

School Facility Evaluation Project  
Part IV - Additional Notes and Comments

School Name:		Sir Winston Churchill School			School Code:		9857
Location:		5220 Northland Drive NW			Facility Code:		1660
Region:		South			Superintendent:		Dr. Donna Michaels
Jurisdiction:		Calgary School District #19			Contact Person:		Leanne Soligo
					Telephone:		214-1123
Grades:		10 - 12			School Capacity:		2190 (Total)
<b>Building Section</b>		<b>Year of Compl.</b>	<b>No. of Floors</b>	<b>Gross Bldg Area (Sq.M.)</b>	<b>Type of Construction (i.e., structure, roof, cladding)</b>	<b>Description of Mechanical Systems (incl. major upgrades)</b>	<b>Comments/Notes</b>
<b>Original Building</b>		1970		19,184.50	Masonry (exterior), flat roof (unknown construction) with brick cladding. Poured-in-place concrete stairwells	2 steam boilers with perimeter radiation.	
<b>Additions/ Expansions</b>		1983		116.00	as above	as above.	Enclosed & roofed over part of interior courtyard
		1999		144.00	as above		Enclosed & roofed over exterior area outside entry area (i.e. enlarged entry)
<b>Total (excluding Portables)</b>				<b>19,444.50</b>			
						Evaluator's Name:	Anne Underwood - Graham Edmunds
						& Company:	Alastair Muir - Graham Edmunds
							Mark Yunker, Wiebe Forest (Mech.)
							Mulan Gerza, Wiebe Forest (Elec.)

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
Upgrading/ Modernization (identify whether minor or major)	1984		237.30	Interior renovation		Renovations to staff workroom, lunchroom, and school "cafeteria" kitchen.
Portable Struct. (identify whether attached/perman. or free-standing/ relocatable)	1967		854.00	Attached frame structure, vertical metal siding, with horizontal metal soffits, flat roofs (unknown construction)	Self-contained heating/ventilating units.	
	1992		422.90			
Total (including Portables)			20,721.40			
List of Reports/ Supplementary Information	Asbestos Materials Survey - (March 1999) - available and reviewed, not attached.					
	Fire Inspection Report - (Oct 1999) attached, see Appendix					
	Updated Mini Plans - attached					

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	Evaluation Components	Summary Assessment	Estim. Cost
1	Site Conditions	Large relatively flat site adjacent to junior high and community centre. Playfields require top-dressing and re-seeding. Main entry has no barrier free access - space is available to add.	\$28,550.00
2	Building Exterior	The building is in generally good condition except windows which need replacement due to age and condition.	\$513,200.00
3	Building Interior	Generally good condition. Some upgrades to provide rated ceilings and walls at storage areas required. Some carpet/washroom flooring requires replacement.	\$356,409.00
4	Mechanical Systems	Replace fixtures in washrooms. Ventilation upgrade for retrofitted fitness rooms.	\$140,000.00
5	Electrical Systems	Clean the exterior lighting, upgrade exit signs. Replace obsolete panels, provide new diesel generator, replace obsolete MCC, provide additional power and data outlets. Clean and retrofit interior lighting. Replace elevator controls	\$804,000.00
6	Portable Buildings	Good condition.	\$4,000.00
7	Space Adequacy:		
	7.1 Classrooms	Deficiency of 2323.5 m <sup>2</sup> . Note that 4 classrooms have been converted to science rooms.	
	7.2 Science Rooms/Labs	Deficiency of 14.4 m <sup>2</sup> . Note that science program is in high demand and school is working towards getting even more science labs - the ones they have are full.	
	7.3 Ancillary Areas	Surplus of 40.4 m <sup>2</sup> .	
	7.4 Gymnasium	Deficiency of 82.2 m <sup>2</sup> . Note that several of the areas included as "gymnasium" are former storage spaces and the gymnasium mezzanine which have been converted for physical education use.	
	7.5 Library/Resource Areas	Deficiency of 62.7 m <sup>2</sup> .	
	7.6 Administration/Staff Areas	Deficiency of 436.2 m <sup>2</sup> .	
	7.7 CTS Areas	"Deficiency" of 741.2 m <sup>2</sup> . (CTS areas aren't very clearly defined, especially their relationship to ancillary areas).	
	7.8 Other Non-Instructional Areas (incl. gross-up)	Surplus of 2545.3 m <sup>2</sup> . This includes the newly enclosed front entry area which is used for some large movement classes (approx. 144 m <sup>2</sup> ) and the open cafeteria area (634.1) and kitchen (88.3).	
	Overall School Conditions & Estim. Costs		\$1,846,159.00

