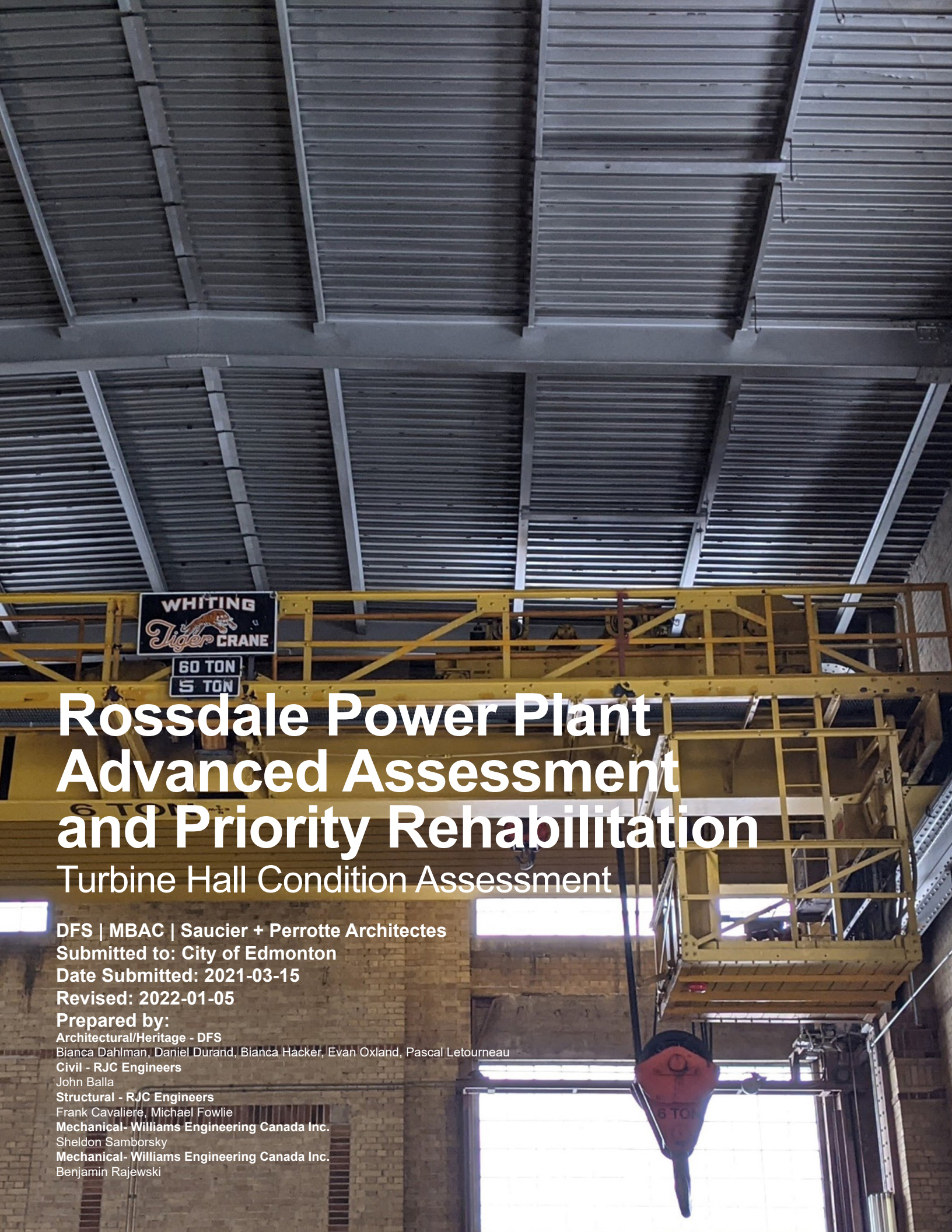

Rossdale Power Plant Advanced Assessment and Priority Rehabilitation

Turbine Hall Condition Assessment

DFS | MBAC | Saucier + Perrotte Architectes
Submitted to: City of Edmonton
Date Submitted: 2021-03-15
Revised: 2022-01-05
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Traditional Land Acknowledgement

We respectfully acknowledge that Edmonton is known by the nêhiyawak (the Cree people) as ᐊᒥᐢᑲᐧᒋᐚᐢᑲᐦᐃᑲᐣ (amiskwacîwâskahikan). It is a traditional gathering place for a diverse group of Indigenous peoples, including the nêhiyaw (Cree), Tsuut'ina, Niitsitapi (Blackfoot), Métis, Nakota Sioux, Haudenosaunee (Iroquois), Dene, Suliné, Anishinaabe/Ojibway/Saulteaux, Inuit, and many others who continue to make this place their home and whose histories, languages, and cultures continue to influence our vibrant community today. The Rossdale Power Plant lies on lands governed by Treaty 6, which encompasses 17 First Nations. In addition, it is acknowledged that the Rossdale site has been a gathering place of Indigenous peoples for thousands of years, and that it has special association with the Traditional Burial Ground and Fort Edmonton Cemetery nearby. The city of Edmonton owes its strength and vibrancy to these lands and the diverse Indigenous peoples whose ancestors' footsteps have marked this territory.

Settlers from around the world who continue to be welcomed here and call Edmonton home, further contribute to the City's resilience and diversity. Together we call upon all our collective honoured traditions and spirits to work in building a great city for today and future generations. We would like to thank the Indigenous communities who participated in The Rivers Crossing Business Plan & Heritage Interpretation Plan engagement sessions. The contributions provided were greatly appreciated and it is hoped that the knowledges and stories shared are reflected here.

Project Team

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The City of Edmonton

Past Owner
EPCOR

Heritage Authority
Alberta Culture, Multiculturalism and Status of Women

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Acknowledgements

The consultant team wishes to thank the City of Edmonton, EPCOR, and the Government of Alberta team members for their stewardship of the project and for their generous contributions and insights concerning the history of the site and the Rossdale Power Plant.

1.0 Executive Summary & Introduction

This report is broken up in sections as highlighted in the Table of Contents above. A thorough physical visual conditions assessment occurred in the autumn of 2020 and early winter 2021. This assessment was limited due to a variety of issues surrounding site-access or limitations of owner supervision and COVID-19 related broader site-access restrictions.

A glossary of deterioration conditions was created after initial assessment, which allowed for mapping via smart .pdf technology, in this case Bluebeam. Conditions were mapped using line drawings prepared for the Heritage Building Record. The advantages of this methodology include spatially scaled mark-ups providing quantities for future estimation, and spatial location of mark-ups to aid with conditions pathology in support of future design and construction packages.

Generally speaking, all surfaces, interior and exterior, are dirty, or soiled, coatings are failing, and nearly all exposed raw metal exhibits passivated surficial corrosion to one degree or another - including mechanical systems and machinery. These specific deterioration patterns are not called out in the attached conditions mapping, Section 4.0, because they are universal — and would only serve to confuse the eye in understanding more important conditions present. Exceptions include calling out unique types of soiling, such as the algae & large ferrous stains in the monumental main floor Turbine Hall, and the blue stain is called out in the monumental main floor Turbine Hall because of the aesthetic importance of this space. Blue stain is not called out in the basement of the Turbine Hall due to its widespread extent.

The building's architectural fabric can be generalised as in good condition. The principal concerns are the parapet and cornice banding which requires deep repointing and flashing to prevent further moisture ingress into the masonry assembly followed by window and door conservation which also function as a barrier to moisture.

All included photographs were taken by DFS, often through the use of MiraCAD's proprietary cloud-based point-cloud and high-resolution photography software named Cloud360. Original building drawings originate from EPCOR, accessed through their RGS Drawing Database.

2.0 Conditions Assessment
2.1 Civil / Landscape

2.1.1 Introduction
RJC has completed a Civil condition assessment on the Rossdale Power Plant site located in downtown Edmonton, Alberta. The following report includes a summary of the documentation available for review, the site conditions observed and what can be expected for the site going forward.

2.1.2 Documentation Review
RJC reviewed both the available drawings and reports provided by the City of Edmonton.

Limited civil drawings were available for review. In general, they were partial sets for the buildings and did not always have the version noted so it is possible they may not reflect what got built. The drawings did contain some information regarding the Grading and utilities but, in general, the information was limited and incomplete. As well, some of the areas appeared different than the structure observed on site, which is likely the result of modifications to the Plant over time.

Furthermore, Design Loads and standards have changed considerably especially involving storm run off the need for treatment or flow suppression will need to be confirmed as part of reuse of the building.

Previous condition assessments and other related reports were also reviewed. In general, the reports noted the condition within the last 15 years and noted conditions similar what RJC observed.

- Asphalt settlement, and repairs over the site through the life cycle of the paved parking areas and on site roadways.
- Erosion of river bank around pump houses due to inherently unstable river bank conditions and storm water outlets not having effective energy dissipation.

2.1.3 Site Assessment
RJC completed a visual condition assessment of the below noted buildings in late 2020 and early 2021. The condition of the site is consistent with the age and use as industrial buildings. The site has been modified over time to accommodate changes in surrounding site use. This has resulted in conditions that are varied, and modified, as is typical of industrial sites.

The reviews were limited to visual observations of accessible areas. No testing or dismantling of finishes occurred during our evaluation. A design review was not part of the scope of this project and the review is preliminary in nature. When the project proceeds into detailed design, detailed checks and further site investigations will likely be required to confirm the conditions and capacities of the systems, as well as repairs may be required to make areas useable for intended use.

The site, split into two areas (Surface works, and Utilities) reviewed are as follows:

2.1.4 Surface Works
The surfaces works is comprised of two aspects, the site grading and overall storm water management, and the Asphalt and flat works. The following outlines the site reviews of those aspects:

2.1.5 Site Grading and Storm Water Management
The site grading and storm water management was evaluated for the area inside of the fence line of the plant. Storm water leaders were evaluated based on observed conditions from the ground only.

In general, the conditions were observed to permit water to flow to designated catch basins and over land drainage paths. The site was sloped mostly away from the building, however, in some areas there was pooling water and obstructions to flow, localized low points exist where loading varied and around several structures.

Storm water leads from roof drains appear to join the underground system internal to the building and outlet to storm manholes on site. Several of the Roof drains exhibit signs of leaking as water damage can be seen along walls adjacent to some of the storm leads. We were unable to enter any manholes and evaluation of conditions of the underground system is excluded as part of the scope.

Condition

- There are several areas where ponding of water has occurred on the site, and negative drainage around the building caused by settlement of backfill material. The grading appears to be in okay to poor condition.
- Water ingress around foundations has been noted but not to significant effect.
- Storm water roof leaders appear to be in poor to very poor condition.

- Leaks and breakages of pipe have occurred and some sections of the leaders have been replaced with plastic pipe in recent renovations.

Therefore, in general, based on only visual observations, it appears the site grading and storm water systems are in ok to poor condition given its age. Overall the system appears to be performing as intended. No immediately critical structural damages were observed during the assessment, but it is expected some repairs will be required.

At this time, one site investigation is suggested. It is unknown what condition the underground storm system is in, given its age and there is some risk related to what the condition might be. It is recommended a site investigation scoping the underground lines internal to the building be considered to review the condition and determine if they are capable of continued use, or if they should be abandoned and reconstructed.

It is also important to note that the areas which exhibit poor conditions should be repaired as leaving water to sit against the base of walls can cause further deterioration of the surface but also can lead to additional structural issues in the building foundation systems.

2.1.6 Asphalt and Flatworks

On site Asphalt was observed to have major cracking and deterioration indicative of weakened subgrade and extended service life. The asphalt has alligator cracking patterns as well as significant ravelling and patching associated with recent repairs. There is a public access path between the main building and the two pump houses, this asphalt path is showing signs of deterioration due to aging. There have been crack seals applied to the cracks in the path to prevent hazards to public safety.

The concrete landings around entrances and curbs are cracked and spalled, some areas had visible reinforcement that was corroding.

Condition

- Asphalt on the site is in okay to very poor condition. There are several areas that hold water due to reduced subgrade capacity causing cracking and more deterioration.
- Localized low areas around catch basins and settlement of soils around the building and cracking throughout the site.
- Concrete Curbs on the site are in good to poor condition.
- Several of the concrete curbs on site have broken missing pieces, and cracks exposing reinforcement.

Therefore, in general, based on only visual observations, it appears the Asphalt and concrete flatworks are in okay to poor condition. No immediately critical structural damages were observed during the assessment, but it is expected some repairs will be required.

2.1.7 Utilities

The existing site utilities have been updated recently to provide water and sanitary services to the site. Water service from the new plant site and sanitary to join the existing system, these services appear to be operational, no visual inspection of the recent service installation was possible, however, for future design it is advisable to complete a line scoping assessment that will document the conditions and capacity of these utilities.

2.1.8 Conclusion

RJC has completed a condition assessment of the Rossdale Power Plant site located in downtown Edmonton. In general, the condition of the structures varies from poor to okay.

If re-occupied, the systems will need to be evaluated for capacity and condition. Based on the results of those evaluations, repairs and reinforcement of the systems can reasonably be expected in some areas. Those could include, but are not limited to, evaluations and repairs such as:

- Regrading and slope stabilization
- Asphalt replacement including base gravel and possibly subgrade work
- Storm water system upgrades including roof drain repairs and underground system repairs
- General concrete repair or reconstruction and patching, including repair of cracked and spalled concrete
- Utilities expansion for increased service level to match new use cases.

These upgrades are dependent on the future use of the building. Those recommendations are beyond the scope of this report and unknown given the intended use is still an unknown. However, it can reasonably be expected that some changes to the civil systems will be part of the work required.

2.1.9 Limits of Liability

This report is intended to provide a general description of the site and its condition, which may have been apparent at the time of our review. Read Jones Christoffersen Ltd. did not perform any design checks to confirm the adequacy of the systems. They will however be required in some instances during design to confirm the capacity of the systems for the intended uses. This is because only limited drawings were available for review.

The review was limited to visual observations of accessible areas. No testing or dismantling of any coverings was performed. Reviews were made on a random basis with no attempt to review or inspect every element or portion of the building. The intent of the review was to determine areas of visually obvious deterioration and need for repair, and to determine, in a general way, the overall quality and sufficiency of the systems, but not to ascertain the quality or sufficiency of any specific aspect of the systems.

Our comments are not a guarantee nor warranty of any aspect of the condition of the building whatsoever, nor that the building has been built in accordance with the drawings and specifications. Any opinions of probable cost presented by the Consultant are based on incomplete or preliminary information and on factors over which the Consultant has no control. The Consultant does not guarantee the accuracy of these probable costs and shall have no liability where the probable costs are exceeded.

Reports prepared by the Consultant are exclusively for the use and benefit of the Client. They are not for the use or benefit of, nor may they be relied upon by, any other person or entity without written permission of the Consultant.

Above: Negative drainage and flow restriction cause by path

Above: Water pooling in settled asphalt area north of the Low Pressure Plant

Above: Damaged asphalt from heavy equipment

Above: Storm catch basin east of the Switch House

Above: Settlement and cracking around Manholes and vaults

Above: Landscaped area east of the Switch House

2.2 Exterior Architectural

The following section is a description of general conditions noted through the condition assessment of architectural fabric on the exterior of the building. The exterior of the Turbine Hall, like the rest of the Low Pressure Plant (LPP) is in good condition for its age and use, with some areas requiring repair to keep the elements out of the masonry assembly. The largest item of concern is the cornice, which has failing perpendicular joints because of the broad horizontal surfaces that do not have flashing. This is allowing moisture into the assembly and is of concern in terms of preventive conservation. Windows have numerous broken glazing units, and the glazing putty is failing and will require conservation in the future. All exterior doors require conservation as their coatings are failing. There is also a thin crack on the southern end of the east elevation that propagates from the cornice and follows the vertical mortar joint along the edge of the decorative rectangular stack bond border. This is likely a settlement crack from initial construction, and not of great concern, but closer investigation could be beneficial.

2.2.1 D4 North Loading Dock Door & D10 South Door - Turbine Hall Exterior Entrances

Doors: Paint is failing on exterior doors, as expected with deferred maintenance over time. There is also Impact damage on the exterior cast-concrete door jambs surrounding D10.	

