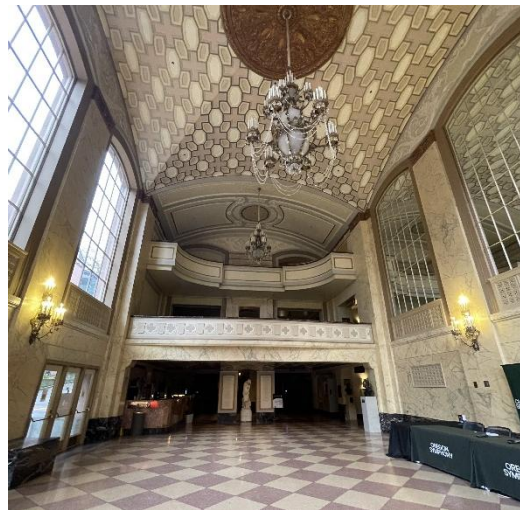
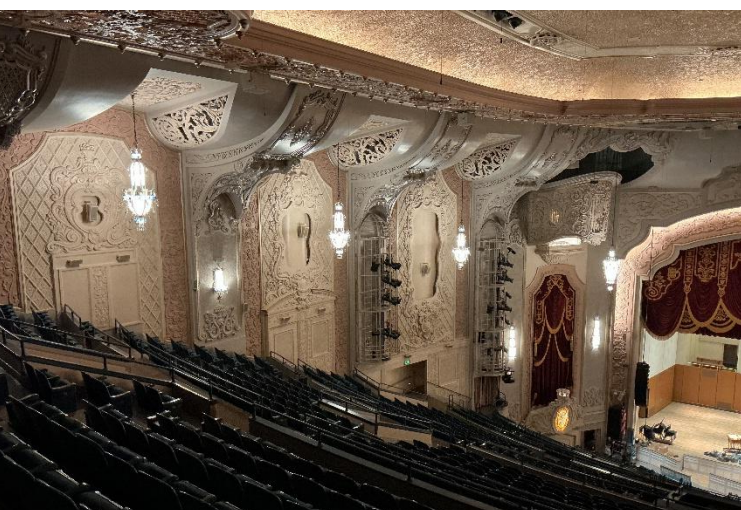




Metro Portland's 5 Centers for the Arts

Facility Condition Assessment for

Arlene Schnitzer Concert Hall

April 10, 2026 | Prepared by: Sazän Group

Contents

1. Building Executive Summary	1
1.1. Purpose and Scope of the Assessment.....	2
1.2. Facility Summary Information	2
1.3. Key Findings and Recommendations	3
1.4. Summary of Total Estimated Costs	4
2. Methodology.....	7
2.1. Facility Condition Assessment.....	8
2.2. Corrective Action Categories	8
2.3. Condition Rating Overview	10
2.4. Cost Estimating Assumptions.....	11
3. Building Summary.....	15
3.1. Facility Overview.....	16
3.2. Condition Assessment.....	16
3.3. Corrective Action Summary	19
3.4. List of Corrective Actions	21
3.5. Facility Conditions.....	81
3.6. Asset Inventory and Asset Condition Ratings.....	84
3.7. Prioritized 5-Year List of Corrective Actions	86
3.8. Prioritized 6–10 Year List of Predicted Renewals.....	88
3.9. Estimated 10–20 Year Maintenance and Recapitalization Need.....	90
3.10. Estimated 20–30 Year Maintenance and Recapitalization Need.....	90
3.11. Recommendations for Follow-up Assessments	91
4. How to use this Report.....	93
5. Appendices.....	95

1. Building Executive Summary

1.1. Purpose and Scope of the Assessment

On November 25, 2025, Săzăn Group (Săzăn) conducted a Facility Condition Assessment (FCA) of three Portland's Centers for the Arts facilities, including Arlene Schnitzer Concert Hall (ASCH). The purpose of this FCA was to provide a comprehensive evaluation of the physical conditions of building systems and provide short, medium, and long-term cost projections of the facility. The assessment was performed to support Metro's asset management objectives, including establishing a consistent baseline of asset condition data, identifying major maintenance needs, and mid-term capital planning.

The FCA included rapid visual assessments of building and site systems, engagement with facility stakeholders and staff, and the development of a structured asset inventory consistent with Metro's asset classification hierarchy and data standards. Major building systems were evaluated, including architectural, structural, mechanical, electrical, plumbing, civil, life-safety, and specialized theater systems. No destructive testing was conducted that might otherwise indicate further condition issues. Each asset was evaluated at Unifomat Level 4, using Metro's asset classification hierarchy, which is based on Unifomat but incorporates agency-specific numbering that does not always directly correspond to standard Unifomat designations. Assets were assigned condition ratings, estimated remaining useful life, replacement costs, and criticality to facility operations.

The scope of work also included identification of potential statutory, regulatory, and code deficiencies; assessment of operational and maintenance practices; evaluation of risk of failure and consequence of failure for critical assets; and development of prioritized recommendations for repair, rehabilitation, and capital replacement.

1.2. Facility Summary Information

Originally constructed in 1927 and substantially renovated in 1984, ASCH is a designated historic landmark and an intensely utilized public performance venue. The primary structure exhibits fundamentally sound construction; however, many assemblies and systems are now at or approaching end of useful life due to age, heavy public use, and prior moisture exposure.

Over the past decade, several major building systems have been replaced or rehabilitated. These have included replacing the "Portland" sign (2017); modernizing all elevators (2018); replacing major theatrical systems including electro-acoustic system, stage lighting, main stage curtain and safety catwalk (2019-21); and replacing the cooling tower, roofing and backup generator (2024-25).

Several issues observed in finishes are relics of historical water intrusion that have since been mitigated by recent work (e.g., roof replacements in 2024), yet interior repairs remain outstanding and should be sequenced after verified envelope remediation. Continuous operations have also constrained the timing of major maintenance.

1.3. Key Findings and Recommendations

Theater Systems

1. Fixed seating units have exceeded the practical life rating and are showing signs of increasing wear and failure.
Recommendation: Replace with new or like.
2. There are locations where the installation of overhead access platforms (i.e., catwalk decks serving variable acoustic array system) makes aiming existing production lighting fixtures difficult for crew.
Recommendation: Replace fixed focus tungsten fixtures at affected locations with new automated LED profile units.
3. Existing manual stage rigging has exceeded its useful life and needs replacement.
Recommendation: Replace existing manual stage rigging using specialty contractor.

Architectural Systems

4. The broadloom carpet throughout all the public areas has exceeded its useful life. There are portions of the carpet in high traffic areas (such as stairs and aisleways) that are frayed and pose a tripping hazard.
Recommendation: Replace existing broadloom carpet with new.
5. There is damaged decorative plaster in the auditorium, both in the ceiling and the vertical walls, as a result of water infiltration. While the water infiltration has been resolved, the damaged plaster needs to be addressed.
Recommendation: Restore existing historic interior plaster finishes using a specialty contractor.

Structural Systems

6. The concrete ceiling in the chiller room shows signs of deterioration and reduced load capacity and should avoid heavy loading until repairs are made.
Recommendation: Demolish and replace entire alley deck structure over chiller room and apply a durable waterproof traffic coating to protect the repaired structure and prevent renewed infiltration.

Building Envelope Systems

7. Systemic water intrusion and localized envelope failures persist at select exterior wall and balcony interface locations due to aging masonry and stucco assemblies. Deteriorated mortar joints, cracking, and failed penetrations are allowing moisture to impact interior finishes in some areas.
Recommendation: Implement a coordinated exterior envelope remediation program to address failed sealants, masonry and stucco deterioration, and balcony-to-wall waterproofing transitions in order to restore long-term moisture protection and prevent continued interior impacts.

Mechanical Systems

8. Core mechanical and plumbing systems are approaching end of useful life. These systems include the chiller, boilers, hydronic air handling units, some packaged rooftop units, smoke evacuation fans, and fire sprinkler systems.
Recommendation: Over the next five years, phase the replacement/refurbishment of end-of-life mechanical and electrical systems, coordinating outages with the production calendar; evaluate heat recovery and controls upgrades where feasible.
9. Operational and performance limitations exist, including insufficient hot water capacity for larger shows, unreliable cooling, and aging sensor devices.
Recommendation: Replace or refurbish end-of-life mechanical assets.

Electrical Systems

10. Much of the distribution equipment and panelboards date to the most recent major renovation in 1984 and are approaching or beyond typical service life.
Recommendation: Develop a capital renewal plan for aging electrical distribution equipment and panelboards.
11. The legacy intercom and paging system has reliability issues and is nearing the end of its normal useful life; however, it is no longer critical to daily operations due to the use of radio communications which are functioning well.
Recommendation: Abandon existing intercom and paging system in place.

1.4. Summary of Total Estimated Costs

Based on observed conditions, maintenance practices, age of building systems and remaining useful life, the FCA developed order-of-magnitude (ROM) cost estimates for required repairs, rehabilitation, and capital replacements. Costs are presented in current dollars and represent planning-level estimates (i.e., +/- 30%) intended to support planning, budgeting and prioritization.

This FCA report identifies that ASCH has approximately \$14.5M-\$27.5M in immediate and priority building system costs recommended for planned budgeting of replacement or repair at ASCH in the next five years. The following tables and graphs summarize the total expenditures and corrective actions broken down by discipline.

[This portion of the page left intentionally blank so that the following charts and tables appear in a single page]

Total Expenditures

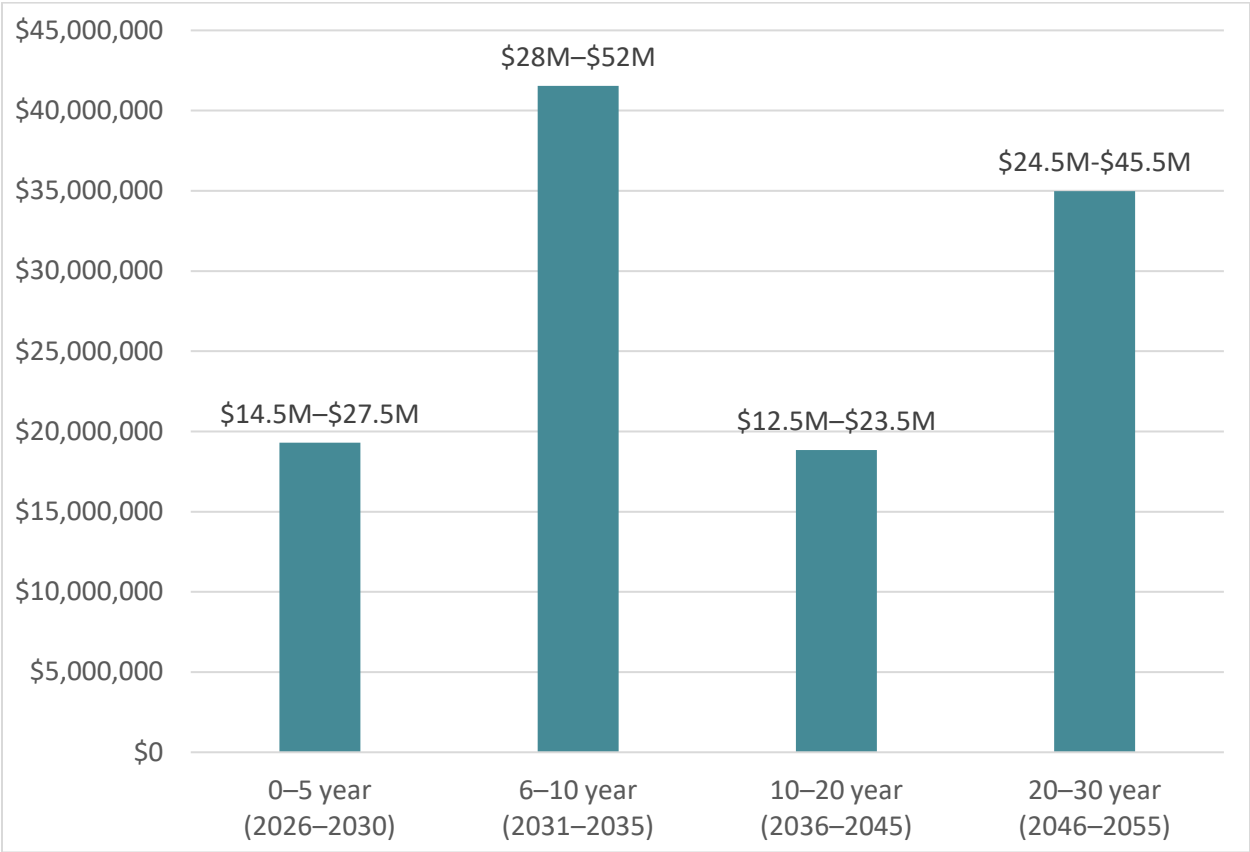


Figure 1. Total Recapitalization Need

Cost Category	Planning-Level Cost Range*
Immediate / High Priority (2026–2030)	\$14.5M–\$27.5M
Short Term (2031–2035)	\$28M–\$52M
Mid Term (2036–2045)	\$12.5M–\$23.5M
Long Term (2046–2055)	\$24.5M–\$45.5M
Total Estimated Capital Need	\$78.5M–\$146M

*Planning-level cost ranges reflect typical order-of-magnitude accuracy for Facility Condition Assessments.

Table 1. Total Recapitalization Need

Immediate / High Priority (2026-2030) Costs by Discipline

Theater Systems	\$6.5M–\$12.0M
Architectural Systems	\$1.5M–\$2.5M
Structural Systems	\$0.0M–\$0.5M
Building Envelope Systems	\$4.0M–\$7.5M
Mechanical Systems	\$2.0M–\$4.0M
Electrical Systems	\$0.5M–\$1.0M
TOTAL	\$14.5M–\$27.5M

Table 2. Total Corrective Action Costs by Discipline

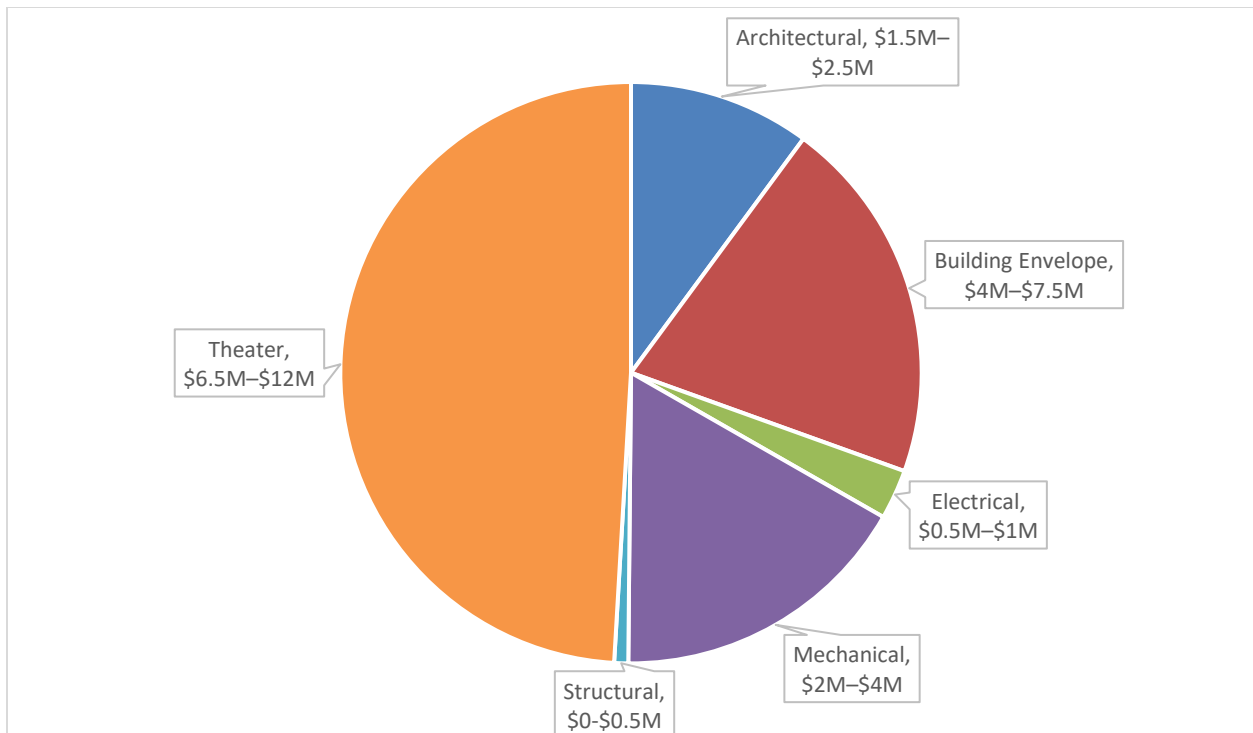


Figure 2. Total Corrective Action Costs by Discipline

2. Methodology

2.1. Facility Condition Assessment

Metro engaged S&B to perform a Facility Condition Assessment (FCA) for Antoinette Hatfield Hall. The FCA was conducted as a high-level observational assessment to provide a comprehensive evaluation of the physical condition, performance, and long-term capital needs of the facility. The assessment was performed to support Metro's asset management objectives, including establishing a consistent baseline of asset condition data, identifying operational and maintenance risks, and informing near- and long-term capital planning and investment decisions.

The assessment included qualitative observations of building systems and order-of-magnitude cost opinions associated with identified Corrective Actions. Remaining Useful Life (RUL) estimates were documented for major systems to provide context for lifecycle cost modeling and long-term replacement forecasting. Cost opinions were developed to support evaluation of near-term Corrective Actions necessary to facilitate continued use of the building.

