BUILDING CONDITION ASSESSMENT

WORKS GARAGE & SHOP

191274 13TH LINE
EAST GARAFRAXA, ONTARIO

Prepared for:

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1.0 EXECUTIVE SUMMARY

1.1 Introduction

Keller Engineering performed a Building Condition Assessment ("BCA") of 191274 13th Line East Garafraxa, ON. ("Site") on October 24, 2023, on behalf of The Township of East Garafraxa ("Client"). The report that follows is based on that review. The weather was sunny and approximately 17°C.

1.2 General Site Description

The Site is composed of 1 building. The building is a one-level structure currently being used as a garage and shop with office space for town vehicles/equipment and maintenance staff. The building was constructed in 1980. The site size is approximately 1725 m2 (0.43 acres). The building has a footprint of approximately 338 m^2 (3,643 ft^2). The site area excluding the building is mainly trimmed grass, trees, gravel, and asphalt pavement. The surrounding area is primarily fields and residential homes. The Site is accessed off 13th Line. For the purposes of this report, the building's elevation facing 13th Line is facing east and is located on the west side of the 13th Line. Surface parking is located at the northeast side of the property.

1.3 General Site Details

City/Town:	East Garafraxa
Province:	Ontario
Number of Stories:	1
Year Built:	1980
Structure:	Poured concrete slab-on-grade substructure, structural framing with prefabricated wood trusses.
Exterior:	Metal siding, aluminum, wood, and PVC windows.
Roof:	Sloped metal roof.
Plumbing:	Copper and ABS/PVC supply. Propane Tank. Propane Water heater. Oil-Water Storage Tank.
Heating, Ventilation & Cooling:	Forced air, electric, propane tube and Suspended units.
Electrical:	Underground, 200 A, 120/240 V. Copper wiring. LED interior and exterior lighting.
Services:	Potable Water: Well. Sewer: Septic System. Storm: Not applicable, surface. Fuel: Propane Gas. Electricity: Hydro One Networks Inc.

1.4 Summary of Facility Condition Index ("FCI")

The current condition of the building and components is expressed as a percentage derived from the ratio of aggregated total cost of repairs/renewal/upgrades to the current replacement value of the building. This ratio is referred to as the Facility Condition Index ("FCI"). Refer to **Appendix B** for a detailed description.

The aggregated total costs estimated for the building is $335,033.00 adjusted for inflation. The current replacement value of the building is estimated to be $2,000,000.00.

Based on the estimated values, the FCI for this building is 16% and is classified as Poor.

Refer to Section 2.3, Standards of Reference, for definitions and classifications.

1.5 General Condition

The building(s) fair to poor condition compared to other structures of similar age and use. In our opinion, maintenance activity has been fair. As a result, the property is showing effects of wear and tear at an average rate compared with other similar facilities. Refer to Section 3.0, Systems and Observations.

Overall, site improvements are in fair condition compared to other developments of similar age and use.

Overall, the structure is in fair condition compared to other developments of similar age and use.

Overall, the building envelope is in fair to poor condition compared to other developments of similar age and use.

Overall, mechanical, electrical, plumbing, and special systems are in fair condition.

Interior elements and other building systems are generally in fair condition.

The Owner advised that they are not aware of any outstanding work orders, building code violations, building code infractions, building ordinances and municipal health and fire safety by-laws violations.

1.6 Recommendations for Further Study

We have identified the need for a Life Safety Audit and Designated Substances Survey to review conditions to protect people based on building construction, protection, and occupancy features.

2.0 PURPOSE AND SCOPE

2.1 Purpose

The purpose of this BCA is to determine the current condition of the building envelope, systems, paved areas, utilities, and site improvements, and to assign an FCI value for the building.

2.2 Scope & Methodology

Keller Engineering, formerly Criterium-Jansen Engineers performed the BCA according to the scope as generally defined in ASTM 2018-15. The survey is based on a review of available documents, an examination of the building and the Site; in particular, the foundation walls (where visible), the roof, the exterior walls, the framing, mechanical systems, exterior doors and windows, paved areas, and utilities.

The report contains the following:

- A description of the overall condition of buildings components and systems and conditions that may limit the expected useful life of the buildings and their components.

- Information about significant deficiencies, deferred maintenance items, and material code violations based on a visual survey of the building and grounds, research of documents, and conversations with people who have knowledge about the facility.

The statements in the report are opinions about the present condition of the subject property. They are based on visual evidence available during a diligent review of all reasonably accessible areas. Standard BCA practices excludes the operation of equipment by the field observer and is to be conducted without the aid of special protective clothing, exploratory probing, removal or relocation of materials, testing, or the use of equipment, such as ladders, stools, scaffolding, metering/testing equipment, or devices of any kind, etc. It is literally the field observer's visual observations while walking through the subject property. The study is not an exhaustive technical evaluation. Such an evaluation would entail a significantly larger scope than this effort. For additional limitations, see Section 5.0. As per standard BCA practices, the user of this report is required to arrange for the field observer to receive timely complete, supervised, and safe access to the subject property's improvements including roofs. Where access was not provided Keller Engineering is obligated to state within the report all such material impediments that interfered with the conducting of the assessment.

Our mandate for this BCA excluded assessment of the facility's compliance to accessibility related standards and the Accessibility for Ontarians with Disabilities Act. Barrier Free Design of the National Building Code of Canada governed handicap accessibility guidelines for buildings constructed after 1990. Possible retroactive compliance for buildings constructed prior to 1990 was not required until subsequent provincial legislation was enacted. A significant change of building use or an Authority Having Jurisdiction may trigger the need for accessibility related building upgrades under certain circumstances. As the timing, scope of work and associated costs cannot be reasonably predicted, we have not included any Capital Costs for future upgrades in the term of the report.

2.3 Standards of Reference

For your reference, the following definitions may be helpful:

All ratings are determined by comparison to other buildings of similar age and construction type.

All directions (left, right, rear, etc.) are taken from the viewpoint of an observer standing in front of the building and facing it.

Condition

Excellent: Component or system is in "as new" condition, requiring no rehabilitation and should perform in accordance with expected performance.

Good: Component or system is sound and performs its function, although it may show signs of normal wear and tear. Some minor rehabilitation work may be required.

Fair: Component or system falls into one or more of the following categories: a) Evidence of previous repairs not in compliance with commonly accepted practice, b) Workmanship not in compliance with commonly accepted standards, c) Component or system is obsolete, d) Component or system approaching end of expected performance. Repair or replacement is required to prevent further deterioration or to prolong expected life.

Poor: Component or system has either failed or cannot be relied upon to continue performing its original function as a result of having exceeded its expected performance, excessive deferred maintenance, or state of disrepair. Present condition could contribute to or cause the deterioration of other adjoining elements or systems. Repair or replacement is required.

Critical: Immediate repair/replacement recommended in less than 1 year. Physical deficiencies that require immediate action as a result of existing or potentially unsafe conditions, building code violations, poor or deteriorated conditions of a critical element or system, or a condition that if left "as is" would result in a critical element or system failure.

Priority

Urgent – Immediate repair/replacement recommended in less than 1 year. Physical deficiencies that require immediate action as a result of existing or potentially unsafe conditions, building code violations, poor or deteriorated conditions of a critical element or system, or a condition that if left "as is" would result in a critical element or system failure.

High – Repair/replacement anticipated within the first 2 years. Physical deficiencies including deferred maintenance that may not warrant immediate attention but require repairs or replacements that should be undertaken on a priority basis, taking precedence over routine preventive maintenance work within a zero to one-year time frame. Included are such physical deficiencies resulting from improper design, faulty installation, and/or substandard quality of original systems or materials.

Components or systems that have exceeded their expected useful life that may require replacement to be implemented within a zero to one-year time frame are also included.

Medium - Repair/replacement is anticipated between 3 to 5 years.

Low - Replacement is not anticipated within the first 5 years.

Facility Condition ("FCI") Levels

Good Condition (0-5% FCI) – Asset is in reasonable condition and does not require capital expenditure.

Fair Condition (6-10% FCI) – Asset is deteriorating, requires capital expenditure and will likely become "poor" within a few years if not addressed.

Poor Condition (11-30% FCI) – Asset is deteriorated and requires immediate capital expenditure.

Critical (31% + FCI) – Asset is in disrepair or dilapidated and requires urgent significant capital expenditure.

Repair/Replacement Reserves - Non-routine maintenance items that will require significant expenditure over the timeframe of this study. Included are items that will reach the end of their estimated useful life during the term of the study or in the opinion of the consultant will require attention during that time. Items with estimated expenditures below $5,000.00 are below the capital threshold for this study and may or may not be reported since it is anticipated that those items will be repaired/replaced within the scope of regular building maintenance. The recommended repairs will be scheduled appropriately over a 20-year period in 5-year intervals. All the prices quoted are in Canadian 2023 dollars and are presented in the Capital Expenditure Tables.

3.0 SYSTEMS AND OBSERVATIONS

Refer to **Appendix B**, Facility Condition Index Table for the estimated time-period of replacement or repairs and associated estimated costs.

3.1 Site Improvements

3.1.1 Paving & Curbing

Description

A paved lot circulates the property with parking space on the south side of the building. The main entrance driveway provides access to the works garage and salt/sand dome. The main entrance driveway is deemed to belong to the sand/salt property.

There is a graveled area on the west side of the property.

Precast concrete barricades are provided at the northwest side of the property to protect the propane tanks.