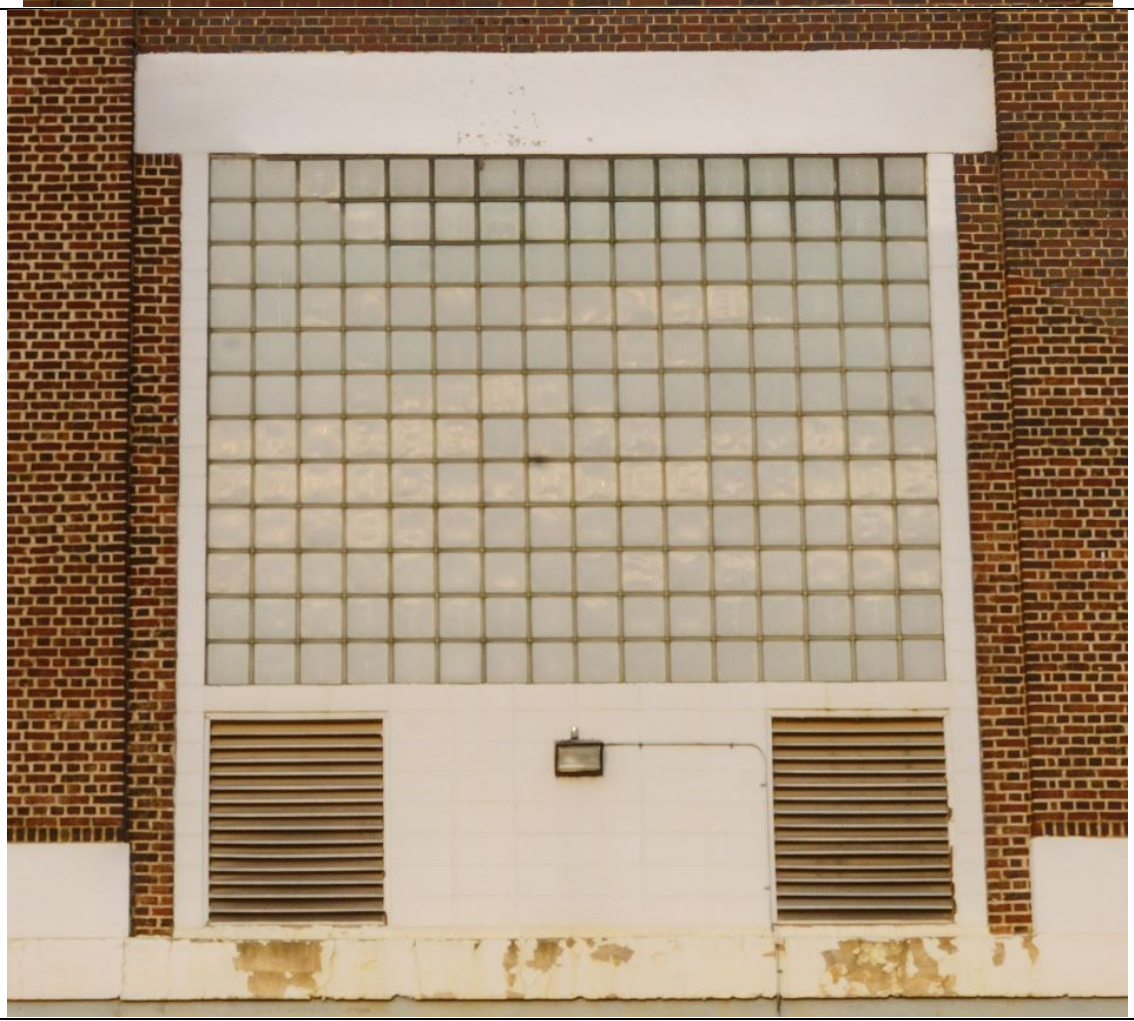
2.2.2 RF-201, Turbine Hall Roof

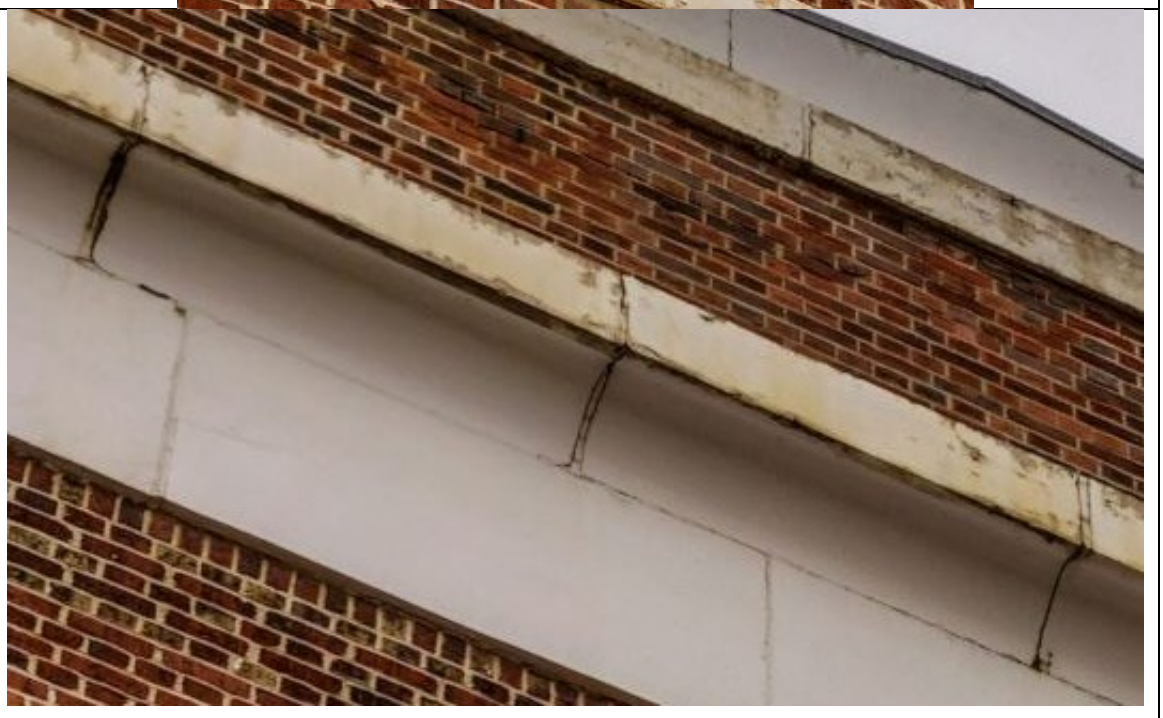
Roofing Membrane:
Membrane has exceeded its serviceable life and is currently in planning stages for near-future replacement.

2.2.3 Turbine Hall Exterior Walls

Multi-Light Rolled Steel Windows:
The multi-light rolled steel windows are in fair condition. Glazing units are all soiled, some are broken or missing, and glazing putty is generally hardened and failing.

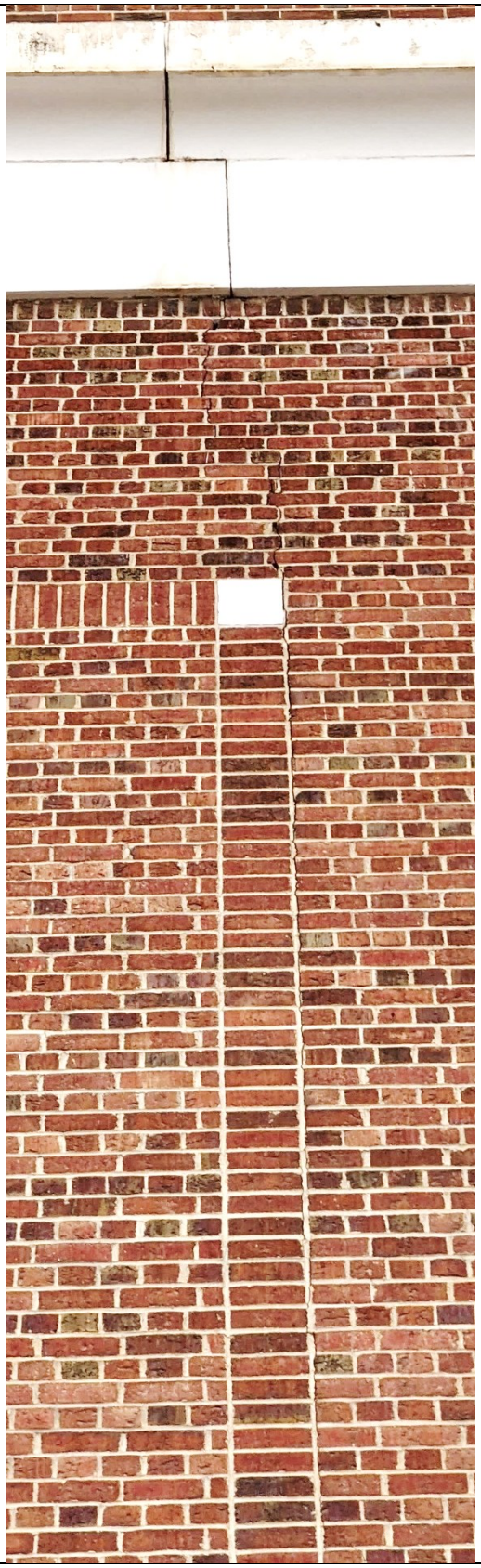
Glass Block Windows:
Good condition generally, some block units are broken, as in lower photo.

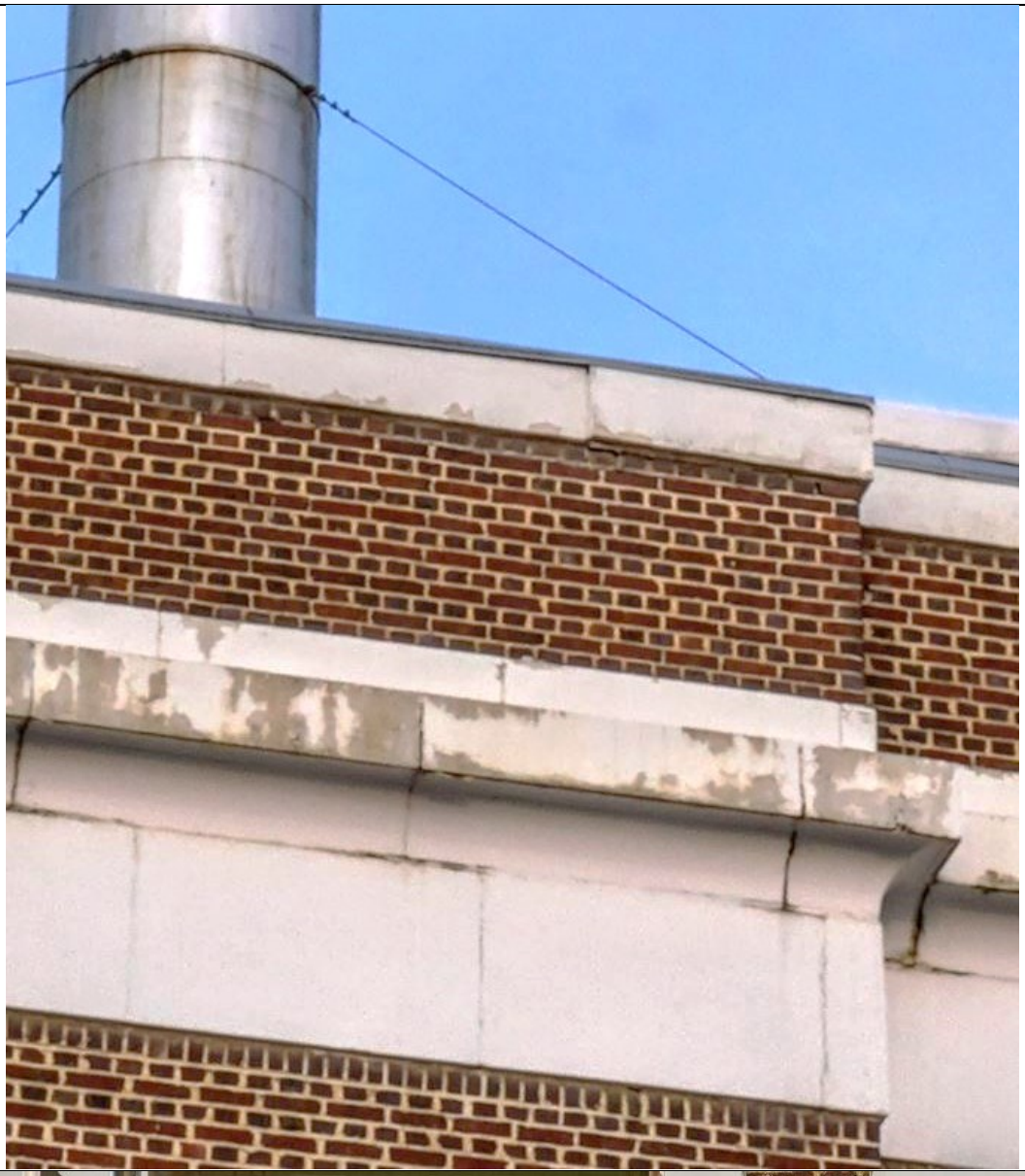


	
Cornice/Parapet /Partial Pediment Perpendicular (Vertical) Mortar Joints: All perpendicular mortar joints in cavetto formed cornice band are failing. This is the same for some perpendicular joints of coping and pediment units as well. Pediments are exhibiting mortar failure where flashing does not span across at the coping level, highlighted in green. This extends to the exposed vertical joints between the three pediment units on top of the coping.	

Crack, Southern Extent of the West Elevation:
Crack in masonry propagating from cornice band zipper joint down to, and along, rectangular border stack joint highlighted in green. This crack does not appear to emanate through the parapet.



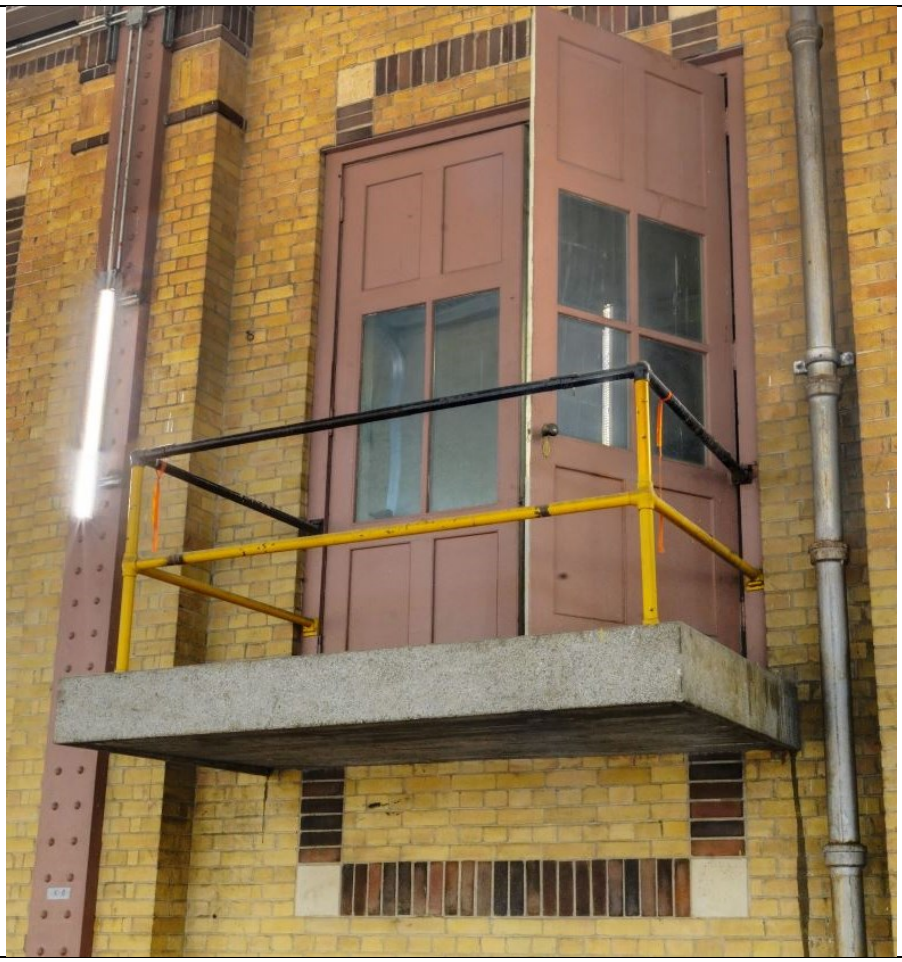
Displaced Masonry Unit: A corner parapet coping unit on the east elevation has exhibited movement.	
Failing Paint on Concrete Surfaces and Cast Masonry Units: Non-original paint on cast-stone/masonry units is failing. Appears to be a type of Poly-Vinyl or Latex, or some combination thereof, due to the way it is peeling plastically.	

