

# Property Condition Assessment

123 Main Road, St. John's, NL

June 30<sup>th</sup> 2016



**Please note that this is a sample document intended only to display our methods. Descriptions, data, and other fields have been purposely altered to prevent duplication, or comparison to any existing building or property.**

123 Main Road June 30, 2016

June 30, 2016

Dear Sir or Madam:

**Property Condition Assessment**

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**St. John's, NL**

Pursuant to your request for a Property Condition Assessment at the described property we have prepared and submit to you this report.

The assessment was completed and report prepared in accordance with the *American Society of Testing and Materials (ASTM) Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process E2018-15 and generally accepted industry standards.*

This Property Condition Report is a complex document and should be reviewed in entirety. This report has been prepared specifically for the client as described above. This report is not intended for use by any other party. It is strongly recommended that Safe and Sound be consulted immediately regarding any areas of this report where further clarification is required.

We trust that you will find the report complete and informative. Please do not hesitate to contact Safe and Sound with any questions, or if we may be of any other service.

Respectfully submitted,

Tom Gresham

On behalf of Safe and Sound Commercial Inspection Ltd.

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## Executive Summary

This summary is prepared based on a property condition assessment and report completed by Safe and Sound for our client Mr. Smith at 123 Main Road, St. John's, NL.

The building is a single-storey steel frame slab on grade commercial building consisting of three independent suites. It covers an estimated 9,000 square feet, as stated by the client and approximated from the roof surface. The main suite is presently in use as a restaurant with seating for approximately 300 patrons. There are two independent office suites at the west of the building facing Assessment Avenue. The offices cover an estimated 3,400 square feet in total.

The visible evidence suggests that the building was constructed in 1997. The larger suite is presently in use by AAA Company Inc. as a restaurant. The west offices are used by BBB and CCC Company Inc, which are legal and accounting firms

The site inspection was carried out on June 30, 201X, in the partial company of the site representative Mr. John.

Our inspection was limited to components that were readily visible and not obstructed by storage, finishes, vegetation, etc.

### **Overall Condition and Level of Maintenance:**

The building is in satisfactory overall condition. The general maintenance has been kept up to date. However, the interior finishes at the North-West office had been damaged due to recent flooding reportedly caused by a plumbing failure. The damaged interior finishes have been removed and the interior was being dehumidified. The affected interior finishes will require replacement prior to occupancy. It should be verified which party is responsible for these repairs. Priority improvements required at the building exterior should be repairs to the walkway in proximity of the main suite front entrance as further detailed.

### **Structure:**

No major structural deficiencies were noted. Several minor repairs are recommended.

### **Electrical:**

Several repairs to the distribution equipment and wiring are required. Improper wiring at additions of process related equipment, and corrosion from elevated humidity at the distribution panel in proximity of the kitchen area was observed. Relocation of the distribution panel is recommended.

### **Heating and Air-Conditioning:**

The rooftop package units (3) are 1 year, 8 years, and 19 years old. The economic service lifespan of this equipment is approximately 20 years. As such, the 19 year old rooftop package unit will likely require replacement in the short term. End of lifespan replacement of the newer rooftop package units (2) is not expected within the time frame considered by this report. Electric baseboard heating is provided at the office units. No significant costs are anticipated with electric baseboard heating during the time frame considered by this report.

**Ventilation:**

Three of the four roof-mounted exhaust fans are estimated to be 19 years of age. These units have a typical life expectancy of 20 to 25 years. Although no major deficiencies were noted, budgeting for the short-term replacement of the three older exhaust fans is recommended.

**Plumbing:**

Pitting and evidence of prior repairs was observed at numerous locations of supply plumbing. Replacement of all supply plumbing with PEX type plumbing is recommended. Replacement of the older and worn plumbing fixtures in the washrooms serving the area in use as a restaurant area is recommended.

**Roofing:**

The roof membrane appears to be 19 years of age, with a 20 to 25 year anticipated lifespan. Budgeting for replacement is recommended. Minor repairs and improvements are recommended to maximize the service life of the roofing system.

**Exterior Walls:**

Localized repairs are recommended to damaged fiber cement paneling. The renewal of caulking joints is recommended within the time frame considered by this report. No major deficiencies were noted with metal cladding.

**Exterior Windows and Doors:**

No major deficiencies were observed. Replacement of signage and door hardware are recommended as detailed in the Fire and Safety Report. Renewal of the window perimeter caulking is recommended in conjunction with fiber cement cladding caulking.

**Site Work:**

The overall condition of the parking lot and walkways was satisfactory. The parking area was resurfaced within the last few years. Major work is not anticipated within the time frame considered by this report. Damage and settling of the walkway surface was observed in proximity of the main suite entrance. This should be repaired immediately due to a potential safety hazard.

**Interior and Insulation:**

The lower portion of wall finishes at the North-West office suite, including the insulation and baseboard trim had been removed due to recent flooding caused by a supply plumbing leak. The suite is presently vacant. Interior finishes will require replacement prior to occupancy of the suite. It should be verified which party is responsible for these repairs.

**Fire Protection:**

Further review is required to determine if a fire safety plan is required dependant on future usage of the building. Present observed deficiencies were as follows:

- improper or damaged door hardware
- inoperative or damaged exit signs and emergency lights

### Five-Year Summary of Recommended Repairs

Please find the following table of more significant recommendations, priorities, and cost estimates based on our findings. A five-year time frame has been considered. Other recommendations will be found in each section as applicable. It is important that the report be reviewed in entirety for consideration of all recommendations.

Report Reference	Item	Recommendation	Unit Quantity	Unit Measure	Estimated Cost Per Unit	Present Estimated Replacement Cost	Anticipated Year of Expenditure				
							2017	2018	2019	2020	2021
<b>Electrical</b>											
2.3.1	Distribution System	Repair of improper wiring by licensed electrician.	1	Allowance	\$2,000.00	\$2,000	\$2,000				
2.3.2	Distribution Panel	Replacement and potential relocation of panel in proximity of kitchen area.	1	Allowance	\$5,000.00	\$5,000	\$5,000				
<b>Mechanical</b>											
<b>Heating and Air-conditioning</b>											
3.3.1	Roof-top Unit	Replacement due to anticipated end of service life.	1	Unit	\$7,000.00	\$7,000	\$7,000				
<b>Ventilation</b>											
4.3.1	Exhaust Fans	Replacement due to anticipated end of service life.	3	Unit	\$1,500.00	\$4,500	\$1,500	\$1,500	\$1,500		
<b>Plumbing</b>											
5.3.1	Supply Plumbing	Replacement due to anticipated end of service life.	1	Allowance	\$9,000.00	\$9,000	\$9,000				
5.3.2	Water Heaters	Replacement due to anticipated end of service life.	4	Allowance	\$800.00	\$3,200	\$1,600	\$800	\$800		
5.3.3	Fixtures	Replacement due to anticipated end of service life.	1	Allowance	\$3,600.00	\$3,600	\$3,600				
<b>Architectural</b>											
<b>Roof</b>											
6.3.1	Roof Membrane	Replacement due to anticipated end of service life.	9,000	sq.ft.	\$17.00	\$153,000			\$99,000		
<b>Interior</b>											
7.3.1	Finishes/flooring	Refurbishment due to water damage at Northwest office suite.	1	Allowance	\$18,000.00	\$18,000	\$18,000				
<b>Insulation</b>											
Nil											
<b>Structure</b>											
Nil											
<b>Exterior</b>											
10.3.1	Exterior Cladding	Repair of fiber cement cladding mechanical damage.	1	Allowance	\$2,300.00	\$2,300	\$2,300				
10.3.2	Exterior Caulking	Replacement of caulking.	2,000	lin. Ft.	\$4.50	\$9,000			\$9,000		
10.3.3	Exterior Cladding	Tighten metal cladding fasteners.	1	Allowance	\$2,800.00	\$2,800		\$2,800			
10.3.4	Walkway	Repair in proximity of main suite entrance.	1	Allowance	\$3,700.00	\$3,700	\$3,700				
<b>Cumulative Projected Five Year Estimated Expenses (Total and Per Year):</b>						\$214,400	\$34,000	\$21,100	\$101,300	\$9,000	\$0

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**THIS REPORT IS SUBJECT TO THE FOLLOWING  
LIMITING CONDITIONS**

The report will be a professional opinion, based on the accessible, visible components and systems of the building. Recommendations are based on a general visual assessment, or walk through of the site. Only those features of the building readily accessible at the time of the assessment are visually observed. We evaluate the current physical condition; we do not perform a design analysis. We visually review the building performance looking for evidence of distress. It should be understood that there are limitations to such an inspection.

