent:	Dr. Donna Michaels
	Jurisdiction:	Calgary				Contact Person:	Leanne Soligo
						Telephone:	214-1121
	Grades:	10-12				School Capacity:	2030

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	1962	2	22852.00	Precast concrete with brick exterior, precast T's roof deck with SBS or BUR roofing.	Two new hot water boilers, with some new area specific ventilation systems and some original	
Additions/ Expansions	1979	1	1307.10	As above	As above	
	1986	1	219.91	Wood frame with vertical metal siding and flat roofs.	Roof top HVAC units.	Portables
	1998	2	12.50	Concrete block with metal siding	Heated from central plant.	Handcapped lift.
	Total		24391.51			

						Evaluator's Name:	Bob Passmore, M.A.A.A.
						& Company:	Building Science Specialists Ltd.

Upgrading/ Modernization (identify whether minor or major)		1980	1	370.3	Welding Shop - minor		
		1982	1	358	Art classrooms - dark room , kiln room		
		1984	1	81.3	Classroom into computer lab		
		1985	1	557 403.2	Office and special ed into computer and accounting labs and workroom auto body shop - add spray booth		
		1986	1	1298	boiler room, music, drama, phys. Ed. office		
		1987	1	237.3	Classrooms into computer lab		
		1989	1	1296	revisions to science wing		
		1998	1	520	upgrade office area and finishes		
Portable Struct. (identify whether attached/perman. or free-standing/ relocatable)		1986	2	212	Attached, with vestibule connection, only two left of original 6.	As above	
List of Reports/ Supplementary Information		CBE Facility Abestos Database, February 23, 1999					

	Evaluation Components	Summary Assessment		Estim. Cost
1	**Site Conditions**	- resurface NW and south parking lots. - replace stair at SW entry.		$56,500
2	**Building Exterior**	- recaulk expansion joints - replace curtain wall windows sections		$711,000
3	**Building Interior**	- repair floor in science wing - provide new ceiling in gymnasium - install new hardware to classroom doors - replace all toilet and shower partitions		$650,500
4	**Mechanical Systems**	- provide additional fire extinguishers throughout - repair water softener in cosmetology - replace three hot water heaters - provide ventilation relief air - replace automatic vents on heating system piping - replace direct-fired ventilation units and repairs to other ventialtion units - provide ventilation and fire dampers in shop wing - replace washroom and gym exhausts - exhaust fans and hood required throughout - provide humidification to all ventilation units - replace condensing units of Library and Kitchen units		$393,000
5	**Electrical Systems**	- install exterior lighting at south parking lot - replace old battery packs - provide dedicated cooling to computer hubs - install telephone in handicapped elevator with link to security		$17,500
6	**Portable Buildings**			$35,500
7	**Space Adequacy:**			
	7.1 Classrooms	- Deficient	-1180.3	
	7.2 Science Rooms/Labs	- Deficient	-302.8	
	7.3 Ancillary Areas	- Slightly excessive	759.9	
	7.4 Gymnasium	- Deficient	-210.1	
	7.5 Library/Resource Areas	-Slightly excessive	174.5	
	7.6 Administration/Staff Areas	- Slightly excessive	2026.8	
	7.7 CTS Areas	- Slightly excessive	802.3	
	7.8 Other Non-Instructional Areas (incl. gross-up)	- Slightly excessive	3702.7	
	Overall School Conditions & Estim. Costs		5773	$1,864,000

Section 1	Site Conditions	Rating	Comments/Concerns	Estim. Cost
1.1	**General Site Condions**			
1.1.1	Overall site size.	4	5.68 hectares	
1.1.2	Outdoor athletic areas.	4	Single large football field on North east corner of site.	
1.1.3	Outdoor playground areas, including condition of equipment and base.	4	Asphalt yard next to building at NE, 4 basketball hoops	
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 all sides, except for west (4th street side) and entries to parking lots. Shop areas open onto south, lane at east end.	
1.1.6	Surface drainage conditions (i.e., drains away from building, signs of ponding).	4	Drainage away from building on all sides.	
1.1.7	Evidence of sub-soil problems.	4	None noted.	
1.1.8	Safety and security concerns due to site conditions.	4	None noted.	