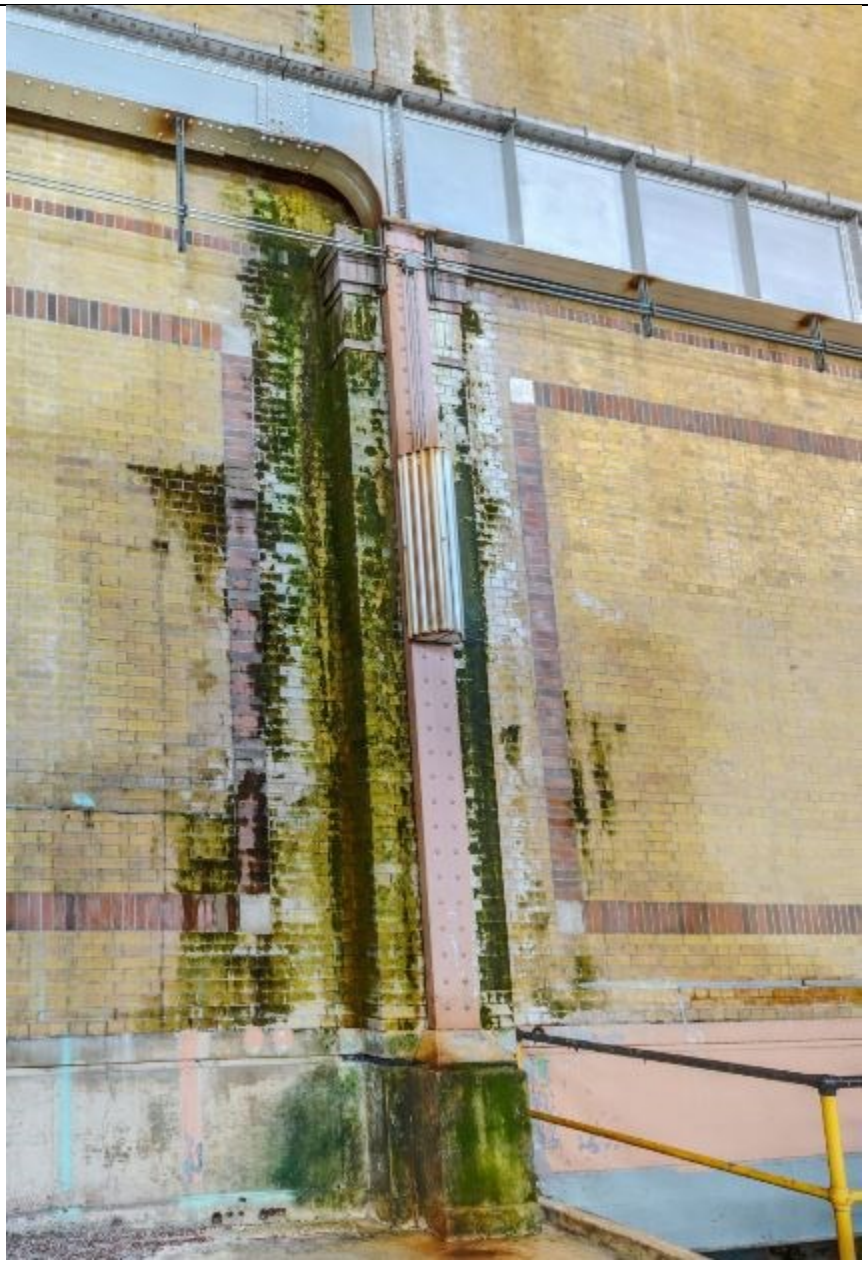
Boarded Window: Plywood boarded window at south elevation, likely due to EPCOR efforts to avoid vandalism.		

2.3 Interior Architectural

The following section is a description of general conditions noted through the conditions assessment of architectural fabric of the building interior. The interior of Turbine Hall has had almost all of its original machinery and mechanical systems removed, with the notable exception of the overhead gantry crane. It is in generally good condition, with the one significant exception being various stains from past water ingress and blue staining and various mechanical damages from demolition & abatement works. There are failing cable trays due to inadequate fixtures/support and railings are generally deficient in terms of human health and safety.

2.3.1 MN-260,240,230,210,270; Main Floor, Generator Units #1-#5

Railings / Juliet Balcony: Railings are loose and not fixed, and a high human health and safety concern.		

Algae & Efflorescence Stains: Algae stains and efflorescence due to large amounts, or constant, free water ingress from roof/rain leaders.	
Ferrous Stain: Orange brown iron-based	

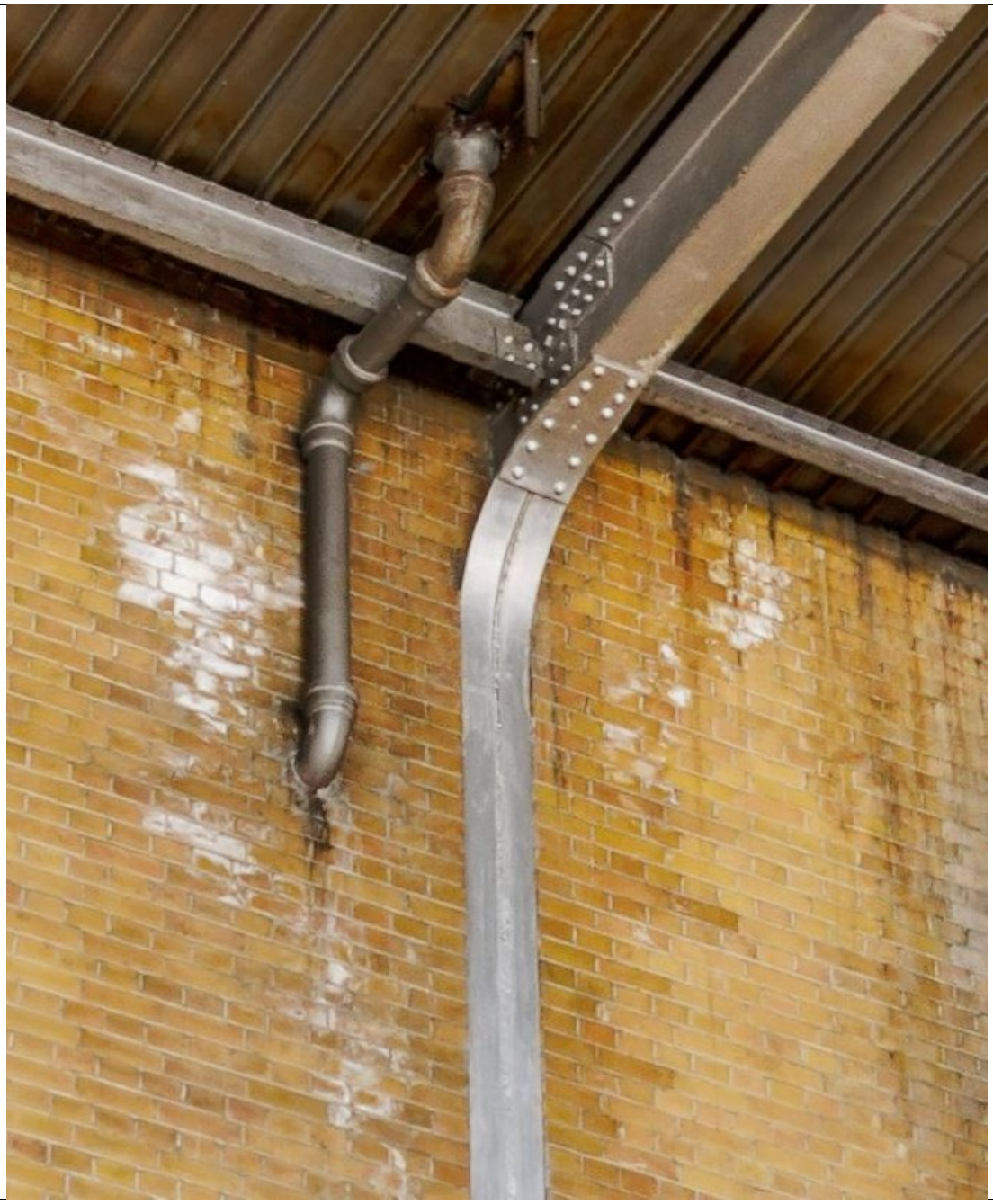
stains, typically appearing as streaks below steel fasteners or cast iron elements. In the example showcased the staining has been exacerbated by water infiltration.	
Mechanical Damage: Mechanical scratches on masonry due to demolition and abatement processes, such as unfortunate leaning of demolished structural units against interior masonry.	

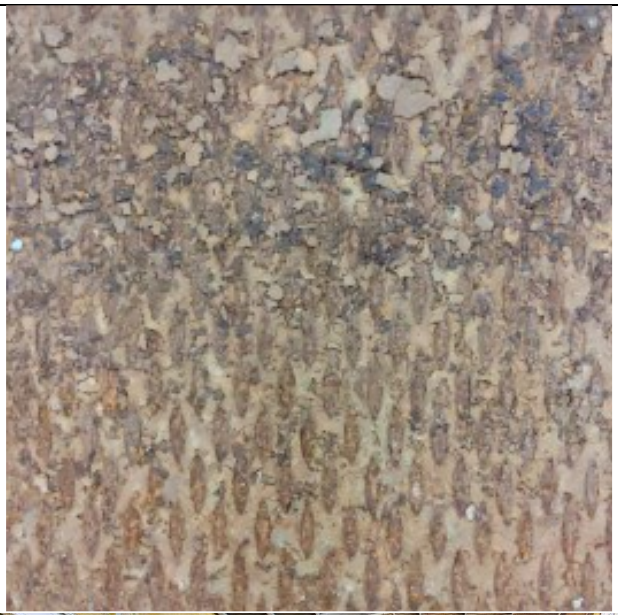
Ceiling Corrosion: The Turbine Hall ceiling exhibits corrosion, generally of low concern, likely surficial corrosion associated with condensation.

However, there are areas of more advance decay, probably historic damage from past leaks, as evidenced by linear puckering, as seen in the bottom two photos. Linear pattern may belie construction of roofing above the interior ceiling surface. Pitting-like perforations are likely due to previous moisture ingress or mechanical damage from roof installation or maintenance.

The era of construction for locations of these areas of higher deterioration coincide with the earliest Turbine Hall construction period, dating from 1938. Bottom-most photograph compares the oldest section, foreground, with the newest, dating from 1955, in the background. Please note the relative difference in

surface conditions.	

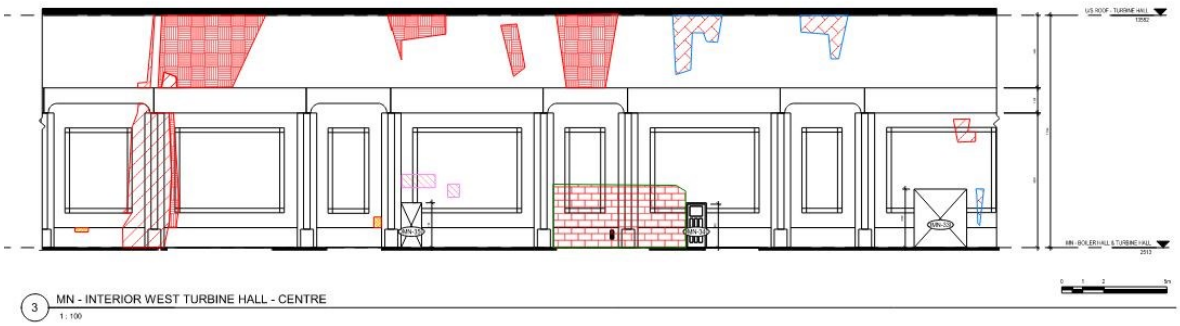
Rain Leaders: Some rain leaders exhibit evidence of past water ingress, such as efflorescence, water, rust, and bio-growth stains.	

Floors: Paint failure on concrete floors due to human erosion along with various scrapes and spalls likely due to construction and industrial activities. Corrosion of metal grating is likely due to presence of moisture (atmospheric moisture or liquid phase).	 

Plant Decommissioning Artefacts: Various relict artefacts from the High Pressure Plant, such as control room panels and past structural elements have been abandoned in the Turbine Hall.	
Blue Abatement Stain: Blue staining is indicatory of post-abatement marking of areas where hazardous materials have been removed. These stains are evident in isolated areas in main floor Turbine Hall only.	

Crane: Gantry crane appears to be in good working condition, paint is in excellent condition. Mechanical operations are not confirmed.		

Historic Graffiti: There are historic industrial subject mementos written from as early as the 40s and 50s, near column "J-14" as identified by duct-tape markings. Historic Graffiti is evident even into the late 90s as the lower most photograph take between column J-16 & J-17.

Lighting: The lighting system composed of vertical tube lights installed in the 1970s, is in generally good condition. Some tubes may require replacement, and fixtures to be investigated further to confirm they are operative.	
Interior West Elevation Stains: Patterns of ferrous staining, Biogrowth, and efflorescence, predominate in the oldest section of the Turbine Hall, 1938, which likely also correlates to roof leaks in this same area from the Boiler Hall above. Please also see deterioration discussion of East exterior Elevation of Boiler Hall. Conditions Markup used to illustrate the numerous surface stains in this section of wall.	

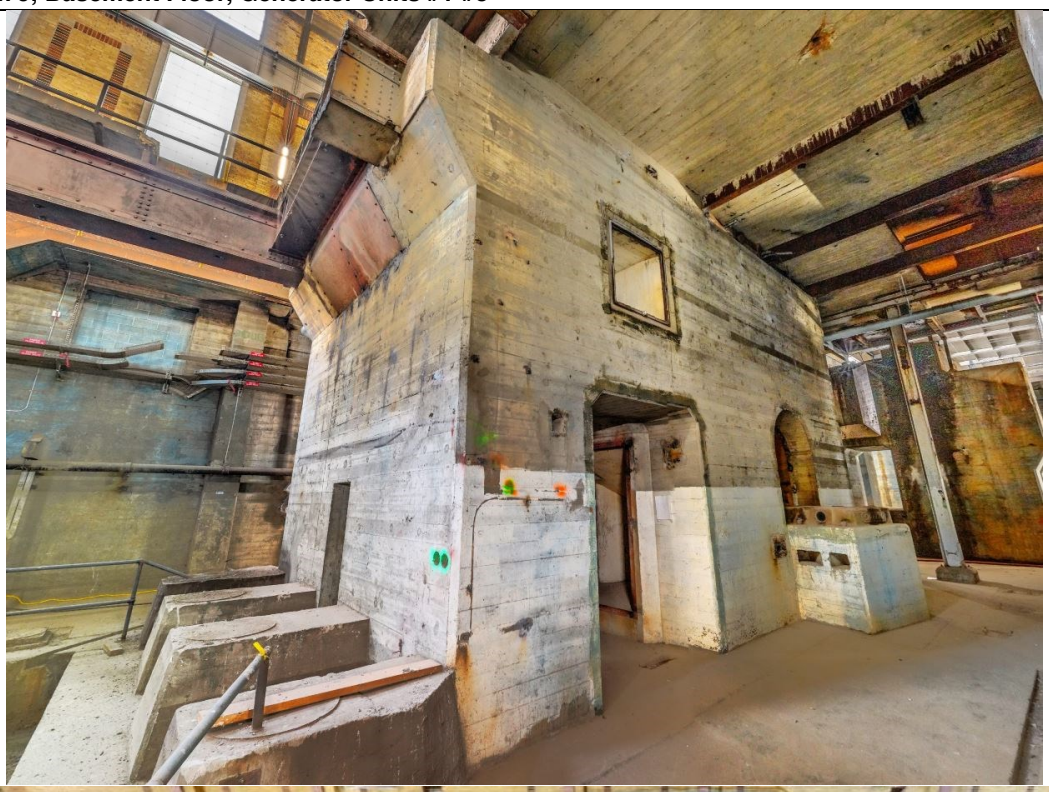
2.3.2 MN-213 (BM-213), MN-233 (BM-233), MN-243 (BM-243), MN-267 (BM-267), Interior Metal Stairs

Stairs: Stair material is in generally good condition with expected minor paint failure and rare spots of passivated corrosion. However, rails are sometimes loose, kick plates are missing, tread depths are short, and geometry is very steep. This means that stairs are generally not conforming to contemporary building code.	

2.3.3 MN-217, MN-263, MN, 265 Interior Concrete Stairs

Concrete Stairs: Finish is in the same state as the floors generally, it is eroding from human traffic. Stair treads have chips and spalls, likely due to mechanical impact damage associated with industrial use and construction activities. Overall, they are in good working condition.	