Throughout any inspection, inferences are often drawn which cannot be confirmed by direct observation. Therefore, it should be understood that we can reduce the number of unforeseen repairs; however, we cannot eliminate them. No destructive testing, disassembly, nor exhaustive physical examinations are completed. Accordingly, no responsibility is assumed concerning these matters or other technical and engineering techniques, which would be required to discover any inherent or hidden condition of the property. Consequently, no guarantee or warranty can be offered or implied.

The assessment does not include the operation of equipment. Sketches, drawings, diagrams, photographs, if any, presented in this report are included for the sole purpose of illustration.

The report will identify deficiencies based on a sampling inspection technique. For example, in a 100-foot x 20-foot brick wall, there are roughly 13,500 bricks and 12,000 feet of mortar joints. A brick-by-brick examination and report would require several hours for this building component alone. As a practical alternative, we use our professional judgment and experience to inspect areas and components most likely to show problems. This means that in some cases we will not find localized problems that were detectable. We ask that you understand and accept this.

Items excluded from this assessment include, but are not limited to, fire protection equipment, fire regulation compliance, building code and municipal bylaw compliance, security systems, telecommunication systems, process and recreational equipment and appliances.

No comment is offered on mould or any environmental concerns such as urea formaldehyde foam insulation, asbestos, radon gas or polychlorinated biphenyls (PCBs). It is strongly recommended that a Phase 1 Environmental Site Assessment be completed to aid in identifying any environmental concerns or hazards.

The decision to complete work, or replace building components should be based on further professional consultation and assessment considering current standards, practices, and National and Municipal code requirements and bylaws where applicable.

The client to whom this report is addressed may use it in deliberations affecting the subject property only, and in so doing, the report must not be abstracted; it must be used in its entirety. Possession of this report or any copy thereof does not carry with it the right of publication, nor may it be used for any purpose by anyone but the applicant without the written consent of the author, and in any event, only with the proper qualifications.

**The assessment and review were completed using the information provided and readily available. The information provided was understood to be factual and correct. Safe and Sound Residential Inspection Ltd. will not be responsible for issues arising from information or facts that were not fully provided, or disclosed prior to the assessment and review.**



## 1.0 Introduction:

### 1.1 Inspection Authorization and Scope

As per the request of Mr. John Smith of St. John's Capital Corp., and in accordance with our Proposal dated January 30, 2016, a visual inspection was performed to identify the existing conditions of the following building components:

- Structure
- Electrical system
- Heating system
- Air-conditioning system
- Plumbing system
- Roofing system
- Ventilation system
- Exterior components
- Insulation
- Interior components
- Fire protection systems

This report exceeds the ASTM Standard E2018-15 in that a five-year time frame for major repairs or replacements of building components has been considered. However, at the request of our client a building code and fire code violation inquiry was not undertaken. This report provides recommendations, preliminary cost estimates and priorities for:

- remedying major deficiencies
- updating or replacement of major components
- undertaking further detailed investigations.

The recommendations are for remedial actions that are considered to be beyond the normal maintenance of the building. Costs are provided for recommendations expected to exceed \$3,000. The costs are only intended to provide an order of magnitude, and do not include any engineering design or construction management fees. Contractors or other Qualified persons as applicable should be contacted for exact quotations.

This report is intended for the exclusive use of our client. Use of the information contained within the report by any other party is not intended and, therefore, we accept no responsibility for such use.

This report is considered to be preliminary in nature. Before any major repairs are undertaken, we recommend that a specialist perform a detailed condition survey and develop a plan of action.

The site inspection was carried out on June 30, 2016, in the company of the facility general manager Mr. John. Our inspection was limited to components that were readily visible and not obstructed by storage, finishes, vegetation, etc. The inspection included a visual review of the building exterior, roof and a sampling of the interior spaces.

The following defined terms are used to describe the condition of the components and systems reviewed:

**Satisfactory** – Performing its intended function; no major defects noted.

**Serviceable** – Performing its intended function, but has visible defects or is aging. It will require minor to moderate repairs.

**Fair** – Barely performing its intended function. Has visible defects or is aging and will require moderate to major repairs in the short term.

**Poor** – Not properly performing its intended function. At or beyond its useful life. Component requires major repair or replacement.

Only the items specifically addressed in this report were examined. No comment is offered on building code and building bylaw compliance, or environmental concerns.

The weather at the time of the inspection was sunny, with an approximate outdoor temperature of 14°C.

## 1.2 Building Description

The building is a single-storey retail building consisting of three independent suites. It covers an estimated 9,000 square feet, as stated by the client and approximated from the roof surface. The larger suite is presently in use as a restaurant with seating for approximately 300 patrons. It includes a seating area, kitchen, storage room, small office, and male/female patron washrooms with four stalls and double basins. The main entrance faces Main Road. There are two independent office suites at the west of the building facing Assessment Avenue. The offices cover an estimated 1,700 square feet each. Each office suite contains single his/her restrooms and a small kitchenette. All building sizes noted here are rough approximations based on site observations, and are for the purposes of this report only. An asphalt surfaced parking area with concrete curbing is located at the East of the property, and accessed from Main Road. Capacity appears to be suitable for approximately 90 vehicles, with four barrier free spaces. For the purpose of this report, the front of the building is considered to be facing North.

## 1.3 Document Review

As part of the Property Condition Assessment, a request was made to review available building plans, maintenance records, warranties and equipment lists. No documentation was provided or available at the time of this assessment.

## 2.0 Electrical:

### 2.1 Description:

Three individual single phase electrical services are present. They are provided through two service drops via overhead pole mounted equipment. A 400 amp 120/240v service serves the main suite (in use as a restaurant). A 400 amp main disconnect, 200 amp distribution panel, and process related disconnects are located in the restaurant electrical/utility room. A 100 amp sub panel was observed in proximity of the kitchen area as further noted. A 100 amp 120/240v electrical service is provided for each office suite with a single distribution panel each. The distribution panels employ circuit breakers. Copper distribution wiring and grounding were observed. The majority of lighting fixtures are of fluorescent type. The building is not equipped with a standby generator. The electricity is supplied to the building by NL Power.

### 2.2 Observations:

**2.2.1** It is impossible on an inspection such as this to determine adequacy for commercial demands.

**2.2.2** The overall system condition appears satisfactory except where further noted.

**2.2.3** Deficiencies noted at the distribution equipment are as follows:

Several repairs to the distribution equipment and wiring are required. Improper wiring at additions of process related equipment, and corrosion from elevated humidity at the distribution panel in proximity of the kitchen area was observed. Relocation of the distribution panel is recommended.

**2.2.4** For safety reasons, electrical improvements should be considered high priority.

### 2.3 Recommendations:

Recommendations		Cost	Time Frame
<b>2.3.1</b>	Repair of improper wiring by licenced electrician.	<b>\$2,000</b>	<b>Immediate</b>
<b>2.3.2</b>	Replacement and relocation of panel in proximity of kitchen area.	<b>\$5,000</b>	<b>Immediate</b>

### 2.4 Limitations:

**2.4.1** Main disconnect panels are not opened/accessed as it is necessary to shut power off to the building.

### 3.0 Heating and Air-conditioning:

#### 3.1 Description:

Three 3 1/2 ton capacity rooftop mounted electric heat pumps provide heating and cooling for the main suite. Electric baseboard heating with wall mounted thermostats is provided at the office suites. Portable window mounted air conditioners were observed at some partitioned areas of the office suites. These would be considered portable units and not within the scope of this assessment.

#### 3.2 Observations:

3.2.1 The rooftop package units (3) are 1 year, 8 years, and 19 years old. The economic service lifespan of this equipment is approximately 20 years. As such, the 19 year old rooftop package unit will likely require replacement in the short term. End of lifespan replacement of the newer rooftop package units (2) is not expected within the time frame considered by this report.

3.2.2 Heat pump air filters are worn and date of last servicing was not apparent. It is recommended that the equipment be serviced by a qualified heating technician, and annually thereafter to maximize efficiency and service life of equipment.

