HAMILTON WENTWORTH DISTRICT SCHOOL BOARD
FEASIBILITY STUDY AND CONCEPT DESIGN

SALTFLEET DISTRICT HIGH SCHOOL
108 Highland Rd. West, Stoney Creek, ON

MAY 10, 2016

CS&P Architects

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1. EXECUTIVE SUMMARY

1.1. Purpose

The purpose of this study is to examine the feasibility of a Space Program and Building Renewal of the existing Saltfleet District High School. The objective is to align the existing facility with the Board's vision for the revitalization and modernization of its complete secondary school portfolio and with its ***Secondary Program Strategy***. The study provides recommendations to the HWDSB to support their decision making process regarding the Board's ***Secondary School Revitalization Program***. Saltfleet District High School requires a combination of upgrades and repairs to meet both curricular demands and day-to-day operations. Added to these retrofits are other critical and emerging issues of new curriculum and program delivery strategies, which need to be physically accommodated and resolved including: student engagement, wellness, universal design (accessibility); special education delivery for personalized learning; sustainability; and the integration of, and possibilities for, technological change to teaching and learning strategies.

1.2. Methodology

The study included a comprehensive review of the existing facility in relation to current and projected enrolments; program delivery; operations and maintenance; and facility conditions. The five year recommendations for upgrades detailed in the ***2013 Building Condition Assessment***, prepared by VFA Inc., were analyzed and coordinated with the proposed program upgrades. A detailed review of the ***Asbestos Inventory, updated in May 2014*** was undertaken to determine the scope and phasing of the required abatement and associated remediation work.

The ***Ontario Ministry of Education Secondary School Space Template*** was used to assess the number and size of existing program spaces in relation to the projected enrolment and the specific educational programs planned for this facility. The ***HWDSB Secondary Program Strategy*** provided information on the required educational programs to be accommodated at Saltfleet. Tier 1 programs accommodate all students at all secondary schools. Tier 2 programs accommodate some students at some secondary schools. Tier 3 and Specialist High Skills Major programs require specialized facilities to accommodate few students at selected secondary schools only.

1.3. Overview

Saltfleet District High School is located on a 15 acre site at 108 Highland Road West, Stoney Creek. The original school was built in 1992. The school is a two storey masonry construction. The original 157,400 square foot facility includes a licenced childcare facility and selected specialty program areas: a triple gym and large exercise room; large central atrium and lecture hall; cafeteria; construction and automotive shops; and a greenhouse supporting a horticulture program. A two storey classroom addition was completed in 2015.

1.4. Proposed Concept Design

The proposed plan accommodates the required educational space program and aligns with key educational principles and values envisioned by the Board. Improvements to existing program and support spaces are proposed to align the floor area and layouts with the provisions of the ***HWDSB Draft Secondary School Design Manual***.

Tier 3, Specialist High Skills Major and Intervention/Support programmes designated for Sherwood include: Construction, Horticulture, Non-Profit Sector, and Extensive Support Program

Construction
The Construction SHSM enables students to build a foundation of sector-focused knowledge and skills before entering apprenticeship training, college, university, or an entry-level position in the workplace.

Horticulture
This course provides students with a wealth of practical knowledge in plant biology, plant science, landscape construction and maintenance, and greenhouse growing.

Non-Profit Sector
Non-profit sector offers a variety of careers in many fields. Employers in the non-profit sector include the different levels of government, education, health care agencies, non-profit organizations, and non-governmental organizations.

Extensive Support Program
This program provides students with intensive, continuous, and individualized support, including collaboration with parents and community partners in order to provide appropriate programming and transition to community supports.

The proposed renewal work includes required building improvements as detailed in the ***Building Condition Assessment*** completed in 2013; required upgrades to meet Ontario Building Code and accessibility standards; site upgrades to meet curriculum, social and municipal requirements; and program and support area upgrades.

The design responds to the current and future needs, unanticipated changes in pedagogy, curriculum, technology and learning expectations. Flexibility in curriculum delivery, based on personalized learning, supported by appropriate technologies and quality learning environments are the basis for the proposed upgrades.

2. EXISTING CONDITIONS ASSESSMENT

2.1. Introduction

A Building Condition Assessment was completed by VFA Inc for HWDSB in 2013. This document is included in the Appendix for reference. According to the VFA assessment the Comparable Facility Condition Index for Sherwood was 16.64% in 2013; the Official FCI was 1.25% which is ranked as Good. The FCI is a ratio of the cost of deferred maintenance over the cost to replace the facility. A Good FCI indicates that the facility looks clean and functional. Limited and manageable component and equipment failure may occur. Facilities' staff time will be devoted to regular scheduled maintenance.

Our assessment of the building conditions include a compilation of the items noted in the VFA report and our site observations from detailed on-site visual inspections of the building and grounds.

2.2. Site Assessment

Site Background: Saltfleet District High School is located on a 15 acre site at 108 Highland Road West. The main access to the school is from the parking and drop-off area located off Highbury Drive. Additional parking is accessed off Highland Road West. A track and playfield with updated bleachers is located at the north portion of the site. The school is surrounded by single-family residential to the south and west and residential under development to the north and east.

Accessibility: Barrier free parking spaces are provided with reasonably convenient access to the main entrance door. The main entrance door is accessible by use of an automatic door operator. All areas of the school are accessible. An elevator provides access to the second floor. The stage is accessed with a barrier free lift which requires upgrades. Accessible washrooms are provided on each floor. Classroom doors do not meet current standards for accessibility.

Parking and Service: There are two parking areas located on the east and west sides of the building. Designated parking for the childcare facility is located on the west side. Service access is located to the west of the building off Highland Road West. This area is used for garbage, loading and compounds for the technology shops. Access for servicing around the perimeter of the building is limited.

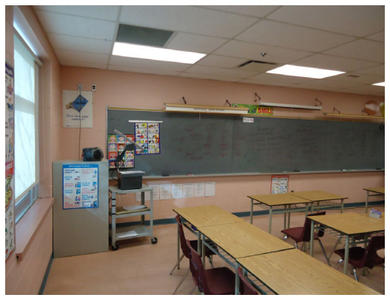
Pedestrian and Vehicular Circulation: An extensive drop-off lane is located on the east side of the building accessed off Highbury Drive. Students and staff share the same parking area. Pedestrian pathways to and through the site are adequate.

Site Amenities: The site has a combined natural turf football/soccer field, with a running track. There are no hard surface active play areas. There is a dedicated garden area at the rear of the building.

2.3. Building Condition

Architectural

- exterior walls: brick veneer finished assembly
- roof: EPDM roof covering assembly - aged and in fair condition
- interior finishes:
  - floors: terrazzo, mainly ceramic tiles and, vinyl composite tiles, hard wood flooring and carpet – carpet, hardwood and VCT are aged and in fair condition
  - walls: painted masonry, plaster and gypsum are aged and are in fair condition. The moveable folding partition and the gypsum walls – aged and in fair condition
  - ceilings: acoustic ceiling tiles and gypsum board ceilings– aged and in fair condition
  - millwork: wood cabinetry with plastic laminate countertops – aged and in fair condition
  - washroom partitions:
  - lockers:
  - interior doors / hardware: HM with paint finish, wood natural, painted or with plastic laminate finish, often with partial vision panel are aged and in fair condition
  - interior stairs: steel with rubber treads – replace first flight of stairs and all tread coverings



Structural
- metal roof deck, steel trusses, steel joists, load-bearing masonry

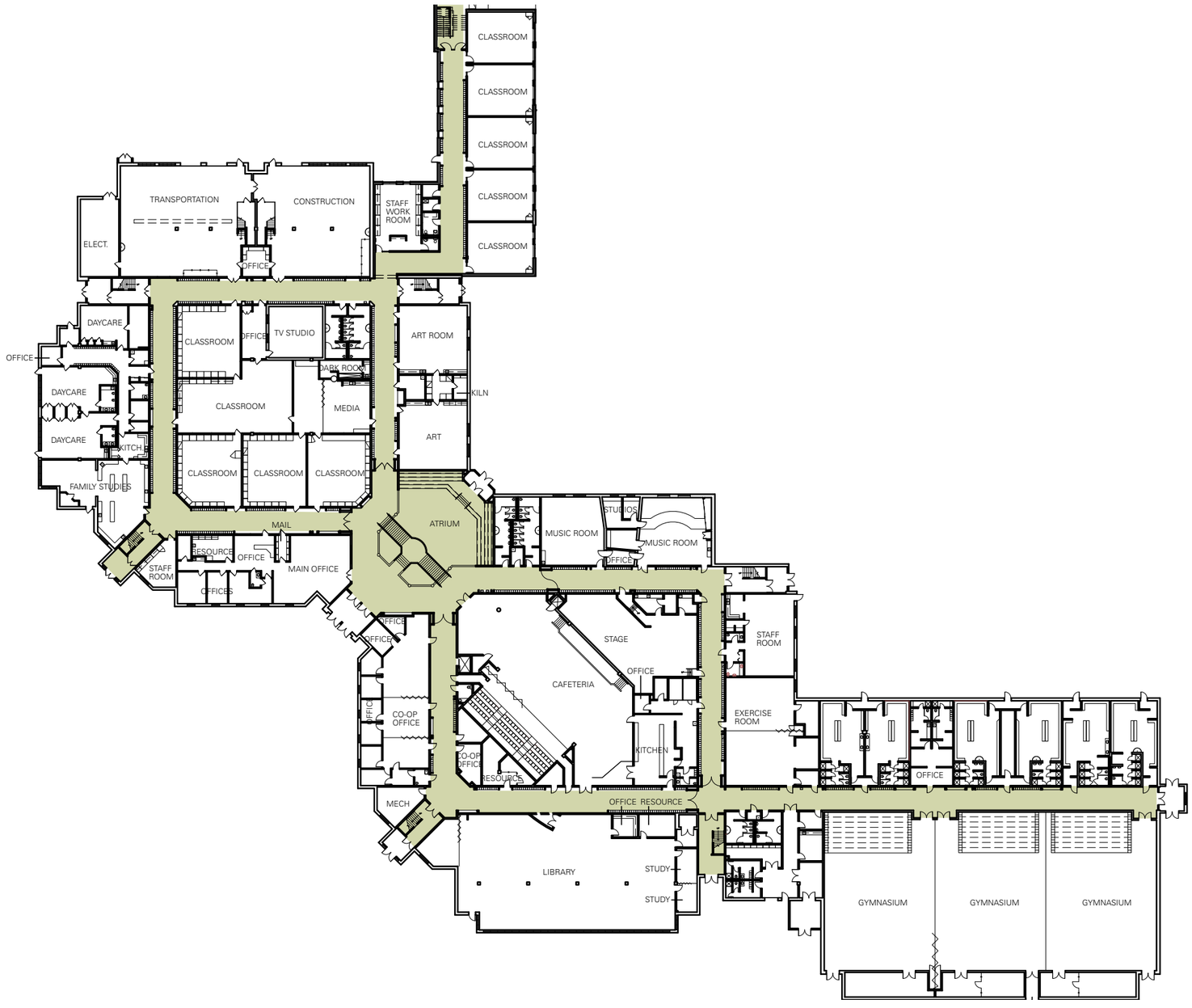
Mechanical
- heating: two gas fired hot water boilers updated in 2012, boilers provide hot water to perimeter fin tube radiators, force flow heaters, unit ventilators, four heat pumps and three central air handlers. HVAC heat pumps are aged and in fair condition. Vestibule heaters are in poor condition
- ventilation: three central air handlers with exhaust fans and various internal exhaust fans. The exhaust for the automotive shop is original to the building and is in poor condition. There are nine ventilators are not functioning and in poor condition
- cooling: cooling tower connected to heat pumps and a rooftop condensing unit. Heat pumps were replaced in 2015
- HVAC controls: building automation system and Direct Digital Controls
- domestic hot water: gas fired boiler, original to 1996 is aged and in fair condition
- gas supply system: is corroded and in fair condition
- boiler chemical pot feeder: aged and in poor condition
- terminal and packaged heat pump units: approximately 100 units - aged and in fair condition

Electrical
- main switchgear: review required
- fire alarm system: review required
- emergency lighting: is hard wired lighting fixtures connected to a central battery bank - aged and in fair condition
- lighting:
- interior lighting: CFLs and T8 lamps with electronic ballasts are in good condition
- exterior lighting: HID fixtures and light standards are in good condition
- security system: panel, motion detectors, sensors, CCTV and keypads was updated in 2008
- PA system:
- IT system: Updated in 2013 and is in good condition
- dust collector: undersized, aged and in poor condition

2.4. Building Code Analysis

The building is classified as Group a Division 2 by the ***Ontario Building Code***. Any renovations or alterations to the building will be subject to the provisions of Part 3 and Part 11 of the OBC. These OBC provisions set out different requirements depending on whether the renovations are considered Basic Renovation or Extensive Renovation.