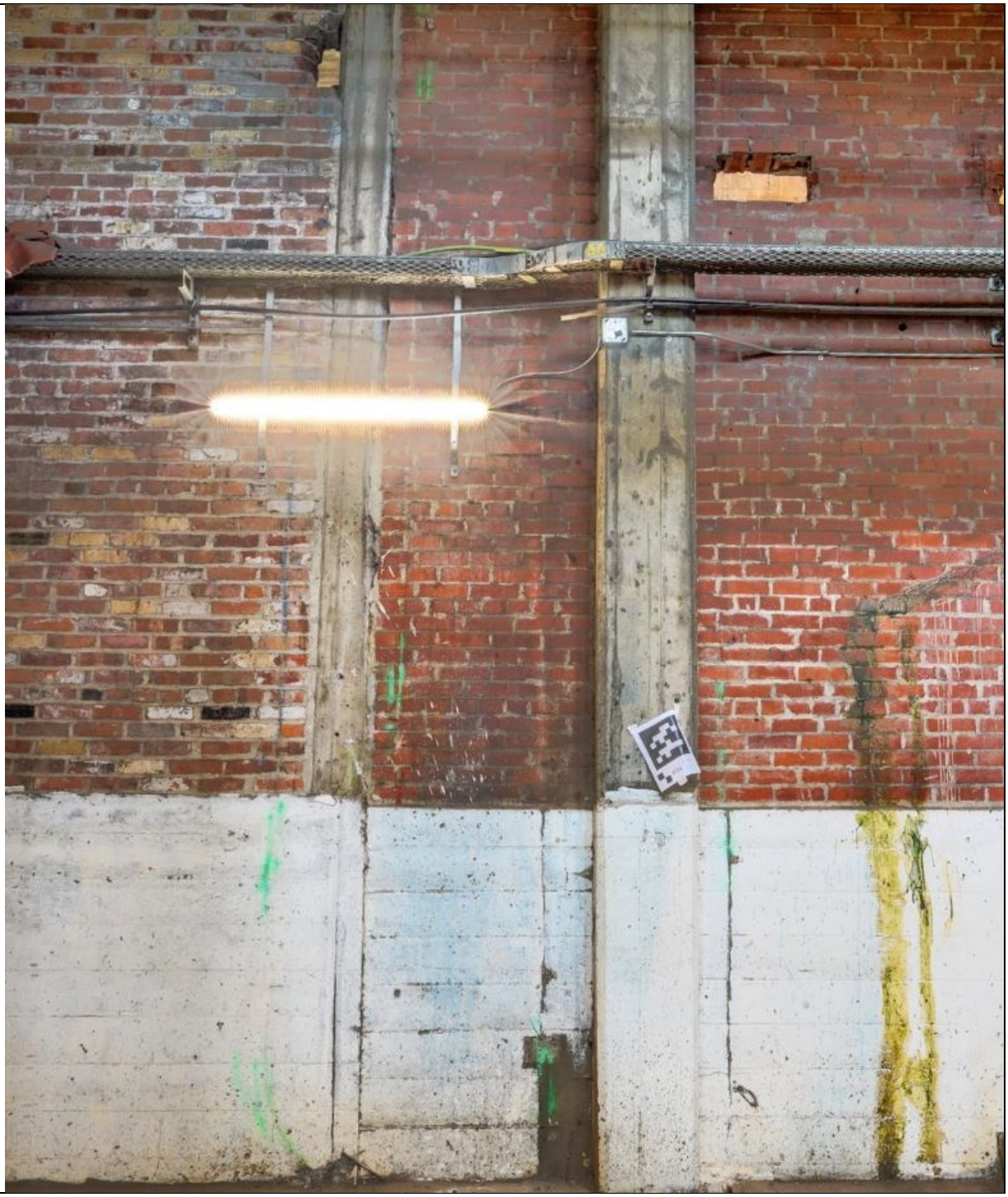
2.3.4 BM-260,240,230,210,270; Basement Floor, Generator Units #1-#5

Turbine Pedestals: Variously covered in blue stain from abatement & demolition processes. Structural steel and slabs surrounding turbines was variously cut to allow machinery removal including condensers. Minor cracks, spalls, corrosion stains, and chips exist on each pedestal.	 

Condenser Podium & Mechanical Basin: Condenser podiums soiled as all other surfaces in the LPP, as are the drainage/mechanical basins below. All are in good condition. Minor cracks, spalls, rust stains, and chips exist on each podium.	

Walls:
Partition brick walls between Turbine Hall and Boiler Hall basements are variably composed of newer red brick at their southern and northern most extents of the later additions of the 50s, seen at topmost photo right). The sections from the 30s and 40s reused brick from earlier power plants, as seen at photo left.

All walls have various degrees of soiling, overpaint, stains, and missing section due to holes being punched through walls for electrical or mechanical servicing over time. All are in generally good serviceable condition, except for some areas of missing sections that should see repair.

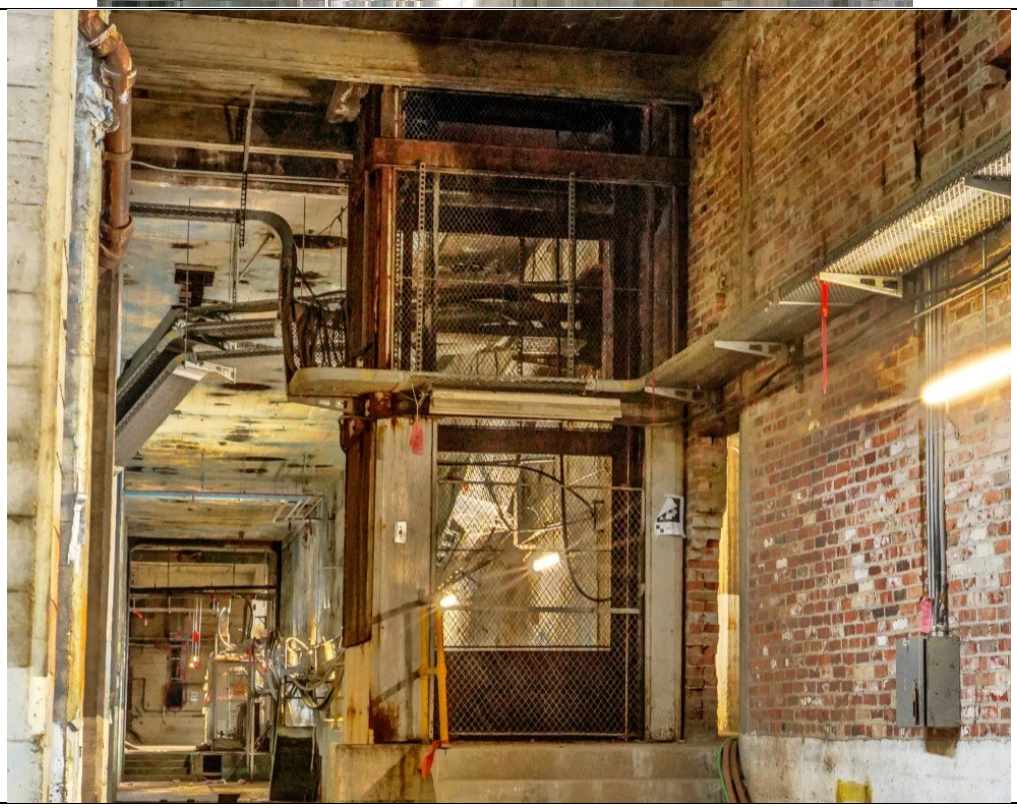


Concrete Ceiling: Various levels of soiling, scratches, chips, stains, patches, mechanical interventions (core holes), and spalls due to various construction activities and industrial usage.	
Cable Trays: Some cable trays are missing sections or have failed.	

2.3.5 BM- 299, Tunnel to Pump House 1

General Conditions: The door, ceiling, floor, walls, cable trays, and mechanical & electrical services are all in generally good condition, other than the expected soiled surfaces, failing concrete paint, and various patches, minor spalls, chips, and overpaint.	

2.3.6 BM-220 & BM-239, Turbine Hall Basement Corridor North and Basement Elevator

Failed Cable Tray Support: Mechanical fixture for an object has failed, could include plastic deformation, fracturing, or failed anchors. This poses a hazard to human health and safety.	
Elevator, BM-239: Still operable. Surficial metal corrosion is evident. Requires more detailed assessment for human health and safety.	

2.3 Mechanical Systems

2.4.1 Introduction

The following is a description of the existing mechanical systems and services in Rossdale Power plant Low Pressure Plant composed of the Turbine Hall, Boiler Hall and Switch house. This report references extensively the *Rossdale Power Plant Occupancy Strategy*, Version 1.0, produced by the City of Edmonton in November 2018. That report is quite detailed, and the information therein was corroborated with our own site observations and information received on site from EPCOR representatives. In many instances this report updates information previously reported or elaborates on systems and equipment which may have been replaced or degraded further since the City of Edmonton Report.

Through the efforts of EPCOR the buildings are being preserved to prevent damage to the structure, building systems, finishes and existing equipment housed within. Some temporary systems and measures are currently in place to slow degradation of the buildings and maintain secure, if unoccupied spaces. The assessment is intended to provide an overview of the mechanical systems in each building while also providing recommendations for measures to implement or maintain which will continue to preserve the integrity of the building and their historically significant elements. Mechanical recommendations will focus on the immediate and urgent elements which threaten the building condition while also addressing possible services and systems which will be key to the redevelopment and renewal of this significant Edmonton landmark. Consideration will be given to initial capital costs, and operating costs of any temporary systems with reliability being the vital trait.

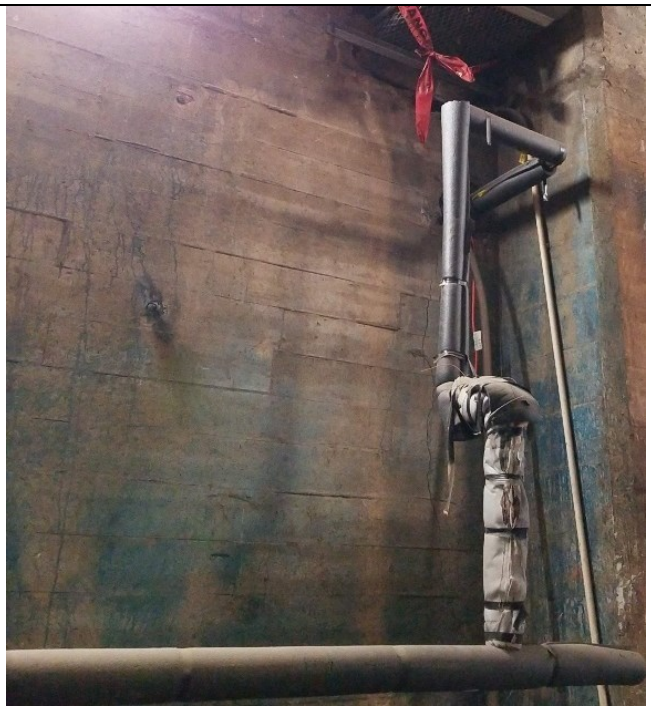
The assessment was accomplished by a walk-through of the building and discussions with the engineer who led the de-commissioning effort when the power plant stopped generating activity. Our evaluations did not involve disassembly or specialized testing of components. However, the information obtained from the building operator with respect to heating, ventilation, and plumbing system components provides a reasonable base of information upon which to estimate the condition of the mechanical systems.

2.4.2 Standards and Codes

Assessment of the mechanical systems and any recommendations have been formulated under the assumption the any urgent rehabilitation work as well as future development work will occur under the following codes, or the version that is in force once the redevelopment phase is underway.

- National Building Code – 2019 Alberta Edition (NBC-AE)
- National Plumbing Code of Canada (NPCC), 2015
- Alberta Occupational Health and Safety Act

2.4.3 Low Pressure Plant Plumbing Systems

Natural Gas: There is no active gas service to the Low Pressure plant. Due to its former vocation as a gas fired electricity generating plant there is significant infrastructure which formerly supplied gas to the large turbines housed within. Although the connections are now abandoned and sealed at both ends, two 300mm diameter steel gas lines still enter the Low Pressure plant in the basement level of the Boiler Hall and terminate in a vault like room near the center of the boiler hall basement. These mains run North to an abandoned gas service trunk on the property. Although likely not suitable for returning to service these two mains could potentially be used a sleeves to insert smaller diameter gas piping to serve future heating systems within the low pressure plant building. Re-using this piping would retain some of the purely industrial character of the space while providing a sure route with minimal excavation through the many buried services on the site North of the building.	 Above: 300mm steel gas piping
Domestic Water Systems: An existing 150mm domestic water service enters the turbine hall basement on the East side of the building just South of the Switch house. The piping is insulated, and heat traced over its entire length and serves the remaining washroom in the building. The condition of this piping is unclear; however, it is reportedly connected directly to the EPCOR water treatment plant, a condition which will likely no longer be tolerated once ownership is transferred to the City. Rather a service entrance to the domestic water main North below Rossdale Road will be preferred. This existing service connection also has no meter, isolation valve nor backflow preventer. A new 100mm domestic water connection is already installed between the Northeast corner of the Low pressure plant, again on the basement level of the turbine hall, and the buried main beneath Rossdale Road. Reportedly, “Both [domestic water and sanitary] services were capped within the building without being put into service. Details for the installation of these two services are depicted on EPCOR drawing PMM-122 and PMM-124.” [1] No isolation valve, meter nor backflow preventer are installed inside the building.	 Above: 150mm domestic water connection from EPCOR Treatment plant

[1] Rossdale Power Plant Occupancy Strategy, Version 1.0, produced by the City of Edmonton in November 2018

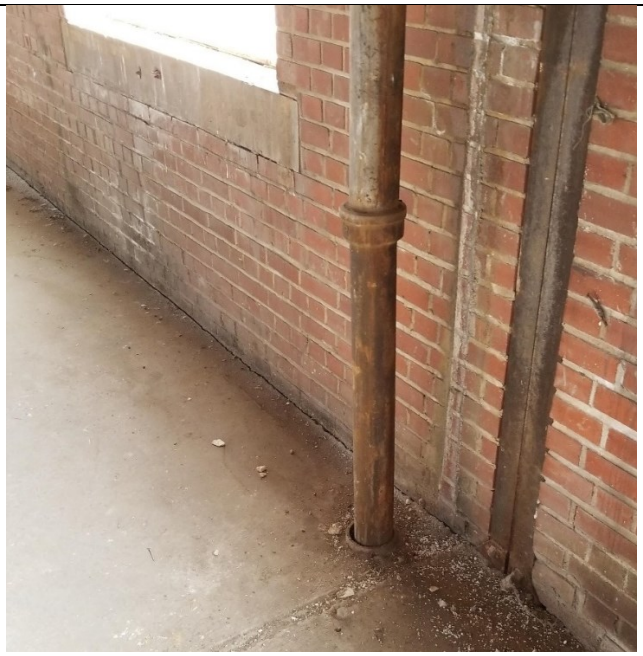
	 Above:100mm domestic water connection North
Sanitary Drainage: There are two existing sanitary drainage connections serving the building. The first is a 150mm line on the South end of the building. According to reports, "The existing sanitary sewer line (150mm) running to the basement of the Switch House has collapsed in proximity to the foundation of the building and is no longer serviceable." [2] . It is highly likely that this line was connected to an outfall directly to the river and should be permanently sealed and abandoned. A new 150mm sanitary drain is installed between the Northeast corner of the Low Pressure Plant, again on the basement level of the turbine hall, and the buried main beneath Rossdale Road. The connection has been capped both within the building and below the road.	 Above: 150mm Sanitary Connection North

[2] Rossdale Power Plant Occupancy Strategy, Version 1.0, produced by the City of Edmonton in November 2018

Storm Water Drainage and Collection:
Storm water drainage appears to be the most critical mechanical system in need of repairs or upgrades in order to preserve the building. The Boiler hall decking, roof and roof drains have been replaced recently and are in excellent condition. The roof drains and their connections to rainwater leaders above the Turbine hall are badly in need of repair and should be replaced simultaneously. Many of the Turbine hall roof drains penetrate the shared wall between the Boiler hall and Turbine hall, before descending to the floor on the Boiler hall side.

