DRYDEN

FACILITY EVALUATION REPORT

Public Works

159 King Street, Dryden, ON

Facility Details			
Gross Area (Sq.m.):	1792		
Construction Year:	Varies: (1950s Stores Bldg) (1965 Main Bldg) (1987 West Addtn.)		
Replacement Cost:	5.7 million		
Previous Evaluation:	2010	By:	Stantec
Date of Evaluation:	09-Aug-22	Project #:	22091
Evaluator:	Quartek Group Inc. architects, engineers, planners		

Repair/Maintenance Events **See attached breakdown of action items by period.*

0-5 year Recommended Event Action Budget	$ 939,480.00
6-10 year Recommended Event Action Budget	$ 1,462,638.00
11-20 year Recommended Event Action Budget	$ 384,600.00

General Summary:

The facility consists of the original stores building plus two blocks of expansion added in later years. The newest addition was constructed in 1986, which is 36 years ago. Each addition has utilized a pre-engineered structure and shell. There are inherent performance issues noted in our summaries that talk about the challenges around the enclosure of the office uses inside these shells.

Apart from these unique challenges, the buildings are all relatively old and in a poor state due to years of hard use and deterioration from the elements. The City of Dryden has invested in select repair/replacement events recently particularly with respect to HVAC equipment. The roof has already been patched by means of asphalt membrane but given the age of the buildings and the patch, the roof and various parts of the exterior wall will require replacement over the next twenty years at considerable cost and disruption. The mechanical and electrical systems are noted to require significant renewal. Other unheated buildings and various operation equipment would require more study as to project continued use.

Structural Summary (Superstructure)**:**

There are areas where there are structural concerns observed related to corrosion and the integrity of connections between base anchors for several haunched beams and footings wherein there is need for remediation of these areas within the next 5 years. Other structural concerns include the slab cracks in service bays and noted deterioration of wash bay masonry surfaces. Apart the above the foundation is otherwise sound and the overall frame structure appears to be solid with no indication of movement, distortion, etc..

Envelope Summary (Shell):

The inherent efficiencies of the pre-engineered building, with its long spans and rapid assembly, also comes with certain limitations of performance, particularly in the areas of air infiltration and super-imposed load limitations/tolerances. In the situation of the public works building, there are drawbacks to maintain separation between pressurized climate-controlled zones for staff and those zones where equipment and servicing of equipment activities are carried out in far less energy-focused volumes. Due to the range of construction phases, the building has various envelope configurations and a generally low insulation value compared to a new facility. The main roof systems will require replacement to preserve/improve water protection. Most materials particularly windows, would warrant immediate replacement and a further study to evaluate the scheduled replacement/budgeting for the balance of envelope repairs.

Interior Summary:

The interior surfaces have not been renovated in recent years and there are immediate replacement items noted in the recommended events. Deferral of some replacement events are noted for the following 6-10 year budgeting period with recommended study in advance so the allowances proposed in the report can be refined.

Mechanical Summary:

While the facility has many newly replaced furnaces, fan coil units as well as new tube heaters in heavy equipment bays, there are areas where these units are reliant upon the dated infrastructure for supply or distribution, which will need replacement within the study horizon. Similar comment applies to some fixtures noted. Due to the overall age of system installation, the theoretical life of various mechanical systems (piping, drains, ducting, etc.) are likely to require partial or whole replacement within the event horizon of the study (20years).

Electrical Summary:

Due to the concealment of most electrical wiring, the study could not fully determine the wiring age or its overall condition beyond a sampling of the age of various panel boards, some of which are due for replacement within the next 5 to 10 years. The emergency lighting batteries will require routine replacement. Due to the overall age of system installation, the theoretical life of various electrical systems are likely to require partial or whole replacement within the event horizon of the study (20 years) that should be budgeted.

Site Drainage:

The report does not identify nor cost-out a solution for the chronic overflow (flooding) from a backed up catch basin near to the receiving door of the stores building. A study is identified into provide an allowance to investigate possible solutions, not lease of which could mean raising the floor level of the stores building, jacking up the stores building or significant re-work of the storm drainage design in the area of King Street.

Study References and Methodology:

The study provides a snapshot of the physical condition and age of building components or systems of the facility at the time of the site visit conducted for evaluation. The site visit is a brief visual, non-invasion walk-through survey of the readily accessible aspects of the building and its site. The survey should not be considered technically exhaustive. The study team also reviews any technical drawings and or other reports and/or building records that are supplied to the evaluator by the facility owner/operator. A brief interview is conducted with maintenance personnel or building users, when possible, to further ascertain known issues for the facility assessment.

The study follows the Uniformat II method for categorizing building components and identifies a potential repair or replacement event. Such an event is provided with an approximate estimate of quantities and cost to maintain the building and not necessarily create an improvement of building feature or performance. The events are organized into potential risk of occurrence over three periods starting with the next five years, years 6 to 10 thereafter and for a period not exceeding a horizon of 20 years from the visit date. In each period, the variables affecting repair or replacement events diminish in accuracy of event cost the further this action is undertaken from the date of the report.

The methodology used in this study is based on the contract scope and the terminology/limitations of ASTM E2018-15 Standard Guide for Property Assessments. Event estimates provided herein are represented in 2022 Canadian dollars. Future periods referred to in this report should be indexed based on several factors affecting future costs, of which may include inflation indexing, regional changes in labour or material availability in the construction industry. The reader would apply these accordingly.

Extra Study: In context to a Uniformat II item, our report may on occasion make a recommendation for the City to engage an expert to conduct addition investigation and/or study concerning an existing building component. This is because a determination could not be reasonably ascertained by Quartek within the parameters of our study scope or because the study/investigation will afford the City more latitude as to the best remedial action other than simply a repair/replacement option. The study/investigation recommendation is in itself an event and we identify a potential cost amounts for budgeting this action. The studies we noted:

Window (and door) Condition Study: This is a situation we find commonly with window frames and glazing conditions. Glazing may have been replaced or glazing replacement may be one of the options for the City to consider instead of whole window (frame) replacement often at considerably less cost and with improved performance. Where we have recommended a study, this precedes any budgeting exercise. So in the case where we proposed

Steel Framing Study: Pre-engineered buildings are by nature built to minimum tolerances. The steel framing is typically designed to use least steel and meet design tolerances based on snow loading used from NBC weather data charts of the day and by applying design tolerances according to the version of the Ontario Building Code governing at the date of building's design/construction. As of the date of this study, NBC weather data hasn't been updated recently and instead there is new data sources available that is being used in energy and structural analysis for today's buildings and for today's more extreme weather occurrences. The OBC has vastly changed particularly Part 4 (Structural Designs) since the construction of the pre-engineered buildings reviewed in this study. For the City to invest into the recladding of a building of this age, our recommendation would be to conduct a structural analysis before hand to determine if reinforcement and other structural changes are required to make the building safe for continued use.