EXISTING FLOOR PLANS



FIRST FLOOR PLAN

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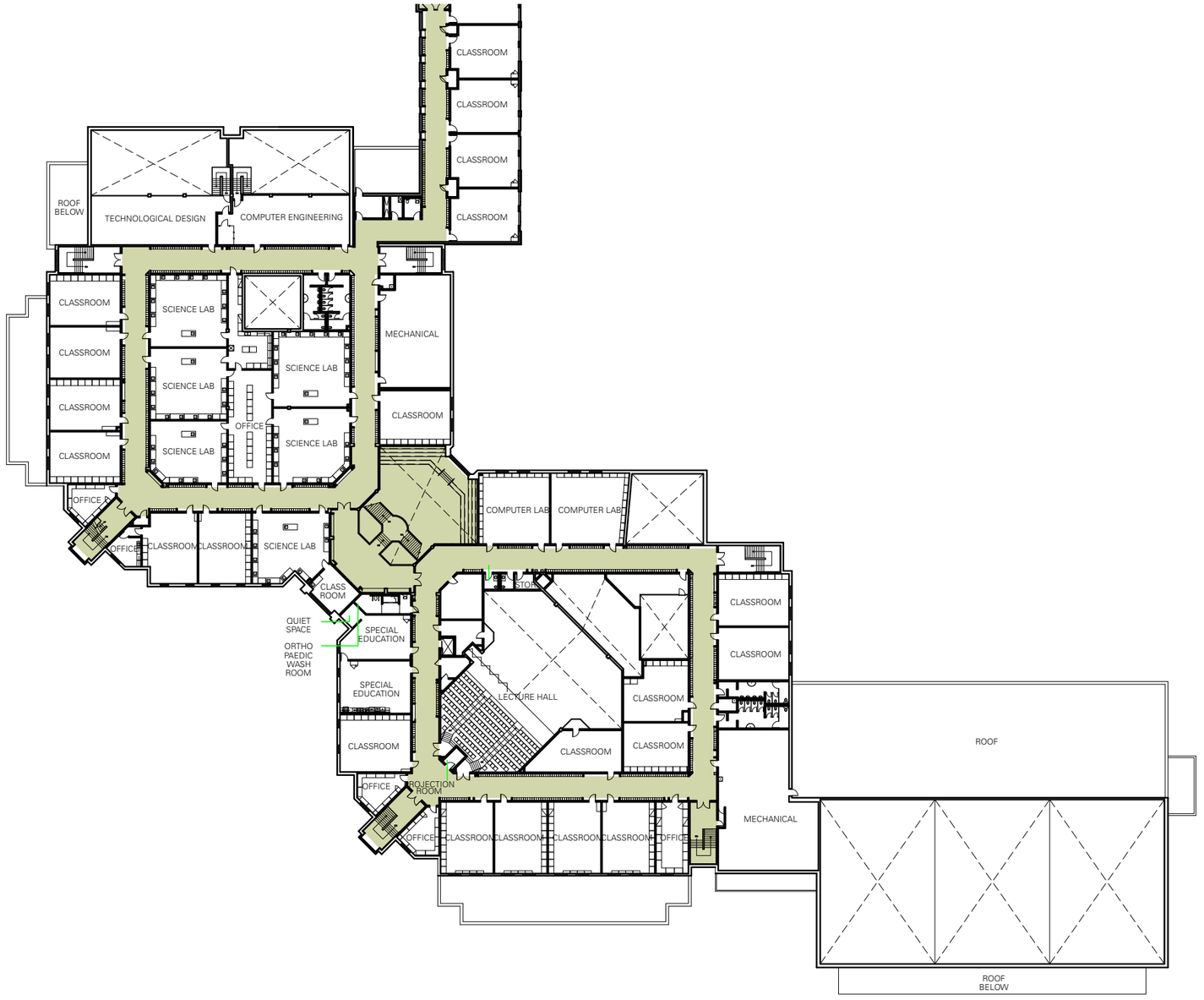
EXISTING FLOOR PLANS



SECOND FLOOR PLAN

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3. CONCEPT PLAN

3.1 Introduction

The proposed retrofit and program upgrades to Saltfleet District High School are based on a review and analysis of the following:

- HWDSB Secondary Program Strategy
- HWDSB Tier 3 Program and Specialist High Skills Major program requirements
- Ministry of Education Secondary School Space Template
- HWDSB Draft Secondary School Design Manual
- Existing and projected student enrolments
- Building Condition Report prepared by VFA Inc

3.2 Ministry of Education – Space Template Analysis

An analysis of the existing program areas and overall gross floor area in relation to the provisions of the *Ministry Space Template* for a school for 1,400 students identifies the following:

- the number of standard Classrooms and general instructional spaces are lower that the requirements for the current and projected student enrolment
- the number and floor area of Science rooms is deficient
- the floor area of spaces dedicated to Music/Arts is deficient
- the floor area of large Technology Labs exceeds the standard
- the Library is appropriately sized for the current and projected student enrolment
- the Cafeteria is undersized for the current and projected student enrolment
- the combined General Office, Guidance and Student Services areas are appropriately sized for the current and projected student enrolment
- the combined floor area of the Gymnasium, Exercise rooms and associated change rooms exceed the standard
- the overall gross floor area of the building is comparable the requirements of the Ministry Space Template

3.3 Floor Plans

The proposed upgrades include extensive renovations to upgrade or relocate the following program areas:

- Transportation
- Construction (Tier 3)
- Science Rooms

The proposed upgrades include basic renovations to the following program areas:

- Library

3.4 Site Plan

The proposed site improvements include:

- upgrades/repairs to parking surfaces, driveways and sidewalks where required

3.5 Asbestos Abatement

- Gaskets in piping in specific areas contain asbestos. Reference to be made to the May 2014 Asbestos Inventory prior to any construction that may disturb these areas.

SECONDARY SCHOOL SPACE TEMPLATE

SECONDARY SCHOOL SPACE TEMPLATE
SAMPLE SCHOOL

School Board: Sample District School Board
Grade Range: Grade 9 to 12
Program: English, French or Dual Track
School Name: **Sample School for 1,650 Students**

SECONDARY SCHOOL SPACE TEMPLATE
Saltfleet Existing (includes new addition)

School Board:
Grade Range:
Program:
School Name: **Saltfleet Existing (includes new addition)**

SECONDARY SCHOOL SPACE TEMPLATE
Saltfleet Proposed

School Board:
Grade Range:
Program:
School Name: **Saltfleet Proposed**

Table 18: Secondary Model Program Sheet			
Expected Enrolment:			**1,400**
Credit Assumptions	**%**	**Credits**	**Classes**
			63
Regular	51	5,355	37
Science	15	1,575	9
Arts	10	1,050	6
Business	5	525	3
Technology	10	1,050	6
Family Studies	3	315	2
Physical Education	6	630	

Number of Instructional Spaces	**63**							**52**								**Model vs Existing**		**49**									
Instructional Spaces	**#**	**Size**		**Floor Area**		**Load**	**OTG**	**Instructional Spaces**	**#**	**Size**		**Floor Area**		**Load**	**OTG**			**Instructional Spaces**	**#**	**Size**		**Floor Area**		**Load**	**OTG**
		m²	**ft²**	**m²**	**ft²**					**m²**	**ft²**	**m²**	**ft²**			**m²**	**ft²**			**m²**	**ft²**	**m²**	**ft²**		
Classroom	37	70	750	2,578	27,750	21	777	Classroom	32	78	838	2,491	26,816	21	672	-87	-934	Classroom	32	78	838	2,491	######	21	672
Science Laboratories	**9**	**116**	**1,250**	**1,045**	**11,250**	**21**	**189**	**Science Laboratories**	**6**			**690**	**7,428**		**126**	-355	-3,822	**Science Laboratories**	**6**			**690**	**7,428**		**126**
Science General (Avg Size)		-		-	-	21		Science General (Avg Size)	2	115	1,238	230	2,476	21	42			Science General (Avg Size)	2	115	1,238	230	2,476	21	42
Science Biology (Avg Size)		-		-	-	21		Science Biology (Avg Size)	1	115	1,238	115	1,238	21	21			Science Biology (Avg Size)	1	115	1,238	115	1,238	21	21
Science Chemistry (Avg Size)		-		-	-	21		Science Chemistry (Avg Size)	2	115	1,238	230	2,476	21	42			Science Chemistry (Avg Size)	2	115	1,238	230	2,476	21	42
Science Physics (Avg Size)		-		-	-	21		Science Physics (Avg Size)	1	115	1,238	115	1,238	21	21			Science Physics (Avg Size)	1	115	1,238	115	1,238	21	21
Total Music / Arts	**6**			**678**	**7,300**		**126**	**Total Music / Arts**	**6**			**640**	**6,890**		**126**	-38	-410	**Total Music / Arts**	**6**			**640**	**6,892**		**126**
Music Instrumental/Vocal	2	129	1,390	258	2,780	21	42	Music Instrumental/Vocal	2	120	1,292	240	2,583	21	42			Music Instrumental/Vocal	2	120	1,292	240	2,584	21	42
Graphics/Visual Arts	4	105	1,130	420	4,520	21	84	Graphics/Visual Arts	2	120	1,292	240	2,583	21	42			Graphics/Visual Arts	2	120	1,292	240	2,584	21	42
Theatre Arts		-		-	-	21	-	Theatre Arts		-		-	-	21	-			Theatre Arts		-		-	-	21	-
Photography		-		-	-	21	-	Photography		-		-	-	21	-			Photography		-		-	-	21	-
Media Arts		-		-	-	21	-	Media Arts	2	80	862	160	1,724	21	42			Media Arts	2	80	862	160	1,724	21	42
Technical / Vocational	**11**			**1,544**	**16,620**		**231**	**Technical / Vocational**	**7**			**1,172**	**12,616**		**147**	-372	-4,004	**Technical / Vocational**	**5**			**920**	**9,902**		**105**
Business/Computer Room	3	97	1,040	290	3,120	21	63	Business/Computer Room	2	104	1,120	208	2,239	21	42			Business/Computer Room	2	104	1,120	208	2,240	21	42
Family Studies	*2*	*114*	*1,230*	*229*	*2,460*		*42*	*Family Studies*	*1*			*128*	*1,377*		*21*	-101	-1,083	*Family Studies*	*1*			*128*	*1,377*		*21*
Family Studies (Food)		-		-	-	21	-	Family Studies (Food)	1	128	1,377	128	1,377	21	21			Family Studies (Food)	1	128	1,377	128	1,377	21	21
Family Studies (Textiles/Fashion)		-		-	-	21	-	Family Studies (Textiles/Fashion)		-		-	-	21	-			Family Studies (Textiles/Fashion)		-		-	-	21	-
Family Studies (Nutrition)		-		-	-	21	-	Family Studies (Nutrition)		-		-	-	21	-			Family Studies (Nutrition)		-		-	-	21	-
Technology Lab Large	*2*	*232*	*2,500*	*465*	*5,000*		*42*	*Technology Lab Large*	*3*			*710*	*7,646*		*63*	246	2,646	*Technology Lab Large*	*2*			*584*	*6,285*		*42*
Transportation		-		-	-	21		Transportation	1	315	3,390	315	3,390	21	21			Transportation	1	315	3,390	315	3,390	21	21
Construction		-		-	-	21		Construction	1	269	2,895	269	2,895	21	21			Construction	1	269	2,895	269	2,895	21	21
Design/Drafting		-		-	-	21		Design/Drafting	1	126	1,361	126	1,361	21	21			Design/Drafting		-		-	-	21	-
Manufacturing		-		-	-	21		Manufacturing		-		-	-	21	-			**Manufacturing (Tier 3 Program)**		-		-	-	21	-
Green Industries		-		-	-	21		Green Industries		-		-	-	21	-			Green Industries		-		-	-	21	-
Welding		-		-	-	21		Welding		-		-	-	21	-			Welding		-		-	-	21	-
Wood		-		-	-	21		Wood		-		-	-	21	-			Wood		-		-	-	21	-
Integrated		-		-	-	21		Integrated		-		-	-	21	-			Integrated		-		-	-	21	-
Technology Lab Small	*4*	*140*	*1,510*	*561*	*6,040*		*84*	*Technology Lab Small*	*1*			*126*	*1,354*		*21*	-435	-4,686	*Technology Lab Small*	-			-	-		-
Communications		-		-	-	21		Communications		-		-	-	21	-			Communications		-		-	-	21	-
Computer Engineering		-		-	-	21		Computer Engineering	1	126	1,354	126	1,354	21	21			Computer Engineering		-		-	-	21	-
Computer Laboratory		-		-	-	21		Computer Laboratory		-		-	-	21	-			Computer Laboratory		-		-	-	21	-
Cosmetology		-		-	-	21		Cosmetology		-		-	-	21	-			Cosmetology		-		-	-	21	-
Health Sciences		-		-	-	21		Health Sciences		-		-	-	21	-			Health Sciences		-		-	-	21	-
Special Education / Resource Room				**520**	**5,600**		**-**	**Special Education / Resource Room**	**2**			**160**	**1,722**		**18**	-360	-3,878	**Special Education / Resource Room**	**-**			**-**	**-**		**-**
Special Education Area		-		-	-	9	-	Special Education Area	2	80	861	160	1,722	9	18			Special Education Area		-		-	-	9	-
Resource Area - Loaded (400-699 sf)		-		-	-	12	-	Resource Area - Loaded (400-699 sf)		-		-	-	12	-			Resource Area - Loaded (400-699 sf)		-		-	-	12	-
Resource Area - Unloaded (<400 sf)		-	-	-	-			Resource Area - Unloaded (<400 sf)		-		-	-		-			Resource Area - Unloaded (<400 sf)		-		-	-		-
Instructional Area Flexibility		-		520	5,600			Instructional Area Flexibility										Instructional Area Flexibility							

