

DRAFT



# City Hall Facility Review

City Council Study Session  
April 7, 2026

AB 6891



# Agenda

- Purpose
- Introduction to Mackenzie
- Project Introduction
- Executive Findings
- Building Assessment
  - Architectural
  - Structural
  - Mechanical & Plumbing
  - Electrical & Low Voltage
- Recommendation
- Next Steps



# Purpose

## Agenda Bill Summary

The purpose of this agenda item is to:

- Provide an overview of the existing City Hall building,
- Summarize facility assessment findings and outline anticipated renovation costs and challenges, and
- Seek City Council direction on whether to renovate the existing building or demolish and construct a new facility



# MACKENZIE.

UNIFIED IN THE DELIVERY OF DESIGN EXCELLENCE  
SINCE 1965



# Project Introduction

## 1957 to Present

1957



Built for Farmer's New World Life Insurance Company

1966

Addition for Farmer's New World Life Insurance Company

1988

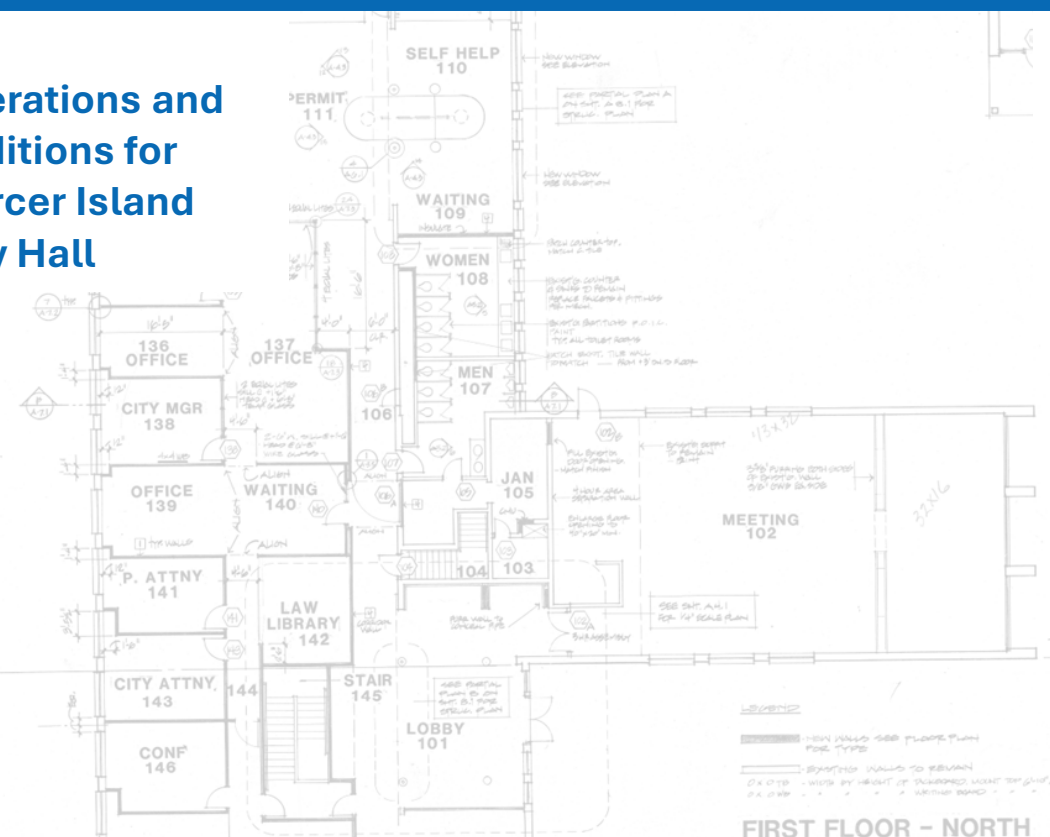
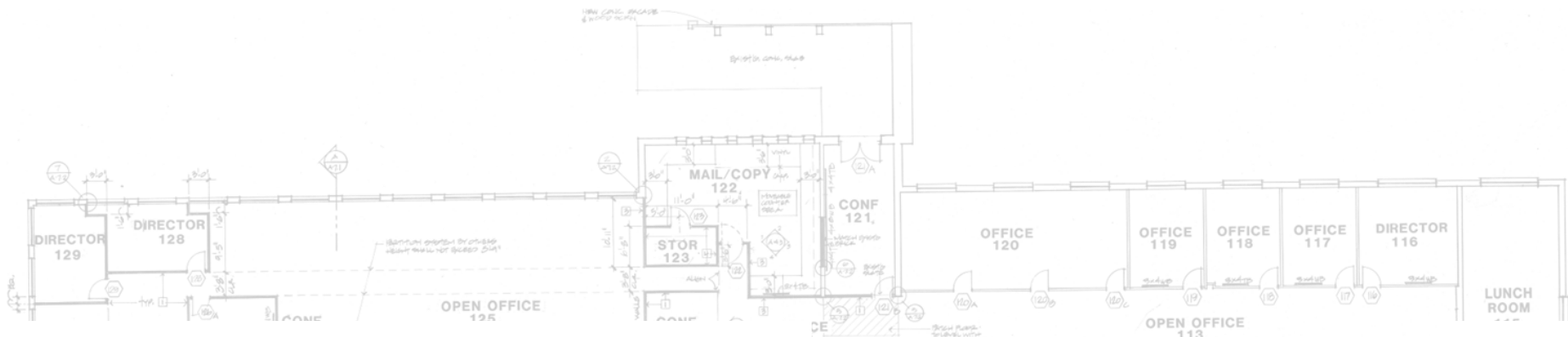
Alterations and Additions for Mercer Island City Hall