Subsurface Site Drainage Study: Carry-out a separate detailed investigation into the condition of storm sewers on the street and within the Public Works Yard. As determined this study may involve CCTV robotic probe and/or other field survey to determine cause of flooding and to make recommendations for repair.

Fuel Delivery Study: A combined number of variables would involve independent evaluation of requirements for a) maintaining an existing fueling station or decommissioning same on site b) relocating a fueling station on the same site and undergoing the environmental study and TSSA standards for the equipment and installation in a new location along with decommissioning of the former fueling station or c) undergoing the environmental study and TSSA standards for the equipment and installation on a new site. Costing of the fuel delivery will have a broad range considerations that warrant a study before establishing a budget for implementation.

We may determine that as a follow-up after implementing a recommended study/investigation, the result (findings)are likely to facilitate a cost for replacement, remediation or other action, a budgetary amount in the form of an allowance has been noted. The findings of the recommended study may exceed this allowance depending on the outcome, but some funding will presumably be allocated to cover a portion of the action.

Theoretical Life: (References provided from RECapp and Other M/E reference documents) We have provided selective examples of typical operational/functional life for various building components as a general guide to readers:

Electrical Components	
Electrical Switch gear	40 years
Electrical Light Fixtures	20 - 30 years + *Efficiency Obsolescence
Radiant Electrical Heating	20 years + *Efficiency Obsolescence
Main Conductors	60 – 70 years
Transformers	30 - 40 years + *Efficiency Obsolescence
Mechanical Components	
Plumbing Piping (Copper)	50-60 years
Hydronic Piping (galv.Iron)	70 - 90 years + *Efficiency Obsolescence
Washroom Fixtures	30 years + *Efficiency Obsolescence
San.Waste Piping (Iron)	60 – 70 years
Gas Furnaces(combustion)	20 - 30 years + *Efficiency Obsolescence
Air handling with H/C coils	50 years + *Efficiency Obsolescence
Light Metal Ducting	60 – 70 years
Enclosure Components	
Window Units (Alum.Frame)	40-50 years + *Efficiency Obsolescence
Flat Roofing Membranes	30 - 40 years + *Efficiency Obsolescence
Sloped Roofs (Shingles)	20-40 years
San. Waste piping (Iron)	30–70 years
Standard Brick (Veneer)	80 - 100 years
Conventional EIFS wall	40 - 60 years
Exterior Metal Siding	40 - 60 years
Superstructure Components	
Concrete Foundations	40-50 years + *Efficiency Obsolescence
Structural Steel Framing	30 - 40 years + *Efficiency Obsolescence
Masonry Walls	20-40 years
San. Waste piping (Iron)	30–70 years

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General Report Disclaimer:

The report should be reviewed in context to any prior hazardous building materials assessment studies as to further budgeting considerations beyond the limited repair/replacement events described in this report.
The intended use of the report is for assistance with long-range asset management planning for a facility under

its current state so ideally adequate budgeting can be provided.

The repair replacement events identified in the report are not intended to capture routine maintenance of various components of the facility that would be generally anticipated as part of the day-to-day operations. Deferred maintenance can lead to earlier than predicted failure of equipment, systems, materials, etc. Not withstanding the described methodology, the study findings are only as accurate as the available information provided, the allowable time to conduct a site visit to properly document findings and the level of access afforded the surveyors by the owner's representative. Costing accuracy may vary due to our ability to fully assess that collateral affects of a repair/replacement event on other elements of the building or surrounding site.

Part A Substructure

A10 Foundations

A1030 **Slab On Grade**

A103001 Standard Slab on Grade

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
SM		1	$ 84,000	CIP concrete slab on grade in maintenance bays.	**Repair**

Condition	Appeared to be in fair condition. Reported that steep slope hinders ability to perform work such as rolling dollies on the floor. Allowance for resurfacing of maintenance bays for regrading.
Scope	Standard slab-on-grade is supported by compacted earth or gravel fill. The soil bearing capacity is sufficient to support the slab. Assemblies include fine grade, gravel fill, underslab insulation, edge forms, termite treatment (interior slabs only), vapor retarder, reinforcing, expansion joints, control joints, and finish and curing. Assemblies are based on thickness of slab.

A103005 Pits and Bases

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
Allowance		1	$ 21,000	CIP concrete service pit in north garage bay.	**Repair**

Condition	Concrete walls and floor appeared to be in good condition. Steel corner angles appeared to be in poor condition - rusted and flaking steel noted.
Scope	Cast-in-place pits and bases. Assemblies include excavation, hand-shaped bottoms, compacted backfill, formwork, reinforcing steel, concrete, and concrete finish. Examples include elevator pits, dock leveler pits, oil change pits, and bases for equipment

Part B Shell

B10 Superstructure

B1010 **Floor Construction**

B101099 Other Floor Construction

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
Allowance		1	$ 2,000	Mezzanine floor in shop constructed of wood joists and sheathing.	**Repair**

Condition	Overall floor appeared in good condition. Localized repairs required at section adjacent mechanical equipment and over drafting room where floor has been cut. Blocking to support cut edges required.
Scope	Any type of special floor construction not included above would fall in this category, such as catwalks, space frames, etc. All associated work items would be included in the assembly.