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).	4	A student/visitor parking lot is provided on the east side of the school, with access from 3rd street. Staff lots are located at the NW corner and south side of the site. Pedestrian access locations are separated from the parking lots.	
1.2.2	Surfacing of on-site road network (note whether asphalt or gravel).	3	Parking areas are paved. NW and South lots require resurfacing	$26,500
1.2.3	Bus lanes/drop-off areas (note whether on-site or off-site).	N/A	City streets	
1.2.4	Fire vehicle access.	4	Building is accessible by alley and parking lot to south. East end parking lot allows access to east wing.	
1.2.5	Signage.	4	Wall mounted sign on north elevation and one over entry on east elevation.	
Other				
1.3	**Parking Lots and Sidewalks**			
1.3.1	Number of parking spaces for staff, students and visitors (including stalls for disabled persons).	4	176 stalls, no designated handicapped stall or handicapped access to school from parking lot.	
1.3.2	Layout and safety of parking lots.	4	Fenced from school grounds.	
1.3.3	Surfacing and drainage of parking lots (note whether asphalt or gravel).	4	Asphalt areas are sloped to area drains.	
1.3.4	Layout and safety of sidewalks.	3	Sidewalks are separated from parking areas. The rest are city sidewalks.. Stairs approaching SW entry are in poor condition and replacement should be considered.	$30,000
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 ramp to main student entry on west side of school. There are no continuous handrails on the two handicap ramps. Install railings	
Other				
	Overall Site Conditions & Estimated Costs			$56,500

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	1963 - 1979 - 1998	No problems noted.	
2.1.2	Wall structure and columns (i.e., signs of bending, cracking, settlement, voids, rust, stains).	4	1963 - 1979 - 1998	Some cracking noted in SW corner of library exterior wall, some wall subsidence in bay walls of shop wing	
2.1.3	Roof structure (i.e., signs of bending, cracking, voids, rust, stains).	4	1963 - 1979 - 1998	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.***		**Bldg. Section**	**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	1963 - 1979 - 1998	No report available, Roofs are mainly SBS, with BUR over the library and cafeteria. In reasonably good condition.	
2.2.2	Roof accessories (i.e., ladders, stairs, hatches, masts, exhaust hoods, chimneys, gutters, downspouts, splashpads).	4	1963 - 1979 - 1998	In good condition	
2.2.3	Control of ice and snow falling from roof.	5	1963 - 1979 - 1998	Roofs slope to inside and drain internally.	
2.2.4	Skylights (i.e., signs of distress, leaks, ice build-up, condensation, deteriorated materials/seals).	N/A			
Other					

Section 2	Building Exterior	Rating	Comments/Concerns		Estim. Cost
2.3	**Exterior Walls/Building Envelope**		**Bldg. Section**	**Description/Condition**	
2.3.1	Exterior wall finishes (i.e., signs of deterioration, cracks, brick spalling, efflorescence, water stains).	3	1955 - 1959	Exterior is brick, precast and curtain wall window sections. Some cracking noted. Expansion joints require recaulking.	$10,000
2.3.2	Fascias, soffits, parapets (i.e., signs of looseness, stains, rust, peeling paint).	4	1963 - 1979 - 1998	Replaced at time of reroofing. No problems noted.	
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	1963 - 1979 - 1998	No evidence of problems	
2.3.4	Interface of roof drainage and ground drainage systems.	4	1963 - 1979 - 1998	Roof drains internally into storm system	
2.3.5	Inside faces of exterior walls (i.e., signs of cracks, water stains, dust spots).	4	1963 - 1979 - 1998	Some staining in NE stair well of tech wing.	
Other					
2.4	**Exterior Doors and Windows**		**Bldg. Section**	**Description/Condition**	
2.4.1	Doors (i.e., signs of deterioration, rusting metal, glass cracks, peeling paint, damaged seals, sealed unit failure).	3	1963 - 1979 - 1998	Some new aluminum. Replace 16 HM insulated doors, complete with hardware.	$26,000
2.4.2	Door accessories (i.e., latches, hardware, screens, locks, alarms, holders, closers, security devices).	3	1963 - 1979 - 1998	See 2.4.1.	
2.4.3	Exit door hardware (i.e., safety and/or code concerns).	3	1963 - 1979 - 1998	Hardware functions as required. See 2.4.1.	
2.4.4	Windows (i.e., signs of deterioration, rusting metal, glass cracks, peeling paint, damaged seals, sealed unit failure).	3	1963 - 1979 - 1998	Windows are in curtain wall sections, several glazing units have failed. Replace all curtain wall sections	$675,000
2.4.5	Window accessories (i.e., latches, hardware, screens, locks, alarms, holders, closers, security devices).	3	1963 - 1979 - 1998	Will be replaced as part of 2.4.4 above.	
2.4.6	Building envelope (i.e., signs of heavy condensation on doors or windows).	4	1963 - 1979 - 1998	No problems noted.	
Other					
	Overall Bldg Exterior Condition & Estim Costs				$711,000