SECONDARY SCHOOL SPACE TEMPLATE

Other Spaces				1,310	14,100		-
Stage		139	1,500	139	1,500		
Library/Library Resource Centre		520	5,600	520	5,600		
Cafetorium/Cafeteria		650	7,000	650	7,000		
Lecture		-	-	-	-	21	-
Seminar		-	-	-	-		
Chapel		-	-	-	-		

Gymnasium and Exercise Room				1,511	16,260		42
Gymnasium Area - Quadruple		1,486	16,000	-	-	63	-
Gymnasium Area - Triple	1	1,115	12,000	1,115	12,000	42	42
Gymnasium Area - Double	-	743	8,000	-	-	21	-
Gymnasium Area - Single	-	372	4,000	-	-		
Dance/Aerobics Studio		-		-	-		
Exercise Room		-		-	-		
Weight Room		-		-	-		
Change Rooms	4	64	690	256	2,760		
Gymnasium and Exercise Room Flexibility		-		139	1,500		

Total GFA and OTG of Instructional Area				9,186	98,880		1,365

Operational Areas	Per Pupil		Floor Area	
	m²	ft²	m²	ft²
General Office	0.2	2.3	299	3,220
Guidance Area	0.1	1.3	169	1,820
Cooperative Education Office			26	280
Staff Lounge			-	
Kitchen/Servery	0.1	1.1	143	1,540
Custodial Areas	0.2	1.7	221	2,380
Staff Room and Teacher Work Rooms	0.3	3.5	455	4,900
Meeting Room			28	300
Academic Storage	0.1	1.0	130	1,400
Washrooms	0.3	3.2	416	4,480
Gymnasium Storage			74	800
Mechanical Spaces	0.5	5.8	750	8,078

Total Operational Area	2,713	29,198
Total Instructional (from above)	9,186	98,880
Total Operational and Instructional	11,899	128,078

Gross Up Added	42%	4,997	53,793
Gross Floor Area		16,896	181,871

Area per Pupil for 1400 pupils:	12.07	129.9

Community Use Rooms	m²	ft²
Child Care	-	
Early Years Hub	-	
Community Use	-	
Other (please identify)	-	
Other (please identify)	-	
Other (please identify)	-	
Total Community Use Rooms Area	-	-

Total Square Feet	16,896	181,871

Other Spaces	4			1,209	13,017		21		
Stage	1	227	2,443	227	2,443		-	88	943
Library/Library Resource Centre	1	604	6,506	604	6,506		-	84	906
Cafetorium/Cafeteria	1	378	4,068	378	4,068		-	-272	-2,932
Lecture	1	-		-	-	21	21	0	0
Seminar		-		-	-		-		
Chapel		-		-	-		-		

Gymnasium and Exercise Room	8			1,813	19,512		42	302	3,252
Gymnasium Area - Quadruple		-		-	-	63	-		
Gymnasium Area - Triple	1	1,127	12,136	1,127	12,136	42	42		
Gymnasium Area - Double		-		-	-	21	-		
Gymnasium Area - Single		-		-	-		-		
Dance/Aerobics Studio		-		-	-		-		
Exercise Room	1	203	2,180	203	2,180		-		
Weight Room		-		-	-		-		
Change Rooms	6	80	866	483	5,196		-		

Total GFA and OTG of Instructional Area				8,175	88,001		1,152	-1,011	-10,879

Operational Areas	Per Pupil		Floor Area				
	m²	ft²	m²	ft²			
General Office			275	2,960		-24	-260
Guidance Area			-			-169	-1,820
Cooperative Education Office			253	2,726		227	2,446
Staff Lounge			185	1,996		185	1,996
Kitchen/Servery			138	1,485		-5	-55
Custodial Areas			110	1,185		-111	-1,196
Staff Room and Teacher Work Rooms			322	3,464		-133	-1,436
Meeting Room			-			-28	-300
Academic Storage			121	1,304		-9	-96
Washrooms			358	3,851		-58	-629
Gymnasium Storage			153	1,646		79	846
Mechanical Spaces			506	5,451		-244	-2,627

Total Operational Area			2,422	26,068	89%	-291	-3,131
Total Instructional (from above)			8,175	88,001	89%	-1,011	-10,879
Total Operational and Instructional			10,597	114,069	89%	-1,302	-14,010

Gross Up Added	34%	3,629	39,063			
Gross Floor Area		16,116	173,476	95%	-780	-8,395

Area per Pupil	13.99	150.6	116%		

Community Use Rooms	m²	ft²
Child Care	325	3,498
Early Years Hub	-	
Community Use	-	
Auditorium	242	2,601
Other (please identify)	-	
Other (please identify)	-	
Total Community Use Rooms Area	567	6,099

Total Square Feet	16,683	179,575		-213	-2,296

Other Spaces	-			-	-		-
Stage		-		-	-		-
Library/Library Resource Centre		-		-	-		-
Cafetorium/Cafeteria		-		-	-		-
Lecture		-		-	-	21	-
Seminar		-		-	-		-
Chapel		-		-	-		-

Gymnasium and Exercise Room	-			-	-		-
Gymnasium Area - Quadruple		-		-	-	63	-
Gymnasium Area - Triple		-		-	-	42	-
Gymnasium Area - Double		-		-	-	21	-
Gymnasium Area - Single		-		-	-		-
Dance/Aerobics Studio		-		-	-		-
Exercise Room		-		-	-		-
Weight Room		-		-	-		-
Change Rooms		-		-	-		-

Total GFA and OTG of Instructional Area	4,742	######		1,029

Operational Areas	Per Pupil		Floor Area	
	m²	ft²	m²	ft²
General Office			-	
Guidance Area			-	
Cooperative Education Office			-	
Staff Lounge			-	
Kitchen/Servery			-	
Custodial Areas			-	
Staff Room and Teacher Work Rooms			-	
Meeting Room			-	
Academic Storage			-	
Washrooms			-	
Gymnasium Storage			-	
Mechanical Spaces			-	

Total Operational Area	-	-	0%
Total Instructional (from above)	4,742	######	52%
Total Operational and Instructional	4,742	######	40%

Gross Up Added		-	-	
Gross Floor Area	4,742	######	28%	

Area per Pupil	4.61	49.6	38%

Community Use Rooms	m²	ft²
Child Care	-	
Early Years Hub	-	
Community Use	-	
Other (please identify)	-	
Other (please identify)	-	
Other (please identify)	-	
Total Community Use Rooms Area	-	-

Total Square Feet	4,742	######

PROPOSED FLOOR PLANS

BASIC RENOVATIONS

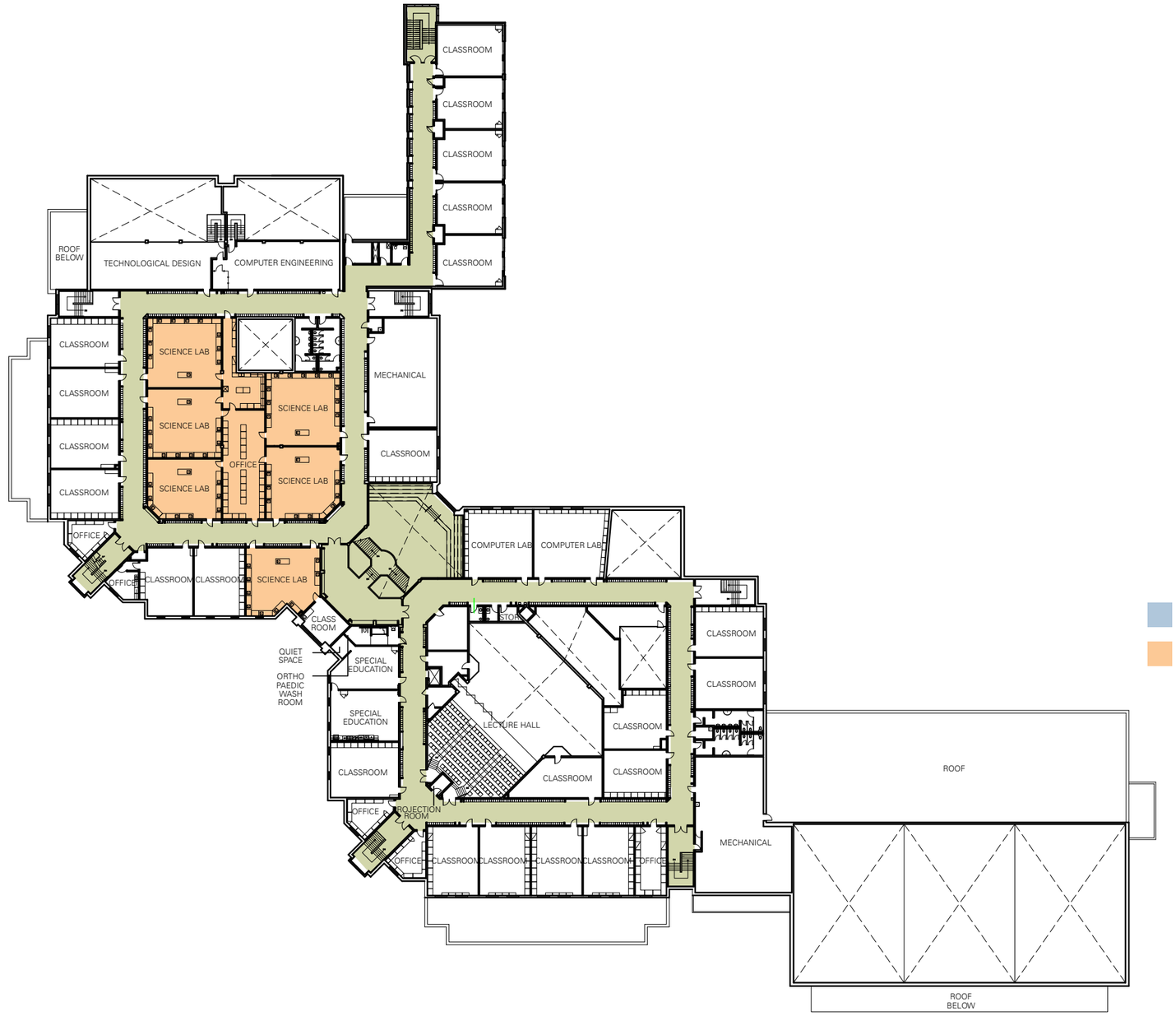
EXTENSIVE RENOVATIONS

FIRST FLOOR PLAN

May 2, 2016

CS&P Architects

PROPOSED FLOOR PLANS



BASIC RENOVATIONS

EXTENSIVE RENOVATIONS

SECOND FLOOR PLAN

CS&P Architects

May 2, 2016

3. CONCEPT PLAN

3.6. Phasing

The Construction phasing for the proposed work should allow six months minimum for the Science Room renovations. Library upgrades may be completed in two to three months over a summer. The Transportation and Construction shops may be completed over a summer. However provisions should be made for potential extended construction period of up to four to five months. Students may need to be accommodated at a different location for up to two months.

APPENDIX

ORDER OF MAGNITUDE CONSTRUCTION COST ESTIMATE

Room No	Program	Construction Type	Area (sf)	Cost per sf	Net Construction Cost	Design Allowance 10%	Total Construction Cost	Construction Contingency 5%	Soft Costs 15%	FFE Allowance 5%	Total Project Cost
	Science Upgrades	Extensive	7,545	$ 150	$ 1,131,750	$ 113,200	$ 1,244,950	$ 62,200	$ 186,700	$ 62,200	$ 1,556,050
	Library	Basic	6,500	$ 70	$ 455,000	$ 45,500	$ 500,500	$ 25,000	$ 75,100	$ 25,000	$ 625,600
	Transportation	Extensive	3,430	$ 110	$ 377,300	$ 37,700	$ 415,000	$ 20,800	$ 62,300	$ 20,800	$ 518,900
	Construction	Extensive	2,930	$ 110	$ 322,300	$ 32,200	$ 354,500	$ 17,700	$ 53,200	$ 17,700	$ 443,100
	Horticulture	Allowance									$ 100,000
Subtotal Renovations											***$ 3,243,650***
Abatement					$ 20,000						$ 20,000
Building Condition Assessment Upgrades					$ 3,500,000	$ 350,000	$ 3,850,000	$ 192,500	$ 577,500		$ 4,620,000
Total Project											**$ 7,883,650**

These costs do not include escalation for Phasing

MECHANICAL SYSTEMS

FOR

SALTFLEET SECONDARY SCHOOL

ADDITION AND RENOVATIONS

108 HIGHLAND ROAD WEST

UPPER STONEY CREEK, ONTARIO

PREPARED BY:

ELLARD-WILLSON ENGINEERING LIMITED
260 Town Centre Boulevard
Suite 202
Markham, Ontario
L3R 8H8

FOR

HAMILTON WENTWORTH
DISTRICT SCHOOL BOARD
120 King Street West
Hamilton, Ontario
L8P 4V2

PROJECT NO. 16060

MAY 6, 2016

1. GENERAL

.1 Documentation of existing mechanical services has been obtained from an on-site visit and existing engineering drawings provided by CS&P Architects.

