C

### School Facility Evaluation Project Part IV - Additional Notes and Comments

School Name:	Ross She	eppard C	omposite High	School	School Code:	7053		
Location:	13546 - 1	111 Aven	ue, Edmonton,	AB.	Facility Code:	1141		
Region: Jurisdiction:	North Edmonto	n Schoo	District #7		Superindendent: Contact Person: Telephone:	R.A Clark * Ron Fortin ** 454-8576		
Grades:	10 - 12				School Capacity:	1995		
uilding 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		
Driginal Building	1956	2	11,490	- Concrete floors and structure; brick wall veneer; steel roof structure; flat membrane roof	- Steam is generated in 1956 and 1963 Boiler Rooms. In the 1956 area, steam is distributed to usage points, classroom ventilators and gym air systems. In the 1963 section, the steam is converted to hot water prior to distribution to usage points, classroom ventilators and air systems. Classroom ventilation provided by ventilators in each classroom. The gyms have separate air systems.			
dditions/ Expansions	1958 1962 1968	2 3 3	2,656 4,833 2,250	- Concrete columns and beams; concrete floor slabs; concrete roof slabs on OWSJ				

\* Acting Director, Facilities Services, Edmonton Public Schools

\*\* Principal

Evaluator's Name: F & Company: F

Peter Ordynec

Holland Roth Architects

Upgrading/ Modernization (identify whether minor or major)	1973 to 1999		- See "Summary of Projects and Costs" in the "Facility Management Guide"	- There have been no major modernizations. A summary of minor upgrades, dating from 1973, is included with the "Facility Management Guide" prepared by EPS. The most recent Weight Room renovations have not been included in the guide.
Portable Struct. (identify whether attached/perman. or free- standing/ relocatable)	None			

List of Reports/	- Facility Management Guide (EPS)
Supplementary	
Information	

Evaluation Components	Summary Assessment	Estim. Cos
1 Site Conditions	- Grade slopes in toward building around most of building perimeter. Some minor asphalt repair required. Otherwise, site conditions are o.k.	\$80,820
2 Building Exterior	- Serious window deterioration, especially openers. Glass block needs re-pointing. Some re-painting of exterior doors and sun shades required. Re-roof original roofs.	\$670,16
3 Building Interior	- The big issues are asbestos removal, new T-bar ceilings throughout tied into sprinkler, heating and ventilation installation, Barrier-free renovations including elevator shafts, power door openers and washroom renovations	\$1,640,5
4 Mechanical Systems	- Requires major upgrade to ventilation and heating system. Controls upgrade should be considered to compliment the ventilation and heating upgrade. New sprinklers required on all levels per Alberta Building Code.	\$2,984,6
5 Electrical Systems	- Due to Mechanical and Architectural (Asbestos Abatement) upgrades, power services should be upgraded as well as lighting to new style T-8 and Electronic Ballasts	\$1,172,0
6 Portable Buildings	- Not applicable	
7 Space Adequacy:		
7.1 Classrooms		
7.2 Science Rooms/Labs		
7.3 Ancillary Areas		
7.4 Gymnasium		
7.5 Library/Resource Areas		
7.6 Administration/Staff Areas		
7.7 CTS Areas		
7.8 Other Non-Instructional Areas (incl. gross-up)		
Overall School Conditions & Estim. Cost	1	\$6,548,1

ection 1	Site Conditions	Rating	Comments/Concerns	Estim. Cost
1.1	General Site Condions			
1.1.1	Overall site size.	4	- The school sits very efficiently on its existing site. Large landscaped areas to south and east. Adequate staff and visitor parking.	
1.1.2	POutdoor athletic areas.	4	- Football fields, soccer fields to north of site; tennis courts, swimming pool adjacent.	
1.1.3	Outdoor playground areas, including condition of equipment and base.		- N/A	
1.1.4	Site landscaping.	4	- Large landscaped areas to south and east; mature trees; borders on park to the west	
1.1.5	Site accessories (i.e., perimeter and other fencing, guard rails, bike stands, flag poles).	4	- Totem pole at street entrance; low "Lawn rail" at main entrance; Frost fence along 135 Street; bike racks appear adequate; concrete garbage enclosures	
1.1.6	Surface drainage conditions (i.e., drains away from building, signs of ponding).	3	<ul> <li>Overall, the building sits high in relation to site; ground and sidewalks adjacent to building face slope in towards the building; consistent with settling found in older buildings; re-grade suggested</li> </ul>	\$47,000
1.1.7	' Evidence of sub-soil problems.	2	<ul> <li>One localized drainage problem along east side; water seepage into basement dressing rooms; suggest re-grading asphalt paving in that area</li> </ul>	\$10,500
1.1.8	Safety and security concerns due to site conditions.	4	- No safety/security issues apparent	
Othe	r			