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	1963 - 1979 - 1998	Exterior walls are precast concrete. Interior walls are load bearing concrete block. No problems noted (see 2.3.1 for replacement of caulking at joints).	
3.1.2	Floors (i.e., signs of cracks, heaving, settlement).	3	1963 - 1979 - 1998	Floors are concrete slab on grade and concrete topping on precast T's on upper floors. One crack found in corridor of second floor Science Wing. It is a tripping hazard. Flooring should be removed, area releveled and flooring installed.	$4,000
Other					
3.2	**Materials and Finishes**		**Bldg. Section**	**Description/Condition**	
3.2.1	Floor materials and finishes.	4	1963 - 1979 - 1998	Floor finishes vary from original 9" VAT in corridors, 12" VCT, sheet vinyl both original and newer from mid '80's modernizations. Modernized office areas are carpeted. Library is carpeted. Gymnasium floors are hardwood. Entry vestibules and washrooms are generally 6" ceramic tile. Floors are in generally good condition.	
3.2.2	Wall materials and finishes.	4	1963 - 1979 - 1998	Walls are mainly giant brick or painted concrete block throughout. Some demountable partitions in office areas.	
3.2.3	Ceiling materials and finishes.	3	1963 - 1979 - 1998	Ceilings are typically exposed concrete T's with 12" ceiling tiles, or sections of suspended 12" tiles. Some areas do have T-bar ceilings, particularly modernized areas. Main gymnasium and mezzanine require new ceilings, damaged by equipment and water leaks.	$31,500
3.2.4	Interior doors and hardware.	3	1963 - 1979 - 1998	Doors are wood throughout, except for metal doors at fire separations. All appear to be original, except in office which have been upgraded.. Most door hardware is original and beginning to fail. Estimate 70 percent of door knobs require replacement	$71,500
3.2.5	Millwork	4	1963 - 1979 - 1998	Millwork is original, except for office which is recently renovated. Modernized areas have newer millwork. All is functional.	
3.2.6	Fixed/wall mounted equipment (i.e., writing boards, tackboards, display boards, signs).	3	1963 - 1979 - 1998	All tackboards and chalkboards are original - replace where required. Whiteboards are found in modernized areas. Replace lockers throughout.	$510,000
3.2.7	Any other fixed/mounted specialty items (i.e., CTS equipment, gymnasium equipment).	FI	1963 - 1979 - 1998	CTS shops are full of specialized equipment, dependent on trade being taught. Welding booths are built of asbestos board panels. These have been damaged over time and offer an exposure hazard. Hazard should be assessed and appropriate remedial measures taken.	
3.2.8	Washroom materials and finishes.	3	1963 - 1979 - 1998	Floors are 6" ceramic tile, walls are painted concrete block, or giant brick. Shower rooms have ceramic tile throughout. Toilet and shower partitions need to be replaced throughout. Three shower stalls require replacement.	$33,500
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	1963 - 1979 - 1998	Mainly non-combustible construction. Building is not sprinklered		
3.3.2	Fire separations (i.e., between buildings, wings, zones if non-sprinklered).	FI	1963 - 1979 - 1998	Building has recently been upgraded with computer cabling. Conduits have been run through several fire separations. The walls have not been patched as part of the contract.		
3.3.3	Fire resistance rating of materials (i.e., corridor walls and doors).	4	1963 - 1979 - 1998	Materials in separations appear to be adequate.		
3.3.4	Exiting distances and access to exits.	4	1963 - 1979 - 1998	Appear to be adequate.		
3.3.5	Barrier-free access.	4	1963 - 1979 - 1998	Building has been recently upgraded with a handicapped lift to all floors. There are handicapped washrooms in the main lobby.		
3.3.6	Availability of hazardous materials audit (i.e., evidence of safety concerns with respect to asbestos, PCB's, chemicals).	4	1963 - 1979 - 1998	CBE Facility Asbestos database indicates the presence of asbestos in elbows on heating pipes throughout the building. 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	1963 - 1979 - 1998	No evidence of other problems		
Other						
	Overall Bldg Interior Condition & Estim Costs					$650,500