2.2. Corrective Action Categories

To support consistent prioritization, budgeting, and risk management, each identified deficiency or recommended Corrective Action has been assigned to one of the following standardized categories. These categories are intended to clearly communicate the nature of the issue, the urgency of response, and the primary driver for action.

The Corrective Action categories are intended to:

- Provide a consistent framework for interpreting deficiencies across facilities and systems
- Support transparent prioritization of capital and maintenance investments
- Align Corrective Actions with risk, compliance, and asset life-cycle considerations
- Enable meaningful aggregation and analysis at the portfolio level

These categories do not replace professional judgment but serve as a standardized decision-support tool for asset management and capital planning.

Major Maintenance

Major Maintenance includes Corrective Actions required to restore assets that are still within their expected useful life but are exhibiting significant deterioration, performance issues, or deferred maintenance. These actions are typically necessary to maintain acceptable levels of service, reliability, and asset value.

Examples of Major Maintenance include, but are not limited to:

- Significant repairs to building envelope components (e.g., roofing, exterior walls, waterproofing)
- Overhauls or major servicing of mechanical and electrical equipment
- Replacement of major subcomponents that are failing prematurely
- Corrective work addressing chronic operational issues

Major Maintenance actions are generally planned and budgeted as part of ongoing capital renewal or maintenance programs and are prioritized based on asset condition, criticality, and risk of failure.

Life Safety and Code Violation

Life Safety and Code Violation includes deficiencies that pose an immediate or near-term risk to occupant safety, public safety, or regulatory compliance. These Corrective Actions are typically driven by building codes, fire and life-safety standards, occupational safety requirements, or other statutory and regulatory obligations.

Examples include:

- Fire alarm or fire suppression system deficiencies
- Inadequate emergency egress or lighting
- Electrical hazards
- Structural safety concerns
- Non-compliance with accessibility standards

Life Safety and Code Violation items are generally assigned the highest priority and should be addressed as soon as practicable to mitigate risk, ensure compliance, and protect occupants and facility operations.

Additional Evaluation Needed

Additional Evaluation Needed includes conditions where observed deficiencies or uncertainties require further investigation, testing, or specialized assessment before an appropriate Corrective Action can be defined.

This category is used when:

- The extent of deterioration cannot be fully determined through visual inspection alone
- Specialized expertise is required (e.g., structural, geotechnical, environmental, hazardous materials)
- Subsurface or concealed conditions are suspected
- System performance issues cannot be clearly diagnosed

Items in this category typically result in follow-up studies, targeted inspections, or monitoring programs that inform future capital planning and Corrective Actions.

End of Useful Life

End of Useful Life includes assets that have reached or exceeded their expected useful life and for which full replacement is recommended. These assets may still be operational but present increasing risk of failure, inefficiency, or inability to meet current performance requirements.

Examples include:

- HVAC equipment beyond expected service life
- Obsolete electrical or control systems
- Plumbing systems with chronic failure history

- Structural or architectural components no longer viable for repair

End of Useful Life actions are generally treated as capital replacement projects and form a significant portion of long-term recapitalization planning.

2.3. Condition Rating Overview

As part of the assessment, the physical condition of the facility's major building systems and related components are categorized in one of five conditions per category:

Excellent

New or very close to new; component or system is sound and performing its function. Eventual repair or replacement will be required when the component or system either reaches the end of its useful life or fails in service.

Good

Satisfactory as-is. A component or system is sound and performing its function, typically within the first third of the component's predicted useful life. However, it may show minor signs of normal wear and tear. Repair or replacement will be required when the component or system either reaches the end of its useful life or fails in service.

Fair

Showing signs of wear and tear but still satisfactory as-is, typically near the middle of its estimated useful life. The component or system is performing adequately at this time but may exhibit signs of wear, deferred maintenance, or evidence of previous repairs. Repair or replacement will be required due to the component or system's condition and/or its estimated RUL.

Poor

Component or system is significantly aged, flawed, functioning intermittently or unreliably; displays obvious signs of deferred maintenance; shows evidence of previous repair or workmanship not in compliance with commonly accepted standards; has become obsolete or exhibits an inherent deficiency. The present condition could contribute to or cause the deterioration of contiguous elements or systems. Either full component replacement is required, or repairs are required to restore it to good condition, prevent premature failure, and/or prolong useful life.

Deficient

Component or system has ceased functioning or performing as intended. Replacement, repair, or another significant action is recommended or required.

2.4. Cost Estimating Assumptions

The overall condition and Corrective Action cost data for Metro assets are based upon a parametric approach that is consistent with supporting effective capital and operations-and-maintenance planning and budgeting. Range of accuracy of conceptual level cost estimating for Corrective Actions is typically +/- 30%, and a contingency factors of 20% for design and estimating, and 10% for soft costs are also included in cost estimate mark-ups. See following Table 10 and Table 11.

Conceptual cost projections are based on 2025 market costs for facilities and building systems. Cost projections do not replace typical project-based planning, budgeting, and due diligence. All cost projections represented in this report reflect labor, materials, and markups necessary to repair or replace systems.

The Construction Cost markup subtotal is calculated on a multiplicative basis, while the Soft Cost markup subtotal is calculated as the sum of the listed items.

Construction Costs and Soft Costs compound when applied to the base cost of labor and materials.

$$\text{Total Cost} = \text{Base Cost} \times (\text{Product of Construction Cost Markups}) \times (\text{Sum of Soft Cost Markups})$$

Construction Cost Item	Markup	Multiplier
Design & Estimating Contingency	20.0%	1.20x
General Conditions, Requirements, and Fee	20.0%	1.20x
Total Construction Cost Markups		1.44x

Table 3. List of Construction Cost Markups

Construction Cost markups are applied on a compounding (multiplicative) basis by converting percentage markups to multipliers and applying them sequentially.

Soft Cost Item	Markup
Design Fees (including CA)	14.5%
Owner Planning & Management Services	10.0%
Project Contingency / Reserve	10.0%
Fixed Furnishings & Equipment	5.0%
Owner Admin or Overhead (e.g., Green design, Policy/Procedures)	4.0%
Owner Consultants (e.g., CM)	4.0%
Utility/Franchise Fees	2.0%
Permits	1.5%
Art	1.0%
Commissioning	0.5%
Testing & Inspection	0.5%
Total Soft Cost Markups	53.0%

Table 4. List of Soft Cost Markups

Soft Cost markups are applied on an additive basis. Items are summed to a total percentage markup which is converted to a multiplier.

All future costs are then normalized to net present value to account for the time value of money and show costs in present dollars. The costs are escalated at a rate of 4.5% per year (the average year-over-year increase in construction costs over the past 15 years) and discounted at a rate of 3.0% per year.

$$\text{Net Present Value} = \text{Total Cost} * \left(\frac{\text{Escalation Rate}}{\text{Discount Rate}} \right)^{\text{Years Until Renewal}}$$

Escalation and Discount Factors	
Escalation	4.5% per year
Discount	3.0% per year

Table 5. List of Escalation and Discount Factors

Facility Condition Index (FCI)

The Facility Condition Index for each facility is an industry standard benchmark for evaluating the condition performance of facilities over time. Agencies develop and change FCIs depending on budget planning and needs. There are various methods for calculating FCI. For this reason, the FCI scores represented in this report should not be compared to those of other organizations unless they use the exact same method of calculation.

The FCI numerator, commonly referred to as Deferred Maintenance, or Backlog in Maintenance and Repair, consists of short-term CAs (i.e., 2025-2030) and mid-term PRs (i.e., 2031-2035).

The FCI calculations used in this report are represented by the total cost of CAs and PRs identified for each building for the period 2025-2035 relative to the estimated 2025 Current Replacement Value (CRV) for each building. This FCI calculation uses CA, PR, and CRV costs in 2025 dollars that do not include escalation.

$$ASCH\ FCI = \frac{\text{Corrective Actions (2026 – 2030)} + \text{Predicted Renewals (2031 – 2035)}}{\text{Current Replacement Value (CRV)}}$$

FCI scores are expressed as percentages that range from 0% – 100%. A lower FCI reflects a facility in better condition with lower maintenance needs and associated costs. Conversely, a high FCI score indicates a facility in poorer condition with higher percentage of maintenance needs and associated costs.



FCI is represented by the following categories:

FCI Score	Definition
Good (0%–5%)	The building is in new or well-maintained condition with no visual evidence of wear, soiling, or other deficiencies.
Fair (5%–10%)	The building is subject to wear and soiling but is still in a serviceable and functioning condition.
Poor (10%–60%)	The building has been subjected to hard or long-term wear and is nearing the end of its useful or serviceable life.
Very Poor (60%–100%)	The building has reached the end of its useful or serviceable life. Renewal is now necessary.

Table 6. FCI scoring categories

Current Replacement Value (CRV)

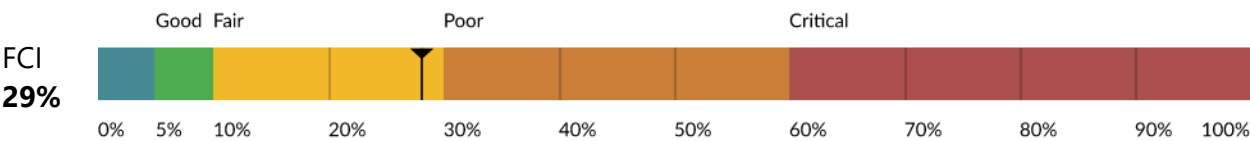
The Current Replacement Value of buildings is based upon a cost model for the use-type of each building and factors the cost model's estimated cost per square foot by the gross square foot area of the building. CRVs should include cost markups to reflect full design and construction costs for the current year's construction market. CRV does not normally include an escalation factor, nor demolition costs of the current building. The primary use of modelling CRVs for buildings is to calculate FCIs for benchmarking purposes.

3. Building Summary

3.1. Facility Overview



Year of original construction	1927
Facility size (gross sq. ft.)	77,625
Number of floors	5
Address	1037 SW Broadway, Portland, OR 97205
Current Replacement Value	\$193,581,386



3.2. Condition Assessment

Theater Summary

See Appendix A for a detailed theater narrative summary.

Architectural Summary

The ASCH is a designated historic landmark originally constructed in 1927 and extensively renovated in 1984. The structure consists of brick masonry and formed concrete, with concrete slab on grade at the main level and concrete mezzanine and balcony structures supporting the auditorium seating areas. As a major performing arts venue, the building contains a series of interconnected public, performance, and support functions that reflect both its early twentieth century architectural character and the updates completed during the mid-1980s renovation.

The theater portion of the building is organized across several audience-facing levels, including the Basement and Lower Level, the Orchestra Level, the Mezzanine Level, the Lower Balcony

Level, and the Upper Balcony Level. These public-facing areas retain high-end finishes characteristic of the historic interior design. Decorative plaster ceilings, ornamental wall treatments, marble flooring, and custom broadloom carpet created specifically for the venue define the finish palette throughout the auditorium and public lobbies. Lighting fixtures, trim elements, and architectural detailing are consistent with the historic aesthetic and contribute to the building's formal character.

Adjacent to the theater spaces, the facility includes a dedicated dressing room tower that rises five levels above the stage support areas. This portion of the building is organized as the Chorus Loft on the second level, followed by the Mezzanine Dressing Level, the Lower Balcony Dressing Level, the Upper Balcony Dressing Level, and an upper projection and mechanical level. Finishes within the dressing tower and other back-of-house areas are utilitarian and durable, consisting primarily of resilient flooring, sealed concrete, painted gypsum board, and exposed or painted masonry appropriate for operational spaces, performer preparation areas, and technical support functions.

Vertical circulation throughout the facility is supported by multiple elevators that serve different functional needs. The dressing room tower is served by one passenger elevator that connects all dressing levels. A separate freight elevator serves the stage and back-of-house support areas and is used for production and equipment movement. Two passenger elevators serve the theater lobbies and provide access across the primary public levels of the venue.

Structural Summary

The structure is comprised of concrete encased steel framing, concrete framing with unreinforced clay block and CMU masonry with brick veneer, steel roof trusses with precast panels, and concrete slab constructed mezzanines and balcony.

The 2015 FCA identified several areas of seismic concern and recommended further analysis. None has been performed. The building does not meet current seismic code.

Overall, structural elements are in good condition, however, many of the components will require replacement in the long-term (e.g. Wall Foundations, Column Foundations & Pile Caps, Perimeter Drainage & Insulation, Standard Slab on Grade, Inclined Slab on Grade, Trenches, Pits and Bases, Basement Wall Construction, Upper Floors Construction, Balcony Floors Construction).

Building Envelope Summary

The building envelope consists of exterior wall systems constructed of brick, cast stone, and stucco cladding over a structural system of formed concrete and concrete slab-supported mezzanine and balcony elements. These assemblies reflect the original construction of the facility and subsequent renovation work.

Exterior glazing systems include a combination of punched window openings and glazed assemblies serving both public-facing and back-of-house areas. Glazing systems are integrated within the exterior wall assemblies and include framed window units and localized curtain wall or storefront-type elements at select locations.

Exterior door assemblies are provided at primary building entrances, exits, and service areas. These include a combination of storefront-style entries and solid door systems integrated within the exterior wall construction.

Roof systems include multiple roof areas serving the facility. Primary roof areas were repaired and replaced in 2024. Roof assemblies include associated flashing, drainage, and interface conditions at parapets, penetrations, and adjacent wall systems.

Mechanical Summary

The HVAC systems at ASCH are comprised of a hot and chilled water central plant. Gas-fired boilers provide hot water to the building. These units are at end of useful life and will require replacement in the next couple of years. The chiller is original to the renovation in the 80's and past normal useful life. Staff have reported that regular service was not reliably performed throughout units' life, leading to reliability issues. Regardless of maintenance, unit has exceeded its normal useful life and is due for replacement.

Four-pipe air handling units provide ventilation as well as heating and cooling to the spaces for single zone units or multizone units provide heating and cooling to several zones. These Pace units are reliable but approaching end of useful life. It is suggested to refurbish these units to prolong their life.

Domestic hot water is provided via a gas-fired tank style water heater. The unit is in fair condition but does not have sufficient capacity for when larger shows are in town and the showers are being fully utilized.

There is a sprinkler system that serves the building. The controls for the sprinkler system have shown signs of failure and replacement parts have to be bought third party. There is some signs of rusting on the piping spread throughout the system, but staff report no issues with leaks. A full inspection of the piping system is recommended to fend off any failures of piping in the upcoming years.

Elevators 1 & 2 (front of house) are hydraulic and their controls/cabs were modernized in 2018. Elevator #3 (dress tower) is a traction elevator that was modernized (including motor replacement) in 2019. Elevator #4 (back stage) is a hydraulic elevator and its controls were modernized in 2019.

The building control system is Niagara-based and staff report issues with overall operation and failure of sensors. The damper actuators on most air handling units appear to be in good condition, but it appears that other sensors and controls equipment have not been replaced in several years, meaning the equipment is approaching end of useful life. A system upgrade is recommended to the most recent version of Niagara.

Electrical Summary

The building is served by a 4000A, 208Y/120V, three-phase, four-wire main distribution switchgear located in the basement. This main distribution equipment supplies power to motor control centers in the basement, balcony, and projection levels, as well as to the chiller, elevators, branch panelboards throughout all levels, and production lighting dimmers. The main

distribution equipment is connected to an 88 kW generator through a 600A automatic transfer switch, ATS. While the primary distribution equipment and panelboards appear to date from the most recent renovation in 1984 and have exceeded their normal useful life, despite being well maintained and in good condition, the generator and ATS are both new, less than one year old.

The generator serves an emergency panel, elevators 1 through 4, and a house lighting emergency panel, providing standby power to critical systems. The lighting system consists of a variety of fixture types, including recessed downlights, troffers, surface-mounted fixtures with wraparound lenses, strip lights, and open sockets. Overall, the lighting system was found to be in fair condition, with several fluorescent and incandescent fixtures still in use.

Low-voltage systems, including telephone, public address, security, and fire alarm, were observed to be in good condition. However, discussions with Facilities personnel indicated that the intercom and paging system is experiencing operational issues and should be abandoned in place as staff now utilize radio communication. Additionally, Facilities staff noted that branch circuit wiring at devices and luminaires includes cracked and deteriorating conductors and insulation. Further investigation of branch circuit wiring and grounding is recommended, with replacement performed as required.

3.3. Corrective Action Summary

Säzän identified 60 corrective actions based on observations made during the assessment. These actions represent approximately \$19.420M in order-of-magnitude cost opinions.