Rainwater leaders are almost exclusively cast iron with bell and spigot connections, exceptions are recently replaced rainwater leaders which are solvent welded PVC. Leaks from cast iron rainwater leaders at high level is resulting in staining of the interior brick, mold growth, and corrosion of archway lintels. Cleanouts at the base of the leaders have begun to fail resulting in water damage and standing water in the boiler hall during heavy rainfall.

According to the Occupancy Report, "There are three (3) existing stormwater discharge locations from within the Low Pressure Plant building to the existing weeping tile and outfall system which discharges directly to the river (EPCOR drawing PMM-17). The existing Storm Sewer line (unknown size) running beneath the Switch House and sump within the Turbine Hall collect at a manhole south of the Switch House. The manhole south of the Switch House has been blocked with sandbags (see EPCOR drawing PMM-17) and the downstream section has collapsed and is no longer serviceable. The North sump in the Boiler Hall discharges directly to an existing drainage pipe (750mm) running parallel to the west wall directly to the river... The South sump in the Boiler Hall discharges (350mm) to a manhole south of the building and then continues directly to the river." [3]. The South sump within the boiler hall also receives the discharge from pumphouse No.1 basement sump pumps.



Above: Cast iron rainwater leader, Boiler Hall

Above: New roof drain and connection to RWL (boiler hall)

Condition and Recommendations

Failing rainwater leaders and cleanouts should be replaced immediately. Many roof drains in the older turbine hall roof pass into the boiler hall and contribute to water infiltration in the boiler hall and turbine hall wall. Roof drains in the turbine hall should be replaced as soon as possible, but in conjunction with repair or replacement of the turbine hall roof. Roof drain discharge should be separated from foundation drains which outfall directly to the river and directed toward storm water retention and drainage infrastructure.

[3] Rossdale Power Plant Occupancy Strategy, Version 1.0, produced by the City of Edmonton in November 2018

2.4.4 Low Pressure Plant Plumbing Fixtures

One washroom in the switch house currently serves the facility. It provides only domestic cold water as the water heater is no longer functional and not scheduled for replacement.

2.4.5 Miscellaneous Piping Vents

The West facing wall of the Boiler hall has many pipe penetrations at various heights and positions. All of the associated systems such as steam condensate, and chemical injection tanks have been de-commissioned. Most if not all of the piping on the interior side of the wall has been removed.

Condition and Recommendations

The exterior piping should be removed as it does not have any historical significance or value. All of the penetrations should be patched with appropriate materials and methods creating a less cluttered appearance along this exterior wall and reducing the likelihood of leaks through the structure.

New plumbing fixtures will be required to meet future occupancy requirements. Refer to Code assessment for plumbing fixture calculations.

2.4.6 Fire Protection

The facility currently has no fire protection system outside of portable extinguishers. As summarized in the Future occupancy report, “The change in occupancy type of the building, or a part thereof, will likely result in the requirement for a fire protection system. The nature and design of this system will depend on the intended use of the space, and its adjacent spaces as defined by the Building Code. This will need to be thoroughly reviewed and considered when repurposing the space.[4]”

It is unclear if a fire pump would be required since the building is at very close proximity to the treatment and pumping station as well as at a low elevation in the river valley. However, the requirement for sprinkler heads near the top of the boiler hall at more than 11m above the incoming water service may require a fire pump. At the time of design development, the available flow and pressure in the vicinity of this site will need to be verified via fire hydrant flow test.

2.4.7 Heating

Due to its former vocation as a gas and coal fired power plant no heating system is present within the boiler hall.

The existing steam unit heaters on the basement level of the turbine hall are all currently unused since there is no longer a working steam system within the building. It is unlikely that the unit heaters could be refurbished and restored to working condition, a more interesting prospect is to preserve some of the unit heaters for future decorative installation where they may provide a desired aesthetic.

The building, and particularly the basement level is maintained at a setpoint of approximately 10°C throughout the heating season to prevent deterioration to the foundation systems. Eight, 58.6kW temporary glycol unit heaters are distributed throughout the basement level and glycol is heated and pumped by two 252kW mobile propane fired boilers and pumps located just North of the Switch house.

Condition and Recommendations

The temporary system appears quite robust and well installed. It also appears adequate for heating to preserve the foundation and no changes are recommended unless maintaining the system in place is cost prohibitive.

A new natural gas fired boiler system and heating glycol pumps could be added as part of the new permanent infrastructure of the building. While this increases capital cost in the short term it would eliminate the rental costs for the existing unit heaters, pumps, boilers and tanks. Natural gas is also typically slightly less expensive than propane, particularly in an urban setting such as central Edmonton.

2.4.8 Cooling

There is currently no cooling or dehumidification for the Low pressure plant and no requirements for such have been noted.

2.4.9 Ventilation and Humidification

There is no mechanical ventilation system serving any area of the Low Pressure plant.

Some operable windows are still present and can provide some ventilation however the mechanisms are largely inoperable, and the ingress of vermin and wildlife likely outweigh any benefits of using the windows. No ventilation requirements for preserving the building have been noted.

[4] Rossdale Power Plant Occupancy Strategy, Version 1.0, produced by the City of Edmonton in November 2018

Humidification is currently not provided to the Low pressure Plant. There is no apparent need for humidification within the space to preserve either the building integrity or the equipment within, particularly during this period when the buildings are unoccupied. However, the Occupancy Strategy report does note, “Due to the historical significance of the building, there were some preservation recommendations within the Building Condition Assessment Report issued by DIALOG in 2011 with regards to humidity and temperature to protect the Low Pressure Plant building from further degradation. This report recommends to maintain [sic] the interior spaces within the building at +20.5°C and a maximum 16% RH (relative humidity) if the building is to be occupied during winter and shoulder seasons.”

2.4.10 Controls

No automation or controls systems are operational within the building, with the exception of standalone controls serving the building heating.

Condition and Recommendations

Since the building is mostly unoccupied for long periods of time the installation of low temperature alarms may be useful to monitor the building throughout the winter to ensure that building operators are notified of any disruption or failure of the heating systems.

The vestiges of controls from the power generating systems are still present in some parts of the building. If they are not in and of themselves of historical significance, they certainly remind occupants of the history of the building and may be worth preserving along with the architecture and structure of the Low Pressure Plant.

2.5 Electrical Systems

In general, the building electrical systems appear to be in overall fair condition, with some variations on specific systems and components as detailed below. See individual condition and recommendation headings within each section.

2.5.1 Electrical
The electrical systems were reviewed to establish general configuration and condition. This was accomplished by a walk-through of the building and discussions with the building operator.

Our assessment did not involve disassembly or specialized testing of components. The review was made during prevailing weather conditions and did not test the capabilities of the heating and ventilating equipment during winter or summer temperature extremes.

Specific equipment model or serial numbers have not been investigated with respect to equipment recall, operating requirements, or other matters affecting the safe performance of the equipment identified by the manufacturer or the authority having jurisdiction.

The electrical systems in the building are in generally fair condition and in order for the building to be occupiable will require significant renovations. The Turbine Hall is connected to the Switch House, boiler hall and pumphouse #1.

2.5.2 Site Services
The Turbine Hall is fed from the switch house via conduit.

Condition and Recommendations

The current service is likely adequate for any future use of the building. Discussions should be had during redevelopment as there may be requirements for additional distribution panels or a separation of services between the Switch House and Turbine Halls depending on their new uses.

2.5.3 Main Service and Distribution systems
The majority of the distribution equipment exists in the Switch House, however, on the main floor of the Turbine Hall, there are several 120/208V distribution panels mounted on the walls to power the existing lighting. Within the basement, there was an MCC noted in the southside of the facility. The MCC appeared to be in excellent condition and added more recently to power active equipment within the facility.

On both, the main floor several turbine control panels have been abandoned in place.

Condition and Recommendations

The MCC in the basement appears to be in good condition and would be reusable for future building uses. The branch circuit panels located throughout the main floor appear to have reached the end of their service life and should be replaced once the future use of the facility is known.

2.5.4 Branch Circuit Wiring and Devices
Within the Turbine Hall basement, conduits and cables are run in tray to distribute power to the facility. The conduit and cabling appeared to be in good to fair condition however, there were several instances of cable tray appearing to fail. There were minimal electrical devices installed in the facility besides the abandoned control panels. The cable penetrations did not appear to be properly protected or sealed.

Condition and Recommendations

It is recommended that the cable tray throughout the facility be repaired immediately to prevent damage to cable/conduit and possible damage to the facility. It is recommended that cable penetrations be sealed with fire rated sealant and properly protected from damage.

2.5.5 Lighting and Lighting Control
The lighting in the facility is comprised of wall mounted multi-lamp fluorescent fixtures. The fixtures are arranged to provide enough light for egress but would not provide enough light for an occupiable and useable space.

Exterior lighting is comprised of wall pack-type high intensity discharge (HID) light fixtures located at various points around the entire building and including all entrance/exits. The lenses appear to have yellowed due to age.

Condition and Recommendations

The lighting in the Turbine Hall is functional for the current space use however, for any occupiable space use a new lighting design would be required. At that time, it is recommended that the fluorescent fixtures be replaced with new LED fixtures suited to the space use and a new low voltage lighting control system be installed.

2.5.6 Low Voltage Systems

Besides control wiring to equipment in the space, no low voltage systems were noted in the space. Speakers for a non-operable PA system appear are mounted in the Turbine Hall.

Condition and Recommendations

It is assumed that for most new uses new telephone/fiber lines will need to be installed throughout the facility. A separate dedicated LAN room will likely be required for the space. The City of Edmonton will also likely want to add CCTV and card access systems to the building for both interior and exterior security.

2.5.7 Life Safety Systems

"Running man" type exit signs have been installed throughout the facility. Several of the exit signs had built in remote heads and battery packs. A few additional battery packs are mounted on the walls. A fire alarm system was not observed in the facility.

Condition and Recommendations

Given the size of the facility additional emergency lighting should be added to cover the entire egress path. Additionally, a fully addressable fire alarm system capable of meeting all code requirements as well as providing the capability of expansion if or when required may also be required. The fire alarm system would cover both the Switch House, Boiler Hall and Turbine Hall.

2.6 Structural Systems

2.6.1 Introduction

RJC has completed a structural condition assessment on six building located on the Rossdale Power Plant site located in downtown Edmonton, Alberta. The six buildings are as follows: Low Pressure Plant (which includes the Boiler Hall, the Turbine Hall & Switch House), Pumphouse 1, Pumphouse 2, and ATCO Gas Metering Building.

The following report is for the Turbine Hall. It includes a summary of the documentation available for review, the site conditions observed and what can be expected for the structure going forward.

2.6.2 Documentation Review

RJC reviewed both the available drawings and reports provided by the City of Edmonton.

Structural drawings were available for review. In general, they were partial sets for the buildings and did not always have the version noted so it is possible they may not reflect what got built. The drawings did contain some information regarding the type and configuration of the structure but, in general, the information was limited and incomplete. As well, some of the areas appeared different than the structure observed on site, which is likely the result of modifications to the Plant over time.

Furthermore, little to no design load information in general was shown on the drawings. Without this information, the capacity of the structures are unknown and will need to be confirmed as part of reuse of the building. A previous report, completed in 2019 by Dialog, noted a capacity of 100 psf for the main floor of the Boiler Hall and part of the Turbine Hall. This type of assessment will be typical to determine capacities of the structures.

Previous condition assessments and other related reports were also reviewed. In general, the reports noted the condition within the last 15 years and noted conditions similar what RJC observed. In general, the reports note the structure in okay to good condition given its age. There were several deficiencies noted, with the major ones being:

- The Boiler Hall west wall and roof appeared to be noted as deficient. The west wall appears to have been addressed with steel reinforcement on the mezzanine levels. The roof had replacement of some of the roof structure completed.
- There were also roof repairs noted with the Turbine Hall and Switch House, but it does not appear they have been completed.
- There was cracking noted in the basement of the Turbine/Boiler Hall, but in general this was not considered a structural concern by previous reports.

2.6.3 Site Assessment

RJC completed a visual condition assessment of the below noted buildings in late 2020 and early 2021. The condition of the structures is consistent with the age and use as industrial buildings. The structures are uniquely configured to support plant operation and have been modified over time to accommodate changes in equipment. This has resulted in structures that are varied, interdependent, and modified, as is typical of industrial sites where focus is on Plant performance and function.

The reviews were limited to visual observations of accessible areas. No testing or dismantling of finishes occurred during our evaluation. A design review was not part of the scope of this project and the review is preliminary in nature. When the project proceeds into detailed design, detailed checks and further site investigations will likely be required to confirm the conditions and capacities of the structures, as well as repairs may be required to make areas useable for intended use.

The Low Pressure Plant (hereafter known as the LP Plant) comprises of three interconnected buildings, including the western-most located Boiler Hall, the centrally located Turbine Hall, and the eastern-most located Switch House. The following outlines the site reviews for the Turbine Hall:

2.6.4 Turbine Hall Structural Description

The Turbine Hall structure consists of a one-storey building with full basement. It is centrally located between the Boiler Hall/Switch House and is the second highest building of the three. It was originally built in 1930-1950s in several phases, in conjunction with the Boiler Hall.

In general, the structure was exposed and visible for review. The roof structure is steel deck on steel beams, with steel columns (partially encased in the masonry walls). There is a steel girder structure above the main floor to support the crane system. The main floor structure consists of concrete slab/beams with some steel structure infill areas. Based on the drawings, the foundation appears to be creosote wood piles with concrete pile caps, which was not visible during our review. The below-grade foundation walls are concrete and above-grade exterior walls are wind-bearing multi-wythe brick. It is likely the brick walls provide the lateral support for the building.

The former use for the building was primarily industrial and major equipment was located in this building. Similar to the Boiler Hall, the equipment has all been removed.

2.6.5 Condition of Turbine Hall Structure

There is some surface corrosion visible on the underside of the roof deck. It appears to be mostly concentrated on the western side and southeastern portion of the roof. While it could only be viewed from the main floor (i.e. from a distance), there did not appear to be any holes as a result. However, there could be additional deterioration of the upper surface, which would not be visible.

- The central beam/plate along the peak of the roof appears to be missing in part of the roof towards the north end.
- Some of the steel columns (shared with the Boiler Hall) have significant surface corrosion and staining on the visible portion. The wall could potentially be hiding more corrosion of the web members.
- There are signs of organic growth on the western brick wall, which may indicate a potential roof leak. There is one location where it is concentrated, roughly in the middle of the western wall. When the project proceeds, there may be some local investigation required to review the brick strength and amount of steel corrosion of the buried columns.
- The main floor concrete is in okay condition. It appears it has been modified due to plant operations over the years. There are several locations with exposed concrete rebar or rough-cut edges on columns/beams.
- There are a few locations where the concrete appears to be poorly consolidated. It appears to be concentrated in the corners of the large concrete pedestals.
- The exterior brick appears to be performing as intended and is in good condition. There appears to be no significant signs of movement in brick or mortar.
- Based on a visual review only, the span appears quite long from roof to main floor. It may require further review.
- The Gantry Crane appeared in okay condition from a distance, but could not be reviewed up close.
- Re-roofing has been proposed but has not been completed.
- A portion of the main floor was previously evaluated in the Dialog's 2019 report and given a capacity of 100 psf.
- The foundation walls below grade appear to be in okay condition. There is some minor cracking at the pour joints and signs of surface delamination/repair.
- There have been some openings cut and loss of section for the central basement wall between the Boiler and Turbine Hall. Some of these areas will probably need repairs depending on the intended use.
- The exterior has some minor spalling and minor deterioration of the surfaces of some of exterior concrete. There are also a couple locations with minor cracks in the exterior walls at the foundation level.
- The exterior stairs on the north side have significant rust and are no longer be performing as intended. It is likely they will need replacement.

Therefore, in general, based on only visual observations, it appears the Turbine Hall structure is in poor to good condition given its age. Overall, the structure appears to be performing as intended (but is seeing significant lower loading currently). No immediately critical structural damages were observed during the assessment, but it is expected some repairs will be required.

At this time, one site investigation is suggested. It is unknown what condition the timber piles would be in (given they are almost 80 years old in some cases), and there is some risk related to what their condition might be. It is recommended a site investigation exposing a sampling of the foundations be considered to review the condition and determine if they are capable of supporting the building for the expected service life.

It is also important to note that there are structural members which are at or could be near the end of their life-cycle. Given the nature of the building's previous use, as well as the modifications made, some of the members may need to be replaced/repaired. This includes areas such as concrete with damaged edges or exposed rebar, as well as steel with holes or corrosion.