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	1963 to 1979	Parking lots on the north east corner and south side have two catch basins each. A catch basin is located in the south alley. Parking lots on the east side and north west sides have single catch basins. All catch basins are connected to city storm sewers.	
4.1.2	Exterior plumbing systems (i.e., irrigation systems, hose bibs).	4	1963 to 1979	Hose bibbs were noted on the west and north west sides of the building. An irrigation system is provided and has three timer/control panels. It services the playing fields to the north east.	
4.1.3	Outside storage tanks.	NA		None	
Other					
4.2	**Fire Suppression Systems**		Bldg. Section	Description/Condition	
4.2.1	Fire hydrants and siamese connections.	NA		None	
4.2.2	Fire suppression systems (i.e., pumps, sprinklers, piping, reservoirs, hoses, stand pipes, CO2 systems).	3	1963 to 1979	A hose and standpipe system is provided in all parts of the building. The system has hose cabinets with synthetic hose, adjustable nozzles and type ABC fire extinguishers. A fire department siamese is required.	$6,000
4.2.3	Hand extinguishers, blankets and showers (i.e., in CTS areas).	4	1963 to 1979	Type ABC dry chemical hand extinguishers are located in the hose cabinets, all mechanical and electrical rooms, all the shops, shops classrooms, science, chemistry, physics and other labs, cosmetology, kitchen, etc.	
4.2.4	Other special situations (e.g., flammable storage areas, science labs, CTS areas).	3	1963 to 1979	The welding shop has a 20 lb. carbon dioxide extinguisher. The science labs. have hand extinguishers. The computer hub locations, drama theatre, general office area, don't have extinguishers. Provide extinguishers in these locations	$500
		FI		The welding shop acetylene/oxygen storage space has no special protection. Quantities and storage of acetylene and oxygen should be in accordance with NFPA #51,	
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	1963 to 1979	A new 6' dia. steel water line from city mains enters the boiler from the north. A 4" domestic water line is metered c/w a valved bypass. A 4" dia. line is run to the standpipe system. Pressure, capacity and quality is good.	
4.3.2	Water treatment system(s).	3	1963 to 1979	The water used in the cosmetology has softeners. The softeners do not work and require repairs.	$500
4.3.3	Pumps and valves (including backflow prevention valves).	4	1963 to 1979	Backflow protection is provided on the domestic, fire protection and boiler feedwater lines.	
4.3.4	Piping and fittings.	4	1963 to 1979	Water piping is soldered copper tubing.	
4.3.5	Plumbing fixtures (i.e., toilets, urinals, sinks)	4	1963 to 1979	Water closets are elongated, floor mounted with flush valves. Lavatories are wall hung. Urinals are stall type with flush tanks. Some newer staff washrooms have countertop lavs. And tank type water closets. Slop sinks are wall hung. Most sinks are countertop stainless steel in classrooms, labs. kitchen, staff room, etc. Drinking fountains in all areas are 1 bubbler wall mounted. The shops generally have slop sinks. Some unmodernized classrooms have enameled steel counter top sinks. Shops generally have slop sinks for student cleanup. One shop has a semi-circular wash fountain. A mop sink is provided in some janitors rooms. Condition of fixtures is good.	
4.3.6	Domestic hot water system (i.e., heater, storage tanks, failure alarms, pressure, volume, recirculation).	3	1963 to 1979	Gas fired tank type water heaters are located in the boiler room(3) and in the mechanical room(3) in the basement below the offices. The water heaters in the basement will require replacement. The others are new.	$13,500
4.3.7	Sanitary and storm sewers, including sumps and pits (note whether sewage system is municipal or septic).	4	1963 to 1979	Sanitary and storm sewers are connected to the city sewer mains. A two compartment sump is provided in the automotive shop. A sump is located in the south wing mechanical room, It is used for lab. 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).	4	1963 to 1979	Two high capacity gas fired hot water boilers rated at 10,000 MBH each are provided in the boiler room. These are new and have good capacity and reliability. New HVAC units on the roof are used to heat and cool the general office, electrical shop and theatre. The exterior general offices are heated by hot water or electric reheat coils in the ventilation ducts. Most other areas are heated by wall fin convectors. The classrooms in the east wing use unit ventilators with duct extensions. Stairways use radiator type and wall fin convectors. Vestibules use fan cabinet or vertical unit heaters. The shops use both horizontal and vertical unit heaters. No problems with inadequate heat were noted.	
4.4.2	Heating controls (including use of current energy management technology.	4	1963 to 1979	Heating and ventilation systems use pneumatic controls. A duplex control compressor in the boiler room is equipped with a dryer. The heating system is controlled by a computer program.	
4.4.3	Fresh air for combustion and condition of the combustion chimney.	3	1963 to 1979	The boiler room combustion air is provided by a packaged ventilation unit with a heating coil. The water heaters in the basement mechanical room have an insulated combustion air duct dropping to 18" above the floor. Ventilation relief openings required by the gas code are not provided from either room. Provide the required openings.	$4,000
4.4.4	Treatment of water used in heating systems.	4	1963 to 1979	The heating water and the glycol mix heating coil systems are provided with chemical pot feeders.	
4.4.5	Low water cutoff/pressure relief valves and failure alarms (i.e., hot water heating).	5	1963 to 1979	The boilers are provided with low water cutoffs, pressure relief valves and failure alarms.	
4.4.6	Heating air filtration systems and filters.	4	1963 to 1979	None.	
4.4.7	Heating humidification systems and components.	NA		None	