2023

Identification of Non-Airborne Asbestos\* & Closure of Mercer Island City Hall (Resolution No. 1650)

TODAY

2026



- WALL TYPE**
- 1. TYPICAL PARTITION TYPE 1 - 5/8" GNB ON EACH SIDE OF 3 5/8" STEEL STUDS AT 16" O.C. TO SUSPENDED CEILING WITH "L" METAL AT TOP.
  - 2. PARTITION TYPE 2 - ADD FULL BATT SOUND INSULATION TO THE STUD CAVITY OF TYPICAL PARTITION TYPE 1. PROVIDE ACOUSTIC SEALANT AT ALL PERIMETERS TOP AND BOTTOM.
  - 3. PARTITION TYPE 3 - ADD FULL BATT SOUND INSULATION ABOVE THE CEILING AND PARTITION TYPE 2. SOUND INSULATION BATTS TO BE LAID 1'-0" TO EACH SIDE OF PARTITION.
  - 4. PARTITION TYPE 4 - 3 5/8" STEEL STUDS AT 16" O.C. UP TO UNDERSIDE OF FLOOR OR ROOF DECK, WITH 5/8" TYPE X GNB UP TO UNDERSIDE OF DECK ON BOTH SIDES. SEAL AT PENETRATIONS OF STRUCTURE, CONDUIT, COCKS, ETC.
  - 5. PARTITION TYPE 5 - 6" CMU REINFORCED AS NOTED ON DRAWINGS UP TO + 3'-4".
  - 6. PARTITION TYPE 6 - 6" CMU REINFORCE AS NOTED ON DRAWINGS UP TO UNDERSIDE OF ROOF DECK.

**LEGEND**

- NEW WALLS SEE FLOOR PLAN FOR TYPE
- EXISTING WALLS TO REMAIN
- 2x10 @ 16" O.C. BY HEIGHT OF DAMAGED WALL TO TOP OF 2x12 @ 16" O.C. - PARTIAL BOARD

FIRST FLOOR - NORTH

\*Results of multiple tests for airborne asbestos were negative

# Mackenzie's Tasks

## Task: Existing Facility Conditions Assessment Consolidation

- Review collection of existing information completed over the past few years
- Conduct site visit to examine and verify existing reports against current conditions
- Prepare **additional** assessments:
  - Facility Condition
  - Structural Assessment
  - Mechanical/Electrical/Plumbing Supplemental Assessment

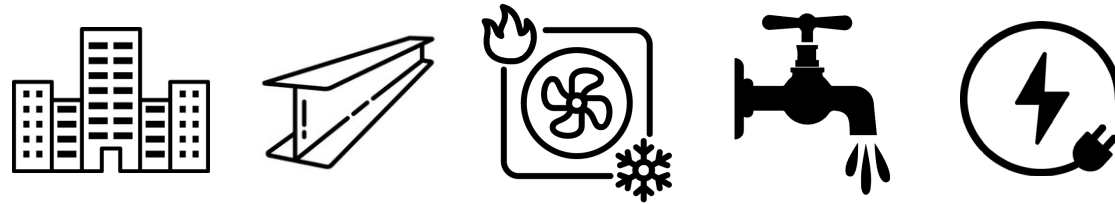
# Mackenzie's Tasks

## Task: Existing Facility Conditions Assessment Consolidation

- Prepare a **consolidated** building evaluation report:
  - **Executive summary** of general condition of the existing buildings
  - Summary of **structural** deficiencies
  - Summary of **mechanical, electrical, and plumbing** deficiencies
  - Summary of **building code and accessibility** non-conformance
  - **Cost estimate** capturing consolidated improvements, including hard and soft costs

# Executive Findings

A breakdown of the City Hall Building Assessment



# Estimated Total Project Cost

## Project costs for the renovation of the existing building

### Estimated Total Project Cost Range

(includes **Construction Costs** & anticipated **Owner Soft Costs**)

Note: All figures are escalated to a **Construction Midpoint of Q4, 2028**

#### Full Building Renovation & Seismic Upgrade

\$55,427,000 to \$57,407,000

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#### Additive Alternate 1

Complete space reconfiguration for a full  
Police & EOC occupancy

\$2,855,000 to \$2,957,000

#### Additive Alternate 2

Fencing for secure parking, automatic gates,  
and covered parking canopy

\$1,764,000 to \$1,827,000

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\$60,046,000 to \$62,191,000

# Key Deficiencies



**Non-Airborne Asbestos**  
identified throughout  
the building



**Seismic deficiency** of the existing building  
structure + inability to meet Seismic  
Category IV requirements for essential  
facilities



Mechanical & electrical systems  
are at **end-of-service-life**



# Building Assessment

## Architectural

Analysis of the existing City Hall Architectural Systems

# Architectural

## Existing conditions



The existing City Hall building was constructed in 1957.

The building is Construction Type III-N (non-combustible).

The building is **not** equipped with an automatic sprinkler system.

The building is a two-story structure with a total building area of 34,737 square feet (SF).

