Request for Proposals

RFP # 3529

Halifax Regional School Board

Design Consulting Services - Eastern Passage High School

Halifax Regional School Board

Closing Date:	**December 13, 2012 A.S.T.**
Closing Time:	**2:00:00 P.M.**
Closing Location:	**Halifax Regional School Board** **33 Spectacle Lake Drive** **Dartmouth, Nova Scotia, B3B 1X7**

A MANDATORY PROPONENTS BRIEFING has been scheduled for

December 4, 2012, 10:00 AM
Eastern Passage High School (currently Seaside) Main Entrance
1881 Caldwell Road, Eastern Passage, NS

Faxed Proposals will not be accepted
(except to modify base proposal that has been submitted)

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INSTRUCTIONS TO PROPONENTS

PART 1 - GENERAL

1. INVITATION

1. PROPOSAL CALL

1. The Halifax Regional School Board will receive offers in the form of a proposal, signed and clearly marked **"Design Consulting Services - Eastern Passage High School"** and submitted at the location and closing time listed below:

   Closing Date: December 13, 2012
   Closing Time: 2:00:00 P.M., AST
   Closing Location: 33 Spectacle Lake Drive, Dartmouth, Nova Scotia
   Contact Person: ***Chris Northrup, Manager, Special Projects***
   Fax # (902) 464-5581.
2. Proposals submitted after the deadline will be returned to the proponent unopened.
3. Amendments to the submitted proposal will be permitted if faxed to 902-464-0161 or delivered to the address above prior to bid closing and if endorsed by the same party or parties who signed the offer.
4. Proponents shall be solely responsible for the delivery of proposals in the manner and time prescribed.
5. Proposal documents are not transferable. Proposals will not be received from Proponents that did not obtain the proposal documents from the School Halifax Regional School Board.

2. INTENT

1. The intent of this proposal call is to obtain an offer to provide professional consulting services lead by an Architectural Consulting firm for the project planning, detailed design development, tender development, and contract administration throughout the implementation, renovation and construction requirements at:

   Eastern Passage High School, Eastern Passage, NS

2. Proponents are expected to provide full time professional consulting services, utilizing the Project Management Institute (PMI) standards and guidelines as per the Project Management Body of Knowledge (PMBOK ® Guide) for Additions and Alterations (A&A).

3. In accordance with the Standard Agreement between the Halifax Regional School Board and the Consultant, the project will be delivered through a Design-Bid-Build approach. Project implementation will be developed through the Project planning stage that will coincide with the Provincial Budget allocation.

4. It is expected that the Design Consultant will seek the input of all sub-consultants in answering the following questions. It is to be understood that this project will be a fully integrated team effort, with all sub-consultants participating at every stage of the project under the direction of the Design Consultant. The HRSB Project Manager (SNC Lavalin) will have overall control of the project delivery on behalf of HRSB and the Design Consultant's Proposal should reflect the ability and experience to work in a project management and construction management delivery model.

   DC350 shall be used as a planning and design guide but may NOT be strictly adhered to in order to maintain budget restrictions.

5. The successful consultant will enter into an agreement, as part of this Request for Proposals, with the Halifax Regional School Board as per form of Consultant Agreement in Appendix C.

6. The project scope is as outlined in Appendix E – Scope of Work and includes requirement for development of a Project Plan (Part A) and Detailed Design and Implementation Plan (Part B). The project delivery method is outlined in Appendix E Scope of Work.

   Part A generally refers to the consultative process as required to meet with stakeholders (identified in item 4 below) to determine a scope of work and develop a conceptual design for review and approval by the School Steering Team (SST) and Sponsor Group.

   Part B generally refers to the detail design process required to use the scope of work and conceptual design to develop tender documents, drawings and specifications and execute a construction contract.

7. The Successful Proponent will be expected to develop an integrated design utilizing the School Space Allocation Program, Conceptual Site Plan, and Space Relationships Diagrams, if available, as the starting point. The referenced documents are provided for information only, as the successful Proponent will consult with the Halifax Regional School Board, the Department of Education the Sponsor Group and the SST to finalize the Design layout. The consultant is expected to make recommendations based upon aesthetic considerations, functional relationships, code requirements, green and healthy building considerations, schedule and budget.

8. Tendering for construction work will be administered by the Halifax Regional School Board with the design consultant team providing supporting contract tendering documents which include: drawings, technical specifications, scope of work, inspections etc.

3. PROPOSAL DOCUMENTS IDENTIFICATION

1. The name of this project is: RFP #3529 – Design Consulting Services – Eastern Passage High School.
2. When submitting inquiries quote this document title as above.

4. EXAMINATION

1. Upon receipt of Bid Documents verify that documents are complete. Notify the Halifax Regional School Board Contact Person should the documents be incomplete or upon finding discrepancies or omissions in the documents.

5. QUERIES/ADDENDA

1. Direct all questions, in writing, to ***Chris Northrup, Manager, Special Projects, Fax # (902) 464-5581***.

2. All addenda issued during the proposal period shall become part of the Proposal. Offer amount shall reflect all addenda.

3. Verbal answers to queries are not binding.

4. Clarifications requested by proponents must be in writing by 12:00 p.m. not less than six (6) working days before the date set for receipt of proposals by the HRSB. The reply will be in the form of an addendum, a copy of which will be forwarded to known proponents, issued no later than three (3) working days before deadline for receipt of proposals.

6. LOCATION OF SUCCESSFUL PROPONENT'S REGISTRATION

1. The successful Proponent must be in compliance with the Corporation Registration Act or Partnerships and Business Name Registration Act of Nova Scotia, and the regulations of the professional licensing associations, before a contract will be awarded by the Halifax Regional School Board.

7. COMMUNICATIONS AFFECTING PROPOSALS

1. Must be in accordance with HRSB Policy E001 Purchasing Policy and Handbook, revised 2008. To view policy, go to: http://www.hrsb.ns.ca/files/downloads/pdf/board/policy/sectione/e.001-purchasing.pdf
2. Electronic Transmissions, including, but not limited to facsimile transmission:
    1. Proposal Forms submitted by facsimile transmissions are not acceptable and will be rejected.
    2. Electronic transmissions modifying Proponent supplied information are acceptable when signed by the signatory of the original Proposal. Submission of such electronic transmissions is at the risk of the Proponent. The Client assumes no liability for the receipt of the electronic transmission or for their proper inclusion with original Proposal. There is no requirement for follow up and upon receipt of an electronic transmission it will be considered binding on both parties. Electronic submissions must be submitted prior to closing time and date specified in the Proposal documents.

8. TAXES

1. The Nova Scotia Harmonized Sales Tax will apply to this proposal. Proponents are NOT to include the value of the Harmonized Sales Tax (HST) in their stipulated fee.
2. The 15% HST is to be added to each contract payment request. The Harmonized Sales Tax will be paid in addition to the contract payment.

9. PROPOSAL INELIGIBILITY (Reason for Rejection)

1. The Contracting authority (Client) will refuse to evaluate a Proposal which:
    1. is not submitted in the required form as included herein;
    2. is submitted by electronic transmission;
    3. omits significant information;
    4. is not signed as required;
    5. has conditions attached which are not authorized by the invitation to Proposal;
    6. is not in alignment with the intent of the RFP;
    7. is not submitted in conformance with Instructions to Proponents;
    8. is not submitted on the required forms;
    9. does not include Proposal security (if required);
    10. does not acknowledge all addenda issued by HRSB; or
    11. contains any other defect which in the opinion of the Contracting Authority (Client) brings the meaning or intent of the Proposal into question.

2. The Halifax Regional School Board reserves the right to accept or reject any or all Offers or to accept any Offers deemed most satisfactory.

10. OFFER ACCEPTANCE / REJECTION

1. Duration of Offer
    1. The proposal shall remain open to acceptance and shall be irrevocable for a period of sixty (60) days after the Proposal closing date.

    2. Award/Selection:
        1. In the evaluation of a Proposal, the Client will consider, but not be limited to, the following criteria:
            1. Proposal price submitted.
            2. Compliance with Proposal Documents.
            3. The experience of the Proponent with similar projects in size and scope.

2. Acceptance of Offer
    1. The Client reserves the right to accept or reject any or all offers or to accept any offer deemed most satisfactory. The Client reserves the right to waive any informality in any or all Proposals.
    2. After acceptance by the Client, the successful Proponent shall be notified in writing of acceptance of Proposal and will be issued an Official Purchase Order by the Halifax Regional School Board.
    3. After a Proposal has been accepted, all Proponents will be advised.

11. SITE ASSESSMENT

1. PROPONENTS BREFING
    1. A mandatory Proponents Briefing has been scheduled for

    December 4, 2012, 10:00:00 AM
    Eastern Passage High School, Main Entrance

2. All proponents and participants are invited to attend.
3. This meeting is **compulsory** for prime Consultants only. Sub-Consultants are welcome but not required.

PART 2 - SUBMISSIONS

1. SUBMISSIONS

1. Proponents must submit *FIVE* (5) bound hard copies of your TECHNICAL SUBMISSION and *ONE* (1) copy of TECHNICAL SUBMISSION on a CD or Flash Drive (ENVELOPE #1)
2. Proponents must submit *ONE* (1) hard copy of FEE SUBMISSION and ONE (1) copy of the FEE SUBMISSION on a CD or Flash Drive (ENVELOPE #2)

2. SUBMISSION FORMAT

1. The Technical Submission, as per APPENDIX A, is to be inserted and sealed in an envelope identified with the **Proponents Name** and labeled "**Technical Submission - RFP #3529 – Design Consulting Services – Eastern Passage High School".** Also place the "Technical Submission" CD or Flash Drive in this envelope. The 'Technical Submission' envelope MUST NOT contain any reference to the fee being offered.

2. The Fee Submission Form, as per APPENDIX B, is to be inserted and sealed in an envelope identified with the **Proponents Name** and labeled "**Fee Submission - RFP #3529 – Design Consulting Services – Eastern Passage High School".** Also place the "Fee Submission" CD or Flash Drive in this envelope.

3. The two envelopes, of each proponent, labeled as indicated above are to be inserted into and sealed in a single (third) envelope, labeled with the **Proponents Name** and "**RFP #3529 – Design Consulting Services – Eastern Passage High School".**

3. SUBMISSION CONTENT

1. Technical Submissions:
    1. Proponents are expected to provide all responses in a manner consistent with the Project Management Institute (PMI) standards and guidelines as per the Project Management Body of Knowledge (PMBOK ® Guide).
    2. Proponents are to provide direct responses to each question in Appendix A -Technical Submission Requirements. Completion of this section is mandatory for all Proponents. For the purpose of evaluation, provide responses in the same order using the same

number sequence as presented in Appendix A.
3. Where possible, provide responses giving reference to work in the Education Sector.
4. The information required is to be provided in a clearly legible typed format with a minimum 10 point font face of Times New Roman. The name of the Proponent Company is to be indicated within the footer of each page of the submission.
5. The two parts comprising the Technical Submission are to be bound and pages are to be numbered. The entire submission is to be kept concise and in no case to exceed 20 pages excluding cover, company profiles, attachments such as CV's.
6. Materials exceeding the twenty (20) page limit will be considered non-responsive and **will not** be reviewed.
7. Failure to answer any numbered question(s) in the Technical Submission may result in a reduced score or a score of zero (0) where this occurs.

2. Fee Submission:
   1. The Fee Submission is to consist of the Fee Submission Form in Appendix B completely filled out in ink or typewritten, with the signature in longhand, and the completed form shall be without interlineations, alterations or erasures.

PART 3 - EVALUATION

1. ACCEPTANCE

1. Proposals shall remain open for acceptance by the Halifax Regional School Board and be irrevocable for sixty (60) days after the proposal closing date.
2. The lowest or any proposal will not necessarily be accepted.
3. The HRSB reserves the right to interview prospective proponents prior to award of RFP.

2. EVALUATION TEAM

1. Proposals will be evaluated by an Evaluation Team comprised of no less than three (3) persons representing the Halifax Regional School Board, and the Department of Education also known as the Sponsor Group.
2. It is to be understood that the degree to which a proposal meets the project requirements, by means of the proposal point score system, will be at the sole discretion of the Evaluation Team.

3. EVALUATION PROCEDURE

TECHNICAL SUBMISSION

1. The '**Technical Submission'** of the proposal will be opened and a technical evaluation will be performed by the Evaluation Team.
2. The '**Technical Submission**' of the proposal will be evaluated by means of a point score as indicated in APPENDIX A.
   1. Technical submissions with a score of 75% or greater of the maximum possible technical score will have fee submissions opened.
   2. All qualified technical submissions scores will then be represented as a percentage and will be multiplied by 90% to establish the technical submission score as 90 percent of the total score.

3. The "**Fee Submission"** of the proponent whose Technical Submission has received seventy five (75) percent or greater of the maximum technical score will be opened. Excluding those with a score of 75 % or greater, those that do not vary from the median technical score by less than 25% will be opened. The fee scoring, which represents the remaining 10% of the points, shall be allocated as described in step 2 below.

FEE SUBMISSION

4. FEE SUBMISSION STEP 1 – Qualified Fee Determination

   The following procedure will be followed regarding the calculation of variance in order to determine 'qualified' price submissions:

1. The '**median**' value of all fee submissions will be determined.
2. The percentage variance from this value will be calculated for each fee submission.
3. The '**average**' value will then be calculated for all submissions which do not vary from the median by more than 25%.
4. Each fee submission which is found to be more than 25% in variance from the 'median' will then be evaluated against the "average".
5. The following is an example to clarify the process utilized in determining if a proponent's fee submission is subject to the "variance" clause contained in the "Government Procurement Process" regarding Architects and Professional Engineering Services. The definition of "median" is as per Merriam Webster's Dictionary and is quoted as follows:

   A value in an ordered set of values below and above which there is an equal number of values or which is the arithmetic mean of the two middle values if there is no one middle number.

5. FEE SUBMISSION STEP 2 – Qualified Fee Scoring

The following procedure will be followed regarding the application of scoring points to the fees qualified in step one.

1. Award 10 points to the lowest fee,
2. All fees within 5% of the lowest fee will also receive 10 points.
3. The next highest fee, not within 5% of the lowest fee, will receive 8 points.
4. Any fee within 5% of the lowest fee receiving 8 points will also receive 8 points.
5. The next highest fee, not within 5% of the lowest fee receiving 8 points, will receive 6 points.
6. Any fee within 5% of the lowest fee receiving 6 points will also receive 6 points.
7. This procedure will continue, awarding 2 fewer points, until zero points are awarded.

6. Example technical and fee submission qualification.

NB: The technical evaluation is completed using the proponent's total score.
The fee evaluation is completed using the proponent's submitted fee.

Firm A- $ 53K, Firm B- $ 63K, Firm C -$ 71K, Firm D- $ 76K and Firm E -$ 107K

1. The "median" value is the middle one - Firm C at $ 71K. If there is an even number of firms the median is taken as the average between the two centre firms.

2. The percentage variance from the median is as follows:
   Firm A - 18/71 = 25.35%, Firm B- 8/71 = 11.27%, Firm D - 5/71 = 7.04%, and Firm E - 36/71 =50.70%.

3. The average is now calculated without Firm A and Firm E because they vary from the median by more than 25%: 63 + 71 + 76 = 210/3 = 70

4. The percentage variance from the average is as follows:
   Firm A - 17/70 = 24.29%, Firm B - 7/70 = 10.00%, Firm C -1/70 = 1.43%, Firm D - 6/70 = 8.57%, Firm E - 37/70 = 52.86 %.

5. Firm A would still be included, but Firm E has a variance of more than 25 % and so would be rejected.

6. If one determined the average by calculating all the fee proposals, the average would

be skewed and may unfairly disqualify a proponent. For example, if the average was calculated with Firm A and Firm E included, it would be: 53 + 63 + 71 + 76 + 107 = 370/5 = 74.

7. The percentage variance from the average would be calculated as follows: Firm A - 21/74 = 28.38%, Firm B - 11/74 = 14.86%, Firm C - 3/74 = 4.05%, Firm D - 2/74 = 2.70%, and Firm E - 33/74 = 44.59%. Firm E would have to be rejected due to a greater than 25 % variance, but Firm A would also be unfairly disqualified. This is why the above method is used.

7. Notwithstanding the technical and fee scores the Client reserves the right to reject any proposal where the fees are deemed to be unreasonable relative to other fee offers, typically a 25% variance from the average qualified fee (excluding the fee in question).

8. The Fee Submission envelope of each proponent who's Technical Submission were not opened, will be returned to the proponent unopened.

9. Debriefing of individual proposals by request only.

10. The Halifax Regional School Board will confirm the successful Proposal.

Appendix A - Technical Submission Requirements

1. TEAM PROFILE SUMMARY

1. **Prime Consultant**

1. Proposal Submitted by:
   1. Firm Name_____
   2. Contact Name _____
   3. Address _____

      _____
   4. Phone # _____ Fax # _____
   5. E-Mail Address: _____ _____ _____
   6. How long has the firm been in operation?_____
   7. Provide names of the Principals of the Firm, their professional designation and their years of experience in the design and building industry.

      _____

      _____

2. What has been the approximate annual value of construction work in Canada prepared by the firm in each of the past five years?

	Year	**Approximate Value**
1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____

2. Sub Consultants

1. List the sub-consultants (Firm Names), team members (Individuals) their role on the project.

Firm Name	Team Member	Role

2. EVALUATION CRITERIA

Firm Name: _____	Potential Value	Actual Value
1. **1. EXPERIENCE / QUALIFICATIONS**		
1. PRIME CONSULTANT FIRM		
1. Experience with educational facilities List not more than five (5) educational facility related projects, undertaken within the last ten years by the Prime Consultant, having a construction value greater than $5,000,000.00. Include the following information: 1. Project: 2. Project Cost 3. Project Client 4. Client Contact name, phone number, email address 5. Construction Manager 6. Consultant team **7.** Brief project description	10	
2. Experience with institutional/other projects List not more than five (5) institutional or other projects undertaken within the last ten years by the Prime Consultant having a construction value greater than $5,000,000.00. Include the following information: 1. Project 2. Project Cost 3. Project Client 4. Client Contact name, phone number, email address 5. Construction Manager 6. Consultant team **7.** Brief project description	6	
3. Experience with Construction Management (Not applicable for this RFP**)** List not more than three (3) projects undertaken within the last ten years by the Prime Consultant having a construction value greater than $3,000,000.00 and delivered using the Construction Management method and/or phased construction method of delivery. Include the following information: 1. Project 2. Project Cost 3. Project Client 4. Client Contact name, phone number, email address 5. Construction Manager 6. Consultant team **7.** Brief project description	0	
4. Design Consultant team leader's experience For the purpose of this project we consider the Design Consultant Team Leader to be the person who will be the main point of contact with your firm, and will have an adequate level of commitment to the project and attend all meetings in addition to other designated personnel listed under key personnel. 1. Provide the name of the Design Team Leader. 2. Provide % of time allocated to this Project. 3. Provide a brief description of the experience of the design team leader in the context of past experience with school and or institutional projects. 4. Provide a description of the Design Consultants Team Leader's experience with Project and Construction Management delivery models. 5. Provide a copy of the CV for the Design Consultant Team Leader.	10	

5. Contract Administrator's Experience — 10

1. Provide name of proposed Contract Administrator.
2. Provide % of time allocated to this Project.
3. Provide a brief description of this Contract Administrator's role with 3 projects having a value of in excess of 1 million dollars during Design and Construction Phases.
4. Describe how the Contract Administrator will coordinate with the design team during design and construction.
5. Provide a copy of the CV for the Contract Administrator.

6. Key Personnel — 5

With respect of this project, provide an outline of the key roles of the personnel assigned to this project and their percentage of time committed to the project.

Describe their suitability for this project based upon the anticipated project needs and their related project experience and training. Provide examples of any relevant experience in the categories of school design, institutional projects, construction management projects, and Project Management projects. Provide a copy of the CV for the Key Personnel listed below.

Key personnel may include Partner, Principal-in-Charge, Project Managers, Design Architects, Specification Writers, Construction Document Coordinators, Senior Technologists, Costing Coordinator, Budget Manager etc...

Role Description	Name	Suitability	% Time Commitment

7. Project References — 10

The Client will contact not less than 5 of the project references and project contacts indicated above in question 1.1.1.1, 1.1.1.2, and evaluate the responses based on successful overall Project and Design Management, Cost Management, Time and Communication Management and willingness of contact to recommend for future projects.

2. MECHANICAL ENGINEERING FIRM

1. Provide a brief description of the firm including key services provided which may be innovative and/or advantageous for this project. Indicate firms experience with Life Cycle Costing. List representative projects, by name, project type (educational etc.), delivery method (design-build, etc) and value for the categories of experience listed below, the total for all three categories is not to exceed five (5) of your most recent projects. — 10
   1. Educational facilities
   2. Institutional projects
   3. Construction management

Description of Firm			
Key Services			
Experience with Life Cycle Costing			
Project Name	Project Type	Delivery Method	Value

2. Key Personnel
Provide an outline of the key personnel designated for this project. Comment on their suitability for this project based upon the anticipated project needs and their related project experience and training. Provide a description of their role for this project and their percentage of time committed to the project.

Role Description	Name	Suitability	% Time Commitment

3. ELECTRICAL ENGINEERING FIRM — 10

1. Provide a brief description of the firm including key services which may be innovative and/or advantageous for this project. Indicate firms experience with Life Cycle Costing. List representative projects, by name, project type (educational etc.), delivery method (design-build, etc) and value for the categories of experience listed below, the total for all three categories is not to exceed five (5) of your most recent projects. See above for submission example.
   1. Educational facilities
   2. Institutional projects
   3. Construction management

2. Key Personnel
Provide an outline of the key personnel designated for this project. Comment on their suitability for this project based upon the anticipated project needs and their related project experience and training. Provide a description of their role for this project and their percentage of time committed to the project. See above for submission example.

4. CIVIL ENGINEERING FIRM — 9

1. Provide a brief description of the firm including key services provided which may be innovative and/or advantageous for this project. List representative projects, by name, project type (educational etc.), delivery method (design-build, etc) and value for the categories of experience listed below, the total for all three categories is not to exceed five (5) of your most recent projects.
   1. Educational facilities
   2. Institutional projects
   3. Construction management

Description of Firm			
Key Services			
Project Name	Project Type	Delivery Method	Value

2. Key Personnel
Provide an outline of the key personnel designated for this project. Comment on their suitability for this project based upon the anticipated project needs and their related project experience and training. Provide a description of their role for this project and their percentage of time committed to the project.

Role Description	Name	Suitability	% Time Commitment

	5. STRUCTURAL ENGINEERING FIRM 1. Provide a brief description of the firm including key services provided which may be innovative and/or advantageous for this project. List representative projects, by name, project type (educational etc.), delivery method (design-build, etc) and value for the categories of experience listed below, the total for all three categories is not to exceed five (5) of your most recent projects. See above 1.4, Civil Engineering for submission example. 1. Educational facilities 2. Institutional projects 3. Construction management 2. Key Personnel Provide an outline of the key personnel designated for this project. Comment on their suitability for this project based upon the anticipated project needs and their related project experience and training. Provide a description of their role for this project and their percentage of time committed to the project. See above 1.4, Civil Engineering for submission example.	9	
	6. LANDSCAPE ARCHITECT FIRM 1. Provide a brief description of the firm including key services provided which may be innovative and/or advantageous for this project. Indicate LEED and Green related work. List representative projects, by name, project type (educational etc.), delivery method (design-build, etc) and value for the categories of experience listed below, the total for all three categories is not to exceed five (5) of your most recent projects. See above 1.4, Civil Engineering for submission example. 1. Educational facilities 2. Institutional projects 3. Construction management 2. Key Personnel Provide an outline of the key personnel designated for this project. Comment on their suitability for this project based upon the anticipated project needs and their related project experience and training. Provide a description of their role for this project and their percentage of time committed to the project. See above 1.4, Civil Engineering for submission example.	9	
	7. Commissioning Firm (Not applicable for this RFP) 1. Provide a brief description of the firm including key services provided which may be innovative and/or advantageous for this project. List representative projects, by name, project type (educational etc.), delivery method (design-build, etc) and value for the categories of experience listed below, the total for all three categories is not to exceed five (5) of your most recent projects. See above for submission example. 1. Educational facilities 2. Institutional projects 3. Construction management 2. Key Personnel Provide an outline of the key personnel designated for this project. Comment on their suitability for this project based upon the anticipated project needs and their related project experience and training. Provide a description of their role for this project and their percentage of time committed to the project. See above for submission example.		
	8. OTHER: 1. Please indicate additional firms engaged for the activities listed below. If additional firms are not engaged, please indicate the personnel on your project team responsible for the items below, and provide a brief description of their company, names of individuals, and their experience with educational facilities, other institutional projects, and construction management. 1. Interior design 2. Code Reviews	4	

	3. Cost Consultant 4. Green Design		

2.	**2. PROJECT COMMUNICATIONS MANAGEMENT** 1. Describe your approach and methods for managing project communications as applied under direction from the Project Manager regarding the following: 1. within your consultant team 2. with all project team members/stakeholders 2. For each phase of the project, describe your proposed processes for client involvement, including the Halifax Regional School Board, the Sponsor Group, the Dept. of Education and SST.	10	
3.	**3. PROJECT QUALITY MANAGEMENT** **1. PROJECT PLAN & DESIGN PHASES** Provide an outline of your quality management processes with regards to the following: 1. Coordinating the team from the schematic design phase to the end of the tender phase, utilizing a multiple tenders method of delivery 2. Review of design options from an integrated perspective 3. Full Team review of drawings and specifications 4. Arriving at design decisions in terms of budget, schedule, quality, green building initiatives within a phased construction delivery model **2. CONSTRUCTION & POST-CONSTRUCTION PHASES** As an integrated design team, please indicate the critical aspects of the Construction and Post-Construction Phases and you methodology for dealing with each of these items? Describe methods for dealing with the following as an Integrated design team: 1. Site meetings 2. Site reviews 3. Shop drawings 4. Site instructions, 5. CCO's, CO"s 6. Progress claims	10	
4.	**4. PROJECT COST MANAGEMENT** 1. List three projects and compare original budgets to final cost. Explain the variance if over budget. Provide contact names, numbers and email address for each project. 2. Describe your method of cost control as it pertains to: 1. Estimating project costs, including cost contingencies 2. Designing to the budget 3. Material selection and design 4. Minimizing changes during construction 5. Coordination with project team 6. Cost controls during design **7.** Cost control during construction	10	
5.	**5. PROJECT SCHEDULE MANAGEMENT** Describe your methods for ensuring that the project schedule is met for the Design Consultant and the Project. Address issues such as: 1. Software and tracking/monitoring 2. Additional resource allocation	10	

	3. Methods for controlling schedule during construction using a multiple RFP method of delivery 4. Describe your success in delivering projects on schedule.		
6	**6. PROJECT MANAGEMENT KEY FACTORS** **Successful Project** 1) List 5 or more key factors that would be included in your model of Project Management. **Unsuccessful Project** 2) List 5 or more key factors that would constitute risk or failure to your model of Project Management	10	
7.	**7. OVERALL CONTENT AND PRESENTATION OF RFP** 1. Evaluate overall content and presentation of RFP as it applies to cover letter, company profiles, content of CV's, appendix, attachments etc...	6	

EVALUATORS' SCORE:_____/158 = _____%

TOTAL SCORE X 90%: _____

DATE: _____

Appendix B - HRSB Fee Submission Form

SUBMITTED BY:

_____

_____

1. The undersigned Proponent agrees to provide all necessary equipment, tools, labour, incidentals and other means to complete the Work in accordance with the Agreement between the Halifax Regional School Board and the Consultant and agrees to accept, therefore, as payment in full for the delivery of **all consultant services** as outlined in the Agreement and described in this Request for Proposals for fee amounts, excluding HST equal to:

PART "A" Project Plan

_____ XX/100 Dollars ($ _____)

PART "B" Detailed Design / Implementation Plan

_____ XX/100 Dollars ($ _____)

PART "C" Total Fee (Part A + Part B)

_____ XX/100 Dollars ($ _____)

1. The Proponent agrees that he/she has/will:
    1. Carefully examined every part of the proposed Agreement and thoroughly understands its stipulations, requirements and provisions;
    2. Determined services required;
    3. Investigated and arranged for the availability of staffing to enable the continuous prosecution of the work herein described.