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	- Wide, long sidewalk from 111 Avenue to formal entrance; second major entrance is from 111 Avenue to gymnasium foyer; cafeteria loading ramp at NW corner of site; parking lots/vehicle access at NE and SE of site; main student access appears to be from the NE (transit terminal)	
1.2.2	Surfacing of on-site road network (note whether asphalt or gravel).	3	- Asphalt. Some minor repairs required	See 1.3.3
1.2.3	Bus lanes/drop-off areas (note whether on-site or off- site).	4	- Special events buses use NE parking lot access; this allows a loop in and out. Alternately, use lane along north of school	
1.2.4	Fire vehicle access.	4	- Unimpeded fire vehicle access is available from the parking lots at the NE and SE of the site; lane along the north of the site is also available; annunciator panel in main (south) entrance of building; fire fighters park on 111 Avenue and access via main entrance	
1.2.5	Signage.	4	<ul> <li>School identification letters on stone façade - south face of building; pylon sign on south landscaped area close to 111 Avenue; totem pole serves as an identifier</li> </ul>	
Other				

Section 1	Site Conditions	Rating	Comments/Concerns	Estim. Cost
1.3	Parking Lots and Sidewalks			
1.3.1	Number of parking spaces for staff, students and visitors (including stalls for disabled persons).	4	<ul> <li>NE lot: 90 powered stalls (staff and visitors) and approximately 20 non-powered</li> <li>SE lot: 52 powered stalls</li> <li>Adequate parking for staff</li> </ul>	
1.3.2	2 Layout and safety of parking lots.	4	- There do not appear to be problems except for double-parking and overcrowding in the NE lot (student vehicles)	
1.3.3	Surfacing and drainage of parking lots (note whether asphalt or gravel).	3	- Asphalt paved parking; drainage to catch basins; some minor patching required	\$20,000
1.3.4	Layout and safety of sidewalks.	3	<ul> <li>Adequate sidewalks from street (at north and south) to all entrances</li> <li>Main entrance - tile damaged outside entry doors</li> </ul>	\$1,000
1.3.5	Surfacing and drainage of sidewalks (note type of material).	3	<ul> <li>Concrete sidewalks; generally, good drainage except for localized problems:</li> <li>a) sidewalk slope at main entrance</li> <li>b) localized grade/sidewalk drop at SW entrance</li> <li>c) localized drainage at sidewalks leading to the two courtyards</li> <li>d) replace/re-grade sidewalk along north of gym</li> </ul>	\$2,320
1.3.6	Curb cuts and ramps for barrier free access.	4	- Barrier free; on-grade access is available at the three entrances located between the 1956/58 wing and the 1962/68 wing	
Other		4	- There is a shortage of parking for students; bus terminal nearby to NE; adequate bicycle racks	
	Overall Site Conditions & Estimated Costs			\$80,820

Section 2	Building Exterior	Rating		Comments/Concerns	Estim. Cost
	Overall Structure		Bldg. <u>Section</u>	Description/Condition	
2.1.1	Floor structure and beams (i.e., signs of bending, cracking, heaving, settlement, voids, rust, stains).	4	1956 & 1958	<ul> <li>Cast-in-place concrete stucture &amp; slabs; no problems apparent</li> </ul>	
		4	1962 & 1968	- Cast-in-place concrete beams; concrete floor slabs on metal pans	
2.1.2	P Wall structure and columns (i.e., signs of bending, cracking, settlement, voids, rust, stains).	_	1956 & 1958	- Masonry walls; concrete columns and beams; no deterioration	
		4	1962 & 1968	- Same as 1956 & 1958	
2.1.3	Roof structure (i.e., signs of bending, cracking, voids, rust, stains).		1956 & 1958	- Steel roof deck on steel trusses	
		4	1962 & 1968	- Concrete roof slab on steel pans on steel (OWSJ)	
Other	r			<ul> <li>Unable to verify structural bearing in exterior walls; assumed concrete columns and beams with masonry infill</li> </ul>	
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 or Roof <u>Section</u>	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).	3	All	- No specific roofing report available; records show partial re-roofing in 1992 and 1996 (Areas 7,2,3 & 4); no signs of roof leaks within building; suggest re- roof of remainding original roof areas	\$210,000
2.2.2	Roof accessories (i.e., ladders, stairs, hatches, masts, exhaust hoods, chimneys, gutters, downspouts, splashpads).	4	All	- Internal stair access available to all roofs; roof ladders between varying roof levels; roof top equipment (mechanical) and accessories all appear in maintained condition	
2.2.3	Control of ice and snow falling from roof.	4	All	- Roofs are flat; no problems with ice; roof water downpipes are internalized	
2.2.4	Skylights (i.e., signs of distress, leaks, ice build-up, condensation, deteriorated materials/seals).			- No skylights	
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).	3	All	- Generally, all brick veneer (original and additions) is in good shape; glass block, however, needs re-grouting - (all blocks, outside surfaces only)	\$110,000
2.3.2	Fascias, soffits, parapets (i.e., signs of looseness, stains, rust, peeling paint).	3	All	- Pre-finished metal fascias generally o.k.; sun shades (south elevation) need re-conditioning; re-finish/re-paint soffit at SW entrance	\$6,000
	Building envelope (i.e., evidence of air infiltration/ exfiltration through the exterior wall or ice build up on wall, eaves, canopy).	3	1956 & 1958 1962 & 1968	<ul> <li>Paint deterioration on inside face of brick "mullions" between window sections implies a moisture problem; major building envelope modifications not practical; re-paint</li> <li>Moisture/ice on interior face of exterior walls appears more a function of the window units rather than of the wall assembly</li> </ul>	See 3.2.2
2.3.4	Interface of roof drainage and ground drainage systems.	4	All	- Roof drainage is internalized leading to storm sewers; ground water is collected in catch basins leading to sewers	
2.3.5	Inside faces of exterior walls (i.e., signs of cracks, water stains, dust spots).	4		- See 2.3.3 above; a re-construction of the exterior walls would be impractical; ongoing maintenance (painting) is probably the best compromise	
Other		3		- Remove classroom ventilator units; repair walls and close openings (leave exterior grilles)	\$15,000