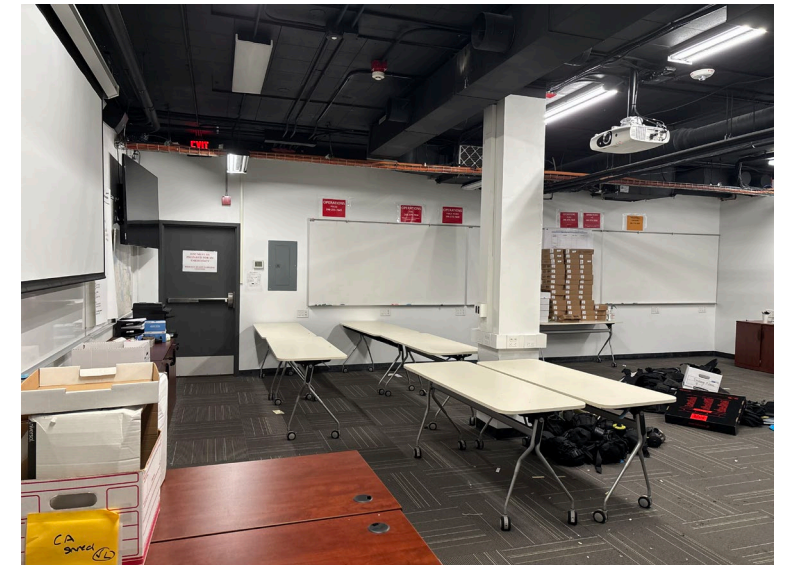
The original occupancy classification of the building is B-2 (business) and A-3 (assembly). There are fire-rated door assemblies throughout the space, but overall fire separations between the spaces was not easily identified onsite.

# Architectural Deficiencies



## Building life safety & egress not up to current building code standards:

- **No automatic sprinkler system**
- **No accessible egress pathway** at the Basement Level of the building
- **Fire separations** between occupancies unable to be verified and most-likely not compliant with current building code standards
- **Lack of signage** for wayfinding and emergency egress
- **Non-Airborne Asbestos** identified in several building elements listed below. If these elements were to break or become disturbed that would present additional challenges to occupancy:
  - Misc. vinyl flooring tile
  - Misc. mastic and residual black mastic
  - Fire-rated wood doors
  - Concealed pipe insulation
  - Window putty
  - Ductwork insulation and lining



# Architectural Deficiencies



## Building envelope deficiencies and non-compliance with current energy code:

- **Moisture intrusion** at numerous existing CMU (concrete masonry unit) block walls and interior gypsum wallboard (typical interior) walls leading to **breakdown of wall construction**
- **Mildew, mold, and rust** along the exterior building facades
- Discoloration from **water damage** at ceilings throughout the building
- Flashing/weatherproofing of the window and door openings, wall joints, and roof edges **does not meet current standards** and is providing additional areas for water intrusion and leakage
- Overall, **under-insulated exterior wall and roof assemblies** which do not comply with current energy code standards

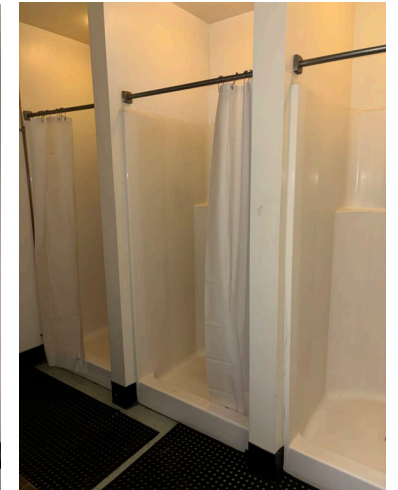
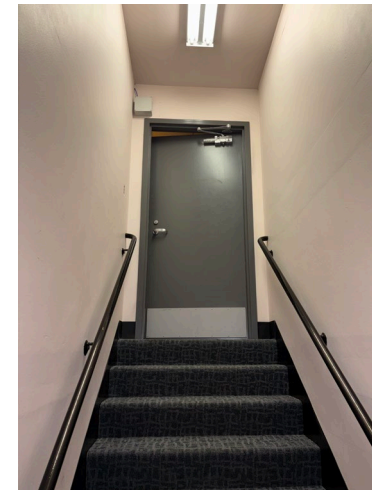
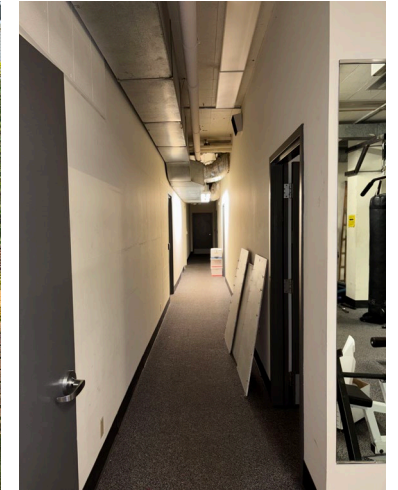
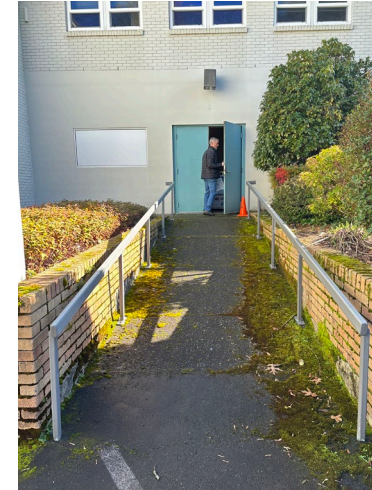


# Architectural Deficiencies



## Accessibility restrictions:

- Stairway treads and ramp slopes, landings, guardrails and handrails **do not comply** with current building code and accessibility standards
- **No accessible egress path** via elevator or wheelchair path to lower level
- **No ADA accessible toilets, showers, or lockers** which comply with current accessibility standards



# Architectural Renovation approach



## **Building life safety & egress updates:**

- New automatic sprinkler system
- Abatement/removal of non-airborne asbestos materials
- Complete space reconfiguration for Police & EOC occupancy