2. The Halifax Regional School Board agrees to examine this Proposal and in consideration, therefore, the Proponent hereby agrees not to revoke this Proposal.
    1. Until one other Proponent has entered into the Agreement with the Halifax Regional School Board for the performance of the work specified in the notice inviting Proponents or,
    2. Until sixty (60) days after the time fixed in the Instructions to Proponents for receiving Proposals has expired, whichever first occurs; provided, however, that the Proponent may revoke this Proposal at any time before the time fixed in the Instructions to Proponents for receiving Proposals has expired upon receipt by the Halifax Regional School Board from the Proponent of written notice of such revocation before said time has expired.
    3. The Proponent hereby agrees to be bound by the award of this commission and if awarded the commission on this Proposal to execute the required Agreement within ten (10) days after notice of award.

HRSB is directly responsible for the safety of its students. Should contractors be required to work in schools while children are present, it is a MANDATORY HRSB REQUIREMENT that contractors and or sub-contractors assign the work to employees who DO NOT have a CRIMINAL RECORD and who ARE NOT LISTED ON THE CHILD ABUSE REGISTRY. By checking the "Agreed" box you are confirming that you understand and will abide by this

mandatory HRSB requirement. Failure to comply with this requirement will result in immediate contract termination. Agreed ☐

4. The Proponent must acknowledges receipt of the following addenda:

ADDENDUM #	DATED	# PAGES
_____	_____	_____
_____	_____	_____
_____	_____	_____

SIGNATURE OF AUTHORIZED OFFICERS

The signature of an officer or representative from the proposing company must appear on this Request for Proposal.

The undersigned hereby submits a proposal upon and subject to, the terms and conditions set forth in the RFP.

The undersigned Proponent declares that this Proposal is made without connection with any other person(s) submitting Proposals for the same work and is in all respects fair and without collusion or fraud.

Dated this _____ day of _____ 2012

Proponent's Name: _____
(Please Print)

Proponent's Signature: _____

Proponent's Email Address: _____

Company: _____

Address: _____

_____

_____

Phone: _____ Fax: _____

Appendix C – Consultant Agreement

Note: This is a sample only of the Owner Consultant Agreement to be completed upon award.

THIS AGREEMENT

Made as of the _____ day of _____ in the year _____

Between the {Halifax Regional School Board Name} (hereinafter called the "Halifax Regional School Board")

And _____ (hereinafter called the "Consultant").

The Parties hereto agree as follows for the following project:

{Project}

To provide professional consulting services as described herein and further described in the documents of RFP No. _____ dated _____, 20__for the stipulated sum / percentage of:

PART "A" - Project plan

_____XX/100 Dollars ($ _____)

PART "B" Detailed Design / Implementation

_____XX/100 Dollars ($ _____)

PART "C" Total Fee (Part A + Part B)

_____XX/100 Dollars ($ _____)

HRSB is directly responsible for the safety of its students. Should contractors be required to work in schools while children are present, it is a MANDATORY HRSB REQUIREMENT that contractors and or sub-contractors assign the work to employees who DO NOT have a CRIMINAL RECORD and who ARE NOT LISTED ON THE CHILD ABUSE REGISTRY. By checking the "Agreed" box you are confirming that you understand and will abide by this mandatory HRSB requirement. Failure to comply with this requirement will result in immediate contract termination. ***Agreed*** ☐

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ARTICLE 1 - DEFINITIONS

1.1 BUDGET

a) **Construction Budget Costs**

Construction Budget means the estimated cost of construction for the Project, excluding HST.

b) **FFE&T Costs**

Fixtures, Furnishings, Equipment and Technology (FFE&T) Costs
The cost of purchasing all items in this category. Example: Chairs, Computers, Instructional Equipment, but exclusive of HST.

c) Hard Cost

A cost that is considered a direct construction cost. This cost may include land, buildings, equipment or machines. Hard Costs do not include architectural, engineering, financial or legal costs. A hard cost is considered a cost that is applied and affixed to the asset, but exclusive of HST.

d) Project Budget Cost

Project Budget means the funds approved by the Province of Nova Scotia, Order in Council for the entire cost of both projects, but exclusive of HST.

e) Soft Costs

A cost that is not considered direct construction cost. Soft costs may include administrative, consultants, investigative, surveying, cost estimating, project management, architectural, engineering, financial, and legal services, but exclusive of HST.

1.2 CLIENT

The Client is the Halifax Regional School Board, and is represented by the Sponsor Group. The Client is also the Contract Authority.

1.3 **CERTIFICATE OF SUBSTANTIAL PERFORMANCE OF THE WORK**

Certificate of Substantial Performance of the Work means a certificate in a form acceptable to the Halifax Regional School Board issued by the Consultant to the Halifax Regional School Board certifying that the Work required by the Contract Documents is ready for use or is being used for the purpose intended and issued when the work to be done under the Construction Contract is capable of completion or correction at a cost of not more than one percent of the contract price and so accepted by the Halifax Regional School Board.

1.4 CERTIFICATE OF TOTAL PERFORMANCE OF THE WORK

Certificate of Total Performance of the Work means a certificate in a form acceptable to the Halifax Regional School Board issued by the Consultant to the Halifax Regional School Board certifying that all items including those arising from the one year warranty period have been corrected by the Contractor as required by the Contract Documents.

1.5 CONSTRUCTION COST

Construction cost means the contract price of all elements of the project designed or specified by the Consultant. Construction cost does not include the compensation to the Consultant and his Sub-Consultants, the cost of the land, right-of ways, or other costs which are the responsibility of the Halifax Regional School Board as provided in Article 3. Where there is no contract price for all or part of the project, the construction cost shall mean the estimated cost as accepted by the Halifax Regional School Board. Where a project has been tendered but not constructed, construction cost shall mean the lowest acceptable tender. Where a project has been completed to Pre-RFP Report and not tendered, construction cost shall mean the accepted estimate contained in the Pre-RFP Report.

1.6 CONSTRUCTION MANAGER

Construction Manager refers to the person or persons designated as responsible for execution of construction contracts and managing, coordinating all aspects of construction.

1.7 CONSTRUCTION MANAGEMENT

Construction Management refers to the process of executing and managing the construction contracts and project activity.

1.8 CONSTRUCTION PHASE

Construction Phase means the period of time during which construction work is performed by Contractors at the Place of the Project and commences on the first day a Contractor performs Work and terminates on the day fixed for Substantial Performance of the Project. Construction Phases may be completed over multiple years in packages that align with the fiscal year.

1.1 CONSULTANT

The Consultant is the person, firm or corporation retained by the Client to perform: design services, cost estimating services, investigative services and the like.

1.2 CONTRACT

The Contract means the agreement between the Halifax Regional School Board and the Contractor for the provision of labour, materials, and equipment for the execution of the work agreed to by the Contractor.

1.8 CONTRACT DOCUMENTS

The Contract Documents means the executed Agreement between the Halifax Regional School Board and the Contractor, the General Conditions of the Contract, the drawings, the specifications, and such other documents as are identified in the Agreement and the General Conditions as constituting part of the Contract Documents.

1.9 CONTRACTOR

The Contractor means the person, partnership or corporation contracting with the Halifax Regional School Board to provide labour, materials and equipment for the execution of the work.

1.10 CONTRACTOR START-UP PROGRAM

Contractor Start-up Program means that full set of pre-planned activities to be carried out by the Contractor after the work is installed to test and inspect the work, to start-up equipment and balance systems, to correct any deficiencies identified as a result of such activities, and in general to demonstrate readiness for Substantial Performance of the Work.

1.11 CONSULTANT AGREEMENT

Consultant agreement refers to the binding legal document signed by the Consultant and Halifax Regional School Board and is represented by Appendix C in this RFP document.

1.12 DETAILED DESIGN PHASE

Detailed Design Phase means the time period subsequent to completing the Program and Concept, leading to a tender and prior to the start of construction activity at the Place of the Project.

1.13 DESIGN CONSULTANT TEAM LEADER

Design Consultant Team Leader is the person who will be the main point of contact with the Prime Design Consultant firm, and will have an adequate level of commitment to the project and attend all meetings in addition to other designated personnel listed under key personnel.

1.14 EVALUATION TEAM

Evaluation Team refers to the member group comprised of representatives from Halifax Regional School Board Purchasing Department, Operations Services Department, Department of Education Facilities Management and the Project Manager , SNC Lavalin O&M.

1.15 HALIFAX REGIONAL SCHOOL BOARD

Halifax Regional School Board is the School Halifax Regional School Board as indicated on the cover page of the Request for Proposals, and includes any representative of the Halifax Regional School Board, such as the Project Manager.

1.16 LETTER OF INTERIM ACCEPTANCE

Letter of interim acceptance refers to a letter of intent that serves as a binding agreement that holds the consultant and Halifax regional School Board to the terms of the RFP until a formal contract is signed and in effect.

1.17 LETTER OF TOTAL PERFORMANCE

The letter of total performance is issued by the consultant to the contractor after the Consultant has made inspections for Total Performance of the Work, and if there are no deficiencies, shall issue a "Letter of Total Completion", denoting the start of the Post Construction Phase.

1.18 Life Cycle Costing

Life Cycle costing is a method for assessing the total cost of a building and/or building system over its life cycle. Life cycle costing can be used to determine acceptable alternatives as they apply to the buildings or building systems while maintaining the same performance requirements relative to initial purchase, installation and operating costs. This determination may assist in the estimation of the cost of design and materials that will provide the lowest overall cost of ownership consistent with the buildings function.

1.19 **PLANNING PHASE**

This phase of work includes the development of the project management plan, the functional program and the conceptual design.

1.20 PRE-RFP REPORT

Pre-RFP Report means a report requested by the Halifax Regional School Board from the Consultant before the project is tendered containing approvals of authorities having jurisdiction over the project, description of the project in comparison to the approved Space Allocation Table of major department, occupancy classifications, project data lists detailing construction materials and systems, anticipated RFP call dates, project schedule and a current construction estimate with comparison to the approved budget.

Note:

For projects utilizing a "Construction Management" method of delivery, all applicable information is to be provided at a time appropriate to the activities; prior to the individual trade package tenders, and the report referred to above, to be provided at a time appropriate to the design and approval schedule. Construction Estimates and Schedules to be provided by the Construction Manager in coordination with the Consultant.

1.21 PROJECT MANAGER

The (PM) acting on behalf of the Sponsor Group for this Project is Ed Cameron, SNC Lavalin O&M. The Design Consultant will follow direction of the Project Manager. The (PM) is responsible to the Sponsor Group.

1.22 SUB-CONSULTANT

Sub-Consultant means professional engineers, architects and special Consultants retained by the Consultant to provide services for such disciplines as architectural, structural, mechanical, electrical, landscape and others to assist the Consultant in preparing contract documents and the administration of the construction contract.

1.23 SPONSOR GROUP

The Sponsor Group is comprised of representatives of Halifax Regional School Board and Department of Education and has final decision authority on project scope. This group normally includes DOE Facilities Management Regional Director(s) and HRSB Operations Services Coordinator-Maintenance and Manager Special projects as well as the assigned Project Manager. The Sponsor Group will meet monthly for the duration of the Project.

1.24 SST

School Steering Team – Committee of stakeholders established in the planning stages of the project to provide input to Sponsor Group and Design Team.

1.25 SUBSTANTIAL PERFORMANCE OF THE PROJECT

Substantial Performance is when the Consultant determines that 97.5% of the project has been completed.

1.26 CONSULTANT AGREEMENT

Consultant agreement refers to the binding legal document signed by the Consultant and Halifax Regional School Board and is represented by Appendix C in this RFP document.

1.27 TOTAL PERFORMANCE OF THE PROJECT

Total Performance of the Project is the date when the total construction and related services contemplated by the Project have been performed to the requirements of all Trade Contracts and in conformance with the provisions of the Builders' Lien Act.

1.28 THE WORK

The work means all the tasks necessary for execution of Part A and Part B as described within this document.

1.29 WRAP-UP PROGRAM

The wrap up program consists of the processes and documentation required for commissioning, final reviews, deficiency list development, training, warranties, Operations & maintenance manuals, etc. required in order to complete the project.

1.30 POST-10 CONSTRUCTION PHASE

Post Construction Phase means that period of time following the Substantial Performance. This will include final commissioning, Functional Performance Testing, warranty administration, deficiency identification and correction, training and demonstrations, closeout documentation, final accounting and additional work as required.

1.31 VERIFICATION OF CONTRACTOR'S PERFORMANCE

Verification of Contractor's Performance means the full set of activities carried out by the Consultant during all phases of the work to ensure that the Contractor's work is properly installed, tested and inspected in compliance with the Contract Documents, and to ensure that the design performance requirements for the work are achieved.

ARTICLE 2 - CONSULTANT SERVICES AND RESPONSIBILITIES

1.0 BASIC SERVICES

1.1 The Consultant agrees to perform basic services (to be included in the stipulated bid price, A through C) of the five phases described in Articles 2.1 through 2.5 and include normal architectural, structural, mechanical and electrical engineering services (includes all consultant office/project administrative costs, travel & expenses for associated project meetings, insurance and liability costs, etc) and any other services included in Article 15 as part of basic services.

1.2 The Consultant agrees to follow the DC350 Design Requirements Manual, Current Edition and all Errata up to bid closing time. DESIGN REQUIREMENTS MANUAL 2010 EDITION Part 1- http://novascotia.ca/tran/works/dc350/Part1.pdf EDUCATIONAL FACILITIES DESIGN REQUIREMENTS Part 2 - http://novascotia.ca/tran/works/dc350/Part2.pdf. Where not practical, any discrepancies which may exist between the DC350 and this agreement must be brought to the attention of the Halifax Regional School Board and a resolution will be made by the Sponsor Group.

2.1 DESIGN PHASE

The Halifax Regional School Board may require multiple scheduled design meetings throughout all phases of the Design process for which the Consultant and his sub-consultants shall attend. The Project Manager shall be responsible for taking and distributing the minutes.

2.1.1 SCHEMATIC DESIGN

2.1.1.1 The Consultant shall study and review with the Halifax Regional School Board the program and the initial budget furnished to the Consultant by the Halifax Regional School Board. The purpose of the study and review shall be to enable the Consultant to ascertain the Halifax Regional School Board's requirements for the project and, where appropriate, to suggest changes to the Halifax Regional School Board.

2.1.1.2 The Consultant shall provide a preliminary evaluation of the program and the initial budget restraints, each in terms of the other.

2.1.1.3 The Consultant shall review with the Halifax Regional School Board alternative approaches to design and construction of the project.

2.1.1.4 Based on the mutually agreed-upon program and the agreed budget, the Consultant shall prepare for approval by the Halifax Regional School Board the schematic design documents consisting of drawings and other documents appropriate in the opinion of the Halifax Regional School Board to the size of the project illustrating the scale and relationship of project components in sufficient detail to fully interpret the program and review costs.

2.1.2 DESIGN DEVELOPMENT

2.1.2.1 Based on the approved schematic design document and approved budget the Consultant shall prepare for approval by the Halifax Regional School Board design development documents consisting of the presentation documents appropriate in the opinion of the Halifax Regional School Board to the size of the project, to fix and describe the size and character of the entire project as to architectural, structural, mechanical and electrical systems, materials and such other elements as may be appropriate. The presentation documents shall consist of a booklet or other documentation appropriate in the opinion of the Halifax Regional School Board which shall contain:

(1) commentary on program statement, concept and solution and technical data,
(2) color drawings,
(3) outline specifications defining major components and systems,
(4) budget and schedule
(5) an outline plan for the verification of the Contractor's Performance.

2.1.2.2 The outline plan for the Verification of the Contractor's Performance should be in sufficient detail to identify those major components of the Contractor's work which will require particular attention, and to define the general approaches to be used by the Consultant to verify that such work is completed in general compliance with the Contract Requirements.

2.1.3 CONSTRUCTION DOCUMENT PREPARATION

2.1.3.1 Based on the approved design development document and budget for each Trade Package, the Consultant shall prepare for approval by the Halifax Regional School Board, construction documents for competitive tendering consisting of drawings and specifications setting forth in detail the requirements for the construction of the project. All construction and tendering documents are to be provided in hardcopy and electronic formats as required.

2.1.3.2 The Consultant shall prepare the construction documents so as to maximize competitive bidding of contractors, sub-trades, and suppliers. Sole sourcing of components will only be permitted with written approval of the Halifax Regional School Board.

2.1.3.3 For any changes to the project requirements, the Consultant will review previous construction estimates to determine if adjustments are required. The Project Manager shall advise the Halifax Regional School Board of any such adjustments.

2.1.3.4 The Consultant shall prepare all necessary tender documents. The Consultant shall submit to the Halifax Regional School Board eight (8) copies of the tender documents in electronic format where possible (hard copy of large drawings) and additional copies when required for review.

2.1.3.5 The Consultant shall submit documents and obtain approval of authorities having jurisdiction over the project.

2.1.3.6 The Consultant shall comply with codes, by-laws, and regulations of applicable levels of government as they apply to the project.

2.1.3.7 When submitting the final bid documents to the Halifax Regional School Board, the Consultant shall provide the "Pre-Tender Report" as defined in Article 1.9.

2.1.3.8 Drawings shall be prepared having regard to the standards approved by the Halifax Regional School Board and as follows:

1. Cover sheet will include a list of drawings.
2. Drawing (sheet) numbers will be in the following sequence:
   100 series (101-199) - Plot Plan, Site Plan, Site Services, Site Details, Landscaping
   200 series (201-299) - Foundation and Footing Plans, Related Details
   300 series (301-399) - Architectural Drawings for Floor Plans, Finish Schedules, Door, Frame and Hardware Schedules, Roof Plan, Exterior Elevations, Wall Sections, Interior Elevations and Details, Window Details, etc.
   400 series (401-499) - Structural Framing Drawing and Details
   500 series (501-599) - Precast Concrete
   600 series (601-699) – Plumbing
   700 series (701-799) - Heating, Ventilation
   800 series (801-899) – Electrical
   900 series (901-999) - Fire Protection

2.1.3.9 Specifications:

(1) The Consultant shall prepare and be entirely responsible for the technical specifications comprising all required sections of revised Divisions of the Master Format as published by Construction Specifications Canada and the National Master Specification (NMS) as developed by Public Works and Government Services Canada

(2) The Consultant shall use the text of the (NMS), to the maximum extent to which it is applicable, in the preparation of the project specifications. Use of the Master Specification System shall not relieve the Consultant of the responsibility for the content of the project specifications.

(3) The Consultant shall correctly update, edit and modify the working copies of the Master Specification sections to suit the project requirements and shall, in addition, prepare those specifications which are required for the project but which are not available from the Master Specification system using the Master Format specification formats.

(4) Unless otherwise agreed, the Consultant shall produce the technical specifications in electronic format using his own personnel at his own expense and shall submit to the Halifax Regional School Board one copy.

(5) Consultant shall comply with the Halifax Regional School Board's Purchasing policy and follow the requirements of the Atlantic Procurement Agreement to insure Maritime manufacturers have full and fair access in the bidding documents.

(6) The Halifax Regional School Board shall provide the Instructions to Proponents, Tender Form, the Contract between the Halifax Regional School Board and the Contractor, the General Conditions and Supplementary General Conditions of the Contract for editing and modification by the Consultant.

2.1.4 OPERATIONAL REQUIREMENTS

2.1.4.1 The consultant will provide Halifax Regional School Board a written comprehensive overview on each system and specifications within the building and included in this project. This will include all design criteria, maintenance manuals, and operational requirements.

2.1.5 VERIFICATION OF CONTRACTOR'S PERFORMANCE

2.1.5.1 The detailed plan for the Verification of Contractors Performance shall include a consolidated listing of project-specific design criteria, assumptions, and systems performance criteria that have been used by the Consultant as a basis for design of the facility, as well as a listing of those activities, and their timings, to be carried out by the Consultant over the remaining phases of the work to ensure that the work is completed in compliance with the Contract Documents and with the design requirements of the facility.

2.2 BIDDING OR NEGOTIATING PHASE

2.2.1 Tender documents will be made available to proponents at a cost of $50/set through Wade Atlantic. Reproduction of specifications/drawings will be the responsibility of the successful design consultant

2.2.2 The Halifax Regional School Board shall advertise tenders on the NS Government Electronic Bulletin Board and the Halifax Regional School Board website.

2.2.3 The Consultant shall prepare addenda necessary to inform all Proponents of clarifications, changes, additions or deletions to tender documents. These addenda shall be issued a minimum of 3 days before closing date of tender. All printing and issuance of addenda shall be by the Halifax Regional School Board.

2.2.4 The Halifax Regional School Board shall receive tenders.

2.2.5 The Consultant shall attend the tender opening and assist the Halifax Regional School Board in checking and reviewing on tenders. He shall submit his written recommendations to the Halifax Regional School Board prior to the award of the Contract.

2.2.6 The Halifax Regional School Board shall award the Contract.

2.3 CONSTRUCTION PHASE

2.3.1 The Consultant shall provide contract administration and periodic site review in accordance with the Contract and in conjunction with the Halifax Regional School Board's Project Manager.

2.3.1.1 The Consultant shall provide written recommendations necessary for the proper execution of the work with reasonable promptness when requested and shall render written recommendations promptly on all claims, disputes and other matters in question.

2.3.1.2 The Project Manager shall submit monthly written reports to the Halifax Regional School Board which will include but not be limited to details of current on-site activities of all disciplines, progress photographs, contemplated change order and change order status reports, assessment of workmanship in comparison to contract documents and comments on contractor's construction schedule. The Consultant shall ensure provision of the necessary documentation to the Project Manager to assist with development of the foregoing reports.

2.3.1.3 The Consultant shall attend all project site meetings. Sub-Consultants shall attend when topics pertaining to their specialty are to be discussed.

2.3.1.4 The Consultant shall review and approve Contractor's submissions such as product lists, product data, shop drawings and samples and compare with the Contract Documents. Special care will be taken in such reviews to ensure that any Contractor proposals for substitutions are consistent with the dimensional and performance requirements of the project design, and in full compliance with the Contract Documents. Review of Contractor's submissions shall be taken with reasonable promptness and in orderly sequence so as not to cause delay to the work. The consultant shall submit review results to the Project Manager.