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	1963 to 1979 to 1999	Hot water is distributed to heating terminals using threaded and screwed black steel. Terminals are unit ventilators, wall fin and radiator convectors, unit and fan cabinet heaters, heating and reheat coils, etc.	
4.4.9	Heating piping, valve and/or duct insulation.	4	1963 to 1979	Heating piping is insulated with canvas covered fiberglass. Some insulation may contain asbestos. Duct work used for cooling and for fresh air is insulated with fiberglass.	
4.4.10	Heat exchangers.	5	1963 to 1979	The glycol mix for the ventilation unit heating coils is heated by a large new plate heat exchanger.	
4.4.11	Heating mixing boxes, dampers and linkages.	4	1963 to 1979	Mixing boxes are used on the central ventilation units and new rooftop HVAC units. Dampers and linkages are operating normally.	
4.4.12	Heating distribution/circulation in larger spaces (i.e., user comfort, temperature of outside wall surfaces).	4	1963 to 1979	The heating distribution in the library, gymnasium, cafeteria, etc is satisfactory.	
4.4.13	Zone/unit heaters and controls.	4	1963 to 1979	Fan cabinet and unit heater fans are cycled by space t'stats. Unit ventilators are controlled by pneumatic t'stats.	
Other	Expansion tanks/auto. air vents.	3	1963 to 1979	The heating and gycol mix systems use four new diaphragm type expansion tanks. The automatic vents on the heating system piping and terminals require replacing.	$20,000

Section 4	Mechanical Systems	Rating		Comments/Concerns	Estim. Cost
4.5	**Ventilation Systems**		Bldg. Section	Description/Condition	
4.5.1	Air handling units capacity and condition.	3	1963 to 1979 - East Wing	This shops wing has a new rooftop HVAC unit for the electrical shop/lab. The auto mechanics shop and auto body shop use interior make-up air units with heating coils. A larger similar unit is located on a mezzanine in the industrial construction shop that supplies air to other shops. Rooftop direct gas fired make-up air units are used in the welding and machine shops. The classrooms and other non-shop areas have a central built-up ventilation unit with heating coil, return/exhaust fans and fresh air/return air/exhaust air dampers. The classrooms on the north side use unit ventilators. Many ventilation units are getting old and will need major work on motors, fans and heating coils..The direct fired units will require replacement.	$82,000
		3	!963 to 1979 - North Wing	This wing houses the boiler room with a built-up ventilation unit and two packaged ventilation units. They have return/exhaust fans and fresh air/return air/exhaust air dampers. One unit services the cafeteria. The drama room has a packaged ventilation unit in a nearby storage room. The two auxiliary gyms have no ventilation. Many ventilation units are getting old and will need major work on motors, fans and heating coils..The direct fired units will require replacement.	$51,000
		3	1963 to 1979 - Central Section.	A large built-up central unit ventilates all areas except the cafeteria and kitchen. A packaged indoor gas fired ventilation unit with return fan is used for the library. It has a heating and cooling section with rooftop condensing unit. Damper arrangements are as per above. Many components are getting old and will need replacement. The kitchen has a rooftop gas fired unit that heats and cools the space and provides make-up air. It has a remote rooftop condensing unit. Much of this equipment is old and units/components will require replacement.	$58,000
		3	1963 to 1979 - Office Wing	A new rooftop HVAC unit is used to ventilate/heat/cool this area. It has branch duct electric or hot water reheat coils controlled by space t'stats. A large central built-up unit in the basement is used to ventilate the top floor. It has a return fan and return/exhaust fresh air mixing dampers. This unit is old and components will need replacement.	$23,500
		3	1963 to 1979 - South Wing	A built-up central ventilation unit is provided for this wing. It has a return/exhaust fan and dampers as per other central units. A small built-up ventilation/ make-up unit services some labs. The central unit is getting old and components will need replacement.	$25,000