Section 1	Site Conditions	Rating	Comments/Concerns	Estim. Cost
1.1	General Site Conditions			
1.1.1	Overall site size.	5	Generally flat site, bordered on one side by junior high and on another side a community recreation centre complex. Good size.	
1.1.2	Outdoor athletic areas.	3	No major problems. Re-seeding top dressing of play fields will be required due to heavy use.	\$6,300.00
1.1.3	Outdoor playground areas, including condition of equipment and base.	NA		
1.1.4	Site landscaping.	4	Plantings at main entry area. Row of evergreens along playing field.	
1.1.5	Site accessories (i.e., perimeter and other fencing, guard rails, bike stands, flag poles).	5	Site immediately adjacent to school fenced.	
1.1.6	Surface drainage conditions (i.e., drains away from building, signs of ponding).	4		
1.1.7	Evidence of sub-soil problems.	4		
1.1.8	Safety and security concerns due to site conditions.	FI	Exterior brick "chimneys" present a climbing hazard. Temporary solution in place at rear of school. Inadequate. More permanent solution will require some design work. 18 locations (\$2700±).	
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).	5	Access from Northmount Drive.	
1.2.2	Surfacing of on-site road network (note whether asphalt or gravel).	4	Asphalt.	
1.2.3	Bus lanes/drop-off areas (note whether on-site or off-site).	NA		
1.2.4	Fire vehicle access.	4	Road access on two sides. Access from paved parking on one full side and 3/4 of the other side.	
1.2.5	Signage.	4	Visible from roadway.	
Other				

Section 1	Site Conditions	Rating	Comments/Concerns	Estim. Cost
1.3	<b>Parking Lots and Sidewalks</b>			
1.3.1	Number of parking spaces for staff, students and visitors (including stalls for disabled persons).	3	Sufficient staff parking, with plug-ins. Secure parking for three school buses (for phys.ed.use). Six visitor stalls. No marked handicapped parking (requires signage only).	\$500.00
1.3.2	Layout and safety of parking lots.	4		
1.3.3	Surfacing and drainage of parking lots (note whether asphalt or gravel).	4	Asphalt - good drainage.	
1.3.4	Layout and safety of sidewalks.	4		
1.3.5	Surfacing and drainage of sidewalks (note type of material).	4	Concrete.	
1.3.6	Curb cuts and ramps for barrier free access.	2	Main entrance inaccessible - school accessible thru side entrance to elevator. Adequate area to rework main entry area and provide ramp system to main doors.	\$21,750.00
Other				
	<b>Overall Site Conditions &amp; Estimated Costs</b>			\$28,550.00

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	all	No signs of deterioration visible.	
2.1.2	Wall structure and columns (i.e., signs of bending, cracking, settlement, voids, rust, stains).	4	all	No signs of deterioration visible.	
2.1.3	Roof structure (i.e., signs of bending, cracking, voids, rust, stains).	4	all	No signs of deterioration visible.	
Other					