.2 The current facility comprises approximately 15,793 Sq. M. (170,000 Sq. Ft.) of floor area, mainly constructed in 1995. The two boilers were replaced in 2012.

.3 The new Addition is approximately 17,000 Sq. Ft.

2. EXISTING MECHANICAL SYSTEMS

.1 Site Services:

.1 Existing gravity storm drainage system terminates in headwall in drainage swale north-east of existing building.

.2 Existing gravity sanitary drainage system connects to Municipal sewer on Highland Road.

.3 Existing incoming 100Ø domestic water service and 200Ø firemain connect to Municipal watermain on Highland Road.

.2 Building Domestic Water System:

.1 Existing incoming 100Ø domestic water service and 200Ø firemain enters building at Sprinkler Water Meter room north of main entrance.

.2 Copper pipe cold water distribution system from the water meter assembly throughout the school.

.3 Building Existing Domestic Water Heating System:

.1 The entire school's domestic hot water system is fed from a gas-fired boiler and storage tank located in second floor north end Mechanical Room. The existing boiler and storage tank are original and appear to be in working condition.

.2 Existing water services were valved and capped in existing corridor ceiling space for future addition (20Ø hot water return, 50Ø cold water and 32Ø hot water).

.4 Building Existing Storm and Sanitary Drainage System:

.1 The building has a 200Ø gravity piped sanitary drainage system and the existing drawings indicate the sanitary drain exits the building at the sound-east side of building.

.2 The building has many gravity piped storm connections that connect to the site storm sewers.

.3 A 100Ø sanitary connection and 200Ø storm connection were terminated below floor, through foundation for future addition. Both drains appear to be shallow from grade. Extended for expansion – Completed 2015.

.5 Plumbing Fixtures:

.1 The school plumbing fixtures appear to be original to the date of construction.

.6 Fire Protection:

.1 The building is fully sprinklered and has fire extinguishers in cabinets in public corridors. Portable fire extinguishers are located throughout the building.

.7 Heating System:

.1 The heating source for the building is provided by two (2) Mach heating boilers with 2,850 MBH heating output each. Boilers were replaced in 2012.

.2 The main building utilizes ceiling mounted watersource heat pumps. Individual classrooms are provided with one heat pump. The heat pump water loop is being cooled by an indoor fluid cooler and heated by boilers.

.3 The gymnasium uses one (1) indoor air handling unit (AHU-1) for heating and cooling.

.8 Ventilation System:

.1 Two (2) indoor mounted heat recovery units complete with a network of supply air ductwork are provided throughout the existing facility. Exhaust air returns back to heat recovery units through ceiling plenum.

.9 Cooling System:

.1 For the most part the building is cooled by the water source heat pumps.

3. RECOMMENDATIONS AND OBSERVATIONS

.1 Existing Heating System & Cooling:

.1 Existing radiation pump VP-3 is leaking. Replacement of the pump is recommended. - **Completed 2015**

.2 Existing heat pumps have been installed since 1995. They are nearing their end of life. In addition, refrigerant R22 will be phased out in 2020, which could impact on existing heat pumps operation. - **Completed 2015**

.3 Existing fluid cooler was installed in 1995 and is required to have a thorough overhaul and maintenance service. - **Completed 2015**

.4 Existing heat pumps serving Classrooms #215, #217, #225 and #257 cannot cool down room temperature as required, re-balance of water flow/replacement of existing balance valves is recommended. – **Completed 2015**

.5 Existing gas piping on roof is corroded. Replacement of the gas pipe on roof is recommended. – **Completed 2015**

.6 The boiler chemical feed is aged and in poor condition. Replacement is recommended.

.7 Automotive shop exhaust is ineffective and in poor condition. Replacement is recommended.

.8 The dust collector is aged and undersized, and in poor condition. Replacement is recommended.

.2 Storm and Sanitary Drains: - **Completed 2015**

.1 The exact depth of the existing capped sanitary and storm drain must be identified to determine if they are deep enough to extend into the Expansion.

.3 Domestic Water: - **Completed 2015**

.1 The existing building domestic water service will be extended to the new Expansion from the capped services, subject to final layout and quantity of plumbing fixtures.

.4 Roof Drainage: - **Completed 2015**

.1 The new addition will be provided with control flow roof drains piped to the existing storm drain cap.

.5 Plumbing Fixtures: - **Completed 2015**

.1 New plumbing fixtures, to Board's Standards, will be provided throughout the new Addition.

.6 Fire Protection: - **Completed 2015**

.1 The new building Addition will be fully sprinklered to meet Code and NFPA-13 requirements.

.2 No sprinkler cap was installed for extension to future Addition. The new building Addition sprinkler system will connect to the existing Block 'A' (south) sprinkler system. Exact connection location to existing sprinkler main to be determined with site review.

.3 Concealed sprinkler heads will be located in drywall ceilings, washrooms and public corridors, and semi-recessed heads will be located in all other ceiling types, as per existing building.

.7 New Addition – HVAC: - **Completed 2015**

.1 New Heat Pumps: Provide water source heat pump for each classroom and corridor. Heat pumps will be grouped and stacked in heat pump closet on the second floor. Heat pump water pipe will be connected into the existing system in the mechanical room main piping. New heat pumps will be provided with two-way control valve.

.2 The existing pumps VP-1 and VP-2 are to be removed and replaced with new pumps.

.3 New heat recovery unit (HRU): Provide a new gas-fired rooftop packaged heat wheel recovery unit for the new expansion ventilation. Ventilation air flow will comply with ASHRAE 62.1-2010 requirement. The gas piping will be connected into existing main gas line on roof for the new HRU. Duct distribution will be ducted into each heat pump closet and the HRU system will utilize a ducted return air system. The washroom exhaust will be routed through he heat recovery unit to recover the heat from the exhaust air.

.4 New Heating Hot Water Heaters: Provide hot water cabinet unit heater at stairs and perimeter radiation heater for corridor exterior wall. Connect hot water piping from existing capped 40Ø piping at west of Corridor #1055 for future use.

.5 The existing cooler is adequate to handle the new addition.

.6 The existing building automation system (BAS) is Johnson Controls. The new addition BAS will be connected to the existing Johnson Controls with additional modules or, alternatively, a complete new BAS Contractor completely integrated with the existing Johnson Controls.

END

ELECTRICAL SYSTEMS

FOR

SALTFLEET SECONDARY SCHOOL
ADDITION AND RENOVATIONS
108 HIGHLAND ROAD WEST
UPPER STONEY CREEK, ONTARIO

PREPARED BY:

ELLARD-WILLSON ENGINEERING LIMITED
260 Town Centre Boulevard
Suite 202
Markham, Ontario
L3R 8H8

FOR

HAMILTON WENTWORTH
DISTRICT SCHOOL BOARD
120 King Street West
Hamilton, Ontario
L8P 4V2

PROJECT NO. 16060-B

MAY 6, 2016

1. GENERAL

.1 Documentation of existing electrical services has been obtained from an on-site visit and existing engineering drawings provided by CS&P Architects.

.2 The current facility comprises approximately 15,793 Sq. M. (170,000 Sq. Ft.) of floor area, mainly constructed in 1995.

.3 The new Addition is approximately 17,000 Sq. Ft.

2. EXISTING ELECTRICAL SYSTEMS AND PROPOSAL FOR NEW ADDITION

.1 Power Supply:

.1 Existing main switchboard (6 sections) is 1200Amp, 347/600V, 3ø, 4W complete with 1000kVA, 27.6kV/600V, 3ø, 4W H.V. transformer in one section, 27.6kV main switch in one section and 3 low voltage distribution sections with spaces for future sections.

.2 Existing peak demand load is 560KW. We have spare capacity for at least 340KW.

.2 Power and Lighting Panels:

.1 Existing power and lighting panels are in good condition and could remain.

.2 Power and lighting panels for new addition will be of the breaker type, with bolt-on breakers and of the NHDP/CDP or NBLP type respectively. Power panels of both of the NHDP and CDP types will have a voltage rating of 347/600 volt, while NBLP panels will be 120/208 volt.

.3 Emergency Lighting:

.1 Building has Emergency Generator which will not be reused (it is old and not working properly).

.2 New emergency lighting will be provided throughout the school and will consist of battery units (550 watts, 120/24 volts) and remote 20 watts heads.

.3 New exit signs will be provided throughout the school ("Running Man" type).

.4 Wiring Materials and Methods:

.1 Existing electrical equipment, wiring material/installation appears to be in good condition.

.2 New Addition

.1 All new wiring will be minimum #12 gauge and will be installed in conduit or surface mounted wiremold in existing school.

.2 EMT will be used for branch circuits installed in furred ceiling spaces and in masonry or drywall partitions. An insulated ground wire will be installed in all conduits.

.3 Conductors will be copper. Insulation for feeders will be R90. Type TW will be used for 15, 20 and 30 amp. branch circuits.

.4 Cable trays will be provided in corridors for computer, P.A./telephone, security and cable TV wiring.

.5 All wiring devices and switches shall be specification grade.

.6 Locations of new power outlets shall be as required to suit application.

.7 Receptacles in corridors and stairs will be 15 amp.

.5 Lighting:

.1 Lighting in School, in most areas is 2'-0"x4'-0" fluorescent T-8 fixtures with different type of lenses.

.2 Some fixtures are complete with 2 lamps and some are with 3 lamps.

.3 In some areas, lighting level should be increased.

.4 Exterior lighting fixtures are complete with H.P.S. lamps and should be replaced with LED type.

.5 New Addition

.1 Lighting will be 2'-0" x 4'-0" fixtures complete with LED strips. Lighting level in classrooms will be at 55 F.C. maintained.

.2 In classrooms two light switches will be provided, one for rows near windows and one for remaining fixtures. Also, for fixtures near windows, relays and sensor will be provided.

.3 For stairs landing, wall mounted fixtures will be provided where ceiling is too high for replacement of fixtures.

.4 Occupancy sensors will be provided in classrooms and storage rooms, etc. Daylight harvesting will be provided also.

.5 Night lighting will be provided in corridors, stairs and vestibules (minimum lighting).

.6 Exit lights will be "Running Man" type.

.7 School has existing lighting control system. (New addition will not be connected to the system).

.6 Fire Alarm System:

.1 Existing Fire Alarm panel is manufactured by Simplex (4100 series) and will remain. It will be modified to suit architectural changes.

.2 Existing Fire Alarm devices (i.e.: F.A. pull stations complete with cover, F.A. heat and smoke detectors, F.A. horns, F.A. horns complete with strobes, etc.) have been installed in building and will remain.

.3 Existing Fire Alarm control panel has capacity for new addition.

.4 New Fire Alarm devices in addition will match existing units. Also, door holders will be installed.

.5 Existing Fire Alarm annunciator/graphic will be replaced to suit architectural and mechanical modification.

.7 P.A./Telephone Integrated System:

.1 P.A./Telephone system is manufactured by Dukane (Main unit is located in I.T. room).

.2 P.A. speakers are located throughout the school.

.3 In classrooms, P.A. handsets and speakers are located in control panel.

.4 In new addition, design will match existing condition.

.5 Main P.A. unit has been changed recently.

.8 Computer System – New Addition:

.1 Computer components have been provided throughout the school.

.2 New computer outlets complete with conduits, wiring, jacks and patch panels will be part of this contract.

.3 Sleeves will be provided between classrooms and corridors and between classrooms.

.4 Quantity and location of new outlets, will suit Board/Architect requirements.

.5 AV outlets complete with associated components will be part of this contract.

.9 Security System:

.1 Existing security system containing motion detectors, door contacts and CCTV cameras.

.2 If required for addition, new devices will match existing.

.3 Provisions for card readers will be part of contract.

.10 Cable TV System – New Addition:

.1 Outlets and empty conduits will be provided in areas to suit Board's requirements. The Board to advise, regarding location.

.11 Clock System:

.1 Existing clocks are synchronized digital clock and are located throughout the school.

.2 In new addition, clocks will be wireless type (Prymax).

.12 Classroom Control Panel:

.1 Existing classroom control panel contains: Dukane P.A./Telephone handsets, P.A. speakers, P.A. call switch and digital clock.

.2 New classroom control panel will be part of this contract.

.13 Mechanical System:

.1 Motor starters will be supplied by Division 15. Division 15 will install starters located in motor control centre and Division 16 will install all remote starters.

.2 Motor control centre will be provided by Division 15 and installed by Division 16 in location as shown on drawings. Main feeders to motor control centers and branch wiring to the disconnect switches/motors will be by Division 16.

.3 Motor disconnect switches will be supplied and installed by Division 16, unless mechanical unit is complete with control panel and/or main switch.

.4 All low voltage control wiring will be by Division 15 (automatic controls).

.5 Existing heat pumps will be replaced with new units (Division 16 to disconnect existing and connect new units).