Observations & Comments	The asphalt pavement of the main lot and parking is in fair condition. There have been recent asphalt pavement repairs. Replacement is not anticipated during the timeline of this report. A budget for repairs has been allowed for during the time-period of this study. Paint markings for parking areas are not provided. A budget for application of parking areas paint markings has been allowed for during the time-period of this report. Gravel/screenings at the side of the building are settled with localized bare/eroded areas. Costs associated with repairs are expected to be below the Capital Threshold and are not included. The precast concrete barricades are in good condition. Replacement is not anticipated during the timeline of this report. Ongoing maintenance is required to keep surfaces renewed, including crack sealing. Typically, pavement resurfacing, or reconstruction is recommended every 25 years depending on the wearing patterns.

3.1.2 Flatwork

Description	There is no flatwork on the property. Not applicable.

3.1.3 Landscaping & Appurtenances

Description	Landscaping on the site consists of grass and trees at the north, east, and west sides of the property. There is a wood post and wire fence at the west side of the property. There are exterior light fixtures at the front of the building.
Observations & Comments	Landscaping and appurtenances are in fair to poor condition with plant overgrowth in the gravel sections and tree foliage overgrowth over electrical wires and the roof of the building. A budget for plant and trees overgrowth trimming and removals has been allowed for during the time-period of this study. The eavestroughs appear to be clogged with tree debris causing rainwater to overflow and soil erosion at ground level below the eavestroughs at the north (rear) side of the property. Costs associated with repairs are expected to be below the Capital Threshold and are not included. The low wood post and wire fence at the west side of the property appears to be in fair to poor condition. A budget for future fence repairs has been allowed for during the time-period of this study.

3.2 Structure & Building Envelope

3.2.1 Substructure

Description

The foundation of the building is cast-in-place poured concrete slab on grade and standard foundations.

Observations & Comments

The slab-on-grade and substructure is in fair condition with localized cracks/fractures. Replacement is not anticipated during the timeline of this report. A budget for localized slab repairs has been allowed for during the time-period of this study.

In any building, slight settlement will occur over time. This was evident from localized cracks in the slab-on-grade.

3.2.2 Superstructure

Description

The building and roof are composed of standard wood and metal framing with prefabricated trusses and bracing/support members.

Observations & Comments

We observed no adverse conditions concerning visible superstructure systems. Replacement is not anticipated during the timeline of this report. Minor repairs are required.

3.2.3 Exterior

Description

The exterior of the building is metal siding.

There are PVC, wood, and aluminum windows of different vintages with insulated glass units ("IGUs"). There are overhead sectional garage doors and metal service doors.

Observations & Comments

The exterior cladding system is original and is in fair to poor condition with faded paint coatings. Replacement is not anticipated during the timeline of this report. A budget for future metal siding paint coatings replacement has been allowed for during the time-period of this report.

Sliding windows and doors are of varying vintages and materials and are in fair condition, in general, and will reach the end of their expected life expectancy during the timeframe of this study. Service life of windows can be extended with moderate repairs that are anticipated to be below the capital threshold. It is reasonable to assume that the failure rate for these units may increase as they approach the end of their expected service life. A budget for future replacement of windows, frames and glazing has been allowed for during the time-period of this report.

Overhead sectional garage doors are in fair-good condition. Service life of sectional doors can be extended with moderate repairs that are anticipated to be below the capital threshold. Replacement is not anticipated during the timeline of this report.

Service doors are in fair condition and operational. Service life of doors can be extended with moderate repairs that are anticipated to be below the capital threshold. Replacement is not anticipated during the timeline of this report.

Sealants should be inspected and maintained at regular intervals to assess overall condition and continuity. Review and periodic replacement of sealant should be part of a regular maintenance schedule. If not maintained, sealant failure can lead to costlier repairs due to damage from water leakage. A budget for sealants replacement has been allowed for during the time-period of this report.

3.2.4 Roofing

Description

There is a sloped metal roof, ridge vent, soffit vents, eavestroughs and rainwater leaders. The metal roof does not have sheathing/decking and is laid on the roof structure. There is a roof hatch to access the hatch. The attic has 6-8 inches of blown-in insulation.

Observations & Comments

The metal roof is in fair condition with aged coatings and discolourations. Maintenance staff reported that there are no leaks. Replacement is not anticipated during the timeline of this report. A budget for renewal of metal coatings of the roof panels has been allowed for during the time-period of this study.

The soffits and sheet metal are in fair condition consistent with their age. Replacement is not anticipated during the timeline of this report.

The eavestroughs and rainwater leaders are in fair condition consistent with their age with localized mechanical damage and are loaded with plant detritus at the rear. Replacement is not anticipated during the timeline of this report. A budget for future repairs has been allowed for during the timeframe of this report.

Given the current visually apparent condition, it seems reasonable to assume that localized repairs, as required, will allow general replacement to be deferred. We assume monitoring and further localized repairs, on an as required basis within the timeframe of the report, can be performed at a cost below the Capital Threshold.

3.3 Mechanical Systems

3.3.1 Plumbing

Description

The plumbing pipes in the building is PVC/ABS and copper. There are floor drains in the washrooms and some service rooms.

Water is sourced from a well on the property with a water well system and expansion tank.

A septic system & pumps provides sewage waste management for the property and is emptied twice a year.

There is a propane tank and a used oil holding tank at the west side of the property. The yellow propane tank is abandoned/not in use and is disconnected.

The garage has trench drains connected to an oil-water interceptor.

The main water and mechanical connections are in the mezzanine.

There is 1 hot water tank (Serial No. 1744108035027), reportedly owned, that provides domestic hot water.

Review of process related equipment is beyond the scope of this mandate.

Observations & Comments

The plumbing systems and propane gas distribution systems are in fair condition where visible with minor repairs required. The plumbing pipes penetrations in fire rated separations (walls/ceilings) are sealed. No funds have been included for maintenance activities such as piping repairs, cleaning out piping, CCTV scans, or for repairs of minor leaks since these are part of regular maintenance and handled from the O/M budget. Replacement is not anticipated during the timeline of this report.

The oil-water interceptor is in working order and will reach the end of its service life within the time-period of this report. A budget for future replacement has been allowed for during the time-period of this report.

The used oil tank is operational with localized rust and paint deterioration and will reach the end of its service life during the timeline of this report. A budget for replacement has been allowed for during the timeframe of this study.

The yellow propane tank is abandoned/not in use and is disconnected. It is recommended that the tank be removed from the site. Costs associated with removal of the tank are expected to be below the Capital Threshold and are not included.

The white propane tank is in good condition. Replacement is not anticipated during the timeline of this report.

The water heater is in good condition and relatively new and it will reach the end of its life expectancy within the time-period of this report; however, costs associated with replacement are expected to be below the Capital Threshold and are not included.

The domestic water well system is operational and in fair condition. No issues have been reported. Replacement is not anticipated during the timeline of this report.

The septic system is operational and was serviced recently. The system my be original and is approaching the end of its service life. A budget for future replacement has been allowed for during the time-period of this study.

3.3.2 HVAC

Description

There is 1 propane gas furnace unit for forced air heating (York, Serial No. W1M5175009), manufactured in 2015.

Supplementary electric baseboard heaters are provided in the office and washroom.

There is a are 2 suspended propane heaters in the garage area.

There is a roof top exhaust fan.

Review of process related equipment is beyond the scope of this mandate.

Observations & Comments

The forced air furnace is in good condition and relatively new. Replacement is not anticipated during the timeline of this report.

The suspended unit heater of the garage (Reznor) is in working and fair condition; however, it will reach the end of its service life within the timeframe of this study. A budget for replacement has been allowed for during the time-period of this report.

The suspended tube heater of the garage (Schwankl) appears to be relatively new and in fair condition. Replacement is not anticipated during the timeline of this report.

The ceiling fans in the garage area are aged and in poor condition. A budget for replacement has been allowed for during the timeframe of this report.

The electric baseboards are in fair condition and operational; however, they will reach the end of their service life within the timeframe of this study. A budget for replacement has been allowed for during the time-period of this report.

The roof top exhaust fan and venting for the garage is functional and is operated manually from a switch. It is recommended that the fan be operated automatically when specific interior ambient conditions occur. A budget for replacement with a system that has automatic systems and sensors has been allowed for during the time-period of this study.

An abandoned chimney opening in the mezzanine ceiling from a past oil furnace is closed with insulation. The abandoned chimney and interior opening should be removed/closed correctly. Cost of repairs is below capital threshold and not included.

3.3.3 Electrical

Description

Electricity enters the service building underground to service panels located at ground level near the stairs to the mezzanine. There are exterior light fixtures provided at the front of the property. Interior and exterior lighting is LED. There is an emergency electrical generator on the east side of the building. Automatic Door openers are provided for the overhead garage doors.

Review of process related equipment is beyond the scope of this mandate.

Observations & Comments

The electrical system appears adequate for the building functions with localized repairs required. We have included a budget for electrical repairs including thermographic scanning during the time-period of this study.

The overhead garage door openers are in fair condition and operational; however, they will reach the end of their expected service life within the timeframe of this study. A budget for replacement has been allowed for during the time-period of this report.

Interior and exterior lighting is in fair condition; however, lighting systems will be nearing the end of their expected service life within the timeframe of this study. A budget for replacement has been allowed for during the time-period of this report.

The emergency electrical generator is in fair condition, and appears to be well maintained. Replacement is not anticipated withing the timeframe of this study.

Based upon the age of the original equipment, a budget for thermographic scanning is recommended. Typically, periodic thermographic scanning is recommended by utility and insurance companies. For the main switches, breakers and other connections, scans should be completed and repeated as part of regular maintenance every 3 years, note that an amount is included in the short term, but in subsequent years the thermographic scan will fall under regular maintenance. Local replacement/repairs of electrical equipment may be required following these scans. Repairs to visible deficiencies noted, will need to be completed. Electrical repairs are considered a high priority. Typically, the power distribution system should last for decades if not for the life of the building if properly maintained. Since the extent and timing of work cannot be predicted, we assume that this can be performed on as needed basis at cost less than the capital threshold.