Section 2	Building Exterior	Rating	Comments/Concerns		Estim. Cost
2.2	<b>Roofing and Skylights</b> <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>		<b>Bldg. Section or Roof Section</b>	<b>Description/Condition/Age</b>	
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	All	No inspection report available. No information on age or structure of roof available from staff. No significant problems reported. Roof may be original. Inspection required. [Estimated cost of replacement with EPDM: \$425,000.00]	
2.2.2	Roof accessories (i.e., ladders, stairs, hatches, masts, exhaust hoods, chimneys, gutters, downspouts, splashpads).	4		All downspouts internal - none visible from exterior.	
2.2.3	Control of ice and snow falling from roof.	NA		Flat roof.	
2.2.4	Skylights (i.e., signs of distress, leaks, ice build-up, condensation, deteriorated materials/seals).	4		New Skylights in main foyer and foyer between portables in good condition. Light scopes at guidance area in good condition.	
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, effluorescence, water stains).	4		Brick cladding in good condition. No issues.	
2.3.2	Fascias, soffits, parapets (i.e., signs of looseness, stains, rust, peeling paint).	4		Aluminum flashings appear in good condition (visual inspection from grade only)	
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			
2.3.4	Interface of roof drainage and ground drainage systems.	NA		Interior drains.	
2.3.5	Inside faces of exterior walls (i.e., signs of cracks, water stains, dust spots).	4		Painted masonry block walls at exterior walls. No signs of distress.	
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).	2	1968	Good condition generally. Overhead doors at C.T.S. (Career & Technology Studies) areas in poor condition. Fiberglass yellowed, cracked, air leakage at perimeters. Replace 4.	\$13,200.00

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		Generally good condition. Original hardware continues to function well.	
2.4.3	Exit door hardware (i.e., safety and/or code concerns).	4			
2.4.4	Windows (i.e., signs of deterioration, rusting metal, glass cracks, peeling paint, damaged seals, sealed unit failure).	2	1968	Aluminum window units operable with Allen wrenches - many not opening due to stripped threads. Interior seals loose and falling out in many windows. Dust inside sealed units throughout. Some aluminum frames distorted at window bottoms. Replace.	\$500,000.00
2.4.5	Window accessories (i.e., latches, hardware, screens, locks, alarms, holders, closers, security devices).	2	1968	Internal blinds damaged in many locations, inoperable several locations. Replace <b>(see 2.4.4 for costs)</b>	
2.4.6	Building envelope (i.e., signs of heavy condensation on doors or windows).	4		No sign of problems.	
Other					
Overall Bldg Exterior Condition & Estimated Costs					\$513,200.00

Section 3	Building Interior - Overall Conditions	Rating	Comments/Concerns		Estim. Cost
3.1	Interior Structure		<u>Bldg. Section</u>	<u>Description/Condition</u>	
3.1.1	Interior walls and partitions (i.e., signs of cracks, spalling, paint peeling).	4	All	No apparent problems.	
3.1.2	Floors (i.e., signs of cracks, heaving, settlement).	4	All	No apparent problems.	
Other					
3.2	Materials and Finishes		<u>Bldg. Section</u>	<u>Description/Condition</u>	
3.2.1	Floor materials and finishes.	3	1968	New Linoleum in all corridors and main common areas (1997). (5) Older tile in classroom areas in good condition. Good floors in gym area. Carpeted areas worn in administration and some instructional areas (3).	\$15,000.00
3.2.2	Wall materials and finishes.	4		Painted G.W.B. or block throughout. School repainted in 1998.	
3.2.3	Ceiling materials and finishes.	3	1968	New Lay-in Acoustic ceiling tiles throughout except at administration area and gymnasium. Glue on tiles in these areas. Replace some water staining on tiles due to roof leakage.	\$55,109.00
3.2	Materials and Finishes (cont'd)		<u>Bldg. Section</u>	<u>Description/Condition</u>	

Section 3	Building Interior - Overall Conditions	Rating	Comments/Concerns		Estim. Cost
3.2.4	Interior doors and hardware.	4		Original hardware in generally good condition. All interior locks rekeyed (1997 or 1998),	
3.2.5	Millwork	3	1968	Millwork generally in good condition. Some areas need replacement. (science room & art) due to condition.	\$55,300.00
3.2.6	Fixed/wall mounted equipment (i.e., writing boards, tackboards, display boards, signs).	4		Generally good condition.	
3.2.7	Any other fixed/mounted specialty items (i.e., CTS equipment, gymnasium equipment).	4			
3.2.8	Washroom materials and finishes.	3	1968	Walls/ceilings in generally good condition. Older washroom/janitorial floors are an epoxy like material with integral base stained/soiled in many areas. Replace. 1 fully accessible washroom on main floor. Add orthopedic washroom at 2nd floor.	\$101,000.00
Other		3	1968	Original lockers in place - some wear and tear and the bottoms are rusting out. Replace 50% in next 5 years, 50% after.	\$100,000.00
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>		Bldg. Section	Description/Condition	