3.2.3 It was observed that the condensate drain of the centrally located unit is discharging directly onto the roof surface. The condensate drain should be routed into a roof drainage provision to prevent premature deterioration of the roof covering.

3.2.4 No significant costs are anticipated with electric baseboard heating during the time frame considered by this report. This equipment can generally be repaired indefinitely. Heaters and wall mounted thermostats are often replaced for cosmetic reasons during interior refurbishment of suites.

#### 3.3 Recommendations:

	<b>Recommendations</b>	<b>Cost</b>	<b>Time Frame</b>
<b>3.3.1</b>	Replacement due to anticipated end of service life.	<b>\$7,000</b>	<b>2019</b>
<b>3.3.2</b>	Servicing of rooftop mounted heat pumps (3).	<b>\$800</b>	<b>Annually</b>
<b>3.3.3</b>	Repair of central heat pump condensate drain.	<b>\$150</b>	<b>2017</b>

## 4.0 Ventilation:

### 4.1 Description:

Four roof mounted exhaust fans were observed. Two serve the restaurant suite, and one serves each office suite. Exhaust fans are controlled by manual wall mounted controls.

### 4.2 Observations:

**4.2.1** Three of the four roof-mounted exhaust fans are estimated to be 19 years of age. These units have a typical life expectancy of 20 to 25 years. Although no major deficiencies were noted, budgeting for the short-term replacement of the three older exhaust fans is recommended.

### 4.3 Recommendations:

Recommendations		Cost	Time Frame
4.3.1	Replacement due to anticipated end of service life (3).	\$4,500	2017-2019

## 5.0 Plumbing:

### 5.1 Description:

Copper supply plumbing is present. Waste plumbing is of ABS construction where visible. The main water entrance and main waste clean out are located at the North exterior wall, and accessible from the main suite kitchen area. Areas served by plumbing are the main suite kitchen area, and four stall restrooms (2). The office suite kitchenette's (2), and single stall restroom's (4). Four domestic electric water heaters are present. A 60-gallon heater supplies the main suite kitchen area. A 40-gallon heater supplies the main suite restrooms. A 40-gallon electric water heater is present at each office suite for supply to kitchenette and restrooms.

### 5.2 Observations:

**5.2.1** The copper supply plumbing appears to be approaching end of service life. Pitting and evidence of prior repairs were observed at numerous locations. Replacement of all supply plumbing with PEX type plumbing is recommended to prevent water damage.

**5.2.2** Water heater tanks were dated 2014 (60 gallon), and 2013 (40 gallon) at the main suite. Water heater tanks were dated 2011 at both office suites. The economic service lifespan of this equipment is approximately 5 to 6 years. Budgeting for replacement of water heaters at 5 years of age is recommended.

**5.2.3** Toilets and basins at the main suite restrooms are aged. Fixtures appear functional; however, damage and prior repairs were observed. Replacement of aging fixtures is recommended.

**5.2.4** Fixtures appeared in satisfactory condition at the main suite kitchen and office suites.

**5.2.4** Waste plumbing appeared to be in satisfactory condition.

### 5.3 Recommendations:

Recommendations		Cost	Time Frame
5.3.1	Replacement of supply plumbing due to anticipated end of service life.	\$9,000	2018
5.3.2	Replacement of water heaters due to anticipated end of service life.	\$3,200	2017-2019
5.3.3	Replacement of fixtures due to anticipated end of service life.	\$3,600	2017

## 6.0 Roofing:

### 6.1 Description:

A flat roof with modified bitumen type roof covering is present. The roof covering is encompassed by perimeter raised parapet type walls with metal flashing. An internal type roof drainage system is present.

### 6.2 Observations:

**6.2.1** The roof membrane appears to be 19 years of age, with a 20 to 25 year anticipated lifespan. The roof covering is showing signs of wear typical for its age. Although this roof membrane is approaching the end of its typical useful lifespan, the need to replace the roof membrane is largely dependent on the quality of the original installation, level of maintenance and visible condition. Based on the overall visible condition of the membrane, immediate replacement is not warranted. Nevertheless, budgeting to replace the roof membrane within the timeframe considered by this report is recommended. It is recommended that annual inspections, and repair if required are completed until roof covering replacement to maximize service life.

**6.2.2** Minor defects such as blisters, voids at seams, etc. were observed. Repair is recommended to maximize the service life of the roofing system.

### 6.3 Recommendations:

Recommendations		Cost	Time Frame
<b>6.3.1</b>	Replacement of roof covering due to anticipated end of service life.	<b>\$153,000</b>	<b>2019-2021</b>
<b>6.3.2</b>	Inspection and minor repair of roof covering.	<b>\$1,500</b>	<b>2017</b>
<b>6.3.3</b>	Replacement of drain grate and removal of debris from roof drains.	<b>\$200</b>	<b>2017</b>

## 7.0 Interior Components:

### 7.1 Description:

Interior walls are finished with painted drywall and wood trim throughout the building. A drop suspended ceiling is provided to conceal ducting, wiring, etc. while providing access for maintenance. The main suite flooring is primarily ceramic tile. Carpet flooring is predominately installed at the office suites.

### 7.2 Observations:

**7.2.1** The lower portion of wall finishes at the North-West office suite, including the insulation and baseboard trim had been removed due to recent flooding reportedly caused by a plumbing failure. The suite is presently vacant. Interior finishes will require replacement prior to occupancy of the suite. It should be verified which party is responsible for these repairs.

**7.2.2** The overall condition of interior finishes and flooring was satisfactory. Typical wear and minor damage was observed at some locations.

### 7.3 Recommendations:

<b>Recommendations</b>		<b>Cost</b>	<b>Time Frame</b>
<b>7.3.1</b>	Refurbishment due to water damage at the Northwest office suite.	<b>\$18,000</b>	<b>2017</b>



## 8.0 Insulation:

### 8.1 Description:

Extruded polystyrene insulation of approximately R 10 was observed above the roof deck where visible at roof penetrations. Radiant faced fiberglass batt insulation of approximately R 12 was observed at the roof deck interior, and wall cavities where visible.

### 8.2 Observations:

**8.2.1** This is a commonly observed amount of insulation for buildings of this age, and is considered satisfactory.

**8.2.2** It is recommended to consider increasing the amount of insulation at the time of, and areas where renovations occur in future. Renovations allow the chance to offset some of the costs associated with Adding additional insulation.

**8.2.3** Increasing insulation levels in a building is more of an upgrade than a necessary repair. Overall building energy usage is, however, an ongoing consideration.

### 8.3 Recommendations:

Recommendations		Cost	Time Frame
	Nil		

### 8.4 Limitations:

A review of the thermal characteristics of the building envelope is beyond the scope of our assessment. Our visual assessment offers comment on the type and amount of insulation materials where visible only.

## 9.0 Structure:

### 9.1 Description:

A concrete slab on grade foundation is present. Exterior walls are steel frame. Walls between suites are of masonry and concrete block construction. Roof structure consists of a steel roof deck supported by open web steel joists, steel beams, and columns.

### 9.2 Observations:

**9.2.1** The overall condition of the structure was satisfactory.

**9.2.2** Bolts were not present at some beam/column/truss connections where spot checks were completed above the suspended ceiling. This is a common observation, and likely due to misalignment of holes during initial construction. It is recommended that hardware be installed at these areas to ensure required support.

**9.2.3** Cracks and evidence of slight settling were observed at the South-East corner of the foundation. This likely occurred shortly after initial construction, and do not appear to be of structural concern. It is recommended that they be sealed or repaired where visible at the exterior of the foundation.

### 9.3 Recommendations:

Recommendations		Cost	Time Frame
<b>9.3.1</b>	Installation of bolts/hardware where not present.	<b>\$1500</b>	<b>2017</b>
<b>9.3.2</b>	Sealing/repair of foundation cracks.	<b>\$1000</b>	<b>2017</b>

### 9.4 Limitations:

The assessment of building structure is limited to areas that are readily accessible and not concealed by finishes, storage, equipment, etc.