## **Accessibility updates:**

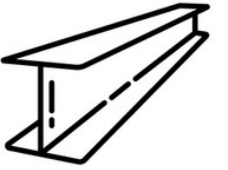
- Addition of an elevator and replacement of existing stairs and ramp
- Addition of ADA compliant restrooms and fixtures

# Architectural Renovation approach



## **Building envelope updates:**

- Full exterior enclosure replacement:
  - Waterproofing measures at basement walls
  - Wall framing improvements with rigid insulation; new windows, exterior doors, and flashing
  - New standing seam metal roofing with insulation



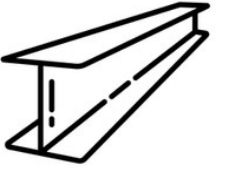
# Building Assessment

## Structural

Analysis of the existing City Hall Structural Systems

# Structural

## Existing conditions



### **Gravity System:**

- Steel roof trusses and corrugated metal roof deck
- Trusses bear on concrete masonry unit (CMU) walls, reinforcement unknown
- Foundation consists of shallow concrete footings

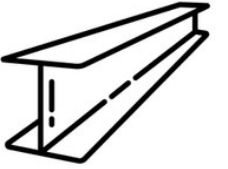
### **Lateral System:**

- Unreinforced masonry shear walls
- Metal roof deck serves as a flexible diaphragm

### **Additional Systems:**

- Interior masonry walls appear non-load bearing and not properly braced at top-of-wall = overturning potential
- Lower-level CMU bearing walls supporting assumed upper-level cantilevered concrete floorplate on all four sides
- Partial mechanical mezzanine in basement area, likely flat plate cast-in-place concrete and concrete columns

# Structural Deficiencies



## Seismic Deficiencies – structural components :

- Existing masonry shear walls are likely **not grouted or reinforced**
  - These shear walls do not provide enough capacity to meet the demands during a seismic event either for in-plane or out-of-plane forces
- Truss seats likely **do not provide adequate out-of-plane wall anchorage** for the top of masonry walls
- Unknown extent of fastening of the metal roof deck to the steel trusses and to adjacent sections of deck - these **connections may be overstressed** when subjected to earthquake forces
- Unlikely that roof construction can withstand diaphragm chord forces
- The type of connection(s) between the roof diaphragm and masonry shear walls make an **incomplete lateral load path**



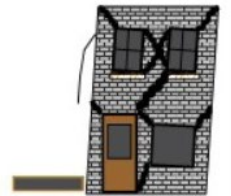
Operational



Immediate  
Occupancy

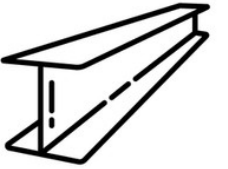


Life  
Safety



Collapse  
Prevention

# Structural Deficiencies



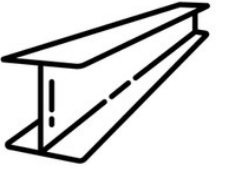
## Seismic Deficiencies – building layout:

- Building layout has multiple wings, each framed with perimeter shear walls, results in **reentrant corners**
- Each wing likely has different shear wall stiffnesses (based on wall length, thickness, aspect ratio) - this issue creates different sections of the building resulting in incompatible amounts of movement, **causing the building to tear apart** at these corner locations
- Northwest wing has a vertical offset irregularity where the shear wall is offset between the upper and lower levels - this offset indicates a **soft-story irregularity** for stiffness and/or strength of this wing
- Subject to slope stability, lateral spreading, and/or **liquefaction concerns**