Section 3	Building Interior - Overall Conditions	Rating	Comments/Concerns	Estim. Cost
3.3.1	Building construction type - combustible or non-combustible, sprinklered or non-sprinklered.	4	Appears to be noncombustible. Non sprinklered.	
3.3.2	Fire separations (i.e., between buildings, wings, zones if non-sprinklered).	4	Appear to be in place.	
3.3.3	Fire resistance rating of materials (i.e., corridor walls and doors).	4	Appear acceptable.	
3.3.4	Exiting distances and access to exits.	F.I.	Appear to meet code. Staff has expressed concern about 2nd floor - up to 1100 students and 50 - 60 staff at one time. Review exiting.	
3.3.5	Barrier-free access.	3	1968 Good throughout building except at main entry (alternate side entry accessible) <b>See 1.3.6 and 3.2.8 for costs</b>	
3.3.6	Availability of hazardous materials audit (i.e., evidence of safety concerns with respect to asbestos, PCB's, chemicals).	FI	All Asbestos audit reviewed (dated Mar 8 1999). Much asbestos ceiling tile removed. Asbestos remains throughout school in mechanical spaces.	
3.3.7	Other health and safety concerns (i.e., evidence of excessive noise conditions, air quality problems)	3	1968 Some ventilation issues in art rooms/CST areas. <b>See Mechanical for costs.</b>	
Other		2	1968 Many storerooms (some adapted use) require ceilings and walls to be refinished to provide adequate rating.	\$30,000.00
	<b>Overall Bldg Interior Condition &amp; Estimated Costs</b>			<b>\$356,409.00</b>

Section 4	Mechanical Systems	Rating	Comments/Concerns		Estim. Cost
<b>4.1 Mechanical Site Services</b>					
4.1.1	Site drainage systems (i.e., surface and underground systems, catch basins).	4		Main building - City of Calgary storm connection. Portables - storm piped to ground. No known problems. Parking lot covered with snow - site drainage is unknown.	
4.1.2	Exterior plumbing systems (i.e., irrigation systems, hose bibs).	4		Irrigation system, hose bibbs	
4.1.3	Outside storage tanks.	n/a		No known tanks	
Other					
<b>4.2 Fire Suppression Systems</b>			<b>Bldg. Section</b>	<b>Description/Condition</b>	
4.2.1	Fire hydrants and siamese connections.	n/a		No hydrants. No siamese connection.	
4.2.2	Fire suppression systems (i.e., pumps, sprinklers, piping, reservoirs, hoses, stand pipes, CO2 systems).	4		Stand pipe system throughout excepting the portables. Sprinkler piping in the lower level original storage areas.	
4.2.3	Hand extinguishers, blankets and showers (i.e., in CTS areas).	4		Portable hand extinguishers are located throughout.	
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		Water service from City of Calgary - pressure / volume is acceptable. No known problems.	
4.3.2	Water treatment system(s).	n/a		none.	
4.3.3	Pumps and valves (including backflow prevention valves).	4		Backflow prevention up to date. No domestic booster pumps.	
4.3.4	Piping and fittings.	4		Water lines are copper c/w soldered joints (solder may contain lead). Cast iron bell and spigot sanitary and storm piping. No known problems. Some stains at lead joints in woodworking shop at mezzanine level.	
4.3.5	Plumbing fixtures (i.e., toilets, urinals, sinks)	4		Flush valve W.C.'s. Urinals are wall mounted flush tank - no known problems. Lav's are enamel cast iron, starting to show wear around the drains.	
4.3.6	Domestic hot water system (i.e., heater, storage tanks, failure alarms, pressure, volume, recirculation).	4		1000 gallons domestic water storage tank c/w steam heat exchanger and domestic recirc line. The Grunfoss pump on the recirc line should be rotated 90 degrees as per manufacturers instructions. Small steam boiler for use to supply steam to HE in off-peak times is not in service. No reported problems with hot water volume.	
4.3.7	Sanitary and storm sewers, including sumps and pits (note whether sewage system is municipal or septic).	4		Sanitary and storm drainage to City - No known problems. Interceptor installed in the shop areas - no know problems.	
Other		3		Boys and Girls locker room showers are in marginal condition. Replace.	\$20,000.00