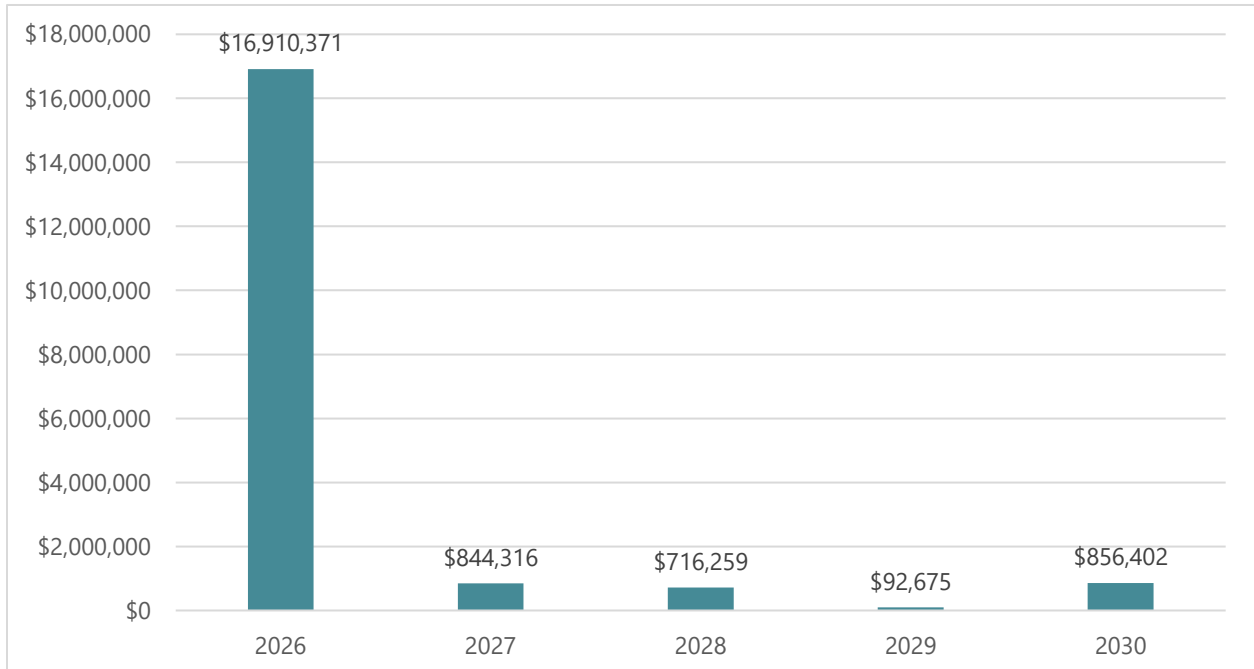


Figure 3. Recapitalization Need by Year, 2026–2030

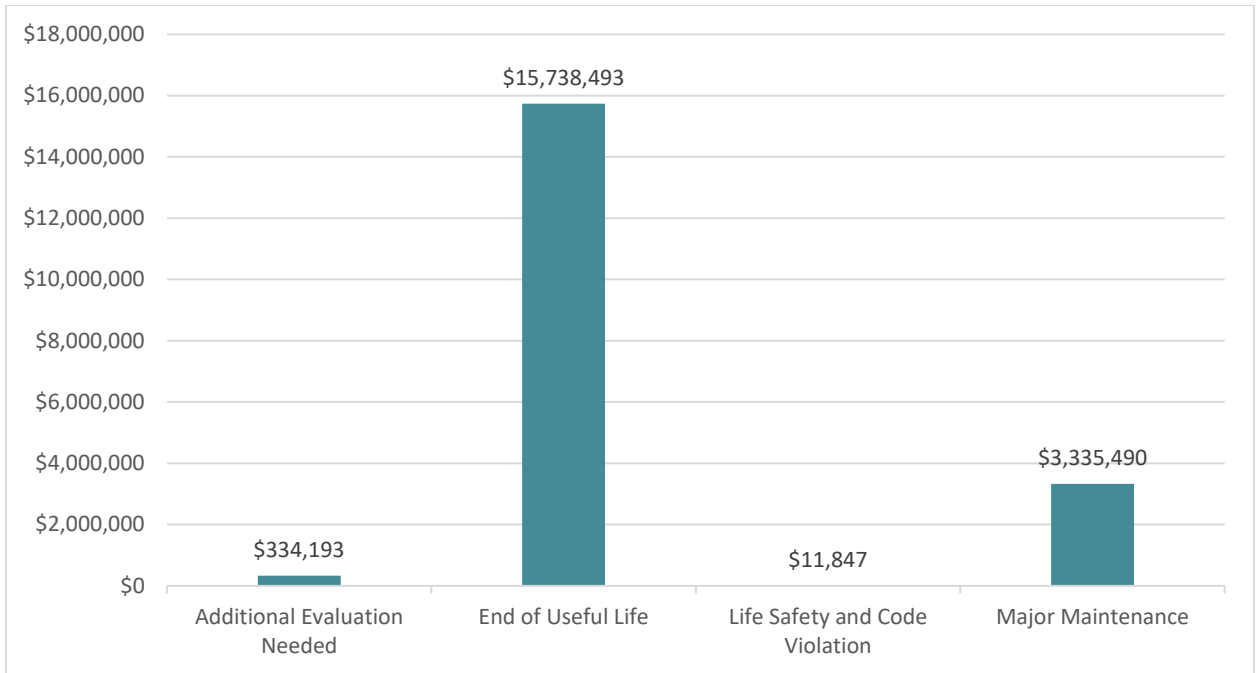


Figure 4. Recapitalization Need by Corrective Action Type

3.4. List of Corrective Actions

Additional Evaluation Needed: Basement Wall Construction



Component
A2221 Basement Wall Construction
Action Type
Additional Evaluation Needed
Year to Occur
2026
CA ID
ASCH-01
Total Cost
\$33,529
Observed Deficiency
Active water leaks occurring at interior spaces appear to be related to failed at-grade seals and failed below grade waterproofing.
Recommended Action
Investigate water testing is recommended to confirm failure mode, leak path and repair required.

Major Maintenance: Balcony Floors Construction



Component

B1113 Balcony Floors Construction

Action Type

Major Maintenance

Year to Occur

2026

CA ID

ASCH-02

Total Cost

\$225,317

Observed Deficiency

Balcony framing interface with exterior wall is a common failure point. Water intrusion is occurring at some locations and is damaging interior finishes. Masonry stains of the adjacent masonry units indicates moisture saturation at the balcony to wall connections.



Recommended Action

We recommend a repair is designed and implemented to waterproof the balcony to wall connections, flashing transitions and the renewal the adjacent masonry elements.

End of Useful Life: Flat Roof Construction



Component

B1221 Flat Roof Construction

Action Type

End of Useful Life

Year to Occur

2026

CA ID

ASCH-03

Total Cost

\$147,529

Observed Deficiency

Concrete roof over chiller room shows signs of water ingress, reinforcing corrosion, and concrete spalling. Structure is compromised and presents potential safety hazard but does not render the room unsafe for occupancy at this time.

Recommended Action

Demolish and replace entire roof structure over chiller room.

Additional Evaluation Needed: Other Roof Systems



Component

B1229 Other Roof Systems

Action Type

Additional Evaluation Needed

Year to Occur

2026

CA ID

ASCH-04

Total Cost

\$22,353

Observed Deficiency

Active water leaks are occurring at roof to wall interface near marquee signage. Assessment of this area was not accessible.

Recommended Action

Further investigation of roof to wall condition at signage to determine area of water ingress and repair solution.

Major Maintenance: Exterior Wall Construction



Component

B2111 Exterior Wall Construction

Action Type

Major Maintenance

Year to Occur

2026

CA ID

ASCH-05

Total Cost

\$2,483,961

Observed Deficiency

At exterior brick and cast stone cladding, failed mortar and grout joints are typical across the building. Moisture staining and saturation has allowed for organic growth and will accelerate degradation.

Recommended Action

We recommend general masonry renewal of historic cast stone and brick elements to include: mortar and grout joint repointing, replacement of damaged units, and cleaning with appropriate masonry cleaner solution, application of water repellent coating to prolong weather resistance and life. Work shall comply with historic preservation standards, and associated costs are included in the estimate. Appropriate grout and mortar is to be used so as not to damage the adjacent masonry elements. For this application a Type N mortar is recommended. Masonry cleaners used should be non-corrosive and low acidity so as to preserve the condition of the masonry elements. Recommended cleaning products include Prosoco - ReVive or similar.

End of Useful Life: Exterior Wall Construction



Component

B2111 Exterior Wall Construction

Action Type

End of Useful Life

Year to Occur

2026

CA ID

ASCH-06

Total Cost

\$151,999

Observed Deficiency

Stucco clad walls located at the alleyway between the Heathman Hotel, exhibit many areas of damage and relate to interior finish damages. Cracks in stucco and failed penetrations are typical at this assembly.

Recommended Action

We recommend repair to renew stucco walls. Cracks are to be route and sealed, penetrations properly detailed and waterproofed, and elastomeric waterproof coating applied across entire wall area. Price reflects waterproofing only.

Major Maintenance: Exterior Louvers, Screens and Fencing



Component

B2113 Exterior Louvers, Screens and Fencing

Action Type

Major Maintenance

Year to Occur

2030

CA ID

ASCH-07

Total Cost

\$28,420

Observed Deficiency

Some damaged louver units. Does not appear to affect adjacent exterior assembly.



Recommended Action

Replace damaged louver units; repair surrounding frames/flashing and reseal to maintain weather-tightness.

End of Useful Life: Balcony Walls & Handrails



Component

B2115 Balcony Walls & Handrails

Action Type

End of Useful Life

Year to Occur

2026

CA ID

ASCH-08

Total Cost

\$657,174

Observed Deficiency

All exterior balconies show many signs of damage and are at the end of life. Interfaces with exterior walls are known points of water intrusion and staining/organic growth show signs of concentrated moisture.

Recommended Action

Perform detailed balcony condition assessment; repair structural damage and replace failed waterproofing/finish components. Where assemblies are at end of life, replace balcony waterproofing and related components to restore safe service.

Major Maintenance: Exterior Windows



Component

B2221 Exterior Windows

Action Type

Major Maintenance

Year to Occur

2030

CA ID

ASCH-09

Total Cost

\$6,395

Observed Deficiency

Window frame leaks in the 3rd floor dressing room bathrooms. Coating and hardware damage at single hung units. Single hung units to be repaired/renewed with stucco wall repairs.

Recommended Action

Identify leak locations and repair window/frame interfaces; replace failed gaskets/sealants; repair/replace damaged hardware and refinish coatings.



Major Maintenance: Exterior Curtain Walls



Component

B2222 Exterior Curtain Walls

Action Type

Major Maintenance

Year to Occur

2026

CA ID

ASCH-10

Total Cost

\$160,941

Observed Deficiency

Assemblies are generally in fair condition. Interior of unit exhibit some areas of water intrusion and finish damages. Exterior seals are failed and metal muttons are corroded.

Recommended Action

We recommend exterior sealant joints are renewed and metal framing members are cleaned of corrosion and receive appropriate coating.

Major Maintenance: Roof Finishes



Component
B3111 Roof Finishes
Action Type
Major Maintenance
Year to Occur
2026
CA ID
ASCH-11
Total Cost
\$4,471
Observed Deficiency
Foil facer of recently installed membrane upturn flashing is missing or peeling away. Given recent installation of roof materials, there is concern for premature failure and accelerated degradation.
Recommended Action
Install new foil facer or replace upturn flashing.

Major Maintenance: Traffic, Toppings & Paving Membranes



Component

B3112 Traffic, Toppings & Paving
Membranes

Action Type

Major Maintenance

Year to Occur

2026

CA ID

ASCH-12

Total Cost

\$67,059

Observed Deficiency

There is no existing waterproofing at the alleyway area. Existing water leaks and corrosion of structural elements are occurring at the ceiling of the chiller room.

Recommended Action

If a structural repair is performed at the area, we recommend a waterproof traffic coating is applied throughout the alley way to protect the area from further damage.



Major Maintenance: Flashings & Trim



Component

B3114 Flashings & Trim

Action Type

Major Maintenance

Year to Occur

2028

CA ID

ASCH-13

Total Cost

\$10,469

Observed Deficiency

Flashing at balcony interface with exterior wall requires repair.

Recommended Action

Remove and replace failed flashing/sealant at balcony-to-wall transitions; repair adjacent finishes and verify proper drainage.

Major Maintenance: Gutters and Downspouts



Component

B3116 Gutters and Downspouts

Action Type

Major Maintenance

Year to Occur

2026

CA ID

ASCH-14

Total Cost

\$1,073

Observed Deficiency

Gutter is damaged.

Recommended Action

Repair/replace damaged gutter sections and install new downspout; verify slope, attachments, and discharge away from building.

End of Useful Life: Interior Door Hardware



Component

C1223 Interior Door Hardware

Action Type

End of Useful Life

Year to Occur

2027

CA ID

ASCH-15

Total Cost

\$34,018

Observed Deficiency

Continuous perimeter gasketing on auditorium doors is worn, detached, and no longer providing an effective seal. Condition allows air, sound, and light transfer between spaces and reduces acoustic and thermal performance.

Recommended Action

Remove existing failed gasketing and install new continuous perimeter acoustic/thermal door gasketing (head, jambs, and meeting stiles as applicable). Ensure proper alignment and full compression when doors are closed.

Major Maintenance: Interior Door Painting & Decorations



Component

C1227 Interior Door Painting & Decorations

Action Type

Major Maintenance

Year to Occur

2028

CA ID

ASCH-16

Total Cost

\$51,769

Observed Deficiency

Painted finishes on multiple interior doors exhibit deterioration including chipped paint, peeling, scuffing, worn edges, and general finish degradation. The deficiencies are limited to the surface coating only; the doors themselves appear structurally sound.

Recommended Action

Prepare and repaint affected interior doors. Scope includes surface cleaning, sanding, patching minor blemishes, spot priming as needed, and applying two coats of interior-grade enamel paint to match existing colors and sheen.



End of Useful Life: Fabricated Toilet partitions



Component

C1331 Fabricated Toilet Partitions

Action Type

End of Useful Life

Year to Occur

2028

CA ID

ASCH-17

Total Cost

\$552,208

Observed Deficiency

Toilet partitions nearing their end of useful life.

Recommended Action

Replace toilet partitions nearing end of useful life with new partitions. Cost reflects replacement of all partitions (each stall and urinal) in all restrooms.

Life Safety and Code Violation: Stair Handrails and Balustrades



Component

C2114 Stair Handrails and Balustrades

Action Type

Life Safety and Code Violation

Year to Occur

2026

CA ID

ASCH-18

Total Cost

\$11,847

Observed Deficiency

Temporary wood handrail extensions installed for construction safety remain in place between the 5th Floor and Bulkhead at the Dressing Room Tower. Installation appears non-permanent and inconsistent with original handrail system.



Recommended Action

Remove temporary wood handrail extensions and restore permanent handrail configuration to match original design intent and finish.

End of Useful Life: Stair, Tread and Landing Finishes



Component

C2221 Stair, Tread and Landing Finishes

Action Type

End of Useful Life

Year to Occur

2026

CA ID

ASCH-19

Total Cost

\$44,706

Observed Deficiency

Stair treads and landings in non-public areas have peeling, worn, and missing finish coatings, including deteriorated safety marking.

Recommended Action

Prep and refinish all treads and landings with a slip-resistant coating and new safety striping.

End of Useful Life: Stair, Tread and Landing Finishes



Component

C2221 Stair, Tread and Landing Finishes

Action Type

End of Useful Life

Year to Occur

2026

CA ID

ASCH-20

Total Cost

\$493,467

Observed Deficiency

Broadloom stair carpet is worn and fraying at multiple treads, nearing the end of its useful life and creating a potential tripping hazard.



Recommended Action

Replace existing stair carpet; remove worn material, repair substrate as needed, and install new commercial-grade stair finish suitable for public, high-traffic areas.

Major Maintenance: Wall Finishes to Inside Exterior Walls



Component

C3111 Wall Finishes to Inside Exterior Walls

Action Type

Major Maintenance

Year to Occur

2026

CA ID

ASCH-21

Total Cost

\$14,529

Observed Deficiency

Interior wall surfaces at the exterior wall at basement level room 039 show significant water-related deterioration, including staining, efflorescence, and finish failure, indicating active or past moisture intrusion.

Recommended Action

Repair damaged wall finishes (clean, patch, refinish) and repaint affected areas. Coordinate with Envelope team to evaluate and address the source of water infiltration before completing finish repairs. Price evaluation and repair.

Additional Evaluation Needed: Wall Finishes to Inside Exterior Walls



Component

C3111 Wall Finishes to Inside Exterior Walls

Action Type

Additional Evaluation Needed

Year to Occur

2026

CA ID

ASCH-22

Total Cost

\$22,523

Observed Deficiency

Interior wall surfaces along exterior wall at dressing room tower second floor stair area show visible water damage, including bubbling, staining, and deterioration of the painted finish.

Recommended Action

Repair damaged wall areas, remove loose or compromised material, refinish wall surfaces, and repaint to match existing. Coordinate with Envelope team to confirm and address the source of water intrusion before repairs. Price reflects evaluation only.

Additional Evaluation Needed: Wall Finishes to Inside Exterior Walls



Component

C3111 Wall Finishes to Inside Exterior Walls

Action Type

Additional Evaluation Needed

Year to Occur

2026

CA ID

ASCH-23

Total Cost

\$33,529

Observed Deficiency

Interior wall surfaces along exterior walls at dressing room tower elevator machine room show extensive water damage, including staining, efflorescence, peeling finish, and deterioration of plaster/painted surfaces.

Recommended Action

Remove loose or damaged wall material, repair and refinish affected wall sections, and repaint to match existing. Coordinate with Envelope team to evaluate and resolve the source of moisture infiltration prior to completing finish repair. Pricing reflects evaluation only.



Additional Evaluation Needed: Wall Finishes to Inside Exterior Walls



Component

C3111 Wall Finishes to Inside Exterior Walls

Action Type

Additional Evaluation Needed

Year to Occur

2026

CA ID

ASCH-24

Total Cost

\$33,529

Observed Deficiency

Interior wall surfaces along exterior wall at orchestra level locker room next to the stage show extensive water damage, including staining, efflorescence, peeling finish, and deterioration of plaster/painted surfaces.

Recommended Action

Remove loose or damaged wall material, repair and refinish affected wall sections, and repaint to match existing. Coordinate with Envelope team to evaluate and resolve the source of moisture infiltration prior to completing finish repairs. Pricing reflects evaluation only.

Additional Evaluation Needed: Wall Finishes to Inside Exterior Walls



Component

C3111 Wall Finishes to Inside Exterior Walls

Action Type

Additional Evaluation Needed

Year to Occur

2026

CA ID

ASCH-25

Total Cost

\$33,529

Observed Deficiency

Interior wall surfaces along exterior wall at top of stage right stair show extensive water damage, including staining, efflorescence, peeling finish, and deterioration of plaster/painted surfaces.