An electrical design load calculation was not performed and is beyond the scope of this report. The Owner did not identify existing issues related to power insufficiency.

3.4 Special Systems

3.4.1 Security

Description

The building is equipped with an alarm system with sensors and keypad. The system is not remotely monitored and is an in-house system.

Observations & Comments

The security systems were not tested at the time of inspection and are not part of the common/general building systems.

The alarm system was reported to be operational and is residential grade with door/window sensors and a keypad for arming. The system appears to be ad-hoc and will reach the end of its service life within the timeframe of this report. A budget for replacement has been allowed for during the time-period of this report.

3.4.2 Fire Protection & Life Safety

Description

Life safety consists of fire extinguishers located throughout the building, emergency lighting and lighted exit signage.

There was a carbon monoxide detector that plugs into an outlet.

Observations & Comments

The exit signs are operational and in fair condition. Replacement is not anticipated within the timeframe of this report. Costs associated with repairs are expected to be below the Capital Threshold and are not included.

A plug-in smoke detector is provided in the office; however, no other smoke/CO2 sensors/detectors & systems where observed. A budget for installation of life-safety sensors and systems has been allowed for in the immediate term.

The emergency lights are operational and in fair condition. Replacement is not anticipated within the timeframe of this report. Costs associated with repairs are expected to be below the Capital Threshold and are not included.

Fire extinguishers are operational and were certified/inspected October 2023. Replacement is not anticipated within the timeframe of this report. Costs associated with inspection/certification and repairs are expected to be below the Capital Threshold and are not included.

There are various wall openings that are not closed in the mezzanine area and at other locations in the garage areas related to fire separations/protection. There are 1980 vintage materials in the building when asbestos containing building materials were in use. A budget for a Life Safety Audit and Designated Substances Survey for items related to fire separations/protection and hazardous materials has been allowed for in the immediate term.

The Point of Contact advised that he was not aware of any outstanding work orders, building code violations, building code infractions, building ordinances and municipal health and fire safety by-laws violations.

Life safety systems need to be tested and inspected annually by a life safety service provider and systems/components repaired/replaced as needed. A budget for repairs/replacement for fire protection and life safety systems has been allowed for during the timeframe of this study.

The life safety systems were visually examined, where possible, during the walkthrough assessment. The system components were randomly reviewed to assess their overall types and condition. It should be noted that the mandate did not include a review of the National Building and Fire Codes, or compliance of the property to these codes. This report also does not consider future changes to the National Building and Fire Code and municipal regulations obliging building upgrades.

3.5 Interior Elements

3.5.1 Finishes

Description

There are office spaces with a lunchroom that includes a fridge and cabinets. The finishes in the office area are typical painted gypsum board and trim, ceiling tiles/painted gypsum board and laminate flooring. The office area has one washroom with an emergency wash station, sink, urinal and toilet stall.

The walls and ceiling of the garage area are metal siding panels with bare concrete slabs.

There is a wood framed mezzanine with stairs over the office area on the 2nd floor. The mezzanine has a painted plywood floor, metal siding walls and ceilings with an access hatch to the attic. There are various shelves with operations related items.

The interior finishes were examined for stains, cracks and other signs of water penetration or condensation. The floors and trim were also examined for chips, gaps, and damaged sections.

Observations & Comments

The garage metal siding partitions and ceilings are aged with localized rust/stains at with portions of the soffit that are open with exposed insulation. Replacement of the metal siding wall and ceiling panels is not anticipated within the timeframe of this study; however, a budget for paint coatings renewal has been allowed for during the time-period of this report.

Interior fittings of the office and washroom such as cabinets and fixtures are in fair condition. Replacement is not anticipated within the timeframe of this study. Costs associated with repairs are expected to be below the capital threshold.

Wall, floor and ceiling finishes of the office area are in fair condition and appear to have been updated recently. Replacement is not anticipated within the timeframe of this study. Since interior finishes are subjective in nature, no allowance for major interior finish has been allocated. Costs associated with repairs are expected to be below the capital threshold.

The mezzanine metal wall siding and ceilings are aged with localized stains. The paint on the floors and stairs is deteriorated. Replacement of the metal siding wall/ceiling and flooring is not anticipated within the timeframe of this study. Costs associated with repairs are expected to be below the capital threshold.

The guard railings of the mezzanine are in fair condition and firm. Replacement is not anticipated within the timeframe of this study.

3.6 Miscellaneous

3.6.1 Maintenance & Other

Observations & Comments

The aerial antenna is in fair condition. Replacement is not anticipated within the timeframe of this report. Costs associated with replacement are expected to be below the Capital Threshold and are not included.

Planned maintenance is necessary for the longevity of assets and to control and reduce repair and replacement costs. Preventative maintenance work should be completed promptly.

From our observations we did not see anything that could not be repaired. There are some current items that require maintenance, but every building requires maintenance.

There is an attic access hatch with a wood frame and a wood sliding board. The attic has blown-in insulation.

4.0 REPAIR/ REPLACEMENT RESERVES

Refer to **Appendix B, Schedule of Anticipated Reserve Requirements**.

5.0 LIMITATIONS

The information, observations, and conclusions described in this report are valid on the date of the report and have been made under the terms, conditions, limitations, and constraints noted in the report. We prepared the report for the exclusive use of the Client. No other individual or party shall be entitled to rely upon the report without our express written consent. If another individual or party relies on the report, such individual or party shall indemnify and hold Keller Engineering, formerly Criterium-Jansen Engineers, harmless for any damages, losses, or expenses incurred because of such use. Any use or reliance of the report by an individual or party other than the Client shall constitute acceptance of these terms and conditions. Any electronic copies of this report that are provided, are for the convenience of the Client, and are not to be construed as the original or final report.

The report is limited to the visual observations made during our review. We did not remove materials, conduct any destructive or invasive testing, move furnishings or equipment, or undertake any digging or excavation. Accordingly, we cannot comment on the condition of systems that we could not see, such as buried structures and utilities, nor are we responsible for conditions that could not be seen or were not within the scope of our services at the time of review. We did not undertake to completely assess the stability of the buildings or the underlying foundation soil since this effort would require excavation and destructive testing. Likewise, this is not a seismic assessment.

We do not render an opinion on uninspected portions of the facility.

We did not perform any computations or other engineering analysis as part of this evaluation, nor did we conduct a comprehensive code compliance investigation. We did not provide an environmental assessment or opinion on the presence of any environmental issues such as asbestos, hazardous wastes, toxic materials, the location, and presence of designated wetlands, IAQ, etc.

The report is not to be considered a warranty of condition, and no warranty is implied. The photographs are an integral part of this report and must be included in any review.

If opinions of probable costs are presented, they are preliminary only. Opinions are based on our general knowledge of building systems and the contracting/construction industry. When appropriate, we have relied on standard sources, such as Means Building Construction Cost Data, to develop opinions of probable costs. However, for some items for which we have developed opinions of probable costs (e.g., structural repairs), no standard guide for developing such costs exists. It is not the intent of the BCA to provide/prepare exact quantities or identify the exact locations of items or systems as a basis for preparing the opinions of costs.

We have performed no design work as part of the study, nor have we obtained competitive quotations or estimates from contractors as this also is beyond the scope of the project. The actual cost to remedy deficiencies and deferred maintenance items that we have identified may vary significantly from estimates and competitive quotations from contractors.

This report has been prepared in strict confidence. No reproduction or reuse is permitted without express written consent. Furthermore, we will not release this report to anyone without your permission. If you have any questions about this report or review, please call.

Thank you for the opportunity to be of assistance to you.

Report Prepared by:

Jaime Rodríguez, B.Tech. (Arch.Sc.), C.E.T., RRO
Senior Project Manager

Report Reviewed by:

Jim Rammos, P.Eng.
Director, Building Science & Restoration

APPENDIX A

SELECTED PHOTOGRAPHS

Location:
191274 13th Line
East Garafraxa, ON

Photo Taken by:
Jaime Rodriguez
Emma Bresil

Date:
October 24, 2023

KELLER ENGINEERING

Description:
South elevation of the works garage and shop.

There are 6 garage bays total.

The siding and roof are corrugated metal.

Photo Number
1

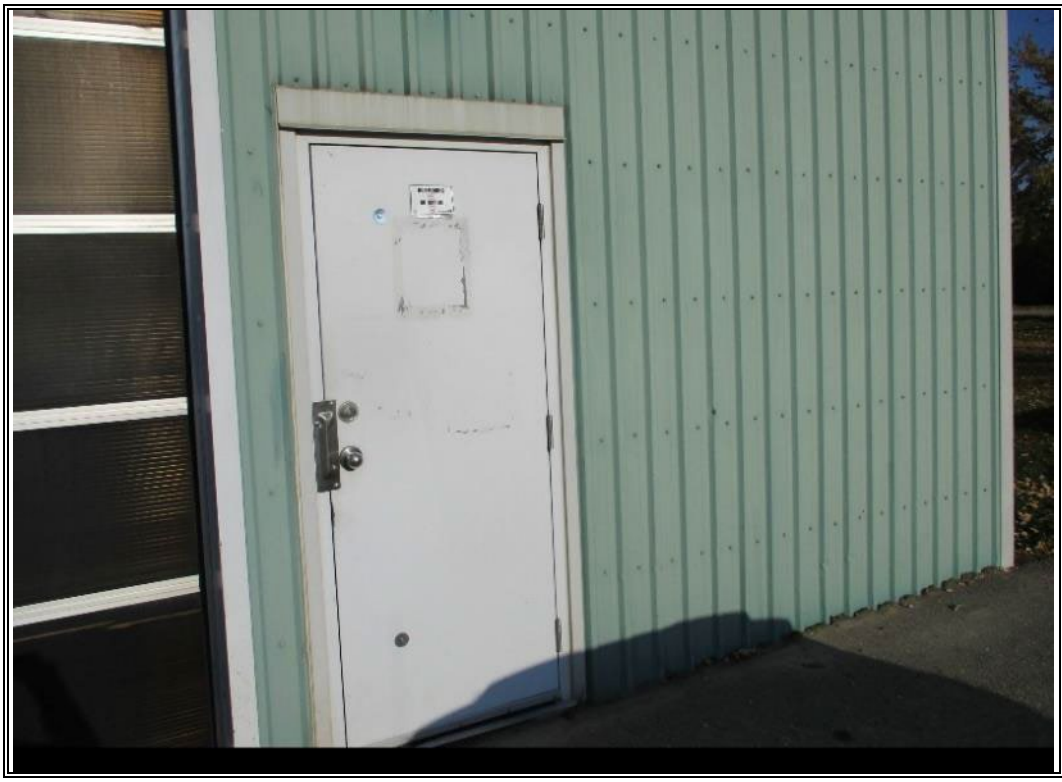
Description:
There are external LED light fixtures above the garages.