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		2 Volcano 250HP steam boilers. It was reported that only 1 boiler is needed to heat the school in the winter. Only 1 boiler has had the burner assembly upgraded.	
4.4.2	Heating controls (including use of current energy management technology).	4		Honeywell is 98% complete in upgrading the current controls system to some level of a building management system. The end devices remain the existing original pneumatic.	
4.4.3	Fresh air for combustion and condition of the combustion chimney.	4		A fan coil unit complete with a steam coil supplies combustion air for the boiler mechanical room. No known problems with the equipment.	
4.4.4	Treatment of water used in heating systems.	4		Dearborn chemical treatment for all systems. 546 heating system, 4064 steam system and unknown chemical in chilled and humidification system.	
4.4.5	Low water cutoff/pressure relief valves and failure alarms (i.e., hot water heating).	4		Boilers are equipped with all safety controls.	
4.4.6	Heating air filtration systems and filters.	4		Bypass filters on all heating systems.	
4.4.7	Heating humidification systems and components.	n/a		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		Heating water from the steam to water heat exchangers circulates through the perimeter radiation throughout the school and the glycol heat exchangers. The coils in the main AHU are steam.	
4.4.9	Heating piping, valve and/or duct insulation.	4		Piping is insulated and in reasonable shape. Ductwork on the AHUs with cooling coils (A-1, A-2, A-3) is insulated in the mechanical rooms. Breeching is insulated.	
4.4.10	Heat exchangers.	4		2 steam to water heat shell and tube for hydronic heating. 1 steam to water immersion type in the domestic water storage tank. Water to glycol located in the main floor fan room. Water to glycol for the science room AHU.	
4.4.11	Heating mixing boxes, dampers and linkages.	4		Mixing box used in the main AHU has been modified to correct the over supply of outdoor air. Dampers and actuators appear to be in acceptable working condition. The smaller package units mixing dampers, etc. are in.	
4.4.12	Heating distribution/circulation in larger spaces (i.e., user comfort, temperature of outside wall surfaces).	3		Weight room, wrestling room, computer room, sports medicine, and gym teachers office areas are hot and have very poor air circulation, requires ventilation upgrade.	\$55,000.00
4.4.13	Zone/unit heaters and controls.	4		Cabinet unit heaters located throughout at the entrance. Unit heaters in the mechanical and storage areas.	
Other					

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.	4		2 built up units c/w chilled coils, humidifier section, steam heating coils and mixing sections. Units appear to be in reasonable working condition.	
4.5.2	Outside air for the occupant load (if possible, reference CFM/occupant).	4		Outdoor air ductwork, mixing sections, dampers and plenums are all in working condition - unknown quantities of CFM per occupant.	
4.5.3	Air distribution system (if possible, reference number of air changes/hour).	4		Supply and return ducting throughout the building all in working condition - unknown air changes.	
4.5.4	Exhaust systems capacity and condition.	4		Separate exhaust fans throughout, capacity unknown.	
4.5.5	Separation of out flow from air intakes.	4		no known problems.	
4.5.6	Special/dedicated ventilation and/or exhaust systems (i.e., kitchen, labs, CTS areas).	4		Kiln, darkroom, cosmetology, food studies, kitchen, shops, dust collection, science fume hoods and chemical storage lockers are all separate exhaust systems.	
Other					
4.5	Ventilation Systems (cont'd)		Bldg. Section	Description/Condition	
	<i>Note: Only complete the following items if there are separate ventilation and heating systems.</i>				