2.3.1.5 The Consultant shall carry out all inspections, site reviews and shall supervise or witness all tests, as defined in the Verification of the Contractor's Performance detailed plan, to verify that the Contract work is proceeding in accordance with the Contract Documents and to ensure that the time required to correct contractor deficiencies during the Facility Startup Phase is minimized. The Consultant shall conduct and/or supervise any further inspections and tests that he considers necessary and appropriate to verify the work of the Contractor and as approved by the Halifax Regional School Board. The Consultant and his sub-consultants shall provide formal site inspections in sufficient frequency to satisfy himself that the construction fully complies with the intent of his construction documents and shall file a report with the Halifax Regional School Board's representative. The consultant shall submit schedules for inspection to the project manager at least 5 working days prior to the inspection process. All inspection results and consultant's review comments shall be submitted in a timely manner to the Project Manager for review including an action plan to address deficiencies.

2.3.1.6 The Consultant shall be conversant with the progress of the work and he shall review and recommend for acceptance or amendment the Contractor's application for payment. The final value of payment to the Contractor shall be assessed by the Halifax Regional School Board's Project Manager and approved by the Board.

2.3.1.7 The Consultant shall notify the Halifax Regional School Board's Project Manager of work which he considers does not conform to the Contract Documents with recommendations on how the work should be corrected.

2.3.1.8 The Halifax Regional School Board's Project Manager shall advise of defects, deficiencies, or concerns noted in the work for the Consultant's review, interpretation and recommendation for corrections. Responses to such advice shall be made within seven days.

2.3.1.9 All instruction regarding the work shall be directed **in writing** to the Halifax Regional School Board's Project Manager. The Consultant shall indicate changes that may be necessary by submitting to the Halifax Regional School Board's Project Manager, documentation outlining reasons for the change, a cost estimate and all specific details required to price the change. If the Halifax Regional School Board approves of this change, a "Contemplated Change Order" will be issued to the Contractor by the Project Manager and the Contractor will be required to provide a quotation in the form of a breakdown of costs for the Consultant's approval and recommendation to the Halifax Regional School Board. The Halifax Regional School Board's Project Manager shall, if accepted, issue a Change Order to the Contract. All changes shall be made by Change Order even though a change may not alter the contract amount.

2.3.1.10 Drawings and/or other acceptable documents shall be prepared by the Consultant and issued by the Halifax Regional School Board to the Contractor for pricing or for execution of changes.

2.3.1.11 The Consultant shall review and ensure that Operational and Maintenance Manual information submitted by the Contractor are consistent in scope, content and format.

2.3.1.12 The Consultant shall review the Contractor's submission of a Contract Wrap-Up Program to ensure that the submission accurately reflects the Contract Document requirements for static inspections, system inspections and the sequence and timing of start-up tests for the facility.

2.3.1.13 The Consultant shall carry out all inspections and shall supervise or observe all tests, as defined in the Verification of the Contractors Performance and in the Contract Documents, to verify that

the work has been completed in accordance with design performance requirements and the Contract documents.

2.3.1.14 Where and as deficiencies are identified during the course of the Contractor Wrap-up Program, the Consultant shall take whatever immediate expeditious action is required to specifically define requirement for correcting such deficiencies, and to verify that such deficiencies have been properly corrected.

2.3.1.15 The Project Manager, with support from the Consultant shall carry out, co-ordinate and/or direct all activities, as defined in the Verification of the Contractor's Performance plan, required to ensure that the Halifax Regional School Board's operating and maintenance personnel from the facility are properly briefed, familiarized and trained in the operation and maintenance of the facility prior to start of operation. Such training shall include early briefings on the design intent of the facility as well as appropriate pre-occupation and post-occupation seminars.

2.3.1.16 The Consultant shall make inspections for Substantial Completion of the Work at the conclusion of the Contractor Wrap-up Program, and prepare a list of outstanding deficiencies with an estimate of their value. When appropriate the Consultant shall issue a "Certificate of Substantial Completion of the Work" to the Halifax Regional School Board for his approval. The Halifax Regional School Board shall issue the "Letter of Interim Acceptance" to the Contract, or denoting the start of Warranty.

2.3.1.17 The Consultant shall make inspections for Total Performance of the Work at the request of the Contractor, and if there are no deficiencies, issue a “Certificate of Total Performance of the Work” to the Halifax Regional School Board for his approval. The Consultant shall issue the “Letter of Total Completion” to the Contractor, denoting the start of the Post-10 Construction Phase.

2.3.1.18 As a general performance target, the Halifax Regional School Board is intent on ensuring that Total Completion of the work is achieved at least three (3) months prior to the end of the one year warranty period.

2.3.1.19 The Consultant and his Sub-Consultants shall be required, at the completion of the Work, to amend the reproducible drawings and electronic files to accurately portray the constructed status of the project. These shall be referred to as "Record Drawings". These drawings shall be submitted to the Halifax Regional School Board’s Project Manager. Record Drawings shall be amended to the same standard of information as provided on original Contract Documents.

2.4 FUNCTIONAL PERFORMANCE TEST PROGRAM

2.4.1 Prior to acceptance of Substantial Performance of the Work, the Halifax Regional School Board may carry out a Functional Performance Test Program to test and measure the performance of all systems, system components and equipment, at maximum load recommended by manufacturer and under simulated operating load conditions; all for the purpose of confirming that the facility is in compliance with all Contract and design requirements. Where and as additional deficiencies are identified during the course of the Performance Test Program, the Consultant shall take whatever expeditious action is required to specifically define requirements for correcting such deficiencies, and to verify that such deficiencies have been properly corrected.

2.5 POST-CONSTRUCTION AND WARRANTY PHASE

2.5.1 The Post-Construction Phase is the period from Total Completion of the Work through to the end of the one year warranty period.

2.5.2 The Halifax Regional School Board’s Project Manager will advise the Consultant of defects observed during the warranty period.

2.5.2.1 The Project Manager will notify the Contractor of these defects and request him to remedy the defects in accordance with the Contract Documents.

2.5.2.2 Thirty (30) days before expiration of the warranty the Halifax Regional School Board's representatives, the Consultant and the Contractor will inspect the Work as arranged by the Project Manager noting defects of products and workmanship.

2.5.2.3 The Consultant shall take whatever expeditious action is required to specifically define requirements for correcting such deficiencies, and to verify that such deficiencies have been properly corrected.

2.5.2.4 The Consultant team shall attend quarterly Warranty Phase meetings as well as final Warranty meetings for all items having extended warranties, conduct site reviews, and submit reports pursuant to those reviews.

2.6 ADDITIONAL SERVICES

The following services are not included in Basic Services unless so identified in Article 15. They shall be provided if authorized or confirmed in writing by the Halifax Regional School Board, and they shall be paid for by the Halifax Regional School Board as provided in this agreement. Provision of any other services not otherwise located in this Agreement must have prior approval by the Halifax Regional School Board. Additional services shall include the following:

2.6.1 Providing planning surveys, environmental studies, or comparative studies of prospective sites, and preparing special surveys, and studies.

2.6.2 Providing consultation concerning replacement of any work damaged by fire or other cause during construction, and providing services as may be required in connection with the replacement of such work.

2.6.3 Identifying and specifying the means of removal or handling of hazardous materials including those containing asbestos or PCBs.

2.6.4 Topographical Survey

2.6.5 Geotechnical Investigation (Report Required).

2.6.6 Commissioning Services.

ARTICLE 3 - HALIFAX REGIONAL SCHOOL BOARD'S RESPONSIBILITIES

3.1 The Halifax Regional School Board shall provide information regarding requirements for the project consisting of background history of the project, previous studies and draft schematic plans and design requirements.

3.2 The Halifax Regional School Board's initial budget for construction will be provided to the Consultant for his review along with an overall schedule for the project.

3.3 The Halifax Regional School Board has designated a Project Manager who shall be responsible for coordination of the project from the Halifax Regional School Board's perspective. The Halifax Regional School Board, through its Project Manager, shall examine the documents submitted by the Consultant and shall render decisions pertaining thereto. This examination by the Halifax Regional School Board and representatives shall not relieve the Consultant of professional and technical responsibility for the documents presented and services rendered to the Halifax Regional School Board.

3.4 The Halifax Regional School Board shall furnish the legal description and a certified land survey of the site giving, as applicable, grades and lines of streets, alleys, pavements, and adjoining property, right-of-ways, restrictions, easements, encroachments, zoning, deed restrictions, boundaries and contours of the site, locations dimensions and complete data pertaining to existing buildings, other improvements and trees and full information concerning available service and utility lines both public and private, above and below grade, including inverts and depths. (Refer to Item 2.6.7)

3.5 The Halifax Regional School Board shall furnish specialist services respecting such matters as test borings, test pits, soil bearing values, percolation tests, including necessary operations for determining sub-soil, and water conditions. (Refer to Item 2.6.7)

3.6 The services, information, surveys, and reports in Articles 3.4 and 3.5 shall be furnished at the Halifax Regional School Board's expense.

3.7 The Halifax Regional School Board's Project Manager, through Halifax Regional School Board Purchasing Department will:
(1) Provide draft Instructions to Proponents, the Construction Agreement form and the General Conditions of the Contract.
(2) Issue the Construction documents for Tender on the Electronic Bulletin Halifax Regional School Board and the appropriate news media.
(3) Issue addenda prepared by the Consultant and his Sub-Consultants.
(4) Receive, open and accept or reject tenders.
(5) Award contract and prepare and execute contract documents.
(6) Carry out any required Performance Tests as described in Article 2.4.2.

3.8 The Halifax Regional School Board in the administration of the Contract shall provide Contract management as described in Article 2.3.

ARTICLE 4 - COST PLANNING AND CONTROL AND CONSTRUCTION ESTIMATING

4.1 Beyond the initial budget established by the Halifax Regional School Board, the Consultant shall be responsible for assisting the Project Manager in all construction estimating by exercising Cost Planning and Control procedures through all stages of the project until completion of construction of the project.

As this is an as required service, we cannot estimate the total number of times there may be a requirement for costing information. As a minimum, we typically may request construction estimates to complete the schematic design phase (high level class “D”), and three during development of construction documents, 30% (class “C”), 50% (class “B”) and 95% (class “A” – pre-tender). Once tenders are received and awarded, we will compile a final estimate based on actual costs that will then establish the ‘construction budget’. Design development may require as many as 2 – Class “D” estimates following schematic design. The costs estimates mentioned in Article 4 are related to high level Class “D” estimates near the conclusion of schematic design; the Class “A” estimate is the pre-tender estimate near the conclusion of construction document preparation.

4.2 After receipt of the Halifax Regional School Board's functional program for the project and the initial budget, the Consultant shall review these and accept the budget, or, if in disagreement, submit to the Halifax Regional School Board for consideration in writing his own budget figure which must be in sufficient detail to permit a proper cost check. Should it be considered necessary to revise the initial budget to meet minimum acceptable program requirements, then the new figure shall be agreed to in writing by both parties and this will be the authority to proceed in the Schematic Design Phase. This figure shall become the approved project budget and must not be exceeded, unless directed by the Halifax Regional School Board in writing.

4.3 The Consultant shall be responsible to design the project within the approved budget. When submitting his design presentation for consideration, based on the program, it shall be accompanied by a detailed cost estimate. During Schematic Design phase, the Consultant shall submit for the

Halifax Regional School Board's Review, cost estimates at intervals as established by both parties as a part of the cost monitoring procedure. Where estimates are not within agreed budget or project target costs, the Halifax Regional School Board may accept the estimate or may order revisions to the design to the agreed limits. The Halifax Regional School Board's acceptance of the cost estimates in writing at any review period is a necessary condition to proceed further into the design development.

4.4 At the completion of the Contract documents and with the Pre-Tender Report, the Consultant shall submit a final cost estimate immediately prior to tendering. Such an estimate shall provide a breakdown of costs under the main construction disciplines. The Project Manager will require the Consultant to submit a detailed trade by trade cost breakdown and/or elemental cost breakdown of the project estimate.

4.5 If the lowest bona fide tender exceeds the Pre-Tender Report estimate, the Halifax Regional School Board may order the Consultant, without charge to the Halifax Regional School Board, to modify the drawings and specifications and/or redesign to comply with the Pre-Tender Report estimate limit.

4.6 If the bidding or negotiation phase has not commenced within three months after the Consultant submits the Contract Documents to the Halifax Regional School Board, any budget costs, target estimates or Pre-Tender Report estimates may be adjusted to reflect any change in the general level of prices in the construction industry between the date of submission of the Contract Documents to the Halifax Regional School Board and the date on which tenders are sought. The Project Manager shall prepare and submit in writing the adjusted price for the Halifax Regional School Board's approval.

ARTICLE 5 - PAYMENTS TO THE CONSULTANT

5.1 PAYMENT ON ACCOUNT OF BASIC SERVICES

5.1.1 Payments for basic services shall be made to the Consultant following completion of each of the phases set out in Article 15.1.2 or, if agreed to by the Halifax Regional School Board, on a monthly basis. The initial payment to the consultant will not be paid until evidence of liability insurance coverage has been provided as per Article 7.4.

5.1.2 No payment subsequent to the first payment shall be made until the Consultant has satisfied the Halifax Regional School Board that:

(1) all of the Consultant's Sub-Consultants have been paid for services rendered to the Consultant and for which the Consultant has been paid by the Halifax Regional School Board, or;

(2) if a dispute exists between the Consultant and a Sub-Consultant regarding payment for services, the disputed amount has been placed in trust by the Consultant pending resolution of the dispute.

5.1.3 The cost of basic services must be included in the Stipulated Bid Price.

5.2 **PAYMENTS ON ACCOUNT OF ADDITIONAL SERVICES**

Payments on account of the Consultant's additional services and defined in Article 2.6 and for reimbursable expenses as defined in Article 5.4 may be made monthly upon presentation of the Consultant's invoices for services rendered or expenses incurred, complete with support documentation to the satisfaction of the Halifax Regional School Board.

5.3 **DIRECT PERSONNEL EXPENSES**

Direct personnel expenses means the direct salaries of all the Consultant's personnel engaged on the project and the Consultant's portion of the cost of their mandatory and customary contributions and benefits related hereto, such as employment taxes and other statutory holidays, vacations, pensions and similar contributions and benefits. These expenses are to be included within the costs associated and detailed in Appendix B - Fee Submission Form, Parts A through C.

5.4 **REIMBURSABLE EXPENSES**

5.4.1 Reimbursable expenses are in addition to the compensation for basic and additional services and include actual expenditures made by the Consultant and his employees and Sub-Consultants in the interest of the project for the expenses listed in the following Articles and in accordance with Article 15.3:

5.4.2 Renderings, models and mock-ups requested by the Halifax Regional School Board, not including reproduction of project drawings & specifications. This does not include design development drawings and sketches.

5.4.3 Pre-authorized computer studies and data processing related to the calculations for energy analysis assisting in the completion of Contract Documents are to be considered as reimbursable expenses and to be paid at cost.

5.5 **PAYMENTS WITHHELD**

No deduction shall be made from the Consultant's compensation on account of penalty, liquidated damages or other sums withheld from payments to Contractors or on account of the cost of changes in the work other than those for which the Consultant is held legally liable.

The Halifax Regional School Board reserves the right to adjust the Consultant's final payment to reflect the premium costs incurred by the Halifax Regional School Board due to changes arising from errors and/or omissions in the documents prepared by the Consultant.

5.6 **LEGAL PAYMENT**

The Consultant shall receive the final payment on account of the fee upon the issuance by the Halifax Regional School Board of the "Letter of Total Performance of the Work" to the Contractors and completion of Post Construction deficiencies as noted in 2.5.2.3. The Consultant may be required to submit a statutory declaration in a form satisfactory to the Halifax Regional School Board verifying that the Consultant has paid all sums owing to his employees and his Sub-Consultants in connection with this Agreement.

5.7 **PROJECT SUSPENSION OR ABANDONMENT**

If the project is suspended or abandoned in whole or in part, at no fault of the Consultant, the Consultant shall be compensated for all services performed prior to the receipt of written notice from the Halifax Regional School Board, and will be related to the Phasing of Compensation outlined in Article 15. If within 3 months after completion of the drawings and specifications tenders have not been called the Department shall, on request from the Consultant, pay 80% of the 15% which would have been due when tenders are received and this shall be final payment until such time as tenders are called and a contract is awarded.

5.8 **CONSULTANT'S ACCOUNTING RECORDS AND STATUTORY DECLARATION**

The Halifax Regional School Board may demand at any stage of this Agreement, statutory declarations verifying the payment of Sub-Consultant fees and any other sums owing by the Consultant in connection with this Agreement. Delay in submitting the statutory declaration will delay release of payments. Records of all costs, percentage payments, reimbursable expenses, expenses pertaining to additional services and services performed shall be kept on the basis of generally accepted accounting principles. At mutually convenient times, such records shall be available for inspection and audit by the Halifax Regional School Board. The Consultant shall keep the records for a period of two years following completion of this Agreement or termination of his services.

5.9 **PERSONNEL SALARIES (Non-Applicable)**

Where contracts are based on a multiple of direct personnel expenses or where direct personnel expenses are charged, the personnel salary times the multiple factor shall not exceed the maximum hourly rate of the Consultant's principals accepted by the Halifax Regional School Board**.**

ARTICLE 6 - OWNERSHIP AND USE OF DOCUMENTS

6.1 All drawings, specifications, reports, calculations and other documents prepared by the Consultant are instruments of service and are the property of the Halifax Regional School Board, whether the work be executed or not. The Halifax Regional School Board reserves the copyright in the work executed. However, they will not be used by the Halifax Regional School Board for any other work without the written permission of the Consultant, which may not be unreasonably withheld**.**

6.2 The copyright shall be in accordance with Section 11, Copyright Act - R.S.C. 1970, Chapter C-30: "Without prejudice to any rights or privileges of the Crown, where any work is, or has been prepared or published by or under the direction or control of Her Majesty or any Government Departments, the copyright in the work, shall, subject to any agreement with the author, belong to Her Majesty and in such case shall continue for a period of fifty (50) years from the date of the first publication of the work."

ARTICLE 7 - INSURANCE AND LIABILITY

7.1 The Design Consultant shall hold harmless and fully indemnify where obligated by law; the Halifax Regional School Board, it's employees and agents, from and against all claims and demands which may be brought against the Halifax Regional School Board and against all loss, liabilities, judgments, costs, damages, or expenses which the Halifax Regional School Board, it's employees and agents, may sustain and resulting from the Consultants' negligent acts, errors, or omissions in the performance of professional services under this agreement.

7.2 The Consultant shall, without limiting his obligations or liabilities herein and at his own expense, provide and maintain the following insurances with insurers licensed in Nova Scotia and in forms and amounts acceptable to the Halifax Regional School Board:

7.2.1 Professional Liability as follows:
"Project Specific Professional" insurance in an amount not less than $5,000,000 for this contract insuring his liability for errors and omissions in the performance of his professional services including all consultants contracted to him. The cost of this insurance is to be paid for by the successful proponent and is to be maintained in force until thirty-six (36) months after the date of the acceptance of the Certificate of Substantial Completion of the work.

7.2.2 Comprehensive General Liability in an amount not less than $10, 000,000.00, per occurrence against bodily injury, personal injury, and property damage including loss of use thereof. Such insurance shall include, but not be limited to non-owned automobile liability and employees as additional insureds. The HRSB shall be added as an additional insured to this policy. (**Not Required for this RFP)**

7.2.3 Automobile Liability on all vehicles owned, operated or licensed in the name of the Consultant in an amount of not less than $2,000,000.

7.2.4 "All-Risks" Valuable Papers and Records Insurance on all such items pertaining to the work under this Agreement in an amount adequate to enable their reconstruction.

7.3 All insurance policies shall state that the coverage provided will not be changed in any material way, cancelled or terminated until 30 days after written notice of such change, cancellation or termination has been given to the Halifax Regional School Board.

7.4 The Consultant shall provide the Halifax Regional School Board with acceptable evidence of all required insurance prior to the commencement of the work and shall promptly provide the Halifax Regional School Board a certified true copy of each policy.

ARTICLE 8 - RIGHT OF CRITICISM

8.1 The Consultant and his Sub-Consultants shall admit to the right for professional architects and engineers in the Halifax Regional School Board's employ to provide critiques on concepts and details prepared by the Consultant and his Sub-Consultants.

ARTICLE 9 - CONSULTANT'S STAFF AND SUB-CONSULTANTS

9.1 The Consultant shall submit to the Halifax Regional School Board for approval, the names, qualifications and experience of all principal personnel to be assigned to this project. Any change in personnel shall be confirmed in writing to the Halifax Regional School Board for approval.

9.2 The Consultant shall submit for the approval of the Halifax Regional School Board, the names and addresses of all his Sub-Consultants to be assigned to this. Any change in personnel shall be confirmed in writing to the Halifax Regional School Board for approval.

9.3 The Consultant shall provide, if requested by the Halifax Regional School Board, a copy of all agreements entered into by the Consultant with Sub-Consultants retained for this project. The Consultant shall also provide a copy of the Agreement to all such Sub-Consultants.

ARTICLE 10 - TERMINATION OF CONTRACT OR SUSPENSION

10.1 Unless otherwise stated in this Agreement, the Consultant's services terminate one year and one day after the completion of this project with prior approval by the Halifax Regional School Board.

10.2 This Agreement may be terminated by the Halifax Regional School Board without cause upon at least seven days' written notice to the Consultant.

10.3 In the event of termination which is not because of the fault of the Consultant, the Consultant shall be compensated for all services performed to termination date, together with reimbursable expenses then due.

ARTICLE 11 - TIME SCHEDULE

11.1 The Consultant shall submit for the Halifax Regional School Board’s approval a written, detailed time schedule for the performance of services on this project. The Consultant shall adhere to the approved schedule and any changes must be reviewed with the Halifax Regional School Board for written agreement to such change. This schedule shall as a minimum reflect and incorporate the key milestone dates for the project as stated below:

- Completion of Schematic Design (Article 2.1.1)
- Completion of Design Development (Article 2.1.2)
- Completion of Construction Document Preparation (Article 2.1.3)

ARTICLE 12 - SUCCESSORS AND ASSIGNS

12.1 The Halifax Regional School Board and the Consultant respectively bind themselves, their partners, successors, assigns, and legal representatives to the other party to this Agreement and to the partners, successors, assigns, and legal representatives of such other party with respect to all covenants of this Agreement. Neither the Halifax Regional School Board nor the Consultant shall assign, sublet, or transfer any interest in this Agreement without the written consent of the other.

12.2 The Consultant agrees to carry on to completion with this Agreement under the name contained herein to the termination or completion of the project, notwithstanding there may have been changes in its organizational structure during the term of this Agreement.

ARTICLE 13 - LAWS & POLICIES GOVERNING THE AGREEMENT

13.1 The laws of Nova Scotia govern this Agreement, except for Article 6.2 where the laws of Canada shall govern.

13.2 In performing the services under the terms of this Agreement, the Consulting firm and its employees shall comply with all the Board's policies and regulations, and as well, applicable laws, ordinances, codes and regulations of all other jurisdictions having or asserting jurisdiction over the services to be performed under the terms of this Agreement.

ARTICLE 14 - ERRORS AND OMISSIONS

14.1.1 The Consultant will execute free of charge or expense to the Halifax Regional School Board any work required resulting from errors or omissions by the Consultants and/or any Sub-Consultants, without prejudice to any claim the Halifax Regional School Board may have against the Consultant.

ARTICLE 15 - BASIS OF COMPENSATION

15.1.1 The Stipulated Bid Price / or percentage of Construction Costs and Reimbursable Expenses as outlined in Section 5 shall be payable and be due at the completion of each phase unless otherwise noted, so that basic compensation for each phase shall equal the following percentages of the total basic compensation payable and be due at the completion of each phase unless otherwise noted. The Halifax Regional School Board may pay interim/monthly billings if agreed by the Halifax Regional School Board and the Consultant. Fiscal planning to be provided by consultant in project planning and billings for consultant services will be derived from this plan.

PROJECT PLAN (PART A):
Upon completion and acceptance by the Halifax Regional School Board and DOE One Hundred percent (100%)

DESIGN PHASE (PART B):

• Program evaluation & schematic design	Ten percent (10%)
• Design Development	Ten percent (10%)
• Construction Documents	Thirty five percent (35%)

TENDERING/NEGOTIATING/AWARD PHASE:

• Upon award of tenders and within approved budget	Ten percent (10%)

CONSTRUCTION PHASE:

• To be paid monthly in proportion to progress of the work	Twenty four percent (24%)

FACILITY START-UP PHASE:

• Interim Acceptance	One percent (1%)
• Final Acceptance	Three percent (3%)
• Record Drawings	Five percent (5%)

ONE YEAR WARRANTY Two percent (2%)

15.1.2 Should the Halifax Regional School Board specifically request the Consultant to design a defined portion of the Work as a separately priced item which subsequently does not become part of the construction cost; the Halifax Regional School Board will reimburse the Consultant for the design phase only of this Work in accordance with Article 15.1.1.

15.2 **COMPENSATION FOR ADDITIONAL SERVICES**

15.2.1 FOR ADDITIONAL SERVICES OF THE CONSULTANT; as described in Article 2.6 any other services included in Article 15 as part of additional services, but excluding additional services of Sub-Consultants, compensation shall be computed as follows: By Agreement prior to Performance.

15.2.2 The Halifax Regional School Board and the Consultant agree in accordance with the terms and conditions of this Agreement that; if the scope of the project and/or Consultant's services is changed materially, the amounts of compensation shall be equitably adjusted, as per Appendix B - Fee Submission Form of Consultant's response to the Request for Proposals for the work.

15.2.3 Changes to the Consultants fees for services will be authorized by Change Order, prepared by the Project Manager in consultation with Halifax Regional School Board and/or Sponsor Group.