## 10.0 Exterior Components:

### 10.1 Description:

Fiber cement panelized cladding is installed at the North and West facing exterior walls, where the building is visible from Main Road and Assessment Avenue, and the main suite entrances are located. The fiber cement cladding appears to have been during a retrofit, likely to increase visual appeal of the building. Metal vertical cladding is installed at the North and East exterior walls, and appears to be original.

The front entrance door to main suite is a double entry aluminum-framed, single-glazed unit. The front entrance doors to the office suites are aluminum-framed, single-glazed units. Three solid steel doors are also provided at the main suite. Two serve as fire exits from the seating area at the East wall, and one as a service door to the kitchen.

The windows are aluminium-framed, single-glazed units. The operable portion of windows are horizontal sliders.

An asphalt surfaced parking area with concrete curbing is located at the East of the property, and accessed from Main Road. Capacity appears to be suitable for approximately 90 vehicles, with four barrier free spaces.

A poured concrete walkway with accessible ramps from the parking area encompasses the building perimeter.

### 10.2 Observations:

**10.2.1** The overall condition of the exterior cladding appears satisfactory. Both fiber cement and metal cladding have life expectancies of 40+ years with good maintenance. It is important to note that fiber cement cladding is cellulose based, and susceptible to deterioration from contact with moisture where exposed due to damage of the exterior finish. It requires regular maintenance to reach the anticipated service life.

**10.2.2** Typical minor damage was observed at fiber cement panels. Localized repairs are recommended to prevent premature deterioration.

**10.2.3** Caulking at fiber cement panel joints was satisfactory but should be monitored for future condition. The renewal of caulking joints is recommended within the time frame considered by this report.

**10.2.4** It is recommended that metal cladding fasteners be retorqued and fastener seals replaced as required to ensure integrity. This should be completed periodically as part of routine maintenance thereafter.

**10.2.5** The overall condition of windows and doors was satisfactory. Repairs and upgrades are required as detailed in the fire and safety inspection at Appendix "B", and noted in the Executive Summary Repair Projection. Major improvements are not anticipated within the time frame considered by this report.

**10.2.6** The overall condition of the parking area and curbing was satisfactory. The parking area was resurfaced within the last few years. Major work is not anticipated within the time frame considered by this report. Some cracks and minor damage were noted at the asphalt surface, and repair is recommended. It is important to complete repairs to asphalt regularly as required to prevent further damage from freeze/thaw cycles and maximize effective useful life.

**10.2.7** Damage and settling of the walkway surface was observed in proximity of the main suite entrance. This should be repaired immediately due to a potential safety hazard.

**10.2.8** Site grading and landscaping was satisfactory.

**10.3 Recommendations:**

<b>Recommendations</b>		<b>Cost</b>	<b>Time Frame</b>
<b>10.3.1</b>	Repair of fiber cement cladding.	<b>\$2300</b>	<b>2017</b>
<b>10.3.2</b>	Caulking of fiber cement cladding joints.	<b>\$9000</b>	<b>2020</b>
<b>10.3.3</b>	Retorque of steel cladding fasteners.	<b>\$2800</b>	<b>2018</b>
<b>10.3.4</b>	Repair of walkway at main suite entrance.	<b>\$3700</b>	<b>2017</b>
<b>10.3.5</b>	Repair of parking area surface cracks.	<b>\$700</b>	<b>2017</b>

## **11.0 Closing Comments:**

This report provides you with a description and overview of the condition of the major components of the building. Should you have any questions, please do not hesitate to contact us. Please review the Appendices which include the pre-survey questionnaire, Fire and Safety Inspection, photographs, and other pertinent information which may be of importance. A glossary of terms that may have been used in this report are also included for your reference.

Respectfully submitted,

Tom Gresham  
On Behalf of Safe and Sound Commercial Inspection Ltd.

## Appendix A: Pre-Survey Questionnaire

**Document Not Completed (Sample Report for Example Only)**

### Pre-Survey Questionnaire: Page 1 of 3

This document is intended to be completed by the building owner or applicable representative. It will be referenced and included as part of the Property Condition Assessment.

Building Address:	
Name of Representative:	
Title of Representative:	

**Disclaimer:** These comments are provided by the building's owner or representative, and no further research was completed to confirm accuracy. Safe and Sound assumes no responsibility or liability as a result of any errors, omissions, or discrepancies.

This list of questions should not be considered all-inclusive.

1. Have there been any recent major repairs or replacements done to building components? If so, what were the approximate costs?  
\_\_\_\_\_
2. What types of preventative maintenance programs are in effect?  
\_\_\_\_\_
3. Are you aware of any upcoming major repairs or replacements?  
\_\_\_\_\_
4. Are there any components or systems that require frequent repairs?  
\_\_\_\_\_
5. Are you aware of any inoperative components or systems in the building?  
\_\_\_\_\_
6. Please list the utility providers as applicable.  
Electricity: \_\_\_\_\_ Water: \_\_\_\_\_  
Natural Gas: \_\_\_\_\_ Other: \_\_\_\_\_

**Representative Initials:** \_\_\_\_\_

### Pre-Survey Questionnaire: Page 2 of 3

- 1. Are you aware of any previous or outstanding building code violations?  
\_\_\_\_\_
- 2. Are you aware of any previous or outstanding fire code violations?  
\_\_\_\_\_
- 3. Was a certificate of occupancy issued for the building?  
\_\_\_\_\_
- 4. Are you aware of any major structural deficiencies in the building?  
\_\_\_\_\_
- 5. What is the age of the roof membrane?  
\_\_\_\_\_
- 6. Is there a roof warranty available for the existing roof membrane?  
\_\_\_\_\_
- 7. Was the roof membrane installer bonded?  
\_\_\_\_\_
- 8. Are you aware of any active roof leaks?  
\_\_\_\_\_
- 9. Is there a maintenance contract for the heating system?  
\_\_\_\_\_
- 10. Is there a maintenance contract for the air-conditioning system if applicable?  
\_\_\_\_\_
- 11. What type of refrigerant is used in the air-conditioning equipment if applicable?  
\_\_\_\_\_
- 12. Have you any warranty information on the heating or cooling systems?  
\_\_\_\_\_
- 13. Are you aware of any aluminum wiring in the building?  
\_\_\_\_\_
- 14. Is there presently a pest control program in effect?  
\_\_\_\_\_
- 15. Are you aware of any inoperative components or systems in the building?  
\_\_\_\_\_