Furthermore, structural reinforcement/replacement might also be required to meet the required new uses for the building under the current Alberta Building Code. In general, the structure has been designed for the Plant's uses and while it would have seen large loads in some areas of the structure, overall the capacity of the structure (and the codes designed to) are generally unknown. Structure capacity will need to be reviewed and repairs can be expected to make them safe for the proposed new non-industrial uses.

It is also expected the building will be re-roofed in the coming years. During this time, the roof deck's condition should be reviewed.

2.6.6 Conclusion

In general, the condition of structure for the Turbine Building varied from poor to good. If re-occupied, the structure will need to be evaluated for capacity and some of the conditions repaired. Based on the results of those evaluations, repairs and reinforcement of the structure can reasonably be expected in some areas. Those could include, but are not limited to, evaluations and repairs such as:

- Levelling or infill of floor structure
- Reinforcement or upgrade of roof structure for current snow loads or changes to roofing
- General concrete repair and patching, including repair of spalled concrete
- Re-establishing steel members if load bearing, including filling holes, reinforcement of members, etc.
- Lateral upgrades: wind and seismic
- Repair of stairs between floors
- Upgrading steel-to-steel connections in some locations
- Review of existing building under requirements for existing buildings (in commentary of National Building Code 2015) and National Building Code - 2019 Alberta Edition

These upgrades are dependent on the future use of the building. Those recommendations are beyond the scope of this report and unknown given the intended use is still an unknown. However, it can reasonably be expected that some changes to the structure will be part of the work required.

2.6.7 Limits of Liability

This report is intended to provide a general description of the structure and its condition, which may have been apparent at the time of our review. Read Jones Christoffersen Ltd. did not perform any design checks to confirm the adequacy of the structure. They will however be required in some instances during design to confirm the capacity of the structure for the intended uses. This is because only limited structural drawings were available for review.

The review was limited to visual observations of accessible areas. No testing or dismantling of any coverings was performed. Reviews were made on a random basis with no attempt to review or inspect every element or portion of the building. The intent of the review was to determine areas of visually obvious deterioration and need for repair, and to determine, in a general way, the overall quality and sufficiency of the structure, but not to ascertain the quality or sufficiency of any specific aspect of the structure.

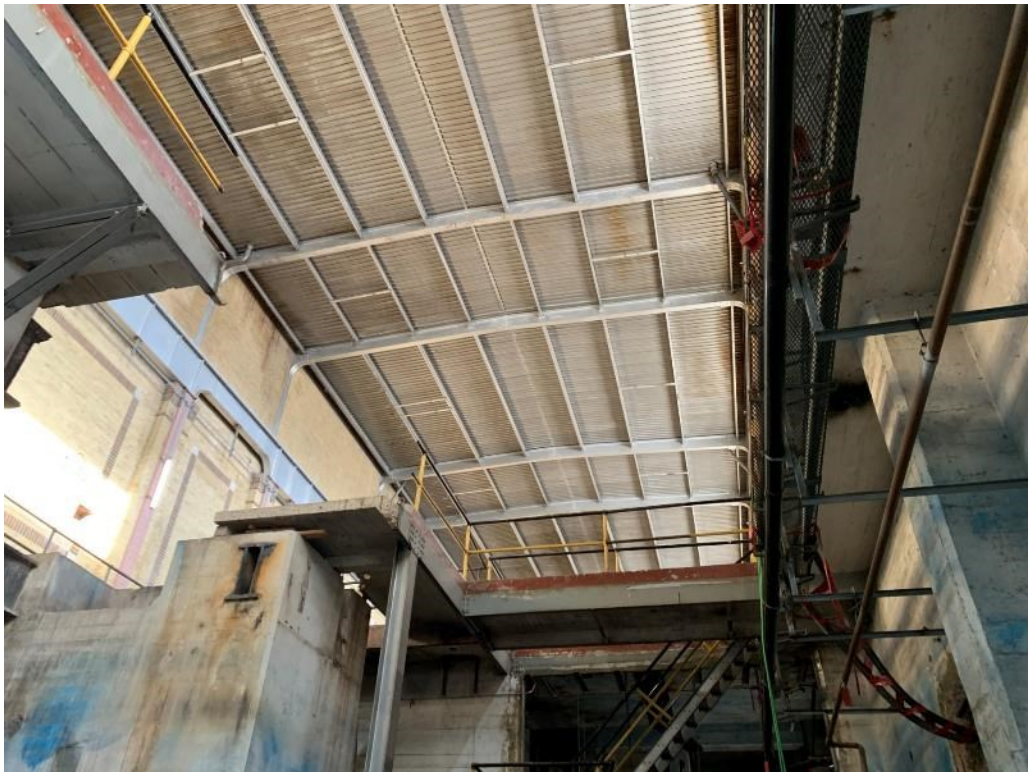
Our comments are not a guarantee nor warranty of any aspect of the condition of the building whatsoever, nor that the building has been built in accordance with the drawings and specifications. Any opinions of probable cost presented by the Consultant are based on incomplete or preliminary information and on factors over which the Consultant has no control. The Consultant does not guarantee the accuracy of these probable costs and shall have no liability where the probable costs are exceeded.

Reports prepared by the Consultant are exclusively for the use and benefit of the Client. They are not for the use or benefit of, nor may they be relied upon by, any other person or entity without written permission of the Consultant.

Above: Boiler/Turbine Hall – Column Rust on shared Wall

Above: Turbine/Switch house

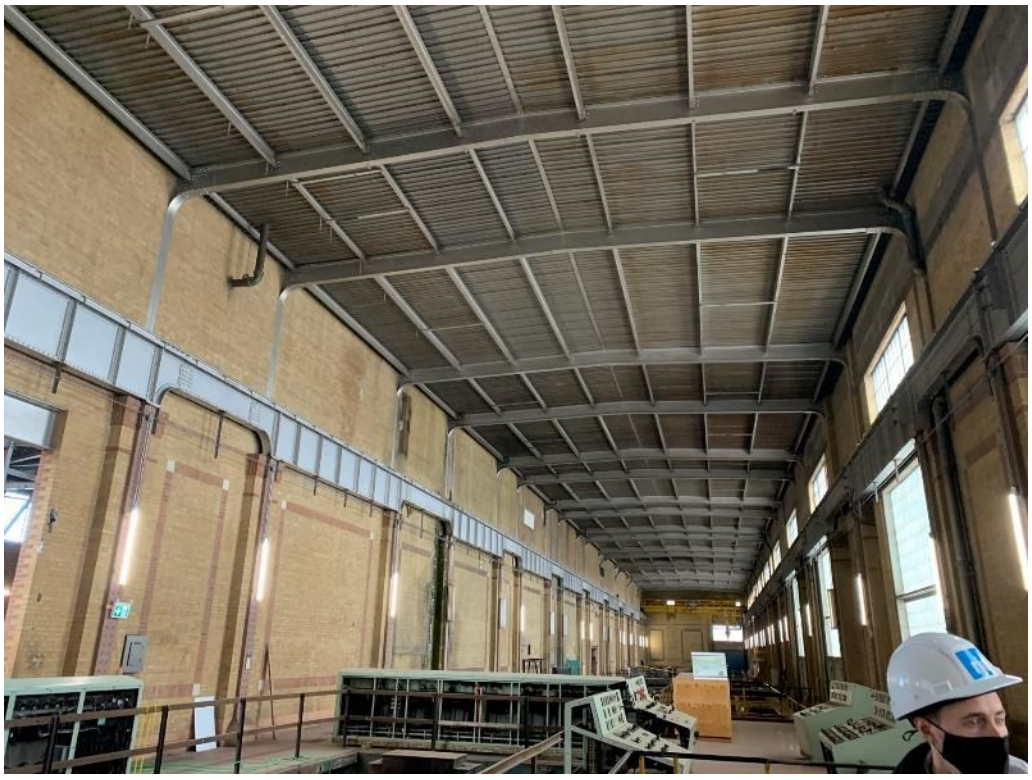
Above: Turbine – Basement Pedestal



Above: Turbine – Photo from basement

Above: Turbine – Basement Structure

Photo 1: Turbine – Roof Structure – Rusting of Deck



Above: Turbine – Roof Structure

Above: Turbine –Main Floor Structure

Above: Turbine –Main Floor & Roof

Above: Turbine –Column with Organic Growth

Above: Turbine –Basement Structure

Above: Turbine –Shared Wall with Boiler Hall

2.7 Building Code

Please refer to the *Building and Fire Code Assessment* for a detailed overview of Building Code and Accessibility compliance challenges and opportunities.

2.8 Designated Substances

While hazardous materials assessment was not within the scope of this project, the consultant team did consult the following documents in the preparation of this condition assessment report. Further examination by a qualified hazardous materials consultant is recommended prior to the implementation of any conservation planning or rehabilitation measures.

Title[5]	Author	Date
Hazardous Building Material Survey Report	PHH ARC Environmental Ltd.	2008-12-24
Oil Samples MP01-9312	Meridian Power Systems Inc.	2009-01-26
PCB G10	Meridian Power Systems Inc.	2009-01-27
PCB GT10	Meridian Power Systems Inc.	2009-01-27
EPCOR Rossdale MP01-9312 PCB Results	Meridian Power Systems Inc.	2009-01-29
Asbestos Bulk Samples and Air Monitoring	PHH ARC Environmental Ltd.	2009-02-11
Asphalt Asbestos Bulk Samples	PHH ARC Environmental Ltd.	2009-03-13
6304BRr01 “Rossdale EPCOR Refractory Bulk Sampling Report”	PHH ARC Environmental Ltd.	2009-07-07
Additional ACM Testing “Pinchin Environmental Asbestos Laboratory - Certificate of Analysis”	Pinchin Environmental Testing	2010-04-23
Haz-Mat Testing Rossdale Generating Project “Bulk Material Identification”	RH Services Inc	2015-04-23
Asbestos Report Roof Access Hatch	Pinchin Environmental Testing	2016-05-09

[5] See Works Cited for specific references.

3.0 Conclusions & Recommendations

Areas or subject matter of the building that might require further investigation, including limitations of the current assessment, include:

1) Unknown thorough conditions of wet-well due to lack of access suggests that the wet-well and all associated machinery and mechanical systems require further investigation. This could correspond to efforts to seal water leaks.
2) Depth of concrete carbonation and depth of concrete reinforcement in relation to its surfaces may help inform sustainable preventative conservation, for instance, perhaps a cathodic protection systems could help reduced future maintenance due to the inherent vice of reinforced concrete assemblies that inevitably exhibit corrosion packing of ferrous reinforcements.
3) Material properties necessary to specify a repair or replacement of materials in unit or section.

Specific recommendations that have follow from understanding of building conditions are included in the subsequent AARP document, *Priority Rehabilitation Scope Definition and Class 5 Budget*.

4.0 Appendices – Conditions Mapping

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Consultant Responses to CP-9673 RPP AAPR PD01 - Alberta Culture Review

2020-06-30

COMMENT #	REFERENCE	PAGE	COMMENT	CONSULTANT'S RESPONSE
01	N/A	N/A	Corrections needed for labels under "Building Condition Assessment" in cheat sheet.	Noted and corrected, thanks.
02	N/A	N/A	Recommend proof reading/editing in general – minor/minimal wording, typing and formatting mistakes noted for written reports	Noted.
03	N/A	N/A	Be mindful of copy/paste transfers – most notably between Building Condition Assessments of Pump Houses (i.e. front door and electrical).	Noted.
04	Building and Fire Code Assessment	TOC	There appears to be an error in the content table at the Building and Fire Code Assessment as the pages are listed in roman numerals	Noted and corrected, thanks.
05	Building and Fire Code Assessment	Section 1.5	Section 1.5 of Building Code Assessment indicates that no floor plans were reviewed but included in appendix?	This will be corrected in the final report.
06			Conservation Plan has yet to be uploaded.	Corrected.
07			Overall, I think the information provided is good and I look forward to discussing further at the next meeting.	Noted, thanks.
08			Recommend light proof reading for very minor typing/wording mistakes but more formatting issues (i.e. line breaks and empty spaces/pages around photos/images).	Noted, thanks.
09			The highlighted section on Pump House #1 to possibly relocate existing equipment to Pump House #2 would go against Standard 4 of the S&Gs which states: "Recognize each historic place as a physical record of its time, place and use. Do not create a false sense of historical development by adding elements from other historic places or other properties or by combining features of the same property that never coexisted." As this is highlighted along with other sections (i.e. the ATCO Gas Building), I understand that this will be edited/removed in the next version.	Yes, this will be removed in the final report.
10			I believe that there were glitches noted in the table of contents/reference pages.	Noted and corrected, thanks.
11			Overall, I think that this Conservation Plan will be a useful tool and I look forward to the future discussions on interventions that it will lead to.	Thanks!

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Consultant Responses to CP-9673 RPP AAPR PD01 - Architectural Review

2020-06-30

COMMENT #	REFERENCE	PAGE	COMMENT	CONSULTANT'S RESPONSE
01	Building and Fire Code Assessment	N/A	Lot of information is included in terms of Code requirements. But it is not always clear on how the existing conditions fare against those requirements. If existing items are determined to be non compliant, adding a sentence pointing out the non-compliance would suffice. [Comment do not apply to accessibility section]	We can endeavor to identify the applicable code nonconformance(s) where they occur and additionally where they could be applied to the range of [future] occupancies proposed. In some areas it is difficult to identify a noncompliance for a certain occupancy type as this could differ slightly from another occupancy type (where that noncompliance is not appropriate or deemed as such).
02	Building and Fire Code Assessment	N/A	Would it be possible to add an executive summary to sum up the level of impact that each major occupancy will have on the buildings?	Yes, we can identify this at a "high-level" in executive summary form at the beginning of the report.
03	Building and Fire Code Assessment	p. 9	Table 3.2 and 3.3: Is D occupancy an anticipated occupancy for Pumphouse # 1 and 2 due to the layout of these two buildings?	The occupancy types for each building are set, although an occupancy might not be proposed for a specific building, we have provided the information to each building, not knowing at this time what the future occupancy could/would be.
04	Building and Fire Code Assessment	p. 11	Table 3.5: It would be helpful to include the minimum rating required for loadbearing walls, columns and arches. At least in brackets? [Comment also applies to Table 3.6].	Noted, we will apply the minimum fire resistance rating(s) required for loadbearing walls, columns and arches [where applicable].
05	Building and Fire Code Assessment	p. 34	Tables showing 'Occupant Load Analysis vs. Exiting Provisions': Would it be possible to add existing conditions to this table or is that still being determined?	During the site visit, many existing exiting doors were locked shut, we can take the measurement from the Architectural drawings to establish the existing exiting width provisions and add this into the relevant table.
06	Building and Fire Code Assessment	p. 40	12.0 Vertical transportation: Which buildings does this section apply to?	We will update and provide further details within the report to where this is required and where this would be triggered.
07	Building and Fire Code Assessment	p. 41	13.0 Washroom requirements: Can a column be added to indicate the number of washrooms required, if we go with all universal (gender-inclusive) washrooms?	Yes, this information can be added. Generally, the number of washrooms required for gender-inclusive purposes would be the sum of those required for both male and female washrooms. This value may change if the occupant load changes throughout the life of the project / design progression. In addition, barrier-free requirements for those washrooms will be revised in the final report to indicate that only 2 barrier-free washrooms are required to be provided for each floor area proposed to contain a barrier-free path of travel, per the Edmonton Access Design Guide.
08	Building and Fire Code Assessment	p. 42	Section 14.0 is titled INTRODUCTION without an indication that this is an introduction to a new section, accessibility. Please revise the title for clarity.	Yes, the final report will be provided with a proper introduction to the Accessibility portion of the report for clarity.

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COMMENT #	REFERENCE	PAGE	COMMENT	CONSULTANT'S RESPONSE
09	Building Condition Assessments		2.1 Civil/Landscape: Same information is included for condition assessments of all buildings. Some of the information included for the Low Pressure Plant is not relevant for the pump houses or ATCO Gas building. Can this section be customized for the pumphouses and ATCO Gas building by removing non-applicable items?	Yes, this will be updated in the final version of the assessment reports.
10	Conservation Plan	p. 20	The City Plan was approved by Council in December 2020.	Noted, thanks. This will be updated in the final report.
11	Conservation Plan	p. 42	Criteria table: Does Building Code requirements fall under 'Health and Safety/Security'?	Yes.