ARTICLE 16 - EXTENT OF AGREEMENT

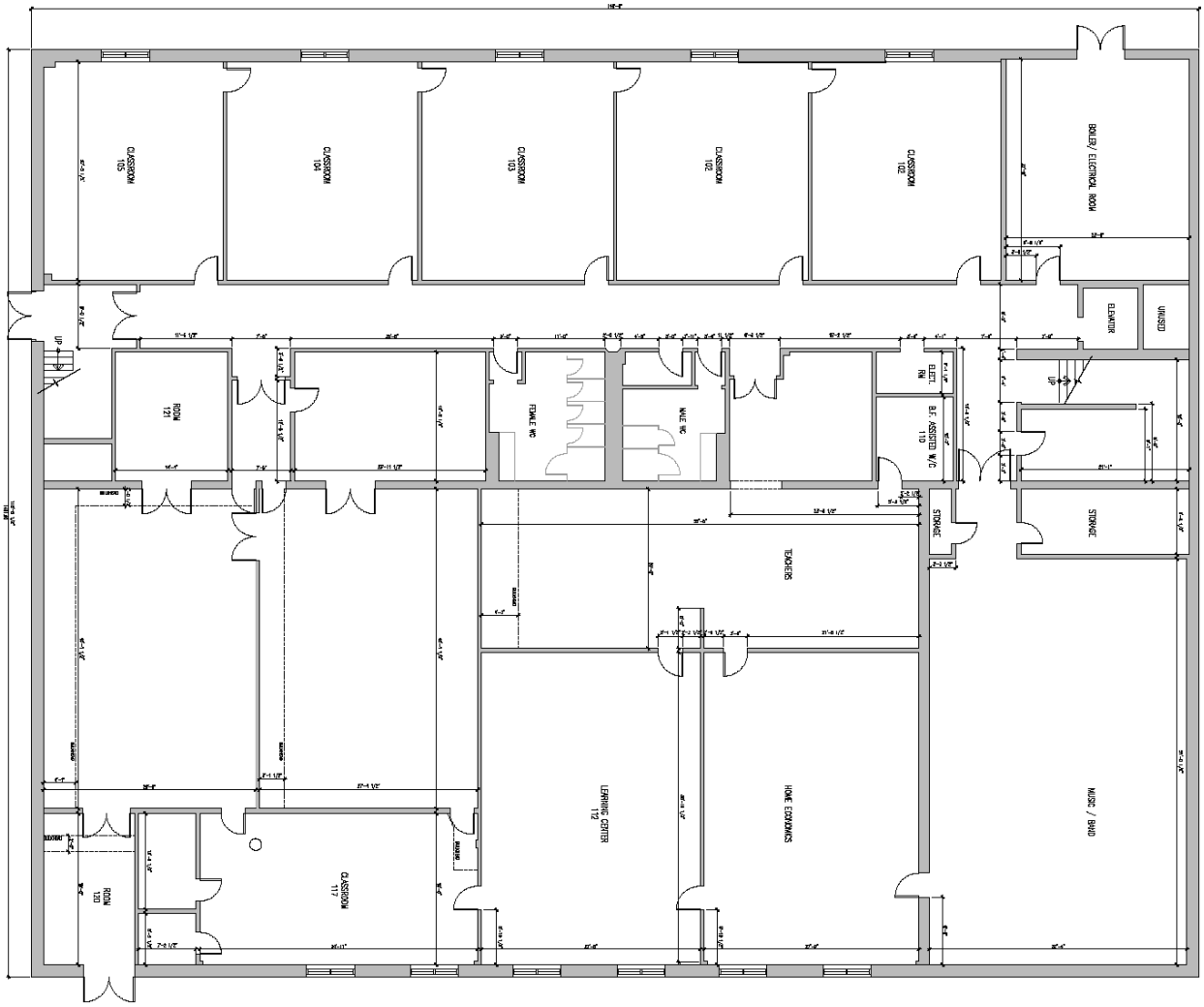
16.1 This Agreement represents the entire agreement between the Halifax Regional School Board and the Consultant and supersedes all prior negotiations, representations, or agreements, either written or oral. This agreement may be amended only by written instrument signed by both the Halifax Regional School Board and the Consultant. This Agreement entered into as of the date and year first written above.

On Behalf of the Halifax Regional School Board **Halifax Regional School Board**	**Witness**
On behalf of the Consultant	**Consultant Witness**

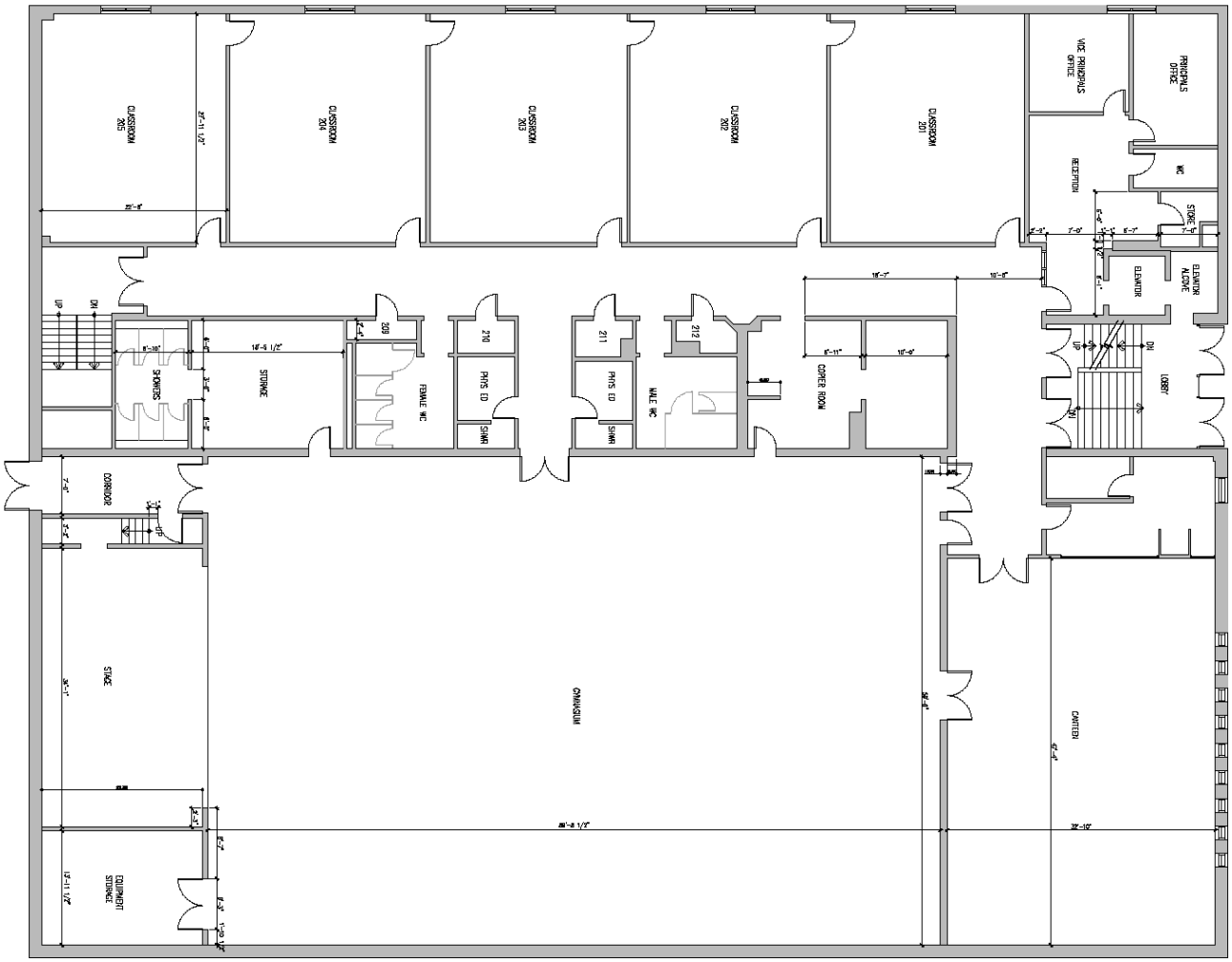
END

Appendix D – Drawings/Floor Plans

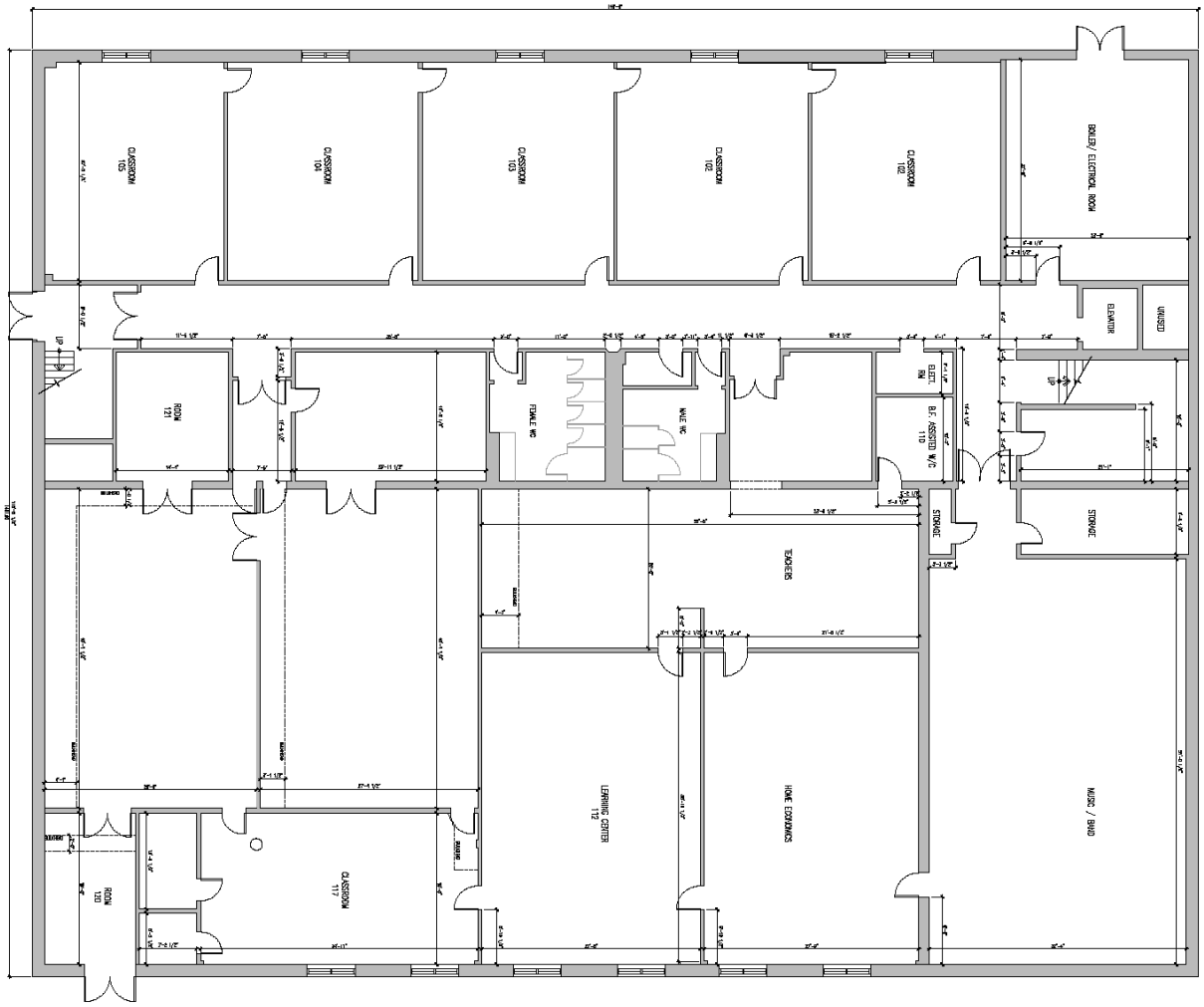
AS FOUND 1ST FLOOR PLAN



AS FOUND 2ND FLOOR PLAN



AS FOUND 3RD FLOOR PLAN



Appendix E – Scope of Work

1 INTRODUCTION

The Halifax Regional School Board invites proposals from design consultants to provide professional building design services to assist the HRSB in implementing their plans to convert the existing Seaside Elementary School, located in Eastern Passage, to a 600 student high school by means of additions and alternations to the existing elementary school. The school will be vacated by the current staff and students in advance of the removals and construction phase. The intended delivery process for the project is by "Design – Bid – Build".

The proponent proposals will contain a Technical submission and a Fee submission described elsewhere in this RFP.

The successful proponent will work through the Sponsor Group supported by the project manager and the School Steering Team (SST). Final decisions rest with the Sponsor Group.

The successful proponent is required to make recommendations based upon aesthetic considerations, functionally, code requirements, green healthy building considerations schedule and budget. At each milestone presentation of a design concept, the successful proponent is required to provide a Class cost estimate as deemed appropriate for the stage of the design.

The project budget is $15M with an estimate of $12.5M for construction costs and $2.5M for soft costs. The successful proponent through planning discussions with the Sponsor Group will review the Public School Program and determine where spaces may offer opportunities to support more than one program.

The Successful Proponent will be required to develop an integrated design utilizing School Space Allocation Program, Conceptual Site Plan, and Space Relationships Diagrams as the starting point, where available. The referenced documents are provided for information only, as the successful Proponent will consult with the Sponsor Group consisting of representation from the Halifax Regional School Board and the Department of Education. The Project will be managed on behalf of the HRSB by SNC Lavalin. The major stakeholders are the School Steering Team, board Staff and DOE staff. Final approval of planning and designs will be made by the Sponsor Group. The successful proponent is expected to make recommendations based upon aesthetic considerations, functional relationships, code requirements, green and healthy building considerations, schedule and budget.
For this project the successful proponent is required to assemble a building design consultant team comprised of the necessary disciplines and qualified staff the following:

1. Architectural Design
2. Landscape Design
3. Interior Design
4. Civil Engineering
5. Structural Engineering
6. Mechanical Engineering
7. Electrical Engineering
8. Project Costing Consultant
9. Green/Sustainable/Healthy Buildings
10. Code compliance Consultant

2. DOE/HRSB INITIAL PLANNING CONCEPT

The existing three story elementary school was constructed in 1974 and is approximately 51,000 square feet. Initial investigations by the HRSB and the Department of Education indicate that a broad approach to planning could be achieved as follows:

1. Locate all the science lab facilities, technology facilities and the visual arts facilities at the existing ground floor and support these facilities with a learning common in the centre of the existing plan.
2. Locate the new 8400 sf gymnasium at the north-east portion of the site connected to the existing building with the gym floor at the same elevation at the existing ground floor.
3. Locate the administration/reception area at the area between the new gym and the existing cafeteria at the second floor. Adjust grade at entrance. Provide elevator for multilevel access.
4. At the existing north side provide an addition to all three levels to increase 4 of the classrooms at each level to 750 sf each for a total of 13. Note one classrooms may need to be deleted at the first and second levels for access between the gym and the existing building.
5. Add 6 classrooms of 900 sf at the west end of the existing classroom wing. Create a learning-common at the south side of the existing classroom wing, between the corridor and the existing gym.
6. Place the library, cafeteria and music room in the existing gym space, at the second level,
7. Utilize the remaining existing space for the remaining educational program and building services requirements.

3. BUILDING PLANNING & DESIGN APPROACH

1. The Successful Proponent will be required to complete a project plan, design and tender document based on PMI Principles with the following primary stages:

1. Pre Design Planning Stage

The successful proponent's initial task will be to meet with the Sponsor Group to discuss the Space Allocation Program requirements and determine the feasibility of the planning described above. Based on the outcome of these discussions, the successful proponent will review the existing facilities and the Facilities Assessment Report along with the space allocation program requirements with a view to producing an outline report and schematic design options that illustrate optimum design solutions. It is understood and expected that the successful proponent will identify areas where a space can be used for more than one education program. If it is determined that the suggested planning approach it is not feasible, the successful proponent will be required to develop an optimum design that supports the requirements of the Public School Program and the project budget.

The DTIR DC-350 document will form the basis for design standards, however, the Sponsor Group may choose to change the requirements where they are deemed to be in the best interests of the project. The successful proponent is required to advise the Sponsor Group, of instances where alternatives to the DC-350 are advisable and feasible.

Space Allocation Program: The Sponsor Group will provide a draft Space Allocation Program for discussion and review. The successful proponent will work with the Sponsor Group to finalize the optimum Space Allocation Program based on the existing facilities, educational program requirements and budget.

PMI Principles & Project Management: For approval by the Sponsor Group and in conjunction with the Project Manager, the successful proponent will use PMI principles, to establish a Project Management plan including but not restricted to; a work breakdown structure, project schedules, cost control methods, communications planning and anticipated major project milestone.

2. Schematic Design Options Stage

Based on the successful proponent's review and recommendations the Sponsor Group will provide directions for schematic design development. It is expected that this stage will begin with "fat pen" studio workshops with the sponsor group and DOE staff. The experience of the sponsor group is to work in conjunction with the principal designer to quickly investigate design

options without progressing to detailed drawings that might change. The proponent shall allow for five (5) half day studio workshops. It is essential that the principal designers be fully aware of the existing building conditions prior to the workshops. The successful proponent must provide costing analysis during these stages to allow the designer and Sponsor Group to make decisions on each option. The costing detail must be appropriate for the stage of the design.

Upon approval of the optimum design solution, the consultant shall prepare appropriate schematic drawings and a breakdown cost estimate.

3. Design Development Stage

Upon approval of the Schematic Design and budget, the successful proponent will prepare the design development in two major stages 50% and 99%. At each stage the project budget will be presented. During each stage the project manager and the successful proponent will schedule meetings to ensure the timely success of the project and exchange of information. After the 99% review, the Successful Proponent will make changes and prepare the final documents for tender by the HRSB as coordinated by the Project Manager.

4. Tender and Award Stage

Upon approval of the Design Development at 100% and the cost estimate by the Sponsor Group, the successful proponent will assist the Project Manager with the tender process including review and approval of the tenders.

5. Construction Stage

The successful proponent will provide standard Contract administration, contractor verification and closeout services Construction Phases may be completed over multiple years in packages that align with the fiscal year.

6. Post Construction Stage

The Successful Proponent will provide standard post construction services. This will include final commissioning, Functional Performance Testing, warranty administration, deficiency identification and correction, training and demonstrations, closeout documentation, final accounting and additional work as required.

4. PROJECT SCHEDULE

Time is of the essence for this project and as such it is the intent of the HRSB and the Sponsor Group to retain the service of one prime architectural consultant along with a full complement of sub-consultants as described in the RFP with the capability of performing all associated tasks with design and contract administration phases of the work within the time frames stated.

Substantial performance for building occupancy will be the 1st week of August 2014.

Tentative Project Schedule (to be detailed in RFP documents)	
RFP Closing Date	December 13, 2012
Award Contract to Consultant	TBD – Possibly December 19, 2012

Facilities Review Report	
Preliminary Schematic Design Report	
Final Schematic Design	
Design Development 50%	
Final Design Development 99%	
Tender	
Award	
Construction Phase	
Substantial Completion	Aug 1, 2014

5. EXISTING BUILDING CONDITIONS SUPPLEMENTARY REPORT

HRSB has retained the services of an outside consultant who is currently working to produce an assessment of the existing building. The assessment is intended to provide an overview of current conditions but is not intended to provide the successful proponent with all insight to the current conditions within the existing building.

During the Pre-Design stage the successful proponent along with their associated disciplines will be required to conduct a supplementary Building Facilities Assessment Report that outlines the impact of the existing building conditions on proposed design solutions to the Sponsor Group. It is essential that all disciplines be aware of the limitations of the existing facilities and the impact of same on their design solutions. The supplementary report will serve to establish design requirements and priorities at the beginning of the design process. See requirements for the report format elsewhere in this scope of work section.

The assessment will include but not be restricted to the following key elements: building envelope, impact on foundations and structure, capacity and ability of existing mechanical, electrical, fire, plumbing, life safety, communications, data systems, budget implications and the like.

The successful proponent will provide 5 copies of the report to the Project Manager for review and approval by the Sponsor Group.

6. INFORMATION AVAILABLE OR TO BE PROVIDED BY HRSB.

Facilities Evaluation Report
Legal Survey & Topographic survey
Soils Report – TBD after conceptual design complete.
Hazardous Materials Report

Limited construction drawings are known to exist and will be made available at the mandatory site visit.

7. EXISTING BUILDING CONDITIONS SUPPLEMENTARY REPORT

1. Existing Building Conditions Supplementary Report

The successful proponent will be required to provide an Existing Facilities report review of the existing building(s) conditions relating to the following:

1. **Building Site**: A general description of size, configuration, features and conditions.

2. **Building Exterior**: A general description of building, envelope type and condition.

3. **Building Interior**: A general description of building construction and finishes, as well as planning considerations (comment on room sizes, layouts, types and relationships with each other).

4. **Building Systems**: A general description of mechanical, electrical, security, fire alarm systems and their conditions.

5. **Building Code Review**: A building code review in respect to most recent code life safety, accessible and safety concern. All new work shall be completed in accordance with the most recent applicable codes.

6. Documentation: Include schematic drawings for all levels, maximum 11" x 17" format to reference issues and recommendations in the report. Provide electronic copies of the report and

7.

8. FUNCTIONAL SPACE ALLOCATION PROGRAM

1 The required rooms and spaces will consist primarily of the range of rooms and service areas relative to the student populations and grade levels for the subject facility and as described in the DC-350 Design Requirements Manual, latest edition (2010) plus supplementary information. Due to the nature of the project, significant flexibility in the application of the DC-350 will be considered acceptable as approved by the Sponsor Group. During the Pre Design stage, the final space allocation program will be developed jointly between the successful proponent and the Sponsor Group in conjunction with program administrators and the Project Manager

2 For the purposes of planning and cost estimation, there is a possibility that the Halifax Regional Municipality may choose to pay for an enhancement of the proposed gymnasium to 10,500 sf from 8,400 sf. This consideration must be acknowledged through the pre-design phase of the project until a final decision is rendered by HRM. This design impact and related capital cost implications will form part of the documentation submitted to the Halifax Regional School Board by the successful proponent.

9. MISCELLANEOUS REQUIREMENTS

1. **Presentation Documents:** The successful proponent will provide written and drawn documentation to completely illustrate the project design and requirements relating to design intent, rationale, costing and schedule. The content of the documentation shall be appropriate to the recipient stakeholders that may include the Sponsor Group, SST, DOE, the Halifax Regional School Board, HRM staff. More than one scheme will be required.

2. If during the performance of design development the successful proponent identifies unforeseen life or health safety concerns, the proponent is required to immediately advise the Project Manager who in conjunction with Sponsor Group will recommend corrective measures.

10. SUPPLEMENTARY FACILITY ASSESSMENT REPORT FORMAT

This document is to be in a coil binder with all of the following general sections identified by labelled tabs.

1. Table of Contents.

2. Executive Summary
Provide a brief summary of the study's intent and the findings of the more detailed report. Include recommendations and cost estimates.

3. General Description
Provide a brief description of building being audited

4. Site
General Description of site size, configuration, features, and conditions. Identify items that can affect the required site development in a positive or negative way in respect to traffic, parking, drainage, site services, grading and the like.

5. **Building Exterior**

Provide a general description of building envelope type and condition. Provide a review of the structural system and as part of this determine if "Robb" joists are present. These were the structural OWSJ's manufactured by Robb Engineering of Amherst from approximately 1963 until 1988. For the Facility Assessment, the structural assessment is to be limited to a visual assessment and review of plans to determine if further structural investigation is required, particularly with respect to the ability of the building to accommodate additions and renovations. If additional assessment is identified as being required, it will be negotiated as a change to the contract. It is required that the structural assessment be conducted by a structural engineer licensed to practice in the Province of Nova Scotia.

6. Building Interior
Provide general descriptions of the building's construction and finishes as well as planning considerations, such as suitability of room sizes, layouts and relationships to each other and the suitability of building for adaptation to the project specific space allocation program.

7. Building Systems
General description of mechanical and electrical systems, security, fire alarm, sprinklers, and their condition along with recommendations regarding their suitability for use with the intended changes in the building.

8. Code Review

General description of items in the existing building that require upgrades to meet current code requirements**.**

9. Special Considerations
Description of accessibility, OHS, and a Building Code report.

Appendix F – Project Management Plan

NOVA SCOTIA DEPT. OF EDUCATION
ADDITIONS & ALTERATIONS PROGRAM

SCHOOL IMPROVEMENT
BUSINESS PLAN

Eastern Passage High School
PROJECT MANAGEMENT PLAN

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2. Part 2 - **Project Plan**

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3. Limitations and Constraints
4. Conditions for Success
5. Objectives
6. Strategy
7. Amendments to the Business Plan
8. Project Organizational Chart

2. Implementation Processes

1. Project Quality Management
2. Project Scope and Change Management
3. Risk Assessment and Management
4. Communications Management
5. Human Resources
6. Acceptance Criteria and Contract Close-out
7. Furniture, Fixtures & Equipment Procurement & Installation
8. Technology Procurement & Installation
9. Occupational Health & Safety
10. Community Enhancement Process

PART 1
INTRODUCTION

The Board acknowledges that the overall objective of this project is to effectively improve and extend the useful life of this facility by approximately 15 – 20 years. It is not intended to become a complete re-working or renovation of the entire facility. The Board will utilize the finite funding amount approved by Government in the most effective manner possible and will manage the project to remain within the boundaries of the overall budget amount and the multi-year cash flow schedule, as stated in the Project Charter.