**Representative Initials:** \_\_\_\_\_

## Pre-Survey Questionnaire: Page 3 of 3

16. Is there any ongoing or pending litigation related to the subject property's physical condition?

---

**Date:**

**Representative Name:**

**Representative Title:**

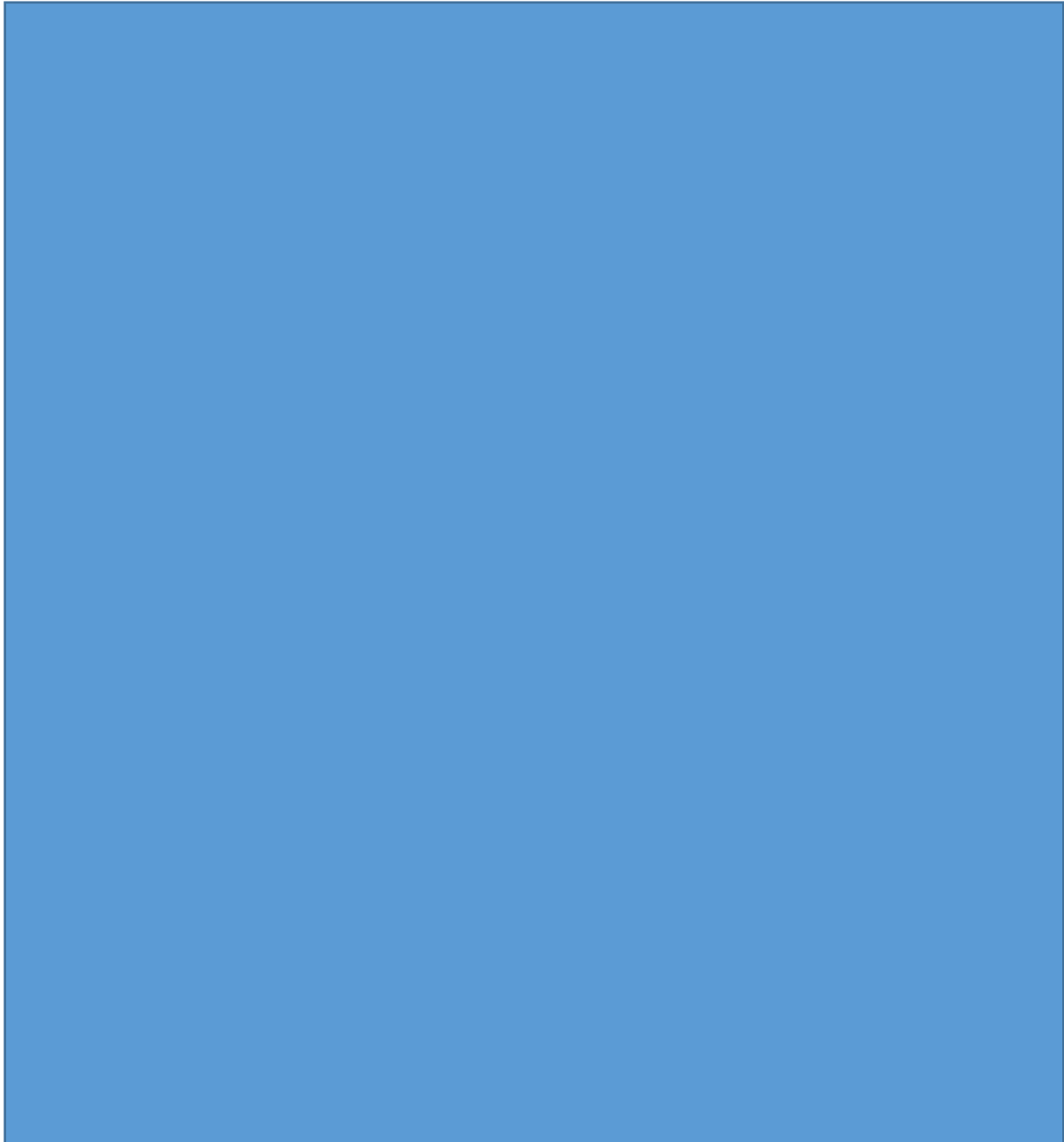
**Representative Signature:**



## Appendix B: Fire and Safety Inspection Report

Report as delivered by ABC Life Safety Services Inc.

**Note: Document omitted due sample report.**



## Appendix C: Report Photos

**Note: Typical number of photos reduced due sample report**









<b>General Photos</b>	
<p>Photo 1: North Elevation</p> 	<p>Photo 2: South Elevation</p> 
<p>Photo 3: East Elevation</p> 	<p>Photo 4: West Elevation</p> 
<p>Photo 5: General Roof Northwest</p> 	<p>Photo 6: General Roof Southeast</p> 
<p>Photo 7: Detail View of Roof Condition</p> 	<p>Photo 8: Example of Ventilation Fan</p> 

Photo 9: Electrical/Utility Room



Photo 10: Main Suite Kitchen



Photo 11: Main Suite Seating Area



Photo 12: Main Suite Restroom



Photo 13: Office Suite General



Photo 14: Office Suite Kitchenette



## Glossary

- ABS** — A type of black plastic pipe commonly used for waste water lines.
- Aggregate** — Crushed rock or stone.
- Air chamber** — A vertical, air filled pipe that prevents water hammer by absorbing pressure when water is shut off at a faucet or valve.
- Air-conditioner condenser** — The outside fan unit of the air conditioning system. The condenser discharges heat to the building exterior.
- Alligatoring** — Coarse checking pattern on the surface of a material. Typically caused by ageing, exposure to sun and/or loss of volatiles.
- Ampacity** — Refers to the how much current a wire can safely carry. For example, a 12-gauge electrical copper wire can safely carry up to 20 amps.
- Asphalt** — A bituminous material employed in roofing and road paving materials because of its waterproofing ability.
- Backfill** — The replacement of excavated earth into a trench or pit.
- Backflow** — A reverse flow of water or other liquids into the water supply pipes, caused by negative pressure in the pipes
- Ballast** — A transformer that steps up the voltage in a florescent lamp.
- Balusters** — Vertical members in a railing used between a top rail and bottom rail or the stair treads. Sometimes referred to as pickets or spindles.
- Base sheet** — Bottom layer of built-up roofing.
- Batt** — A section of fiberglass or rock-wool insulation.
- Bay window** — Any window space projecting outward from the walls of a building, either square or polygonal in plan.
- Beam** — A structural member transversely supporting a load. A structural member carrying building loads (weight) from one support to another. Sometimes called a girder.
- Bearing wall** — A wall that supports any vertical load in addition to its own weight.
- Bird's-mouth cut** — A cut out in a rafter where it crosses the top plate of the wall providing a bearing surface for nailing. Also called a heel cut.
- Bitumen** — Term commonly applied to various mixtures of naturally occurring solid or liquid hydrocarbons, excluding coal. These substances are described as bituminous. Asphalt is a bitumen. *See Asphalt.*
- Blocking** — Small wood pieces to brace framing members or to provide a nailing base for gypsum board or paneling.
- Board and batten** — A method of siding in which the joints between vertically placed boards or plywood are covered by narrow strips of wood.
- Bottom chord** — The lower or bottom horizontal member of a truss.
- Brick tie** — Metal strips or wires that are inserted into the mortar joints of the brick veneer. Ties hold the veneer wall to the backer wall behind it.
- Brick veneer** — A vertical facing of brick used to clad a building. Brick veneer is not a load-bearing component.
- Building paper** — A general term for papers, felts and similar sheet materials used in buildings without reference to their properties or uses. Generally comes in long rolls.
- Built-up roof** — A roofing composed of three to five layers of asphalt felt laminated with coal tar, pitch or asphalt. The top is finished with crushed slag or gravel. Generally used on flat or low-pitched roofs.
- Butt joint** — The junction where the ends of building materials meet. To place materials end-to-end or end-to-edge without overlapping.
- Cant strip** — A triangular shaped piece of lumber used at the junction of a flat deck and a wall to prevent cracking of the roofing which is applied over it.
- Cantilever** — Any part of a structure that projects beyond its main support and is balanced on it.
- Cap flashing** — The flashing covering over a horizontal surface to prevent water from migrating behind the base flashing.
- Cap sheet** — The top layer in modified bitumen roofing.
- Casement window** — A window with hinges on one of the vertical sides and swings open like a door.
- Ceiling joist** — One of a series of parallel framing members used to support ceiling loads and supported in turn by larger beams, girders or bearing walls. Can also be roof joists.
- Cement** — The grey powder that is the “glue” in concrete. Portland cement. Also, any adhesive.
- Certificate of Occupancy** — Certificate is issued by the local municipality and is required before anyone can occupy and live within the building. It is issued only after the local municipality has made all inspections and all monies and fees have been paid.
- CFM (cubic feet per minute)** — A rating that expresses the amount of air a blower or fan can move. The volume of air (measured in cubic feet) that can pass through an opening in one minute.
- Chase** — A framed enclosed space around a flue pipe or a channel in a wall, or through a ceiling for something to lie in or pass through.
- Checking** — Cracks that appear with age in many large timber members. The cracks run parallel to the grain of the wood. At first superficial, but in time may penetrate entirely through the member and compromise its integrity.
- Cleanout** — An opening providing access to a drain line. Closed with a threaded plug.
- Closed-cut valley** — A method of valley treatment in which shingles from one side of the valley extend across the valley, while shingles from the other side are trimmed 2 inches from the valley centerline. The valley flashing is not exposed.
- Collar tie** — Nominal one- or two-inch-thick members connecting opposite roof rafters. They serve to stiffen the roof structure.
- Column** — A vertical structural compression member that supports loads acting in the direction of its longitudinal axis.
- Combustion air and ventilation air** — The ductwork installed to bring fresh, outside air to the furnace or boiler room. Normally two separate supplies of air are brought in: one high for ventilation and one low for combustion.
- Compressor** — A mechanical device that pressurizes a gas in order to turn it into a liquid, thereby allowing heat to be removed or added. A compressor is the main component of conventional heat pumps and air conditioners. In an air conditioning system, the compressor normally sits outside and has a large fan (to remove heat).
- Concrete board or cement board** — A panel made out of concrete and fiberglass, usually used as a tile backing material.
- Condensate drain line** — The pipe that runs from the air conditioning cooling coil to the exterior or internal building drain, to drain away condensation.
- Condensation** — The change of water from vapor to liquid when warm, moisture-laden air comes in contact with a cold surface.
- Condensing unit** — The outdoor component of a cooling system. It includes a compressor and condensing coil designed to give off heat.
- Conduit, electrical** — A pipe, usually metal, in which wire is installed. The pipe serves to protect the wire.