Photo Number
2

Location:
191274 13th Line
East Garafraxa, ON

Photo Taken by:
Jaime Rodriguez
Emma Bresil

Date:
October 24, 2023



Description:
The service doors are metal and functional.

Photo Number
3

Description:
There are soffit vents for the roof.

Photo Number
4

Location:
191274 13th Line
East Garafraxa, ON

Photo Taken by:
Jaime Rodriguez
Emma Bresil

Date:
October 24, 2023

KELLER ENGINEERING

Description:
West side of the property.

Additional items are stored beside the shop.

Photo Number
5

Description:
There is a propane tank that stores fuel used for heating.

Photo Number
6

Location:
191274 13th Line
East Garafraxa, ON

Photo Taken by:
Jaime Rodriguez
Emma Bresil

Date:
October 24, 2023

KELLER ENGINEERING

Description:
The yellow tank is corroded and is not in use/abandoned.

The white tank is storage for motor oil, and it is emptied once a year.

Photo Number
7

Description:
The fence on the property line is wood posts and wire fencing.

Photo Number
8

Location:
191274 13th Line
East Garafraxa, ON

Photo Taken by:
Jaime Rodriguez
Emma Bresil

Date:
October 24, 2023

KELLER ENGINEERING

Description:
North side (rear) of the building.

There is ground erosion below the eavestroughs. The eavestroughs are clogged with plant detritus and should be cleaned.

There are propane gas lines running across the back of the building.

Photo Number
9

Description:
There are vents for suspended tube and unit heaters in the garage.

Windows have insulated glass units ("IGUs"). Windows are different materials and vintages. Some windows appear to be original.

Photo Number
10

Location:
191274 13th Line
East Garafraxa, ON

Photo Taken by:
Jaime Rodriguez
Emma Bresil

Date:
October 24, 2023

KELLER ENGINEERING

Description:
Location of private water well on site.

Domestic water for the building comes from a well system on the property.

Photo Number
11

Description:
The electrical system connects underground and is sourced from the town.

There is an emergency electrical power generator for the building.

Photo Number
12

Location:
191274 13th Line
East Garafraxa, ON

Photo Taken by:
Jaime Rodriguez
Emma Bresil

Date:
October 24, 2023

KELLER ENGINEERING

Description:
The septic system is possibly original to the building.

The septic tank is cleaned twice a year.

It was reported that the septic tank leaks were repaired recently.

Photo Number
13

Description:
The tree branches are close to the overhead power lines.

Hydro has been contacted to remove the branches.

Photo Number
14

Location:
191274 13th Line
East Garafraxa, ON

Photo Taken by:
Jaime Rodriguez
Emma Bresil

Date:
October 24, 2023

KELLER ENGINEERING

Description:
An antenna is provided at the east side of the building.

The antenna is in fair condition.

Photo Number
15

Description:
Asphalt pavement at the entrance that provides access to the works garage and salt/sand dome.

Comments and costs related to the asphalt pavement at the entrance are part of the salt/sand dome report and are not included as part of the works garage.

Photo Number
16

Location:
191274 13th Line
East Garafraxa, ON

Photo Taken by:
Jaime Rodriguez
Emma Bresil

Date:
October 24, 2023

KELLER ENGINEERING

Description:
Asphalt pavement related to the works garage is in fair condition.

Photo Number
17

Description:
Asphalt pavement related to the works garage is in fair condition with localized cracks.

Photo Number
18

Location:
191274 13th Line
East Garafraxa, ON

Photo Taken by:
Jaime Rodriguez
Emma Bresil

Date:
October 24, 2023

KELLER ENGINEERING

Description:
Vehicle parking area at the east side of the property.

Pavement parking paint markings are not provided.

Photo Number
19

Description:
The roof has ridge vents and an exhaust fan.

There are eavestroughs and rainwater leaders around the roof.

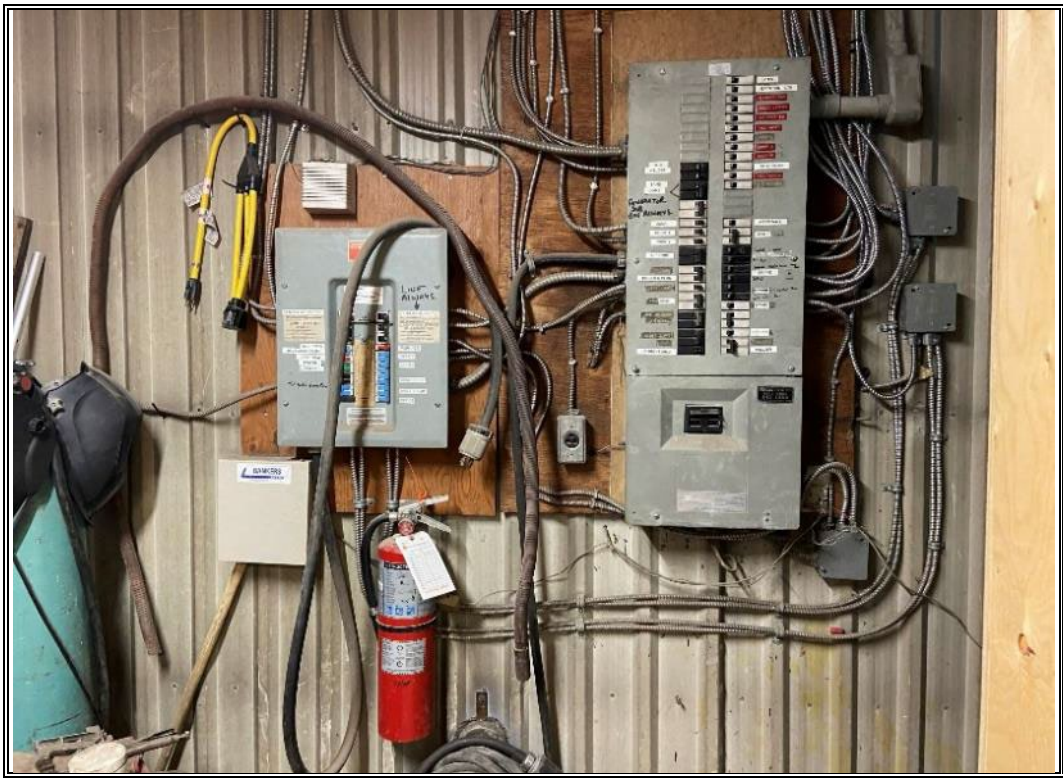
Photo Number
20

Location:
191274 13th Line
East Garafraxa, ON

Photo Taken by:
Jaime Rodriguez
Emma Bresil

Date:
October 24, 2023

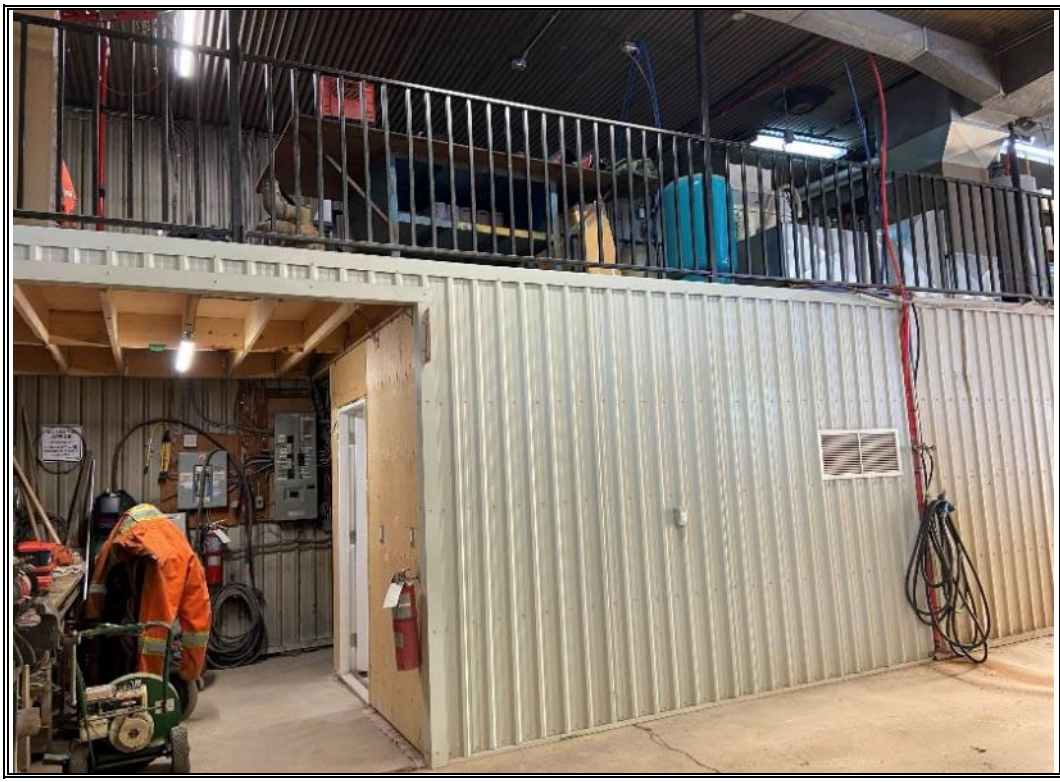
KELLER ENGINEERING



Description:
View of electrical distribution panels, breakers and main disconnect.
The main breaker panel is rated for 200A, 120/240V.