Recommended Action

Remove loose or damaged wall material, repair and refinish affected wall sections, and repaint to match existing. Coordinate with Envelope team to evaluate and resolve the source of moisture infiltration prior to completing finish repairs. Pricing reflects evaluation only.



Additional Evaluation Needed: Wall Finishes to Inside Exterior Walls



Component

C3111 Wall Finishes to Inside Exterior Walls

Action Type

Additional Evaluation Needed

Year to Occur

2026

CA ID

ASCH-26

Total Cost

\$33,529

Observed Deficiency

Interior wall surfaces along exterior walls at mezzanine level corridor are heavily deteriorated, with large areas of spalling, delamination, surface loss, and exposed substrate from prior water intrusion and wear.

Recommended Action

Remove loose or damaged wall material, repair substrate as needed, refinish affected wall sections, and repaint to match existing. Coordinate with Envelope team to confirm whether underlying moisture issues are active and address them prior to finish repairs. Pricing reflects evaluation only.

Additional Evaluation Needed: Wall Finishes to Inside Exterior Walls



Component

C3111 Wall Finishes to Inside Exterior Walls

Action Type

Additional Evaluation Needed

Year to Occur

2026

CA ID

ASCH-27

Total Cost

\$22,353

Observed Deficiency

Interior wall surfaces along exterior walls over the main entrance by the canopy shows visible water damage, including staining and localized deterioration of the painted finish.

Recommended Action

Repair affected wall area; remove damaged material, refinish surface, and repaint to match existing. Coordinate with Envelope team to evaluate and resolve the source of moisture intrusion before completing repairs. Pricing reflects evaluation only.

Major Maintenance: Wall Finishes to Interior Walls



Component

C3112 Wall Finishes to Interior Walls

Action Type

Major Maintenance

Year to Occur

2026

CA ID

ASCH-28

Total Cost

\$58,676

Observed Deficiency

Interior plaster wall surfaces at the music room exhibit significant cracking, separation, and areas of deterioration, indicating material failure and loss of finish integrity.

Recommended Action

Repair damaged plaster sections, stabilize loose areas, patch and refinish wall surfaces, and repaint to match surrounding finishes.



Major Maintenance: Wall Finishes to Interior Walls



Component

C3112 Wall Finishes to Interior Walls

Action Type

Major Maintenance

Year to Occur

2026

CA ID

ASCH-29

Total Cost

\$13,412

Observed Deficiency

Interior wall surfaces at back of theater 3rd Floor corridor exhibit dents, gouges, and finish damage, with areas of impact-related deterioration and surface irregularities.

Recommended Action

Patch and repair damaged wall sections, restore finish to a smooth condition, and repaint to match surrounding surfaces.

Major Maintenance: Wall Finishes to Interior Walls



Component

C3112 Wall Finishes to Interior Walls

Action Type

Major Maintenance

Year to Occur

2026

CA ID

ASCH-30

Total Cost

\$13,412

Observed Deficiency

Interior wall finishes at the break room on the upper balcony level show visible water damage, including staining, efflorescence, peeling paint, and areas of material deterioration at multiple locations.

Recommended Action

Repair damaged wall sections; remove loose or compromised material, patch and refinish affected areas, and repaint to match existing finishes. Coordinate with Envelope team to confirm and address the source of moisture intrusion prior to completing repairs.

End of Useful Life: Column Finishes



Component

C3113 Column Finishes

Action Type

End of Useful Life

Year to Occur

2026

CA ID

ASCH-31

Total Cost

\$62,588

Observed Deficiency

Terra cotta column enclosure at the rear of the stage, approximately 60 linear feet in extent, is deteriorated and has exceeded its useful service life.

Recommended Action

Remove deteriorated terra cotta column enclosure and evaluate current fire-resistance requirements. Provide a code-compliant fire-rated column protection system if required; if fire protection is no longer required, remove the enclosure and repair adjacent finishes with appropriate materials.

Major Maintenance: Flooring



Component

C3224 Flooring

Action Type

Major Maintenance

Year to Occur

2026

CA ID

ASCH-32

Total Cost

\$31,294

Observed Deficiency

Flooring in support spaces shows significant deterioration, including surface spalling, staining, moisture damage, and loss of finish integrity.

Recommended Action

Repair or resurface flooring in affected support spaces; patch damaged areas and apply a durable protective floor coating suitable for mechanical/electrical rooms.

End of Useful Life: Flooring



Component

C3224 Flooring

Action Type

End of Useful Life

Year to Occur

2026

CA ID

ASCH-33

Total Cost

\$67,059

Observed Deficiency

Flooring is aged and nearing the end of its useful life, with visible surface wear, discoloration, and localized deterioration.

Recommended Action

Replace existing flooring; remove deteriorated materials, repair substrate as needed, and install new resilient flooring suitable for the space.



End of Useful Life: Flooring



Component

C3224 Flooring

Action Type

End of Useful Life

Year to Occur

2027

CA ID

ASCH-34

Total Cost

\$60,778

Observed Deficiency

Painted/coated concrete floor finish at subbasement area is worn, peeling, and deteriorated across the area.

Recommended Action

Prep and refinish concrete floor with a new durable coating system (e.g., epoxy or industrial concrete paint).

Major Maintenance: Flooring



Component

C3224 Flooring

Action Type

Major Maintenance

Year to Occur

2026

CA ID

ASCH-35

Total Cost

\$11,176

Observed Deficiency

Marble flooring does not extend throughout the room, resulting in an unfinished area with plywood infill. This creates an uneven floor elevation and a non-continuous finished surface.

Recommended Action

Remove plywood infill, prepare and level substrate as required, and install a compatible finished material to provide a continuous, uniform finished floor surface.

End of Useful Life: Carpeting



Component

C3225 Carpeting

Action Type

End of Useful Life

Year to Occur

2029

CA ID

ASCH-36

Total Cost

\$40,852

Observed Deficiency

Lobby broadloom (sheet) carpet near end of useful life.

Recommended Action

Replace with new.



End of Useful Life: Bases, Curbs and Trim



Component

C3226 Bases, Curbs and Trim

Action Type

End of Useful Life

Year to Occur

2029

CA ID

ASCH-37

Total Cost

\$51,823

Observed Deficiency

Resilient base board throughout the entire Dressing Room Tower and Theater Back of House Areas nearing end of useful life.

Recommended Action

Replace with new.

Major Maintenance: Ceiling Finishes



Component

C3331 Ceiling Finishes

Action Type

Major Maintenance

Year to Occur

2026

CA ID

ASCH-38

Total Cost

\$22,353

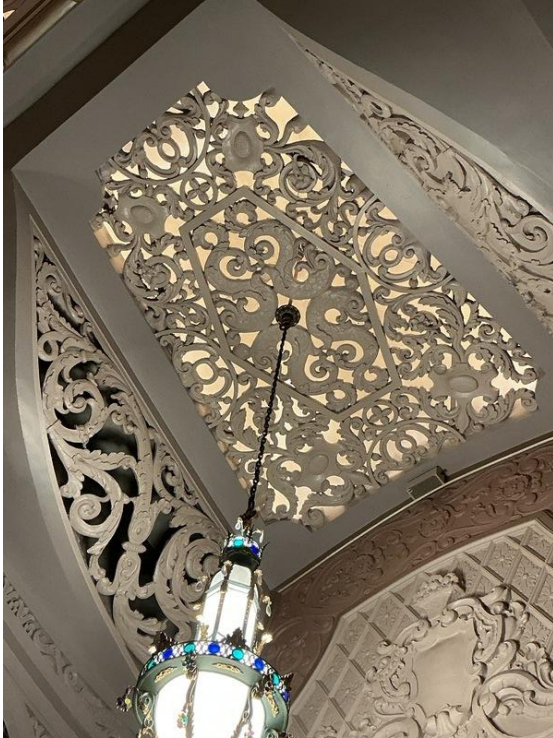
Observed Deficiency

Ceiling finish at mezzanine level stair beam enclosure shows visible water damage, including staining, peeling, and localized material deterioration.

Recommended Action

Repair damaged ceiling areas, remove loose or compromised material, refinish affected sections, and repaint to match existing. Coordinate with Envelope team to confirm and resolve the moisture source prior to completing repairs.

Major Maintenance: Ceiling Finishes



Component

C3331 Ceiling Finishes

Action Type

Major Maintenance

Year to Occur

2026

CA ID

ASCH-39

Total Cost

\$33,529

Observed Deficiency

Two ceiling areas show damaged ornamental plaster with cracking, delamination, and paint loss from prior water intrusion.

Recommended Action

Repair and restore damaged plaster (patch, stabilize, refinish, repaint) to match existing decorative ceiling.

End of Useful Life: Suspended Ceilings



Component

C3332 Suspended Ceilings

Action Type

End of Useful Life

Year to Occur

2026

CA ID

ASCH-40

Total Cost

\$222,299

Observed Deficiency

All suspended ceiling system has come to the end of its useful life in the Dress Tower and Theater Back of House Spaces.

Recommended Action

Remove and replace suspended ceiling systems at end of useful life with new suspended ceiling systems.



Additional Evaluation Needed: Domestic Water Supply Equipment



Component

D2223 Domestic Water Supply Equipment

Action Type

Additional Evaluation Needed

Year to Occur

2026

CA ID

ASCH-41

Total Cost

\$22,353

Observed Deficiency

The domestic hot water system does not have the capacity to serve showers when larger shows are in town.

Recommended Action

Evaluate options for storage tank or additional hot water capacity. Heat pump water heater with storage tank and electric backup water heater could be a good option. Price reflects evaluation only.

End of Useful Life: Boilers



Component

D3221 Boilers

Action Type

End of Useful Life

Year to Occur

2027

CA ID

ASCH-42

Total Cost

\$380,997

Observed Deficiency

Boilers are at end of useful life.

Recommended Action

Replace boilers with newer condensing-style boilers for added system efficiency. Replace expansion tank, boiler room piping, and upgrade pumps to variable speed system at time of replacement. Total Cost includes pricing for these systems.

End of Useful Life: Chilled Water Systems



Component

D3331 Chilled Water Systems

Action Type

End of Useful Life

Year to Occur

2026

CA ID

ASCH-43

Total Cost

\$998,055

Observed Deficiency

The chiller is at end of useful life.

Recommended Action

Replace chiller with new modular system.
Investigate heat recovery chiller options to potentially reduce natural gas load for boilers.
Replace piping and upgrade pumps to VFD at the time of replacement.

End of Useful Life: Direct Expansion Systems



Component
D3332 Direct Expansion Systems
Action Type
End of Useful Life
Year to Occur
2030
CA ID
ASCH-44
Total Cost
\$123,155
Observed Deficiency
Outdoor condensing unit CCU-5 is at end of useful life.
Recommended Action
Replace unit with new equipment.

End of Useful Life: Package Units



Component

D3552 Package Units

Action Type

End of Useful Life

Year to Occur

2030

CA ID

ASCH-45

Total Cost

\$83,840

Observed Deficiency

The packaged rooftop unit on the lower roof is at end of useful life.

Recommended Action

Replace with new equipment. Consider adding energy recovery for additional energy savings.

End of Useful Life: Heating Generating Systems



Component

D3661 Heating Generating Systems

Action Type

End of Useful Life

Year to Occur

2026

CA ID

ASCH-46

Total Cost

\$71,529

Observed Deficiency

The electric wall heater in the ticket booth is not functional and replacement parts are no longer produced.

Recommended Action

Replace unit with new equipment. This may require major renovation in the ticket booth to get new equipment to fit in place.

End of Useful Life: Heating Generating Systems



Component

D3661 Heating Generating Systems

Action Type

End of Useful Life

Year to Occur

2030

CA ID

ASCH-47

Total Cost

\$88,814



Observed Deficiency

There are three hydronic unit heaters (UH-1, 2, 3) that are at end of useful life.

Recommended Action

Replace with new heating equipment.



End of Useful Life: Heating-Cooling Air Handling Units



Component

D3663 Heating-Cooling Air Handling Units

Action Type

End of Useful Life

Year to Occur

2027

CA ID

ASCH-48

Total Cost

\$283,480

Observed Deficiency

ASU-1, 2, 4, and 5 are at end of useful life.

Recommended Action

Refurbish unit with new fans, coils, and interior cleaning to extend life of unit. Pricing includes refurbishment of all four units.



End of Useful Life: Heating-Cooling Air Handling Units



Component

D3663 Heating-Cooling Air Handling
Units

Action Type

End of Useful Life

Year to Occur

2026

CA ID

ASCH-49

Total Cost

\$1,005,878

Observed Deficiency

ASU-3 is at end of useful life.

Recommended Action

Replace unit with a heat recovery ventilator and provide heating and cooling to the space via split-system heat pump in lieu of replacing system in kind.

End of Useful Life: Exhaust & Ventilating Systems



Component
D3664 Exhaust & Ventilating Systems

Action Type
End of Useful Life

Year to Occur
2028

CA ID
ASCH-50

Total Cost
\$78,805

Observed Deficiency
All smoke evacuation fans are at end of useful life.

Recommended Action
Replace all fans with new equipment.



Picture depicts a representative sample. All fans need to be replaced.

Additional Evaluation Needed: Other Controls and Instrumentation



Component

D3669 Other Controls and Instrumentation

Action Type

Additional Evaluation Needed

Year to Occur

2028

CA ID

ASCH-51

Total Cost

\$23,009

Observed Deficiency

Older controls sensors remain in place and are past their normal useful life.

Recommended Action

Perform point to point checkout of sensors, calibration check, and retro-commissioning on entire system. Pricing reflects evaluation only.

Additional Evaluation Needed: Wet Sprinkler Systems



Component

D4114 Wet Sprinkler Systems

Action Type

Additional Evaluation Needed

Year to Occur

2026

CA ID

ASCH-52

Total Cost

\$44,706

Observed Deficiency

The fire sprinkler system is at end of useful life. Piping shows signs of rust and controls failures have occurred in the past (flow switches, tampers, etc) with parts that are no longer manufactured.

Recommended Action

Perform inspection of fire sprinkler piping to assess overall system condition and identify any needs for piping replacement. Fully upgrade system controls.

End of Useful Life: Low Tension Service & Dist.



Component

D5112 Low Tension Service & Dist.

Action Type

End of Useful Life

Year to Occur

2030

CA ID

ASCH-53

Total Cost

\$497,357

Observed Deficiency

All equipment is in fair condition but at end of useful life; includes switchboards, distribution panels, motor control centers, and branch panelboards.

Recommended Action

Replace switchboards, distribution panels, motor control centers, and branch panelboards.



End of Useful Life: Other Special Systems & Devices



Component
D5994 Other Special Systems & Devices
Action Type
End of Useful Life
Year to Occur
2026
CA ID
ASCH-54
Total Cost
\$165,194
Observed Deficiency
Installation of access catwalks for Meyer Array system has rendered some lighting positions hard to access, making focusing potentially dangerous.
Recommended Action
Replace incandescent, fixed focus fixtures in these locations with automated LED profile units.

End of Useful Life: Theater & Stage Equipment



Component

E1223 Theater & Stage Equipment

Action Type

End of Useful Life

Year to Occur

2026

CA ID

ASCH-55

Total Cost

\$4,247,042

Observed Deficiency

Existing Manual Stage Rigging has exceeded its useful life. Replacement is currently scheduled for 2026.

Recommended Action

Replace stage rigging components that have exceeded manufacturer recommended service life; inspect supporting structure; perform load testing/certification by qualified rigging contractor.

End of Useful Life: Audio-visual Equipment



Component

E1225 Audio-visual Equipment

Action Type

End of Useful Life

Year to Occur

2026

CA ID

ASCH-56

Total Cost

\$388,940

Observed Deficiency

Existing Meyer Constellation system in good working order. Existing Meyer line array house PA is in need of replacement.

Recommended Action

Replace the existing line array system with a modern, appropriately sized system; integrate with amplification/processing and verify coverage and performance.

End of Useful Life: Blinds and Other Window Treatment



Component

E2113 Blinds and Other Window
Treatment

Action Type

End of Useful Life

Year to Occur

2027

CA ID

ASCH-57

Total Cost

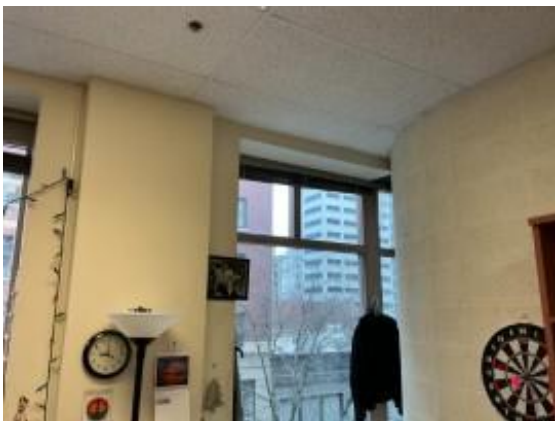
\$85,044

Observed Deficiency

Window blinds are worn, aged, and past their end of useful life, with visible discoloration and declining operability.

Recommended Action

Replace existing blinds with new window treatments appropriate for the space; remove and dispose of deteriorated units.



End of Useful Life: Fixed Multiple Seating



Component

E2115 Fixed Multiple Seating

Action Type

End of Useful Life

Year to Occur

2026

CA ID

ASCH-58

Total Cost

\$4,653,864

Observed Deficiency

Fixed seating beyond useful life and in need of replacement.