**Control joint** — Tooled, straight grooves made on concrete floors or structures to “control” where the concrete should crack (as a result of shrinkage).

**Cooling load** — The amount of cooling required to keep a building at a specified temperature during the summer, usually 25° C, based on a design outside temperature.

**Corbel** — To build out one or more courses of brick or stone from the face of a wall. This may be decorative, or serve to support a structural component.

**Counterflashing** — A metal flashing usually used to cover another flashing and prevent moisture entry.

**Course** — A row of shingles or roll roofing running the length of the roof. Parallel layers of building materials such as bricks, or siding laid up horizontally.

**CPVC** — See PVC.

**Crawlspace** — A shallow space below a building, normally enclosed by the foundation walls.

**Cricket** — A saddle-shaped, peaked construction connecting a sloping roof plane with a wall or chimney. Designed to encourage water drainage away from the chimney or wall joint.

**Culvert** — Round, corrugated drain pipe (normally 15 or 18 inches in diameter) installed beneath a driveway and parallel to and near the street.

**Cupping** — A type of warping that causes boards or shingles to curl up at their edges. Typically caused by uneven drying or loss of volatiles.

**Curb** — The short elevation of a supporting element above the deck of a roof. Normally a box (on the roof) on which a skylight or piece of mechanical equipment is attached.

**Curtain wall** — An exterior building wall that is supported entirely by the building structure, rather than being self-supporting or load-bearing.

**Damper** — A metal “door” placed within the ductwork, typically. Used to control flow of air, etc., in the ductwork.

**Damp-proofing** — The black, tar-like material applied to the exterior of a foundation wall. Used to minimize moisture penetration into the wall.

**Deck** — The surface, installed over the supporting framing members, to which the roofing is applied.

**Dedicated circuit** — An electrical circuit that serves only one appliance or a series of electric heaters or smoke detectors.

**Dew point** — Temperature at which a vapor begins to deposit as a liquid. Applies especially to water in the atmosphere.

**Disconnect** — A large electrical ON-OFF switch.

**Diverter valve** — A device that changes the direction of water flow from one faucet to another.

**Dormer** — A box-like projection from the sloping plane of a roof that frames a window.

**Double-hung window** — A window with two vertically sliding sashes, both of which can move up and down.

**Downspout** — A pipe for draining water from roof gutters. Also called a leader.

**Drain tile** — A perforated, corrugated plastic pipe laid at the bottom of the foundation wall and used to drain excess water away from the foundation. It prevents ground water from seeping through the foundation wall. Sometimes called perimeter drain.

**Drip** — A groove in the underside of a sill or drip cap to cause water to drop off on the outer edge instead of drawing back and running down the face of the building.

**Ducts** — Usually round or rectangular metal pipes installed for distributing warm or cold air from the heating and air-conditioning equipment.

**Eaves protection** — Additional layer of roofing material applied at the eaves to help prevent damage from water backup (typically caused by ice damming).

**EIFS** — Exterior Insulation Finish System. An exterior cladding system that employs a relatively thin acrylic stucco coating over insulation panels. (Pronounced “ee-fus”)

**Elbow** — A plumbing or electrical fitting that lets you change directions in runs of pipe or conduit.

**Evaporator coil** — The part of a cooling system that absorbs heat from air passing through it. The evaporator coil is found within the ductwork.

**Expansion joint** — A joint that allows for building material expansion and contraction caused by temperature changes.

**Exposed aggregate finish** — A method of finishing concrete which washes the cement/sand mixture off the top layer of the aggregate — usually gravel. Often used with precast concrete exterior wall finishes.

**Exposure** — The portion of the roofing or wall cladding material exposed to the weather after installation.

**Fascia** — a vertical member attached to the ends of the roof structure and often the backing of the gutter.

**Felt** — Fibrous material saturated with asphalt and used as an underlayment or part of a built-up roofing system.

**Finger joint** — A manufacturing process of interlocking two shorter pieces of wood end to end to create a longer piece of dimensional lumber or molding. Often used in jamba and casings and are normally painted (instead of stained).

**Fire stop** — A solid, tight closure of a concealed space, placed to prevent the spread of fire and smoke through such a space. Includes stuffing wire and pipe holes in the fire separations.

**Flashing** — (1) Sheet metal or flexible membrane pieces fitted to the joint of any roof intersection, penetration or projection (chimneys, copings, dormers, valleys, vent pipes, etc.) to prevent water leakage.  
(2) The building component used to connect portions of a roof, deck, or siding material to another surface such as a chimney, wall, or vent pipe. Often made out of various metals, rubber or tar and is mostly intended to prevent water entry.

**Flatwork** — Common word for concrete floors, driveways, patios and sidewalks.

**Flue** — The space or passage in a chimney through which smoke, gas, or fumes ascend.

**Fluorescent lighting** — A fluorescent lamp is a gas-filled glass tube with a phosphor coating on the inside. Gas inside the tube is ionized by electricity which causes the phosphor coating to glow. Normally with two pins that extend from each end.

**Footing** — A widened, below-ground base of a foundation wall or a poured concrete, below-ground, base used to support foundations or piers.

**Forced air heating** — a common form of heating with natural gas, propane, oil or electricity as a fuel. Air is heated through a heat exchanger and distributed through a set of metal ducts.

**Form** — Temporary structure erected to contain concrete during placing and initial hardening.

**Foundation** — The supporting portion of a structure below the first floor construction, or below grade, including the footings.

**Framing** — The structural wood, steel or concrete elements of the building.

**Framing, balloon** — A system of framing a building in which all vertical structural elements of the bearing walls consist of single pieces extending from the top of the foundation sill plate to the roof plate and to which all floor joists are fastened.

**Frost line** — The depth of frost penetration in soil and/or the depth at which the earth will freeze and swell. This depth varies in different parts of the country.

**Furring** — Strips of wood or metal applied to a wall or other surface to even it and normally to serve as a fastening base for finish material.

**Gable** — A sidewall, typically triangular, that is formed by two sloping roof planes.

**Gable roof** — A type of roof with sloping planes of the same pitch on each side of the ridge. Has a gable at each end.

**Gasket** — A device used to seal joints against leaks.

**GFI or GFCI or Ground Fault Current Interrupter** — A electrical device used to prevent injury in locations where one might be in contact with a grounded surface and an electrical appliance. Most GFIs are located in a receptacle or circuit breaker and can be identified by the presence of a “test” and a “reset” button.

**Glued laminated beam (glulam)** — A structural beam composed of wood laminations. The laminations are pressure-bonded with adhesives.

**Granules** — Crushed rock coated with ceramic material, applied to the exposed surface of asphalt roofing products to add color and reduce ultraviolet degradation. Copper compounds added also help to make them algae resistant.

**Groundwater** — Water from a subsurface water source.

**Grout** — Mortar made of such consistency (by adding water) that it will flow into the joints and cavities of the masonry work and fill them solid.

**Gusset** — A flat metal, wood, plywood or similar type member used to provide a connection at the intersection of wood members. Most commonly used at joints of wood trusses. They are fastened by nails, screws, bolts, or adhesives.

**Gutter** — The trough that channels water from the eaves to the downspouts.

**H-beam** — A steel beam with a cross section resembling the letter H.

**J-clip** — Small metal clips formed like an H that fits at the joints of two plywood (or wafer board) sheets to stiffen the joint. Normally used on the roof sheathing.

**Header** — A beam placed perpendicular to joists and to which joists are attached in framing for around an opening.

**Hearth** — The fireproof area directly in front of a fireplace. The inner or outer floor of a fireplace, usually made of brick, tile, or stone.

**Heat pump** — A device that uses compression and decompression of gas to heat and/or cool a building.

**Heating load** — The amount of heating required to keep a building at a specified temperature during the winter, based on an outside design temperature.

**Hip** — The external angle formed by the meeting of two sloping sides of a roof.

**Honeycombs** — The appearance concrete makes when aggregate in the concrete is visible and where there are void areas in the concrete.