The smaller breaker panel is rated for 60A, 120/240V.

Photo Number
21



Description:
Mezzanine and office spaces as seen from the garage.

Fire extinguishers are provided.

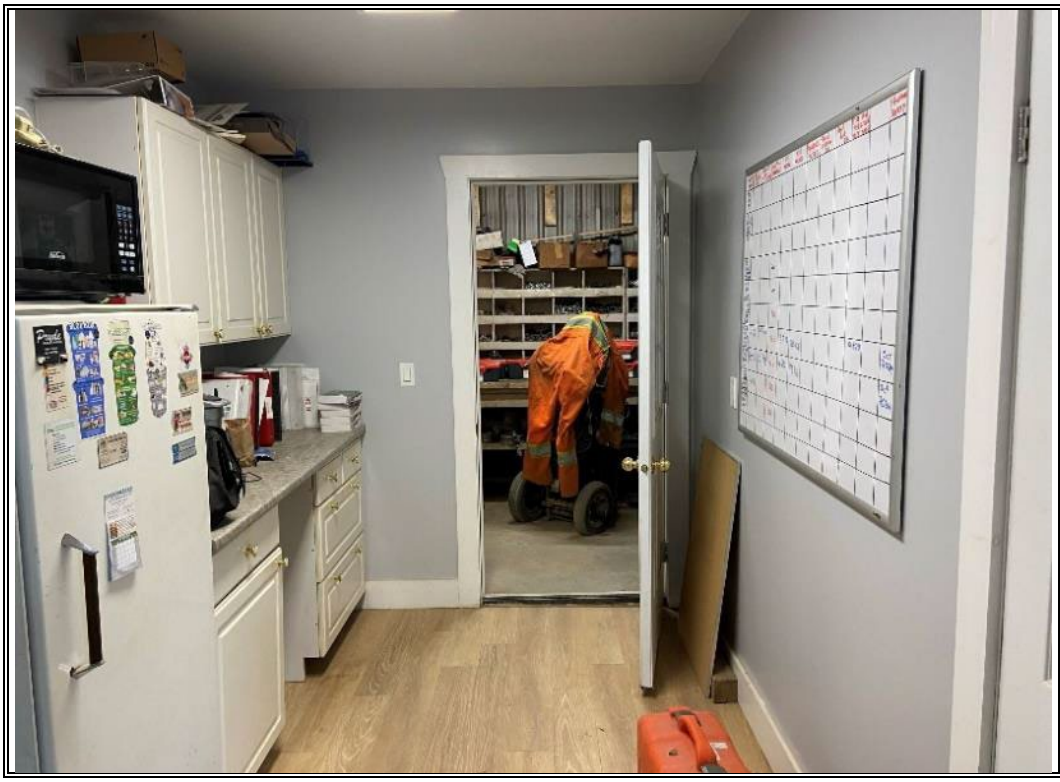
Photo Number
22

Location:
191274 13th Line
East Garafraxa, ON

Photo Taken by:
Jaime Rodriguez
Emma Bresil

Date:
October 24, 2023

KELLER ENGINEERING



Description:
Office space – lunchroom.

The lunchroom has painted gypsum board walls/ceiling and laminate flooring.

Kitchen grade cabinets and a countertop is provided.

Photo Number
23

Description:
Office space.

The lighting is LED.

The ceilings are fibreboard tiles.

The lunchroom has painted wood paneling walls and laminate flooring.

Photo Number
24

Location:
191274 13th Line
East Garafraxa, ON

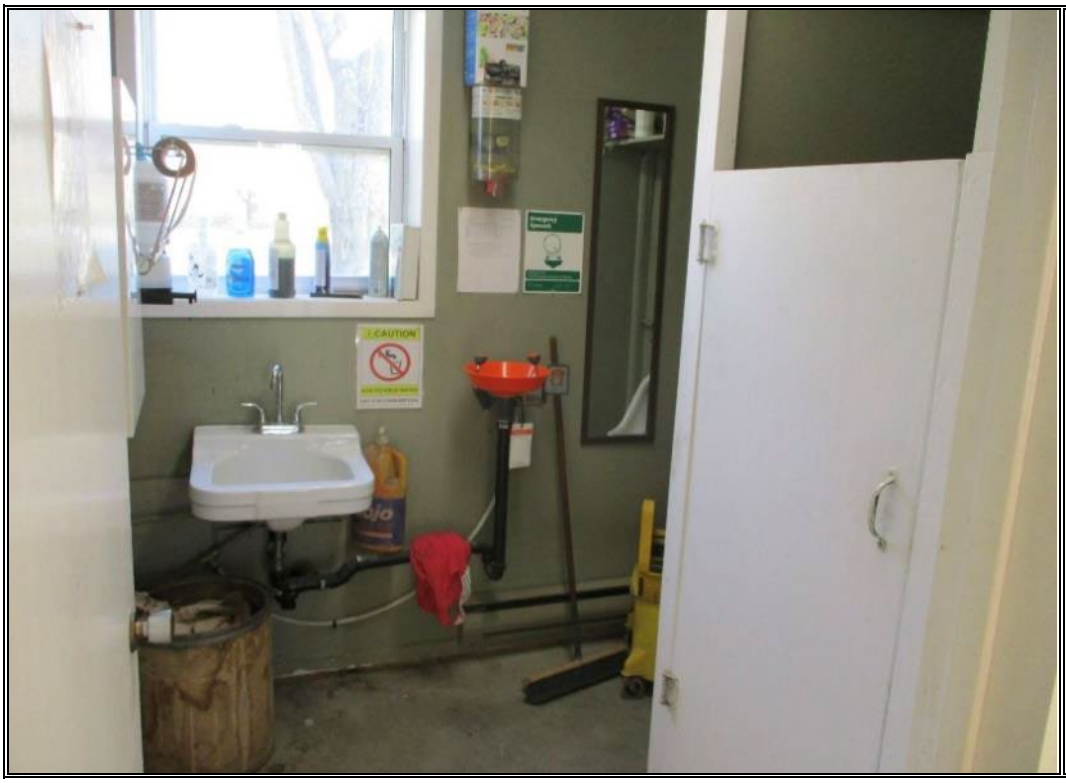
Photo Taken by:
Jaime Rodriguez
Emma Bresil

Date:
October 24, 2023

KELLER ENGINEERING

Description:
The office space/ lunchroom and washroom has forced air heating and supplemental electric baseboard heating.

Photo Number
25



Description:
Washroom.

The washroom finishes are bare concrete floor, painted gypsum walls/ceiling, typical bathroom fittings/fixtures and an eyewash station.

Photo Number
26

Location:
191274 13th Line
East Garafraxa, ON

Photo Taken by:
Jaime Rodriguez
Emma Bresil

Date:
October 24, 2023

KELLER ENGINEERING

Description:
The building is equipped with an alarm system with sensors and keypad.

The system is not remotely monitored and is an in-house monitored system.

Photo Number
27

Description:
The garages have sectional overhead doors with motorized openers.

The garage has a trench drain that empties into the oil-water interceptor.

Photo Number
28

Location:
191274 13th Line
East Garafraxa, ON

Photo Taken by:
Jaime Rodriguez
Emma Bresil

Date:
October 24, 2023

KELLER ENGINEERING

Description:
Garages.

The lighting is LED.

There are ceiling fans.

The walls and ceiling of the garage area are metal siding panels with bare concrete slabs.

Photo Number
29

Description:
Garage entrance.

Emergency lighting, lighted exit signs and fire extinguishers are provided.

The exit doors are metal.