B1020 **Roof Construction**

B102001 Structural Frame

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
Allowance	Study	1	$ 5,000	Roof framing of original Stores building	**Allowance**

Condition	Unable to review concealed roof framing. Based on age of this part of the PW bldg. an inspection to determine the nature of the framing and the uplift protection if any.
Scope	The structural frame could consist of structural steel including columns, beams, joists, and all associated items. It could be a concrete frame utilizing concrete or masonry columns and concrete girders and beams. The structural frame could be wood columns with wood beams or wood trusses. The structural frame could be a combination of the above. For example, concrete or masonry columns with structural steel beams and joists. All associated work items should be included in each assembly. Separate assemblies would be used for different types of construction. The unit of measure at the assembly level is the square footage of the supported area. Decks and slabs are not included in this assembly

B102004 Canopies

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
SM		9	$ 3,600	Canopy at west side entrance to crew room constructed of steel columns and wood beams, joists and sheathing.	**Repair**

Condition	Overall good condition. Beams showed weathering. Recommended to clad beams to avoid further deterioration due to exposure to the elements.
Scope	Canopies should be broken into assemblies according to their particular type of construction (i.e., flat slab, pan slab, precast or pre-stressed slab, four-way slab, slabs on metal or wood decking with concrete fill, etc.). All associated work items should be included in each assembly

B20 Exterior Enclosure

B2010 **Exterior Walls**

B201001 Exterior Enclosure

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
LM	Allowance		$ 10,000	General perimeter consisting of a range of wall construction that is approximately 60% masonry block and 40% metal girts with liner in exposed pre-engineered portions	**Study**

Condition	A range of poor to fair condition: The air/vapour integrity of the pre-eng. Wall sections are prone to leakage and poor thermal control yet these walls form part of the envelope separating climate-controlled zones of them building. The metal siding that clads nearly all of the building perimeter except for approx. 11 meters of stone veneer, are in various states of corrosion along the ground level where some sections even appear to have the wood strapping rotted out. There are areas where there are exposed asbestos shingles (Stores bldg. block). Due to the range of repair scenarios to restore walls, a multi-faceted strategy would appear appropriate toward remediation following a study to further assess the various methods of repair and to assign accuracy for budgeting appropriate funding prior refining an allowance approach.
Scope	Assemblies would include material contained in exterior closure wall, such as masonry with brick veneer. Materials used for interior finishes on exterior walls are not included in this assembly. For example, if the interior side of this masonry wall is sheetrock applied on metal furring strips, the masonry wall is included in this assembly, but the furring strips and sheetrock are categorized as Wall Finishes C3010

B201003 Insulation and Vapour Retarder

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
LM	Allowance			existing exposed metal/touch-ups and colour harmonizing. Painted dissimilar wall colours of metal siding. See B201001	**Study**

Condition	Refer to B201001 for example thermal and vapour barrier related issues to be addressed.
Scope	Assemblies would include all types of insulation associated with the exterior wall. Rigid, batt and poured insulation should be separated into different assemblies.

B201010 Exterior Coatings

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
SM		100	$ 8,500	Existing exposed metal/touch-ups and colour harmonizing. Painted dissimilar wall colours of metal siding.	**Coating**

Condition	A temporary measure to improve cosmetically. Certain sections of existing pre-finished siding have stained or faded.
Scope	Assemblies include paint, stucco, etc. The unit of measure at the assembly level is area of exterior coatings.

B201099 Other Exterior Walls

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
SM	Unit Cost Est.	6	$ 12,000	Severely dented sections of siding at various locations.	**Repair**

Condition	Replace section of metal siding and girt or strapping if damaged.
Scope	Exterior walls not described by the assembly categories listed above

B2020 **Exterior Windows**

B202001 Windows

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
Unit Cost Est.		8	$ 29,400	Replace Wood Windows on original west-facing public works offices and wood windows facing north in stores block.	**Replace**

Condition	Wood frames and sashes appear rotted and paint has flaked off of exterior surfaces. Capping has failed and age of windows exceed theoretic life and performance.
Scope	Fixed or operable windows located in exterior walls or exterior skin. Assemblies would include frames, glazing, caulking, finishes, and other associated work.

B30 Roofing

B3010 **Roof Coverings**

B301002 Low Slope Membrane Systems

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
SM		approx. 6	$ 12,000	Modified Bituminous membrane over existing metal siding (~800 SM total coverage):	**Repair**

Condition	Fair condition (Mod-Bit); History of application unknown. Leaking areas only to be repaired around roof penetrations and other leaking areas noted by staff.
Scope	Assemblies include roof coverings, such as built-up, elastomeric, modified bitumen, etc. Also, walkways or work areas (used to gain access to rooftop equipment) will be included here.

Part C Interiors

C10 Interior Construction

C1010 **Partitions**

C101001 Fixed Partitions

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
EA	Study		$ 5,000	Dividing wall (mostly masonry) and ceiling assembly between service bays and office zones	**Study**

Condition	Study to determine Thru-wall and thru-ceiling penetrations and door sealant between zones. Study to review any HVAC cross ducting and exhaust cross ducting. Study to determine best methods to seal air movement and thermal transfer between office zone and mechanical service bays. Study to propose details to carry-out work under allowance in 6-10 year action window.
Scope	Interior fixed partitions include metal or wood studs, sheetrock, masonry, and concrete walls.

C101004 Interior Guardrails and Screens

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
SM	Allowance	1	$ 10,000	Mezzanine Wooden Guard rail and stair guard	**Repair**

Condition	Existing railing would not comply with OBC requirements nor workplace safety standards and will require modifications to include toe guard, intermediate rails and increased height of upper railing.
Scope	Assemblies include balustrades (handrails and the row screen of posts that support them) and screens and associated work including tracks and anchoring systems. These balustrades/ guardrails are related to interior balconies and are not associated with stairs.

C30 Interior Finishes

C3020 **Floor Finishes**

C302004 Resilient Floor Finishes

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
SM		60	$ 7,500	Grey VAT as identified in PINCHIN report as area 9 containing asbestos (Chrysotile)	**Replace**

Condition	Good condition: selective removal and disposal of tile; replacement with non-VAT tile or sheet.
Scope	Assembly includes Resilient Floors and bases.

C302005 Carpeting

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
SM		142	$ 9,500	Glue down nylon carpet located in front offices reception/general office.	**Replace**

Condition	Appears worn in travel areas /stained in other places.
Scope	Sheet or tile carpet with appropriate underlay

Part D Services

D20 Plumbing

D2010 **Plumbing Fixtures**

D201001 Water Closets

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
EA		5	$ 11,900	Crew washroom & other single W/Cs	**Replace**

Condition	Older High-volume fixtures. At theoretic life.
Scope	Self explained

D201002 Urinals

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
EA		1	$ 4,200	Crew washroom	**Replace**

Condition	Older High-volume fixtures. At theoretic life.
Scope	Self explained

D201003 Lavatories

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
EA		5	$ 9,100	Crew washroom & other single W/Cs	**Replace**

Condition	Older fixtures and faucets. At theoretic life.
Scope	Self explained

D201004 Sinks

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
EA		2	$ 3,640	In washrooms and utility spaces	**Replace**

Condition	Older fixtures and faucets. At theoretic life.
Scope	Self explained

D201005 Showers/Tubs

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
EA		2	$ 3,640	In Crew locker area	**Replace**

Condition	Older fixtures and faucets. At theoretic life.
Scope	Self explained

D2030 **Sanitary Waste**

D202099 Other Sanitary Waste

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
EA		3	$ 28,000		**Replace**

Condition	
Scope	Sanitary waste and vent not described by the assembly categories listed above.