Recommended Action

Replace fixed seating systems that have exceeded useful life; repair substrate/anchorage as required and verify accessibility/aisle clearances. Pricing for this CA does not include ADA upgrades.

Major Maintenance: Paving & Surfacing



Component

G2331 Paving & Surfacing

Action Type

Major Maintenance

Year to Occur

2026

CA ID

ASCH-59

Total Cost

\$78,235

Observed Deficiency

Exterior paving tiles on Main St. are cracked and displaced, creating uneven walking surfaces and potential tripping hazards.

Recommended Action

Remove damaged tiles, repair substrate as needed, and replace with matching pavers to restore a flush, safe walking surface.



Additional Evaluation Needed: Wiring & Conduits & Ductbanks



This picture represents typical branch wiring

Component	G4223 Wiring & Conduits & Ductbanks
Action Type	Additional Evaluation Needed
Year to Occur	2030
CA ID	ASCH-60
Total Cost	\$28,420
Observed Deficiency	Reports from staff note that branch wiring at devices and fixtures are at end of useful life.
Recommended Action	Field investigate branch circuit wiring to determine deficiencies.

3.5. Facility Conditions

Component	Rating
A1111 Wall Foundations	Good
A1112 Column Foundations & Pile Caps	Good
A1113 Perimeter Drainage & Insulation	Good
A1331 Standard Slab on Grade	Good
A1333 Inclined Slab on Grade	Good
A1334 Trenches, Pits and Bases	Good
A2221 Basement Wall Construction	Good
B1112 Upper Floors Construction	Good
B1113 Balcony Floors Construction	Good
B1115 Exterior Stairs and Fire Escapes	Poor
B1221 Flat Roof Construction	Poor
B1222 Pitched Roof Construction	Good
B1223 Canopies	Good
B2111 Exterior Wall Construction	Poor
B2112 Parapets	Good
B2113 Exterior Louvers, Screens and Fencing	Poor
B2115 Balcony Walls & Handrails	Deficient
B2116 Exterior Soffits	Fair
B2221 Exterior Windows	Fair
B2222 Exterior Curtain Walls	Poor
B2331 Exterior Glazed Doors & Entrances	Fair
B2332 Solid Exterior Doors	Good
B2334 Exterior Overhead Doors	Good
B2339 Other Exterior Doors & Entrances	Fair
B3111 Roof Finishes	Good
B3112 Traffic, Toppings & Paving Membranes	Poor
B3114 Flashings & Trim	Poor
B3115 Roof Eaves and Soffits	Good
B3116 Gutters and Downspouts	Poor
B3222 Roof Hatches	Excellent

Component	Rating
B3223 Gravity Roof Ventilators	Excellent
C1111 Fixed partitions	Good
C1116 Interior Balustrades and Screens	Good
C1117 Interior Windows & Storefronts	Good
C1221 Interior Doors	Fair
C1222 Interior Door Frames	Fair
C1223 Interior Door Hardware	Fair
C1224 Interior Door Wall Opening Elements	Fair
C1225 Interior Door Sidelights & Transoms	Fair
C1226 Interior Hatches & Access Doors	Good
C1226 Interior Hatches & Access Doors	Fair
C1227 Interior Door Painting & Decorations	Fair
C1228 Interior Overhead Doors	Good
C1331 Fabricated Toilet partitions	Fair
C1333 Storage Shelving and Lockers	Good
C1334 Ornamental Metals and Handrails	Good
C1336 Closet Specialties	Fair
C1337 General Fittings & Misc. Metals	Fair
C2111 Regular Stairs	Good
C2114 Stair Handrails and Balustrades	Good
C2115 Fixed Ladders	Good
C2115 Fixed Ladders	Good
C2221 Stair, Tread and Landing Finishes	Good
C2222 Stair Soffit Finishes	Fair
C2223 Stair Handrail & Balustrade Finishes	Good
C3111 Wall Finishes to Inside Exterior Walls	Fair

Component	Rating
C3112 Wall Finishes to Interior Walls	Poor
C3112 Wall Finishes to Interior Walls	Fair
C3113 Column Finishes	Fair
C3224 Flooring	Fair
C3224 Flooring	Poor
C3225 Carpeting	Fair
C3226 Bases, Curbs and Trim	Fair
C3331 Ceiling Finishes	Deficient
C3331 Ceiling Finishes	Fair
C3332 Suspended Ceilings	Fair
D1111 Passenger Elevators	Fair
D1112 Freight Elevators	Fair
D2111 Water Closets	Good
D2112 Urinals	Good
D2113 Lavatories	Fair
D2114 Sinks	Fair
D2116 Water Fountains	Good
D2117 Showers	Fair
D2118 Drinking Fountains and Coolers	Fair
D2120 Water Heaters	Fair
D2221 Cold Water Service	Fair
D2222 Hot Water Service	Fair
D2223 Domestic Water Supply Equipment	Fair
D2331 Waste Piping	Fair
D2332 Vent Piping	Fair
D2333 Floor Drains	Fair
D2334 Sanitary Waste Equipment	Good
D2335 Pipe Insulation	Fair
D2441 Pipe & Fittings	Fair
D2442 Roof Drains	Fair
D2443 Rainwater Drainage Equipment	Fair
D2444 Pipe Insulation	Fair
D2991 Gas Distribution	Fair

Component	Rating
D2995 Decorative Fountain Piping Devices	Fair
D3112 Gas Supply system	Fair
D3115 Hot Water Supply System	Fair
D3221 Boilers	Poor
D3222 Boiler Room Piping & Specialties	Poor
D3224 Insulation	Fair
D3331 Chilled Water Systems	Poor
D3332 Direct Expansion Systems	Poor
D3441 Air Distribution Systems	Fair
D3442 Exhaust Ventilation Systems	Fair
D3444 Hot Water Distribution	Fair
D3445 Chilled Water Distribution	Fair
D3447 Glycol Distribution Systems	Fair
D3552 Package Units	Poor
D3661 Heating Generating Systems	Poor
D3662 Cooling Generating Systems	Fair
D3663 Heating-Cooling Air Handling Units	Fair
D3664 Exhaust & Ventilating Systems	Poor
D3665 Hoods and Exhaust Systems	Fair
D3667 General Monitoring & Control	Fair
D3668 Building Automation Systems	Good
D3669 Other Controls and Instrumentation	Fair
D3771 Piping System Testing & Balancing	Poor
D3772 Air systems Testing & Balancing	Poor
D3773 HVAC Commissioning	Poor
D4111 Sprinkler Water Supply	Fair
D4114 Wet Sprinkler Systems	Fair
D4221 Standpipe Water Supply	Fair

Facility Condition Assessment
Arlene Schnitzer Concert Hall

Component	Rating
D4223 Sandpipe Equipment	Fair
D4224 Fire Hose Equipment	Fair
D4331 Fire Extinguishers	Good
D4332 Fire Extinguisher Cabinets	Fair
D5112 Low Tension Service & Dist.	Fair
D5221 Branch Wiring Devices	Poor
D5222 Lighting Equipment	Deficient
D5222 Lighting Equipment	Fair
D5223 Lighting Controls	Excellent
D5223 Lighting Controls	Fair
D5331 Public Address & Music Systems	Good
D5332 Intercommunication & Paging System	Poor
D5333 Telephone System	Good
D5334 Call Systems	Poor
D5336 Clock and Program systems	Good
D5337 Fire Alarm systems	Fair
D5338 Security and Detection Systems	Fair
D5339 Local Area Networks	Good
D5991 Grounding Systems	Fair
D5992 Emergency Light & Power Systems	Excellent
D5992 Emergency Light & Power Systems	Fair
D5993 Floor Raceway Systems	Fair
D5994 Other Special Systems & Devices	Poor
E1111 Security & Vault Equipment	Fair
E1112 Teller and Service Equipment	Fair
E1114 Checkroom Equipment	Good
E1116 Laundry & Dry Cleaning Equipment	Fair
E1117 Vending Equipment	Good
E1118 Office Equipment	Fair
E1222 Library Equipment	Good
E1223 Theater & Stage Equipment	Poor

Component	Rating
E1224 Instrumental Equipment	Good
E1225 Audio-visual Equipment	Fair
E1333 Loading Dock Equipment	Good
E1991 Maintenance Equipment	Fair
E1993 Food Service Equipment	Fair
E2111 Fixed Artwork	Good
E2112 Fixed Casework	Fair
E2113 Blinds and Other Window Treatment	Fair
E2115 Fixed Multiple Seating	Poor
E2115 Fixed Multiple Seating	Good
E2222 Furniture & Accessories	Good
E2223 Movable Rugs and Mats	Fair
E2223 Movable Rugs and Mats	Good
G2111 Bases and Sub-Bases	Good
G2112 Paving & Surfacing	Good
G2113 Curbs, Gutters and Drains	Good
G2115 Painted Lines	Fair
G2331 Paving & Surfacing	Fair
G2332 Edging	Fair
G2333 Exterior Steps	Good
G2442 Retaining Walls	Good
G2443 Terrace & perimeter Walls	Good
G2555 Planting	Fair
G2556 Planters	Good
G2557 Irrigation Systems	Good
G2559 Trees	Good
G3111 Potable Water Distribution & Storage	Fair
G3112 Non-Potable Water Distribution & Storage	Fair
G3114 Fire Protection Distribution & Storage	Fair
G3221 Piping	Fair
G3222 Manholes & Cleanouts	Fair
G3223 Septic Disposal Systems	Good
G3224 Lift Stations	Good
G3331 Piping	Fair

Component	Rating
G3334 Lift Stations	Good
G3554 Cooling Towers on Site	Good
G3661 Fuel Piping	Fair
G4221 Fixtures & Transformers	Fair
G4223 Wiring & Conduits & Ductbanks	Poor
G4224 Site Lighting Controls	Fair

Component	Rating
G4331 Site Communications Systems	Fair
G4332 Site Security & Alarm Systems	Fair
G4992 Site Emergency Power Generation	Fair

Table 7. List of Component Ratings (components not present or not applicable to this facility have been omitted for clarity)

3.6. Asset Inventory and Asset Condition Ratings

The Combined Rating for assets is a derived score representing the current condition of the asset. It is calculated as the average of four factors (asset age, asset condition, asset performance, and level of maintenance), each assessed on a 5-point scale.

Asset ID	Name	Combined Rating	Criticality	Replacement Cost
8390	ASCH Cooling Tower	1.75-Poor	1-Vital	\$387,400
8409	ASCH Personnel Lift	5-Excellent	4-Support	\$0
10412	ASCH Foundation		1-Vital	\$0
8371	ASCH AED 3	4.75-Good	1-Vital	\$1,487
8370	ASCH AED 2	4.75-Good	1-Vital	\$1,487
8369	ASCH AED 1	4.75-Good	1-Vital	\$1,487
8536	ASCH Orchestra Concession Stand		4-Support	\$0
8537	ASCH Water Treatment 02	4-Good	3-Important	\$30,000
8389	ASCH Condenser Pump 2	4-Good	2-Essential	\$18,448
8388	ASCH CONDENSER PUMP 1	4-Good	2-Essential	\$18,448
8383	ASCH CHILLER PUMP 2	4-Good	2-Essential	\$18,448
8382	ASCH CHILLER PUMP 1	4-Good	2-Essential	\$18,448
8294	ASCH ASU 4	4-Good	2-Essential	\$210,440
8410	ASCH Stage Lift heat exchanger	4-Good	2-Essential	\$20,000
8407	ASCH HR FOLLOW SPOT	4.5-Good	3-Important	\$4,870
8404	ASCH HL FOLLOW SPOT	3.75-Adequate	3-Important	\$4,870
8400	ASCH EF No. 05	4.25-Good	2-Essential	\$3,894
8399	ASCH EF No. 04	3-Adequate	3-Important	\$3,894
8397	ASCH EF No. 02	4.25-Good	2-Essential	\$3,894
	ASCH EF No. 11	3-Adequate	3-Important	\$3,894

Asset ID	Name	Combined Rating	Criticality	Replacement Cost
8394	ASCH EF No. 10	3-Adequate	3-Important	\$3,894
8387	ASCH CLOTHES WASHER 2	4.25-Good	4-Support	\$3,930
8386	ASCH CLOTHES WASHER 1	4.25-Good	4-Support	\$3,930
8385	ASCH CLOTHES DRYER 2	4.25-Good	4-Support	\$3,540
8384	ASCH CLOTHES DRYER 1	4.25-Good	4-Support	\$3,540
8380	ASCH Boiler 2	2.5-Marginal	2-Essential	\$445,000
8379	ASCH ASU 6	4-Good	2-Essential	\$158,000
8378	ASCH ASU 5	3.75-Adequate	2-Essential	\$15,890
8377	ASCH ASU 3	3-Adequate	2-Essential	\$15,890
8376	ASCH ASU 2	4.25-Good	2-Essential	\$122,400
8375	ASCH ASU 1	4.25-Good	2-Essential	\$163,700
8297	ASCH Main Street Gate	3.75-Adequate	4-Support	\$0
8295	ASCH CHILLER	1.5-Poor	2-Essential	\$446,310
	ASCH FCU-2	5-Excellent	2-Essential	\$5,790
	ASCH FCU-1	5-Excellent	1-Vital	\$5,790
8392	ASCH EF No. 08	4.5-Good	3-Important	\$3,894
	ASCH EF # Unknown	4.5-Good	3-Important	\$3,894
	ASCH GENERATOR	4.75-Good	2-Essential	\$84,211
	ASCH Unit Heater	4.75-Good	3-Important	\$3,970
	ASCH CU 1	5-Excellent	2-Essential	\$12,370
	ASCH CU 2	4.5-Good	3-Important	\$19,880
	ASCH Water Heater Domestic	5-Excellent	2-Essential	\$7,210
8381	ASCH Boiler 1	2.5-Marginal	2-Essential	\$445,000
	ASCH EF No. 9	3-Adequate	3-Important	\$3,894
	Grinder Pump	5-Excellent	1-Vital	\$8,788
	Grinder Pump	5-Excellent	1-Vital	\$8,788
8401	ASCH EF No. 06	4.5-Good	3-Important	\$3,894
8405	ASCH Hot Boiler pump 2	2.5-Marginal	2-Essential	\$7,210
	ASCH Hot Boiler pump 1	2.5-Marginal	2-Essential	\$7,210

Table 8. List of Asset Inventory and Asset Conditions

3.7. Prioritized 5-Year List of Corrective Actions

CA ID	Component	Action	Priority	Cost
ASCH-01	A2221 Basement Wall Construction	Conduct further evaluation	1	\$33,529
ASCH-02	B1113 Balcony Floors Construction	Repair system	1	\$225,317
ASCH-03	B1221 Flat Roof Construction	Replace system	1	\$147,529
ASCH-04	B1229 Other Roof Systems	Conduct further evaluation	1	\$22,353
ASCH-05	B2111 Exterior Wall Construction	Repair system	1	\$2,483,961
ASCH-06	B2111 Exterior Wall Construction	Replace system	1	\$151,999
ASCH-07	B2113 Exterior Louvers, Screens and Fencing	Repair system	3	\$28,420
ASCH-08	B2115 Balcony Walls & Handrails	Replace system	1	\$657,174
ASCH-09	B2221 Exterior Windows	Repair system	3	\$6,395
ASCH-10	B2222 Exterior Curtain Walls	Repair system	1	\$160,941
ASCH-11	B3111 Roof Finishes	Repair system	1	\$4,471
ASCH-12	B3112 Traffic, Toppings & Paving Membranes	Repair system	1	\$67,059
ASCH-13	B3114 Flashings & Trim	Repair system	2	\$10,469
ASCH-14	B3116 Gutters and Downspouts	Repair system	1	\$1,073
ASCH-15	C1223 Interior Door Hardware	Replace system	2	\$34,018
ASCH-16	C1227 Interior Door Painting & Decorations	Repair system	2	\$51,769
ASCH-17	C1331 Fabricated Toilet Partitions	Replace system	2	\$552,208
ASCH-18	C2114 Stair Handrails and Balustrades	Rectify safety/code issue	1	\$11,847
ASCH-19	C2221 Stair, Tread and Landing Finishes	Replace system	1	\$44,706
ASCH-20	C2221 Stair, Tread and Landing Finishes	Replace system	1	\$493,467
ASCH-21	C3111 Wall Finishes to Inside Exterior Walls	Conduct further evaluation	1	\$14,529

CA ID	Component	Action	Priority	Cost
ASCH-22	C3111 Wall Finishes to Inside Exterior Walls	Conduct further evaluation	1	\$22,353
ASCH-23	C3111 Wall Finishes to Inside Exterior Walls	Repair system	1	\$33,529
ASCH-24	C3111 Wall Finishes to Inside Exterior Walls	Conduct further evaluation	1	\$33,529
ASCH-25	C3111 Wall Finishes to Inside Exterior Walls	Conduct further evaluation	1	\$33,529
ASCH-26	C3111 Wall Finishes to Inside Exterior Walls	Conduct further evaluation	1	\$33,529
ASCH-27	C3111 Wall Finishes to Inside Exterior Walls	Conduct further evaluation	1	\$22,353
ASCH-28	C3112 Wall Finishes to Interior Walls	Repair system	1	\$58,676
ASCH-29	C3112 Wall Finishes to Interior Walls	Repair system	1	\$13,412
ASCH-30	C3112 Wall Finishes to Interior Walls	Repair system	1	\$13,412
ASCH-31	C3113 Column Finishes	Replace system	1	\$62,588
ASCH-32	C3224 Flooring	Repair system	1	\$31,294
ASCH-33	C3224 Flooring	Replace system	1	\$67,059
ASCH-34	C3224 Flooring	Replace system	2	\$60,778
ASCH-35	C3224 Flooring	Repair system	1	\$11,176
ASCH-36	C3225 Carpeting	Replace system	3	\$40,852
ASCH-37	C3226 Bases, Curbs and Trim	Replace system	3	\$51,823
ASCH-38	C3331 Ceiling Finishes	Repair system	1	\$22,353
ASCH-39	C3331 Ceiling Finishes	Repair system	1	\$33,529
ASCH-40	C3332 Suspended Ceilings	Replace system	1	\$222,299
ASCH-41	D2223 Domestic Water Supply Equipment	Conduct further evaluation	1	\$22,353
ASCH-42	D3221 Boilers	Replace system	2	\$380,997
ASCH-43	D3331 Chilled Water Systems	Replace system	1	\$998,055
ASCH-44	D3332 Direct Expansion Systems	Replace system	3	\$123,155
ASCH-45	D3552 Package Units	Replace system	3	\$83,840
ASCH-46	D3661 Heating Generating Systems	Replace system	1	\$71,529
ASCH-47	D3661 Heating Generating Systems	Replace system	3	\$88,814