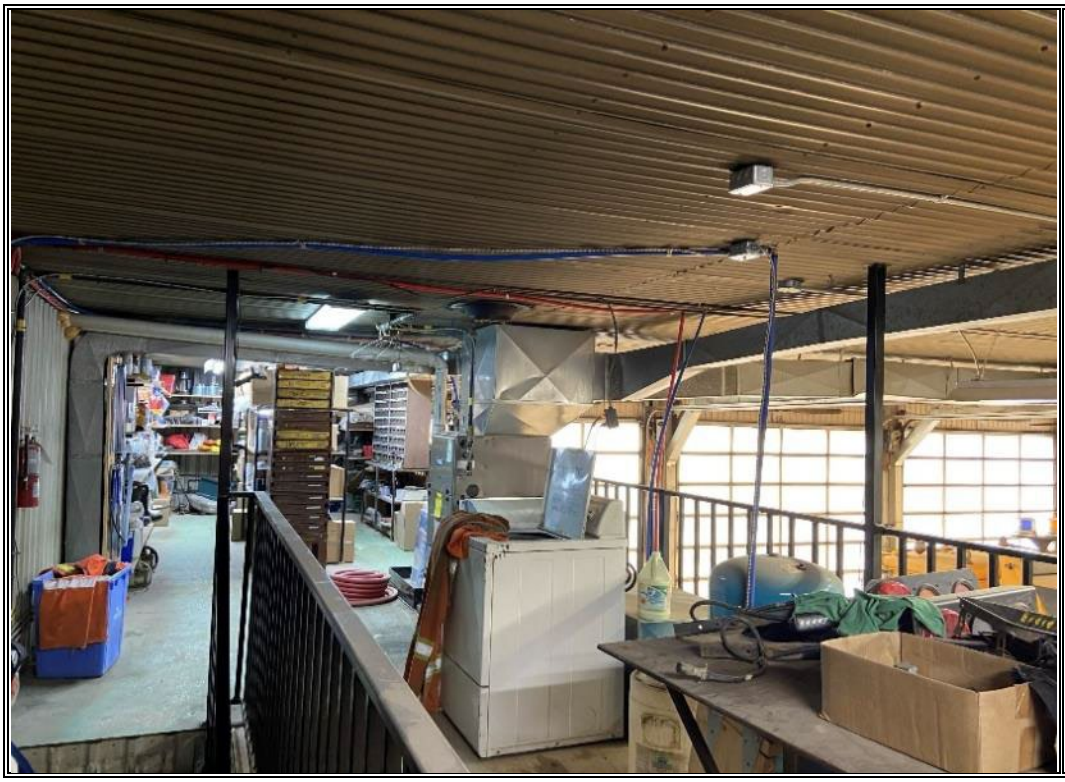
Photo Number
30

Location:
191274 13th Line
East Garafraxa, ON

Photo Taken by:
Jaime Rodriguez
Emma Bresil

Date:
October 24, 2023

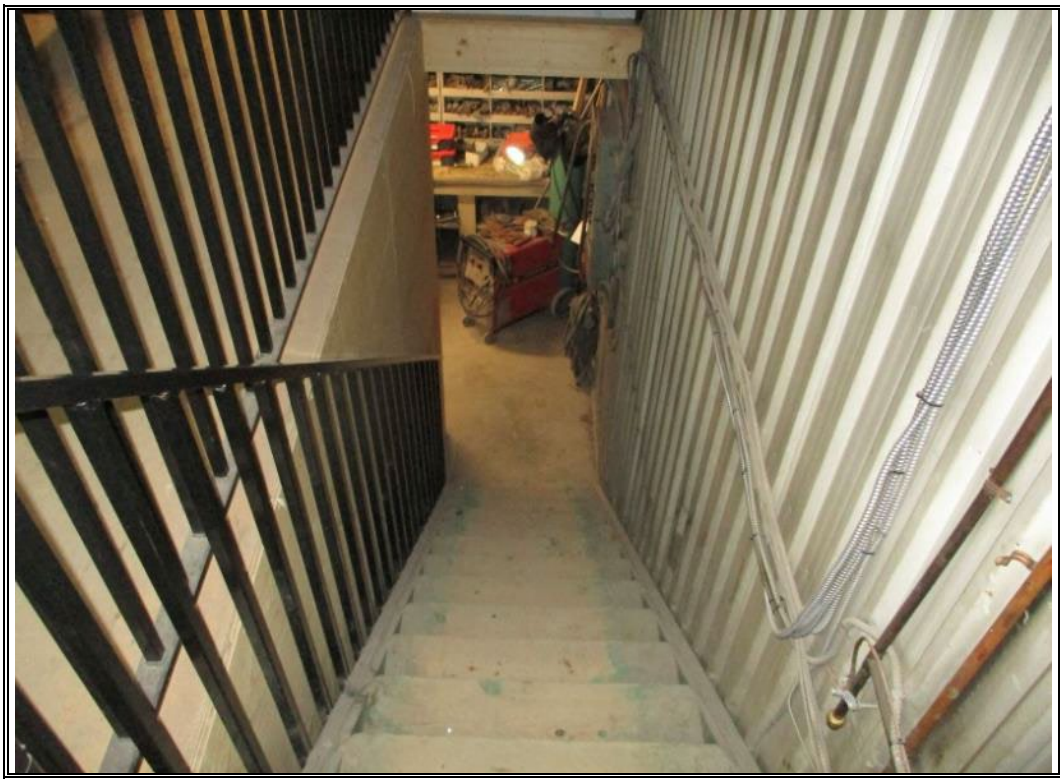
KELLER ENGINEERING



Description:
Mezzanine above office/ lunchroom.

The mezzanine has stairs, metal guards/railings a painted plywood floor, metal siding walls and ceilings with an access hatch to the attic. There are various shelves with operations related items.

Photo Number
31



Description:
The stairs are wood with a metal railing.

Photo Number
32

Location:
191274 13th Line
East Garafraxa, ON

Photo Taken by:
Jaime Rodriguez
Emma Bresil

Date:
October 24, 2023

KELLER ENGINEERING

Description:
Propane hot water tank and the propane furnace of newer vintage.

Photo Number
33

Description:
There is a pressure tank for the water well system.

Photo Number
34

Location:
191274 13th Line
East Garafraxa, ON

Photo Taken by:
Jaime Rodriguez
Emma Bresil

Date:
October 24, 2023

KELLER ENGINEERING

Description:
Openings at pipe penetrations are sealed.

Photo Number
35

Description:
Metal bracing for the structure is visible.

The northeast section of the shop has a ceiling mounted propane heater.

The heater has an independent thermostat.

Photo Number
36

Location:
191274 13th Line
East Garafraxa, ON

Photo Taken by:
Jaime Rodriguez
Emma Bresil

Date:
October 24, 2023

KELLER ENGINEERING

Description:
An abandoned chimney opening in the mezzanine ceiling from a past oil furnace is closed with insulation. The abandoned chimney and interior opening should be removed/closed correctly. Cost of repairs is below capital threshold and not included.

Photo Number
37

Description:
The concrete slab is cracked.

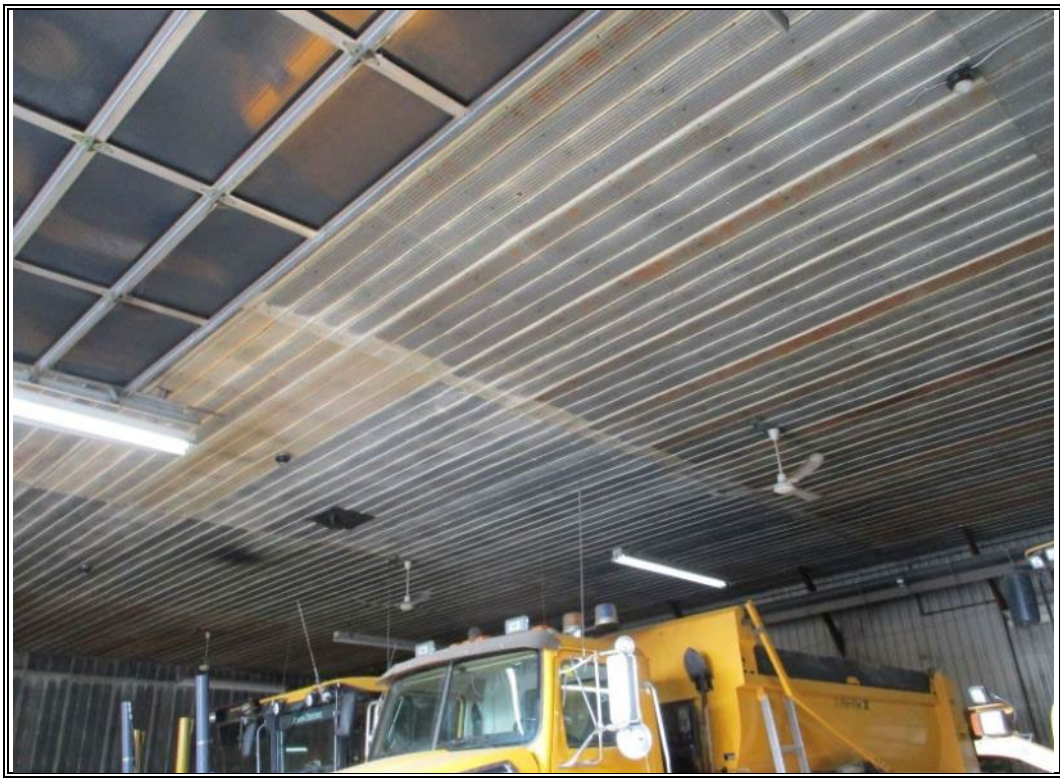
Photo Number
38

Location:
191274 13th Line
East Garafraxa, ON

Photo Taken by:
Jaime Rodriguez
Emma Bresil

Date:
October 24, 2023

KELLER ENGINEERING



Description:
The metal corrugated soffit of the garage is rusted and stained.

Photo Number
39

Description:
The metal corrugated walls of the garage are rusted, faded and stained.

Photo Number
40

Location:
191274 13th Line
East Garafraxa, ON

Photo Taken by:
Jaime Rodriguez
Emma Bresil

Date:
October 24, 2023

KELLER ENGINEERING

Description:
A propane tube heater and thermostat are provided in the garage area.

Photo Number
41

Description:
There is an oil-water interceptor that collects water from the trench drain.

Once a year a company collects the water to be disposed.

Photo Number
42

Location:
191274 13th Line
East Garafraxa, ON

Photo Taken by:
Jaime Rodriguez
Emma Bresil

Date:
October 24, 2023

KELLER ENGINEERING

Description:
Garage. The ceiling hole is for venting to the roof top exhaust fan.

The exhaust fan is turned on manually for venting when vehicles are in operation.

The ceiling fans are old but operational.

Photo Number
43

Description:
There is a plug-in carbon monoxide detector.

Costs for installation of new Smoke, CO2 Detectors, Sensors & Systems has been included.