Section 4	Mechanical Systems	Rating	Comments/Concerns	Estim. Cost
4.5.7	Ventilation controls (including use of current energy management technology).	4	see 4.4.2	
4.5.8	Air filtration systems and filters.	4	low efficient filters	
4.5.9	Humidification system and components.	F1	Main AHU is equipped with a water spray humidifier which was not operating at the time of the review.	
4.5.10	Heat exchangers.	n/a	none	
4.5.11	Ventilation distribution system and components (i.e., ductwork, diffusers, mixing boxes, dampers, linkages).	4	All duct systems and dampers, etc. appear to be in working 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).	F1		Trane absorption chiller (B4F-3) capacity unknown. Unit was functioning last cooling season, unknown performance at time of review.	
4.6.2	Cooling distribution system and components (i.e., ductwork, diffusers, mixing boxes, dampers, linkages)	4		see 4.5.1	
4.6.3	Cooling system controls (including use of current energy management technology).	4		see 4.4.2	
4.6.4	Special/dedicated cooling systems (i.e., labs, CTS areas).	4		unit in mechanical room for unknown purpose.	
Other		3		Cooling tower in need of repair.	\$65,000.00
4.7	Building Control Systems		Bldg. Section	Description/Condition	
4.7.1	Building wide/system wide control systems and/or energy management systems.	4		New Honeywell system in place.	
Overall Mech Systems Condition & Estim. Costs					\$140,000.00

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).	4		Underground service from padmounted transformer. Main switchboard is Westinghouse 480/277 V. Ampere Rating of switch board or main breaker nameplates not displayed. Estimated 1200A. Adequate capacity and good condition.	
5.1.2	Site and building exterior lighting (i.e., safety concerns).	3		Exterior lighting at all entrances/exits. Wall mounted fixtures, majority with wire guards. Controlled by timer. Parking lot - 2 poles with 4 arm fixtures. All exterior lighting needs cleaning.	\$2,000.00
5.1.3	Vehicle plug-ins (i.e., number, capacity, condition).	4		56 duplex receptacles on steel tubular rail in good condition, no control.	
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).	4	All	Simplex 4100 zoned system with digital display of status. Control panel in main lobby with remote annunciator and graphic display at main entry. All bells complete with strobes. The system is in good condition.	
5.2.2	Emergency lighting systems (i.e., safety concerns, condition).	4	All	Selected fluorescent luminaries in hallways and classrooms, 277V are connected to emergency power generator via transfer switch. The system is in good condition.	
5.2.3	Exit lighting and signage (i.e., safety concerns, condition).	2	All	Exit signs 277V. About 7 additional exit signs needed to indicate adequately exit routes.	\$2,000.00
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.	N/A		No surge protection	
5.3.2	Panels and wireways capacity and condition.	3	All	Branch panels are in fair condition, however, they are obsolete with no replacement breakers available. Most panels are full with no spare breakers or spaces.  Recommendation - replace obsolete panels.	\$90,000.00
5.3.3	Emergency generator capacity and condition and/or UPS (if applicable).	3	Mech RM	15kVa 480/277V 3 $\phi$ gas fired generator is located in mechanical room. Should be replaced with a diesel generator, possibly of larger size. A separate enclosure generator room can be built within mech room. The generator appears in operating condition.	\$28,000.00
5.3.4	General wiring devices and methods.	3	All	Wiring generally in conduit, majority recessed. 2-5 receptacles in classroom, some classrooms need additional circuits/outlets. Wiring and devices in good condition.	\$42,000.00
5.3.5	Motor controls.	3	Mech RM	4 MCCs - Westinghouse 480V obsolete (1965) with spare parts difficult to obtain. Some loose starters.  Recommendation: Replace obsolete MCCs	\$50,000.00
Other		4	Mech RM	Building automation control recently upgraded (1999). In good condition	