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Consultant Responses to CP-9673 RPP AAPR PD01 - City Planning Review

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COMMENT #	REFERENCE	PAGE	COMMENT	CONSULTANT'S RESPONSE
01	Photographic Record Documents	p.3	P. 3 of each Photographic Record document says that all photographic data is from MiraCAD or drone footage "with the exception of photograph #8, which was taken by a Pixel 3a Smartphone Camera." Each document has its own numbering so I'm assuming that this photograph #8 taken by the Pixel 3a is only in one of the Photographic Record documents and not them all.	Noted and corrected, thanks.
02	Switch House Condition Assessment	p. 35	Looks like a word is missing in the final paragraph. Was it intended to read "...there is a notable lack of trolley stops"?	Noted and corrected, thanks.
03	Switch House Condition Assessment	p. 45	Should read "its" rather than "it's" in second sentence of Natural Gas paragraph.	Noted and corrected, thanks.
04	Switch House Condition Assessment	p.48	This states that the temporary glycol heating system is "adequate for heating to preserve the foundation and no changes are recommended unless maintaining the system in place is cost prohibitive." I would like one or two more sentences recommending what we should do if the system in place is deemed to be cost prohibitive.	We will update the recommendation accordingly.
05	Switch House Condition Assessment	p. 53	The first sentence under heading 2.6.6 refers to the Turbine Hall which appears to be a boilerplate error, since this document pertains not to the Turbine Hall but to the Switch House.	Noted and corrected, thanks.
06	Turbine Hall Condition Assessment	p. 44	Should read "its" rather than "it's" in second sentence of Natural Gas paragraph.	Noted and corrected, thanks.
07	Turbine Hall Condition Assessment	p. 47	This states that the temporary glycol heating system is "adequate for heating to preserve the foundation and no changes are recommended unless maintaining the system in place is cost prohibitive." I would like one or two more sentences recommending what we should do if the system in place is deemed to be cost prohibitive.	We will update the recommendation accordingly.
08	Turbine Hall Condition Assessment	p. 52	"It is important to note that there are structural members which are at or could be near the end of their life-cycle." I thought part of the purpose of this report is to identify what's good and what isn't. Does a "things could be bad" statement impugn the structural integrity of the building, or is that intended to just be a flag for future detailed design in adaptive reuse work?	Statement is intended to note structure cost can be expected to upgrade and maintain structure. It is not intended to indicate the structure is no longer usable, and we will update comments to better reflect it.

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COMMENT #	REFERENCE	PAGE	COMMENT	CONSULTANT'S RESPONSE
09	Boiler Hall Condition Assessment	p. 14	Second sentence refers to Turbine Hall, which looks to be a boilerplate error.	Noted and corrected, thanks.
10	Boiler Hall Condition Assessment	p. 51	Should be "its" rather than "it's" in second sentence of Natural Gas paragraph.	Noted and corrected, thanks.
11	Boiler Hall Condition Assessment	p. 54	This states that the temporary glycol heating system is "adequate for heating to preserve the foundation and no changes are recommended unless maintaining the system in place is cost prohibitive." I would like one or two more sentences recommending what we should do if the system in place is deemed to be cost prohibitive.	We will update the recommendation accordingly.
12	Boiler Hall Condition Assessment	p. 60	"It is important to note that there are structural members which are at or could be near the end of their life-cycle." I thought part of the purpose of this report is to identify what's good and what isn't. Does a "things could be bad" statement impugn the structural integrity of the building, or is that intended to just be a flag for future detailed design in adaptive reuse work?	Statement is intended to note structure cost can be expected to upgrade and maintain structure. It is not intended to indicate the structure is no longer usable, and we will update comments to better reflect it.
13	Pump House 1 Condition Assessment	-	Page numbers missing throughout.	Noted and corrected, thanks.
14	Pump House 2 Condition Assessment	-	Page numbers missing throughout.	Noted and corrected, thanks.
15	Pump House 2 Condition Assessment	Wet Mud page	"wed mud deposits" is a typo. Great schematic explaining the water ingress issue, though!	Noted and corrected, thanks.
16	Building and Fire Code Assessment	p. 3	In the paragraph after the bullets, remove the apostrophe after "buildings."	Noted and corrected, thanks.
17	Building and Fire Code Assessment	p. 31	The total calculated occupant loads seem really high. 1425 people on the main floor of the Turbine Hall? 1065 people on the mezzanine level of the Boiler Hall? 424 people in Pumphouse #1? 1481 people in Pumphouse #2? I just want to ensure that how we're calculating the area is accurate. These numbers are the basis of other calculations so they have to be realistic. For example, on page 41, the occupancy numbers total up to 11,380 people needing 124 water closets plus 14 barrier-free washrooms (p. 68) for a total of 128. Eleven thousand people in the Low Pressure Plant seems impossible and the washroom numbers seem astronomical to me.	The occupancy calculations identified in the assessment are a product of applying the Code-defined ratios of area per person. In practice the final determination of occupancy type, likely coupled with a design occupant load (which limits the number of people permitted to occupy portions of each of the buildings at any one time) would be used to limit the number of (amongst other things) washroom fixtures required. We will add a clarifying note to this effect.

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18	Conservation Plan part 1	p. 22	Section 4.5 of the River Crossing Business Plan actually doesn't have any text about the power plant, but the map in this section shows the power plant as being intended for Institutional / Cultural uses. This wouldn't preclude commercial uses, but the reference to at-grade commercial in section 4.5 of the business plan is to streetfronts on 96 Ave and 104 St north of the power plant. Please combine the two (A) sections under the section 4.5 heading on p. 22 and correct them accordingly.	Noted and corrected, thanks.
19	Conservation Plan part 1	p. 23	The sentence "The Rivers Crossing Business Plan is legally supported through zoning by the Rossdale Area Redevelopment "Bylaw 8139..." is not exactly correct. The Rossdale Area Redevelopment Plan was adopted in 1986 and we are now in the process of updating the ARP on the basis of the Business Plan. Replace this with something like the following: "The City is now in the process of updating the Rossdale Area Redevelopment Plan on the basis of the River Crossing Business Plan. The boundary of the ARP is shown on the following map. The City is also in the process of updating the zoning that applies to the power plant complex to reflect the scope of possible future uses."	Noted and corrected, thanks.
20	Conservation Plan part 1	p. 36	Should read "Stone masons" instead of "Stone mason's".	Noted and corrected, thanks.
21	Conservation Plan part 1	p. 36	Footnote 28 appears to be misplaced.	Noted and corrected, thanks.
22	Conservation Plan part 1	p. 72	John Poole was the son of PCL founder Ernest Poole. Perhaps write "(who later became co-owner of construction firm known as PCL, formerly Poole Construction Limited, and a prominent Edmonton philanthropist)".	Noted and corrected, thanks.
23	Conservation Plan part 1	p. 84	p. 84 The first sentence is missing a period.	Noted and corrected, thanks.
24	Conservation Plan part 1	p. 93	The final sentence on the page -- "It is the drainage of the glacial melt Lake Edmonton that led to a rapid down cutting of what we now call the North Saskatchewan River" -- is technically correct but it makes the reader think that the drainage of Lake Edmonton happened through the North Saskatchewan River, when in fact the drainage was the Gwynne Channel (Godfrey, 1993, p. 26-29). It would be clearer to write: "After the glacial-melt Lake Edmonton drained to the southeast, what we now call the North Saskatchewan River rapidly began cutting down its valley."	Noted and corrected, thanks.
25	Conservation Plan part 1	p. 94	Impressive re-drawing / updating of the river valley geological cross-section!	Thanks!

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26	Conservation Plan part 1	p. 96	Given footnote 44, I think you mean "World Wildlife Fund" (capitalized) rather than the World Wildlife Foundation, which is a different, much smaller, organization.	Noted and corrected, thanks.
27	Conservation Plan part 1	p. 97	I think there should be a comma between the two sentences on this page.	Noted and corrected, thanks.
28	Conservation Plan part 1	p. 113, 115	What is the evidence supporting the statement that Cree called Rossdale pehonan? The Executive Summary of the 2004 Rossdale Flats Aboriginal Oral Histories Project said that Rossdale was a pehonan, or gathering place, long before the fur trading era. All subsequent references to pehonan in the Oral Histories Project report, however, come from Louis "Buff" Parry, a non-Indigenous person with an exceptionally curious background that includes writing a book and making documentary about secret societies and years of research about the Holy Grail. Since the Oral Histories Project report was issued, other people locally have applied the term pehonan to Rossdale, but no archival evidence of the name has been demonstrated, and the River Crossing project's extensive Indigenous engagement with First Nation elders and others never connected the term to Rossdale. In the book Castles to Forts: A True History of Edmonton, Metis researcher Phillip Coutu, one of the most involved Indigenous activists associated with the Rossdale burial ground, uses the term pehonan a number of times, but only in connection with the area near the forks, or confluence, of the North and South Saskatchewan Rivers over 500 km to the east of Edmonton. Archaeological evidence indicates that the Rossdale flat had human activity as long as 10,000 years ago, but there is also evidence of similarly old human activity on other river flats in the area. In the words of provincial archaeologist Caroline Hudecek-Cuffe, "There is increasing evidence showing a very long and consistent pattern of Indigenous hunting, camping, and utilization of the diverse resources offered by the river valley and its tributaries in the Edmonton region." On our River Crossing web page, we celebrate the river valley being "a sustaining force, giving people water, food, shelter, and medicine." It is also accurate to say that the Rossdale flat has been a place of human activity for 10,000 years. To suggest that this one river flat, however, was more special, or more sacred, than other, nearby river flats prior to the arrival of the fur trading forts feeds into a narrative with more political purpose than evidentiary support.	"pehonan" here isn't being used as a noun, but as a verb. It is in line as an accepted convention, from Chief Bruno to Edmonton Historical Board website. However, we have now referred to it as Gathering Place instead, to be more inclusive of a multitude of indigenous groups rather than Cree-centric.

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COMMENT #	REFERENCE	PAGE	COMMENT	CONSULTANT'S RESPONSE
29	Conservation Plan part 1	p. 124	The label for the map on this page should read "The green line depicts the possible route of Anthony Henday's expedition..." There are four different versions of Henday's journals with so much variation between them that historians today are loath to follow earlier generations of historians who claimed to have determined with certainty Henday's route. For more information, see Henday, Anthony. A Year Inland, ed. Barbara Belyea. Waterloo: Wilfrid Laurier University Press, 2000.	Noted and corrected, thanks.
30	Conservation Plan part 1	p. 124-125	The write-up about Fort Augustus / Edmonton House I needs to be rewritten as it is based on an incorrect reading of Dylan Reade's 2018 article. Dylan confirmed with me in an 8 Apr 2021 email that he has no contention with the accepted location of Fort Augustus / Edmonton House I "as it seems to be amply documented both archivally and by archaeology" in Dylan's words. It's Fort Augustus II that he thinks was located on the Victoria flat. While we don't yet have concrete archaeological evidence of the fort being in this location, Dylan's article provides the archival evidence supporting his claim, which is consistent with the fact that archaeologist Nancy Saxberg has never found any 1800-1815 artifacts in Rossdale and herself believes that Fort Augustus / Edmonton House II were on the Victoria flat. In other words, the current evidence points to the Rossdale flat as being home only to Fort August / Edmonton House IV between 1813 and 1830, when Edmonton House V was built on what is now the Legislature grounds. This report should reflect this current thinking.	Noted and corrected, thanks.
31	Conservation Plan part 1	p. 125	This sentence at the bottom of the page also needs to be changed in light of my previous comment: "European settlement on the Rossdale flats did not occur until the early 19th century, with Fort Edmonton II & Fort Augustus II (1802- 1810)." As mentioned, evidence points to European settlement on the Rossdale flat beginning in 1813.	Noted and corrected, thanks.

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32	Conservation Plan part 1	p. 125	I would also encourage you to consider revising this sentence: "...likely for the same reasons Indigenous Peoples chose Rossdale Flats as a place for encampment for the preceding 10,000 years as land with good river access, flat relatively high land, and largely flood free." Today's high-banked Rossdale flat reflects significant fill added in the 20th century. Binnema and Ens, in the introduction to their 2016 publication of the 1821-1826 Edmonton House Journals, note on p. lxxxv that frequent flooding on the Rossdale flat was the reason for the move to the Legislature grounds site, so Rossdale clearly was flood prone. The fur traders choosing to return in 1813 to what is now the Edmonton area after a failed venture 100 km downstream (Fort Augustus / Edmonton House III, 1810-1812) was obviously done in recognition that the Edmonton area better met their needs, but the specific choice of the Rossdale flat at that time may have been as simple as that it was the next "virgin" flat over from where they had been before 1810. It was probably more nuanced a choice than that -- the Rossdale flat was on the inside of the river's turn and hence away from the strongest flow whereas the Victoria Flat was on the outside of the turn -- but what I think needs to be emphasized in this part of the report is not one flat's superiority over all the others in the vicinity but the general desirability of the Edmonton area. On 9 Apr 2021, I spoke with Alwynne Beaudoin, Director of Natural History at the Royal Alberta Museum and an expert paleoecologist. When I asked her what originally made the Edmonton area attractive to Indigenous peoples, she said that it was "the variety of the landscape." The Edmonton area has a protective valley, is on the margin of the forest, is close to the grassland, is near the Beaver Hills, is a good spot to get across the river, and is convenient to the mountains. "Where you get a lot of ecological complexity," she said, "is where you get a lot of resources."	Noted and corrected, thanks.
33	Conservation Plan part 1	p. 126	Revise the piece about the locations of Edmonton II and IV based on my comments above. Nancy Saxberg and Dylan Reade both think that Edmonton II was on the Victoria flat, though they focus on different edges of that flat. Nancy's work (e.g. image on p. 112 of the Conservation Plan) along with documentary evidence (e.g. the James Bird map on p. 107) strongly connect Edmonton IV with Rossdale.	Noted and corrected, thanks. I circled back with Nancy Saxberg as well [EO].
34	Conservation Plan part 1	p. 128	Is the red box lower on the image than intended?	Yes, noted and corrected, thanks.
35	Conservation Plan part 1	p. 130	Dylan Reade (reade.dylan@gmail.com) has information on how Donald Ross got River Lot 4 in case you want to follow that lead.	Finally made contact, thanks Erik! [EO].

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36	Conservation Plan part 1	p. 130	Donald Ross's hotel was called the Edmonton Hotel. And the "the land underneath the Power Plant" is not "likely," but certainly, "outside of the bounds of the River Lot."	Edited. I found a reference to Ross Hotel at one point and I think that stuck in my head [EO].
37	Conservation Plan part 1	p. 135	Photo caption and footnote should read "Power Plant in Danger."	Noted and corrected, thanks.
38	Conservation Plan part 1	p. 136	Should read "Jasper Avenue's"	Noted and corrected, thanks.
39	Conservation Plan part 1	p. 141	I would recast the final sentence to indicate that the Rossdale Power Plant was the only electrical generating station in Edmonton until Clover Bar opened in 1970.	Noted and corrected, thanks.
40	Conservation Plan part 1	p. 147	Should read "street railway cars"	Noted and corrected, thanks.
41	Conservation Plan part 1	p. 154	Final sentence appears to be a note to the writer.	Noted and corrected, thanks.
42	Conservation Plan part 1	p. 157	The caption for Figure 127 appears garbled: "up to 16 of the plant's boiler technology was..."	Noted and corrected, thanks.
43	Conservation Plan part 1	p. 171	Should read "Mayor Hawrelak"	Noted and corrected, thanks.
44	Conservation Plan part 1	p. 175 - 176	All references to the "City" should be capitalized.	Noted and corrected, thanks.
45	Conservation Plan part 1	p. 183	Be consistent regarding whether to fully capitalize "Whiting." Also, "Whiting" is spelled incorrectly in one place.	Thanks, some confusion based on a report presentation of the name.
46	Conservation Plan part 2	p. 7	Should read "Pump House #2 and the Switch House are included in this draft."	
47	Conservation Plan part 2	p. 7	I'm pleased to see the discussion of deep Indigenous connection to the site but would like to see it called something other than pehonan. As indicated in comments above, no one including you has presented evidence that this one river flat had especial importance before fur trading forts were established on it. What the evidence instead indicates is the importance of the river valley as a whole to Indigenous peoples. I propose replacing the pehonan heading and first two sentences with something like the following: "Indigenous significance: The river valley of which Rossdale is a part has deep Indigenous significance. There is evidence of campsites in Rossdale and other river flats going back 10,000 years. European fur traders were drawn to what is now the Edmonton region because of the number of Indigenous peoples who lived on this land. The establishment of trading forts in Rossdale made it an important gathering space for many First Nations and Metis people -- a place of ceremonies, celebrations, meetings, trade, dance, and games."	Noted and amended. Please refer to response to comment #28.