D2040 **Rain Water Drainage**

D204099 Other Rain Water Drainage System

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
EA		1	$ 21,000		**Replace**

Condition	
Scope	Rain water drainage system not described by the assembly categories

D30 HVAC

D3040 **Distribution Systems**

D304008 Air Handling Systems

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
L/S	EA	1	$ 21,000		**Replace**

Condition	Exceeds theoretic life of Equipment Operation.
Scope	This includes systems that distribute heated and cooled air, ventilating and exhaust air, hot and chilled water, steam, and glycol heating.

D50 Electrical

D5010 **Electrical Service and Distribution**

D501005 Panels

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
AMP		1	$ 14,000	Panel D and DC in garage. Panel DA in Tool Crib / Stores. Panel 3 in drafting room. Stab-lok panel on mezzanine above drafting room. Stab-lok panel on mezzanine above wash bay. Stab-lok panel in storage pole barn.	**Replace**

Condition	Replace old Stab-lok panel boards. Panel boards at or near end of service life.
Scope	Branch circuit panel boards. Assemblies include panel boards, breakers, conduit, and wire.

Part E Equipmt. & Furnishings

No Events

Part F Special Construction

F10 Special Construction

F1010 **Special Structures**

F101001 Metal Building Systems

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
Allowance		1	$ 7,000	Main building built in the mid-1960s and north vehicle storage addition built in the mid-1980s.	**Repair**

Condition	Appeared to be in overall good condition with localized areas in poor condition. Exposed column at front entrance showing deterioration; to be refinished and protected. Deteriorated columns near the base in the vehicle maintenance bays to be reinforced (see event below).
Scope	Special structures includes air-supported structures, and pre-engineered structures.

F101001 Metal Building Systems

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
Allowance		1	$ 210,000	Main pre-eng building and north addition. Deteriorated pre-eng columns in garage bays.	**Repair**

Condition	Deteriorated columns near the base in the vehicle maintenance bays to be reinforced (see event below). Repairs to be designed by Professional Engineer licenced in the Province of Ontario.
Scope	Special structures includes air-supported structures, and pre-engineered structures.

F101001 Metal Building Systems

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
Allowance		1	$ 7,000	West office/car-port addition built in the mid-1980s.	**Repair**

Condition	Limited visibility due to finishes. Where visible, appeared to be in good condition. At west exterior wall of offices, recommended that lower section of rusted cladding be removed to allow for assessment of structural columns. Provide protection of structure from deterioration. Allowance given for protection of structure; to be confirmed following further investigation.
Scope	Special structures includes air-supported structures, and pre-engineered structures.

F101002 Exterior Utility Buildings

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
				East pole drive shed	
SM		275	$ 115,500		**Replace**

Condition	Building appeared to be in poor condition. Exposed wood elements appeared quite weathered; one pole replaced with sawn timber member, water staining on roof trusses.
Scope	Special structures includes air-supported structures, and pre-engineered structures.

F101002 Exterior Utility Buildings

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
				Bulk Materials Shed	
SM		275	$ 85,000		**Replace**

Condition	Building appeared to be in poor condition. Concrete damaged at front openings, exterior finishes in poor condition and missing in patches.
Scope	Special structures includes air-supported structures, and pre-engineered structures.

F101002 Exterior Utility Buildings

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
				West pole Storage Shed	
SM		275	$ 126,000		**Replace**

Condition	Water staining on roof trusses.
Scope	Special structures includes air-supported structures, and pre-engineered structures.

F1020 **Integrated Construction**

F102001 Special Purpose Rooms

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
				Vehicle wash bay inside maintenance garage.	
Allowance		1	$ 50,000		**Repair**

Condition	Painted concrete masonry walls with hollow precast concrete roof. Walls and ceiling appeared mouldy; walls worn in areas. Allowance for refurbishment.
Scope	Integrated construction includes integrated assemblies and special purpose rooms.

Part G Bldg. Siteworks

G30 Site Civil/Mechanical Utilities

G3030 **Storm Sewer**

D303002 Storm Sewer Piping

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
LM	Study		$ 3,000	Catch basins located outside the stores building east entrance and adjacent storage area.	**Study**

Condition	Storm sewer inadequate to drain site around stores building during storm events leading to flooding of the building. Further study needed to determine appropriate repair measures whether through restructuring of storm drainage, provision of storm water storage, or raising of the building and regrading.
Scope	This includes installation of piping for collection of storm water.

G3060 **Fuel Distribution**

D306001 Liquid Fuel Distribution Piping

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
LM	Study			East Yard	**Study**

Condition	Not visible. No issues reported. Based on apparent age of fuel pump, expect system may be nearing the end of its life expectancy. Recommend obtaining a quote from a supplier as this is a specialty item.
Scope	This includes installation of piping for fuel oil distribution. This includes equipment related to piping, system leak detection, and tightness testing.

D306003 Liquid Fuel Dispensing Equipment

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
LM	Study			East Yard	**Study**

Condition	Appears to be an older pump that may be nearing the end of its life expectancy. Anticipate replacement or refurbishment of fuel distribution system in near future. Recommend obtaining a quote from a supplier as this is a specialty item.
Scope	This includes installation of buried or above ground fuel tanks.

D306004 Liquid Fuel Storage Tanks

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
EA	Study			Underground diesel fuel storage tank (4500L) in east yard. ESA report by Garner Lee dated 1998 indicates tank was likely installed in 1970.	**Study**

Condition	Not visible. No issues reported. Based on apparent age of fuel pump, expect system may be nearing the end of its life expectancy.
Scope	This includes installation of buried or above ground fuel tanks.

D306005 Liquid Fuel System Trench boxes

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
LM	Study			East yard.	**Study**

Condition	Not visible. No issues reported. Based on apparent age of fuel pump, expect system may be nearing the end of its life expectancy. Recommend obtaining a quote from a supplier as this is a specialty item.
Scope	This includes installation of prefabricated trench boxes for shoring during installation of piping.