END

Hamilton-Wentworth District School Board

Condition Assessment

Saltfleet HS, Building ID 8360-1

Facility Name (SFIS)	Saltfleet HS
Ministry Building Number	8360-1
GFA (m2)	14619
Year Built by Original/Additions	1996
Replacement Value - OTG	$24,829,300
Official FCI (%)	1.25
Comparable FCI (%)	16.64
Asset Address	108 Highland Rd W
Asset City	Stoney Creek
Asset Postal Code	L8J 2T2
-- ACCESSIBILITY CHECKLIST --	----------
Designated parking space	Yes
Path of travel to the main entrance door.	Yes
Designated entrances	Yes
Path of travel to all floors/elevations.	Yes
Elevator	Yes
Instructional spaces entrance doors.	Yes
Fire policy and fire safety plan	Yes
Fire alarm system with strobe and audible signals	No
Communal washrooms	Yes
Designated washroom	Yes
-- ENERGY CHECKLIST --	----------
Energy efficient boiler	Yes
Energy audit report	No
Energy efficient domestic hot water heater	No
Energy efficient recovery system	No
Energy efficient HVAC pumps and fan motors	No
Energy efficient interior lighting	Yes
Building Automation System	Yes
Energy efficient faucets	No
Energy efficient urinals and toilets	No
Architectural and Site Assessor	Ramin Saeedi
Mechanical and Electrical Assessor	Mark Pantchevski

How to read the final report

The Final Report contains assessment information for 5 years for this facility.

Asset details reported are either populated from the SFIS system (e.g. GFA, year built etc) or calculated based on Ministry's criteria (e.g. Replacement Value – OTG, Official FCI, Comparable FCI etc).

Accessibility and Energy assessment lists are provided in a yes/no format. For a full description of accessibility/energy definitions please check the TCPS database, Asset Narratives, under the Narratives Tab.

Asset Narratives include the following:

- Architectural & Structural Summary –a brief summary of the asset including construction dates and areas of the original and additions. A brief description of the structure, the exterior wall system, the roof assembly system and the building interiors.
- Mechanical Summary – a brief summary of the mechanical systems.
- Electrical Summary – a brief summary of the Electrical systems.
- Site Summary – a brief summary of the Site systems.
- Limitations – a summary of the scope of work and the Tactical Planning Window.

Building Elements listed are only the ones that require replacement in the next 5 years; their condition is Critical if failed or risk of imminent failure is observed, or Poor if it is not functioning as intended with significant repairs within the next two (2) years, or Fair if normal deterioration and minor distress is observed requiring repairs within three (3) to five (5) years.

2011-2015 Cost and Year information is a snapshot from the assessment and cannot be edited in TCPS.

2011-2015 Priority is the value of the Event priority calculated when the assessment data was imported in TCPS and stored in this read-only field.

Estimated Cost and Fiscal Year are values that can be edited at any time by end users.

Event Priority is a field populated with labels like Urgent, High, Medium and Low based on the Event Priority Value. This value is calculated based on the Element Type and Element Condition.

Photos are provided at the event level: old photos are suffixed with the world "Old", new photos are suffixed with the date of assessment.

A copy of this report in PDF format is saved in the TCPS database. You can access it by selecting the Asset Instance in Data Manager and opening this report in PDF format from the Document Tab.

1. Architectural & Structural Executive Summary

Saltfleet SS Building ID-8360-1 was assessed on May 13, 2013 by VFA, is located at 108 Highland Road W, Stoney Creek, Ontario. The original facility is a two story structure of block construction without basement. The original building is constructed in 1992.

The size of the building is 14,619 square meters. The site is 6.07 hectares. Where visible, mainly in the GYM, workshops, and Cafeteria, the structure of the school are of Metal roof decking, steel trusses, steel joists and load bearing masonry. It was indicated that the roof coverings has been replaced in 1997.

The interior finishes consist of terrazzo, mainly ceramic tiles and, vinyl composite tiles, hard wood flooring, painted gypsum board walls and, gypsum board acoustic ceilings.

The exterior walls of the school are brick veneer finished assembly.

Typical spaces in the school include auto shops, wood shop, library/resource center, music room, theater art class, auditorium, gymnasiums, computer rooms, science labs, administration office, and mechanical service space and general instructional classrooms.

2. Mechanical Executive Summary

2013 - Overall, the mechanical equipment is in good condition.

Heating for Saltfleet Secondary School is provided by two gas fired hot water boilers updated in 2012. The boilers provide hot water to perimeter fin tube radiators, force flow heaters, unit ventilators, heat pumps and air handlers. There are three central air handlers which supply heating and ventilation throughout the school. Cooling for the school is provided by a cooling tower connected to heat pumps and a rooftop condensing unit connected to the gym central air handler. The remaining ventilation is provided by rooftop exhaust fans and various internal exhaust fans.

Domestic hot water for the school is provided by a gas fired boiler, original to 1996.

The HVAC controls for the school are provided by building automation system and Direct Digital Controls.

The school has one elevator serving two floors and stage lift for the auditorium.

Fire protection for the school is provided by a wet sprinkler system with three zones and fire extinguishers.
Comments on exceptions: Based on age of components and observed site conditions the following mechanical equipment has exceeded their theoretical useful life and will require replacement within the tactical planning window.

- The stage lift was not operational and in critical condition.

- The domestic water boiler is aged and in fair condition.

- Exterior natural gas piping is corroded and in fair condition.

- HVAC pumps are aged and in poor condition.

- The boiler chemical feed is aged and in poor condition.

- Automotive shop exhaust is ineffective and in poor condition.

- Heat pumps are aged and in fair condition.

- Vestibule heaters are primarily non-operational and in poor condition.

- The dust collector is aged and undersized and in poor condition.

3. Electrical Executive Summary

2013 - Electrically Saltfleet Secondary School is in good condition.

The main switchgear has a 1200 Amp capacity. The fire alarm panel (Simplex 4100) and end devices are in good condition.

Emergency lighting is provided by hard wired lighting fixtures connected to a central battery bank. The interior lighting within the building is in good condition with CFLs and T8 lamps with electronic ballasts. Exterior lighting is provided by HID fixtures and light standards for the parking area and grounds. Exit lighting is in good condition.

Security system includes a panel, motion detectors, sensors, CCTV and keypads. The CCTV was updated in 2008.

The information technology system is in good condition, reportedly updated in 2013.
Comments on exceptions: Based on age of components and observed site conditions the following electrical equipment has exceeded their theoretical useful life and will require replacement within the tactical planning window.

- The emergency lighting system is aged and in fair condition.

4. Site Summary

2013-The site - Saltfleet SS is bounded by frame land from north and, west .The Highbury Drive is on the east side of the Building. Highland road W is on the south side of the site.

Typical walkways service the site, with asphalt concrete landing or stairs at most building entrances.

There is a wall mounted sign on top of the building facing south of the building which displays school name; the building access off Highland Road and there are paved parking on the south, west and, east sides of the site.

Definitions for Energy Checklist

Energy audit report: An ASHRAE Level I energy audit report was completed within the last three years.

Energy efficient boiler: The energy efficient boiler provided is a condensing boiler installed within the last five years or is energy star rated.

Energy efficient domestic hot water heater: The energy efficient domestic hot water heater provided is direct or power vented natural gas fired or has an electric heat coil.

Energy efficient recovery system: The building is provided with a Heat Recovery Unit (HRU).

Energy efficient HVAC pumps and fan motors: The energy efficient HVAC pumps and fan motors are reportedly provided with a variable frequency drive.

Energy efficient interior lighting: The provided interior lighting is controlled by motion sensors or building automation system and/or the interior light fixtures are provided with T8 or T5 fluorescent lamps and electronic ballast.

Building Automation System: The building has a comprehensive Direct Digital Control (DCC) automation system to monitor and control the mechanical system.

Energy efficient faucets: Approximately 50% of the lavatory faucets are provided with aerators and motion sensors.

Energy efficient urinals and toilets: Approximately 50% of the urinals and toilets are provided with a low flow flush valve (less than 1.6 gpf)

Definitions for Accessibility Checklist

Designated parking space: The provided designated Barrier Free Accessible parking space is a minimum 2,400 mm wide and is clearly marked with an accessibility sign.

Path of travel to the main entrance door: The provided accessible path of travel from the designated Barrier Free Accessible parking space to an accessible building entrance is a minimum 910 mm wide and includes curb cuts and ramps

Designated entrances: The provided designated Barrier Free Accessible entrance is a minimum 850 mm wide to allow a mobility device, clearly marked with an accessibility sign and is provided with an automatic door open device.

Path of travel to all floors/elevations: The Barrier Free Accessible path of travel is provided with either an accessible ramp or a vertical transportation device where a floor or an elevation difference exists.

Elevator: The provided Barrier Free Accessible Elevator has the following: clear audible communication indicating floors and up/down direction; doors, which open long enough and a minimum 900 mm wide; and a control panel, which is provided with Braille and an emergency call system and where the top is at a maximum height of 1,400 mm above floor.

Instructional spaces entrance doors: The instructional spaces are provided with an entrance door which is a minimum of 850 mm wide.

Fire policy and fire safety plan: Fire policy and fire safety plans are reportedly in place for the evacuation of people with disabilities.

Fire alarm system with strobe and audible signals: Fire alarm system is reported to include strobe lights and audible signals

Communal washrooms: There is a Barrier Free Accessible washroom stall, which is a minimum of 1,500 x 1,500 mm, in the each boys and girls washroom on each accessible floor.

Designated washroom: A designated Barrier Free Accessible washroom is provided on each floor, and is equipped with the following: an automatic door open device; grab bars; emergency call button; lever handle or motion sensor faucets; and a lavatory, where an insulated knee space is provided and the height of lavatory top is a maximum of 815 mm above the floor.

Limitations

This report has been prepared to meet the Ministry of Education (EDU) objectives for the Condition Assessment Program for Educational Facilities in Ontario. The purpose of the Condition Assessment Program was to assess the current physical condition of the schools and associated site features, and to validate information currently contained in the online capital renewal database software Total Capital Planning Solution (TCPS).

The validation of data was limited to a five year period, which is defined as the current assessment year plus four years. Information contained in the database beyond this period was not validated or reviewed.

The provided event costs are intended for global budgeting purposes only. The event costs were adjusted to include regional factors and were based on an approved unit cost list. Actual event costs for the work recommended may differ since the event costs can only be determined after preparation of tender documents, which would consider: specific design conditions, site restrictions, effects of ongoing building operations and construction schedule. The approved cost threshold for the Condition Assessment Program is $ 10,000.

Barrier Free Accessibility and Energy Conservation Measures assessments were limited to a preapproved checklist presented on Page 2. The assessment of portables (classrooms not integrated with the building envelope), solar photovoltaic panels, other solar energy collectors, wind turbines, sheds, less than 45 sq.m., play-equipment/structures, score boards, goal posts and flag poles, fire extinguishers, decommissioned swimming pools, window coverings, black/white boards, benches, gymnastic equipment and the appropriateness of room space were excluded from the scope of work. Information related to these components contained in the database was not updated to reflect condition observed. Information related to events which are either planned or in progress, and currently locked were not updated.

All Elements

B SHELL

B30 Roofing

B3010 Roof Coverings

Element Instance : B3010 Roof Coverings

Description 2013 - The roof system was observed to be a EPDM roof covering assembly probably installed over deck insulation

Condition Assessment 2013 - The EPDM roof covering was observed to be aged and worn beyond its useful life with blisters and loss of seam surface material.

Last Replacement Year	1996
Theoretical Life	22
Technical Condition	Fair

Major Repair [B3010 Roof Coverings]

Event Type: Major Repair **Priority:** High

Brief Description	Major Repair [B3010 Roof Coverings]
Estimated Cost	$436,560
Fiscal Event Year	2016
2011-2015 Cost	$436,560
2011-2015 Priority	High
2011-2015 Year	2016

Recommendation 2013 - The EPDM roof covering was observed to be aged and worn beyond useful life and there has been reported of leaking in isolated area on the roof and, evidence of blisters. Replacement is suggested.

May 2013- Evidence of water ponding on the surface of the roof covering.

May 2013- Sign of blisters in majority of the roof covering area.

C INTERIORS

C10 Interior Construction

C1010 Partitions

Element Instance : C1010 Partitions - Original Building - gym/lecture hall

Description 2013 - Moveable folding partition walls in the GYM, cafeteria and, Stage

Condition Assessment 2013 - The moveable folding partition in the gymnasium and cafeteria are, damaged, and approaching their expected useful life.

Last Replacement Year	1996
Theoretical Life	20
Technical Condition	Fair

Replacement [C1010 Partitions - Original Building - gym/lecture hall]

Event Type: Replacement **Priority:** Medium

Brief Description	Replacement [C1010 Partitions - Original Building - gym/lecture hall]
Estimated Cost	$244,800
Fiscal Event Year	2016
2011-2015 Cost	$244,800
2011-2015 Priority	Medium
2011-2015 Year	2016

Recommendation

2013 - The moveable partition in the gymnasium, cafeteria is showing signs of damage, and have approaching their expected useful life. Replacement planning is recommended.

May 2013- Stage movable partition wall.

May 2013- Evidence of wear and tear.

May 2013- Movable partition in the cafeteria.

May 2013- Evidence of damaged on the cafeteria movable partition wall.