Section 2	Building Exterior	Rating		Comments/Concerns	Estim. Cost
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	All	- Doors at main entry and the main gymnasium entry are aluminum and in good shape; remaining doors are wood, painted; suggest painting, re-surfacing west and north facing doors	\$1,160
2.4.2	Door accessories (i.e., latches, hardware, screens, locks, alarms, holders, closers, security devices).	4	All	- Good, heavy-duty hardware appears worn but in good condition	
2.4.3	Exit door hardware (i.e., safety and/or code concerns).	4	All	- Panic devices, closers at all exterior exit doors	
2.4.4	Windows (i.e., signs of deterioration, rusting metal, glass cracks, peeling paint, damaged seals, sealed unit failure).	3	1956 & 1958 1962 & 1968	<ul> <li>The windows show signs of weathering and some wood rot (dry rot) in limited locations; the problem with replacement is the support for the glass block over. Lower sills are metal clad; suggest replacement and repair of all sash (ie: operating and fixed) and re-surfacing existing perimeter frames</li> <li>Problem is with the operating units; suggest removal, re-furbishing with new operating hardware and weatherstrip; re-installation</li> </ul>	\$310,000
2.4.5	Window accessories (i.e., latches, hardware, screens, locks, alarms, holders, closers, security devices).	3	All	- See 2.4.4 above; problem with windows in all parts of the building is the hardware; replacement suggested	\$18,000
2.4.6	Building envelope (i.e., signs of heavy condensation on doors or windows).	3		- See notes in 2.3.3 and 3.2.2 for related price	See 3.2.2
Other					
	Overall Bldg Exterior Condition & Estim Costs				\$670,160

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	All	- Generally, minor localized cracking; no evidence of structural problems leading to wall deterioration	
3.1.2	Floors (i.e., signs of cracks, heaving, settlement).	4	All	- There are some signs of floor slab heave in the basement of the 1962/68 wing, consistent with slab-on-grade installations; these are not, however, sufficiently pronounced to cause concern	
Other					
3.2	Materials and Finishes		Bldg. Section	Description/Condition	
3.2.1	Floor materials and finishes.	3	All	- No major problem; some (20%) replacement/repair of resilient flooring required; areas have been identified and reflected in this price; terrazzo floors are in good condition; gymnasium and stage floors need re-finishing; further investigation required (ie. thickness measure) to determine whether replacement of large gym floor and large stage floor are required. (\$42,000 price included is for refinishing only)	\$86,800
3.2.2	Wall materials and finishes.	3	1956 & 1958 1962 & 1968	<ul> <li>Stage, drama/dressing/custodial areas would all benefit from painting; exterior walls in all classrooms need removal of peeling paint and re-painting; significant percentage of classrooms need painting; re-paint all exterior walls</li> <li>Allow re-painting 50% of classrooms</li> </ul>	\$33,000
3.2.3	Ceiling materials and finishes.	3	1956 & 1958 1958 1962 & 1968	<ul> <li>The major problem is asbestos: on the ceilings and, in some rooms, on the upper portion of the walls (asbestos removal will be dealt with in Section 3.3); suggest new suspended acoustic ceilings in all classrooms as well as removal/replacement of T-bar ceilings in corridors; mechanical component needs perimeter radiation units: suggest these be incorporated in the new ceiling installation (cheaper than floor installation and ensuing re-fabrication of millwork); large gymnasium ceiling tiles (12" x 24") appear loose and have been dropping off on a regular basis; small gym ceiling has the same conditions; suggest price allowance for checking gym ceiling and re-fastening as required (assume 30% of area)</li> <li>Generally, the existing T-bar ceilings are dirty and show signs of repeated removal/replacement; the enclosed price reflects the percentage of ceilings where replacement was considered appropriate</li> </ul>	\$320,000