**Hose bib** — An exterior water faucet.

**Hot wire** — The wire that carries electrical energy to a receptacle or other device-in contrast to a neutral, which carries electricity away again. Normally the black wire.

**HVAC** — An abbreviation for Heat, Ventilation, and Air Conditioning.

**I beam** — A steel beam with a cross section resembling the letter I.

**Ice damming** — The buildup of ice and water at the eaves of a sloped roof. Melting snow on the roof refreezes at the roof overhang, causing the damming. Buildings with inadequate attic insulation or ventilation or with large roof projections beyond the exterior walls are more prone to ice damming.

**Irrigation** — Lawn sprinkler system.

**Jack post** — A type of structural support made of metal, which can be raised or lowered through a series of pins and a screw to meet the height required. Typically used as a replacement for an old supporting member in a building.

**Joist** — One of a series of parallel beams, usually two inches in thickness, used to support floor and ceiling loads, and supported in turn by larger beams, girders, or bearing walls.

**Joist hanger** — A metal U-shaped item used to support the end of a floor joist and attached with hardened nails to another bearing joist or beam.

**Knob-and-tube wiring** — A common form of electrical wiring used before the Second World War. When in good condition it may still be functional for low amperage use such as smaller light fixtures.

**Lath** — A building material of narrow wood, metal, gypsum, or insulating board that is fastened to the frame of a building to act as a base for plaster, shingles, or tiles.

**Lattice** — An open framework of crisscrossed wood or metal strips that form regular, patterned spaces.

**Leader** — *See Downspout.*

**Ledger** — The wood or metal members attached to a beam, studding, or wall used to support joist or rafter ends.

**Lintel** — A horizontal structural member that supports the load over an opening such as a door or window.

**Load-bearing wall** — A wall supporting its own weight and some other structural elements of the building such as the roof and floor structures.

**Louvre** — A vented opening into a room that has a series of horizontal slats and arranged to permit ventilation but to exclude rain, snow, light, insects, or other living creatures.

**Mansard roof** — A roof with two sloping planes of different pitch on each of its four sides. The lower plane is steeper than the upper, and may be almost vertical.

**Masonry** — Stone, brick, concrete, hollow-tile, concrete block, or other similar building units or materials. Normally bonded together with mortar to form a wall.

**Modified bitumen roof** — A roof covering that is typically composed of a factory-fabricated composite sheet consisting of a copolymer-modified bitumen, often reinforced with polyester and/or fiberglass, and installed in one or more plies. The membrane is commonly surfaced with field-applied coatings, factory-applied granules or metal foil. The roofing system may incorporate rigid insulation.

**Mortise** — A slot cut into a board, plank, or timber, usually edgewise, to receive the tenon (or tongue) of another board, plank, or timber to form a joint.

**Mullion** — A vertical divider in the frame between windows, doors, or other openings.

**Neutral wire** — Usually color-coded white, this wire carries electricity from a load back to the service panel.

**Newel post** — The large starting post to which the end of a stair guard railing or balustrade is fastened.

**Nosing** — The projecting edge of a molding or drip or the front edge of a stair tread.

**On center** — The measurement of spacing for studs, rafters, and joists in a building from the center of one member to the center of the next.

**Open valley** — Method of valley construction in which shingles on both sides of the valley are trimmed along a chalk line snapped on each side of the valley. Shingles do not extend across the valley. Valley flashing is exposed.

**Open web steel joist** — One of a series of parallel beams, used to support floor and roof loads, and supported in turn by larger beams, girders or bearing walls. Consists of horizontal top and bottom chords, with diagonal and/or vertical web members connecting the chords together.

**Oriented Strand Board or OSB** — A manufactured 4-foot-by-8-foot wood panel made out of one- to two-inch wood chips and glue. Often used as a substitute for plywood.

**P-trap** — Curved, U-section of drain pipe that holds a water seal to prevent sewer gasses from entering a building through a fixtures' drain pipe.

**Parapet** — The portion of an exterior wall that extends above the edge of a roof.

**Parging** — A thin layer of cement placed over masonry units.

**Partition** — A wall that subdivides spaces within any story of a building or room.

**Paver** — Materials (commonly masonry) laid down to make a firm, even surface on the exterior.

**Performance bond** — An amount of money (usually 10 percent of the total price of a job) that a contractor must put on deposit with a governmental agency as an insurance policy that guarantees the contractors' proper and timely completion of a project or job.

**Perimeter drain** — Typically 4-inch perforated plastic pipe around the perimeter (either inside or outside) of a foundation wall (before backfill) that collects and diverts ground water away from the foundation.

**Pilot light** — A small, continuous flame (in a boiler, or furnace) that ignites gas or oil burners when needed.

**Pitch** — (1) The degree of roof incline expressed as the ratio of the rise, in feet, to the span, in feet. (2) A thick, oily substance commonly obtained from tar, used to seal out water at joints and seams. Pitch is produced from distilling coal tar, wood tar, or petroleum.

**Pitch pocket** — A container, usually formed of sheet metal, around supporting connections with roof-mounted equipment. Filling the container with pitch, or better yet, plastic roof cement, helps seal out water even when vibration is present. A pitch pocket is *not* the preferred method of flashing a roof penetration.

**Plan view** — Drawing of a structure with the view from overhead, looking down.

**Plate** — Normally a horizontal member within a framed structure, such as: (1) sill plate — a horizontal member anchored to a concrete or masonry wall; (2) Sole plate — bottom horizontal member of a frame wall; or (3) top plate — top horizontal member of a frame wall supporting ceiling joists, rafters, or other members.

**Plenum** — The main supply air or return air duct leading from a heating or cooling unit.

**Plumbing stack** — A plumbing vent pipe that penetrates the roof.

**Ply** — A term to denote the number of layers of roofing felt, veneer in plywood, or layers in built-up materials, in any finished piece of such material.

**Point load** — A point where a bearing/structural weight is concentrated and transferred to another structural member or component.

**Portland cement** — Cement made by heating clay and crushed limestone into a brick and then grinding to a pulverized powder state.

**Post** — a vertical framing member usually designed to carry a beam.

**Post-and-beam** — A basic building method that uses just a few hefty posts and beams to support an entire structure. Contrasts with stud framing.

**Power vent** — A vent that includes a fan to speed up air flow.

**Pressure relief valve** — A safety device mounted on a water heater or boiler. The relief valve is designed to release any high pressure in the vessel and thus prevent tank explosions.

**Pressure-treated wood** — Lumber that has been saturated with a preservative to resist rot.

**PVC or CPVC** — (Polyvinyl chloride) A type of white or light gray plastic pipe sometimes used for water supply lines and waste pipe.

**Quarry tile** — A man-made or machine-made clay tile used to finish a floor or wall. Generally 6 inches by 6 inches by 1/4-inch thick.

**R value** — A measure of insulation's resistance to heat flow. The higher the R value the more effective the insulation.

**Rafter** — (1) The framing member that directly supports the roof sheathing. A rafter usually follows the angle of the roof, and may be a part of a roof truss. (2) The supporting framing member immediately beneath the deck, sloping from the ridge to the wall plate.

**Rafter, hip** — A rafter that forms the intersection of an external roof angle.

**Rafter, valley** — A rafter that forms the intersection of an internal roof angle.

**Rake edge** — The overhang of an inclined roof plane beyond the vertical wall below it.

**Rebar** — Reinforcing bar. Ribbed steel bars installed in concrete structures designed to strengthen concrete. Comes in various thicknesses and strength grades. May be epoxy coated to enhance rust resistance.

**Refrigerant** — A substance that remains a gas at low temperatures and pressure and can be used to transfer heat. Freon is an example.

**Register** — A grille placed over a supply air or return air duct.

**Reglaze** — To replace a broken window.

**Reinforcing** — Steel rods or metal fabric placed in concrete slabs, beams, or columns to increase their strength.

**Relief valve** — A device designed to open if it detects excess temperature or pressure. Commonly found on water heating or steam producing systems.