Section 4	Mechanical Systems	Rating		Comments/Concerns	Estim. Cost
4.5	**Ventilation Systems**		Bldg. Section	Description/Condition	
4.5.2	Outside air for the occupant load (if possible, reference CFM/occupant).	4	1963 to 1979	All ventilation units have adjustable damper positioners to adjust the amount of fresh air. Actual amounts of fresh air/occupant is not known.	
4.5.3	Air distribution system (if possible, reference number of air changes/hour).	3	1963 to 1979	Most central systems have a main supply duct system that supplies air to the rooms using wall or ceiling grilles and diffusers. The corridors are used for return air and the doors to the class rooms, etc, have door grilles without fire dampers. New systems use main return ducts with room return air grilles and fire dampers in fire separations. Many storage rooms and offices in the shop wing do not have any ventilation. Provide required ventilation and fire dampers.	$30,000
4.5.4	Exhaust systems capacity and condition.	3	1963 to 1979	The central ventilation systems have large exhaust capabilities. Washrooms, the auxiliary gyms, etc., have central roof exhaust fans. Many of these are old and will require replacement	$8,000
4.5.5	Separation of out flow from air intakes.	4	1963 to 1979	Generally separation is good. The east wing central unit has a three meter separation between the fresh air intake and exhaust air louvers. This may require some work.	
4.5.6	Special/dedicated ventilation and/or exhaust systems (i.e., kitchen, labs, CTS areas).	3	1963 to 1979	The kitchen range hoods have new up-blast roof exhaust fans. Various labs and science classrooms have fume hoods or ceiling grilles with exhaust fans. Many exhaust fans have been replaced. Several others will require replacing. A kiln room in the arts area has a very small wall exhauster without hoods. Hoods are required.	$20,000
Other					
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	1963 to 1979	A computer controlled operations system is in place that can be programmed to provide energy management. All central and packaged ventilation systems use dedicated pneumatic control systems. The old and new rooftop HVAC units have electric controls.	
4.5.8	Air filtration systems and filters.	4	1963 to 1979	All ventilation units use a relaceable media filter including the unit ventilators.	
4.5.9	Humidification system and components.	3	1963 to 1979	None of the ventilation units have humidification systems. All of the ventilation units should have humidifiers installed.	$35,000
4.5.10	Heat exchangers.	NA		None	
4.5.11	Ventilation distribution system and components (i.e., ductwork, diffusers, mixing boxes, dampers, linkages).	4	1963 to 1979	Damper sections and controls, diffusers, etc., are generally in good condition.	
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).	3	1963 to 1979	The new rooftop HVAC units(3) and the kitchen and library air handling units have heating and cooling. They use DX cooling coils . The kitchen and library units have remote older condensing units. The new units have condensing sections. The older units will require major work.	$16,000
4.6.2	Cooling distribution system and components (i.e., ductwork, diffusers, mixing boxes, dampers, linkages)	4	1963 to 1979	Cooling is distributed through main supply ducts with branches to diffusers and grilles. Reheat coils are installed in many branch ducts controlled by space heating/cooling t'stats. The kitchen and library units have space t'stats.	
4.6.3	Cooling system controls (including use of current energy management technology).	4	1963 to 1979	Cooling air is supplied at temperatures that are set by factory set controls. Space t'stats can cycle the cooling sections or control reheat coils. The computer system can be programmed to provide energy management control.	
4.6.4	Special/dedicated cooling systems (i.e., labs, CTS areas).	NA		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	!963 to 1979	The computer system controls the systems individually. The heating system is monitored by a remote central station for low temperature and component failure.	
	Overall Mech Systems Condition & Estim. Costs				$393,000