Part A Substructure

No Events

Part B Shell

B10 Superstructure

B1020 **Roof Construction**

B102001 Structural Frame

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
Allowance			$ 20,000	Wood (Stores Building)	**Allowance**

Condition	Refer to Study undertaken in year 1-5 and action list, if any for reinforcement of this wood roof truss system.
Scope	The structural frame could consist of structural steel including columns, beams, joists, and all associated items. It could be a concrete frame utilizing concrete or masonry columns and concrete girders and beams. The structural frame could be wood columns with wood beams or wood trusses. The structural frame could be a combination of the above. For example, concrete or masonry columns with structural steel beams and joists. All associated work items should be included in each assembly. Separate assemblies would be used for different types of construction. The unit of measure at the assembly level is the square footage of the supported area. Decks and slabs are not included in this assembly

B20 Exterior Enclosure

B2010 **Exterior Walls**

B201001 Exterior Enclosure

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
SM	Allowance	238	$ 600,000	General perimeter consisting of a range of wall construction that is approximately 60% masonry block and 40% metal girts with liner in exposed pre-engineered portions	**Repair**

Condition	A range of poor to fair condition: See Study description of example repair scope. Due to the range of repair scenarios to restore walls a suggested allowance approach would be appropriate for remediation, which is based on approximately $280/SM or $25/sq. Ft. . See Study recommendations.
Scope	Assemblies would include material contained in exterior closure wall, such as masonry with brick veneer. Materials used for interior finishes on exterior walls are not included in this assembly. For example, if the interior side of this masonry wall is sheetrock applied on metal furring strips, the masonry wall is included in this assembly, but the furring strips and sheetrock are categorized as Wall Finishes C3010

B201011 Joint Sealant

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
LM		300	$ 3,000	General maintenance labour and sealant supply to various joint locations throughout.	**Repair**

Condition	Some caulking has dried and is cracked; other evidence of gaps and lack of elasticity. Theoretical life of exterior sealant is 10 to 15 years.

B2020 **Exterior Windows**

B202004 Exterior Glazing

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
SM	Study		$ 3,000	All exterior Glass to be reviewed for gasketing, glazing and performance.	**Study Req'd**

Condition	Periodic scheduled review of glazing performance, sealed unit performance, etc.
Scope	In addition to glass, this includes acrylic, polycarbonate, and plastic glazing.

B2030 **Exterior Doors**

B203001 Solid Doors

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
EA		5	$ 4,000	Perimeter HM exit doors	**Coating**

Condition	Unfinished exterior: to be cleaned of rust, prime coat and finish paint
Scope	Assemblies include all exterior solid doors, hollow metal or wood with frames. Solid doors may include viewing lites in door. Door hardware is located in B203008 EXTERIOR DOOR HARDWARE.

B30 Roofing

B3010 **Roof Coverings**

B301003 Roof Insulation and Fill

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
SM		approx. 800	$ 52,000	See B301099 for description of location	**Replace**

Condition	Remove insulated liner and install new liner (top down)
Scope	Assemblies include all types of insulation associated with the roof area.

B301004 Flashing and Trim

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
SM		approx. 800	$ 23,000	See B301099 for description of location	**Replace**

Condition	Provide flashing around edges and at valleys, etc. plus interface between 1987 addition.
Scope	Assemblies include all flashings associated with the roof, i.e., eave flashing, gable flashing, etc.

B301006 Roof Openings and Supports

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
SM		approx. 800	$ 16,000	See B301099 for description of location	**Replace**

Condition	Various existing HVAC openings and venting/exhaust openings. Verify framing between purlins of pre-eng frame. Review and if required brace dormer to meet original pre-eng. Specs.
Scope	All roof penetrations including roof hatches, sky lights, area glazing, roof hatches, gravity roof ventilators, smoke vents, etc.

B301099 Other Roofing

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
SM		approx. 800	$ 140,000	All Pre-eng metal roofing that is currently sealed with Mod-Bit membrane	**Replace**

Condition	Remove metal roof sheathing and mod-bit capping. new metal siding per pre-eng load loading specifications. Provide flashing around existing roof penetrations compatible with metal sheet roofing.
Scope	Assemblies include roof coverings, such as built-up, elastomeric, modified bitumen, etc. Also, walkways or work areas (used to gain access to rooftop equipment) will be included here.

Part C Interiors

C10 Interior Construction

C1010 **Partitions**

C101001 Fixed Partitions

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
SM	Allowance		$ 145,000	See C101001 during 1-5 year period. Refers to walls and ceilings that divide the office from the service bay zones in attempt to address equivalence to new-build separation.	**Repair**

Condition	Repair - Anticipated repair actions may include: duct sealing around penetrations, Thermal and air/vapour sealant of ceiling assembly using foam spray in cavities, membranes, tapes, etc., fire protection and sealing of any exposed voids/gaps. Gasketing around doors and replaced/new door closers and other hardware. Pressure testing of completed repairs.
Scope	Assembly includes caulking, gasketing between dissimilar materials and at joints.

C30 Interior Finishes

C3020 **Floor Finishes**

C302007 Painting and Staining Floors

Unit/Meas.	O/Factor	Quantity	C	Location	Flag
SM		881	$ 116,290	Service bay areas, stores building	**Coating**

Condition	Most service bay floor do not have paint or other treatment other than perhaps a sealer. The floors would require etxhing and other cleaning prior to receiving a primer (expoxy) and finish coat
Scope	Assemblies include painted and stained floor surfaces.

C3030 **Ceiling Finishes**

C303004 Acoustical Ceiling Tile and Panels

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
SM	Allowance	420	$ 28,600	Office area	**Replace**

Condition	Replace damaged and or stained and discoloured SAT and to repaint 12" x12" interlocking tile (front office area)
Scope	Assemblies include acoustical ceiling tiles and panels. The suspension system, if required, is in Assembly Category C303007. This assembly does not include items that directly apply to ceiling finishes covered elsewhere in this subsystem.

Part D Services

D20 Plumbing

D2020 **Domestic Water Distribution**

D202001 Pipes and Fittings

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
EA		1	$ 28,000		**Replace**

Condition: Exceeding theoretic life

Scope: This assembly includes equipment associated with the domestic water supply, including fittings, and specialties required for hookup. Assemblies include hot water heaters, water treatment plant, i.e., water softeners, filters, distillers, etc.; pumps directly associated with domestic water supply; and tanks for the potable hot or cold water system. The unit of measure at the assembly level is pieces of equipment.

D202002 Valves and Hydrants

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
EA		1	$ 5,600		**Replace**

Condition: Exceeding theoretic life

Scope: Assemblies include all valves and hydrants. Hose bibbs are included in this assembly. The unit of measure at the assembly level is number of valves and hydrants.