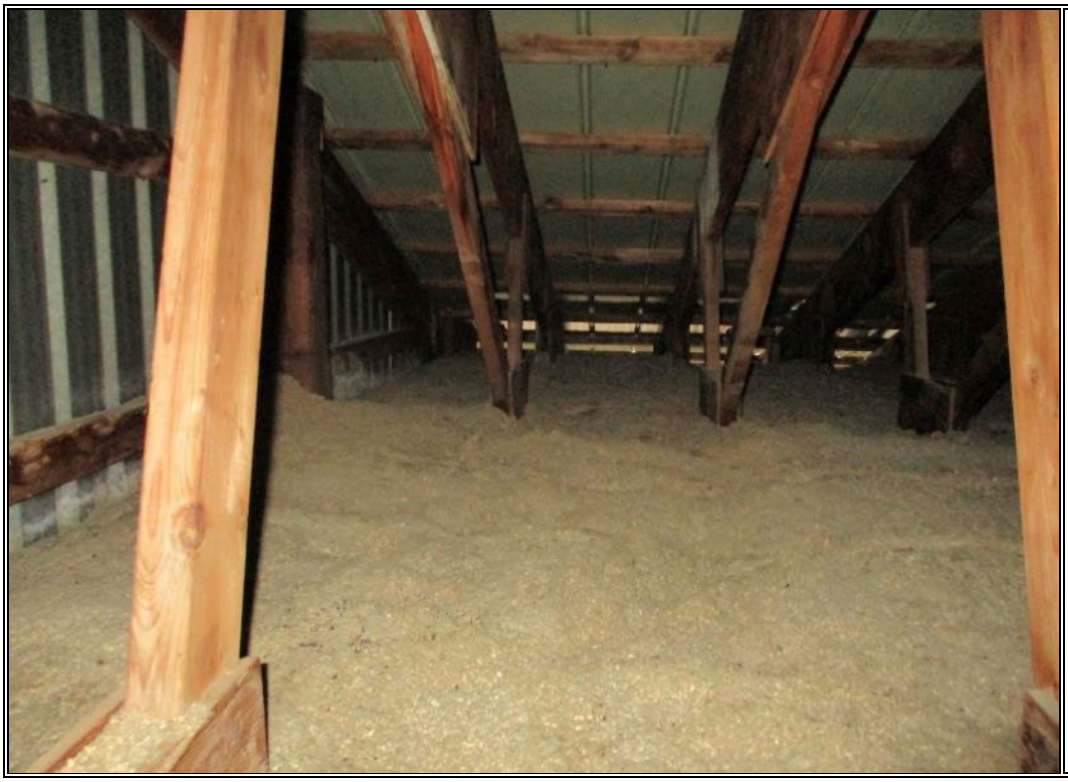
Photo Number
44

Location:
191274 13th Line
East Garafraxa, ON

Photo Taken by:
Jaime Rodriguez
Emma Bresil

Date:
October 24, 2023

KELLER ENGINEERING



Description:
General view of the attic.

There is blown-in insulation about 6-8” in depth.

Structure is in fair condition. Sheathing/ decking is not provided.

Photo Number
45

Description:
The attic has prefabricated wood trusses.

Structure is in fair condition.

Sheathing/decking is not provided.

The attic is unused and for storing miscellaneous items.

Photo Number
46

Location:
191274 13th Line
East Garafraxa, ON

Photo Taken by:
Jaime Rodriguez
Emma Bresil

Date:
October 24, 2023

KELLER ENGINEERING

Description:
The insulation and attic space are exposed near the attic.

Photo Number
47

APPENDIX B

FACILITY CONDITION INDEX TABLE

2023

Facility Condition Index Table

NA = Not Anticipated during the timeframe of the report based on the condition at the time of the study.
BLW = Below Capital Threshold
The recommendations and comments included in this report are based on the collective experience of Keller Engineering. Any costs or other comments contained herein do not necessarily infer that subcontracts, quotes, or opinions of other professionals were solicited.
This table summarizes probable costs of repairs or replacements, including both labor and materials. These costs are based on our general knowledge of building systems, local contracting/construction industry conditions, and other sources such as Means Building Construction Cost Data. We have performed no design work as part of this study, nor have we obtained competitive quotations or estimates. Costs are uninflated.

Condition Values:
1. 0-10 Excellent. "As new" condition.
2. 11-30 Good. Sound an performs its function.
3. 31-60 Fair. Repair or replacement may be required to prolong life.
4. 61-80 Poor. Component has failed or cannot be relied on to perform function.
5. >81 Critical. Immediate repair/replacement is less than 1 year and may relate to safety or code violations.

Township of East Garafraxa - Works Garage & Shop
191274 13th Line, East Garafraxa

REPAIR/REPLACEMENT RESERVES

ITEM	DESCRIPTION	UNIT COSTS & TIME-PERIOD ESTIMATES						CONDITION ESTIMATE		ANTICIPATED PRIORITY			PREDICTED LIFE CYCLE				
		2023	YEARS 1 - 5 2024 - 2028	YEARS 6 - 10 2029 - 2033	YEARS 11 - 15 2034 - 2038	YEARS 16 - 20 2039 - 2043	TOTAL 20 YEAR	CONDITION LEVEL	CONDITION VALUE	IMPORTANCE WEIGHTING SCALE	PRIORITY VALUE INDEX	PRIORITY LEVEL	INCEPTION YEAR (ESTIMATED)	ACTUAL AGE	LIFE EXPECTANCY	OBSERVED AGE	REMAINING LIFE EXPECTANCY
1.0 SITE IMPROVEMENTS																	
1.1 Paving	Asphalt - Driveway - Deemed to belong to Sand/Salt Dome - NA						$ -	-	-	-	-	-	-	-	-	-	-
	Asphalt - Main Lot & Parking - Repairs		$ 7,500				$ 7,500	Fair	50	50	50	Medium	2015	8	30	10	20
	Asphalt - Paint Markings - Install new		$ 5,000				$ 5,000	Fair	50	50	50	Medium	-	-	25	-	-
	Gravel/Screenings - Side - Regrading - BLW						$ -	Fair	35	25	31	Medium	2015	8	25	10	15
	Concrete Barracades - Side, for propane tanks - NA						$ -	Good	25	25	25	Low	2015	8	40	10	30
1.2 Flatwork	Not applicable						$ -	-	-	-	-	-	-	-	-	-	-
1.3 Landscaping	Plants & Trees - Overgrowth - Trimming/removals - BLW						$ -	Fair	50	20	38	Medium	1980	43	100	40	60
	Low Fence - Wire & wood posts - Repairs				$ 5,000		$ 5,000	Fair	40	20	32	Medium	2005	18	50	15	35
	Grass/Sod & Soil - Rear & front - Repairs & regrading (erosion) - BLW						$ -	Fair	40	20	32	Medium	1980	43	50	40	10
2.0 STRUCTURE & BUILDING ENVELOPE																	
2.1 Substructure	Concrete Slab - Repairs		$ 5,000				$ 5,000	Fair	40	50	44	Medium	1980	43	100	40	60
	Standard Foundations - Replacement - NA						$ -	Fair	40	60	48	Medium	1980	43	100	40	60
2.2 Superstructure	Structural Framing - Columns, Beams/Trusses - Replacement - NA						$ -	Fair	40	60	48	Medium	1980	43	100	40	60
2.3 Exterior	Metal Cladding - Replacement - NA						$ -	Fair	60	30	48	Medium	1980	43	75	25	50
	(10) Windows - Replacement			$ 10,000			$ 10,000	Fair	50	50	50	Medium	2005	18	30	20	10
	Overhead Sectional Doors (6) - NA						$ -	Good	30	40	34	Medium	2015	8	30	10	20
	Exterior Doors (3) - Swing - Replacement - NA						$ -	Fair	55	40	49	Medium	2005	18	30	20	10
	Sealants - Replacement		$ 10,000				$ 10,000	Fair	50	50	50	Medium	2005	18	15	15	0
	Paint/coatings - Cladding - Replacement			$ 75,000			$ 75,000	Fair	60	30	48	Medium	1980	43	30	20	10
2.4 Roofing	Sloped Metal Panels - Replacement - NA						$ -	Fair	40	60	48	Medium	1980	43	75	50	25
	Paint/coatings - Metal Panels - Replacement			$ 75,000			$ 75,000	Fair	40	60	48	Medium	1980	43	30	20	10
	Soffits & Sheet Metal - Replacement - NA						$ -	Fair	40	60	48	Medium	1980	43	30	15	15
	Eavestroughs & Rainwater Leaders - Repairs			$ 5,000			$ 5,000	Fair	40	40	40	Medium	2015	8	25	10	15
3.0 MECHANICAL SYSTEMS																	
3.1 Plumbing	Domestic Water & Sanitary Distribution Systems & Piping - Repairs			$ 5,000			$ 5,000	Fair	40	60	48	Medium	1980	43	50	30	20
	Propane Gas Distribution Systems & Piping			$ 5,000			$ 5,000	Fair	40	60	48	Medium	1980	43	50	30	20
	Oil-Water Interceptor - Replacement			$ 5,000			$ 5,000	Fair	40	60	48	Medium	2015	8	15	10	5
	Used Oil Tank - White - Replacement		$ 5,000				$ 5,000	Poor	65	30	51	High	1990	33	30	25	5
	Trench Drains - Repairs - NA						$ -	Fair	40	60	48	Medium	1980	43	50	20	30
	Waterheater (John Wood) - Propane Gas - Replace - BLW						$ -	Good	20	60	36	Medium	2020	3	15	2	13
	Propane Tank - Replacement - NA						$ -	Good	30	30	30	Medium	2015	8	30	2	28
	Propane Tank - Yellow - Abandoned - Removal - BLW						$ -	-	-	-	-	-	-	-	-	-	-
	Domestic Water Well System & Expansion Tank - Repairs					$ 5,000	$ 5,000	Fair	40	60	48	Medium	1980	43	50	20	30
	Septic System & Pumps - Replacement		$ 20,000				$ 20,000	Fair	40	60	48	Medium	1980	43	30	25	5
3.2 HVAC	Forced Air Furnace (York) - Replace - NA						$ -	Good	20	60	36	Medium	2015	8	25	5	20
	Suspended Heater (Reznor) - Propane - Replacement			$ 5,000			$ 5,000	Fair	40	60	48	Medium	2000	23	20	15	5
	Tube Heater (Schwank) - Propane - Replacement - NA						$ -	Fair	40	60	48	Medium	2015	8	20	10	10
	Ceiling Fans - Replacement - BLW						$ -	Poor	65	20	47	Medium	1980	43	20	30	0
	Electric Baseboards - Replacement			$ 5,000			$ 5,000	Fair	40	65	50	Medium	2000	23	20	15	5
	Roof Top Exhaust Fan & Venting - Replacement		$ 5,000				$ 5,000	Fair	40	65	50	Medium	2000	23	20	10	10
3.3 Electrical	Distribution & Wiring Systems - Repairs & Thermographic Scanning		$ 5,000				$ 5,000	Fair	45	65	53	High	1980	43	50	30	20
	Overhead Door Opener Motors/Operators - Replacement			$ 5,000			$ 5,000	Fair	40	65	50	Medium	2010	13	20	10	10
	Interior & Exterior Lighting - Replacement			$ 5,000			$ 5,000	Fair	40	65	50	Medium	2000	23	20	15	5
	Emergency Electrical Generator & Systems - Replacement - NA						$ -	Fair	40	65	50	Medium	2010	13	30	15	15
4.0 SPECIAL SYSTEMS																	
4.1 Security	Alarm System, Sensors & Key Pad - Replacement		$ 5,000				$ 5,000	Poor	70	20	50	Medium	2010	13	15	15	0
4.2 Fire & Life	General Fire & Life Safety System Repairs			$ 5,000			$ 5,000	-	-	-	-	-	-	-	-	-	-
	Exit Signs - Repairs - BLW						$ -	Fair	40	65	50	Medium	2000	23	30	20	10