CA ID	Component	Action	Priority	Cost
ASCH-48	D3663 Heating-Cooling Air Handling Units	Replace system	2	\$283,480
ASCH-49	D3663 Heating-Cooling Air Handling Units	Replace system	1	\$1,005,878
ASCH-50	D3664 Exhaust & Ventilating Systems	Replace system	2	\$78,805
ASCH-51	D3669 Other Controls and Instrumentation	Conduct further evaluation	2	\$23,009
ASCH-52	D4114 Wet Sprinkler Systems	Conduct further evaluation	1	\$44,706
ASCH-53	D5112 Low Tension Service & Dist.	Replace system	3	\$497,357
ASCH-54	D5994 Other Special Systems & Devices	Replace system	1	\$165,194
ASCH-55	E1223 Theater & Stage Equipment	Replace system	1	\$4,247,042
ASCH-56	E1225 Audio-visual Equipment	Replace system	1	\$388,940
ASCH-57	E2113 Blinds and Other Window Treatment	Replace system	2	\$85,044
ASCH-58	E2115 Fixed Multiple Seating	Replace system	1	\$4,653,864
ASCH-59	G2331 Paving & Surfacing	Repair system	1	\$78,235
ASCH-60	G4223 Wiring & Conduits & Ductbanks	Conduct further evaluation	3	\$28,420
Total				\$19,420,023

Table 9. Prioritized 5-Year List of Corrective Actions

3.8. Prioritized 6–10 Year List of Predicted Renewals

Component	Action	Priority	Cost
C1337 General Fittings & Misc. Metals	Replace system	1	\$270,457
D1111 Passenger Elevators	Replace system	1	\$1,040,792
D5338 Security and Detection Systems	Replace system	1	\$1,924,906
E1116 Laundry & Dry Cleaning Equipment	Replace system	1	\$82,070
E1993 Food Service Equipment	Replace system	1	\$149,218
E2112 Fixed Casework	Replace system	1	\$3,133,569
B2331 Exterior Glazed Doors & Entrances	Replace system	2	\$719,105
D2120 Water Heaters	Replace system	2	\$437,747

Component	Action	Priority	Cost
D2331 Waste Piping	Replace system	2	\$585,582
D2332 Vent Piping	Replace system	2	\$506,865
D3441 Air Distribution Systems	Replace system	2	\$4,001,159
D3662 Cooling Generating Systems	Replace system	2	\$887,013
D4224 Fire Hose Equipment	Replace system	2	\$42,239
B2332 Solid Exterior Doors	Replace system	3	\$415,017
C1111 Fixed partitions	Replace system	3	\$7,687,689
C1117 Interior Windows & Storefronts	Replace system	3	\$1,165,999
C1226 Interior Hatches & Access Doors	Replace system	3	\$198,582
C1333 Storage Shelving and Lockers	Replace system	3	\$13,834
C1334 Ornamental Metals and Handrails	Replace system	3	\$525,688
C2115 Fixed Ladders	Replace system	3	\$132,388
D2113 Lavatories	Replace system	3	\$237,152
D2114 Sinks	Replace system	3	\$256,915
D2117 Showers	Replace system	3	\$39,525
D2118 Drinking Fountains and Coolers	Replace system	3	\$108,695
D2221 Cold Water Service	Replace system	3	\$782,603
D2222 Hot Water Service	Replace system	3	\$810,271
D2223 Domestic Water Supply Equipment	Replace system	3	\$984,182
D2333 Floor Drains	Replace system	3	\$138,339
D2441 Pipe & Fittings	Replace system	3	\$262,844
D2991 Gas Distribution	Replace system	3	\$94,861
D3115 Hot Water Supply System	Replace system	3	\$666,003
D3224 Insulation	Replace system	3	\$401,183
D3444 Hot Water Distribution	Replace system	3	\$1,940,697
D3445 Chilled Water Distribution	Replace system	3	\$1,952,554
D3667 General Monitoring & Control	Replace system	3	\$98,813
D3668 Building Automation Systems	Replace system	3	\$411,064
D3669 Other Controls and Instrumentation	Replace system	3	\$126,481
D4332 Fire Extinguisher Cabinets	Replace system	3	\$15,810
D5331 Public Address & Music Systems	Replace system	3	\$2,543,459
D5333 Telephone System	Replace system	3	\$1,600,778
D5336 Clock and Program systems	Replace system	3	\$543,474
D5339 Local Area Networks	Replace system	3	\$1,598,802
D5991 Grounding Systems	Replace system	3	\$256,915
Total			\$39,791,338

Table 10. Prioritized 6–10 Year List of Predicted Renewals

3.9. Estimated 10–20 Year Maintenance and Recapitalization Need

Component	Cost
B1223 Canopies	\$1,678,296
B2112 Parapets	\$765,036
B2116 Exterior Soffits	\$2,326,263
B2334 Exterior Overhead Doors	\$102,766
B3111 Roof Finishes	\$6,138,554
B3222 Roof Hatches	\$125,603
B3223 Gravity Roof Ventilators	\$182,695
C1116 Interior Balustrades and Screens	\$800,908
D2111 Water Closets	\$356,903
D2112 Urinals	\$199,696
D2116 Water Fountains	\$42,489
D2335 Pipe Insulation	\$244,309
D2442 Roof Drains	\$216,691
D2443 Rainwater Drainage Equipment	\$611,835
D2444 Pipe Insulation	\$140,212
D3112 Gas Supply system	\$488,618
D4331 Fire Extinguishers	\$8,498
D5223 Lighting Controls	\$1,933,227
D5223 Lighting Controls	\$1,933,227
D5992 Emergency Light & Power Systems	\$1,285,277
D5992 Emergency Light & Power Systems	\$1,285,277
G2559 Trees	\$229,472
Total	\$21,095,854

Table 11. Estimated 10–20 Year Maintenance and Recapitalization Need

3.10. Estimated 20–30 Year Maintenance and Recapitalization Need

Component	Cost
A1111 Wall Foundations	\$5,498,955
A1112 Column Foundations & Pile Caps	\$2,540,812

A1113 Perimeter Drainage & Insulation	\$270,038
A1331 Standard Slab on Grade	\$5,867,189
A1334 Trenches, Pits and Bases	\$527,802
A2221 Basement Wall Construction	\$527,802
B1112 Upper Floors Construction	\$16,472,317
B1113 Balcony Floors Construction	\$3,277,279
Total	\$34,982,194

Table 12. Estimated 20–30 Year Maintenance and Recapitalization Need

3.11. Recommendations for Follow-up Assessments

The FCA identified several deficiencies which require additional evaluation and analysis to understand the extent and cause of the issue. Those deficiencies and estimations of their costs are summarized below. These costs are included in the prioritized 5-year list of corrective actions.

CA ID	Component	Deficiencies	Cost
ASCH-01	A2221 Basement Wall Construction	Active water leaks occurring at interior spaces appear to be related to failed at-grade seals and failed below grade waterproofing.	\$33,529
ASCH-04	B1229 Other Roof Systems	Active water leaks are occurring at roof to wall interface near marquee signage. Assessment of this area was not accessible.	\$22,353
ASCH-21	C3111 Wall Finishes to Inside Exterior Walls	Interior wall surfaces at the exterior wall at basement level room 039 show significant water-related deterioration, including staining, efflorescence, and finish failure, indicating active or past moisture intrusion.	\$14,529
ASCH-22	C3111 Wall Finishes to Inside Exterior Walls	Interior wall surfaces along exterior wall at dressing room tower second floor stair area show visible water damage, including bubbling, staining, and deterioration of the painted finish.	\$22,353
ASCH-24	C3111 Wall Finishes to Inside Exterior Walls	Interior wall surfaces along exterior wall at orchestra level locker room next to the stage show extensive water damage, including staining, efflorescence, peeling finish, and	\$33,529

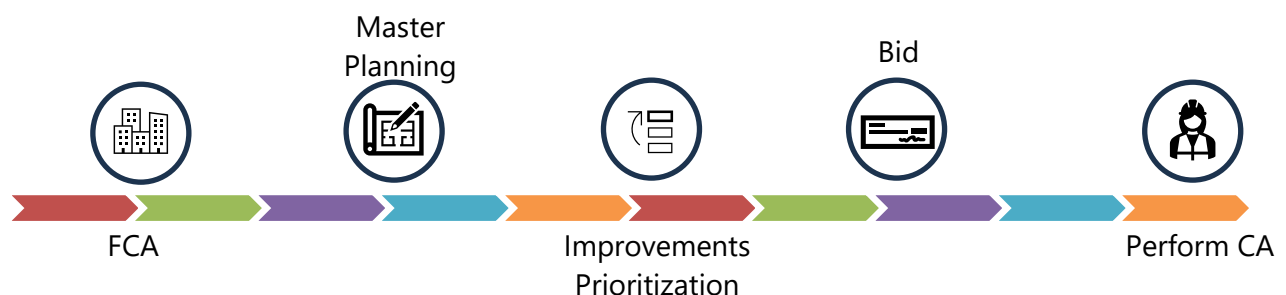
		deterioration of plaster/painted surfaces.	
ASCH-25	C3111 Wall Finishes to Inside Exterior Walls	Interior wall surfaces along exterior wall at top of stage right stair show extensive water damage, including staining, efflorescence, peeling finish, and deterioration of plaster/painted surfaces.	\$33,529
ASCH-26	C3111 Wall Finishes to Inside Exterior Walls	Interior wall surfaces along exterior walls at mezzanine level corridor are heavily deteriorated, with large areas of spalling, delamination, surface loss, and exposed substrate from prior water intrusion and wear.	\$33,529
ASCH-27	C3111 Wall Finishes to Inside Exterior Walls	Interior wall surfaces along exterior walls over the main entrance by the canopy shows visible water damage, including staining and localized deterioration of the painted finish.	\$22,353
ASCH-41	D2223 Domestic Water Supply Equipment	The domestic hot water system does not have the capacity to serve showers when larger shows are in town.	\$22,353
ASCH-51	D3669 Other Controls and Instrumentation	Older controls sensors remain in place and are past their normal useful life.	\$23,009
ASCH-52	D4114 Wet Sprinkler Systems	The fire sprinkler system is at end of useful life. Piping shows signs of rust and controls failures have occurred in the past (flow switches, tampers, etc) with parts that are no longer manufactured.	\$44,706
ASCH-60	G4223 Wiring & Conduits & Ductbanks	Reports from staff note that branch wiring at devices and fixtures are at end of useful life.	\$28,420
Total			\$334,193

Table 13. Recommended Follow-up Assessments and Estimated Costs

4. How to use this Report

The information in this report provides Metro with objective recommendations and cost estimates that should be considered for both short and long-term planning and budgeting. To effectively utilize the data, the following recommendations include:

1. Review Corrective Action improvement scope and costs. This will identify trends in what systems require the most work and provide high-level capital planning figures.
2. Review Corrective Actions per facility to understand the recommended work items by scope and cost.
3. Consider opportunities for combining recommended improvements based on similar scope, schedule, and budget concerns. Combining scope of work options will provide efficiencies of scale and work trades.
4. Assess the building value and functionality and compare against the cost to maintain the facility.
5. Assign a dedicated project manager (i.e., Department staff or consultant) for selected improvements and begin further planning and refinement of scope of work for each improvement. Each proposed project should have an experienced facilities professional to develop a scope of work.
6. Understand that this FCA is a starting point for the Department's formal asset management strategy.
 - a. The cost projections provided in this report are useful to illustrate Rough Order of Magnitude (ROM), budgetary costs that are -30% / +50% and are intrinsically conservative. Do not rely on these costs for cost management of projects; rather, from this initial baseline, project managers will be better informed about the future development of more detailed third-party cost estimates.
 - b. The description of work to be performed to address Corrective Actions must be reviewed and more fully detailed by a qualified facility professional, architect, engineer, or construction manager to minimize construction risk. Where applicable, a detailed design be completed.



5. Appendices

Narrative Summary

Project: Portland's Facility Condition Assessment
Subject: Brunish, Winningstad, Newmark, Arlene Schnitzer Concert Hall, Keller Auditorium
Date: 3/11/2026
From: Chris Ochocki, ASTC

Introduction

Project History and Narrative Summary Purpose

Over the course of multiple visits in November and December of 2026, PLA Designs represented by Chris Ochocki, ASTC, Jessica Irish, Nate Zwainlesk, & Thomas Cowdery toured the Brunish, Winningstad, & Newmark Theaters, the Arlene Schnitzer Concert Hall, and the Keller Auditorium. The intent of our visits to each of the Portland's performance venues was to observe, report, and provide recommendations for the theatrical systems and equipment in the spaces.

Our observations and reporting of recommended corrective actions have been recorded as part of the overall facility condition assessment project led by Sazan Group. However, due to the specialized nature of the technical systems and equipment for performing arts venues, many of the items observed, and our recommendations for said items, require context than exceeds space limitations in the executive summaries. This narrative summary report of our findings and recommendations is intended to provide the extra context required and should serve as a higher definition document for future corrective actions for the theatrical systems and equipment included herein.

Recognition of Excellent Facility Stewardship by P5 Staff

As we toured each space, a common theme emerged. For every technical system, at every venue without fail, every piece of equipment observed was in the best condition possible. This was true for the systems and equipment we observed which were brand new, the systems and equipment we observed which were long ago obsolete and in desperate need of replacement, and the systems and equipment in all stages of life in-between. Our reporting would be incomplete without first acknowledging the Portland's Operations Staff, as well as the many stagehands and department heads whose passion and excellent stewardship of the systems and equipment in their charge can be observed throughout each space we observed.

Systems & Equipment Groupings

Our observations, reporting, and recommended corrective actions for the systems and equipment included in our scope of work are grouped into the following categories:

- Stage Flooring Systems
- Manual & Motorized Stage Rigging Systems
- Stage, Decorative, & Variable Acoustic Draperies

- Fixed Pipe Grid Systems
- Motorized Orchestra Pit, Stage, and Seating Lifts
- Theatrical Lighting Control Systems
- General Illumination Fixtures
- Production Lighting Fixtures
- Production Audio/Visual Systems
- Fixed Audience Seating
- Portable Audience Seating & Seat Decking
- Technical Access and Other Life Safety Items
- Historic Interior Finishes

Note that some system groups listed above may not be present in each of the venues observed. Additionally, detailed commentary on audiovisual systems is somewhat lacking, due to variables which are often subjective rather than objectively obvious. Our comments are therefore generalized.

As with most complex technical systems, theatrical systems and equipment are often interconnected in ways that may not seem readily apparent. In many cases systems which seem fully independent of each other are in fact intertwined. With very few exceptions, it is not possible to replace or repair an item without impacting many other items in space. For clarity of reporting, we have isolated the theatrical systems for each space observed into separate groups. However, we have also done our best to highlight instances where our recommendations for repair or replacement of a specific component will likely have an impact on other items in the space, up to and including requiring modifications to and/or replacement of equipment in good or working condition.

Brunish Theater – Observations & Recommendations

Masking Draperies (Brunish Theater)

Summary Overview

System Rating	Estimated Remaining Life	Life Safety Issue
Very Poor	None	No

Observations

- Most of the drapery system includes sewn-in manufacturer labels identifying them as IFR (inherently flame-resistant) velour drapery products of Stagecraft Industries, Inc., installed in March 2012. Other drapes within the system were unlabeled, but their observed condition, material wear, and degradation patterns strongly suggest they are of similar age or older. The overall drapery system shows extensive signs of deterioration, including moisture-related staining, weakened backing, structural tearing, fraying, hem failures, and previous repairs. The damage is systemic rather than isolated, indicating end-of-life conditions.
- Extensive tide-line staining indicates repeated moisture exposure.
- Binder migration and backing hardening visible across multiple panels.
- Multiple structural tears, including one long repaired tear at a weakened elevation.

- Hem separation and drag damage where drapes contact the floor.
- Fraying and emerging tears suggest compromised tensile strength.
- Multiple panels exhibit symptoms consistent with binder migration, including hardened lower sections, tide-line staining, and backing distortion. Combined with the observed structural failures (horizontal tears and frayed openings occurring precisely within the affected elevation), these conditions strongly suggest that the binder system has been compromised, contributing to the overall degradation and reduced remaining service life of the drapery system.
- Damage is consistent with long-term storage and age-related degradation.

Recommendations

- The widespread physical degradation, persistent moisture damage, and structural failure of multiple panels, indicate that replacement of the drapery system should be considered a near-term priority. Continued use increases the likelihood of additional tears and shortens aesthetic life onstage.