D202003 Domestic Water Equipment

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
EA		2	$ 4,200		**Replace**

Condition:

Scope: This assembly includes equipment associated with the domestic water supply, including fittings, and specialties required for hookup. Assemblies include hot water heaters, water treatment plant, i.e., water softeners, filters, distillers, etc.; pumps directly associated with domestic water supply; and tanks for the potable hot or cold water system. The unit of measure at the assembly level is pieces of equipment.

D202004 Insulation and Identification

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
EA		1	$ 11,200		**Replace**

Condition: To be replaced with associated piping.

Scope: Assemblies include insulation used in association with domestic water supply. The unit of measure at the assembly level is number of fixtures.

D202005 Specialties

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
EA		1	$ 7,000		**Replace**

Condition

Scope: Any other special items associated with domestic water supply. All associated work items, including pipes, fittings, valves, insulation, and hookup should be included in this assembly. The unit of measure at the assembly level is pieces of special equipment.

D2030 Sanitary Waste

D203001 Waste Pipe and Fittings

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
EA	Assembly	1	$ 10,500		**Replace**

Condition: Exceeds theoretic life of System Operation.

Scope: Assemblies include all pipe, fittings, and associated work with regard to sanitary waste pipe and fittings. The unit of measure at the assembly level is number of fixtures.

D203002 Vent Pipe and Fittings

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
EA	Assembly	1	$ 3,500		**Replace**

Condition: Exceeds theoretic life of System Operation.

Scope: Assemblies include all pipe, fittings, and associated work with regard to sanitary vent pipe and fittings. The unit of measure at the assembly level is number of fixtures.

D203003 Floor Drains

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
EA		1	$ 3,888		**Replace**

Condition: Exceeds theoretic life of System Operation.

Scope: Assemblies include all floor drains. Hub drains are considered to be pipe and are not included in this category. The unit of measure at the assembly level is number of drains.

D2090 Other Plumbing Systems

D209005 Compressed Air System (Non-Breathing)

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
KG/M2	EA	1	$ 22,400		**Replace**

Condition: Exceeds theoretic age

Scope: This subsystem includes all special plumbing systems which are not included in D2010 through D2040.

D30 HVAC

D3010 **Energy Supply**

D301002 Gas Supply System

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
KW	Assembly	1	$ 22,260		**Replace**

Condition	Exceeds theoretic life of Equipment Operation. Not efficient
Scope	This category includes both natural gas and LPG. Assemblies include metering and regulation equipment, storage equipment, transfer equipment, and distribution piping. The unit of measure at the assembly level is each system.

D3040 **Distribution Systems**

D304001 Air Distribution, Heating and Cooling

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
L/S	Assembly	1	$ 105,000		**Replace**

Condition	Exceeds theoretic life of Equipment Operation. Not efficient
Scope	Assemblies include heating coils, cooling coils, and fittings and specialties required for water hook-up. This assembly also includes duct heaters, filters, humidifiers, supply and return ductwork, dampers, fire dampers, supply and return grilles, registers and diffusers, turning vanes, sound traps, and all associated insulation. The unit of measure at the assembly level is CF/M.

D304008 Exhaust Systems

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
L/S	Assembly	1	$ 50,400		**Replace**

Condition	Exceeds theoretic life of Equipment Operation. Not efficient
Scope	Assemblies include ductwork grilles, registers, diffusers, fans, and all associated work. The unit of measure at the assembly level is each system.

D50 Electrical

D5020 **Lighting and Branch Wiring**

D502002 Lighting Equipment

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
SM			$ 25,200	Mostly T8 fluorescent light fixtures throughout building. Some LED and T5 fluorescent light fixtures in shop / garage areas. Incandescent light fixtures in pole barn.	**Replace**

Condition	Energy Reduction Payback: Replace ballasts and lamps in fluorescent light fixtures. Replace drivers in LED light fixtures.
Scope	This assembly includes fixtures, conduit, wire, and switching devices.

D5090 **Other Electrical Services**

D509002 Emergency Lighting and Power

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
SM			$ 5,600	Emergency battery units and remote heads located throughout building	**Replace**

Condition	Replace batteries and replace lamps at end of service life.
Scope	Assemblies include fixtures, motors used for power generation, connection and testing, transfer switches, conduit, wire, battery chargers, batteries, and solar panels.

D509005 Electrical Heating

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
SM			$ 7,000	Fan forced heater in front office area. Baseboard heaters in various areas throughout building.	**Replace**

Condition	Replace heaters at end of theoretical service life.
Scope	Items could include baseboard heaters and wall and ceiling heaters. Assemblies include safety switches, control devices, heaters, conduit, and wire.

Part E Equipmt. & Furnishings

No Events

Part F Special Construction

No Events

Part G Bldg. Siteworks

No Events

Part A Substructure

No Events

Part B Shell

B20 Exterior Enclosure

B201011 Joint Sealant

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
LM		300	$ 3,000	General maintenance labour and sealant supply to various joint locations throughout.	**Repair**

Condition	Routine periodic maintenance or future event. Theoretical life of exterior sealant is 10 to 15 years.
Scope	Exterior application of joint sealants

B2020 **Exterior Windows**

B202004 Exterior Glazing

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
EA	allowance	10	$ 16,000	All exterior Glass to be reviewed for gasketing, glazing and performance. Based on prior study.	**Repair or Replace**

Condition	General: window frames are in fair condition but reglazing due to age of sealed units.
Scope	Exterior application of joint sealants

B30 Roofing

B3010 **Roof Coverings**

B301003 Roof Insulation and Fill

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
SM		approx. 625	$ 4,070	See B301099 for description of location	**Replace**

Condition	Remove insulated liner and install new liner (top down)
Scope	Assemblies include all types of insulation associated with the roof area.

B301004 Flashing and Trim

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
SM		approx. 625	$ 18,000	See B301099 for description of location	**Replace**

Condition	Provide flashing around edges and at valleys, etc. plus interface between 1987 addition.
Scope	Assemblies include all flashings associated with the roof, i.e., eave flashing, gable flashing, etc.

B301006 Roof Openings and Supports

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
SM		approx. 625	$ 12,500	See B301099 for description of location	**Replace**

Condition	Various existing HVAC openings and venting/exhaust openings. Verify framing between purlins of pre-eng frame. Review and if required brace dormer to meet original pre-eng. Specs.
Scope	All roof penetrations including roof hatches, sky lights, area glazing, roof hatches, gravity roof ventilators, smoke vents, etc.