Section 3	Building Interior - Overall Conditions	Rating		Comments/Concerns	Estim. Cost
3.2	Materials and Finishes (cont'd)		Bldg. Section	Description/Condition	
3.2.4	Interior doors and hardware.	3		- Interior doors generally well maintained; some re-painting required; hardware old but solid; no apparent problems; some code-related changes are in order; these are discussed in 3.3.3	\$5,000
3.2.5	Millwork	4		<ul> <li>Millwork is old; localized repair/replacement is in order; low priority compared to the more pressing issues</li> </ul>	
3.2.6	Fixed/wall mounted equipment (i.e., writing boards, tackboards, display boards, signs).	4		- Same category as 3.2.5 above; minimal complaints from staff re: adequacy	
3.2.7	Any other fixed/mounted specialty items (i.e., CTS equipment, gymnasium equipment).	4		<ul> <li>School is in the process of replacing gymnasium bleachers using a separate source of funding; generally, equipment appears to suffice; no specific complaints from staff</li> </ul>	
3.2.8	Washroom materials and finishes.	3		- Old but functioning and adequate; localized repair issues have been identified and extend of suggested repair/replacement is identified in the enclosed budget price	\$3,160
Other					

ction 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		Bldg. <u>Section</u>	<u>Description/Condition</u> - Building area (for code review purposes) is approximately 10,000 M <sup>2</sup> . Per Alberta Building Code 1997, the construction of this building falls under subsection 3.2.2.24. The building is non-combustible construction and would have no problem meeting 1-hour fire separation requirements. However, all	
	required. Building construction type - combustible or non- combustible, sprinklered or non-sprinklered.	3		floors must be sprinklered - Non-combustible; sprinklers required	See Mech
	Fire separations (i.e., between buildings, wings, zones if non-sprinklered).	3		<ul> <li>1 hour fire separations required</li> <li>1 hour fire separation of exit stairways is provided with the exception of two stairways in the 1956 wing</li> </ul>	4.2 \$10,600
	Fire resistance rating of materials (i.e., corridor walls and doors).	4		- Corridor walls do not require a fire separation; fire separation of exits is adequate except as noted in 3.3.2	
3.3.4	Exiting distances and access to exits.	4		- Meet code requirements	
3.3.5	Barrier-free access.	3	All	<ul> <li>Generally, the school is not barrier-free at present; grade level access is provided to the 1956/58 wings via the north entrances to these wings</li> <li>Suggest the following measures: <ul> <li>a) Barrier-free elevator shafts in both the 1956/58 and the 1962/68 sections</li> <li>b) Power door openers to the entrances leading to the elevator shafts</li> <li>c) Hold-open devices on corridor doors in the 1956/58 wing</li> <li>d) One barrier-free washroom stall and lavatory for each sex in both the 1956/58 wing and the 1962/68 wing.</li> </ul> </li> </ul>	\$342,000
	Availability of hazardous materials audit (i.e., evidence of safety concerns with respect to asbestos, PCB's, chemicals).	3		- No audit available at time of review; remove all ceiling and upper-wall asbestos in 1956/58 wing	\$840,000
	Other health and safety concerns (i.e., evidence of excessive noise conditions, air quality problems)	4		- Air quality problems addressed with mechanical review	
Other					
	Overall Bldg Interior Condition & Estim Costs				\$1,640,56

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	Ext.	- Surface drainage. Roof drains to storm sewer system	
4.1.2	Exterior plumbing systems (i.e., irrigation systems, hose bibs).	4	Ext.	- Hose bibbs on school exterior.	
4.1.3	Outside storage tanks.			- None	
Other					
4.2	Fire Suppression Systems		Bldg. Section	Description/Condition	
4.2.1	Fire hydrants and siamese connections.	4	Ext.	- Siamese connection on side of small gym. Fire hydrants 111 Avenue & 135 Street; one across 133 Street. 2 others along 111 Avenue in front of school; one NW corner; one NE corner.	
4.2.2	Fire suppression systems (i.e., pumps, sprinklers, piping, reservoirs, hoses, stand pipes, CO2 systems).	2	1956 1956	<ul> <li>Basement - Sprinklers installed. Sprinkler tree in boiler room.</li> <li>Crawl space adjacent boiler room. There is a high area used as storage.</li> <li>Some small engines stored there besides general storage. Sprinklers should be extended to cover storage area.</li> </ul>	\$18,000
			All	- Fire hose cabinets installed.	
4.2.3	Hand extinguishers, blankets and showers (i.e., in CTS areas).	4	All	<ul> <li>Fire extinguishers installed in all fire hose cabinets and wall hung in mechanical rooms.</li> </ul>	
4.2.4	Other special situations (e.g., flammable storage areas, science labs, CTS areas).	3	Labs	- Blankets in Chem Labs.	
		~	Prep.Rm	- Chemical storage in unvented cabinets. Corrosion developing on cabinets.	Inc. 4.5.1
Other		3		<ul> <li>Add new sprinklers to portion of building not presently sprinklered, but required by present code requirement</li> </ul>	\$300,000