The work will be undertaken in order of greatest priority, firstly addressing occupational health and safety issues, secondly addressing building code issues, thirdly addressing urgent building infrastructure needs and lastly, program space deficiencies within the school facility.

To be included in this Business Plan is a general "Project Plan" which is derived from a consultant's report on the school, more precisely defining the scope that is generally outlined in the Project Charter. It describes how the Board will organize the Project within the approved budgetary and multi-year cash flow allotments. The actual work will be undertaken on a multi-year, multi-phase basis and scheduled to allow continued, safe operation of the school, as well as being implemented within the cash flow funding approval provided.

The Board will ensure that the Project Plan is of sufficient detail to allow the Project Manager to respond to unforeseen conditions or events that present challenges to the ability to meet the fundamental project objectives, such as the budget, cash flow and schedule.

Also included in the Business Plan is a "Project Management Plan" which outlines, in detail, how the Board will address the delivery of the project through all of its phases.

PART 2
PROJECT MANAGEMENT PLAN

1 OVERVIEW

.1 General Project Scope

Eastern Passage High School

The HRSB plans to convert the existing Seaside Elementary School, located in Eastern Passage, to a 600 student high school by means of additions and alternations to the existing elementary school. The school will be vacated by the current staff and students in advance of the removals and construction phase. The intended delivery process for the project is by "Design – Bid – Build".

The successful proponent is required to provide Design service and to make recommendations based upon aesthetic considerations, functionally, code requirements, green healthy building considerations schedule and budget. At each milestone presentation of a design concept, the successful proponent is required to provide a Class cost estimate as deemed appropriate for the stage of the design.

The project budget is $15M with an estimate of $12.5M for construction costs and $2.5M for soft costs. The successful proponent through planning discussions with the Sponsor Group will review the Public School Program and determine where spaces may offer opportunities to support more than one program.

.2 Overall Strategic Goals and Expected Benefits

.1 Goals

.1 To construct or improve the identified school facilities which is in response to the recommendations of the School Capital Construction Committee and subsequent authorization by Government.

.2 To effectively manage these projects to ensure that they remain within the approved budget and cash flow allotment.

.3 To manage the projects effectively to the approved Project Schedule.

.4 To establish priorities and balance the work to be performed between physical structure needs and educational program requirements.

.2 Expected Benefits

.1 A school facility that facilitates the efficient and effective delivery of the Nova Scotia Public School Program (PSP).

.2 The extension of the useful life of the facility for a period of approximately 20 + years.

.3 A school facility that allows for efficient and effective maintenance and operation by the School Board.

.3 Limitations and Constraints

The funding constraint represents a significant challenge to all Business Plans. This Project Plan, in its multi-phase approach, addresses necessary construction contingencies that may be required as a result of unforeseen technical conditions. It also relies upon the involved parties to make responsible choices in scope of work adjustments on a "go-forward" basis. The board and its consultant will control financial pressures through all variables that may exist, such as inflationary conditions. That is to say scope, design standards, work packages, tender timing, local understanding and expertise and work force are some of the considerations. The overall objective of the project is to extend the useful life of this facility - not rebuild it as new and therefore the work performed should reflect this requirement.

.1 Schedule
To be completed by August 2014.

.2 Project Budgets (including all hard and soft costs)

Eastern Passage High School - 15 million dollars project total budget.

.4 Conditions For Success

.1 The maintenance of and continued safe operation of the school over the entire length of project work at all times.
.2 Senior management, Project Manager and Design Consultant commitment to supporting the use of project management processes generally recognized by the PMI process.

.5 Objectives

.1 Comply with government approval and project scope as outlined herein.
.2 Provide for the continued safe occupancy and operation of the school over the entire course of the work.
.3 Establish priorities and balance the work to be performed between physical structure needs and educational program requirements.
.4 Provide an opportunity to gather input for the design from the school community through the functioning of a School Steering Team (SST).
.5 Identify initial, essential building components and FFE&T with value for consideration of re-use.
.6 Design the project(s) to appropriate standards and to the DOE allotted budget(s) utilizing a multi-phase approach where restricted by school capacity and projected cash flow requirements. Prepare tender packages in accordance with project delivery objectives.
.7 Assist and recommendation in the appropriate project delivery method based on project requirements, time constraints, available resources and market economies.
.8 Tender the work in accordance with board purchasing guidelines recognizing the Government of Nova Scotia procurement procedures, including the latest version

of the provincial Construction Contract Guidelines document. Phase 1, Eastern Passage High School is to be fast tracked in order to meet Substantial performance on or before August 1, 2014.

.9 Assist with assessment and award of construction contracts when budget and corresponding required scope of work requirements are met.

.10 Provide design and services in accordance with contract requirements and accepted financial guidelines Provide contract administration services for the project by consultants and periodic review / inspection services as required to ensure the intent of the contract documents are met.

.11 Provide and implement the commissioning of each stage of work in accordance with the Quality Management plan developed in the Project Management Plan.

.12 Report to Project Manager, through the timely submission of a Capital Expenditure Monthly Progress Status Report indicating project status reports, expenditure updates and submission of claim and budget concerns. Identify serious project concerns specifically with respect to scheduling which will affect school operations and budget variation as soon as problems arise.

.13 Participate with Project Manager in the project audit process after completion of all phases of the work

.6 Strategy

Delivery Methodology - Design–bid–build

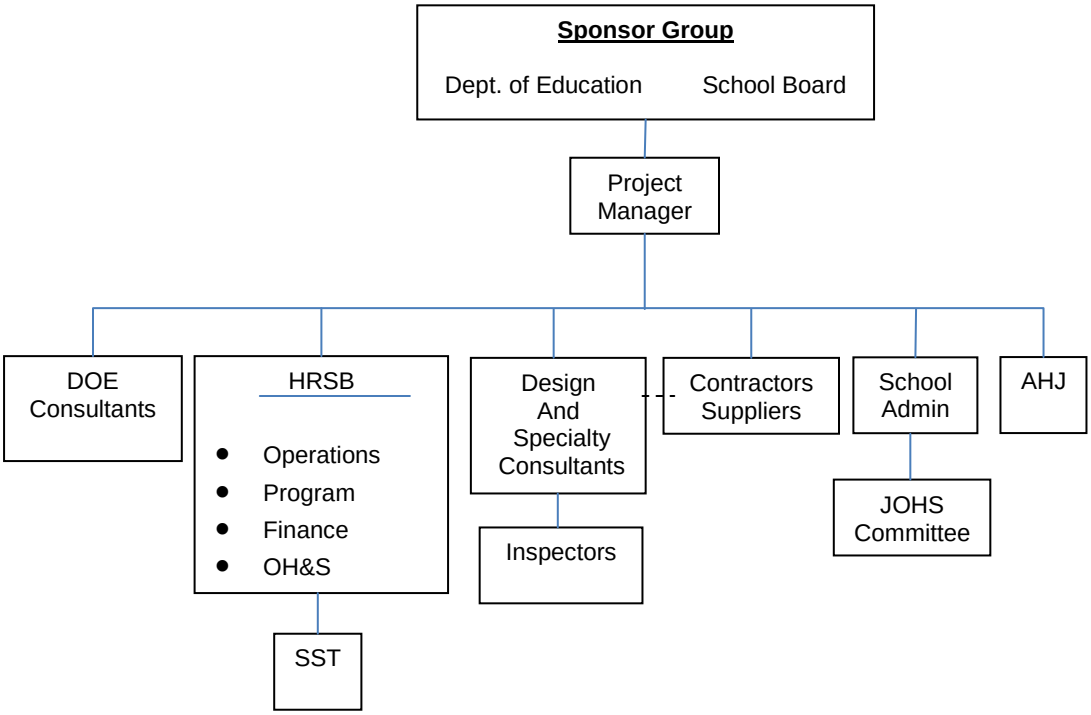
The following factors have been considered in determining the method of project delivery:

- The need for a quick, effective method of building.
- Need for an effective communication strategy from a single source that would be responsible for all aspects of design and delivery of a building project(s).

.7 Amendments to the Business Plan

The approved process for these projects concurs with a multi-year funding commitment related to a predetermined scope of work. That approval recognizes and acknowledges that the scope is general in nature and may be redefined or adjusted in a minor nature, as the project(s) proceed, in order to adhere to budget and/or schedule constraints. Any change in the Business Plan that involves a change in the Project Plan budget(s) or schedules will be reported to the Department of Education through the Regional Director by means of a formal Change Request document. Upon review of the rationale for the proposed change in the Business Plan, the approval by the Director, Facilities Management or other recommendations / modifications will be communicated to the board by the Regional Director, Facilities Management.

.8 Project Organizational Chart


Sponsor Group
Dept. of Education
School Board
Project Manager
DOE Consultants
HRSB
Operations
Program
Finance
OH&S
SST
Design And Specialty Consultants
Inspectors
Contractors Suppliers
School Admin
JOHS Committee
AHJ

2 IMPLEMENTATION PROCESSES

.1 Project Quality Management

The Board will provide to the Department of Education, an overall Project Quality Management Plan. It will include processes to address quality planning, quality assurance, quality control and corrective actions. As the project progresses, the Board will monitor and assess the status of the project against the overall objectives. Issues arising from this assessment process will result in corrective action of a) the process that allowed the issue to arise, and b) any immediate problems created by the issue. Provided in conjunction with these quality procedures are the Board's methodologies for corrective action in each of the identified areas. Related aspects of each area of quality management are to be as follows:

.1 Quality Planning
The Board will implement, in consultation and agreement with the Department of Education, the following:

.1 Design Standards:
The Board will identify and direct the design consultants on the required standards for design and construction work on this project. These standards will be generally consistent with the standards and guidelines for new school construction but will not be bound by them. The Board will reference the current requirements of the DC350 (DRM) latest version document as a "guide" for the design and construction of school projects, not an absolute requirement. The contents of the DC350 manual will serve as a "reference" only, with the primary objective being to extend the useful life of the school facility (approximately15-20 years). Issues of life cycle costing and building maintainability are paramount in this direction on the standard of quality of this work. Where the standard of the DC350 manual clearly exceeds this objective, it will be viewed as not applicable.

It is the intent with this work that all current standards of design and construction already present in the school will be maintained where possible and/or appropriate. That is to say, space size, finishes or fit-up downgrading will not occur without approval by all attached parties. It is, however, the responsibility of the Board and it's consultants to vary from these and other guidelines where possible and applicable to control both budgeting and serviceability issues relative to this work. Any significant variations to these standards will be submitted for review and approved by the Director, Facilities Management, and Department of Education.

Project Quality Standards:

.1 The latest version of the provincial Construction Contracts Guidelines (CCG) document.

.2 The latest versions of the Atlantic Canada Procurement Agreement and the Nova Scotia Policy on Government Procurement.

.3 The requirements of the latest versions of all national, provincial and/or municipal codes and standards relevant to the project.

.4 The Space Allocation Program from the Project Plan.

.5 Other standards, internal or external, as identified and/or defined by the Board and/or its professional design consultants.

.6 The proposed project schedule(s), including design activities, review submissions and miscellaneous project milestones.

.7 Budget and cash flow requirements from the Project Charter.

Checklists, including but not limited to, the following items:

.8 Design Consultants Request for Proposals
.9 Consultant Agreement
.10 Design reviews (assuring that design standards are being met)
.11 Design Consultant reports re: area, cost, program comparison, etc.
.12 Construction "Front End"
.13 Construction Tender Addenda
.14 Bid Form
.15 Bond Form
.16 Form of Agreement with Contractor
.17 Tender Reviews (including Consultant review)
.18 Contractor claim for Progress Payment
.19 Contemplated Change Orders (CCO's)
.20 Change Orders (CO's)
.21 Site Instructions (SI's)
.22 Change Directives (CD's)
.23 Certificate of Substantial Performance
.24 Certificate of Total Completion of the Work
.25 Certificate of Total Completion of the Contract
.26 Status/progress reports to Department of Education addressing:
    .1 Finances
    .2 Schedule
    .3 Issues, challenges and/or risks
.27 Safety Plans: See Focus Area Plan re: - Occupational Health & Safety

.2 Quality "Assurance"

The Board will implement, in consultation and agreement with the Department of Education, the following:

.1 Attend meetings of a Project Steering Team at intervals appropriate to the scope and nature of the project to ensure sufficient stakeholder input. Representatives

from the Department of Education will be members of the PST. Meetings will be convened by the Project Manager

.2 Direct all Sub-consultant teams and report, through the Project Manager on their Quality Management processes for meeting overall project requirements and reduction of errors and omissions.

.3 Ensure that each project meeting during the construction phase(s) addresses health and safety issues. Resulting discussions, challenges, commitments and action items will be recorded in the minutes of the meetings.

.4 Create and implement a comprehensive Commissioning Plan, when the scope of the work requires. This will be done by enlisting the services of an independent consultant as the Commissioning Provider. The Commissioning Provider will have input from the beginning of this project phase through to the end of the Warranty period.

.3 Perform Quality Control" Activities

The Consulting team will be expected to carry out the following:

.1 Provide design reviews to provide sufficient confidence to the board and the Department of Education that the project design will be in accordance with the stated project objectives. The board will outline it's proposed schedule and nature of consultant design review submissions. Copies of design submissions will be forwarded to the Department of Education for their review and records.

.2 Continue implementation of the Commissioning Plan, if applicable, including:

.1 Consultant verification of contractor's performance
.2 Testing by independent agencies (asphalt, concrete, soils, IAQ, water, etc.)
.3 Shop drawing submittals and reviews
.4 Contractor proof of performance (deliverables/submittals)
.5 Functional performance testing (FPT)
.6 Corrective actions resulting from FPT
.7 Staff training
.8 Delivery of operating and maintenance manuals

.3 Report monthly through the project Manager on the progress of the project against the approved project schedule. This report will identify any potential "risk events" that could negatively affect the achievement of the project's schedule objectives. The report must also identify strategies which will be employed to avoid these risk events from happening or to address them if they do happen. See Section 3.0 - Risk Management and Assessment.

.4 Report monthly through the Project Manager on the project budget and projected cash flow against the approved budget and cash flow. Monthly progress claims will be submitted consistent with approved cash flow requirements. This report will identify any potential "risk events" that could

negatively affect the achievement of the project's budget objectives. The report must also identify strategies which will be employed to avoid these risk events from happening or to address them if they do happen.

.4 Implement Corrective Action

The board will, in agreement with the Department of Education, implement appropriate corrective actions to address:

.1 Schedule slippage, in order to ensure that the project's critical path is maintained.

.2 Cost issues, in order to ensure that the project's budget and cash flow requirements are met.

.3 Project scope modifications

.4 Quality and workmanship not to specifications

.5 Product(s) not approved

.6 Change requests, evaluation and authorization/rejection.

.7 Health and safety infractions

.2 Project Scope and Change Management

The project's scope will be continuously managed to ensure that it complies with the terms of the Project Charter Letter and this Project Management Plan. Due to changed conditions or new information, it may be necessary to vary from the original scope of the project. This will be done only under the conditions as set forth herein.

Throughout the course of the project, a Scope Change Log will be maintained that will indicate the agreed upon scope of the portion of the project in question and the proposed change. Alternatives considered will be delineated, along with schedule (critical path), risk and cost ramifications. The cost change for the change in scope will be estimated as accurately as possible. A one page summary will accompany the report. Changes must clearly prove to be in the interests of the continued operation of the school, considering the health of students and staff, and also program ramifications.

A scope change is defined as a deviation from the agreed upon Project Plan. It is NOT to be confused with a cost change or overrun on the original scope, although a scope change may result in changes in costs, schedule, risk and resource requirements.

The report will be submitted to the Department of Education

.1 Two types of changes are possible:

.1 A minor change, perhaps in the scope or schedule, would require a revision of the Project Plan to take into consideration the new information. This change must be approved in accordance with the Scope and Change Management section.

.2 A major change which necessitates preparation of a new Project Plan and a new Business Plan. This, in essence, results in abandonment of the original Project Charter and Business Plan, with the result of a new project starting at square one.

N.B. Any scope change approval will be reflected in the budget and schedule sections of the Business Plan, as well as noted in the Project Change Log.

.3 Risk Assessment and Management

Several areas of risk may be associated with the school(s) construction process and, when identified by the board, will be managed by the Project Management Plan through a detailed and comprehensive process presented to the Department of Education at project initiation and reported on regularly.

Some examples of project risk are as follows:

.1 Scope Creep:
Additional work being required as the result of existing conditions and/or unforeseen issues being identified during the work process. The board will make specific required adjustments in the overall work to address this issue, and to identify the same within the Project Plan description of the work.

.2 Creeping Elegance
The inclusion of additional features or the raising of the standard of acceptance to levels not originally planned for.

.3 Schedule Adjustments:
Due to limited school access to allow continued operation, clear definitions of school access are to be described in each tendered work package.

.4 Cost Overruns:
As a result of additional work being required. Again, the Project Plan(s) will be adjusted accordingly to allow for these costs, assuming they are not significant or unusual (oil spill reinstatement).

.5 Cost Overruns:
The result of inflationary or market influence (tender time lines) pressure. The board again will adjust the overall scope of work or budgeting (i.e., other costs, FFE&T, etc.) to allow work to continue with degree of comfort.

.6 Occupational Health & Safety and Associated Risk
A committee will be established by the board, for each phase of the work, to

review/identify/address all related OH&S issues. The Department of Education will be advised of issues in each monthly project report.

.7 Contractor Default or Other Unforeseen Incident
Issues that may prevent the work being completed and school occupancy being compromised. Board will employ project manager to monitor contractor and work in strict manner to identify potential issues in this regard long before they become critical.

A Risk Register will be created and distributed by the Project Manager, identifying the following:

1. Potential risk items, divided into the following sections:
    1. Schedule
    2. Budget
    3. Technical
    4. Occupational Health and Safety
    5. Other

2. The probability of occurrence (high, medium, low)
    1. The impact (high, medium, low) on the project's objectives should the risk event occur
3. Potential responses / contingency plans to risk events that actually occur and become "issues" (mitigation or transfer of ownership of the issue)
4. Warning signs (signals that would alert the Project Manager that a risk event is about to occur)
5. Strategy regarding how the Board will respond to the occurrence of warning signs.

.4 Communications Management

.1 Project Communications Management will be carried out in accordance with best practices using PMI Model and in agreement with the Sponsor Group. Transmittal records, and courtesy copies, are to be provided where hard copy distribution occurs.

.5 Human Resources

The Board will provide the necessary staff, professional and support services, to direct and assist all aspects of the project work. Costs for these staff positions may be in part charged to the project budget in the form of an agreed upon management and administrative fee.

The Board will retain all design professionals required to be involved in the project work and charge all related costs to the project budget.

SNC Lavalin O&M has been retained by HRSB as the Project Manager for the projects and will be responsible and accountable for maintaining the Business Plan and meeting the project's goals and objectives throughout all phases of the project(s).

.6 Acceptance Criteria and Contract Close-out

A formal contract close-out process will be provided by the board in order to certify the work complete. Staff from the Department of Education and the Board will be involved in all noted activities to effectively complete the contract terms and conditions, to verify and document the project's deliverables have been received, to ensure that the project is accepted by the owner and to document "lessons learned".

The following items, where applicable, are required before the project(s) will be considered ready for it's intended use and occupancy:

.1 Substantial Performance documentation
.2 Air quality testing results, as per the Project Plan when required.
.3 Water tests: acceptable chemical analysis and functionality of the treatment system if applicable.
.4 Notification that the required training has been completed.
.5 Cleaning to meet DOE/Board standards
.6 Comprehensive deficiency list including time and cost estimates for completing the items contained.
.7 Manuals as required under the contract
.8 Humidifiers: commissioned and fully functional if applicable.
.9 Life safety certificates: such as fire alarm, sprinkler, etc as per specifications
.10 Schedule for completing Functional Performance Testing (FPT).
.11 User Training of designated Board personnel.

After the requirements for occupancy have been met, the following items are required for completion of the contract:

1. Completion of Functional Performance Testing
2. Completion of outstanding deficiencies
3. Completion of warranty items
4. Completion of user training
5. "As built" documents
6. Project audit (lessons learned survey)
    1. What was done well?
    2. What could have been improved?
    3. What were the bottlenecks encountered?
    4. Project deviations:
        1. cost, time, specs?
        2. why did they occur?
        3. could they have been avoided?
    5. What improvements should be made for the next project?
    6. Other relevant comments
    7. How Board standards and processes will be updated as a result of lessons learned
    8. Signage: both interior and exterior
    9. Change order log identifying the source and cost of each change as well as a total amount and percentage of total change orders attributable to consultant errors and omissions for the prime and each significant sub-consultant.

10. Schedule report comparing planned vs. actual milestones

.7 Furniture, Fixtures & Equipment Procurement & Installation

The Board will:

.1 Undertake the FFE procurement and installation in accordance with the Projects(s) planning process.
.2 Identify funding for the purchase of FFE in accordance with the Project(s) planning process and overall funding allotment for the project.
.3 Develop appropriate FFE lists in conjunction with the Department of Education and existing inventory appropriate to the program needs.
.4 Procure all such components of the overall list as required by the work being performed and the budget available for each stage of the work
.5 Coordinate delivery, storage and set up of all existing and new FFE for the school.

.8 Technology Procurement & Installation

The board will:

.1 Undertake the procurement and installation of technology in the project in accordance with the Project(s) planning process.
.2 Establish budgeting for technology in accordance with the Project(s) planning process and overall funding allotment for the project.
.3 Review existing inventory and technology refresh plans separate from this process and amend accordingly the project plan.
.4 Procure all components of said list appropriate to the work being performed and budget allotted for each stage of the work.
.5 Coordinate delivery, storage and set up of all technology areas for the school.

.9 Community Enhancement Process

The board will:

.1 Enter into a Joint Use Agreement, as may be required. Model basis for agreement is found in the Appendices "C".

.2 Undertake a consultation process involving staff and members of the community at large with the view toward discussing opportunities to participate in the addition and alterations project. This participation will take the form of identifying and funding areas of additional work outside the normal program range for the school.

.3 Establish such committee at the time of notice of the project approval, and will undertake and coordinate the consultation process prior to the commencement of the work. The enhancement space or fit-up will be clearly identified and accepted with required funding as determined by the Department of Education.

FOWLER BAULD & MITCHELL
architecture

FACILITY EVALUATION REPORT

SEASIDE ELEMENTARY SCHOOL

Eastern Passage, NS

FBM Project # 2012-095

Prepared by
Fowler Bauld & Mitchell Ltd.

With
Dumac Energy
Hanscomb Limited

Prepared for
Halifax Regional School Board

Submitted
November 23rd, 2012

SEASIDE ELEMENTARY SCHOOL

FACILITY EVALUATION REPORT

NOVEMBER 2012

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FACILITY EVALUATION

Seaside Elementary School is a grades 5 to 6 English and grades 4 to 6 French emersion school in Eastern Passage, Nova Scotia with an estimated enrollment of 305 students. The facility is three storeys, load bearing concrete block with open web steel joists floor/roof framing system, dating from 1974. In 1995 an elevator was installed in the building. The gross floor area is approximately 44,380 ft^2. The building is of non-combustible construction and is sprinklered.

The intent of this study is to provide an existing condition report under the headings of building envelope, interior, building systems and special conditions. This study did not investigate the functionality of the building with respect to delivery of the teaching program.

The information on existing conditions has been collected from the following sources:

- Site inspections by FBM and its consultants, November 2012;
- Construction Drawings (1974 and 1995 elevator installation);
- School maintenance records
- Information obtained from staff (principal/custodian)

Our observations listed under the headings noted above were deficiencies of concern, followed by a recommendation. **Bold** font recommendations are of immediate concern, while non-bold font recommendations are not necessarily of immediate concern, but do warrant attention. These recommendations are followed by an estimated cost.

A formal structural review by a Structural Engineer was not completed at this time. Structural items identified as a concern should be assessed by a Structural Engineer to determine if any structural concerns are present.

1. BUILDING ENVELOPE

The building is constructed of load bearing concrete block, open web steel joists with 4" concrete floor slabs (1-1/2" metal deck with 2-1/2" reinforced concrete) and 1-1/2" metal deck with 1/2" gypsum board sheathing at the roof. Exterior finish is jumbo face brick with punched metal windows.

1.1 Roof

The building's roof, divided into two sections by an expansion joint curb, has had a complete reroof performed within the past five years with a two-ply modified bituminous roofing system and was completed in two phases (see photo 1.1.1). One section of the roof has been replaced within the last five years, while the other section has been replaced within the last two years. The roof is in excellent condition.

1. Roof fan curbs, chimney flashing, and plumbing vent flashings all appear to be in good condition (see photos 1.1.2 and 1.1.3). No action required.

2. The school's roof features three plastic dome skylights, which appear to have been replaced during the reroof and appear to be in good condition with no reports of leaks (see photo 1.1.4). No action required.

3. There are four roof drains located on the roof and slopes to these drain are excellent (see photo 1.1.5). No action required.

4. The expansion joint, complete with a built-up curb is in excellent condition with no reports of leaking (see photo 1.1.6). No action is required.


1.1.1 | Existing (reroofed) roof


1.1.2 | Fan curb


1.1.3 | Chimney and plumbing vent flashings


1.1.4 | Plastic bubble skylight


1.1.5 | One of the four roof drains


1.1.6 | Roof expansion joint

1.2 Walls (Exterior)

Exterior walls are constructed of:

4" jumbo face brick
1" air space
2" rigid insulation
8" load bearing concrete block (12" at gymnasium joist bearing walls)

1. Exterior jumbo face brick is in over-all good condition with the exception of the southern façade. From the vantage point of the ground, it appears that some of the mortar joints have begun to fail (see photo 1.2.1). A closer examination of the entire building should be conducted to determine the condition of the mortar joints and repoint if necessary.