May 2013- GYM movable partition wall.

May 2013-Damaged on the movable partition wall in the GYM.

C1020 Interior Doors

Element Instance : C1020 Interior Doors - Original Building

Description

2013 - These include all doors within the building except for those through the perimeter walls are Interior Doors. They are constructed of hollow metal with a paint finish, wood with a natural, or paint or plastic laminate finish. They are often provided with glazed vision or half panels.

Condition Assessment

2013 - At the time of the assessment the interior doors were in fair condition, they were showing signs of age and they are approaching their expected useful life.

Last Replacement Year	1996
Theoretical Life	25

Technical Condition Fair

Replacement [C1020 Interior Doors - Original Building]

Event Type: Replacement **Priority:** Medium

Brief Description	Replacement [C1020 Interior Doors - Original Building]
Estimated Cost	$298,400
Fiscal Event Year	2017
2011-2015 Cost	$298,400
2011-2015 Priority	Medium
2011-2015 Year	2017

Recommendation

2013 - The interior doors are approaching their useful life. Replacement plan of the interior doors is suggested.

May 2013- Typical interior doors in the school.

May 2013- Worn interior door.

Element Instance : C1020 Interior Doors - Original Building

Description

2013 - Interior door hardware was observed to consist of push bars, knob handles, push plates, kick plates, butt hinges and door closers

Condition Assessment

2013 - The interior door hardware was observed to be aged, worn and deteriorated. Corrosion was noted on various components.

Last Replacement Year	1996
Theoretical Life	15
Technical Condition	Fair

Replacement [C1020 Interior Doors - Original Building]

Event Type: Replacement

Priority: Medium

Brief Description	Replacement [C1020 Interior Doors - Original Building]
Estimated Cost	$112,581

Fiscal Event Year	2017
2011-2015 Cost	$112,581
2011-2015 Priority	Medium
2011-2015 Year	2017

Recommendation

2013 - The hardware was observed to be aged and worn beyond useful life. Replacement of interior door hardware in conjunction with door replacement is suggested.

May 2013- Typical interior door lock set.

May 2013- Typical interior door closer.

May 2013- Typical interior door hinges.

C1030 Fittings

Element Instance : C1030 Fittings - Original Building

Description 2013 - Classroom millwork was observed to include wood cabinetry, and plastic laminate counters and countertops.

Condition Assessment 2013 - At the time of the assessment all cabinetry, millwork items, counters and countertops were in a fair condition

Last Replacement Year	1996
Theoretical Life	20
Fittings Type	Unspecified

Technical Condition Fair

Replacement [C1030 Fittings - Original Building]

Event Type: Replacement **Priority:** Medium

Brief Description	Replacement [C1030 Fittings - Original Building]
Estimated Cost	$697,578
Fiscal Event Year	2016
2011-2015 Cost	$697,578
2011-2015 Priority	Medium
2011-2015 Year	2016

Recommendation 2013 - As all the cabinetry, millwork items, counters and countertops are approaching their expected useful life and are in fair condition the recommendation is planning to replace them in close future.

May 2013- Typical classroom millwork.

May 2013- Millwork fitting in the staff room.

May 2013- Worn millwork fitting in the family study classroom.

C20 Stairs

C2010 Stair Construction

C201001 Interior Stair Construction

Element Instance : C201001 Interior Stair Construction - Original Building

Description	2013 - Interior stair frames and treads
Condition Assessment	2013 - At the time of the assessment the interior stairs were in fair condition, the treads were worn and there was signs of corrosion on the framework
Last Replacement Year	1996
Theoretical Life	43
Technical Condition	Fair

Major Repair[C2010 Interior Stair Construction]

Event Type:	Major Repair	**Priority:**	High

Brief Description	Major Repair[C2010 Interior Stair Construction]
Estimated Cost	$78,336
Fiscal Event Year	2016
2011-2015 Cost	$78,336
2011-2015 Priority	High
2011-2015 Year	2016

Recommendation 2013 - Replacement of initial flight of the interior stairs including the rubber covering is recommended

May 2013- Typical stair case in the school.

May 2013- Rusted and, corroded stair frame.

C30 Interior Finishes

C3010 Wall Finishes

Element Instance : C3010 Wall Finishes - Original Building

Description 2013 - Interior painted wall finishes were observed to include, concrete block, plaster and gypsum wallboard surfaces.

Condition Assessment 2013 - The interior wall finishes were observed to be aged and worn. Peeling, marks, chips and discoloration were deficiencies noted on wall surfaces.

Last Replacement Year	1996
Theoretical Life	10
Wall Finishes Type	Unspecified
Technical Condition	Fair

Replacement [C3010 Wall Finishes - Original Building]

Event Type: Replacement **Priority:** Medium

Brief Description	Replacement [C3010 Wall Finishes - Original Building]
Estimated Cost	$306,510
Fiscal Event Year	2016
2011-2015 Cost	$306,510
2011-2015 Priority	Medium
2011-2015 Year	2016

Recommendation 2013 - The aged and worn interior painted wall finishes are suggested to be refinished.

May 2013- Faded paint wall covering in the GYM.

C3020 Floor Finishes

Element Instance : C3020 Floor Finishes - Original Building

Description 2013 - Carpet floor covering in Library.

Condition Assessment 2013 - At the time of the assessment the carpet floor covering was in fair condition, it was showing signs of age and wear

Last Replacement Year	1996
Theoretical Life	10
Floor Finishes Type	Unspecified
Technical Condition	Fair

Replacement [C3020 Floor Finishes - Original Building]

Event Type: Replacement **Priority:** Medium

Brief Description	Replacement [C3020 Floor Finishes - Original Building]
Estimated Cost	$182,478
Fiscal Event Year	2016
2011-2015 Cost	$182,478
2011-2015 Priority	Medium
2011-2015 Year	2016

Recommendation

2013 - The carpet located in the Resource Center is subjected to frequent foot traffic. Excessive wear was evident throughout the Resource Center. Replacement of carpet is recommended.

May 2013- Worn and stained carpet floor covering in the library.

May 2013- Worn carpet flooring in the resource room.

May 2013- Worn Carpet flooring in the resource room.

Element Instance : C3020 Floor Finishes - Original Building

Description 2013 - Vinyl Composite 12" x 12" floor tile situated in isolated rooms and classrooms in the school.

Condition Assessment 2013 - At the time of assessment the vinyl composite floor tile in some classrooms is showing signs of wear and discoloration.

Last Replacement Year	1996
Theoretical Life	20
Floor Finishes Type	Unspecified
Technical Condition	Fair

Replacement [C3020 Floor Finishes - Original Building]

Event Type: Replacement **Priority:** Medium

Brief Description	Replacement [C3020 Floor Finishes - Original Building]

Estimated Cost	$652,392
Fiscal Event Year	2016
2011-2015 Cost	$652,392
2011-2015 Priority	Medium
2011-2015 Year	2016

Recommendation

2013 - The vinyl composite floor tile and vinyl base is exhibiting signs of wear and has exceeded its effective rated design life. Replacement planning recommended.

May 2013- Typical worn VCT in the classrooms.

May 2013- Worn VCT floor covering in the cafeteria.

Element Instance : C3020 Floor Finishes - Original Building - gym

Description

2013 - Original finished hardwood strip flooring and wood base situated on the stage and GYM area.

Condition Assessment

2013 - The original hardwood strip flooring is worn, scratched but in fair condition.

Last Replacement Year	1996
Theoretical Life	20

Floor Finishes Type	Unspecified
Technical Condition	Fair

Replacement [C3020 Floor Finishes - Original Building - gym]

Event Type: Replacement **Priority:** Medium

Brief Description	Replacement [C3020 Floor Finishes - Original Building - gym]
Estimated Cost	$192,277
Fiscal Event Year	2016
2011-2015 Cost	$192,277
2011-2015 Priority	Medium
2011-2015 Year	2016

Recommendation

2013 - The hardwood strip flooring on the stage and in GYM area are in fair condition. Refinishing or replacement of the hardwood flooring recommended.

May 2013- Painted hardwood flooring on the stage.

May 2013- Worn and discolored hardwood flooring in the gym area.

C3030 Ceiling Finishes

Element Instance : C3030 Ceiling Finishes - Original Building

Description 2013 - Acoustical ceiling tiles 2’ x 4’ acoustical ceiling tiles and grid

Condition Assessment 2013 - At the time of assessment the acoustical ceiling tiles were in fair condition with signs of age and deterioration

Last Replacement Year	1996
Theoretical Life	25
Ceiling Finishes Type	Unspecified
Technical Condition	Fair

Major Repair[C3030 Ceiling Finishes- Original Building]

Event Type: Major Repair **Priority:** Medium

Brief Description	Major Repair[C3030 Ceiling Finishes- Original Building]
Estimated Cost	$32,130
Fiscal Event Year	2015
2011-2015 Cost	$32,130
2011-2015 Priority	Medium
2011-2015 Year	2015

Recommendation 2013 - Recommend the replacement of stained, damaged acoustical ceiling tiles.

May 2013- Damaged acoustic tile in the school.

May 2013- Damaged Acoustic ceiling tile.

C303003 Gypsum Wallboard Ceiling Finishes

Element Instance : C303003 Gypsum Wallboard Ceiling Finishes

Description 2013 - Gypsum board ceiling in cafeteria.

Condition Assessment 2013 - At the time of the assessment the gypsum board ceilings were in fair condition

Last Replacement Year	1996
Theoretical Life	30

Technical Condition Fair

Major Repair[C3030 Gypsun board ceiling Finishes]

Event Type: Major Repair **Priority:** Medium

Brief Description	Major Repair[C3030 Gypsun board ceiling Finishes]
Estimated Cost	$13,005
Fiscal Event Year	2015
2011-2015 Cost	$13,005
2011-2015 Priority	Medium
2011-2015 Year	2015

Recommendation 2013 - Gypsum board ceilings are original and have passed there EUL and should be replaced/ refinished.

May 2013- Damaged gypsum board ceiling in the cafeteria.

D SERVICES

D10 Conveying

D1010 Elevators & Lifts

Element Instance : D1010 Elevators & Lifts - Original Building

Description 2013 - The handicap accessible chair lift for the stage is original to the building and is rated for 341 kg.

Condition Assessment 2013 - At the time of assessment the handicap accessible chair lift for the stage was not operational. The entrance to the chair lift on the side of the stage was boarded up.

Last Replacement Year	1996
Theoretical Life	30
Elevators & Lifts Type	Unspecified
Technical Condition	Critical

Major Repair

Event Type: Major Repair **Priority:** Urgent

Brief Description	Major Repair
Estimated Cost	$15,300
Fiscal Event Year	2013
2011-2015 Cost	$15,300
2011-2015 Priority	Urgent
2011-2015 Year	2013

Recommendation

2013 - Repair of the handicap accessible chair lift for the stage is recommended as soon as possible. The associated cost is an estimate as repair or replacement may be recommended by an elevator inspector.

May 2013 - The Chair Lift for the Stage is Not Operational

May 2013 - The Entrance of the Chair Lift From the Stage is Boarded Up

D20 Plumbing

D2020 Domestic Water Distribution

Element Instance : D2020 Domestic Water Distribution - Original Building

Description

2013 - The domestic hot water is generated by one natural gas-fired boiler which is original to 1996 and is located in mechanical room B237.

Condition Assessment

2013 - The domestic hot water boiler is inefficient and is nearing the end of its useful life.

Last Replacement Year	1996
Theoretical Life	25
Domestic Water Distribution Type	Unspecified
Technical Condition	Fair

Replacement [D2020 Domestic Water Distribution - Original Building]

Event Type: Replacement **Priority:** Medium

Brief Description	Replacement [D2020 Domestic Water Distribution - Original Building]
Estimated Cost	$40,800
Fiscal Event Year	2016
2011-2015 Cost	$40,800
2011-2015 Priority	Medium
2011-2015 Year	2016

Recommendation 2013 - Replacement of the original domestic water heater is recommended based on age and condition.

May 2013 - Original Domestic Water Boiler

D30 HVAC

D3010 Energy Supply

Element Instance : D301002 Gas Supply System - Original Building

Description 2013 - The building includes a natural gas supply and distribution system for the boilers, kitchen science rooms and rooftops.

Condition Assessment 2013 - The exterior sections of the gas piping located on the rooftops is showing signs of rust over the majority of the pipe run.

Last Replacement Year	1996
Theoretical Life	35

Technical Condition Fair

Replacement [D301002 Gas Supply System - Original Building]

Event Type: Replacement **Priority:** High

Brief Description	Replacement [D301002 Gas Supply System - Original Building]
Estimated Cost	$15,000
Fiscal Event Year	2017
2011-2015 Cost	$15,000
2011-2015 Priority	High
2011-2015 Year	2017

Recommendation

2013 - The exterior section of the natural gas distribution piping is deteriorating faster than expected and replacement of repair is recommended.

May 2013 - Corrosion of the Exterior Natural Gas Piping - Roof

May 2013 - Corrosion of the Exterior Natural Gas Piping - Entire Pipe Run

D3020 Heat Generating Systems

D302005 Auxiliary Equipment

Element Instance : D302005 Auxiliary Equipment - Original Building

Description

2013 - There are a total to four HVAC pumps which are aged. Three pumps that circulate heating hot water to perimeter radiators, heat pumps, air handlers and force flow units. One pump circulates chilled water between the cooling tower, chiller, heat pumps and air handlers.