**Resilient flooring** — A durable floor cover that has the ability to resume its original shape.

**Retaining wall** — A structure that holds back a slope or elevation of land and prevents erosion.

**Ridge** — The horizontal line at the junction of the top edges of two sloping roof surfaces.

**Riser** — A vertical member between two stair treads.

**Roll roofing** — Asphalt roofing products manufactured in roll form.

**Romex** — A name brand of non-metallic sheathed electrical cable that is used for indoor wiring.

**Roof deck** — The surface, installed over the supporting framing members, to which the roofing is applied.

**Roof sheathing** — The wood panels or sheet material fastened to the roof rafters or trusses on which the shingle or other roof covering is laid.

**Roof valley** — The "V" created where two sloping roofs meet.

**Roofing membrane** — The layer or layers of waterproofing products that cover the roof deck.

**Run, stair** — The horizontal distance of a stair tread from the nosing to the riser.

**Saddle** — Two sloping surfaces meeting in a horizontal ridge, used between the back side of a chimney, or other vertical surface, and a sloping roof. Used to divert water around the chimney or vertical surface.

**Sanitary sewer** — A sewer system designed for the collection of waste water from the bathroom, kitchen and laundry drains, and is usually not designed to handle storm water.

**Sash** — The frame that holds the glass in a window, often the movable part of the window.

**Saturated felt** — A felt that is impregnated with tar or asphalt.

**Scratch coat** — The first coat of plaster, which is scratched to form a bond for a second coat.

**Scupper** — (1) An opening for drainage in a wall, curb or parapet. (2) The drain above a downspout or in a flat roof, usually connected to the downspout.

**Sealer** — A finishing material, either clear or pigmented, that is usually applied directly over raw wood or concrete for the purpose of sealing the wood or concrete surface.

**Seasoning** — Drying and removing moisture from green wood in order to improve its usability.

**Service equipment** — Main control gear at the electrical service entrance, such as circuit breakers, switches, and fuses.

**Service lateral** — Underground power supply line.

**Shake** — A wood roofing material, normally cedar or redwood. Produced by splitting a block of the wood along the grain line. Modern shakes are sometimes machine sawn on one side.

**Sheathing** — (1) Sheets or panels used as roof deck material. (2) Panels that lie between the studs and the siding of a structure.

**Short circuit** — A situation that occurs when hot and neutral wires come in contact with each other. Fuses and circuit breakers protect against fire that could result from a short.

**Sill** — (1) The two-by-four or two-by-six wood plate framing member that lays flat against and bolted to the foundation wall (with anchor bolts) and upon which the floor joists are installed. (2) The member forming the lower side of an opening, as a door sill or window sill.

**Skylight** — A more or less horizontal window located on the roof of a building.

**Slab-on-grade** — A type of foundation with a concrete floor which is placed directly on the soil. In warm climates, the edge of the slab is usually thicker and acts as the footing for the walls. In cold climates, the slab is independent of the perimeter foundation walls.

**Sleeper** — Usually, a wood member that serves to support equipment.

**Soffit** — (1) The finished underside of the eaves. (2) A small ceiling-like space, often out of doors, such as the underside of a roof overhang.

**Solid waste pump** — A pump used to 'lift' waste water to a gravity sanitary sewer line. Usually used in basements and other locations which are situated below the level of the city sewer.

**Spalling** — The cracking and breaking away of the surface of a material.

**Span** — The clear distance that a framing member carries a load without support (between structural supports).

**Splash block** — A pad placed under the lower end of a downspout to divert the water from the downspout away from the building. Usually made out of concrete or fiberglass.

**Stair stringer** — Supporting member for stair treads. Can be a notched plank or a steel member.

**Starter strip** — Asphalt roofing applied at the eaves that provides protection by filling in the spaces under the cutouts and joints of the first course of shingles.

**Step flashing** — Flashing application method used where a vertical surface meets a sloping roof plane

**Storey** — That part of a building between any floor or between the floor and roof.

**Storm collar** — A metal flashing used to seal around a penetration in a roof.

**Storm sewer** — A sewer system designed to collect storm water, separate from the waste water system.

**Storm window** — An extra window usually placed outside of an existing one, as additional protection against cold weather, or damage.

**Stucco** — An outside plaster finish made with Portland cement as its base.

**Stud** — One of a series of slender wood or metal vertical structural members placed as supporting elements in walls and partitions.

**Stud framing** — A building method that distributes structural loads to each of a series of relatively lightweight studs. Contrasts with post- and-beam.

**Sump** — Pit or large plastic bucket/barrel inside a basement, designed to collect ground water (storm water) from a perimeter drain system.

**Sump pump** — A submersible pump in a sump pit that pumps any excess ground water to the storm sewer.

**Suspended ceiling** — A ceiling system supported by hanging it from the overhead structural framing.

**Tempered** — Strengthened. Tempered glass will not shatter nor create shards, but will "pelletize" like an automobile window. Required in tub and shower enclosures, for example.

**Termites** — Insects that superficially resemble ants in size, general appearance, and habit of living in colonies; hence, they are frequently called "white ants." Subterranean termites establish themselves in buildings not by being carried in with lumber, but by entering from ground nests after the building has been constructed. If unmolested, they eat out the woodwork, leaving a shell of sound wood to conceal their activities, and damage may proceed so far as to cause collapse of parts of a structure before discovery.

**Terra cotta** — A ceramic material molded into masonry units.

**Threshold** — The bottom metal, concrete, or wood plate of an exterior door frame. They may be adjustable to keep a tight fit with the door slab.

**Toenailing** — To drive a nail in at a slant. Method used to secure floor joists to the plate. Not acceptable for securing joists flush to a header or beam.

**Tongue-and-groove** — A joint made by a tongue (a rib on one edge of a board) that fits into a corresponding groove in the edge of another board to make a tight flush joint. Typically, the subfloor plywood is tongue-and-groove.

**Top chord** — The upper or top member of a truss.

**Trap** — A plumbing fitting that holds water to prevent air, gas, and vermin from entering into a building.

**Tread** — The walking surface board in a stairway on which the foot is placed.

**Treated lumber** — A wood product which has been impregnated with chemicals to reduce damage from wood rot or insects. Often used for the portions of a structure which is likely to be in ongoing contact with soil and water. Wood may also be treated with a fire retardant.

**Truss** — An engineered and manufactured roof support member with "zig-zag" framing members. Does the same job as a rafter but is designed to have a longer span than a rafter.

**Tube-and-knob wiring** — See *knob-and-tube wiring*.

**UFFI** — Urea Formaldehyde Foam Insulation, a foam insulation blown into existing walls. (Pronounced "you-fee")

**Ultraviolet degradation** — A reduction in certain performance limits caused by exposure to ultraviolet light.

**Underlayment** — (1) A one-quarter-inch material placed over the subfloor plywood sheathing and under finish coverings, such as vinyl flooring, to provide a smooth, even surface. (2) A secondary roofing layer that is waterproof or water-resistant, installed on the roof deck and beneath shingles or other roof-finishing layer.

**UV rays** — Ultraviolet rays from the sun.



**Valley** — The inward angle formed by two intersecting, sloping roof planes. Since it naturally becomes a water channel, additional attention to waterproofing it is desirable.

**Vapour barrier** — A building product installed on exterior walls and ceilings under the drywall and on the warm side of the insulation. It is used to retard the movement of water vapour into walls and prevent condensation within them. Normally, polyethylene plastic sheeting is used.

**Vent** — A pipe or duct allowing the flow of air and gases to the outside. In a plumbing system, the vent is necessary to allow sewer gases to escape to the exterior

**Vermiculite** — A mineral closely related to mica, with the faculty of expanding on heating to form lightweight material with insulation quality. Used as bulk insulation and also as aggregate in insulating and acoustical plaster and in insulating concrete floors.

**Water closet** — A toilet.

**Weather stripping** — Narrow sections of thin metal or other material installed to prevent the infiltration of air and moisture around windows and doors.

**Weep holes** — Small holes in exterior wall cladding systems that allow moisture to escape and air pressure equalization in the cavity space drained by the weep hole.

**Wythe** — (rhymes with “tithe” or “scythe”) A vertical layer of masonry that is one masonry unit thick.

**Zone** — The section of a building that is served by one heating or cooling loop because it has noticeably distinct heating or cooling needs. Also, the section of property that will be watered from a lawn sprinkler system.

**Zone valve** — A device, usually placed near the heater or cooler, which controls the flow of water or steam to parts of the building; it is controlled by a zone thermostat.

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