2023

Facility Condition Index Table

NA = Not Anticipated during the timeframe of the report based on the condition at the time of the study.
BLW = Below Capital Threshold
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Township of East Garafraxa - Works Garage & Shop
191274 13th Line, East Garafraxa

REPAIR/REPLACEMENT RESERVES

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	Smoke, CO2 Detectors, Sensors & Systems - Install new	$ 5,000					$ 5,000	Poor	70	40	58	High	2023	-	20	-	-
	Emergency Lights - BLW						$ -	Fair	40	65	50	Medium	2000	23	20	20	0
	Fire Extinguishers - Replacement - NA						$ -	Fair	40	65	50	Medium	2000	23	30	20	10
	DSS & Life Safety Audit	$ 5,000					$ 5,000	-	-	-	-	-	-	-	-	-	-
5.0 INTERIOR ELEMENTS																	
5.1 Finishes	Partitions - Walls & Ceilings - Metal - Garage - Replacement - NA						$ -	Fair	60	20	44	Medium	1980	43	50	40	10
	Paint/coatings - Garage metal siding & ceilings - Partitions			$ 35,000			$ 35,000	Poor	70	20	50	Medium	1980	43	50	40	10
	Fittings - Office & Washroom - Repairs - BLW						$ -	Fair	50	20	38	Medium	2010	13	25	10	15
	Wall, Floor & Ceilings, Doors - Office - Repairs - BLW						$ -	Fair	50	20	38	Medium	2010	13	25	10	15
	Mazzanine & Stairs - Repairs - BLW						$ -	Fair	50	20	38	Medium	1980	43	50	25	25
	Railings/Guards - Mezzanine & Stairs - Replacement- NA						$ -	Fair	50	20	38	Medium	2010	13	25	10	15
6.0 MISCELLANEOUS																	
6.1 Other	Aerial Antenna - Repairs - NA						$ -	-	-	-	-	-	-	-	-	-	-

FACILITY CONDITION INDEX (FCI)

Current Estimated Replacement Value of Assets	**$ 2,000,000**

	IMMEDIATE 2023	YEARS 1 - 5 2024 - 2028	YEARS 6 - 10 2029 - 2033	YEARS 11 - 15 2034 - 2038	YEARS 16 - 20 2039 - 2043	TOTAL
Current Aggregated Total Costs Estimate	$ 10,000	$ 67,500	$ 240,000	$ 5,000	$ 5,000	**$ 327,500**
Inflated Aggregated Total Costs	$ 10,230	$ 69,053	$ 245,520	$ 5,115	$ 5,115	**$ 335,033**
Current FCI	1%	3%	12%	0%	0%	**16% POOR**

FCI Classifications:
1. FCI = 0-5% Good Condition. Asset in reasonable condition and does not require capital expenditure
2. FCI = 6-10% Fair Condition. Asset is deteriorating, requires capital expenditure and will likely become "poor" within a few years if not addressed.
3. FCI = 11-30% Poor Condition. Asset is deteriorated and requires immediate capital expenditure.
4. FCI = > 31% Critical Condition. Asset is in disrepair or dilapidated and requires urgent significant capital expenditure.

APPENDIX C

RESUMES

25 First Street
Orangeville, Ontario L9W 2C8
Tel: 519-940-0571
Email: info@kellerengineering.com

Jim Rammos, P.Eng., IEEE ~ CURRICULUM VITAE

AREAS OF EXPERTISE

Mr. Rammos has extensive knowledge and experience in the Building Science and Forensics industry. His specific areas of expertise include building science, thermographic scanning, mechanical & electrical engineering, new and restoration construction, reserve fund studies, performance audits, mechanical & electrical systems designs and assessments.

QUALIFICATIONS

Keller Engineering, located in Orangeville, Ontario services Southern Ontario and South Saskatchewan. We specialize in building inspection and commercial real estate consulting services. Our firm is a consulting engineering company that combines the resources of engineering leaders with the service and responsiveness of your own dedicated, local firm. With broad expertise and carefully controlled standards of quality our engineers provide a resource base that offers our clients the highest quality engineering evaluations.

Keller Engineering services encompass investigations and analyses vital to property acquisition and management, including: Due Diligence Reports, Property Condition Assessments, Reserve Studies, Performance Audits, Environmental Site Assessments, Construction Plan and Cost Reviews, Construction Loan Monitoring, Construction Quality Inspections, Structural Investigations, Facilities Management Consulting, Forensic Engineering, Insurance Investigations, and Design and Related Services.

Jim Rammos, P.Eng., IEEE is a Senior Engineer at Keller Engineering. Mr. Rammos is a licensed Professional Engineer in the province of Ontario and has over 25 years of engineering experience. To complement his portfolio of work Mr. Rammos also works with our clients to complete restoration work, building condition assessments, capital replacement studies and is a certified thermographer to complete electrical thermographic scanning and energy audits.

25 First Street
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KELLER ENGINEERING

EDUCATION

- Bachelor of Technology (B.Tech.), Ryerson Polytechnical University, Toronto, ON
- Bachelor of Engineering (B.Eng.), University of Toronto, Toronto, ON
    - Major: Mechanical Engineering

- Bachelor of Applied Science (B.A.Sc.), University of Toronto, Toronto, ON
    - Major: Electrical Engineering

- Professional Engineer, Professional Engineers Ontario, licensed since 1995
- BCIN – Building Code Identification Number 35394
- Certified Thermographer – Level 1, since 2007

PROFESSIONAL REGISTRATIONS

Licensed, Association of Professional Engineers of Ontario (PEO)
American Society of Heating, Refrigeration & Air-Conditioning Engineers (ASHRAE)
Canadian Society for Mechanical Engineers (CSME)
Canadian Automated manufacturing Society (CAMS)
Institute of Electronics & Electrical Engineers (IEEE)
Ontario Building Envelope Council (OBEC)

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Jaime Rodríguez, B.Tech. (Arch.Sc.), C.E.T., RRO
~ CURRICULUM VITAE

AREAS OF EXPERTISE

Mr. Jaime Rodriguez specializes in building science and building envelope engineering. Jaime provides design & replacement/repair planning, quality control, building envelope forensics, diagnostic testing, and contract management services. He is primarily engaged in engineering project management, providing technical expertise, and building science/engineering design and property condition assessments.

QUALIFICATIONS

Keller Engineering, located in Orangeville, Ontario services Southern Ontario and South Saskatchewan. We specialize in building inspection and commercial real estate consulting services. Our firm is a consulting engineering company that combines the resources of engineering leaders with the service and responsiveness of your own dedicated, local firm. With broad expertise and carefully controlled standards of quality our engineers provide a resource base that offers our clients the highest quality engineering evaluations.

Keller Engineering services encompass investigations and analyses vital to property acquisition and management, including: Due Diligence Reports, Property Condition Assessments, Reserve Studies, Performance Audits, Environmental Site Assessments, Construction Plan and Cost Reviews, Construction Loan Monitoring, Construction Quality Inspections, Structural Investigations, Facilities Management Consulting, Forensic Engineering, Insurance Investigations, and Design and Related Services.

Jaime Rodríguez is Senior Project Manager at Keller Engineering. Mr. Rodriguez is a Certified Engineering Technologist in the Province of Ontario and has over 20 years of engineering experience. Jaime has effective problem-solving skills that provide practical engineering, project management & field applied solutions.

EDUCATION

- Bachelor of Technology (B.Tech.), Ryerson University, Toronto, ON

PROFESSIONAL REGISTRATIONS

Certified Engineering Technologist, Ontario Association of Engineering Technicians and Technologists (OACETT).
International Institute of Building Enclosure Consultants (IIBEC), RRO Designation.