Condition Assessment

2013 - The four main HVAC pumps are aged and in fair condition. Residue from previous leaks was observed during the site assessment and minor corrosion was observed.

Last Replacement Year	1996
Theoretical Life	25
Auxiliary Equipment Type	Unspecified
Technical Condition	Fair

Replacement [D302005 Auxiliary Equipment - Original Building]

Event Type: Replacement **Priority:** High

Brief Description	Replacement [D302005 Auxiliary Equipment - Original Building]
Estimated Cost	$15,300
Fiscal Event Year	2016
2011-2015 Cost	$15,300
2011-2015 Priority	High
2011-2015 Year	2016

Recommendation

2013 - Based on the age and condition of the four main HVAC pumps replacement is recommended. The HVAC pumps are reaching the end of their expected useful life, which is generally 25 years. Replacement of the HVAC pumps is recommended to minimize the potential impact on the heating system.

May 2013 - Aged Hot Water Heating Pumps

May 2013 - Aged Hot Water Heating Pump

May 2013 - Aged Cooling Tower Pump

Element Instance : D302005 Auxiliary Equipment - Original Building

Description 2013 - Chemical pot-feeder is provided for induction of chemical treatment for boiler's heating hot water loop.

Condition Assessment 2013 - The aged chemical pot feeder is heavily corroded and in poor condition.

Last Replacement Year	1996
Theoretical Life	18
Auxiliary Equipment Type	Unspecified
Technical Condition	Poor

Replacement [D302005 Auxiliary Equipment - Original Building]

Event Type: Replacement **Priority:** High

Brief Description	Replacement [D302005 Auxiliary Equipment - Original Building]

Estimated Cost	$10,200
Fiscal Event Year	2015
2011-2015 Cost	$10,200
2011-2015 Priority	High
2011-2015 Year	2015

Recommendation 2013 - The chemical feed equipment is aged and past its rated useful life. Replacement is recommended.

May 2013 - Aged Boiler Chemical Feeder

D3040 Distribution Systems

D304007 Exhaust Systems

Element Instance : D304007 Exhaust Systems - Auto Shop

Description 2013 - The exhaust system for the automotive shop is original to 1996.

Condition Assessment 2013 - It was reported that fumes from the automotive shop are traveling to the mezzanine classrooms above the automotive shop.

Last Replacement Year	1996
Theoretical Life	25
Technical Condition	Poor

Replacement

Event Type: Replacement **Priority:** High

Brief Description	Replacement
Estimated Cost	$20,400
Fiscal Event Year	2014

2011-2015 Cost	$20,400
2011-2015 Priority	High
2011-2015 Year	2014

Recommendation

2013 - Replacement and or upgrading of the existing automotive shop's exhaust system is recommended to ensure that the fumes do not travel to adjacent classrooms.

May 2013 - Existing Automotive Shop Exhaust System

D3050 Terminal & Package Units

Element Instance : D3050 Terminal & Package Units - Original Building

Description

2013 - There are reported to be 100 original heat pumps which provide HVAC throughout the school.

Condition Assessment

2013 - The heat pumps have are reaching the end of their useful lives and are reported to be having issues and are requiring increased maintenance.

Last Replacement Year	1996
Theoretical Life	19
Technical Condition	Fair

Replacement

Event Type: Replacement **Priority:** High

Brief Description	Replacement
Estimated Cost	$400,000
Fiscal Event Year	2017
2011-2015 Cost	$400,000
2011-2015 Priority	High
2011-2015 Year	2017

Recommendation

2013 - Replacement of the original heat pumps is recommended in the next 5 years based on age and condition.

May 2013 - Original Heat Pumps

May 2013 - Original Heat Pumps

Element Instance : D3050 Terminal & Package Units - Original Building

Description

2013 - There are a total of nine unit ventilators located in space above the ceilings of vestibules provide heating through diffusers in the vestibules areas and are original to 1996.

Condition Assessment

2013 - The majority of the unit ventilators in the vestibule areas are reported to be non-operational as they are difficult of impossible to work on. The lack of space around the units does not allow for proper maintenance and replacement of parts. The lack of operational heating in the vestibules has rendered the spaces unheated on winter days.

Last Replacement Year	1996
Theoretical Life	25
Technical Condition	Poor

Replacement [D3050 Terminal & Package Units - Original Building]

Event Type: Replacement **Priority:** High

Brief Description	Replacement [D3050 Terminal & Package Units - Original Building]
Estimated Cost	$137,700
Fiscal Event Year	2014
2011-2015 Cost	$137,700
2011-2015 Priority	High
2011-2015 Year	2014

Recommendation

2013 - Replacement of the unit ventilators in the vestibule areas is recommended with a heating system which allows for appropriate maintenance and repairs to be conducted.

May 2013 - Non Operational Ventilator Units Above Ceiling

D50 Electrical

D5020 Lighting & Branch Wiring

D502002 Lighting Equipment

Element Instance : D502002 Lighting Equipment - Original Building

Description

2013 - Emergency lighting in the school is original to 1996 and includes hard wired lighting fixtures connected to a central battery bank located in mechanical room B237.

Condition Assessment

2013 - The batteries were reportedly checked and/ or replaced in 2007. The lighting fixtures are original and are outdated.

Last Replacement Year	1996
Theoretical Life	20
Lighting Equipment Type	Emergency Lighting
Technical Condition	Fair

Replacement [D502002 Lighting Equipment - Original Building]

Event Type: Replacement **Priority:** High

Brief Description	Replacement [D502002 Lighting Equipment - Original Building]
Estimated Cost	$102,000
Fiscal Event Year	2016
2011-2015 Cost	$102,000
2011-2015 Priority	High
2011-2015 Year	2016

Recommendation 2013 - Replacement of the original lighting fixtures and batteries is recommended based on age and condition.

May 2013 - Original Emergency Lighting Fixtures

D5090 Other Electrical Services

D509099 Other Special Systems and Devices

Element Instance : D509099 Other Special Systems and Devices - Dust Collector

Description 2013 - The woodshop machinery is serviced by a dust collector which is located at the exterior of the woodshop class.

Condition Assessment 2013 - The dust collector was observed to be undersized and unable to keep the work areas clean. It was reported that wood dust travels from the woodshop to adjacent classrooms. The dust collector is located outside and being exposed to the elements, minor rusting was visible at the time of assessment.

Last Replacement Year	1996
Theoretical Life	20
Technical Condition	Poor

Replacement

Event Type: Replacement **Priority:** Urgent

Brief Description	Replacement
Estimated Cost	$81,600
Fiscal Event Year	2015
2011-2015 Cost	$81,600
2011-2015 Priority	Urgent
2011-2015 Year	2015

Recommendation 2013 - Replacement of the original dust collector is recommended based on age and condition.

May 2013 - Aged and Corroding Dust Collector

May 2013 - Aged and Corroding Dust Collector

G BUILDING SITEWORK

G20 Site Improvement

G2010 Roadways

Element Instance : G2010 Roadways - Site

Description 2013 - Asphalt paved roadway circling the school with access of Highland Road W.

Condition Assessment 2013 - The asphalt paved roadway is exhibiting Pot hole and, cracking and some depressed areas.

Last Replacement Year	1996
Theoretical Life	20
Technical Condition	Fair

Replacement [G2010 Roadways - Site]

Event Type: Replacement **Priority:** Medium

Brief Description	Replacement [G2010 Roadways - Site]
Estimated Cost	$24,888
Fiscal Event Year	2016
2011-2015 Cost	$24,888
2011-2015 Priority	Medium
2011-2015 Year	2016

Recommendation 2013 - The asphalt paved roadway is showing signs of pot hole and cracking. Reconstruction planning warranted.

May 2013- Evidence of pot hole on the main roadway in front of the building.

May 2013- Cracked on the surface of asphalt-paved roadway.

G2030 Pedestrian Paving

Element Instance : G2030 Pedestrian Paving - Site

Description

2013 -Interlock, Concrete and, Asphalt Paved sidewalks situated around the perimeter of the building.

Condition Assessment

2013 - The asphalt and concrete paved surfaces are showing signs of uneven and cracked surfaces with signs of vegetation growth and isolated areas of spalling and deteriorated concrete.

Last Replacement Year	1996
Theoretical Life	22

Technical Condition Fair

Replacement [G2030 Pedestrian Paving - Site]

Event Type: Replacement **Priority:** Medium

Brief Description	Replacement [G2030 Pedestrian Paving - Site]
Estimated Cost	$20,808
Fiscal Event Year	2016
2011-2015 Cost	$20,808
2011-2015 Priority	Medium
2011-2015 Year	2016

Recommendation

2013 - The Interlock, concrete and asphalt paved sidewalks are showing signs of deterioration and have exceeded their effective design rated life. Replacement planning recommended.

May 2013- Asphalt paved pedestrian showing sign of alligator cracking.

May 2013- Worn asphalt paved sidewalk.

May 2013- Worn Inter lock with vegetation growth.

May 2013- Cracked surface on concrete paved pedestrian.

Hamilton-Wentworth District School Board

Report Summary

Saved Report Name	Final Report Template mod1
User Name	william lo
Report Type	Text With Pictures
Report Name	Condition Assessment
Start Year	2013
Number of Years	5
Priority	Default
Structure / Instance	Saltfleet HS, Building ID 8360-1
Filter	Parent Criteria Summary: Structure parent - A SUBSTRUCTURE OR Structure parent - B SHELL OR Structure parent - C INTERIORS OR Structure parent - D SERVICES OR Structure parent - G BUILDING SITEWORK - where the detail criteria for the parent node is - Technical Condition <> Not Assessed ;
Asset Photos	Default Photos Only
Current Backlog FCI	No
Element Photos	No Photos
Include Element ACL Criteria	No
Exclude Elements Without Events	Yes
Include Event level details	Yes
Event Photos	All Photos
Include Costlines	No
Printed Date	10/30/2013

ATTENTION:

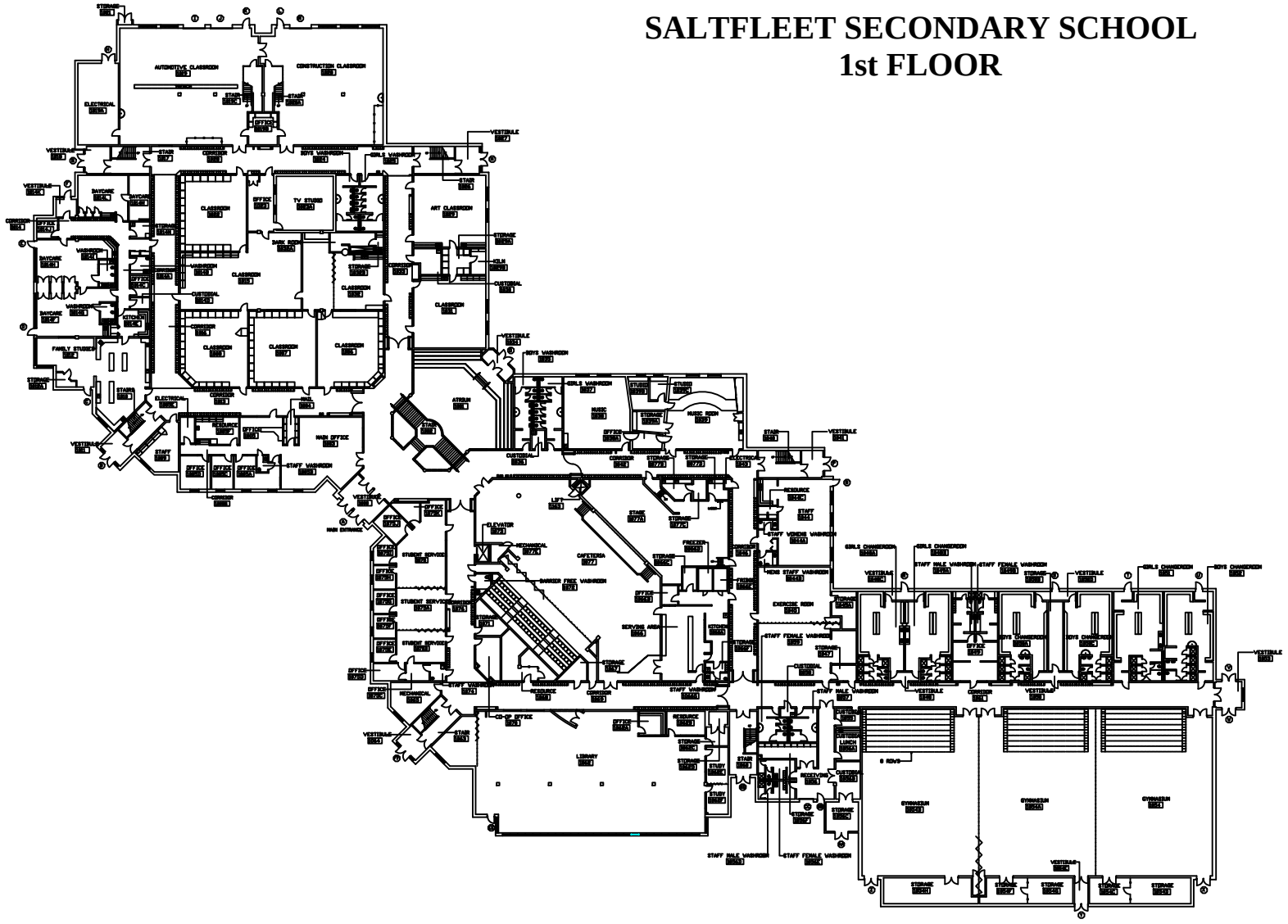
PLEASE DO NOT PHOTOCOPY OR DISTRIBUTE THIS BOOK

SALTFLEET SECONDARY SCHOOL
Asbestos Inventory

Updated MAY 2014

Prepared by:
Regulated Substance Team (905-521-2513)
The Hamilton-Wentworth District School Board