Table 17-3. Immediate Occupancy Basic Configuration

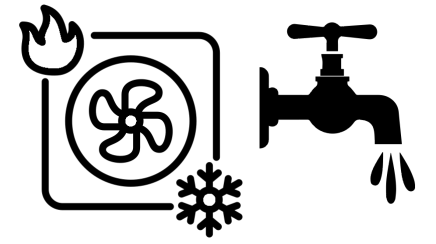
Status	Evaluation Statement	Tier 2 Reference	Commentary Reference
<b>Very Low Seismicity</b>			
<b>Building System—General</b>			
C NC N/A U	LOAD PATH: The structure contains a complete, well-defined load path, including structural elements and connections, that serves to transfer the inertial forces associated with the mass of all elements of the building to the foundation.	5.4.1.1	A.2.1.1
C NC N/A U	ADJACENT BUILDINGS: The clear distance between the building being evaluated and any adjacent building is greater than 0.5% of the height of the shorter building in low seismicity, 1.0% in moderate seismicity, and 3.0% in high seismicity.	5.4.1.2	A.2.1.2
C NC N/A U	MEZZANINES: Interior mezzanine levels are braced independently from the main structure or are anchored to the seismic-force-resisting elements of the main structure.	5.4.1.3	A.2.1.3
<b>Building System—Building Configuration</b>			
C NC N/A U	WEAK STORY: The sum of the shear strengths of the seismic-force-resisting system in any story in each direction is not less than 80% of the strength in the adjacent story above.	5.4.2.1	A.2.2.2
C NC N/A U	SOFT STORY: The stiffness of the seismic-force-resisting system in any story is not less than 70% of the seismic-force-resisting system stiffness in an adjacent story above or less than 80% of the average seismic-force-resisting system stiffness of the three stories above.	5.4.2.2	A.2.2.3
C NC N/A U	VERTICAL IRREGULARITIES: All vertical elements in the seismic-force-resisting system are continuous to the foundation.	5.4.2.3	A.2.2.4
C NC N/A U	GEOMETRY: There are no changes in the net horizontal dimension of the seismic-force-resisting system of more than 30% in a story relative to adjacent stories, excluding 1-story penthouses and mezzanines.	5.4.2.4	A.2.2.5
C NC N/A U	MASS: There is no change in effective mass of more than 50% from one story to the next. Light roofs, penthouses, and mezzanines need not be considered.	5.4.2.5	A.2.2.6
C NC N/A U	TORSION: The estimated distance between the story center of mass and the story center of rigidity is less than 20% of the building width in either plan dimension. This statement does not apply to buildings with flexible diaphragms.	5.4.2.6	A.2.2.7
<i>continues</i>			
Table 17-3 (Continued). Immediate Occupancy Basic Configuration Checklist.			
Status	Evaluation Statement	Tier 2 Reference	Commentary Reference
<b>Low Seismicity (Complete the Following Items in Addition to the Items for Very Low Seismicity)</b>			
<b>Geologic Site Hazards</b>			
C NC N/A U	LIQUEFACTION: Liquefaction-susceptible, saturated, loose granular soils that could jeopardize the building's seismic performance do not exist in the foundation soils at depths within 50 ft (15.2 m) under the building.	5.4.3.1	A.6.1.1
C NC N/A U	SLOPE FAILURE: The building site is located away from potential earthquake-induced slope failures or rockfalls so that it is unaffected by such failures or is capable of accommodating any predicted movements without failure.	5.4.3.1	A.6.1.2
C NC N/A U	SURFACE FAULT RUPTURE: Surface fault rupture and surface displacement at the building site are not anticipated.	5.4.3.1	A.6.1.3
<b>Tsunami Hazards</b>			
C NC N/A U	TSUNAMI: The building is not located within a Tsunami Design Zone as defined by ASCE 7 Chapter 6 or is located in a Tsunami Design Zone where the inundation depth per ASCE 7 Chapter 7 is less than 3 ft (0.9 m).	5.4.3.1	A.6.1.4
<b>Moderate and High Seismicity (Complete the Following Items in Addition to the Items for Low Seismicity)</b>			
<b>Foundation Configuration</b>			
C NC N/A U	TIES BETWEEN FOUNDATION ELEMENTS: For buildings supported on soils classified as Site Class D, DE, E, or F, the individual pile caps, piles, and piers are restrained by concrete beams or slabs adequate to resist seismic forces. For buildings supported on soils classified as Site Class E or F, individual spread footings are restrained by concrete beams or slabs adequate to resist seismic forces.	5.4.3.4	A.6.2.2
C NC N/A U	DEEP FOUNDATIONS: Piles that are required to transfer lateral and/or overturning forces between the structure and the soil shall have a positive connection between the piles and the pile cap, foundation mat, grade beam, or other element of the building foundation system. Cast-in-place and precast non-prestressed piles shall have a minimum longitudinal reinforcement ratio of 0.0025 and transverse reinforcing spaced at no more than 6 in. (152.4 mm) within a distance of three times the pile diameter from the bottom of the pile cap. Precast prestressed piles shall have a minimum effective prestress of 400 psi and transverse reinforcing spaced at no more than 6 in. (152.4 mm) within a distance of 20 ft (6 m) from the top of the pile.		A.6.2.3
C NC N/A U	SLOPING SITES: The exterior grade difference from one side of the building to another does not exceed one story in height.		A.6.2.4
Note: C = Compliant, NC = Noncompliant, N/A = Not Applicable, and U = Unknown.			

# Structural Renovation approach



## Seismic Remediation:

- Micropile deep foundations
- Supplemental footings for seismic upgrade
- Shotcrete of existing masonry shear walls with new reinforcement to increase the flexural and shear strength
- Reinforce joist seat connections to strengthen out-of-plane connection of existing masonry walls
- Adding new diaphragm fastening or replacing the metal roof deck to provide adequate diaphragm capacity
- New steel angles or channels welded between the trusses to act as diaphragm chord members
- Additional steel channels, wide flange shapes, etc. to act as collector elements



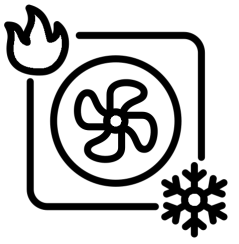
# Building Assessment

## Mechanical & Plumbing

Analysis of the existing City Hall Mechanical & Plumbing Systems

# Mechanical

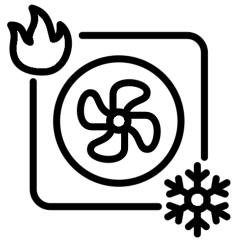
## Existing conditions



### General:

- The HVAC system consists of two supply air handling units (direct outside air ventilation only) and,
- An air-to-water heat pumps which are served by a two-pipe condenser system
- A boiler and a cooling tower tie into the condenser loop to act as a source of heat during cooler weather and a means of heat rejection during hotter weather
- Heat pumps recirculate and mix zone air with the ventilation air supplied by the air handlers. There is no central return air system for the air handlers, nor is there any means of heat recovery
- Exhaust is removed from the spaces via belt drive fans to maintain a relatively neutral pressure balance within the zones
- Supplemental relays on a mix of several split system heat pumps
- There is no central direct digital control system present; all the installed systems currently operate on standalone/package controls

# Mechanical Deficiencies

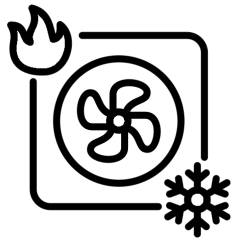


Generally, all the mechanical systems are at or nearing the end of their useful service life:

- The two primary air handlers appear to be original and are well past their useful service life
- The existing heat pump units are all at or nearing the end of their anticipated useful service life though they look to have likely been replaced or installed around the 2000's, rather than being original
- The boiler and cooling tower were likely installed or replaced at the same time as the heat pumps; nearing the end of their useful service life
- The pumps for the condenser loop are original to the loop



# Mechanical Deficiencies



## Non-airborne asbestos:

- Ductwork was found to **include asbestos** lining/insulation

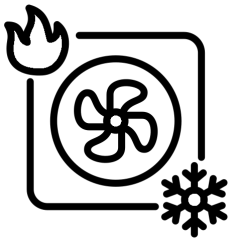
## Installation errors:

- The hydronic piping serving all the heat pumps was installed in PVC. **PVC is not appropriate** for this type of installation and is showing signs of sagging/warping



# Mechanical

## Renovation approach



**Due to the near or at end-of-life condition observed for the majority of the systems AND the poor condition of the supporting infrastructure (piping and ductwork), it would not be recommended that any of these systems be retained for reuse as part of a renovation**

- Remove and install new mechanical systems that meet current energy code
- Remove and install new supporting infrastructure (piping and ductwork)
- Install direct digital control system for system control and monitoring

# Plumbing

## Existing conditions



**Currently the facility is served by multiple electric tank-style water heaters, ground water sump pump and non-low flow fixtures.**

### **Existing fixture counts:**

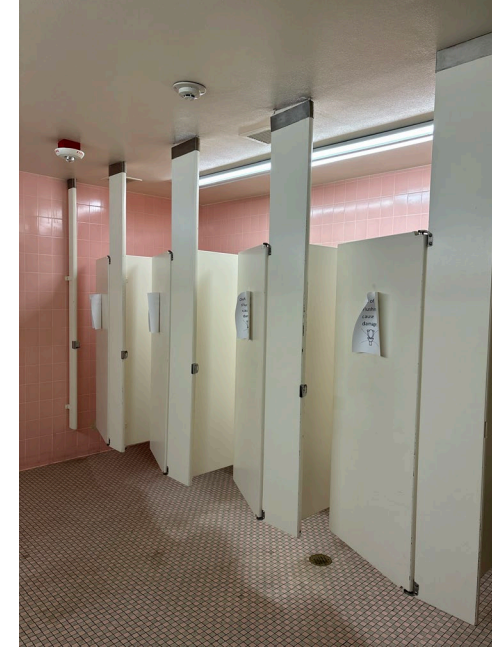
- Basement:
  - Women's: 1 toilet fixtures, 1 lavatory, 3 showers
  - Men's: 2 toilet/urinal fixtures, 2 lavatories, 3 showers
- First floor:
  - Women's: 6 toilet fixtures, 7 lavatories
  - Men's: 12 toilet/urinal fixtures, 4 lavatories
  - Unisex: 2 toilet fixtures, 2 lavatories

# Plumbing Deficiencies



Generally, all the systems are at or nearing the end of their useful service life; additional concerns include:

- **Inadequate number of plumbing fixtures** for occupancy of building
- There are **no accessible water closets/toilets, lavatories, showers, or lockers** which meet current ADA accessibility standards

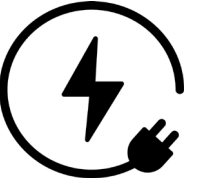


# Plumbing

## Renovation approach



- Replacement of the electric water heaters with heat pump technology
- Provide ADA accessible restrooms
- Provide additional plumbing fixtures to adequately serve occupancy of the building
- Install modern low-flow plumbing fixtures
- Replace ground water sump pump within basement level
- Wholesale re-piping of the domestic water system for programmatic changes



# Building Assessment

## Electrical & Low Voltage

Analysis of the existing City Hall Electrical & Low Voltage Systems

# Electrical

## Existing conditions



### **Main Electrical Service:**

- The facility is served by a 1200 Amp, 208Y/120V, 3-phase, 4-wire main service switchboard located in the basement electrical room. The service is fed from an exterior pad-mounted utility transformer. The switchboard appears to be original to the 1988 renovation.

### **Distribution Panels and Feeders:**

- The facility contains multiple 208/120V branch circuit panelboards distributed throughout the building. The panels and associated breakers appear to date back to the 1988 renovation.

### **Emergency Power System:**

- 100 kW outdoor diesel generator & 800 Amp Automatic Transfer Switch (ATS) located in the main electrical room

### **Lighting System & Controls:**

- Lighting systems consist primarily of fluorescent fixtures and incandescent sources. Lighting controls appear limited and do not reflect modern energy management practices.

# Electrical Deficiencies



Generally, all the systems are at or nearing the end of their useful service life; major power system concerns include:

- Aging protective devices and bus components
- Limited availability of replacement parts
- Increased probability of failure due to age
- Absence of modern monitoring and metering capabilities
- Elevated arc flash risk relative to modern equipment
- Breaker failure under fault conditions
- Nuisance tripping
- Obsolete breaker models with limited availability
- Inaccurate or outdated panel schedules
- Limited spare capacity



# Electrical Deficiencies



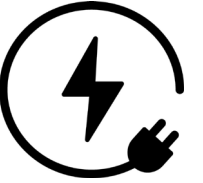
## Lighting system deficiencies:

- **Non-compliance** with current Washington State Energy Code
- Aging ballasts and **lamp failures**
- Reduced lighting quality
- **High energy consumption** lighting fixtures
- Lack of occupancy and daylight controls