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48	Conservation Plan part 2	p. 7	Surely the phase "arbitrary Eurocentric deli" is an error?	Yes, noted and corrected, thanks.
49	Conservation Plan part 2	p. 7	Should read "(specifically Forts Edmonton & Fort Augustus IV)"	Noted and corrected, thanks.
50	Conservation Plan part 2	p. 8	In heading B, paragraph 1, capitalize "City."	Noted and corrected, thanks.
51	Conservation Plan part 2	p. 9	Should read "Mayors" not "Majors."	Noted and corrected, thanks.
52	Conservation Plan part 2	p. 18	Should read "including Fort Edmonton IV and Fort Augustus IV" and, lower on the page, "Fort Edmonton IV's location at this site..."	Noted and corrected, thanks.
53	Conservation Plan part 2	p. 18	Regarding the text in highlighting, once the Rossdale subdivision is registered, the Rossdale Power Plant will occupy a portion of a 3.72 ha parcel.	Noted and corrected, thanks.
54	Conservation Plan part 2	p. 19	Should read "co-owner of PCL."	Noted and corrected, thanks.
55	Conservation Plan part 2	p. 20	"[This point split as below]" -- is this a note to the writer?	Yes, noted and corrected, thanks.
56	Conservation Plan part 2	p. 27	There are two copies of the same image.	Noted and corrected, thanks.
57	Conservation Plan part 2	p. 48	Should read "...of Fort Edmonton IV."	Noted and corrected, thanks.
58	Conservation Plan part 2	p. 49	In point 5, it should read "...similar to the heritage pattern."	Noted and corrected, thanks.
59	Conservation Plan part 2	p. 50	Is the paragraph that begins "New additions should not attempt..." intended to be part of the Mechanical and Electrical Systems row? It feels like its own Additions row.	Noted and corrected, thanks.
60	Conservation Plan part 2	p. 50	The sentence "While reversibility was once a mantra of the heritage profession re-treatability is recognised as" appears to be unfinished.	Noted and corrected, thanks.
61	Conservation Plan part 2	p. 52	It looks like there is a writer's note at the top of the page.	Noted and corrected, thanks.
62	Conservation Plan part 2	p. 56	The text of the top of the page appears incorrect or missing something.	Noted and corrected, thanks.
63	Conservation Plan part 2	p. 64	What does the Distillery District image have to do with the notion of relocating machinery?	Machinery bit was supposed to be deleted, good catch. Distillery example is about turning windows into doors. I actually physically changed a few when I was a mason myself [EO].

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64	Conservation Plan part 2	p. 70 - 76	I will need to discuss this proposed process with the City's Indigenous Relations Office. My observation is that this looks to be a very resource-intensive process. There is nothing in this write up about how it would relate to engagement with non Indigenous stakeholders and the general public other than saying that "meaningful and clear roles for non-Indigenous collaborators will be critical to the success of the engagement process." Also, unless I'm missing it, there is nothing in this text that explains how the proposed engagement process relates to the conservation phases listed on p. 43. For example, is all of the process indicated recommended to happened as part of the limited, strategic renovations being done as part of the Advanced Assessment and Priority Rehabilitation project in 2021 - 2023, or would all of this process apply to short term work in 2023 - 2028? Or medium term work after 2029? I suggest adding a Staging or Timing subsection to this section of the report.	This will be updated. Not part of AAPR process, because this is a bit more hard nose stabilisation/enabling rather than permanent space-making. There could also be opportunities to run this engagement alongside other area re-development such as the inidgenous park to the north. City Framework will be referenced.
65	Conservation Plan part 2	p. 86	The second sentence in bullet (1) should read "Do salient archival records survive..."	Noted and corrected, thanks.
66	Conservation Plan part 2	p. 86	The second sentence in bullet (2) should read "The authors attempted to make contact but were unsuccessful."	Noted and corrected, thanks.

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COMMENT #	REFERENCE	PAGE	COMMENT	CONSULTANT'S RESPONSE
67	Conservation Plan part 2	p. 87	As noted on p. 126 of the Conservation Plan part 1, there already is a National Historic Site in the vicinity of the Rossdale Power Plant: the misnamed "Fort Edmonton III National Historic Site" that commemorates the location of the final fur trading fort in the Edmonton area, on what is now the grounds of the Alberta Legislature. This NHS, designated in 1959, is embarrassingly documented (e.g. a photo of Fort Edmonton V on the NHS web page is labelled as being Fort Edmonton III) and celebrates an incredibly narrow band of the history of the area. Designating the Rossdale Power Plant as a National Historic Site as suggested on p. 87 would leave the historical error of the existing designation unaddressed and could contribute to a sense of historical designation fragmentation. Please consider revising this text to recommend that the existing NHS designation be amended both in terms of the geography it pertains to and its period of significance. Similar to The Forks National Historic Site, an amended NHS designation could comprehend thousands of years of human history in this central portion of Edmonton's river valley -- from ancient Indigenous use to the fur trade to the settlement period to the present. The City has already had preliminary discussions with the Historic Sites and Monuments Board about this approach. In an 9 Jul 2019 email, Board staff admitted that "the Board's interest in the 1950s was typical of that era, a Eurocentric focus on the fur trade story and, today, many of these traditional stories are being told in a broader, richer fashion. The Historic Sites and Monuments Board of Canada (HSMBC) has updated and expanded other older designations to provide more inclusive histories. On several occasions, these updates have also included a name change." The email encouraged us to submit an amendment application which we have not done yet. If your report were to call for an amendment to the existing designation, it would strengthen the case that the City makes to the Board.	Good strategy about the specific recommendation to incorporate along with Fort Edmonton III (albeit a revision) have incorporated!
68	Conservation Plan part 2	p. 88	Should read "including an isolated area of blue stain."	Noted and corrected, thanks.

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Consultant Responses to CP-9673 RPP AAPR PD01 - FPD (AS) Review

2020-06-30

COMMENT #	REFERENCE	PAGE	COMMENT	CONSULTANT'S RESPONSE
01	Historic Building Record Drawings (for all buildings)		Text/font size should be the same on each sheet for consistency. (eg. Drawing List, Hatch Legend, Symbols Legend, Dimensions, are too small and not legible etc.)	Noted, thanks.
02	Historic Building Record Drawings (for all buildings)		ROS111, Rossdale EPCOR Administration Building is noted on the "Site Plan Building List", please indicate that this building is not a part of this project.	Noted, this will be adjusted on the final set of Historic Building Record Drawings.
03	Boiler Hall Archival Photo Record		Boiler Hall-Photo Record. 'Company' is misspelled	Noted, thanks. To be corrected in final version.
04	Condition Mapping Drawings (for all buildings)		Text/font size should be the same on each sheet for consistency. Some text/notes are too small and not legible etc.)	Noted, thanks.
05	Condition Mapping Drawings (for all buildings)		*Spelling errors, please do a spell check on all drawings	Noted, thanks.
06	Condition Mapping Drawings (for all buildings)		Some Room Numbers should be moved to be legible. Some walls run right through the room numbers.	Noted, thanks. To be corrected in final version.
07	Drawings: H260, H261, H263, H557, H558 Boiler Hall		Text and Room numbers difficult to read in hatched areas.	Noted, thanks. To be corrected in final version.
08	Drawings: H251, H551 Pump House #2		Text and Room numbers difficult to read in hatched areas.	Noted, thanks. To be corrected in final version.
09	Condition Assessment-Switch House	p. 52	First sentence to be reworded	Noted, thanks.

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COMMENT #	REFERENCE	PAGE	COMMENT	CONSULTANT'S RESPONSE
10	Condition Assessment-Turbine Hall First paragraph, 2nd sentence	p. 23 (and page 32)	Confirm if a Gantry crane, it may be an overhead or bridge crane.	Confirmed, this is a gantry crane.
11	Condition Assessment-Turbine Hal 2.6.1 Introduc-tion: First paragraph	p. 51	First sentence to be reworded	Noted, thanks.
12	Condition Assessment-Boiler Hall 2.6.1 Introduc-tion: First paragraph	p. 58	First sentence to be reworded	Noted, thanks.
13	Condition As-sessment-Pump House #1		Page numbers missing	Noted, thanks. To be corrected in final version.
14	Condition As-sessment-Pump House #1	2.1	The Civil/Landscape section (description and photos) is focused on the LPP and not Pump House #1	Noted, thanks. To be corrected in final version.
15	Condition As-sessment-Pump House #1 2.6.1 Introduc-tion: First para-graph	p. 39	First sentence to be reworded	Noted, thanks.
16	Condition As-sessment-Pump House #2		Page numbers missing	Noted, thanks. To be corrected in final version.
17	Condition As-sessment-Pump House #2	2.1	The Civil/Landscape section (description and photos) is focused on the LPP and not Pump House #2	Noted, thanks. To be corrected in final version.

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COMMENT #	REFERENCE	PAGE	COMMENT	CONSULTANT'S RESPONSE
18	Condition Assessment- Pump House #2 2.6.1 Introduction: First paragraph		First sentence to be reworded	Noted, thanks.
19	Condition Assessment- Pump House #2 2.6.5 third paragraph, first sentence & 2.6.6. first sentence		The structure is noted as in okay condition given its age. in 2.6.6, it is noted that the structure condition is poor to fair, should both sentences reflect the same structural condition?	Yes, this will updated in the final version.
20	Condition Assessment- ATCO Gas Building		Page numbers missing	Noted, thanks. To be corrected in final version.
21	Condition Assessment- ATCO Gas Building	2.1 p. 5-13	The Civil/Landscape section (description and photos) is focused on the LPP and not the ATCO Gas Building	Noted, thanks. To be corrected in final version.
22	Conservation Plan-Part 1	p. 22	Phase 3: Power Plant Rehabilitation- line up points A), B) & C) to the left	Noted, thanks. To be corrected in final version.
23	Conservation Plan-Part 1	Blank page	Blank page.	Noted, thanks. To be corrected in final version.
24	Conservation Plan-Part 1	p. 22	Phase 3: Power Plant Rehabilitation- line up points A), B) & C) to the left	Noted, thanks. To be corrected in final version.
25	Conservation Plan-Part 1	p. 32-33 Table	For Low Pressure Plant, maybe indicate it's a total of all three buildings	Noted, thanks. To be corrected in final version.
26	Conservation Plan-Part 1 First paragraph, 3rd sentence	p. 60	Confirm if a Gantry crane, it may be an overhead or bridge crane. (reference to Gantry also on pages 62, 63 & 74)	Confirmed, this is a gantry crane.

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27	Conservation Plan-Part 1	p. 151	Dates 1912-13 & 1908-09 need to be moved to the following page (152)	Cannot determine what this is referring to.
28	Conservation Plan-Part 2	p. 19 4.4.3.1	Reference to voids (for equipment & movement) mentioned twice.	Noted, thanks. To be corrected in final version.
29	Conservation Plan-Part 2	p. 20 4.4.3.4	ATCO Gas building - not to be included in Conservation Plan	Noted, thanks. To be corrected in final version.
30	Conservation Plan-Part 2	p. 26 4.5.1	Both Floor Plans are identical	Noted, thanks. To be corrected in final version.
31	Conservation Plan-Part 2	p. 27 4.5.1	Which floor is this plan for?	Title says BM/MN/02 as per Heritage Record.
32	Conservation Plan-Part 2	p. 28 4.5.1	Floor Plan section missing on Key BM-LLP Area, top section between Boiler and Turbine Halls	Do you mean the mezzanine? Yes, this has been purposefully excluded from illustration for legibility, covered in tables above.
33	Conservation Plan-Part 2	p. 30-33 4.5.2	Revise top Elevation Symbol	Noted, thanks. To be corrected in final version.
34	Conservation Plan-Part 2	p. 40 4.5.4	ATCO Gas building - not to be included in Conservation Plan	Noted, thanks. To be corrected in final version.
35	Conservation Plan-Part 2	p. 51 5.2.1	Note above table (@Bianca D. Water Treatment Plant… (what is this in reference to?)	This is an internal note. To be removed in final version.
36	Conservation Plan-Part 2	p. 53, 64	In the Conservation Plan Part 2, I noted that page 64 photo is a duplicate of the photo on page 53. (Michael's Comment)	Yes, same idea, implemented in different building
37	Conservation Plan-Part 2	p. 67 5.2.4	ATCO Gas building - not to be included in Conservation Plan	Noted, thanks. To be corrected in final version.
38	Conservation Plan-Part 2	p. 87	...including an isolated are..should be 'area', of blue stain	Noted, thanks. To be corrected in final version.

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Consultant Responses to CP-9673 RPP AAPR PD01 - Mechanical Technical Review

2020-09-15

COMMENT #	REFERENCE	PAGE	COMMENT	CONSULTANT'S RESPONSE
01	ROS105 Switch House 2.4.3 Low Pressure Plant Plumbing Systems		I would not recommend using existing degraded piping as a sleeve for new piping. If the sleeve is degraded and is expected to continue to degrade, then it is not going to be effective, and would likely cause more problems than benefits.	Understood. For the current report we will note the piping as to be investigated further but an unlikely option based on further possible degradation of the existing pipe.
02	ROS105 Switch House 2.4.9 Ventilation and Humidification		Is ventilation needed for dehumidification in the Low Pressure Plant?	No need for dehumidifcation was noted in the low pressure plant. Degradation to the envelope seems to be primarily due to infiltration of rain through storm drainage piping. The infiltration rate into the building is also likely sufficient to prevent humidity problems during it's unoccupied period. As the envelope is improved and openings sealed this may become a requirement.
03	ROS108 Pump House 1 2.4.7 Ventilation		Notwithstanding the fact that there is no code requirement for occupant ventilation, would some ventilation not be beneficial for managing humidity, volatile contaminants, odours, etc.?	No need for dehumidifcation as a preservation method was noted at this time. The higher priority is the proper sealing of intake valves which will largely solve any humidity/odour problems.

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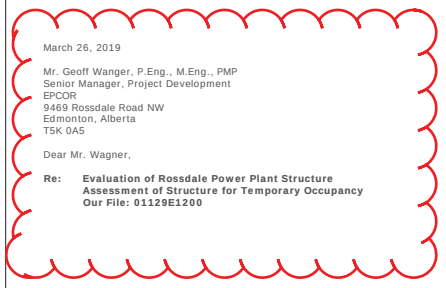
Consultant Responses to CP-9673 RPP AAPR PD01 - Structural Review

2020-06-30

COMMENT #	REFERENCE	PAGE	COMMENT	CONSULTANT'S RESPONSE
01	Switch House Condition Assessment	2.6.6	Conclusion references Turbine Hall, not Switch House.	Noted, to be corrected in final version.
02	Turbine Hall Condition Assessment		Boiler Hall West Wall - It is my understanding the bracing was sized to provide short term stability only. It was not braced to address a 1/50 year environmental event or seismic.	Noted.
03	Turbine Hall Condition Assessment	2.6.5	Items note "long span from roof to floor." I assume this is in reference to a column. There were many locations where the building was braced back to the equipment. When the equipment was removed, so was the lateral stability.	Noted.
04	Boiler Hall Condition Assessment		Sim . Boiler Hall West Wall - It is my understanding the bracing was sized to provide short term stability only. It was not braced to address a 1/50 year environmental event or seismic.	Noted.
05	Boiler Hall Condition Assessment	2.6.5	No earthquake upgrades were pursued. It is my understanding that the City's Project Sponsor directed Dialog to design $xxM in construction and install. No systems were upgraded to meet relevant codes of the time.	Noted.
06	Boiler Hall Condition Assessment		Sim. Items note "long span from roof to floor." I assume this is in reference to a column. There were many locations where the building was braced back to the equipment. When the equipment was removed, so was the lateral stability.	Noted. Reference is to columns and walls (mostly walls).
07	Boiler Hall Condition Assessment		Typo. Dialog year stating floor capacity.	Date is correct.  March 26, 2019 Mr. Geoff Wanger, P.Eng., M.Eng., PMP Senior Manager, Project Development EPCOR 9469 Rossdale Road NW Edmonton, Alberta T5K 0A5 Dear Mr. Wagner, Re: Evaluation of Rossdale Power Plant Structure Assessment of Structure for Temporary Occupancy Our File: 01129E1200
08	Boiler Hall Condition Assessment		Temporary supports and infil of floor openings was done for an event in 2019 (?). I am not aware of any engineering involvement to direct or size any of this work. Proceed with caution.	Noted. See response to item 07 above.