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).	5	1963 to 1979	Service is underground from city overhead lines to a switchboard in a separate electrical room. The main switch is rated at 1600 amperes, 3 phase 347/600v. Power is distributed to transformers throughout the building and in the electrical room that supply power at 277/480v or 120/208v. Demand is at 2.183 kva. Access and installation is good.	
5.1.2	Site and building exterior lighting (i.e., safety concerns).	3	1963 to 1979	The parking lot on the north-west has wall HIDs. The entrance canopies on the east and north have HIDs. The south parking lot has no lighting. A canopy light is used on the portables entry. The south wall and east parking lot have HIDs on the walls. The north east parking lot has HIDs on the walls. The end of the north wing has no lights. Provide south parking lot lighting.	$6,000.00
5.1.3	Vehicle plug-ins (i.e., number, capacity, condition).	4	1963 to 1979	Vehicle plug-ins are installed for all parking lots for most parking spaces. The north west lot has 12 duplex plug-ins, the south lot has 29, the east lot has 18 and the north west has 18.	
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).	5	1963 to 1979	A central alarm system with digital readout is installed in the west students entrance . It has battery back-up, trouble supervision and central station connection. Smoke detectors are installed in stairways and some corridors. Heat detectors are used in shops, labs., storage rooms, science classrooms, mechanical and electrical rooms. Pull stations are installed at stairway and building exits. Alarms are generally 10" dia. with strobes. Some smaller rooms have 6" dia. alarms with strobes.	
5.2.2	Emergency lighting systems (i.e., safety concerns, condition).	3	1963 to 1979	Battery packs are located throughout the building and remote heads are located in the corridors , shops, library, cafeteria, stairways, mechanical rooms, kitchen, gymnasiums and exits. There is a huge number of battery packs and many are old. These will require replacement.	$4,000.00
5.2.3	Exit lighting and signage (i.e., safety concerns, condition).	4	1063 to 1979	Exit signs are provided at all building and floor exits. Each of the large rooms have exit signs from them. They are connected to the battery packs.	
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	1963 to 1979	No surge protection is provided except on the new computer services.	
5.3.2	Panels and wireways capacity and condition.	4	1963 to 1979	Wireways are good and extra panelboard capacity has been added in most labs, shops, etc.	
5.3.3	Emergency generator capacity and condition and/or UPS (if applicable).	NA		None	
5.3.4	General wiring devices and methods.	4	1963 to 1979	Receptacles are grounded type. Generally devices are in good shape.	
5.3.5	Motor controls.	4	1963 to 1979	Larger motors are provided with protected disconnects and magnetic starters. Small motors have thermal switches.	
Other					
5.4	**Lighting Systems**		Bldg. Section	Description/Condition	
5.4.1	Interior lighting systems and components (i.e., illumination levels, conditions, controls).	5	1963 to 1979	Lighting in most areas is flouorescent. Corridor pot lights also have mini-fluorescent lamps. Industrial shaded fixrures in mechanical rooms also have mini-fluorescent lamps. The shops use HID fixtures. Illumination levels are generally good. Levels were recorded as follows : mechanical rooms 162 lux, theatre storage - 216 lux, drama - 324 to 646 lux, stairways - 216 to 378 lux, corridors - 216 to 432 lux, dressing room - 432 lux, training room - 432 to 754 lux, showers - 432 lux, phys. ed. office - 538 lux, large gym - 432 lux, weight room - 216 lux, general office - 646 lux, office work room - 1076 lux, computer hub room - 108 to 432 lux, math offices - 324 lux, classrooms 324 to 432 lux, library - 432 to 646 lux, meeting room - 332 lux, kitchen - 324 to 432 lux, aux. gyms - 162 lux, computer labs 324 lux, shops - 324 to 646 lux, staff lounge - 378 lux, staff dining - 378 lux, baseball storage - 108 to 162 lux, telephone distribution room = 432 lux.	
5.4.2	Replacement of ballasts (i.e., health and safety concerns).	5	1963 to 1979	All ballasts have been replaced with electronic types.	
5.4.3	Implementation of energy efficiency measures and recommendations.	4	1963 to 1979	The entire lighting system has been upgraded to T-8 lamp equipped fixtures or mini-fluorescent lamps. Some locations are very brightly illuminated.	
Other					

Section 5	Electrical Systems	Rating		Comments/Concerns	Estim. Cost
5.5	**Network and Communication Systems**		Bldg. Section	Description/Condition	
5.5.1	Telephone system and components (i.e., capacity, reliability, condition).	4	1963 to 1979	The telephone system has been totally replaced. System and capacity are good.	
5.5.2	Other communication systems (i.e., public address, intercom, CCTV, satellite or cable TV).	5	1963 to 1979	A telephone intercom system with connections to speakers in all areas has just been installed. An old cable TV system is still in place in many areas. It is not used. A public address system is in provided with speakers in all areas.	
5.5.3	Network cabling (if available, should be category 5 or better).	5	1963 to 1979	An new computer hub system with internet access has been recently installed,	
5.5.4	Network cabling installation (i.e., in conduit, secured to walls or tables).	5	1963 to 1979	Cabling is installed in metal conduit and is supported on trapeze hangers It is run concealed in renovated areas. In other locations it is run exposed. Many fire separations have been beached and not re-established.	
5.5.5	Wiring and telecommunication closets (i.e., size, security, ventilation/cooling, capacity for growth).	3	1963 to 1979	Computer hubs are located in locked rooms without adequate cooling. Dedicated cooling should be provided in these rooms.	$7,000.00
5.5.6	Provision for dedicated circuits for network equipment (i.e., hubs, switches, computers).	5	1963 to 1979	Computer hubs are on dedicated circuits. Computers in the labs. and in many areas are on dedicated circuits. Some are on general circuits. Extra panelboard capacity has been added in many areas.	
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).	NA		None.	
5.6.2	Intrusion alarms (if applicable).	5	1963 to 1979	A security system is installed with several cameras and motion detectors is installed. Monitors and a video tape recording system is provided. The system has a central station connection for unoccupied hours.	
5.6.3	Master clock system (if applicable).	5	1963 to 1979	A master clock system is installed with clocks in all areas except the general office area, Battery powered clocks are used in the general office area.	
Other					
5.7	**Elevators/Disabled Lifts (If applicable)**		Bldg. Section	Description/Condition	
5.7.1	Elevator/lift size, access and operating features (i.e., sensing devices, buttons, phones, detectors).	3	1963 to 1979	A new small capacity hydraulic elevator has been recently installed (1998). Instructions for between floor shutdown is not provided. A telephone is not provided. Provide a telephone to security offices.	$500
5.7.2	Condition of elevators/lifts.	5	1963 to 1979	Condition is good.	
5.7.3	Lighting and ventilation of elevators/lifts.	5	1963 to 1979	Limited ventilation. Lighting is adequate.	
Other	Programmer/co-ordinator	4	1963 to 1979	A central programmer/co-ordinator is provided is provided to automatically sound the call bells.	
	Overall Elect. Systems Condition & Estim Costs				$17,500