Pipe Grid System (Brunish Theater)

Summary Overview

System Rating	Estimated Remaining Life	Life Safety Issue
Good	10+ Years	No

Observations

- The Pipe Grid System appears to be constructed from 1.5" Schedule 40 steel pipe, painted to match the ceiling above. The pipe grid supports both portable theatrical equipment clamped to the pipe grid members, as well as permanent and semi-permanent equipment mounted to, or immediately adjacent to the pipe grid members. The pipe grid components appear, based on a visual review, to be in good overall condition. However, given the age of the pipe grid and limited available as-built documentation, a detailed structural review, beyond the scope of this report is recommended.
- The existing Pipe Grid system appears to be in good condition.
- Cross-connect clamps between pipe grid members appear secure.
- Ledger brackets supporting pipe grid members terminating at perimeter walls appear to be well attached to walls, and connections to pipe grid members appear secure.
- Threaded rod hangers appear to be in good condition.
- Portable equipment attached to the pipe grid appears to be properly secured, including the appropriate safety cables per best theatrical practice.
- No lateral seismic bracing serving the pipe grid system was observed.
- We were unable to observe any documentable point load, or overall system load ratings for the pipe grid system.

Recommendations

- A detailed hands-on structural review and analysis of the pipe grid components and pipe grid connections to structure should be performed by a registered structural engineer, so that accurate load ratings for the pipe grid system are known.
- Though not required at the time of installation, the addition of new seismic bracing of the pipe grid system should be considered as part of work scope for systems and equipment permanently or semi-permanently attached to the pipe grid system.

Theatrical Lighting Controls (Brunish Theater)

Summary Overview

System Rating	Estimated Remaining Life	Life Safety Issue
Poor	1-5 Years, depending on use	Yes (Emergency egress controls)

Observations

- Production Lighting Power Controls consists of an array of portable dimmer bars which have been configured for semi-permanent attachment to the Pipe Grid System. The dimmer bars appear to be in fair condition but are now obsolete. Sourcing replacement parts for the dimmer bars is likely to become problematic as the manufacturer has ceased operations.
- General Lighting Controls are partially integrated with production lighting controls. Manufacturer support for the general lighting controls system is anticipated to end in the next 5 years.
- **No means of automatic control bypasses to trigger emergency lighting during a loss of normal power or fire alarm event could be observed.**
- There are currently no hard-wired or dedicated means to control modern LED production lighting instruments present in space.
- The DMX Data Input receptacle for controlling the dimmer bars is located on the opposite side of the space from the existing control location, necessitating a long run of portable patch cable(s) between the stage lighting console and the control receptacle.
- DMX data distribution (required for the control of modern stage lighting fixtures) is limited.
- Existing panel boards serving obsolete dimmer bars are in good condition and have ample capacity to support reconfiguration of the system from obsolete incandescent fixtures to modern LED units.
- Existing stations for general lighting controls are obsolete, with manufacturer support for the devices likely to be ending within the next 5 years.
- Existing company switch is in excellent condition and should remain to allow for future growth.

Recommendations

- Remove obsolete dimmer bars and existing panelboards and replace them with mains fed relay panels with integral circuit breakers, utilizing existing feeders.

- Provide new multi-outlet power receptacles fed from new relay panels at the locations of the removed dimmer bars.
- Provide new hardwired lighting network and DMX/RDM data distribution adjacent to new power receptacles and at elevated control location.
- Replace existing Architectural controls to allow for new LED General Illumination fixtures described below and connect to building's Fire Alarm Control Panel per current life safety codes and best theatrical practice.

General Lighting Fixtures (Brunish Theater)

Summary Overview

System Rating	Estimated Remaining Life	Life Safety Issue
Very Poor	1 Year	No

Observations

- Existing general illumination consists of two separate groups of fixtures. A grid linear work light fixtures, lamped with fluorescent tubes of varying color temperatures, suspended just above the pipe grid, and incandescent production lighting fixtures, clamped to the pipe grid and plug connected to existing dimmer bars.
- Lamps of differing color temperature, not color balanced to production lighting fixtures likely produce shifts in perceived color between set construction/design and performances.
- Production lighting fixtures serving as house lighting are obsolete, procurement of replacement lamps with theatrical quality dimming is likely to become problematic within the next five to ten years.

Recommendations

- Remove existing fluorescent fixtures and obsolete production lighting fixtures serving as house lighting fixtures with new LED cylinder downlights with smooth dimming to less than .01% and high color rendering. Integrate with new house lighting, emergency egress, and production lighting controls systems.

Production Lighting Fixtures (Brunish Theater)

Summary Overview

System Rating	Estimated Remaining Life	Life Safety Issue
Very Poor	None	No

Observations

- Existing production lighting fixture inventory consists of obsolete incandescent units in poor condition and in need of replacement.

Recommendation

- Replace existing incandescent fixtures with a basic complement of new LED units.

Production Audio/Video Systems (Brunish Theater)

Summary Overview

System Rating	Estimated Remaining Life	Life Safety Issue
Fair	1-5 Years	No

Observations

- A/V systems in the space are limited, though appropriate for the size typical use of the space. However, many existing components are obsolete or nearing obsolescence.

Recommendations

- Replace aging components with new.

Portable Audience Seating & Seat Decking (Brunish Theater)

Summary Overview

System Rating	Estimated Remaining Life	Life Safety Issue
Very Poor (Portable Seating)	1 Year	No

Observations

- Portable seating units have exceeded their expected useful life and need to be replaced.
- Upholstery on existing seating units is well worn on many seating units. Some units are beginning to show signs of extreme wear.
- Self-rising mechanisms on many seats appear to be failing. Self-rising functionality is critical to allow life safety code conformance with existing row to row spacing as configured.
- Railings for portable decking system appear to be well secured to existing seating decks.
- Portable decking units are aging but appear very well maintained. Seating decks appear to be in good condition, with a solid and premium feel.
- Barring abuse or accidental damage, the existing seat decking system should remain functional for the next 8-12 years.

Recommendations

- Replace existing portable seating units in the Brunish with new units. We recommend the new units be provided in the same type and configuration as the portable audience seating in the Winningstad Theater to allow for consolidated maintenance and to provide a uniform experience across P5 venues with portable audience seating.

Technical Access and Other Life Safety Items (Brunish Theater)

Observations

- Gaps in railings at elevated control platform exceed the allowable dimensions described in current OSHA requirements.
- Color temperature of general lighting fixtures in Brunish Dressing Rooms appears to be in the 4000K range. Best practices for these areas are 3000K CCT & 90+ CRI lighting.

Recommendations

- Reconfigure railing installation to remove gaps larger than those that allow for a 4" sphere to pass through.
- Replace dressing room fixtures with new fixtures, color matched to new LED production lighting fixture's base color temperature. (Typically 3000K.)

End of Brunish Observations & Recommendations

Winningstad Theater – Observations & Recommendations

Stage Flooring Systems (Winningstad)

Summary Overview

System Rating	Estimated Remaining Life	Life Safety Issue
Fair	1-5 Years	No

Observations

- Existing finish floor panels appear to have been replaced with new tempered hardboard. Due to pandemic related supply chain shortages, available stock of tempered hardboard has been prone to pre-mature failure when used in stage floor applications.

Recommendations

- Carefully observation of finish floor panels to mitigate the potential of pre-mature failure. Anticipate replacement of entire stage floor in advance of typical life cycle for performance space flooring.

Manual & Motorized Stage Rigging Systems (Winningstad)

Summary Overview

System Rating	Estimated Remaining Life	Life Safety Issue
Very Poor	1 Year	No

Observations

- Existing manual counterweight rigging sets have exceeded the manufacturer's published recommended useful life.
- We observed multiple locations where lifting lines for FOH lighting hoists are rubbing against adjacent lifting lines, or other equipment adjacent to lifting lines.
- Motorized line sets appear to be in working order, but many components have exceeded the manufacturer's published recommended useful life.

Recommendations

- Replace existing manual and motorized line sets with new, matching quantities and configuration of existing line sets.

Stage, Decorative, & Variable Acoustic Draperies (Winningstad)

Summary Overview

System Rating	Estimated Remaining Life	Life Safety Issue
Good	7-9 Years	No

Observations

- The majority of the drapery system includes sewn-in manufacturer labels identifying them as Rose Brand, Velour 54 in IFR (inherently flame-resistant) 25 oz. Charisma drapery products installed in May 2013.
- The Winningstad's drapery system is aged but very well maintained. The draperies observed are consistent with expected wear patterns for IFR velour in long-term theatre use. Replacement is not immediately required, but capital planning for renewal within the next 7–9 years is appropriate based on age, aesthetic wear, and lifecycle expectations.

Recommendations

- No conditions were observed that indicate an immediate need for total system replacement; however, based on age, material type, and observed wear patterns, planning for replacement within the next 7–9 years is recommended.

Motorized Orchestra Pit, Stage, and Seating Lifts (Winningstad)

Summary Overview

System Rating	Estimated Remaining Life	Life Safety Issue
Fair	1-5 Years	No

Observations

- Lift system has been well maintained but is beginning to show signs of age.
- Abnormal wear patterns, and metal shavings were observed at multiple screw jack locations.
- High pitched whine during system, during lift operation was observed.

- Users indicate lift system is inspected/maintained annually.

Recommendations

- Continue regular maintenance/inspection by specialized elevator/lift contractor.
- Even with regular maintenance and care, mechanical systems are subject to normal wear which can lead to failure. Planning for replacement of lift system within 5 years is recommended.

Theatrical Lighting Controls (Winningstad)

Summary Overview

System Rating	Estimated Remaining Life	Life Safety Issue
Fair	1-5 Years	No

Observations

- General Lighting controls were replaced in 2017 and conform to all current life safety codes.
- Production lighting controls and distribution systems are configured primarily for incandescent stage lighting instruments.
- Existing controls can accommodate a limited number of LED based production lighting fixtures.
- Existing Stage Lighting Distribution equipment is in fair condition, and configured primarily for incandescent production lighting fixtures.
- Limited DMX/RDM and lighting network data distribution is present, but is inadequate to support a full complement of LED production lighting fixtures.

Recommendations

- Replace existing production lighting distribution equipment with new, configured to fully support an inventory of all LED production lighting fixtures.
- Replace existing dedicated dimmer modules located in existing stage lighting dimmer racks with new dedicated relay modules.

General Illumination Fixtures (Winningstad)

Summary Overview

System Rating	Estimated Remaining Life	Life Safety Issue
Excellent	10-15 Years	No

Observations

- General and Work Lighting Fixtures are LED, replaced in 2017 and in excellent condition.

Recommendations

- None at this time.

Production Lighting Fixtures (Winningstad)

Summary Overview

System Rating	Estimated Remaining Life	Life Safety Issue
Poor	1-3 Years	No

Observations

- Existing production lighting complement consists of mostly incandescent fixtures nearing or exceeding obsolescence.
- Fixtures are well maintained and in working condition, but sourcing of production quality lamps is likely to become problematic in the near future.

Recommendations

- Replace existing incandescent fixture inventory with new LED units.

Production Audio/Visual Systems (Winningstad)

Summary Overview

System Rating	Estimated Remaining Life	Life Safety Issue
Good	5-10 Years	No

Observations

- Existing equipment appears to be current generation and in good working condition.

Recommendations

- None at this time.

Fixed & Portable Audience Seating (Winningstad)

Summary Overview

System Rating	Estimated Remaining Life	Life Safety Issue
Good	10-15 Years	No

Observations

- Existing fixed and portable seating units are in good condition and show minimal signs of wear.

Recommendations

- None at this time.

End of Winningstad Observations & Recommendations

Newmark Theater – Observations & Recommendations

Stage Flooring Systems (Newmark)

Summary Overview

System Rating	Estimated Remaining Life	Life Safety Issue
Fair	1-5 Years	No

Observations

- Existing finish floor panels appear to have been replaced with new tempered hardboard. Due to pandemic related supply chain shortages, available stock of tempered hardboard has been prone to pre-mature failure when used in stage floor applications.

Recommendations

- Carefully observation of finish floor panels to mitigate the potential of pre-mature failure. Anticipate replacement of entire stage floor in advance of typical life cycle for performance space flooring.

Manual & Motorized Stage Rigging Systems (Newmark)

Summary Overview

System Rating	Estimated Remaining Life	Life Safety Issue
Poor	1 Year	No

Observations

- Existing manual counterweight rigging sets have exceeded the manufacturer's published recommended useful life.

Recommendations

- Replace existing manual line sets with new, matching quantities and configuration of existing line sets.

Stage, Decorative, & Variable Acoustic Draperies (Newmark)

Summary Overview

System Rating	Estimated Remaining Life	Life Safety Issue
Good	7-9 Years	No

Observations

- The majority of the drapery system includes sewn-in manufacturer labels identifying the drapery. The 2014 iWeiss masking drapery, fabricated from Rose Brand 25 oz IFR Charisma velour, remains in sound operational condition despite its age. The drapes exhibit normal long-term wear characteristics, including surface fading, nap compression, and minor soiling, but no failures that compromise their structural or functional integrity. Stitching, panel alignment, and

fabric performance remain stable. Given the durability of IFR Charisma velour and the well-executed original construction, these drapes are expected to remain serviceable for a minimum of 7 additional years with routine handling and maintenance.

- By contrast, the 2017 Rose Brand border drapery, although made from the same 25 oz IFR Charisma velour, demonstrates significant construction-related deficiencies. The fabric itself is not the limiting factor; rather, the borders show poorly executed original stitching, including extremely narrow seam allowances, evidence of multiple removed and re-sewn seam lines, and areas of active seam stress and separation. These deficiencies reflect variable fabrication quality rather than material degradation. As a result, despite being newer and made from the same base velour product, these borders have a substantially shortened remaining lifespan and are likely to require replacement within the next five years, potentially sooner depending on use frequency.

Recommendations

- The Newmark Theatre's drapery system remains broadly operational, with the 2014 iWeiss masking drapery showing age-appropriate fading, nap wear, and minor soiling while still retaining full structural and functional integrity. Remaining serviceable for longer than 5 years. In contrast, the 2017 Rose Brand border drapery, though made from the same IFR Charisma fabric, displays significant fabrication-related deficiencies. These issues stem from original construction quality rather than material degradation, resulting in a substantially shorter remaining useful life and the need for replacement within the next five years, potentially sooner depending on progression of seam failure.
- However, it should be noted that the grand drape, as part of the iWeiss 2014 drapes was fabricated from Peacock Charisma velour, is also generally serviceable despite localized fading and minor wear around pull-handle attachment points. Importantly, this fabric was obviously selected to match the color palette of the auditorium seating upholstery. If the venue intends to reupholster or replace the seating in the coming years, it is recommended that the grand drape be replaced concurrently. Staggered replacement, where new seating fabric is installed alongside an older, naturally faded drape, will result in highly noticeable color mismatch, making either the drape or the seating appear prematurely worn. Coordinated replacement will preserve visual cohesion and avoid a scenario where one element's fresher dye lot makes the other appear detrimentally faded.

Motorized Orchestra Pit Lift (Newmark)

Summary Overview

System Rating	Estimated Remaining Life	Life Safety Issue
Fair	1-5 Years	No

Observations

- Lift system has been well maintained but is beginning to show signs of age.
- Users indicate lift system is inspected/maintained annually.

Recommendations

- Continue regular maintenance/inspection by specialized elevator/lift contractor.
- Even with regular maintenance and care, mechanical systems are subject to normal wear which can lead to failure. Planning for replacement of lift system within 5 years is recommended.

Theatrical Lighting Controls (Newmark)

Summary Overview

System Rating	Estimated Remaining Life	Life Safety Issue
Fair	1-5 Years	No

Observations

- General Lighting controls were replaced in 2017 and conform to all current life safety codes.
- Production lighting controls and distribution systems are configured primarily for incandescent stage lighting instruments.
- Existing controls can accommodate a limited number of LED based production lighting fixtures.
- Existing Stage Lighting Distribution equipment is in fair condition, and configured primarily for incandescent production lighting fixtures.
- Limited DMX/RDM and lighting network data distribution is present, but is inadequate to support a full complement of LED production lighting fixtures.

Recommendations

- Replace existing production lighting distribution equipment with new, configured to fully support an inventory of all LED production lighting fixtures.
- Replace existing dedicated dimmer modules located in existing stage lighting dimmer racks with new dedicated relay modules.

General Illumination Fixtures (Newmark)

Summary Overview

System Rating	Estimated Remaining Life	Life Safety Issue
Excellent	10-15 Years	No

Observations

- General and Work Lighting Fixtures are LED, replaced in 2017 and in excellent condition.

Recommendations

- None at this time.

Production Lighting Fixtures (Newmark)

Summary Overview

System Rating	Estimated Remaining Life	Life Safety Issue
Poor	1-3 Years	No

Observations

- Existing production lighting complement consists of mostly incandescent fixtures nearing or exceeding obsolescence.
- Fixtures are well maintained and in working condition, but sourcing of production quality lamps is likely to become problematic in the near future.

Recommendations

- Replace existing incandescent fixture inventory with new LED units.

Production Audio/Visual Systems (Newmark)

Summary Overview

System Rating	Estimated Remaining Life	Life Safety Issue
Good	5-10 Years	No

Observations

- Existing equipment appears to be current generation and in good working condition.

Recommendations

- None at this time.

Fixed Audience Seating (Newmark)

Summary Overview

System Rating	Estimated Remaining Life	Life Safety Issue
Very Poor	1 Year	No

Observations

- Existing fixed seating units have well exceeded their anticipated useful life, and are in need of replacement.

Recommendations

- Replace seating units with new of like kind and layout.

Technical Access and Other Life Safety Items (Newmark)

Observations

- Vertical ladder from mid gallery to loading gallery/grid iron access is open, with no observable safety measures conforming to current OSHA requirements.

Recommendations

- Provide fall arrest and recovery system at vertical ladder between mid and loading galleries.