B301099 Other Roofing

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
SM		approx. 625	$ 90,750	All Pre-eng metal roofing that does not currently have a sealed with Mod-Bit membrane	**Replace**

Condition	Remove metal roof sheathing. New metal siding per pre-eng loading specifications. Provide flashing around existing roof penetrations compatible with metal sheet roofing.
Scope	Assemblies include roof coverings, such as built-up, elastomeric, modified bitumen, etc. Also, walkways or work areas (used to gain access to rooftop equipment) will be included here.

B301001 High Slope Roof Coverings

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
SM		approx. 220	$ 10,000	Existing Stores building	**Replace**

Condition	Replace building asphalt shingles due condition and performance life exceeded.
Scope	Assemblies include roof coverings, such as shingle, wood shake, and standing seam, etc.

B301004 Flashing and Trim

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
SM		approx. 220m2	$ 3,400	Store building and linking breezeway:	**Replace**

Condition	Replaced (1996) South part of Roof - Inverted membrane roof const.
Scope	Assemblies include all flashings associated with the roof, i.e., eave flashing, gable flashing, etc.

B301006 Roof Openings and Supports

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
Unit Cost Est.		1	$ 1,000	Store building and linking breezeway: flashing, and joints between dissimilar materials	**Replace**

Condition	Numerous flashing and sealant failure locations
Scope	All roof penetrations including roof hatches, sky lights, area glazing, roof hatches, gravity roof ventilators, smoke vents, etc.

Part C Interiors

C10 Interior Construction

C1010 **Partitions**

C101008 Joint Sealant

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
LM			$ 2,500	General maintenance labour and sealant supply to various joint locations throughout.	**Repair**

Condition	Some caulking has dried and is cracked; other evidence of gaps and lack of elasticity. Theoretical life of exterior sealant is 10 to 15 years.
Scope	Exterior application of joint sealants

C1020 **Interior Doors**

C102001 Standard Interior Doors

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
EA		22	$ 5,500	refers to all doors within the office/staff zone and the stores zone of the building (both sides and frame)No aluminum doors	**Coating**

Condition	Stained and discoloured existing paint and various stages of age; primarily wood doors but some hollow metal doors and frames as well.
Scope	Assemblies include all standard interior wood or hollow metal doors with frames, finish, etc. Standard interior doors may include vision lites. Interior door hardware is located in C102007 INTERIOR DOOR HARDWARE.

C102007 Interior Door Hardware

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	
EA		22	$ 10,080	refers to all doors within the office/staff zone and the stores zone of the building ; some are exterior HM doors. No aluminum doors	**Replace**

Condition	Assumes on basis of age that all hardware in beyond Theoretical life of and not master keyed or equipped with level handles, closers and other fitments.
Scope	Assemblies include all standard interior wood or hollow metal doors with frames, finish, etc. Standard interior doors may include vision lites. Interior door hardware is located in C102007 INTERIOR DOOR HARDWARE.

C30 Interior Finishes

C3010 **Wall Finishes**

C103005 Painting to Walls

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
SM		353.7	$ 8,800	all drywall wall surfaces and concrete block wall surfaces within the office/staff zone and the stores zone of the building	**Coating**

Condition	General paint wear and damage over period of use.
Scope	This assembly includes painting, spackling and sealant applied directly to an interior wall surface.

Part D Services

D30 HVAC

D3030 **Cooling Generating Systems**

D303003 Direct Expansion Systems

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
KW	EA	2	$ 14,000	roof mounted	**Replace**

Condition	Exceeds theoretic life of Equipment Operation. Not efficient
Scope	Assemblies include condensers, compressors, heat pumps, and refrigerant piping. The unit of measure at the assembly level is each.

D50 Electrical

D5010 Electrical Service and Distribution

D501005 Panels

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
AMP		1	$ 4,200	Panels A and B in main electrical room.	**Replace**

Condition	Replace old panelboards in main electrical room. Panelboards at or near end of service life.
Scope	Branch circuit panel boards. Assemblies include panel boards, breakers, conduit, and wire.

D5020 Lighting and Branch Wiring

D502002 Lighting Equipment

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
SM			$ 25,200	Mostly T8 fluorescent light fixtures throughout building. Some LED and T5 fluorescent light fixtues in shop / garage areas. Incandescent light fixtures in pole barn.	**Replace**

Condition	Energy Reduction Payback: Replace ballasts and lamps in fluorescent light fixtures. Replace drivers in LED light fixtures.
Scope	This assembly includes fixtures, conduit, wire, and switching devices.

D5090 Other Electrical Services

D509002 Emergency Lighting and Power

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
SM			$ 5,600	Emergency battery units and remote heads located throughout building	**Replace**

Condition	Exceeded reliable Operation Life: Replace batteries at end of life. Replace lamps in remote heads.
Scope	Assemblies include fixtures, motors used for power generation, connection and testing, transfer switches, conduit, wire, battery chargers, batteries, and solar panels.

Part E Equipmt. & Furnishings

No Events

Part F Special Construction

F10 Special Construction

F1040 **Special Facilities**

F104003 Kennels and Animal Shelters

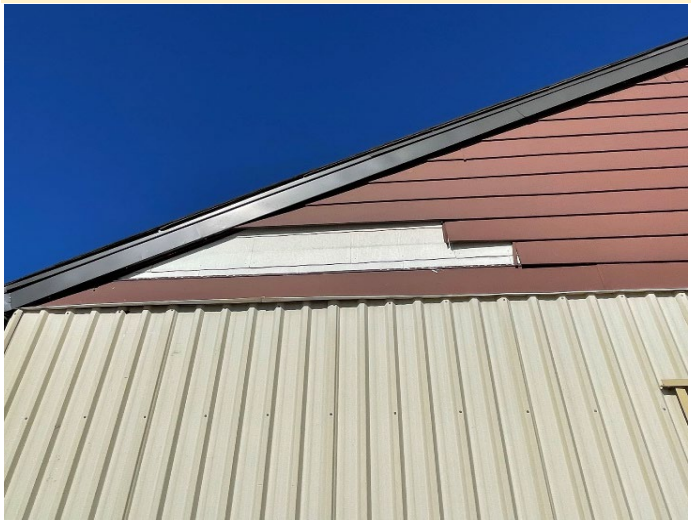
Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
Allowance		1	$ 150,000	Animal shelter located at north edge of property.	**Repair**