Section 4	Mechanical Systems	Rating		Comments/Concerns	Estim. Cost
4.3	Water Supply and Plumbing Systems		Bldg. <u>Section</u>	Description/Condition	
4.3.1	Domestic water supply (i.e., pressure, volume, quality - note whether municipal or well supply).	4	1956	<ul> <li>Room 013 - 6 " municipal water service to a 2" water meter. Serves fire hose systems through a reduced pressure backflow preventer.</li> </ul>	
4.3.2	Water treatment system(s).			- None on domestic water system.	
4.3.3	Pumps and valves (including backflow prevention valves).		1956	- Room 103 - Domestic hot water recirculation pump Bell & Gossett 189034.	
		4	1962	- Boiler Room - Domestic hot water circ. Pump Bell & Gossett 189105.	
			All	- Backflow adequate. Some valves are seizing.	
4.3.4	Piping and fittings.	3	All Chem Labs	<ul> <li>Original piping. No noted problems.</li> <li>Drain lines on Chem Lab sinks are corroding and some have been replaced. Remainder require replacement.</li> </ul>	\$8,000
4.3.5	Plumbing fixtures (i.e., toilets, urinals, sinks)		All	<ul> <li>Any cracked fixtures have been replaced. Remaining fixtures adequate.</li> <li>No problems noted.</li> </ul>	
		3		- No handicap fixtures in washrooms.	\$5,000
			Showers	- Showers have only one drain in centre of shower area.	
4.3.6	Domestic hot water system (i.e., heater, storage tanks, failure alarms, pressure, volume, recirculation).		1956	- 013 - Steam heat exchanger in hot water storage tank c/w recirc. Pump. See item 4.3.3.	
		4	1962	- Boiler Room - 2 domestic hot water heaters c/w recirc. pump noted 4.3.3. One at State Model SBT 80 199 NEG DFCGA 180,000 BTU/hr.; 80 U.S. gal. One at Rudd Model GL-90-300A, 75 U.S. Gal., 360,000 BTU/hr.	
4.3.7	Sanitary and storm sewers, including sumps and pits (note whether sewage system is municipal or septic).	4	1968	- Fan Room - 3 sump pumps for weeping tile.	
		4	All	- Municipal sewage system. No problems noted.	
Other					

Section 4	Mechanical Systems	Rating		Comments/Concerns	Estim. Cost
4.4	Heating Systems		Bldg. <u>Section</u>	Description/Condition	
4.4.1	Heating capacity and reliability (including backup capacity).		1956	- Rm. 013 - 3 fire tube steam boilers. Original boilers manufactured Reliance Welding Works. Coal fired boilers converted to natural gas. Two larger boilers to heat building. One smaller boiler to serve the domestic hot water system. Unable to access tags. Possible asbestos in boiler and flue insulation. Two condensate tanks in boiler room; one for domestic hot water system; small boilers, and one for the two heating boilers. Four condensate pumps have tags painted over.	
		3	1963	- Boiler Room - 2 Fire tube steam boilers Reliance Welding Works. Coal fired boilers converted to natural gas. Four steam to heating water shell and tube heat exchangers. Five pumps for heating water distribution. One at 3 h.p., 2 at 3/4 h.p. and 2 at .5 h.p No legible tags on any pumps. One condensate tank complete with two condensate pumps Darling 76291.	\$955,305
			1963	- Complaints of downdrafting in boiler.	
4.4.2	Heating controls (including use of current energy management technology.	3	All	- Pneumatic system, uses day/night setback.	Inc. 4.7.1
4.4.3	Fresh air for combustion and condition of the combustion chimney.	4	Boiler Rm.	- Combustion air available for boilers and domestic hot water tanks. Unable to see inside of combustion chimney.	
4.4.4	Treatment of water used in heating systems.		Boiler	- Chemical injection into steam condensate tanks.	
		4	Rms. 1963	- Boiler Room - Each hot water heating system has a chemical feed pot and bypass filter.	
4.4.5	Low water cutoff/pressure relief valves and failure alarms (i.e., hot water heating).	4	Boiler Rm.	- All boilers have sight glasses, blowdowns, pressure relief valves and low water cut off.	
4.4.6	Heating air filtration systems and filters.			- N/A	
4.4.7	Heating humidification systems and components.			- None	