Section 5	Electrical Systems	Rating	Comments/Concerns		Estim. Cost
5.4	Lighting Systems		<b>Bldg. Section</b>	<b>Description/Condition</b>	
5.4.1	Interior lighting systems and components (i.e., illumination levels, conditions, controls).	3	All	Majority of classrooms - surface wraparound 2-40W, Hallways - some surface, majority recessed. Cafeteria - Recessed 2 x 4 & 2 x 2. Gym - Surface 1 x 4 complete with wireguards. Utility areas, storage - strips, bare or with reflectors. All fluorescent luminaires 277V with magnetic ballasts and T-12 lamps. Tube color - mixture of CW & WW often in the same room. Lighting levels slightly below recommended standard, due to age of lamps and lenses.  Recommended action - cleaning and relamping.	\$60,000.00
5.4.2	Replacement of ballasts (i.e., health and safety concerns).	F1	All	Fluorescent luminaires possibly contain PCBs in ballasts due to age.	
5.4.3	Implementation of energy efficiency measures and recommendations.	3	All	Recommended Action: Replace all ballasts with electronic ballasts and all lamps with T-8 lamps.	\$440,000.00
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	All	Phone switch: Meridian SL1 in good condition, no voice mail. 8 incoming lines plus fax.	
5.5.2	Other communication systems (i.e., public address, intercom, CCTV, satellite or cable TV).	4	All	PA rack with Sonny tuner, amplifier and manual electro mech zone selector switch bank. Paging operates either via phone or zone switch at rack. Phone operation, 2 zones: All call, hallways. Good condition.	
5.5.3	Network cabling (if available, should be category 5 or better).	3	All	Cat 5 cabling - good condition. Majority of classrooms 1 outlet, some more. Need expansion - more outlets are required throughout the building.	\$58,000.00
5.5.4	Network cabling installation (i.e., in conduit, secured to walls or tables).	4	All	Partly in conduit and probably open in ceiling space in good condition.	
5.5.5	Wiring and telecommunication closets (i.e., size, security, ventilation/cooling, capacity for growth).	4	All	Patch panels on shelves and in cabinets in good condition.	
5.5.6	Provision for dedicated circuits for network equipment (i.e., hubs, switches, computers).	4	All	As per site information - Hubs are 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	All	Silent Knight with fire alarm dialer. Security pad Regency 4660B, motion detectors in corridors, good condition.	
5.6.3	Master clock system (if applicable).	4	All	Lathem LTR 384 in main office, good condition.	
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	All	2 hydraulic Montgomery elevators 10 hp with obsolete electro mech relay control.	
5.7.2	Condition of elevators/lifts.	3	All	Both elevator controls are in poor condition and need to be replaced.	\$32,000.00
5.7.3	Lighting and ventilation of elevators/lifts.	4	All	Adequate.	
Other					
Overall Elect. Systems Condition & Estimated Costs					\$804,000.00

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>		<b>Six attached portables.</b>	
6.1.1	Foundation and structure (i.e., signs of bending, cracking, settlement, rust, voids, stains).	4	Stairs in good condition. Underside vented through plywood.	
6.1.2	Roof materials and components (i.e., signs of deterioration, leaks, ice build-up).	4	Internal drains to exterior. Surface above grade. Splash pad needed (one).	
6.1.3	Exterior wall finishes (i.e., signs of deterioration, cracks, water stains).	4	Metal cladding (vertical siding) with horizontal sidings at fascias. Vented plywood soffits.	
6.1.4	Doors and windows (i.e., signs of deterioration, rusting hardware, glass cracks, peeling paint, damaged seals).	4		
6.1.5	Interior finishes (i.e., floors, walls, ceiling).	4	Carpet/sheet lino in good condition.	
6.1.6	Millwork (i.e., counters, shelving, vanities, cabinets).	4	Minimal millwork in good condition.	
6.1.7	Fixed/wall mounted equipment (i.e., writing boards, tackboards, display boards, signs)	4	Blackboards throughout. Adequate tackboards.	
6.1.8	Heating system.	4	Self-contained ventilating units in good working condition.	
6.1.9	Ventilation system.	4	See above.	
6.1.10	Electrical, communication and data network systems.	3	Lighting levels adequate (surface wraps and recessed). Emergency lighting - battery units are operational. 4 to 5 receptacles per classroom - adequate. One dedicated circuits for computer power. 1 computer outlet per classroom - additional drops needed. Replace magnetic ballast with electronic and T-12 lamps with T-8 lamps.	\$4,000.00
6.1.11	Health and safety concerns (i.e., fire and smoke alarms, fire protection systems, exiting, fire resistance rating of materials).	4		
6.1.12	Barrier-free access.	4	Access from main school barrier free.	
	<b>Overall Portable Bldgs Condition &amp; Estimated Costs</b>			<b>\$4,000.00</b>