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.		Two portables attached to South end in 1986.	
6.1.1	Foundation and structure (i.e., signs of bending, cracking, settlement, rust, voids, stains).	4	Wood frame, no problems noted	
6.1.2	Roof materials and components (i.e., signs of deterioration, leaks, ice build-up).	FI	Not reviewed	
6.1.3	Exterior wall finishes (i.e., signs of deterioration, cracks, water stains).	4	Vertical metal siding, no problems noted.	
6.1.4	Doors and windows (i.e., signs of deterioration, rusting hardware, glass cracks, peeling paint, damaged seals).	4	No problems noted.	
6.1.5	Interior finishes (i.e., floors, walls, ceiling).	3	Ceilings are suspended T-bar, walls are painted gypsum board, floors are carpeted. Carpet needs replacement.	$6,500
6.1.6	Millwork (i.e., counters, shelving, vanities, cabinets).	4	Original, but functional	
6.1.7	Fixed/wall mounted equipment (i.e., writing boards, tackboards, display boards, signs)	4	Original, but functional	
6.1.8	Heating system.	3	Each portable and the corridor have rooftop packaged gas fired heating/cooling units(3). These units are old and parts are difficult to obtain. They will require replacement.	$18,000
6.1.9	Ventilation system.	3	The rooftop air units can supply an adjustable amount of fresh air through the heating ductwork. Included in 6.1.8	
6.1.10	Electrical, communication and data network systems.	3	The building telephone and public address systems are installed in the portables(2). Replace all fluorescents with T-8 lamp equipped fixtures.	$6,000
6.1.11	Health and safety concerns (i.e., fire and smoke alarms, fire protection systems, exiting, fire resistance rating of materials).	4	The building fire alarm system is extended to the portables. Fire detectors are provided. Emergency and exit lights are provided.	
6.1.12	Barrier-free access.	3	Accessible by a short steep ramp. Replace with longer, properly sloped ramp	$5,000
	Overall Portable Bldgs Condition & Estim Costs			$35,500

Section 7	Space Adequacy	This Facility			Equiv. New Facility			Surplus/ Deficiency	Comments/Concerns
		No.	Size	Total Area	No.	Size	Total Area		
7.1	Classrooms	39	varies	3059.7	53	80	4240	-1180.3	
7.2	Science Rooms/Labs	9		897.2	10	120	1200	-302.8	
	Science Rooms		varies						
	Prep area		varies						
7.3	Ancillary Areas (i.e., Art, Computer Labs, Drama, Music,)	14		1829.9	11		1070	759.9	
	Computer labs		616.4		2	130			
	Drama		275.6		9	90			
	Drama		219.4						
	Art		458.3						
	Music & practice rooms		260.2						
7.4	Gymnasium (incl. gym storage)	1		1564.9	1		1775	-210.1	
	Gymnasium (incl. gym storage)		1371.3			1775			
	Storage		44.3						
	Mezzanine		149.3						
7.5	Library/Resource Areas	1		1074.5	1		900	174.5	
	Library		891.9						
	Resource		63.3						
	Workrom		119.3						
7.6	Administration/Staff, Physical Education, Storage Areas			3800.8			1774	2026.8	
	Administration/Staff, Physical Education,		1058			1427			
	Storage		2742.8			347			
	Sub - Total			12227			10959	1268	
7.7	7.7.1 Business Education	2		112.2			805	-692.8	
			92.3		7	115			
			19.9						
	7.7.2 Home Economics	3		403.7			420	-16.3	
			118.5		1	160			
			119		1	100			
			118.4		1	160			
	7.7.3 Industrial Arts					280 375	655		
	7.7.4 Other CTS Programs	11	various	3546.4		300 510 570	1380	2166.4	
	CTS Areas - sub-total			4062.3			3260	802.3	
7.8	Other Non-Instructional Areas (i.e., circulation, wall area, crush space, wc area)			8089.7			4387	3702.7	large cnetral lobby and cafeteria space
	Overall Space Adequacy Assessment	78		24379	87		18606	5773	

Evaluation Component/ Sub-Component	Additional Notes and Comments

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