Section 4	Mechanical Systems	Rating		Comments/Concerns	Estim. Cost
4.4	Heating Systems Cont'd		Bldg. <u>Section</u>	Description/Condition	
	Heating distribution systems (i.e., piping, ductwork) and associated components (i.e., diffusers, radiators).		All	- Major upgrade of heating system required.	Inc. 4.4.1
		3	1956	- Steam heating system to classroom ventilators, perimeter radiation and air systems.	
			1963	- Steam to heat exchangers then heating hot water distribution to classroom ventilators perimeter radiation and air systems.	
4.4.9	Heating piping, valve and/or duct insulation.	3	All	- Some insulation missing at mechanical equipment. No insulation on ductwork. Possibility of asbestos on heating pipe elbows and on boilers.	Inc. 4.4.1
4.4.10	Heat exchangers.	4	1963	- 4 - Shell and tube heat exchangers (steam to hot water). No problems noted.	
4.4.11	Heating mixing boxes, dampers and linkages.	3	All	- Classroom ventilators had problems noted. Cold air comes from the bottom in winter. Require upgrade. Hard to control drafting at times. Some noted as not working.	Inc. 4.4.1/ 4.5.1
4.4.12	Heating distribution/circulation in larger spaces (i.e., user comfort, temperature of outside wall surfaces).		All	- Major upgrade of heating system required.	Inc. 4.4.1
			Gym	- Complaints of draft and temperature swings.	
		3	Drama	- Hot and stuffy.	
			Library	- Upper library hot.	
			General	- Many complaints of room having heat swings. Some ventilation not working. Windows open to cool rooms.	
4.4.13	Zone/unit heaters and controls.	3	Vest.	<ul> <li>Vestibules use force flow and unit heaters. Some complaints of noise.</li> <li>Overheating and temperature swings.</li> </ul>	Inc. 4.4.1
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.		All	- Major ventilation upgrade required.	
			Clsrms.	- Use classroom ventilators.	
				- Trane Torridor unit 315CB4 Serial #185669. Complete with outside air/return air mixing section and reheat coil.	
		3	Lrg.Gym	- Trane Torridor Unit 3-150B2 Serial #185666. Complete with reheat coil outside air only. Access across gym ceiling on planks laid on ceiling.	\$1,061,450
			Café.	- Ceiling hung in 63 boiler room. No access to tag. Unit has reheat coil.	
			1968	- TWA Trane Cabinet Fans. One at Unit 14-HF Serial #428394 and one at Unit T12-1F Serial #429068.	
4.5.2	Outside air for the occupant load (if possible, reference CFM/occupant).		All	- Major ventilation upgrade required.	Inc. 4.5.1
			Clsrms.	- Use classroom ventilators limited control on outside air.	
			Sm.Gym	- Outside air through mixing box.	
		2	Lrg.Gym	- Outside air through air system.	
			Café	- Outside air through air system.	
				- A number of areas were noted without any ventilation, ie. Main offices, science prep., Principal's office, and Drama areas are examples. Generally, there were a lot of stuffy areas in the school.	
4.5.3	Air distribution system (if possible, reference number of air changes/hour).	2	All	- Limited air distribution. Some areas do not have ventilation.	Inc. 4.5.1
4.5.4	Exhaust systems capacity and condition.	3	All Wshrms.	<ul> <li>The building uses a corridor exhaust system to ventilate corridors.</li> <li>Limited amount of air from washrooms. Little flow from grilles. Grilles very dirty.</li> </ul>	Inc. 4.5.1

Section 4	Mechanical Systems	Rating		Comments/Concerns	Estim. Cost
4.5	Ventilation Systems Cont'd		Bldg. Section	Description/Condition	
4.5.5	Separation of out flow from air intakes.	4	All	- Adequate.	
4.5.6 Other	Special/dedicated ventilation and/or exhaust systems (i.e., kitchen, labs, CTS areas).	2	All Kitchen Science Arts Drk.Rm. 1956 HomeEc	<ul> <li>All major ventilation upgrade required.</li> <li>Kitchen exhaust c/w fire suppression air is made up from Cafeteria area.</li> <li>Fume hoods have little or no air flow from them.</li> <li>Kiln exhaust system; c/w fire suppression. No air to room to replace exhaust air.</li> <li>Complaints of being light headed after working in darkroom area.</li> <li>South facing staff offices have window shakers for cooling.</li> <li>Exhaust system above household style ranges.</li> </ul>	Inc. 4.5.1
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	
	Ventilation distribution system and components (i.e., ductwork, diffusers, mixing boxes, dampers,			- N/A	
Other				- N/A	

Section 4	Mechanical Systems	Rating		Comments/Concerns	Estim. Cost
4.6	Cooling Systems		Bldg. Section	Description/Condition	
4.6.1	Cooling system capacity and condition (i.e., chillers, cooling towers, condensers).			- N/A	
4.6.2	Cooling distribution system and components (i.e., ductwork, diffusers, mixing boxes, dampers, linkages)			- N/A	
4.6.3	Cooling system controls (including use of current energy management technology).			- N/A	
4.6.4	Special/dedicated cooling systems (i.e., labs, CTS areas).			- N/A	
Other				- N/A	
4.7	Building Control Systems		Bldg. Section	Description/Condition	
4.7.1	Building wide/system wide control systems and/or energy management systems.	3	1963	<ul> <li>Pneumatic control system with day/night setback. Major upgrade of controls required to compliment the heating and ventilation upgrade.</li> <li>Boiler Room - Compressor Wbester Model U.H. Serial #8780 complete with air dryer.</li> <li>Controls system should be upgraded to match upgraded heating and ventilation system.</li> <li>Controls compressor in mechanical Room 013; no legible tags.</li> </ul>	\$636,870
	Overall Mech Systems Condition & Estim. Costs				\$2,984,625