Examine buildings brick veneer to determine condition of mortar joints **$1000**

2. Exterior Caulked expansion joints in the masonry have become hard, brittle, and in most locations have completely failed (see photo 1.2.2). Existing caulked joints should be removed, the face brick properly prepared, and the joints re-caulked. This should be done as soon as possible to prevent further water infiltration.

Remove existing caulk joints, and re-caulk masonry expansion joints (aprox. 275 lineal ft) **$2400**

3. A significant area of the interior 3" concrete block at Level 1 in the South West corner (previously the wood working storage) has cracked (see photos 1.2.3 and 1.2.4). The exterior foundation does not show any cracks in this area, but has been parged so an accurate assessment cannot be made (see photo 1.2.5). It is recommended that a Structural Engineer investigate and evaluate the cracking concrete block to determine the structural integrity in this area.

Obtain a Structural Engineer to investigate and evaluate the cracking in the concrete block **$2500**

4. The exterior foundation wall is 14" cast in place concrete. The interior face is covered with 3" concrete block and the exterior face has been parged. An accurate assessment cannot be made about the state of the foundation, however, staff did not report any leaks.


1.2.1 | Deteriorating mortar joints on the south façade


1.2.2 | Failed brick expansion joint


1.2.3 | Cracked concrete block at Level 1 – SW corner


1.2.4 | Cracked concrete block at Level 1 – SW corner


1.2.5 | Exterior foundation wall at SW corner

1.3 Windows

The present window system in the classrooms are metal frames with double hung operating sliders glazed with vision glass units, with the exception of Level 1 windows which are glazed with polycarbonate units in the outer panes (see photo 1.3.1). The cafeteria features a series of narrow windows with hopper type operators (see photo 1.3.2). Windows are original to the school's construction in 1974.

1. Classroom windows have reached the end of their useful life. Many of the window operators do not properly open or close, allowing for air and water leakage (see photo 1.3.3). Water damage is evident at window sills, heads, and ceiling tiles. Classroom windows should be replaced.

Replace existing classroom windows with aluminum framed windows **$60,500**

2. Cafeteria windows have reached the end of their useful life and are showing signs of water leakage at window sills (see photo1.3.4). Cafeteria windows should be replaced.

Replace existing cafeteria windows with aluminum framed windows	**$6,500**

3. At some point three smaller metal windows with horizontal sliders were added to the building; two at the library and one at the cafeteria kitchen (see photo 1.3.5). These windows appear to be in acceptable condition. Consideration should be made to replace these windows at the same time as the classroom and cafeteria windows.

Replace existing Library and Kitchen windows with aluminum framed windows	$5,000

4. Caulking around intake louvre for air handler #1 (Located in room 304) has deteriorated at the louvre head (see photo 1.3.6). The existing caulking around the entire louvre should be removed, face brick properly prepared, and the louvre re-caulked to prevent further water infiltration.

Remove existing caulk, and re-caulk louvre	**$250**


1.3.1 | Overall view of typical window configuration


1.3.2 | Overall view of typical cafeteria window configuration


1.3.3 | Evidence of water leakage at classroom windows


1.3.4 | Evidence of water leakage at cafeteria windows


1.3.5 | Smaller window in Library


1.3.6 | Deteriorating caulk at intake louvre (AH-1)

1.4 Exterior Doors

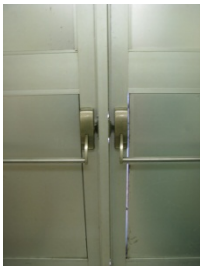
Exterior doors are of steel construction and are original to the school's construction in 1974.

1. Exterior exit doors have reached the end of their useful life and have begun to fail. The gymnasiums exit doors panel is not tightly secured to the door stile (see photo 1.4.1). This is allowing water and air leakage, as well as poses a security risk to the building. All exterior exit doors should be replaced with aluminum doors.

Replace exterior doors with aluminum doors	**$22,500**

2. Steel lintels above both exit doors on the west façade are showing signs of deterioration. Lintels should be evaluated for structural integrity by a Structural Engineer and replaced if required.

Assess steel lintels for structural integrity and replace if necessary	**$500**



1.4.1 | Gymnasium exit door

1.4.2 | Deteriorating Steel lintel at West exit doors

1.5 Soffits

The school's main entrance features a precast concrete soffit (see photo 1.5.1). The soffit is weathered, however in good condition. No action required.

1.5.1 | Precast soffit at main entrance

2. BUILDING INTERIOR

2.1 Flooring

The floors are a combination of 12”x12” vinyl composite tile (VCT), concrete terrazzo, and painted concrete floors.

1. Vinyl tile can be broken into three categories:
   1. VCT-1 Vinyl Composite Tile 1 (original from 1974 construction)
   2. VCT-2 Vinyl Composite Tile 2 (installed during the 1995 elevator addition)
   3. VCT-3 Vinyl Composite Tile 3 (New tile installed around 2000)

   Most of the floor tile is the original VCT tile (see photo 2.1.1) and is nearing the end of its useful life. Consideration should be given to upgrade this tile. These areas include classrooms, gymnasium/stage, and cafeteria.

Replace VCT-1 (27,700 ft^2)	$20,000

   The remainder of the VCT is a combination of replacement tile (VCT-2) from 1995 (areas affected by the elevator addition) (see photo 2.1.2), and newer tile (VCT-3) installed sometime around 2000, located in corridors, some Level 1 classrooms and the Library (see photo 2.1.3). Both VCT-2 and VCT-3 are in fair condition with minimal shrinkage cracks. No action required.

2. Concrete terrazzo flooring is located in washrooms, shower/change rooms and stairwells. Generally terrazzo is in good condition, however, very dirty in washrooms around urinals and where toilets were replaced (see photo 2.1.4 and 2.1.5) and may require chemical cleaning.

   Terrazzo flooring in Male W/C’s on both Level 1 and 2 have minor hairline cracks. Administration W/C 214 has a significant crack (see photo 2.1.6). This crack should be properly filled and sealed to prevent dirt accumulation.

Chemically clean terrazzo floor around urinals and toilets	$1,000
Fill crack in terrazzo floor in Administration W/C	**$1,000**

3. The former industrial arts rooms (now recycle room and computer lab) have painted concrete floors. Paint is quite worn and the floors should be properly prepped and repainted.

Repaint concrete floors in rooms 118, 121, and 122 (2,386 sq. ft.)	$3,600


2.1.1 | Original VAT in Cafeteria


2.1.2 | VCT-1 at Main Entrance elevator alcove.


2.1.3 | VCT-2 shown in Library


2.1.4 | Terrazzo floor very dirty around urinals


2.1.5 | Terrazzo very dirty around toilets


2.1.6 | Significant crack in Admin W/C terrazzo flooring.


2.1.7 | Painted concrete floor requiring painting

2.2 Ceilings

Ceilings are a combination of 12”x12” acoustic tile on gypsum board, 24”x24” fiberglass acoustic tiles, and gypsum board ceilings in washrooms and change rooms. All ceilings are original to the 1974 construction and in general are in poor condition.

1. Ceilings in the corridors and rooms bounded by the southern corridor walls and northern gymnasium wall as well as room under the gymnasium structural slab are 12”x12” acoustic tile adhered to 5/8” gypsum board and are an integral part of the buildings fire rate separations. Many tiles have become detached from the drywall and have been re-attached in various ways including spray foam adhesive and drywall screws (see photos 2.2.1 and 2.2.2). These ceilings are generally in bad condition and should be replaced.

Replace 12”x12” acoustic tile on gypsum board with a fire rated acoustic tile system (8175 sq.ft.)	**$26,000**

2. 24”x24” fiberglass acoustic tile are generally in bad condition (see photo 2.2.4 and2.2.5). Many of the previously stained and broken tiles have already been replaced with fissure type ceiling tiles (see photo2.2.6). Consideration should be given to replace this ceiling system with a new acoustic tile ceiling.

Replace 24”x24” fiberglass ceiling tile with new acoustic tile system (20,375 sq. ft.)	$48,600

3. Gypsum board ceilings in washrooms and change rooms are in good condition, with the exception of a hole in Female Change Room 236 (see photo2.2.7). This hole should be patched and painted as it is part of the fire separation in the building.

Patch and paint hole in GWB ceiling in Female Change Room.	$100

Many of the gypsum board ceilings in the service rooms have penetrations that are not properly fire stopped (see photo 2.2.8). These penetrations should be properly fire stopped and smoke sealed as they penetrate a required fire separation.

Fire stop and smoke seal penetrations through service rooms	$500

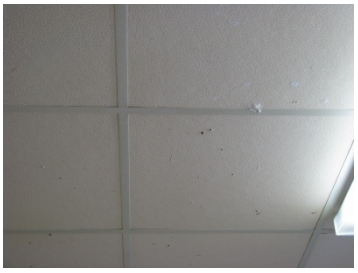
4. Construction drawings indicate several areas of asbestos ceiling tiles located mainly in storage rooms. As asbestos ceiling tiles do not pose a hazard unless they are disturbed or damaged, no immediate action is required; however consideration should be given to replace these tiles.

Replace asbestos ceiling tiles	$200

2.2.1 | 12”x12” tile reattached with foam adheasive

2.2.2 | 12”x12” ceiling reattached with drywall screws

2.2.3 | 2’x4’ fissure acoustic tile



2.2.4 | Marred and, damaged 24”x24” ceiling tiles.

2.2.5 | Damaged 24”x24” ceiling tiles

2.2.6 | Replacement ceiling tiles

2.2.7 | Hole in GWB ceiling in Female Change Room

2.2.8 | Penetration through fire rated ceiling

2.3 Interior Partitions

Interior partitions throughout the school are a combination of ½” drywall on either side of 3-5/8” steel studs or painted concrete block. Generally walls need to be repainted. Wall base throughout the building varies from wood base, terrazzo base, and vinyl wall base (areas renovated during elevator addition).

1. Drywall partitions (located between classrooms) are generally in good condition, no action required, with the exception of the main entrance elevator alcove (see photo 2.3.1) and Classroom 203. This area should be patched and painted.

Patch and paint drywall at elevator alcove	$250

2. In many areas paint on the concrete block wall is peeling (see photos 2.3.2 and 2.3.3). These areas of wall should be properly scraped, prepped, and painted.

Scrape, prepare and paint concrete block walls	$3,000

3. In most areas wood base has started to peel and is generally in poor condition (see photo2.3.4). Although this is aesthetic, consideration should be made to repaint all wood base.

Scrape and repaint wall base in all areas	$6,300

4. In two service rooms penetrations through the partitions are not properly fire rated (see photo 2.3.5 and 2.3.6). The National Building Code requires a fire-resistance rating on all janitor and service rooms, therefore these rooms must be isolated from adjacent spaces.

Install fire rated access doors at penetrations through Janitor Closet partitions **$1,300**


2.3.1 | damage to drywall partition at elevator alcove


2.3.2 | Peeling paint on concrete block in Change Room 236


2.3.3 | Peeling paint on concrete block in Stair 306


2.3.4 | Wood base in poor condition


2.3.5 | Penetration through wall Janitor's Closet 324


2.3.6 | Penetration through wall in Janitor's Closet 212

2.4 Interior Doors

Interior doors are solid core wood doors in pressed steel frames.

1. Most interior doors require painting. Doors should be properly prepped and painted.

Properly prepare and paint interior doors (121 leafs) **$30,300**

2. Interior door hardware does not conform to barrier free standards, as doors are not equipped with lever handles.

Install lever type handles in all classrooms (37 doors) **$9,300**

3. Entry doors do not have power assist push button door operator.

Install power-assist door operator with push buttons at main entry for barrier free access **$3,000**

2.5 Washrooms

There is one main washroom group with a male and female student washroom located on each floor. Staff washrooms, one per sex, are located off Teachers Room 329, as well as one unisex washroom located in the administration area. Washrooms are in overall good condition.

1. Washrooms are in overall good condition (see photo 2.5.1). Fixtures have been upgraded in the past few years. Basin faucets have also been upgraded to lever type faucets. Each student washroom is equipped with a barrier free stall, staff washrooms however are not barrier free.

2. Although basins have been upgraded with lever faucets, proper barrier free clearance under the vanity has not been achieved (see photo 2.5.2). Vanities should be reconfigured to allow for the proper clearances set out by the Canadian Standards Association (B651-12| Accessible design for the built environment).

Reconfigure student washroom vanities for conform with barrier free standards	**$3,000**

3. The toilet stall layout of Male Washroom 223 has been reconfigured from the original layout, increasing the size of the barrier free stall toward the basins (see photo 2.5.3). This change in configuration has made area in front of the basins much too tight and not barrier free compliant. The barrier free toilet partition should be moved back to its original location allowing for adequate space in front of the basins.

Reconfigure Male Washroom 223 configuration	**$500**

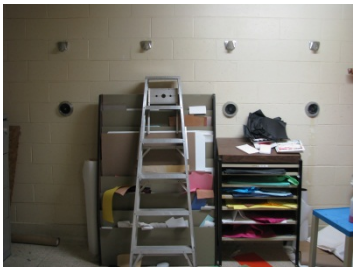
4. Male and Female change rooms have had abandoned from their intended purpose. The female change room is now used as storage, while the male change room has been converted into a Photo Copy/Storage room accessible from Level 2 corridor. Both change areas still have their shower heads in place so they could easily be converted back into their intended use (see photos 2.5.4 and 2.5.5).


2.5.1 | Overall female W/C


2.5.2 | Upgraded sinks in Female W/C


2.5.3 | Reconfigured toilet stall in WC 223


2.5.4 | Female Change Room (Now Storage)


2.5.5 | Male Change Room (now Photo Copy/Storage)

2.6 Window Treatments

Most classrooms have been upgraded to roller shades, however some classrooms are still furnished with curtains.

Provide roller blinds in remaining classrooms (approx. 10 windows)	$4,000

2.7 Communication Boards

Classrooms have either 2 or 3 whiteboards installed over front and side of classroom chalk boards. No action required

3. ELECTRICAL SYSTEMS

3.1 Electrical Service and Distribution

The electrical service entrance is fed overhead from three 50 k.VA pole mounted utility transformers located on Caldwell Road. The service entrance is rated at 400 ampere, 120/208 volt, 3 phase, 4 wire and is located in the Boiler room. The original design drawings indicate the switchboard was initially fed with an underground service which has been replaced with the overhead service. The electrical service conduits extend from the exterior wall through the boiler room and then enter the service entrance switchboard. This distance exceeds the allowable length of 3 metres (Canadian Electrical Code (CEC) Rule 6-206 (1) (c) and Electrical Bulletin 2007-01) (refer to Electrical Photo 3.1.1).

The service entrance switchboard includes a main 400 amp circuit breaker, utility metering cabinet and a distribution section complete with fourteen (14) fusible disconnect switches. These switches feed the elevator machine, the boiler room motor control centre and eleven (11) branch circuit wiring panels located throughout the building. The main switch was manufactured by CEB and has been in service since 1973 (39 years). The switchboard is fully utilized with no space to install fusible switches; therefore additional load growth is not possible (refer to Electrical Photo 3.1.2).

The service is metered by NSPI (meter # 072079). A review of the billing history indicates that a maximum demand of 25 kW occurred within the last two years. This translates to a maximum current of approximately 81 amps using an estimated power factor of 0.85. The electrical service is capable of a continuous load of approximately 115 kW. Based on this, the service could support an additional load of approximately 90 kW, or about 250 amps.

The electrical service entrance equipment is located in the Boiler Room which is not permitted due to the ampacity of the main switch. Service entrance equipment rated for 250 amps or greater must be housed in a separate electrical room used for no other purpose and containing no other equipment (NSP Electrical Bulletin 2000-02, revised January 2008). In addition, the main electrical room typically would require a separation from the remainder of the building incorporating a fire resistance rating of at least one hour.

Educational facilities constructed for the Province of Nova Scotia are not permitted to have overhead electrical services that cross student areas, walkways, etc.

It is recommended that a suitable location be selected for the construction of a new main electrical room. This proposed electrical room would house new electrical service

equipment fed underground from a new utility padmount transformer. This equipment would be sized to handle current requirements with an allowance for reasonable future load growth.

Provide new electrical service entrance equipment **$95,000**

All of the branch circuit panelboards were manufactured by CEB (with the exception of the photocopy room panel manufactured by Siemens and a boiler room panel manufactured by Cutler Hammer). Most of these panels are original equipment and have been in service for approximately 39 years (with the exception of Panel 'NE' in the boiler room added for the recent elevator equipment and Panel 'F1 in the Photocopy room) (refer to Electrical Photo 3.1.3). Several of these are located in areas accessible to the students and are not equipped with padlocks (refer to Electrical Photo 3.1.4) Panel directories are generally complete; however, some are missing directories (Panel 'D', for example) (refer to Electrical Photo 3.1.5). Computer and other sensitive electronic equipment are not segregated from motor and miscellaneous loads. Generally, most circuit breakers have been assigned leaving limited spare capacity for load growth in some areas (refer to Electrical Photos 3.1.6 and 3.1.7). It appears that emergency lighting battery packs are not fed from the circuit which supplies normal lighting to the area covered by that unit. This is a requirement of the Canadian Electrical Code (CEC) Rule 46-304 (4) (refer to Electrical Photo 3.1.8).

The following is a summary of branch circuit wiring panels:

Panel Designation	Location	Manufacturer	Rating (Amps)	Rating (Volts/Phase)	Total Circuits	Spare Positions
Panel 'A'	First Floor Janitor Closet	CEB	200	120/208V 3Ph/4Wire	42	6
Panel 'A1'	Corr. To Eco Room	CEB	200	120/208V 3Ph/4Wire	36	None
Panel 'B'	Room 210	CEB	200	120/208V 3Ph/4Wire	42	1
Panel 'C'	Third Floor Janitor Closet	CEB	200	120/208V 3Ph/4Wire	42	None
Panel 'D'	Stair to Stage	CEB	200	120/208V 3Ph/4Wire	24	4
Panel 'NE'	Boiler Room	Cutler Hammer	100	120/208V 3Ph/4Wire	30	2
Panel 'F'	Kitchen	CEB	200	120/208V 3Ph/4Wire	42	15
Panel 'F1'	Photocopy Room	Siemens	200	120/208V 3Ph/4Wire	18	10
Panel 'P1'	Home Economics	CEB	100	120/208V 3Ph/4Wire	36	None
Panel 'P2'	Learning Centre	CEB	100	120/208V 3Ph/4Wire	24	9
Panel 'P3'	Computer Room	CEB	200	120/208V 3Ph/4Wire	36	11
Panel 'P4'	Eco Room	CEB	100	120/208V 3Ph/4Wire	24	None

Typically, each teaching area is equipped with only three (3) receptacles. This quantity of receptacles is not sufficient to support the needs of a modern teaching environment. Wiring devices (receptacles and switches) in most of the building are original equipment. Receptacles have been added to selected rooms over the years using surface mounted boxes and raceways (refer to Electrical Photo 3.1.9). Some receptacles were noted to have damaged faces (refer to Electrical Photo 3.1.10).

The majority of the branch circuit wiring would have been in service for 39 years. A review of the corridor ceiling spaces revealed that in some cases electrical services are not installed and supported in conformance with the Canadian Electrical Code (refer to Electrical Photo 3.1.11, 3.1.12).

Provide new electrical distribution system	$375,000


3.1.1 | Overhead Electrical Service


3.1.2 | Main Service Entrance Switchboard


3.1.3 | Panel 'NE' (Added for Elevator Equipment)


3.1.4 | Panel 'P2' (Accessible to Students)


3.1.5 | Panel 'D' (Missing Panel Directory)


3.1.6 | Panel 'C' (No Spare Breakers)


3.1.7 | Panel 'P1' (No Spare Breakers)


3.1.8 | Panel 'P4' (Emergency Light Battery Breaker)


3.1.9 | Surface Raceway and Receptacle

3.1.10 | Receptacle with Damaged Face

3.1.11 | Wiring Installed in Ceiling Space

3.1.12 | Wiring installed in Ceiling Space

3.1.13 | Motor Control Centre in Boiler Rm.

3.1.14 | Manual Motor Starters in Boiler Rm.

3.2 Lighting System

The main lighting system for this building consists of two (2) lamp, surface mounted fixtures equipped with T8 lamps, electronic ballasts and wrap around lenses. These energy efficient luminaires were retrofitted to the building within the last few years and are in good condition. Lighting levels appear to meet current standards. Line voltage switching is provided locally and common area switches are accessible to students (with the exception of key switches in washrooms and change rooms). As a result, someone could place corridors and stairwells in darkness which could result in harm. These devices appear to be in good condition (refer to Electrical Photos 3.2.1 to 3.2.5).

Consideration should be given to replace light switches in corridors and stairwells with key switches.

Supply and install key switches	$1,000

Consideration should be given to the installation of occupancy sensors in each room to reduce energy consumption.

Supply and install occupancy sensors	$15,000

The lighting system for the gymnasium has not been upgraded and consists of two lamp fluorescent fixtures with wire guards, magnetic ballasts and T12 lamps controlled via key switches. Consideration should be given to replacing this lighting system with an LED

based system to save energy and reduce maintenance (refer to Electrical Photo 3.2.6).

Supply and install gymnasium LED lighting system	$30,000

Portions of the exterior of the building are lit with pole mounted, high intensity discharge (HID) light fixtures that are rented from the utility. There are also building mounted light fixtures fed from Panel 'C' via a time clock. The existing exterior lighting system does not provide required levels of illumination. Consideration should be given to replacing this lighting system with an LED based system to provide improved exterior lighting coverage (refer to Electrical Photos 3.2.7 to 3.2.10)

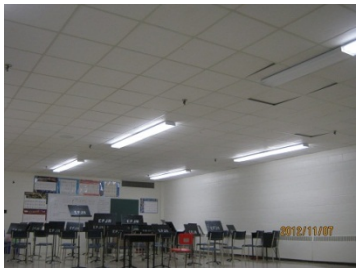
Supply and install exterior building mounted LED luminaires	$21,000


3.2.1 | Typical Classroom lighting


3.2.2 | Typical Corridor lighting

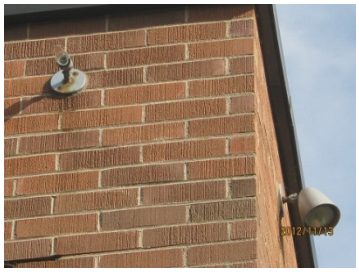

3.2.3 | Library Lighting


3.2.4 | Washroom key switch


3.2.5 | Music Room Lighting


3.2.6 | Gymnasium Lighting


3.2.7 | Exterior pole mounted HID light fixture


3.2.8 | Building mounted incandescent light fixture


3.2.9 | Front canopy light fixture

3.2.10 | Exterior lighting time clock

3.3 Emergency Lighting and Exit Signage

The building is equipped with battery units with both local and remote lighting heads for emergency lighting. Some areas are equipped with only a single remote head which does not conform to the Canadian Electrical Code (Rule 46-106). The Gymnasium is equipped with self-contained units with Plexiglas guards. Based on the observed quantity and location of emergency lighting equipment, it is unlikely that there will be sufficient illumination produced during power interruptions to comply with the requirements of the National Building Code. Additional emergency lighting should be installed in corridors and stairwells. It appears that emergency lighting battery packs are not fed from the circuit which supplies normal lighting to the area covered by that unit. This is a requirement of the Canadian Electrical Code (CEC) Rule 46-304 (4). The emergency lighting equipment should be rewired to the appropriate circuits (refer to Electrical Photos 3.3.1 to 3.3.4)

Provide additional emergency lighting units and rewire to comply with the CEC **$20,500**

The building is equipped with exit signs; however, they are in poor condition. Some units have been retrofitted with LED lights; however, they do not provide adequate illumination. Circuit breakers feeding exit signs should be equipped with breaker lock-on devices. All exit signs should be replaced with modern LED type which comply with CAN/CSA C860-96 standard for Exit Lights (refer to Electrical Photos 3.3.5, 3.3.6).

Replace all exit signs **$10,500**


3.3.1 | Typical emergency lighting unit


3.3.2 | Single remote emergency head


3.3.3 | Gymnasium emergency light


3.3.4 | Remote emergency battery unit

3.3.5 | Typical exit sign

3.3.6 | Typical exit sign retrofitted with LEDs

3.4 Fire Alarm System

The building is equipped with a single stage fire alarm system with the control panel located in the second floor corridor opposite the entrance lobby. Alarm initiating devices include pull stations, heat detectors, smoke detectors, duct smoke detectors, sprinkler system flow switches and magnetic door releasing hardware. The system monitors twelve (12) alarm zones and two (2) supervisory inputs. Signaling appliances are audible only. The system, manufactured by Edwards (Custom 6500), is an older conventional type (non-addressable) and appears to be in reasonable condition. This panel is no longer manufactured; however, at this time parts and service are still available (refer to Electrical Photos 3.4.1 to 3.4.5).

The fire alarm control panel is fed from Panel 'B' (Circuit 38), is not properly identified and does not have a breaker lock-on device installed. The electrical code requires that the fire alarm system must be fed with power from a source as close as practicable to the first available source of 120 VAC (Rule 32-108). The fire alarm control panel should be re-fed from the main switchboard to comply with this requirement (refer to Electrical Photo 3.4.6). The fire alarm system is tested annually and there are no reported problems. A new addressable fire alarm control panel complete with additional detectors, graphic annunciator and audible/visual signaling devices is recommended.