# Low Voltage

## Existing conditions



### **Low Voltage Systems:**

- The Local Area Network (LAN) system appears to be in fair condition
- The Main Distribution Frame (MDF) room equipment is in good condition and continues to support the City's central data systems

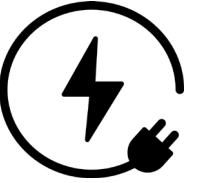
### **Access Control and Surveillance Systems:**

- Electronic access control and video surveillance systems are installed and operational

### **Fire Alarm system:**

- The facility is equipped with a Potter PFC 6200 addressable fire alarm system

# Low Voltage Deficiencies



**Generally, the low voltage, access control, and fire alarm systems are in fair condition, but some concerns include:**

- Cabling category compliance
- Backbone capacity
- Redundancy and resiliency
- Main Distribution Frame (MDF) cooling and power sufficiency
- A security systems audit is recommended to evaluate modernization opportunities and integration with future infrastructure improvements

# Electrical & Low Voltage Renovation approach



**The electrical infrastructure at the City Hall / Police Station facility is largely at or beyond its intended service life, particularly the primary power distribution systems dating from the 1988 renovation. Renovation work required:**

- Full replacement of branch panelboards is recommended
- Feeder conductors should be evaluated and replaced where insulation condition or capacity limitations are identified
- Updated panel schedules and labeling should be provided as part of modernization
- Generator replacement should be planned within approximately five years, with evaluation of increased capacity for resiliency
- The ATS may remain in service if compatible with replacement equipment
- A comprehensive LED retrofit is recommended. The upgrade should include occupancy sensors, daylight controls where applicable, and improved lighting levels in operational police areas
- A security systems audit is recommended to evaluate modernization opportunities and integration with future infrastructure improvements

# Building Assessment Summary

- **Architectural** - building & life safety non-compliance, energy code non-compliance, lack of accessibility
- **Structural** - seismic deficiencies
- **Mechanical** – non-airborne asbestos materials, installation errors, energy code non-compliance, systems are at or nearing the end of their useful service life
- **Plumbing** - inefficient fixtures, energy code non-compliance, systems are at or nearing the end of their useful service life
- **Electrical** - energy code non-compliance, systems are at or nearing the end of their useful service life
- **Low Voltage** – outdated systems, non-compliance with current codes, lack of capacity & resiliency

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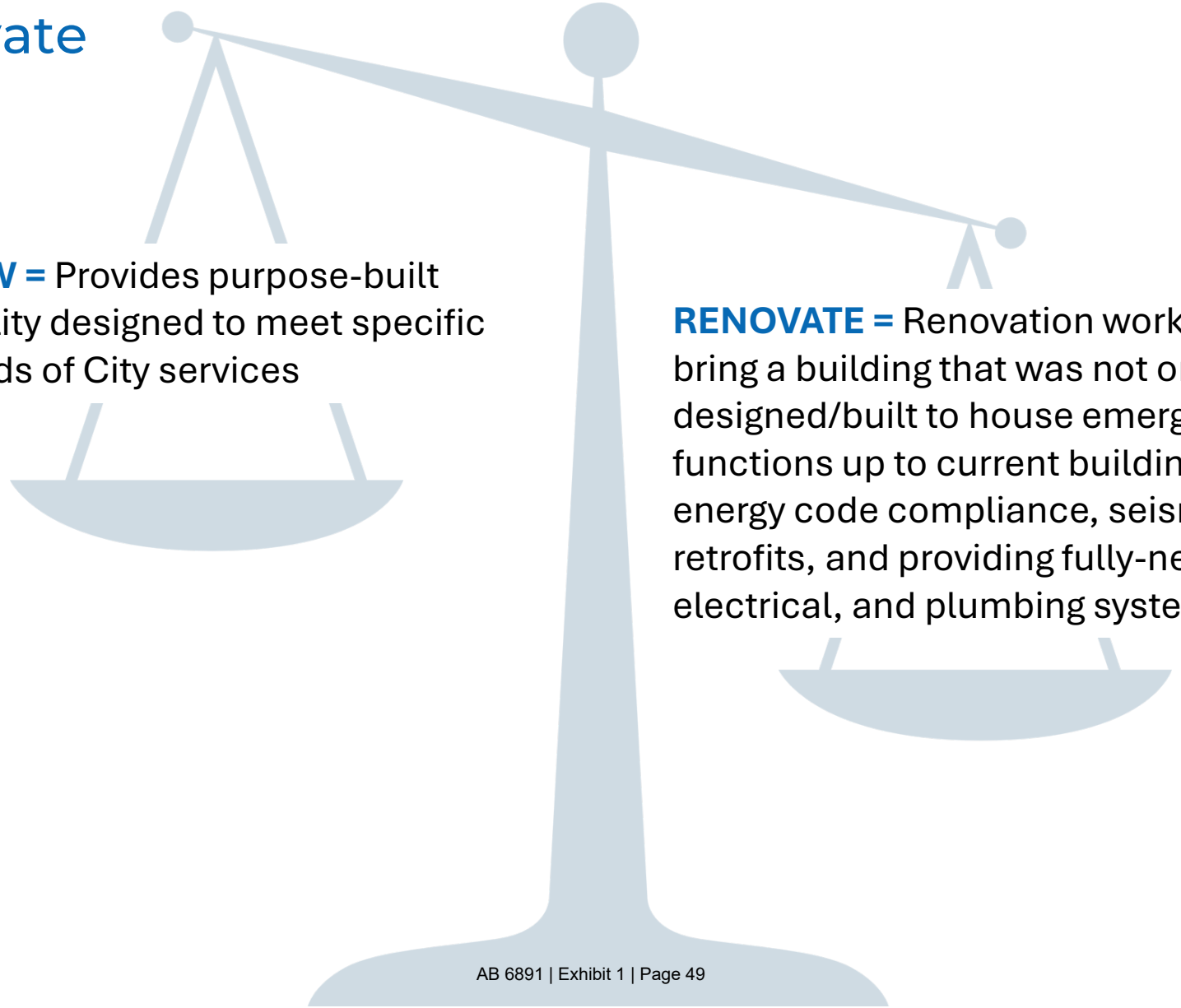
\$60,046,000 to \$62,191,000