Section 5	Electrical Systems	Rating		Comments/Concerns	Estim. Cost
5.1	Site Services		Bldg. Section	Description/Condition	
	Primary service capacity and reliability (i.e., access, location, components, installation, bus sizes - note whether overhead or underground).	3		<ul> <li>Primary service is an underground feed to a transformer vault located in the centre basement.</li> <li>Distribution equipment is a FPE 1600A 120/208V substation feeding two 800A CDP's. Substation is bus connected to the transformers.</li> <li>Due to mechanical upgrade, increase service to 15 Kv - 600V unit substation and new 600V distribution.</li> </ul>	\$150,000
5.1.2	Site and building exterior lighting (i.e., safety concerns).	5		- Site lighting consists of roof mounted HPS fixtures.	
5.1.3	Vehicle plug-ins (i.e., number, capacity, condition).	3		<ul> <li>School has 118 parking stalls with power.</li> <li>No plugs are on timer or thermostat controls.</li> </ul>	\$20,000
Other					
				- N/A	
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		<ul> <li>Fire alarm is an Edwards CMIN Addressable system.</li> <li>Devices consist of: smoke detectors in stairwells and infirmary, heat detectors in storage rooms, science rooms and utility rooms, bell/strobe devices and duct detectors.</li> <li>System is regularly tested. Last test performed August 9, 1999.</li> <li>System was installed in 1998.</li> </ul>	
5.2.2	Emergency lighting systems (i.e., safety concerns, condition).	4		<ul> <li>Emergency lighting consists of battery packs and remote heads .</li> <li>Emergency lighting properly illuminates exit paths.</li> </ul>	
5.2.3	Exit lighting and signage (i.e., safety concerns, condition).	3		<ul> <li>Exit signs consist of incandescent signs in appropriate locations.</li> <li>Storage area which is being used as a drama room should have exit signs added.</li> </ul>	\$1,000
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.				
		3		<ul> <li>Surge protection is only present in Computer Lab 110.</li> <li>Add surge protection panel to Room 254 to feed computers.</li> </ul>	\$3,000
5.3.2	Panels and wireways capacity and condition.	3		<ul> <li>Panels consist of Westinghouse &amp; FPE type panelboards. 90% of panels are originally installed.</li> <li>Panels are obsolete and spare parts are difficult to locate.</li> <li>Most panels are either full or have less than 5% spare space.</li> </ul>	\$78,000
5.3.3	Emergency generator capacity and condition and/or UPS (if applicable).				
				- N/A	
5.3.4	General wiring devices and methods.	3		<ul> <li>Classrooms typically only have two receptacles. Devices are old and have little retention left.</li> <li>Recommend addition of receptacle in classrooms to meet increased demand for computers and replacement of existing receptacles.</li> </ul>	\$240,000
5.3.5	5 Motor controls.	3		<ul> <li>Motor controls consist of wall mounted starters manufactured by Allen Bradley.</li> <li>Some starters have been replaced or retrofitted with variable speed drives.</li> <li>Existing starters are obsolete and spare parts difficult to locate.</li> </ul>	\$10,000
Other					

Section 5	Electrical Systems	Rating		Comments/Concerns	Estim. Cost
5.4	Lighting Systems		Bldg. Section	Description/Condition	
5.4.1	Interior lighting systems and components (i.e., illumination levels, conditions, controls).		1956	<ul> <li>Lighting levels are typically low in classrooms and depend on natural light.</li> <li>Controls consist of line voltage switching in classrooms and low voltage in corridors, gymnasiums and library.</li> <li>Classrooms; 290-530 Lux.</li> </ul>	
		2		<ul> <li>Corridors; 76 Lux.</li> <li>Gymnasium, small; 500 Lux (Mercury Vapour).</li> <li>Gymnasium, large; 880 Lux (Mercury Vapour).</li> <li>Administration; 800 Lux.</li> <li>Gymnasium fixtures are Mercury Vapour type fixtures with wireguards and propose a safety hazard if bulbs blow up.</li> </ul>	See 5.4.3 For Pricing
			1958	- Classrooms; 270-670 Lux. - Washrooms; 440 Lux. - Corridors; 76-80 Lux.	
			1962	- Classrooms; 290-1000 Lux.	
5.4.2	Replacement of ballasts (i.e., health and safety concerns).		1968	- Classrooms; 370-500 Lux.	
		F.I.		- Age of school indicates a possibility of some PCB type ballasts.	
	Implementation of energy efficiency measures and recommendations.	2		<ul> <li>Recommendation to replace lighting with new style fixtures. T8 lamps and electronic ballasts to improve lighting in classrooms.</li> <li>Gymnasium with new style metal halide fixtures with lens.</li> <li>Upgrade remainder.</li> </ul>	\$670,000
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).	5		- Telephone system was installed in December, 1999. Telephones are located in all classrooms and offices.	
	Other communication systems (i.e., public address, intercom, CCTV, satellite or cable TV).	4		<ul> <li>Public Address System is an originally installed system and is tied into the phone system for paging.</li> </ul>	
5.5.3	Network cabling (if available, should be category 5 or better).	5		- Data infrastructure consists of Cat. 5 cabling with a fibreoptic backbone.	
5.5.4	Network cabling installation (i.e., in conduit, secured to walls or tables).	5		- Installation is neat and tidy utilizing conduit and cable tray.	
5.5.5	Wiring and telecommunication closets (i.e., size, security, ventilation/cooling, capacity for growth).	5		<ul> <li>Main server room requires additional ventilation.</li> <li>Data closets are located in various locations in the school and have room for growth.</li> </ul>	
	Provision for dedicated circuits for network equipment (i.e., hubs, switches, computers).	3		- Dedicated circuits are only provided for in Room 110.	See 5.3.4 For Pricing
Other					