Replace fire alarm panel and all devices **$15,000**


3.4.1 | Custom 6500 Fire Alarm panel


3.4.2 | Typical fire alarm bell


3.4.3 | Fire Alarm smoke detector


3.4.4 | Fire Alarm duct mounted smoke detector


3.4.5 | Pull station missing glass rod

3.4.6 | Breaker 38 Feeds Eire Alarm Panel

3.5 Structured Wiring System

Communication services to the building consist of a fifty pair telephone cable and a fibre optic cable which feed the building underground from a utility pole. The telephone terminal is located in the Boiler room (refer to Electrical Photo 3.5.1). The facility is not equipped with a central telephone system (PBX). The building contains a modest structured wiring system (Category 5e). A proxy server, switches and patch panels are located in an wall rack housed in the Administration office. Copper data back bone cables from this rack serve patch panels and switches in the Library, Classroom 301, Resource room and the computer room (refer to Electrical Photos 3.5.2 to 3.5.4). Typically each teaching space is equipped with a 4 port Ethernet switch (3Com) (refer to Electrical Photo 3.5.5). The wiring for the network has been retrofitted into the building and is installed through the ceiling spaces with outlets in surface mounted boxes (refer to Electrical Photo 3.5.6). This system is limited when compared to a modern educational facility.

Consideration should be given to the construction of a dedicated main communication room to accommodate equipment racks, patch panels, switches and main server. Dedicated communications rooms should be constructed on each floor connected to the main communications room via fibre and copper back bone cables. A horizontal Category 6A data distribution system complete with wireless access points should be installed throughout the building.

Provide a Category 6A structured wiring system	$70,000

3.5.1 | Communications service entrance

3.5.2 | Proxy server in Admin.

3.5.3 | Network switch in Library

3.5.4 | Network switch in Computer Room

3.5.5 | Typical data outlet in classroom

3.5.6 | Communications wiring retrofit in ceiling space

3.6 Television Distribution System

This building is not equipped with a television distribution system. Typically, an educational facility would be equipped with a television distribution system including CATV connection from local provider, bi-directional coaxial cable distribution system, modulators, computer VGA to video scan converters, and television and video source equipment racks. Each teaching area would be equipped with a television outlet.

Provide a television distribution system	$30,500

3.7 Public Address System

The building is equipped with a public address system that includes head end equipment located in the General office and speakers throughout the building. The system, manufactured by Dukane (Compact 3200) is approaching the end of its useful service life and spare parts are no longer available (refer to Electrical Photo 3.7.1 and 3.7.2). The classrooms are not equipped with call back buttons and, therefore, a teacher cannot initiate a call to the administration area in an emergency situation. The student washrooms are not equipped with speakers. A school PA system should be heard in every office, classroom or other teaching space and wherever students may congregate. The public address system is an antiquated model no longer manufactured. The bell system for class dismissal is controlled by a programmable time clock, manufactured by Intermatic (Model ET70215C) located in the Administration office (refer to Electrical Photo 3.7.3). A total system replacement is recommended.

The school uses a portable sound system for events in the Gymnasium (Yorkville Model

MP6D) (refer to Electrical Photo 3.7.4).

Provide new P/A system **$40,500**


3.7.1 | Dukane P/A System Console


3.7.2 | Typical P/A System Speaker


3.7.3 | Class Dismissal Time Clock


3.7.4 | Gymnasium Sound System

3.8 Security Systems

1. The building is equipped with an intrusion alarm system including a control panel, motion sensors strategically located near entrances, corridors and selected rooms, door contacts and keypads. There are two keypads, one located in the boiler room and one near the main entry. The control panel is housed in a storage room located under the front stairway. The system is a hard wired type (not addressable) manufactured by DSC (Model 1864) (refer to Electrical Photos 3.8.1 to 3.8.4). The system also monitors the fire alarm panel, boilers and air compressor. There are no reported problems with this system. An annual system test and verification is typically carried out. Additional motion sensors are required to cover all ground floor and second floor rooms with exterior windows to comply with current DOE requirements.

2. The building is not equipped with a closed circuit television system for video surveillance of the premises. A video surveillance system should be considered to meet current DOE requirements. The system would include interior and exterior digital colour cameras, digital recording devices (with a minimum of 14 days storage), power over Ethernet switches, wiring and appropriate software. Cameras would be positioned inside each entrance, inside each exit, at main reception, in the cafeteria and at entrances to each washroom bank, and

additional areas where there is a high likelihood of student misbehavior or criminal activity.

Provide a complete video surveillance system	$35,000

3. The building is not equipped with a Lock down Annunciation system. A modern educational facility would be equipped with such a system, including a supervised control panel, emergency push button in administration, interior and exterior blue visual appliances and associated wiring and conduit. A Lock down Annunciation system should be considered.

Provide a complete Lock down Annunciation system	$20,000

4. The building is not equipped with an electronic Access Control system. A modern educational facility would be equipped with a complete access control system, including proximity card readers, hardware, controls, software, firmware, wire and conduits to provide monitoring and control of access points such as the main entrance to the building. An electronic Access Control system should be considered.

Provide an electronic Access Control system	$24,500


3.8.1 | Security System Panel

3.8.2 | Wall Motion Sensor

3.8.3 | Ceiling Motion Sensor


3.8.4 | Keypad in Boiler Room

4. MECHANICAL SYSTEMS

4.1 Domestic Water System

There are separate sprinkler water domestic water entrances fed from municipal water system (refer to Picture 4.1.1). The NPS 3 domestic water supply to the building from municipal water system has an NPS 2 meter (refer to Picture 4.1.2). The domestic water entrance doesn't have backflow prevention. Backflow prevention should be provided in accordance with Halifax Regional Water Commission requirements. Also, there is a NPS 1 ½ metered branch water line feeding an exterior connection for outside activities. This branch has double check backflow prevention (refer to Picture 4.1.3). The connection to the main and this branch line is uninsulated.

Provide new backflow prevention	**$25,500**

Domestic hot water for the building is heated in a Ferro Metal vertical stone lined tank with heating bundle fed from the boiler. The domestic hot water distribution system is equipped with a Grunfos recirculation pump (see picture 4.1.6).

The piping for the domestic water distribution system is copper with soldered joints. Valves are a combination of original gate style and newer ball valves. Typically gate valves would not hold and valve stems may break when they are closed. In addition, systems of this vintage would have used lead based solder at the joints which could be a health concern. Consideration should be given to replacement of the domestic water system if the building's service life is to be extended.

Replace the domestic water distribution system	$75,000

4.1.1 | Sprinkler Domestic Water Entrance

4.8.2 | Domestic Water Entrance

4.1.3 | Sprinkler Domestic Water Entrance


4.1.4 | Backflow preventer for exterior connection for outside activities


4.1.5 | Exterior connection for outside activities


4.1.6 | Domestic Hot water tank with pumps.

4.2 Storm and Sanitary Systems

The storm sewer drains to municipal sewer system. There are four roof drains. Two roof drains have plastic dome and two have cast domes (see photos 4.2.1 and 4.2.2). The plastic roof drain domes should be replaced with cast dome to reduce possibility of dome blowing off roof.

Replace roof drain domes	$500

The Sanitary piping is a mixture of cast iron and copper. The sanitary and storm systems in the building are original. The condition of the underground sanitary and rainwater leader piping is dependent on the quality of the initial installation and the ggressiveness of the waste water. Based on past experience with systems of this vintage the cast iron piping could be corroded and may require replacement. The condition of the sanitary and storm systems should be determined by video inspection equipment before a definitive decision on replacement can be made.

Video inspect existing sanitary sewer and rainwater systems	**$1,500**


4.2.1 | Roof drain with plastic dome


4.2.2 | Roof drain with cast dome

4.3 Plumbing Fixtures

The plumbing fixtures are a mixture of original and replacements.

1. The water closets in the public washrooms are replacement dual flush floor mounted flush tank (see photos 4.3.1 – 4.3.3).

2. Urinals are stall type with flush tanks. The water to the flush tanks has an occupancy sensor to control the water feed to the urinal flush tank (see photos 4.3.4).

The current Building Code requires barrier free urinals. To facilitate this, one urinal and a portion of the raised urinal area would be removed a new urinal installed at barrier free height. At this time, the urinal flush tank could be replaced with electronic flush valves on both the replacement urinal and the existing urinal that require one pint per flush.

Replace urinals with new flush valve urinals that use one pint LPF	$4,500

The basins in the public washrooms are replacement stainless steel in vanities with 4" center faucets (see photos 4.3.5).

The gymnasium female change rooms are equipped with six single stall showers. The gymnasium male change rooms are equipped with gang showers. The shower trim is typical for this vintage of building and would likely not include pressure/temperature balancing features. Maintenance staff indicated that the showers are not used (see photo 4.3.7, 4.3.8 and 4.3.9). The floor drains serving the shower heads are not trap primed. Without trap priming the drains could dry out and allow sewer gases to enter the room. Cleanout plugs should be installed below the floor drain strainer to prevent sewer gases from enter the room

Provide cleanout plugs in abandon shower drains	**$1,000**

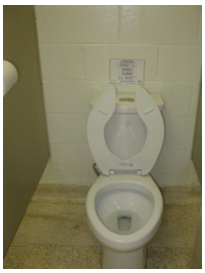
Drinking fountains are vitreous china recessed with bubblers and are located in the corridors. On the Main floor, there is also an adjacent wall mounted drinking fountain mounted at a lower elevation (see photo 4.3.10 and 4.3.11).
The pot sink in the kitchen has an above floor grease interceptor (see photos 4.3.12).

There is a cast iron service sinks located in the Janitor's closets. The faucets on sinks don't have backflow prevention device (see photos 4.3.13). To allow for connected to a cleaning chemical dispensing units, a new faucet with a continuous pressure vacuum breaker should be installed.

Replace service sink faucets with new faucets and continuous pressure vacuum breaker	$2,500


4.3.1 | Typical Barrier free Water Closet


4.3.2 | Dual Flush


4.3.3 | Typical Water closet


4.3.4 | Flush tank Urinals with occupancy sensor


4.3.5 | Stainless Steel lavatory


4.3.6 | Typical vanity


4.3.7 | Male gang shower


4.3.8 | Female shower Stall


4.3.9 | Drain for Female showers


4.3.10 | Drinking fountain


4.3.11 | Drinking fountains


4.3.12 | Pot Sink grease interceptor

4.3.13 | Service Sink with no vacuum breaker


4.3.14 | Kitchen sink with copper drain


4.3.15 | Elevator sump pit by Boiler Room

4.4 Boiler Plant

Space heating is provided by a hot water heating system. Heating water is generated by the original 100 horsepower, oil fired, steel fire tube boiler, manufactured by the Volcano. The boiler is a Starfire model 5B-100F-D2 and is equipped with low water cut-off, operating aquastats, relief valve and a retrofit Carlin 1150 FFD oil burner. The boiler's flue is connected to a metal chimney which replaced the masonry chimney removed to accommodate the elevator (see photo 4.4.1 and 4.4.2).

There are five inline pumps which supply the heating system, Air Systems and DHW System as follows:

Pump	Rated Flow	Hp
Heating	120	1
Coils	95.6	1
Coil AH-1	29.3	1/4
Coil AH-3	8.9	1/12
DHW Coil	37.5	1/6

The heating system is equipped with ceiling mounted steel expansion tanks (see photos 4.4.5). There is a three way control valve providing scheduled water to the perimeter heating system (see photos 4.4.6). For backup, there is a valved connection between the supply to the perimeter heating pump and the coil pump.
The boiler plant piping is typical for a system of this vintage. The majority of the boiler room piping is insulated. There is no air separator installed in the supply piping from the boiler.

The boiler plant and much of the associated equipment has been in service for over 35 years and although operational, is nearing the end of its expected service life. Boilers of this style and vintage maintain the water at relatively high temperatures and are unable to cold start in mild weather conditions. In addition, the boiler plant would not have the capacity required to supply the heating demands of any proposed new ventilation systems.

The proposed new system would include two heating boilers sized to meet the buildings heating and ventilation loads. The recommended boilers would be capable of full temperature modulation and cold start operation (fire only when there is a requirement for heat) based on the building load. As part of the replacement, upgrade of the heating pumps, mixing valves and boiler piping should be considered.

Provide a new boiler plant as described above	$225,000

Fuel oil is stored in a buried 9092 litre fiberglass oil tank. As noted in the table below provided by HRSB, the date of installation of the tank is 1999. There is an oil tank gauge and oil tank leak detection monitor. Oil is piped from the oil tank to the boiler room through a set of underground copper lines in a sleeve. The oil lines cross the floor to the burner (see photos 4.4.5, 4.4.6, 4.4.7 and 4.4.8)

	QTY	Location	Type	Year	Capacity (litres)	Dike Required	Dike Provided	Registration Number
Seaside Elementary 1881 Caldwell Road Eastern Passage, NS	1	UNDER GROUND TANK	UG - Fiberglass	1999	9,092	No	No	1136

The oil distribution system installation may have met the code of the day but does not comply with the current requirements of the B-139 Standard for the Installation of Oil Burning Equipment. The B-139 standard states in part that underground oil piping shall be installed with secondary containment, and be equipped with a means of detecting a leak from the primary pipe or tube. In addition, there is significant liability associated with underground oil storage tanks. Recommendations include replacement with a new above ground tank installed outside with a new oil distribution system that is either installed above grade or in an approved underground secondary containment system with leak detection monitors.

Upgrade the oil tank as described above	**$20,000**


4.4.1 | Oil fired boiler


4.4.2 | Boiler breeching replaced


4.4.3 | Boiler pipe


4.4.4 | Circulator and 3 way valve


4.4.5 | Oil Tank monitor and gauge


4.4.6 | Oil lines from underground oil tank


4.4.7 | Oil lines across floor to burner


4.4.8 | Underground oil tank

4.5 Hydronic Distribution and Perimeter Heating systems

The heating distribution for the building utilizes steel pipe and is configured as reverse return. The majority of the heating mains observed throughout the building were insulated. In some ceiling spaces the pipe insulation is falling off (see photos 4.5.1).

Repair heating distribution insulation	$12,000

The hydronic piping distribution systems may provide additional service life. The condition of heating mains is dependent on the system water quality and the method of treatment used. The heating system at this facility is not equipped with water treatment; therefore, the condition of the original hydronic distribution is questionable. The exact condition could only be determined by removing and examining sections of piping.

Space heating for a typical classroom is provided using 24”slope top wall fin radiation located along the perimeter walls. The library and cafeteria are heated by 12” sloped top wall fin radiation located along the perimeter walls. There are convectors in the stairwells and cabinet heaters at the entrances/exits. Gymnasium is heated with 4 recessed cabinet heaters. A portion of the core area on Main Level and Upper level have reheat coils in the air system (see photos 4.5.2, 4.5.3, 4.5.4, 4.5.5 and 4.5.6).

The radiation in most locations appeared to be in fair condition and could remain in place. Recommendations would include removing the enclosure, cleaning the element

and replacing the isolation valves. Damaged sections of radiation should be replaced.

Clean and repair existing radiation	$10,000

4.5.1 | Heating mains pipe insulation fall off

4.5.2 | Typical classroom 24" slope top Radiation

4.5.3 | Stairwell Convector

4.5.4 | Entrance Cabinet Heater

4.5.5 | Gym Cabinet Heater

4.5.6 | Reheat Coils

4.6 Air Distribution Systems

There are three air handling systems providing mechanical ventilation for this school.

1. AH-1 serves all areas except the Gym on main floor and the Industrial Arts and Domestic Science areas on lower floor. This return air unit is the original built up unit located in a mechanical room on the upper floor adjacent to the stage. The unit was manufactured by Trane and has a rated supply/return capacity of 17,750 CFM. The outside air intake is located on the exterior wall at the upper level. Return air is drawn from the ceiling return air plenums on the three levels. Filters are located after the mixed air stream and consist of disposable media in a galvanized frame. There are two pressure relief hoods on the roof over the return air plenum. The unit is equipped with a hot water heating coil rated at 15^0 F temperature rise, three way valve and coil circulator for outside air tempering. Air is supplied to the classroom via a single trunk duct with sidewall supply air registers and other areas by ceiling diffusers. Return air is a sidewall return air grille open to the return air plenum (see photos 4.6.1, 4.6.2, 4.6.3, 4.6.4, 4.6.5 and 4.6.6). There was a substantial amount of dust build up noted in the return air plenum (see photo 4.6.7).

   Based on the original design drawings, the ventilation rate for a typical classroom is approximately 0.8 CFM/sq. ft., which was typical for a building of

this vintage. In the winter (when other means of natural ventilation are not available) the main outside air damper modulates to minimum position and the system brings in approximately 21% outside air. With balancing, during warm weather conditions, the units could meet the current ventilation requirements of current ASHRAE Standard 62, however, based on control sequence and heating coil capacity the current AH-1 is unable to supply the required outside air ventilation rates during the heating season. Consideration should be given to upgrading this system with ducted return and new energy efficient equipment that could supply the required outside air ventilation rate for each space. Typically modern equipment would include higher levels of filtration, energy recovery and humidification.

Provide a new replacement AH-1	$175,000

2. AH-2 serves Industrial Arts and Domestic Science area on lower floor. This unit is a package 100% outside air unit located in the boiler room. The unit has a rated supply/return capacity of 5,800 CFM. The outside air intake is located on the exterior wall of the boiler room. The original unit was replaced with a Trane Modular unit with filters, face and bypass dampers heating coil and fan. The unit is equipped with a hot water heating coil rated at 90^0 F temperature rise and two way valve for outside air tempering. Outside air is drawn in through a louver near grade and there is a hood over the louver. Air is supplied to the Industrial Arts and Domestic Science area via sidewall supply air registers. Air is exhaust from the Domestic Science area through sidewall air grille by exhaust fan EF-6. Air is exhaust from the Industrial Arts area through sidewall air grille by exhaust fan EF-7. EF-6 and EF-7 are inline fans located at the face of the exhaust louver near grade. There is no apparent access to EF-6 and EF-7 (see photos 4.6.8 to 4.6.13). According to the original design drawings, there is no motorized damper installed on the exhaust duct to the fan which could result in cold air being drawn into the building through the backdraft damper during times when the fan is not operating. The exhaust ducts are not insulated.

   While locating a unit in the boiler room was common and in may have been acceptable, it is not acceptable by today's standards.

   The space uses of portions of the area served by AH-2 have changed over the years. Consideration should be given to upgrading this system with new energy efficient equipment that could supply the required outside air ventilation rate for each space. Typically modern equipment would include higher levels of filtration, energy recovery from the exhaust air and humidification.

Provide a new replacement AH-2	$150,000

Provide motorized dampers for EF-6 and EF-7 and insulate 10' of exhaust duct	**$4,000**

3. AH-3 serves the gymnasium. This unit is the original packaged return air unit hung from the roof above the storage room by the stage and has two roof mounted exhaust fans EF-2 and EF-3 rated at 2,700 CFM each. The unit is access by a ladder to a small service walkway. The unit was manufactured by Trane and has a rated supply/return capacity of 5,400 CFM. The outside air intake is located on the exterior wall at the upper level. The unit has filters, face and bypass dampers heating coil and fan. The unit is equipped with a hot water heating coil rated at 15^0 F temperature rise, three way valve and coil circulator for outside air tempering. Air is supplied to the gymnasium via a four independent branch ducts to four supply grilles. Return air is drawn back through a return air grille in the wall common with stage (see photos 4.6.14 to 4.6.19).

   Based on the original design drawings, the main outside air damper modulates to minimum position and the system brings in approximately 21% outside air. With balancing, during warm weather conditions, the units could meet the current ventilation requirements of current ASHRAE Standard 62, however, based on control sequence and heating coil capacity the current AH-3 is unable to supply the required outside air ventilation rates during the heating season.

   Consideration should be given to upgrading this system with a new energy efficient equipment that could supply the required outside air ventilation rate for each space. Typically modern equipment would include higher levels of filtration. As a minimum, the coil and associated piping should be replaced with a coil capable of tempering the required outside air.

Provide a new replacement AH-3	$100,000
Provide new coil and piping for AH-3	$8,500

There are nine exhaust fans as follows:

Exhaust Fan	Rated Flow (Based on the original drawings)	Hp	Location
EF-1	3900 cfm	1 1/2	Washroom Exhaust
EF-2	2700 cfm	1/2	Gym Associated with AH-3
EF-3	2700 cfm	1/2	Gym Associated with AH-3
EF-4	500 cfm	1/6	Female Shower Room
EF-5	1100 cfm	¾	Male Shower Room
EF-6	3300 cfm	¾	Lower Floor associated with AH-3
EF-7	1375 cfm	1/3	Lower Floor associated with AH-3
EF-8	2100 cfm	1	Removed
EF-9	1625 cfm	1/2	Kitchen Exhaust
EF-Elev			Elevator Exhaust

Exhaust for the washrooms is provided by a roof mounted exhaust fan EF-1. According to the original design drawings, there is no motorized damper installed on the exhaust duct to the fan which could result in cold air being drawn into the building through the backdraft damper during times when the fan is not operating (see photo 4.6.20 and 4.6.21).

Provide motorized dampers for EF-1 and insulate 10' of exhaust duct **$2,000**

Exhaust for the Female Shower Room and Male Shower room is provided by a roof mounted exhaust fan EF-4 and EF-5. According to the original design drawings, there is no motorized damper installed on the exhaust duct to the fan which could result in cold air being drawn into the building through the backdraft damper during times when the fan is not operating. These rooms are no longer used as shower rooms.

Provide motorized dampers for EF-1, EF-4 and EF-5 and insulate 10' of exhaust duct **$6,000**

The joints in ductwork distribution were not sealed which may result in excessive air leakage (see photo 4.6.3).

The existing ductwork should be cleaned, sealed and balancing checked.

Seal ductwork, clean ductwork and AH unit, clean return air plenum and check balancing: $5,500

There are domestic ranges in the Domestic Science area without any hoods. Minimum requirements for these ranges would be to have a residential style ducted hood to the exterior of the building.

Provide residential exhaust hood over range in Domestic Science area	$1,500

The original drawings show a sheet metal hood with fire protection for the kitchen ducted to EF-9 (see photo 4.6.22). There is a commercial cooking range installed in the kitchen with a range exhaust hood with wet chemical fire protection (see photo 4.5.23). The current exhaust fan EF-9 does not meet NFPA 96 Standard for the Ventilation Control and Fire Protection of Commercial Cooking Operations and doesn't have an approved backdraft damper (see photo 4.5.23). This fan should be replaced with a NFPA 96 exhaust fan with approved backdraft damper.

Replace EF-9 with NFPA 96 compliant exhaust fan system	**$10,000**

Combustion air for the boiler room is provided by louvered openings in the boiler room doors (see photo 4.6.25). In addition, a ventilation system to manage heat accumulation in the room is recommended. The proposed system would use equally balanced supply and exhaust fans to maintain the room temperature setpoint

Provide boiler room ventilation system	$15,000

Although common for a school of this age, the ventilation systems such as described above would not comply with the current National Building Code of Canada referenced ASHRAE Standard 62, Ventilation for Acceptable Indoor Air Quality. Typically, the mechanical ventilation systems would supply conditioned outside air to the volumes required by the ASHRAE Standard.


4.6.1 | Built up AH-1 fan


4.6.2 | Built up AH-1 coil an filter sections


4.6.3 | Return air relief hood from R/A plenum


4.6.4 | Relief hood on roof


4.6.5 | Typical sidewall supply and return grilles


4.6.6 | Return air grille open to the R/A plenum

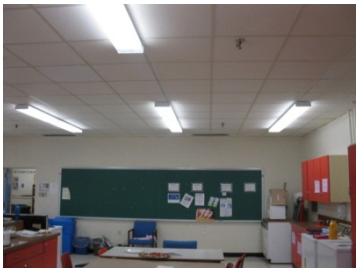

4.6.7 | Dust in Return air plenum

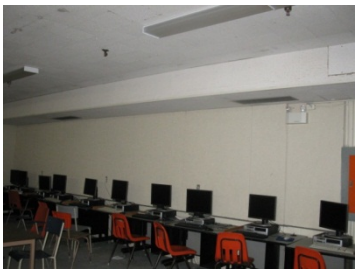

4.6.8 | AH-2 in boiler room


4.6.9 | AH-2 Intake hood


4.6.10 | EF-6 and EF-7 outside and AH-1 intake


4.6.11 | EF-6 and EF-7 inside

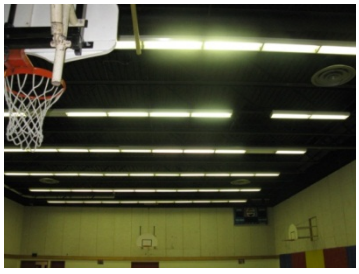

4.6.12 | Domestic Science supply grilles


4.6.13 | Computer Lab supply grilles


4.6.14 | AH-3


4.6.15 | EF-6 and EF-7 outside and AH-1 intake


4.6.16 | AH-3 supply ducts


4.6.17 | AH-3 supply distribution


4.6.18 | Grille under EF-2


4.6.19 | AH-3 return grille


4.6.20 | Washroom exhaust grille


4.6.21 | Typical roof mounted exhaust fan


4.6.22 | Original Exhaust hood


4.6.23 | Current exhaust hood


4.6.24 | Kitchen exhaust fan


4.6.25 | Boiler room combustion air

4.7 Controls Systems

The original building control system was pneumatic with a duplex control air compressor and control air dryer. A partial Building Automation System (BAS) was installed to do scheduling and control of some mechanical equipment (see photo 4.7.1, 4.7.2 and 4.7.3).