# Recommendation

Findings based recommendation for the existing City Hall

# Considerations

## New vs Renovate



**NEW** = Provides purpose-built facility designed to meet specific needs of City services

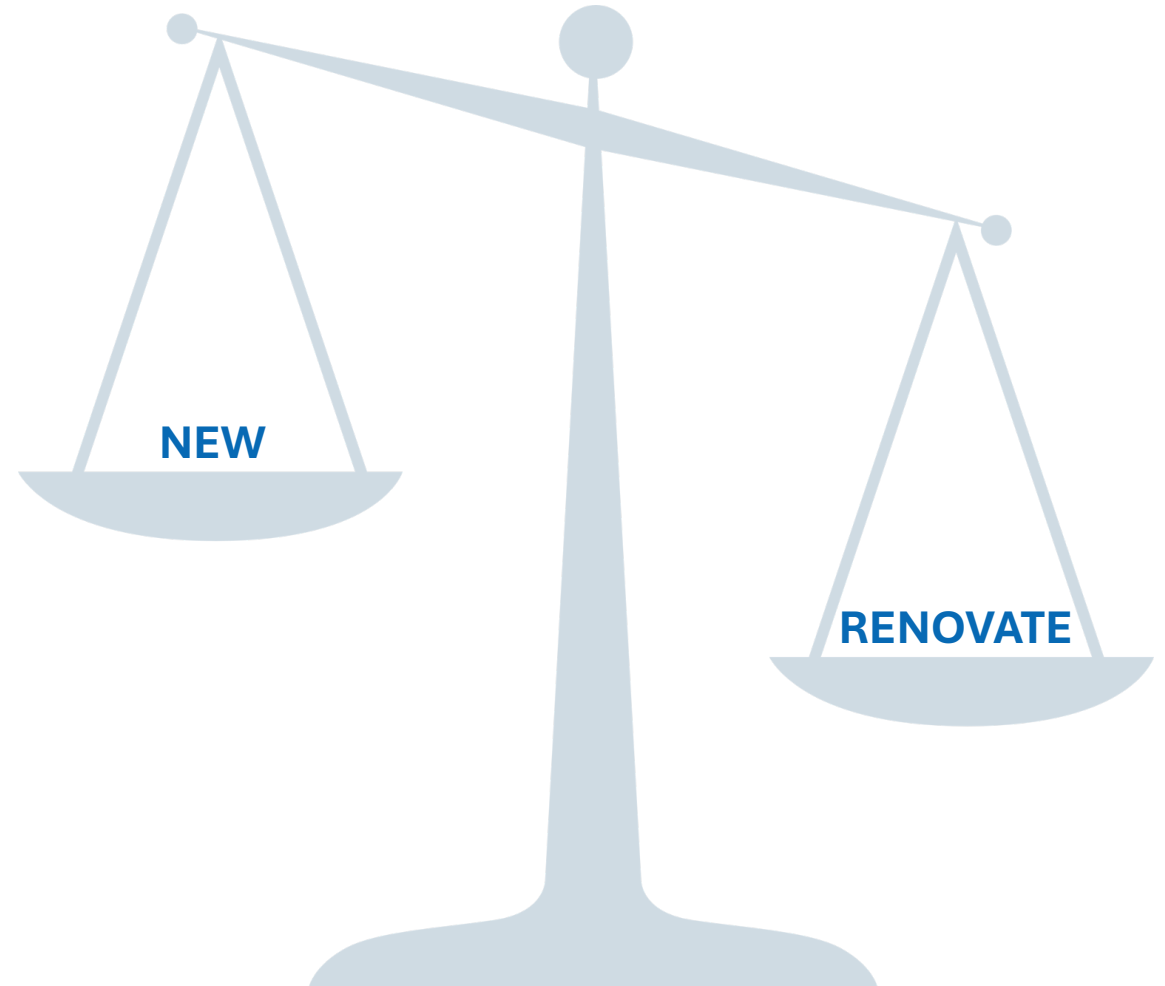
**RENOVATE** = Renovation work required to bring a building that was not originally designed/built to house emergency response functions up to current building code and energy code compliance, seismic category IV retrofits, and providing fully-new mechanical, electrical, and plumbing systems.

## Recommended Action

Based on the cost estimate to fully renovate City Hall, which confirms previous findings, the City Manager is recommending demolition of the City Hall facility.

## Recommended Motion

Direct the City Manager to prepare a demolition plan for City Hall and return to the City Council for review and approval.



# Next Steps

## Future Discussions

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## Future Discussions

- The next presentation to the City Council will include information on the Public Works Building condition assessment, an update on the recently completed seismic work, and follow-up discussions on replacement or renovation.
- The project team is also working on the assessment and space planning for the newly acquired 9655 Building, which will also be discussed with the City Council at a future meeting.
- This additional information and analysis will support ongoing facility planning discussions with the City Council.



Questions?