School Facility Evaluation Project  
Part IV - Additional Notes and Comments

Section 7	Space Adequacy	This Facility			Equiv. New Facility			Surplus/ Deficiency	Comments/Concerns
		No.	Size	Total Area	No.	Size	Total Area		
7.1	Classrooms	29	72.6 - 133.8	2396.5	59	80	4720	-2323.5	Doesn't include 6 portables @ 70 m <sup>2</sup> +/- . Discrepancy in classroom numbers are due to converted classrooms to science labs, portables, extensive CTS programs and larger sized ancillary areas such as the Auditorium.
7.2	Science Rooms/Labs	14	46.5 - 79	1305.6	11	120	1320	-14.4	Includes 4 converted classrooms
7.3	Ancillary Areas (i.e., Art, Computer Labs, Drama, Music,)	8	79 - 318.2	1200.4	2 10	130 90	1160	40.4	Music (318.2 m <sup>2</sup> ) includes practice rooms (44 m <sup>2</sup> ) office & computer lab (51.2 m <sup>2</sup> ).
7.4	Gymnasium (incl. gym storage)	2	157.5 - 745.2	1692.8	1	1675 100	1775	-82.2	Offices & storage range from 9.6 m <sup>2</sup> to 53.0 m <sup>2</sup> . Includes fitness mezzanine, wrestling, sports medicine.
7.5	Library/Resource Areas	1	902.1 58.2	960.3	1	1023	1023	-62.7	
7.6	Administration/Staff, Physical Education, Storage Areas			1280.8		992 350 375	1717	-436.2	
7.7	CTS Areas								
	7.7.1 Business Education	6	73.8 - 110.4	626.3	7	115	805	-178.7	
	7.7.2 Home Economics	2	110.4	220.8	1 1	160 100	260	-39.2	
	7.7.3 Industrial Arts	4	139.4 - 464.5	1100.9	1 1 2	300 510 570	1950	-849.1	Note that former VED area is now used for Fine Arts. School would like another construction/design lab.
	7.7.4 Other CTS Programs	9	50.2 - 212.5	1360.8	9	115	1035	325.8	Includes storage @ 29 m <sup>2</sup> .
7.8	Other Non-Instructional Areas (i.e., circulation, wall area, crush space, wc area)			7299.3			4754	2545.3	Includes kitchen and cafeteria.
	<b>Overall Space Adequacy Assessment</b>	75		19444.5	106		20519	-1074.5	

Evaluation Component/ Sub-Component	Additional Notes and Comments
Section 3.3	Administration had concerns about number of students on second floor and width of hallways & location and size of exits. Apparently, fire department has reviewed and said conditions are safe. Concern remains. A code check (travel distances, widths, etc.) of this area based on actual number of occupants might allay concerns.
Section 7	Plans need to be updated to show most recent renovations.
Section 7	Cafeteria thought to be small for number of students as per Administration.
Section 7	Lack of staff preparation/work space a critical item for staff - would like to address if possible in any upgrades.
Section 7	With any upgrading, would like to review in filling internal court to provide more science rooms. Some classrooms have been partially converted to science labs. Need to complete.
Section 7	Administration lists priorities in upgrades to meet program requirements as: 1st: more science labs; 2nd: more CTS space; requirement for better physical education space and another gym; need for more construction/design space. Note that the school has purchased buses to take students to off-site physical education programs (due to lack of space in building - also means that there is a good variety of programs). When team was at school dancing classes were taking place in the renovated foyer (only large open space available - gyms get constant use).