There is a low temperature aquastat installed on the supply riser from the boiler that notifies the security system if the water temperature falls below the expected set-point (see photo 4.7.4).

Space temperatures for the classrooms, offices etc. are controlled by pneumatic thermostats with pneumatic zone valves at the radiation. Vestibules are heated with force flow cabinet heaters with aspirating pneumatic thermostats. Unit heaters have electric thermostats (see photo 4.7.5, 4.7.6 and 4.7.7).

The heating boiler operation and supply water temperature to the building are controlled via the boiler aquastats. There is a programmed 3 way control to reset the supply water temperature to the building based on outside conditions which generally results in over-heating and energy waste. There is a low temperature aquastat installed on the supply riser from the boiler that notifies the security system if the water temperature falls below the expected set-point.

The majority of the control systems currently in place at this facility are functional at the current time. Many of the original components such as zone valves and thermostats are reaching their expected life expectancy. These systems would not provide the level of control accuracy and flexibility that would typically found in a building with a modern Building Automation System (BAS).

Additional BAS benefits would include the following:

1. BAS individual room temperature control by replacement of the existing pneumatic thermostats and control valves, adding BAS temperature sensors to control cabinet and unit heaters. Currently a few room have BAS Control. **Savings:** With increase accuracy and monitoring, energy saved by not overshooting temperatures and being able to setback temperatures during unoccupied hours with confidence that the temperature is all spaces are at an acceptable level.

2. Provide a security system contact closure to notify the BAS controls that the building is secure for the night. Following a short time delay, building to switch to night setback and all systems would switch from occupied mode to unoccupied mode. **Savings:** Pipe heat loss, fan energy, energy required to temper replacement air.

3. Add BAS Control to main domestic hot water tank and recirculation pump. Turn off recirculation when building is unoccupied. **Savings:** Pipe heat loss, Pump energy.

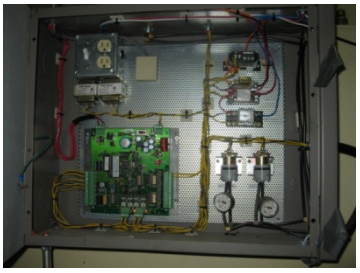
4. Ensure that all exhaust fans have BAS Control. Turn off exhaust fans when space unoccupied. **Savings:** Fan energy, energy required to temper replacement air.

5. Add Carbon Dioxide sensors to the return air ductwork of the AH-1 and AH-3 and control the quantity of outside air based on Carbon Dioxide level. **Savings:** Tempering of outside air.

Provide new BAS control System	$165,000


4.7.1 | Control Air Compressor


4.7.2 | Control panel in boiler room


4.7.3 | BAS Control Panel


4.7.4 | Control panel in boiler room


4.7.5 | Classroom thermostat


4.7.6 | Thermostat for unit heater


4.7.7 | Aspirating Thermostat for Vestibule

4.8 Sprinkler Systems

The building sprinkler system is supplied by one system wet system which does not appear to be zoned by floor. The alarm valve is located in the boiler room. The fire department connection is located just outside the boiler room. There is no backflow preventer which may be required in the future based on municipal regulations.

Provide backflow preventer for the sprinkler system in accordance with Halifax Regional Water Commission requirements. **$15,000**

The distribution is essentially concealed piping throughout the building protecting both the occupied spaces. The building drawings are dated 1973, therefore, the system is approximately 39 years old.

Sprinkler heads are required to be replaced (or tested) at 50 years of age, therefore, the heads will need to be replaced within the next 11 years.

The supervised shut-off valve for the top and bottom of the Elevator Shaft and the Elevator Machine Room is located in the Boiler Room. The boiler room door is normally locked and, therefore, is not normally acceptable to the Elevator Inspector.

Relocate the supervised shut-off valve to an accessible area	**$3,500**

The underside of the stage requires additional protection to meet area of coverage requirements.

Provide addition sprinkler heads and modify existing sprinkler in this area	**$3,000**

There are areas that appear to have exposed combustible materials in the ceiling space.

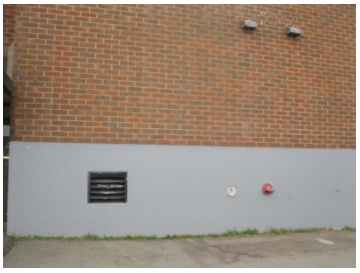
Provide sprinkler coverage in ceiling areas where combustible materials are exposed	**$20,000**

If the ventilation system is upgraded then much, if not all, of the sprinkler system would have to be replaced to provide space for ductwork.

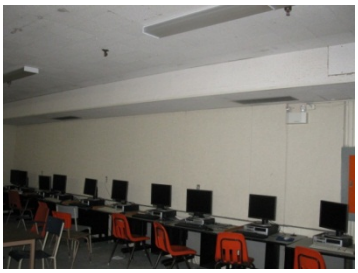
Replace the existing sprinkler system	$120,000
Provide low pressure switch on the alarm valve trim	**$1,000**
Provide sprinkler coverage at the underside of the bulkhead in the Resource Room	**$500**
Provide sprinkler head in Resource Room next to column	**$250**
Lower sprinkler heads in Computer Room next to bulkhead	**$500**
Provide additional sprinkler heads and relocate sprinkler heads in Old Tech Room to meet 130 ft^2 maximum spacing	**$1500**
Provide additional sprinkler head and relocate a sprinkler head in room next to Old Tech Room due to beam	**$300**

4.8.1 | Sprinkler alarm valve in boiler room

4.8.2 | Elevator Supervised valve in boiler room



4.8.3 | Fire department connection



4.8.4 | Bulkhead

5. SPECIAL CONSIDERATIONS

5.1 Accessibility

1. Main Entrance is not barrier free and does not have automatic door operator with push buttons for barrier free access.
2. Interior doors are not equipped with barrier free hardware.
3. Male and Female washrooms are equipped with barrier free stalls; however, vanities do not conform to barrier free standards.

5.2 Occupational Health and Safety

1. 10-1/2" stair treads do not meet minimum requirements.
2. 7-3/4" stair risers exceed maximum.
3. Stair rails and guards do not meet code requirements at a height of 30" (required min. 36") and 37-1/2" (required min. 42") respectively.

5.3 Building Code (National Building Code 2010)

The building area is approximately 44,380 ft^2 (4,123 m^2.), three storey, and of non-combustible construction and sprinklered.

1. NBC 3.2.2.24 - *Occupancy Group A, Div. 2; up to 6 storeys, Any Area, Sprinklered*. Requirements are: building area not limited by building area; sprinklered; not more than 6 storeys in height; non-combustible construction; Floor assemblies to have a fire-resistance rating of not less than 1 hour; Loadbearing walls , columns and supporting structure to have a fire resistance rating not less than that required for the support assembly.
   Meets Requirements.
2. NBC 3.1.13.6 - Corridor flame spread rating: Meets requirements.
3. NBC 3.3.1.5 - Egress doorways: Meets requirements.
4. NBC 3.3.1.11 - Door swings: Meets requirements.
5. NBC 3.3.1.21 - Janitor closet fire separation: **Does not meet requirements.**
6. NBC 3.4.2.5 - Location of exits: Meets requirements.
7. NBC 3.4.3.2 - Exit capacity: Meets requirements.
8. NBC 3.6.2.1 - Fire Separations around service rooms: **Does not meet requirements.**
9. NBC 3.7.2.2 - Water closet requirements: Meets requirements for quantity.

6. APPENDIX | A

The follow section contains a cost breakdown for items of immediate concern and items which warrant attention.

1 Building Envelope

	Deficient Item	**Immediate**	Attention
1.1	**Roof**		
1.2	**Walls**		
1.2.1	Examine building's brick vaneer to determine condition of mortar joints	**$1,000**	
1.2.2	Remove existing caulk joints, and re-caulk masonry expansion joints (approx. 275 lineal ft)	**$2,400**	
1.2.3	Obtain a Structural Engineer to investigate and evaluate the cracking in the concrete block	**$2,500**	
1.3	**Windows**		
1.3.1	Replace existing classroom windows with aluminum framed windows	**$60,500**	
1.3.2	Replace existing cafeteria windows with aluminum framed windows	**$6,500**	
1.3.3	Replace existing library and kitchen windows with aluminum framed windows		$5,000
1.3.4	Remove existing caulk, and re-caulk louvre	**$250**	
1.4	**Exterior Doors**		
1.4.1	Replace all exterior exit doors with aluminum doors (2 sets of doube doors)	**$22,500**	
1.4.2	Evaluate steel lintels for structural integrity and replace if necessary	**$500**	
1.5	**Soffits**		
	Total	**$96,150**	$5,000

2 Building Interior

	Deficient Item	**Immediate**	Attention
2.1	**Flooring**		
2.1.1	Replace VCT-1 (27,700 ft²)		$20,000
2.1.2	Chemically clean terrazzo floor around urinals and toilets		$1,000
2.1.3	Fill crack in terrazzo floor in Administration W/C	**$1,000**	
2.1.4	Repaint concrete floors in rooms 118, 121, and 122 (2,386 sq. ft.)		$3,600
2.2	**Ceilings**		
2.2.1	Replace 12"x12" acoustic tile on gypsum board with a fire rated acoustic tile system (8,175 sq. ft.)	**$26,000**	
2.2.2	Replace 24"x24" fiberglass ceiling tile with new acoustic tile system (20,373 sq. ft.)		$48,600
2.2.3	Patch and paint hole in Female Change Room		$100
2.2.4	Fire stop and smoke seal penetrations through service rooms		$500
2.2.5	Replace asbestos ceiling tiles		$200

	Deficient Item	**Immediate**	Attention
2.3	**Interior Partitions**		
2.3.1	Patch and paint drywall at elevator alcove		$250
2.3.2	Scrape, prepare and paint concrete block walls		$3,000
2.3.3	Scrape and repaint wall base in all areas		$6,300
2.3.4	Install fire rated access doors at penetrations through Janitor Closet partitions	**$1,300**	
2.4	**Interior Doors**		
2.4.1	Properly prepare and paint interior doors (121 leafs)	**$30,300**	
2.4.2	Install lever type handles in all classrooms (37 doors)	**$9,300**	
2.4.3	Install power-assisted door operator with push buttons at main entry for barrier free access	**$3,000**	
2.5	**Washrooms**		
2.5.1	Reconfigure student washroom vanities to conform with barrier free standards	**$3,000**	
2.5.2	Reconfigure Male Washroom 223 configuration	**$500**	
2.6	**Window Treatments**		
2.6.1	Provide roller blinds in remaining classrooms (approx. 10 windows)		$4,000
2.7	**Communication Boards**		
	Total	**$74,400**	$87,550

3 Electrical System

	Deficient Item	**Immediate**	Attention
3.1	**Electrical Service and Distribution**		
3.1.1	Provide new electrical service entrance equipment	**$95,000**	
3.1.2	Provide new electrical distribution system		$375,000
3.2	**Lighting System**		
3.2.1	Supply and install key switches in Corridors and Stairwells		$1,000
3.2.2	Supply and install occupancy sensors		$15,000
3.2.3	Supply and install gymnasium LED lighting system		$30,000
3.2.4	Supply and install exterior building mounted LED luminaires		$21,000
3.3	**Emergency Lighting and Exit Signage**		
3.3.1	Provide additional emergency lighting units and rewire to comply with the CEC	**$20,500**	
3.3.2	Replace all exit signs	**$10,500**	
3.4	**Fire Alarm System**		

	Deficient Item	**Immediate**	Attention
3.4.1	Replace fire alarm panel and all devices	**$15,000**	
3.5	**Structured Wiring**		
3.5.1	Provide a Category 6A structured wiring system		$70,000
3.6	**Television Distriburtion System**		
3.6.1	Provide a television distribution system		$30,500
3.7	**Public Address System**		
3.6.1	Provide new P/A system	**$40,500**	
3.8	**Security System**		
3.8.1	Provide a complete video surveillance system		$35,000
3.8.2	Provide a complete Lock down Annunciation system		$20,000
3.8.3	Provide an electronic Access Control system		$24,500
	Total	**$181,500**	$577,500

4 Mechanical Systems

	Deficient Item	**Immediate**	Attention
4.1	**Domestic Water System**		
4.1.1	Provide new backflow prevention	**$25,500**	
4.1.2	Replace the domestic water distribution system		$75,000
4.2	**Storm and Sanitary Systems**		
4.2.1	Replace roof drain domes		$500
4.2.2	Video inspect existing sanitary sewer and rainwater systems	**$1,500**	
4.3	**Plumbing Fixtures**		
4.3.1	Replace urinals with new flush valve urinals that use one pint LPF		$4,500
4.3.2	Provide cleanout plugs in abandon shower drains	**$1,000**	
4.3.3	Replace service sink faucets with new faucets and continuous pressure vacuum breaker		$2,500
4.3.4	Provide new floor drains with trap primers when sanitary sewer is replaced		$7,500
4.4	**Boiler Plant**		
4.4.1	Provide a new boiler plant as described above		$225,000
4.4.2	Upgrade the oil tank as described above	**$20,000**	
4.5	**Hydronic Distribution and Perimeter Heating Systems**		
4.5.1	Repair heating distribution insulation		$12,000

	Deficient Item	**Immediate**	Attention
4.5.3	Clean and repair existing radiation		$10,000
4.6	**Air Distribution**		
4.6.1	Provide a new replacement AH-1		$175,000
4.6.2	Provide a new replacement AH-2		$150,000
4.6.3	Provide motorized dampers for EF-6 and EF-7 and insulate 10’ of exhaust duct	**$4,000**	
4.6.4	Provide a new replacement AH-3		$10,000
4.6.5	Provide new coil and piping for AH-3		$8,500
4.6.6	Provide motorized dampers for EF-1 and insulate 10’ of exhaust duct	**$2,000**	
4.6.7	Provide motorized dampers for EF-1, EF-4 and EF-5 and insulate 10’ of exhaust duct	**$6,000**	
4.6.8	Seal ductwork, clean ductwork and AH unit, clean return air plenum and check balancing		$5,500
4.6.9	Provide residential exhaust hood over range in Domestic Science area		$1,500
4.6.10	Replace EF-9 with NFPA 96 compliant exhaust fan system	**$10,000**	
4.6.11	Provide boiler room ventilation system		$15,000
4.7	**Control Systems**		
4.7.1	Provide new BAS control System		$165,000
4.8	**Sprinkler System**		
4.8.1	Provide backflow preventer for the sprinkler system in accordance with HRWC requirements.	**$15,000**	
4.8.2	Relocate the supervised shut-off valve to an accessible area	**$3,500**	
4.8.3	Provide addition sprinkler heads and modify existing sprinkler in this area	**$3,000**	
4.8.4	Provide sprinkler coverage in ceiling areas where combustible materials are exposed	**$20,000**	
4.8.5	Replace the existing sprinkler system		$120,000
4.8.6	Provide low pressure switch on the alarm valve trim	**$1,000**	
4.8.7	Provide sprinkler coverage at the underside of the bulkhead in the Resource Room	**$500**	
4.8.8	Provide sprinkler head in Resource Room next to column	**$250**	
4.8.9	Lower sprinkler heads in Computer Room next to bulkhead	**$500**	
4.8.10	Provide additional/relocate sprinkler heads in Old Tech Room to meet 130 ft^2 maximum spacing	**$1,500**	
	Provide additional sprinkler head and relocate a sprinkler head in room next to Old Tech Room due to beam	**$300**	
	Total	**$70,000**	$867,500

Totals - Each Category	**$422,050**	$1,537,550
Total All Categories	**$1,959,600**	

7. APPENDIX | B

The following section contains building floor plans

A-1 Floor Plan | Level 1
A-2 Floor Plan | Level 2
A-3 Floor Plan | Level 3
A-4 Roof Plan

FLOOR PLAN – LEVEL 1

FOWLER BAULD & MITCHELL
architecture

Fowler Bauld & Mitchell Ltd.
PO Box 514, Suite 102
1660 Hollis Street, Halifax, Nova Scotia B3J 2R7
Tel: 902 429 4100 Fax: 902 423 3063
email: architects@fbm.ns.ca www.fbm.ns.ca

SEASIDE ELEMENTARY SCHOOL
EASTERN PASSAGE, NOVA SCOTIA

November 23, 2012
Project No. 2012-095

A-1

FLOOR PLAN – LEVEL 2

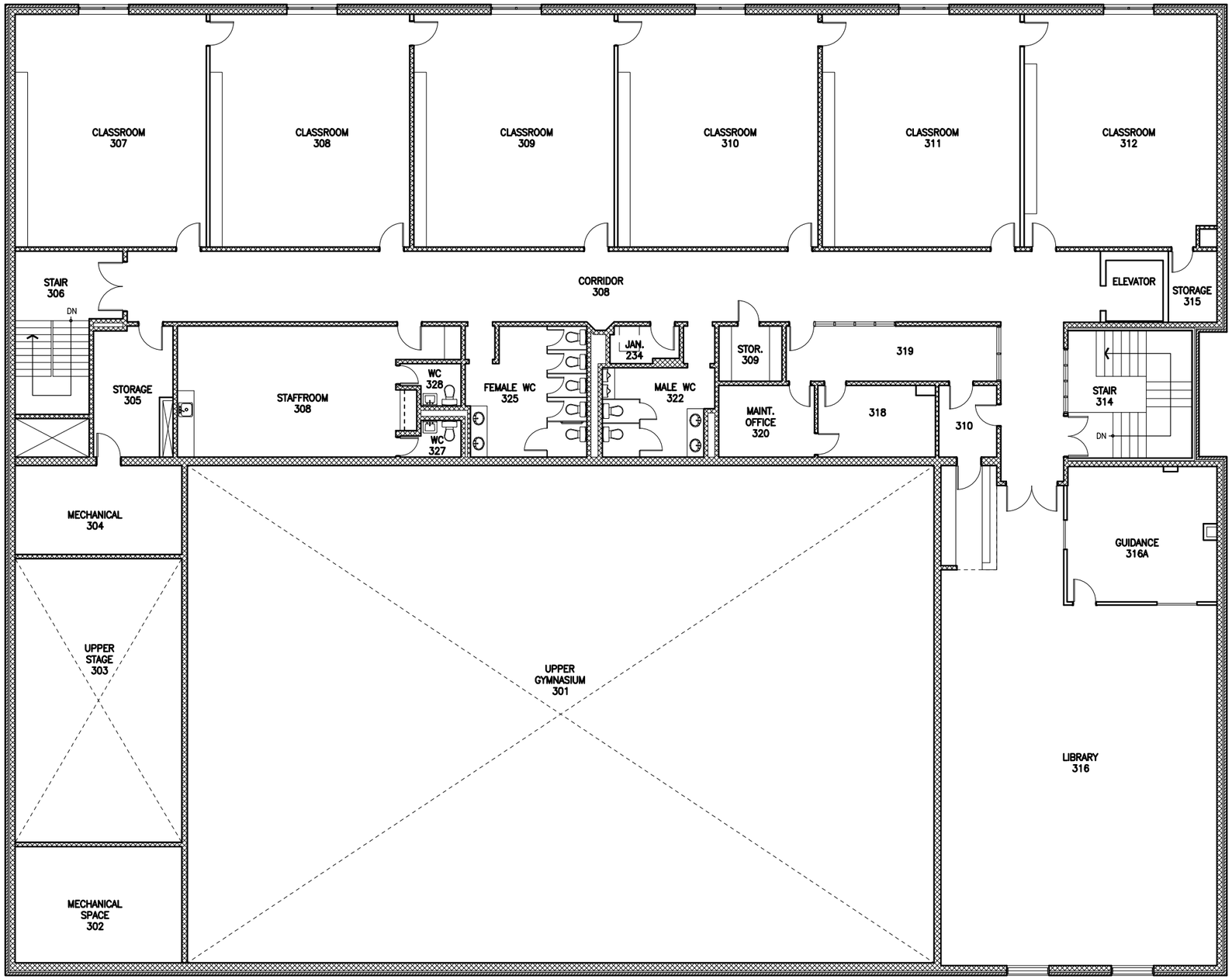
FOWLER BAULD & MITCHELL
architecture

Fowler Bauld & Mitchell Ltd.
PO Box 514, Suite 102
1660 Hollis Street, Halifax, Nova Scotia B3J 2R7
Tel: 902 429 4100 Fax: 902 423 3063
email: architects@fbm.ns.ca www.fbm.ns.ca

SEASIDE ELEMENTARY SCHOOL
EASTERN PASSAGE, NOVA SCOTIA

November 23, 2012
Project No. 2012-095

A-2



FLOOR PLAN – LEVEL 3

FOWLER BAULD & MITCHELL
architecture

Fowler Bauld & Mitchell Ltd.
PO Box 514, Suite 102
1660 Hollis Street, Halifax, Nova Scotia B3J 2R7
Tel: 902 429 4100 Fax: 902 423 3063
email: architects@fbm.ns.ca www.fbm.ns.ca

SEASIDE ELEMENTARY SCHOOL
EASTERN PASSAGE, NOVA SCOTIA

November 23, 2012
Project No. 2012-095

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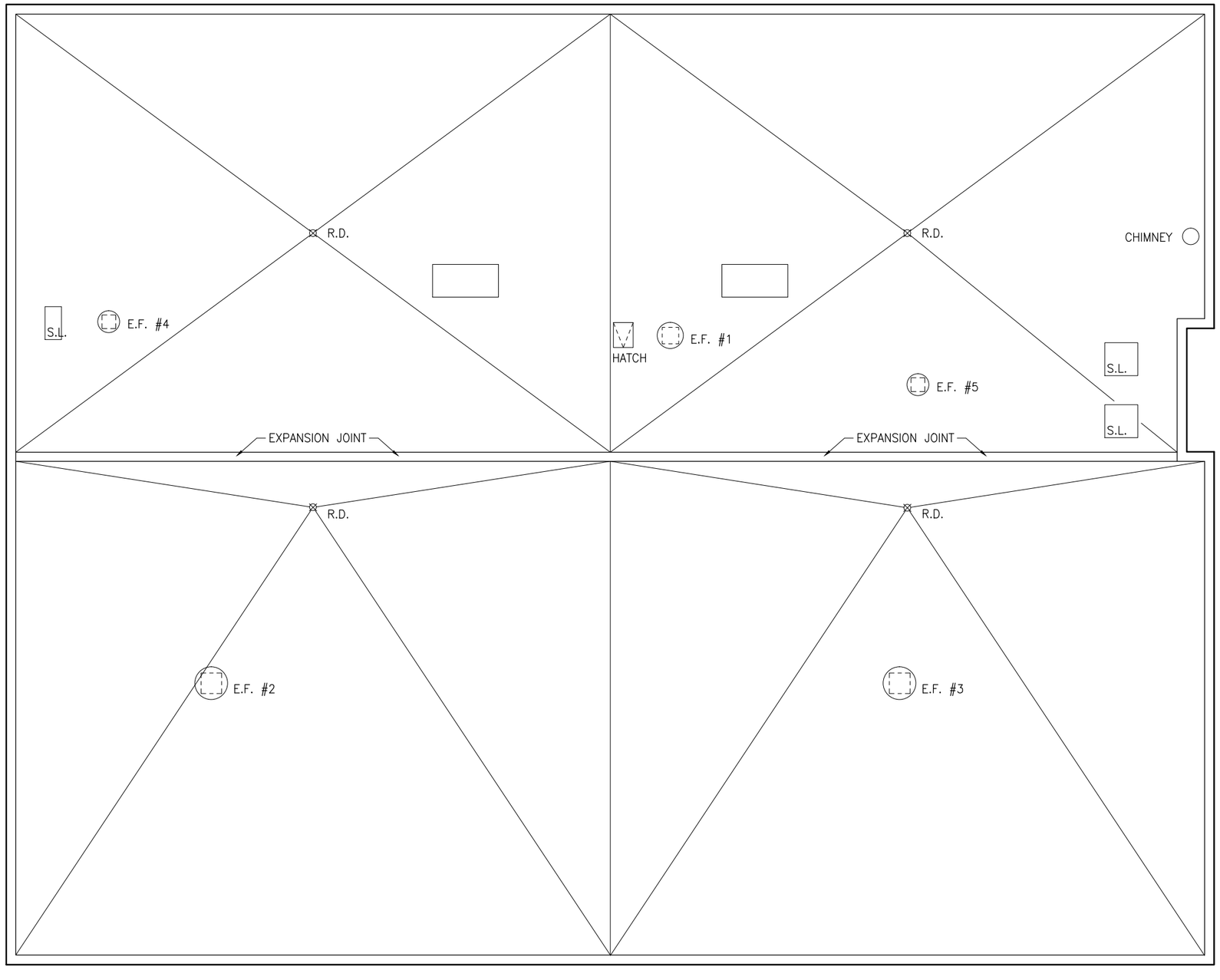

FLOOR PLAN – LEVEL ROOF

FOWLER BAULD & MITCHELL
architecture

Fowler Bauld & Mitchell Ltd.
PO Box 514, Suite 102
1660 Hollis Street, Halifax, Nova Scotia B3J 2R7
Tel: 902 429 4100 Fax: 902 423 3063
email: architects@fbm.ns.ca www.fbm.ns.ca

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