SALTFLEET SECONDARY SCHOOL
1st FLOOR



Updated May 2014

Original Construction: 1996

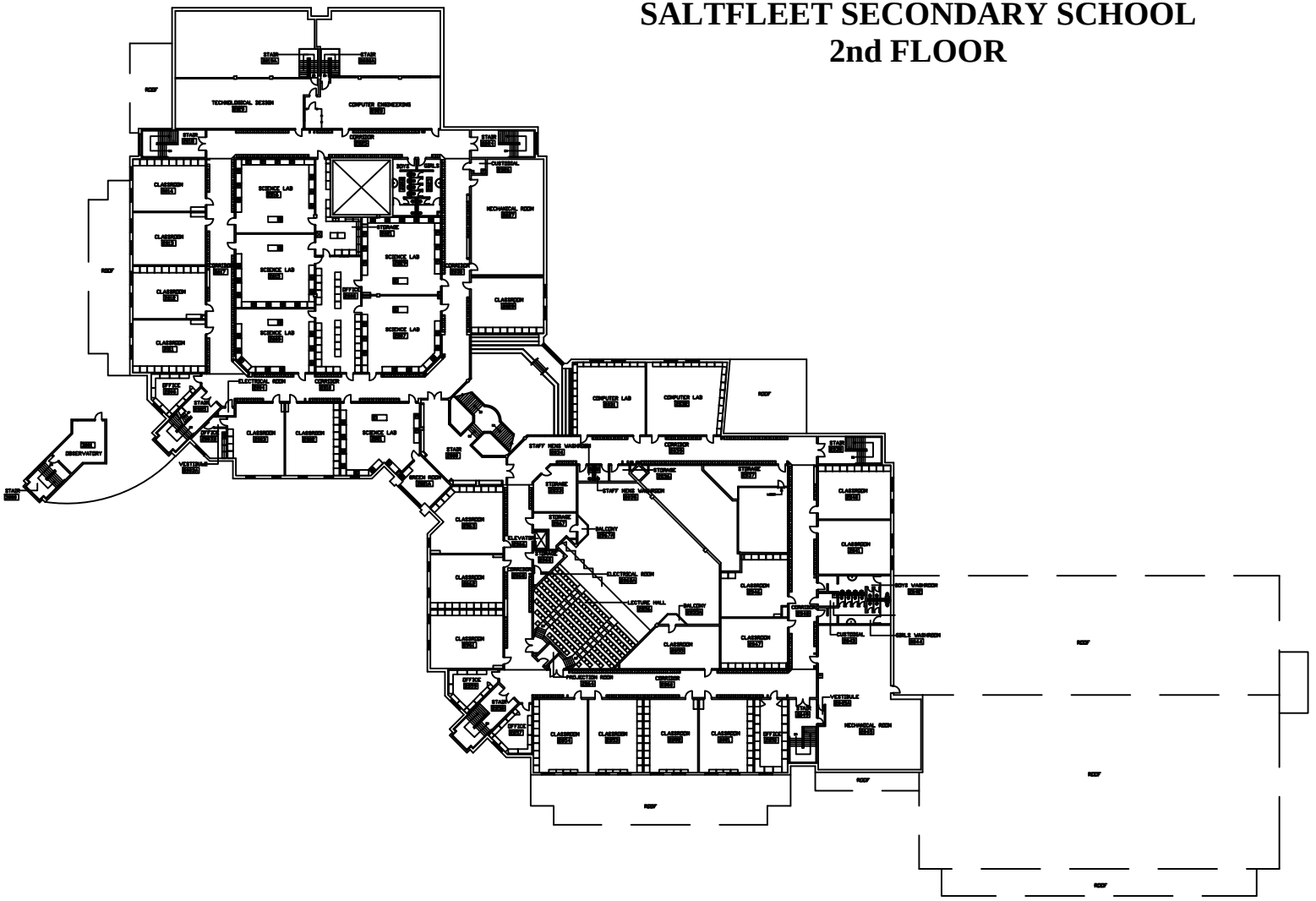
REGULATED SUBSTANCE TEAM
905-521-2513

CAUTION: Gaskets on piping contains asbestos

HAMILTON-WENTWORTH
DISTRICT SCHOOL BOARD

SALTFLEET
SECONDARY SCHOOL

SALTFLEET SECONDARY SCHOOL
2nd FLOOR



Updated May 2014

Original Construction: 1996

REGULATED SUBSTANCE TEAM
905-521-2513

CAUTION: Gaskets on piping contains asbestos

HAMILTON-WENTWORTH
DISTRICT SCHOOL BOARD

SALTFLEET
SECONDARY SCHOOL

SUMMARY PAGE

School built in 1996

Gaskets on piping contains asbestos

PINCHIN ENVIRONMENTAL

THE PINCHIN GROUP

Pinchin Environmental Asbestos Laboratory
Certificate of Analysis

Project Name: Hamilton-Wentworth District School Board
Saltfleet School, 108 Highland Road West, Stoney Creek, ON
Project No.: 86101.006
Prepared For: L. Cantar / J. Erskine

Lab Reference No.: b107670
Date Analyzed: April 16, 2014

BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
0001A Grey gasket on heat pump system, West Mechanical Room A223	Homogeneous, black, gasket material.	Chrysotile 25-50%	Non-Fibrous Material 50-75%
0001B Grey gasket on heat pump system, West Mechanical Room A223			Not Analyzed
Comments:	Analysis was stopped due to a previous positive result.		
0001C Grey gasket on piping in cabinert outside B237, East Mechanical Room			Not Analyzed
Comments:	Analysis was stopped due to a previous positive result.		
0002A Red gasket on radiation pump system, West Mechanical Room A223	Homogeneous, red, gasket material.	None Detected	Non-Fibrous Material > 75%
0002B Red gasket on radiation pump system, West Mechanical Room A223	Homogeneous, red, gasket material.	None Detected	Non-Fibrous Material > 75%
0002C Red gasket on radiation pump system, West Mechanical Room A223	Homogeneous, red, gasket material.	None Detected	Non-Fibrous Material > 75%

ANALYST

PINCHIN ENVIRONMENTAL

THE PINCHIN GROUP

Pinchin Environmental Asbestos Laboratory
Certificate of Analysis

Project Name: Hamilton-Wentworth District School Board
Saltfleet School, 108 Highland Road West, Stoney Creek, ON
Project No.: 86101.006
Prepared For: L. Cantar / J. Erskine

Lab Reference No.: b107670
Date Analyzed: April 16, 2014

BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
0003A Black gasket on main sprinkler system, Sprinkler Room B139	Homogeneous, black, gasket material.	None Detected	Cellulose 5-10% Non-Fibrous Material > 75%
0003B Black gasket on main sprinkler system, Sprinkler Room B139	Homogeneous, black, gasket material.	None Detected	Cellulose 5-10% Non-Fibrous Material > 75%
0003C Black gasket on main sprinkler system, Sprinkler Room B139	Homogeneous, black, gasket material.	None Detected	Cellulose 5-10% Non-Fibrous Material > 75%
0004A Light grey gasket on cold water piping system, East Mechanical Room B237	Homogeneous, grey, gasket material.	Chrysotile 10-25%	Non-Fibrous Material > 75%
0004B Light grey gasket on cold water piping system, East Mechanical Room B237			Not Analyzed
Comments:	Analysis was stopped due to a previous positive result.		
0004C Light grey gasket on cold water piping system, East Mechanical Room B237			Not Analyzed
Comments:	Analysis was stopped due to a previous positive result.		

ANALYST

McMaster University

Occupational and Environmental Health Laboratory

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REPORT OF RESULTS

April 29, 2009

Email: kevin.coveney@hwdsb.on.ca
shireen.todai@hwdsb.on.ca

Mr. Kevin Coveney
Hamilton Wentworth
District School Board
50 Millwood Pl.
Hamilton ON L9A 2M8

The samples were received in the laboratory on April 1, 2009 in acceptable condition. They consisted of six bulk samples for asbestos identification. The analysis was completed on April 22, 2009.

WO # 131596

Laboratory Sample No.	*Client Sample Identification "Saltfleet High School"*	*Type of Asbestos*	*Non Asbestos Fibres*	*% (area)*
09040038	1 - Portable # P178 - fissured ceiling tile - grey	nd	cellulose mmmf	> 75
09040039	2 - Portable # P178 - fissured ceiling tile - grey	nd	cellulose mmmf	> 75
09040040	3 - Portable # P178 - fissured ceiling tile - grey	nd	cellulose mmmf	> 75
09040041	4 - Portable # P178 - door wall, drywall - white	nd	cellulose mmmf	0.5 - 10
09040042	5 - Portable #P178 - whisp air wall, drywall - grey	nd	cellulose mmmf	0.5 - 10
09040043	6 - Portable #P178 - blackboard wall, drywall - grey - yellow	nd nd	cellulose mmmf cellulose	0.5 - 10 > 75

ACCREDITED LABORATORY AIHA Industrial Hygiene See aihalqap.org for details

C:\8\LabFiles\Reports\April\HWDSB9.doc

nd: not detected

mmmf: (man-made mineral fibres) may include fiberglass, mineral wool, slag wool, rock wool and ceramic fibres.

Bulk Method: Dispersion Staining with Polarized Light Microscopy (PLM), U.S. Environmental Protection Agency Test Method EPA/600/R-93/116 Method for the Determination of Asbestos in Bulk Building Materials, June 1993 as per Ontario Regulation 278/05, November 1, 2005.

Analyst: Anca Gheorghiu, B.R.T.
Research Assistant

Reviewed and approved by: Lorraine Shaw, B.Sc., CIH, ROH
Laboratory Manager

The results in this report apply only to the samples received and tested by the Occupational and Environmental Health Laboratory, McMaster University. This report shall not be reproduced, except in full.
/dp

Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 600/M4-82-020

NVLAP Lab Code: 200664-0

Customer: Pinchin Environmental Ltd
11-875 Main St West
Hamilton, Ontario L8S 4R9

Attn: Damian Palus

Lab Order ID: 1013165
Analysis ID: 1013165PLM
Date Received: 11/4/2010
Date Reported: 11/8/2010

Project: 61677 Seltfleet High School - WO 160951

Sample ID / *Lab Sample ID*	Description / *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes / Treatment
001a	Firedoor insulation - Autoshop	None Detected	10% Cellulose	90% Other	Gray Fibrous Heterogeneous
1013165PLM_1					Teased
001b	Firedoor insulation - Autoshop	None Detected	10% Cellulose	90% Other	Gray Fibrous Heterogeneous
1013165PLM_2					Teased
001c	Firedoor insulation - Autoshop	None Detected	10% Cellulose	90% Other	Gray Fibrous Heterogeneous
1013165PLM_3					Teased

Ired Gulley (3)

Analyst

Nathaniel Durham, MS or Approved Signatory

1013165

Client:	Pinchin Environmental Ltd.
Contact:	Damian Palus
Address:	11-875 Main St. W. Hamilton, ON
Phone:	905-577-6206
Fax:	905-577-6207
Email:	dpalus@pinchin.com
Project:	61677 Saltfleet High School - WO 1
Client Notes:	PLM EPA 600/R-93/116, Stop Positi Analyze Asbestos Samples to 0.5% as per the Ontario Regulation 278/05.
P.O. #:	61677 WO 160951
Date Submitted:	9/10/2010 0:00
Analysis:	PLM EPA 600/R-93/116
TurnAroundTime:	3 Days

Instructions:
Use Column "B" for your contact info

To See an Example Click the bottom Example Tab.

Enter samples between "<<" and ">>"
Begin Samples with a "<< "above the first sample and end with a ">>" below the last sample.
Only Enter your data on the first sheet "Sheet1"
Note: Data 1 and Data 2 are optional fields that do not show up on the official report, however they will be included in the electronic data returned to you to facilitate your reintegration of the report data.

Scientific Analytical Institute, Inc.

302-L Pomona Dr.
Greensboro, NC 27407
Phone: 336.292.3888
Fax: 336.292.3313
Email: lab@sailab.com

Sample Number	Data 1	Sample Description	Data 2
<<			
001a		Firedoor insulation - Autoshop	
001b		Firedoor insulation - Autoshop	
001c		Firedoor insulation - Autoshop	

Accepted ☑
Rejected ☐

11-4@10A