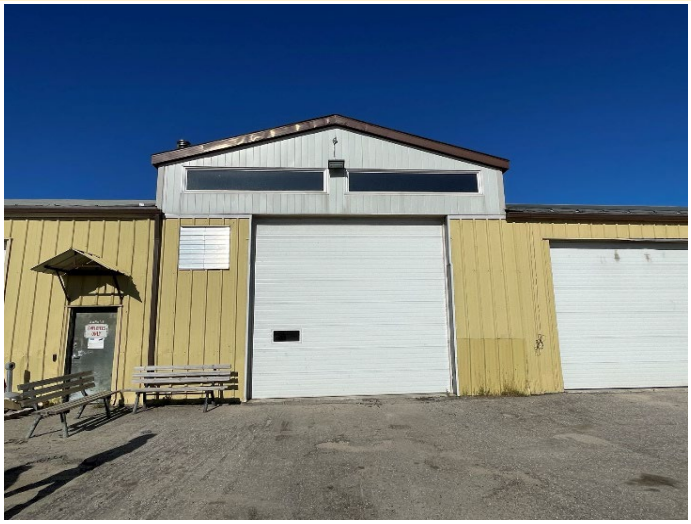
Condition	Viewed from exterior only. Building appeared to be in fair to poor condition overall. Cracks or missing mortar noted in concrete masonry walls. Our understanding is this building is used very seldom if at all. If to be put back into regular use, rehabilitation and upgrades are expected to be needed. Allowance provided for refurbishment.
Scope	Special facilities includes aquatic facilities; ice rinks, site constructed incinerators; kennels and animal shelters; and liquid and gas storage tanks.

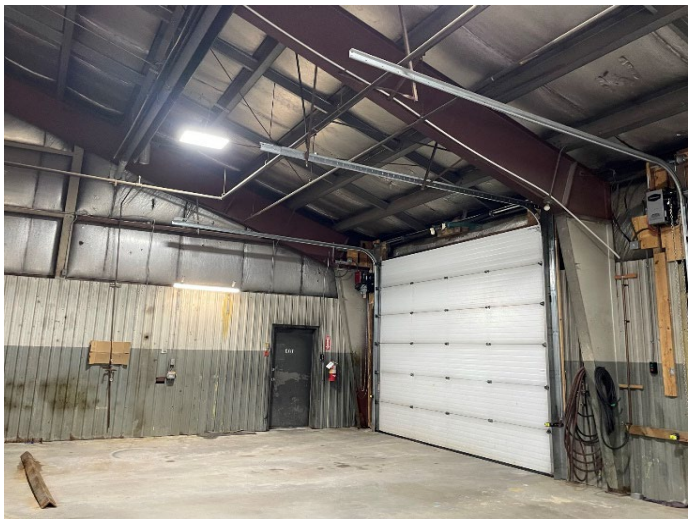
Part G Bldg. Siteworks

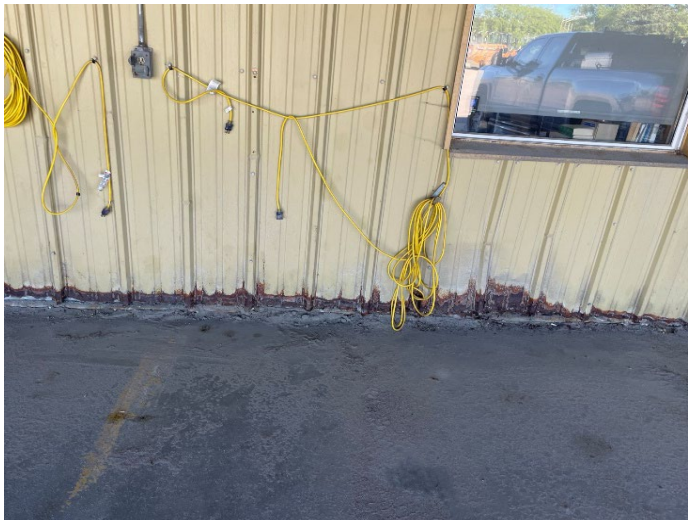
No Events

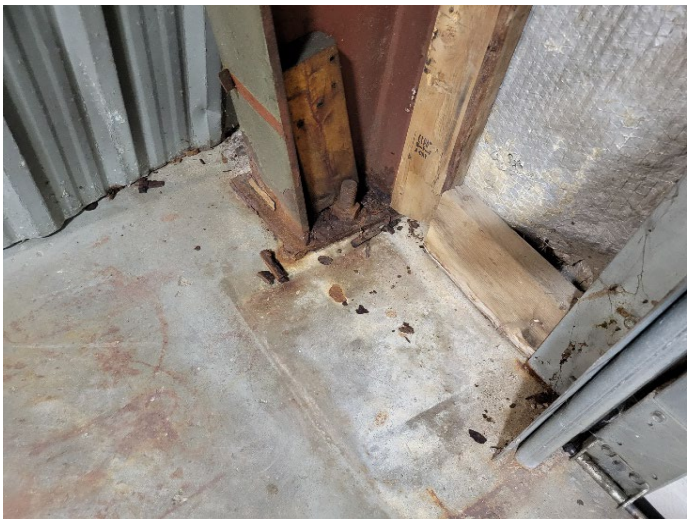
Interior and Exterior Views, Structural Damage

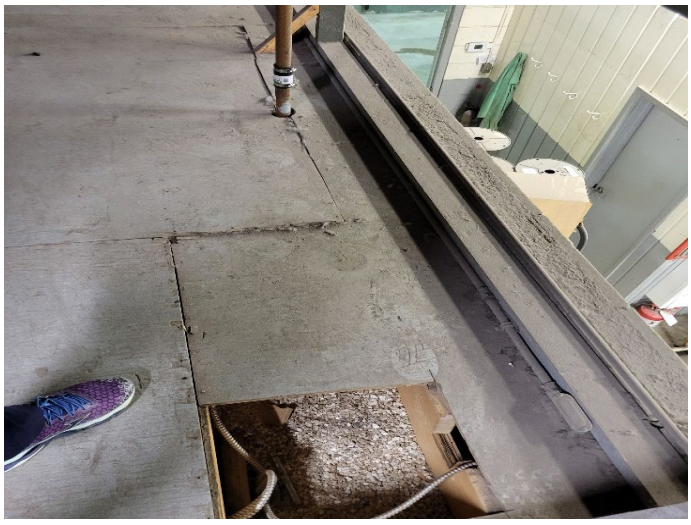












M/E Views