Section 5	Electrical Systems	Rating		Comments/Concerns		
5.6	Miscellaneous Systems		Bldg. Section	Description/Condition		
5.6.1	Site and building surveillance system (if applicable).			- N/A		
5.6.2	Intrusion alarms (if applicable).	4		<ul> <li>Intrusion alarms consist of infrared motion detectors installed in classrooms, hallways and offices. System has an auto dialer to a monitoring company.</li> </ul>		
5.6.3	Master clock system (if applicable).			- N/A		
Other						
5.7	Elevators/Disabled Lifts (If applicable)		Bldg. Section	Description/Condition		
	Elevator/lift size, access and operating features (i.e., sensing devices, buttons, phones, detectors).			- N/A		
5.7.2	Condition of elevators/lifts.			- N/A		
5.7.3	Lighting and ventilation of elevators/lifts.			- N/A		
Other		3	All	- School will require barrier-free access elevators in both the 1956/58 and the 1962/68 wings.	See 3.3.5	
	Overall Elect. Systems Condition & Estim Costs				\$1,172,000	

Section 6	Portable Buildings	Rating	Comments/Concerns	Estim. Cost
	Note: Separate sheets can be completed, if necessary, for portable buildings of different ages and/or conditions.		- Not applicable	
	Foundation and structure (i.e., signs of bending, cracking, settlement, rust, voids, stains).			
	Roof materials and components (i.e., signs of deterioration, leaks, ice build-up).			
	Exterior wall finishes (i.e., signs of deterioration, cracks, water stains).			
	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).			
	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.			
	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			\$0

0	Space Adequacy	This Facility			Equiv. New Facility			Surplus/	Commonte/Concorne
Section 7		No.	Size	Total Area	No.	Size	Total Area	Deficiency	Comments/Concerns
	Classrooms	15 @ 9 @ 2 @ 12 @ 2 @ 2 @ 1 @ 1 @ 1 @	72 81 88 90 99 102 61 109 124	3761	52	80	4160	-399.0	- There are 45 classrooms and 20 science classrooms; some science classrooms can be used for non-science teaching
	Science Rooms/Labs	2 @ @ @ @ @ @ @ @ 0 @ 0 @ 0 @ 0 @ 0 @ 0	61 72 79 90 97 101 105 111 132	2015	10	120	1200	815.0	- Area totals include Science Prep. Rooms (268 M <sup>2</sup> )
	Ancillary Areas (i.e., Art, Computer Labs, Drama, Music,)	1 @ @ @ 1 @ @ @ @ 1 @ @ @ 2 @	75 108 189 95 232 102 117 122 139	1674	2 9	130 90	1070	604.0	- Existing area includes 2 stages (206 + 33 = 239 M <sup>2</sup> )
	Gymnasium (incl. gym storage)	1 @ 1 @ 1 @	544 850 48	1589	1 1	1675 100	1775	-186.0	- Includes weight room (147 M <sup>2</sup> )
	Library/Resource Areas	1 @ 1 @	435 223	658	1	900	900	-242.0	- Existing area excludes staff resource areas
7.6	Administration/Staff, Physical Education, Storage Areas	A PE S	1139 48 626	1813	A PE S	1077 350 347	1774	39.0	- Phys. Ed. staff areas undersized

Section 7	Space Adequacy	This Facility			Eq	uiv. New	Facility	Surplus/	
		No.	Size	Total Area	No.	Size	Total Area	Deficiency	Comments/Concerns
7.7	7.7.1 Business Education	N/A							
	7.7.2 Home Economics	1@ 1@	256 116	372	1 1	160 100	260	112.0	- Larger classroom split into two areas
	7.7.3 Industrial Arts	N/A							
	7.7.4 Other CTS Programs	N/A							
	Other Non-Instructional Areas (i.e., circulation, wall area, crush space, wc area)			9347		2478 1189 480 240	4387	4960.0	- Includes dressing rooms, cafeteria and kitchen
	Overall Space Adequacy Assessment			21,229			15,526	5,703.0	

Evaluation Component/ Sub-Component	Additional Notes and Comments
Section 7: Space Adequacy	- For a rated capacity of 1995 students, the school would need 1995/25 = 80 classrooms. At present, for a capacity of 1867 students, the existing 79 classrooms are adequate
	<ul> <li>The Physical Education staff have voiced several concerns: <ol> <li>shortage of space and shower/change facilities for both female and male staff; staff are presently cramped (2-3 staff in a 150 ft. office)</li> <li>request additional storage space, interior and exterior</li> <li>ventilation and heating of the staff areas as well as the gymnasia is poor</li> <li>shortage of electrical outlets in female staff change area</li> <li>suggest gym floor replacement (has been sanded too many times) and address surface finish re: slipping</li> <li>Items 3, 4 &amp; 5 have been addressed in this evaluation; items 1 &amp; 2 are presented here for consideration</li> </ol> </li> </ul>