End of Newmark Observations & Recommendations

Arlene Schnitzer Concert Hall – Observations & Recommendations

Stage Flooring Systems (ASCH)

Summary Overview

System Rating	Estimated Remaining Life	Life Safety Issue
Good	5-10 Years	No

Observations

- Existing stage floor is in good condition and with regular maintenance and care should have an anticipated life of 5-10 years.

Recommendations

- None at this time

Manual & Motorized Stage Rigging Systems (ASCH)

Summary Overview

System Rating	Estimated Remaining Life	Life Safety Issue
Poor	1 Year	No

Observations

- Existing manual counterweight rigging sets have exceeded the manufacturer's published recommended useful life.
- Users indicate replacement of manual stage rigging components is scheduled.

Recommendations

- Replace existing stage rigging equipment as currently scheduled.

Decorative, & Variable Acoustic Draperies (ASCH)

Summary Overview

System Rating	Estimated Remaining Life	Life Safety Issue
Good	5 Years	No

Observations

- Decorative draperies are in good condition and if cleaned at regular intervals should have an expected life of not less than 10 years.
- Acoustic draperies at perimeter of house are in generally fair condition and should be able to sustain one more cleaning cycle.

Recommendations

- Clean acoustic draperies within 2 years. Prepare for replacement no later than 5 years after next cleaning cycle.

Motorized Orchestra Pit, Stage, and Seating Lifts (ASCH)

Summary Overview

System Rating	Estimated Remaining Life	Life Safety Issue
Good	5-10 Years	No

Observations

- Lift system has been well maintained and is operated regularly.
- Users indicate lift system is inspected/maintained annually.

Recommendations

- None at this time

Theatrical Lighting Controls (ASCH)

Summary Overview

System Rating	Estimated Remaining Life	Life Safety Issue
Excellent	10-15 Years	No

Observations

- New lighting controls equipment was staged for installation at time of observation.

Recommendations

- None at this time.

General Illumination Fixtures (ASCH)

Summary Overview

System Rating	Estimated Remaining Life	Life Safety Issue
---------------	--------------------------	-------------------

Good	10-15 Years	No
------	-------------	----

Observations

- General lighting fixtures were being replaced with new LED lamps at the time of our observation.
- Existing raceways/sockets for general lighting fixtures appear in most locations to be original to the building. Existing raceways/sockets may lead to accelerated failure of new LED lamps.

Recommendations

- Carefully monitor failure rate of newly installed LED lamps. If many new LED lamps begin to fail sooner than anticipated by LED lamp manufacturer, consider replacement or retrofit of existing raceways/sockets with linear LED tape.

Production Lighting Fixtures (ASCH)

Summary Overview

System Rating	Estimated Remaining Life	Life Safety Issue
Good	1-5 Years	No

Observations

- Existing production lighting fixtures are in good working condition.
- There are limited location where the installation of new catwalk decks serving variable acoustic array system makes aiming/focusing of existing production lighting fixtures problematic.

Recommendations

- Replace fixed focus incandescent fixtures at locations affected by new catwalk decks for variable acoustic array with new automated LED profile units.

Production Audio/Visual Systems (ASCH)

Summary Overview

System Rating	Estimated Remaining Life	Life Safety Issue
Fair	1-3 Years	No

Observations

- Existing line array speakers/subs are in fair condition, but are leased and not owned by P5.
- Lease agreement mandates equipment be removed and placed on tour by leasing company during summer months. Equipment is prone to damage or abuse during touring that can complicate operations once re-installed.

Recommendations

- Replaced leased line array and subs with new, purchased by P5.

Fixed Audience Seating (ASCH)

Summary Overview

System Rating	Estimated Remaining Life	Life Safety Issue
Very Poor	1 Year	No

Observations

- Existing fixed audience seating has well exceeded its intended life and is in desperate need of replacement.

Recommendations

- Replace fixed seating units with new of like kind and arrangement.

Historic Interior Finishes (ASCH)

Summary Overview

System Rating	Estimated Remaining Life	Life Safety Issue
Poor	1 Year	No

Observations

- Existing decorative plasterwork shows signs of aging and in need of restoration.
- Damage to plaster finishes was observed in multiple locations.

Recommendations

- Restoration of historic plaster finishes by a qualified entity, specializing in historic preservation/restoration is recommended.

End of Arlene Schintzer Concert Hall Observations & Recommendations

Keller Auditorium – Observations & Recommendations

Stage Flooring Systems (Keller)

Summary Overview

System Rating	Estimated Remaining Life	Life Safety Issue
Very Poor	End of Life	No

Observations

- Existing stage floor is in very poor condition and in need of replacement.

Recommendations

- Replace existing stage floor with field constructed sprung wood stage floor assembly.

Manual & Motorized Stage Rigging Systems (Keller)

Summary Overview

System Rating	Estimated Remaining Life	Life Safety Issue
Fair	End of Life (Chain Hoists)	No

Observations

- Existing manual counterweight rigging components have exceeded the manufacturer's recommended life but all line sets appear to be in good operational condition.
- Users indicate a preference to repair damaged/broken manual counterweight components as required, rather than wholesale replacement of stage rigging system.
- Chain hoists at grid iron are obsolete, and servicing is becoming problematic due to lack of manufacturer's direct support.

Recommendations

- Continue to monitor and repair existing manual stage rigging components as required, with Level 2 Stage Rigging Inspections by qualified personnel per current ESTA/ANSI standards annually. Anticipate replacement being required within 5-10 years.
- Replace existing chain motor hoist units with new, matching existing configuration and rating.

Decorative, & Variable Acoustic Draperies (Keller)

Summary Overview

System Rating	Estimated Remaining Life	Life Safety Issue
Good	5-10 Years	No

Observations

- Draperies deployed during observation appear to be from 2013 and are in surprisingly good condition given their age.

Recommendations

- Clean as required.

Motorized Orchestra Pit (Keller)

Summary Overview

System Rating	Estimated Remaining Life	Life Safety Issue
Very Poor	End of Life	No

Observations

- The orchestra pit lift has exceeded its reasonable service life and presents potential safety risks.

Recommendations

- Replace Orchestra Pit Lift with new.

Theatrical Lighting Controls (Keller)

Summary Overview

System Rating	Estimated Remaining Life	Life Safety Issue
Poor	1 Year	No

Observations

- Existing house and production lighting controls system has reached end of life and is soon to reach end of manufacturer's support period.
- Dedicated DMX/RDM & Production Lighting Network distribution is lacking for a modern flagship performing arts facility.

Recommendations

- Replace existing architectural lighting system with new.
- Provide new dedicated DMX/RDM and Lighting Network distribution backbone on stage, in common control locations, and at all FOH lighting positions.

General Illumination Fixtures (Keller)

Summary Overview

System Rating	Estimated Remaining Life	Life Safety Issue
Fair	1-5 Years	No

Observations

- General house lighting fixtures consist of incandescent production lighting fixtures configured as architectural fixtures.
- Lamps for existing fixtures of theatrical grade quality and performance are likely to become problematic to source within the next 1-5 years.

Recommendations

- Replace existing incandescent fixtures with new LED units. Replacement of existing house lighting fixtures with new LED units should be performed at the same time as replacement of existing theatrical lighting controls system.

Production Lighting Fixtures (Keller)

Summary Overview

System Rating	Estimated Remaining Life	Life Safety Issue
Fair	1-5 Years	No

Observations

- Existing production lighting fixtures are in good working condition, but incandescent units are becoming obsolete, with quality lamps likely becoming hard to source within the next 1-5 years.

Recommendations

- Replace incandescent production lighting fixtures with LED units.

Production Audio/Visual Systems (Keller)

Summary Overview

System Rating	Estimated Remaining Life	Life Safety Issue
Very Poor	End of Life	No

Observations

- Existing PA speakers are underpowered and do not provide adequate coverage throughout the space for most performances.

Recommendations

- Replace existing FOH PA system with new.

Fixed Audience Seating (Keller)

Summary Overview

System Rating	Estimated Remaining Life	Life Safety Issue
Very Poor	1 Year	No

Observations

- Existing fixed audience seating has well exceeded intended life and is in desperate need of replacement.

Recommendations

- Replace fixed seating units with new of like kind and arrangement.

Technical Access and Other Life Safety Items (Keller)

Observations

- Elevated Lighting positions lack railings and fall arrest safety systems conforming to current OSHA requirements.

Recommendations

- Provide fall arrest and recovery system at all elevated lighting positions.

End of Keller Auditorium Observations & Recommendations

Respectfully Submitted,

PLA Designs, Inc.

Chris Ochocki, ASTC

Senior Theater Consultant

Appendix B

Metro's Asset Classification Hierarchy				ASTM UniFormat II (2024)	
Level 1	Level 2	Level 3	Level 4	UniFormat Code #	UniFormat 2024 - Level 4 Category
A Substructure	A1 Foundation	A11 Standard Foundation	A1111 Wall Foundations	A101001	WALL FOUNDATIONS
			A1112 Column Foundations & Pile Caps	A101002	COLUMN FOUNDATIONS AND PILE CAPS
			A1113 Perimeter Drainage & Insulation	A101003	DEWATERING
		A12 Special Foundations	A1221 Pile Foundations	A102001	PILE FOUNDATIONS
			A1222 Grade Beams		
			A1223 Caissons	A102002	CAISSONS
			A1224 Underpinning	A102003	UNDERPINNING
			A1225 Dewatering	A102004	DEWATERING
			A1226 Raft Foundations	A102005	RAFT FOUNDATIONS
			A1227 Pressure Injected Grouting	A102006	PRESSURE INJECTED GROUTING
			A1229 Other Special Conditions	A102099	OTHER SPECIAL FOUNDATIONS
		A13 Slab on Grade	A1331 Standard Slab on Grade	A103001	STANDARD SLAB ON GRADE
			A1332 Structural Slab on Grade	A103002	STRUCTURAL SLAB ON GRADE
			A1333 Inclined Slab on Grade	A103003	INCLINED SLAB ON GRADE
			A1334 Trenches, Pits and Bases		
			A1335 Under-Slab Drainage & Insulation	A103006	FOUNDATION DRAINAGE
	A2 Basement Construction	A21 Basement Excavation	A2111 Excavation for Basements	A201001	EXCAVATION FOR BASEMENTS
			A2112 Structure Back Fill & Compaction	A201002	STRUCTURE BACKFILL AND COMPACTION
			A2113 Shoring	A201003	SHORING
		A22 Basement Walls	A2221 Basement Wall Construction	A202001	BASEMENT WALL CONSTRUCTION
			A2222 Moisture Protection	A202002	MOISTURE PROTECTION
			A2223 Basement Wall Insulation	A202003	BASEMENT WALL INSULATION
			A2224 Interior Skin	A202099	OTHER BASEMENT WALLS
B Shell	B1 Superstructure	B11 Floor Construction	B1111 Suspended Basement Floors Construction		
			B1112 Upper Floors Construction		
			B1113 Balcony Floors Construction	B101004	BALCONY CONSTRUCTION
			B1114 Ramps	B101005	RAMPS
			B1115 Exterior Stairs and Fire Escapes		
			B1116 Floor Raceway System		
			B1117 Other Floor Construction	B101099	OTHER FLOOR CONSTRUCTION
		B12 Roof Construction	B1221 Flat Roof Construction		
			B1222 Pitched Roof Construction		
			B1223 Canopies	B102004	CANOPIES
			B1229 Other Roof Systems	B102099	OTHER ROOF CONSTRUCTION
	B2 Exterior Enclosures	B21 Exterior Walls	B2111 Exterior Wall Construction		
			B2112 Parapets	B201004	PARAPETS
			B2113 Exterior Louvers, Screens and Fencing	B201005	EXTERIOR LOUVERS AND SCREENS
			B2114 Exterior Sun Control Devices	B201006	SUN CONTROL DEVICES (EXTERIOR)
			B2115 Balcony Walls & Handrails	B201007	BALCONY WALLS AND RAILINGS
			B2116 Exterior Soffits	B201008	EXTERIOR SOFFITS
		B22 Exterior Windows	B2221 Exterior Windows	B202001	WINDOWS
			B2222 Exterior Curtain Walls	B202003	CURTAIN WALLS
			B2223 Exterior Storefronts	B202004	EXTERIOR GLAZING
		B23 Exterior Doors	B2331 Exterior Glazed Doors & Entrances	B203002	GLAZED DOORS
			B2332 Solid Exterior Doors	B203001	SOLID DOORS
			B2333 Exterior Revolving Doors	B203003	REVOLVING DOORS
			B2334 Exterior Overhead Doors	B203004	OVERHEAD AND ROLL-UP DOORS
			B2339 Other Exterior Doors & Entrances	B203098	OTHER EXTERIOR SPECIALTY DOORS
	B3 Roofing	B31 Roof Coverings	B3111 Roof Finishes		
			B3112 Traffic, Toppings & Paving Membranes		
			B3113 Roof Insulation & Fill	B301003	ROOF INSULATION AND FILL
			B3114 Flashings & Trim	B301004	FLASHINGS AND TRIM
			B3115 Roof Eaves and Soffits		
			B3116 Gutters and Downspouts	B301005	GUTTERS AND DOWNSPOUTS
		B32 Roof Openings	B3221 Glazed Roof Openings		
			B3222 Roof Hatches		
C Interiors	C1 Interior Construction	C11 Partitions	C1111 Fixed partitions	C101001	FIXED PARTITIONS
			C1112 Demountable Partitions	C101002	DEMOUNTABLE PARTITIONS
			C1113 Retractable Partitions	C101003	RETRACTABLE PARTITIONS
			C1114 Site Built Toilet Partitions		
			C1115 Site Built Compartments Cubicles		
			C1116 Interior Balustrades and Screens	C101004	INTERIOR GUARDRAILS AND SCREENS
			C1117 Interior Windows & Storefronts		
		C12 Interior Doors	C1221 Interior Doors		
			C1222 Interior Door Frames		
			C1223 Interior Door Hardware	C102007	INTERIOR DOOR HARDWARE
			C1224 Interior Door Wall Opening Elements		
			C1225 Interior Door Sidelights & Transoms		
			C1226 Interior Hatches & Access Doors		
			C1227 Interior Door Painting & Decorations		
			C1228 Interior Overhead Doors	C102005	INTERIOR OVERHEAD DOORS

Appendix B

Metro's Asset Classification Hierarchy				ASTM UniFormat II (2024)	
Level 1	Level 2	Level 3	Level 4	UniFormat Code #	UniFormat 2024 - Level 4 Category
C Interiors (continued)	C2 Stairs	C13 Fittings	C1331 Fabricated Toilet partitions		
			C1332 Fabricated Compartments & Cubicles		
			C1333 Storage Shelving and Lockers		
			C1334 Ornamental Metals and Handrails		
			C1335 Identifying Devices		
			C1336 Closet Specialties	C103010	CLOSETS
			C1337 General Fittings & Misc. Metals		
	C2 Stairs	C21 Stair Construction	C2111 Regular Stairs	C201001	INTERIOR STAIR CONSTRUCTION
			C2112 Curved Stairs		
			C2113 Spiral Stairs		
			C2114 Stair Handrails and Balustrades		
			C2115 Fixed Ladders		
			C2221 Stair, Tread and Landing Finishes	C202001	INTERIOR STAIR FINISH
	C3 Interior Finishes	C22 Stair Finishes	C2222 Stair Soffit Finishes		
			C2223 Stair Handrail & Balustrade Finishes		
			C3111 Wall Finishes to Inside Exterior Walls		
		C31 Wall Finishes	C3112 Wall Finishes to Interior Walls		
			C3113 Column Finishes		
			C3221 Floor Toppings		
		C32 Floor Finishes	C3222 Traffic Membranes		
			C3223 Hardeners and Sealers	C302010	HARDENERS AND SEALERS
			C3224 Flooring		
			C3225 Carpeting	C302005	CARPETING
			C3226 Bases, Curbs and Trim		
			C3227 Access Pedestal Flooring		
		C33 Ceiling Finishes	C3331 Ceiling Finishes		
			C3332 Suspended Ceilings	C303007	SUSPENSIONS SYSTEMS
			C3333 Other Ceilings	C303099	OTHER CEILING AND CEILING FINISHES
D Services	D1 Conveying	D11 Elevators & Lifts	D1111 Passenger Elevators	D101002	PASSENGER ELEVATORS
			D1112 Freight Elevators	D101003	FREIGHT ELEVATORS
			D1113 Lifts		
			D1221 Escalators		
		D12 Escalators & Moving Walks	D1222 Moving Walks	D102002	MOVING WALKS
			D1991 Dumbwaiters		
		D19 Other Conveying Systems	D1992 Pneumatic Tube Systems	D109001	PNEUMATIC TUBE SYSTEMS
			D1993 Hoists & Cranes		
			D1994 Conveyors	D109002	CONVEYORS
			D1995 Chutes		
			D1996 Turntables	D109004	TURNTABLES
			D1997 Baggage Handling & Loading Systems		
			D1998 Transportation Systems	D109006	TRANSPORTATION SYSTEMS
	D2 Plumbing	D21 Plumbing Fixtures	D2111 Water Closets	D201001	WATERCLOSETS
			D2112 Urinals	D201002	URINALS
			D2113 Lavatories	D201003	LAVATORIES
			D2114 Sinks	D201004	SINKS
			D2115 Bathtubs		
			D2116 Water Fountains		
			D2117 Showers		
			D2118 Drinking Fountains and Coolers	D201006	DRINKING FOUNTAINS AND COOLERS
			D2119 Bidets and Other Plumbing Fixtures	D201007	BIDETS
			D2120 Water Heaters		
		D22 Domestic Water Distribution	D2221 Cold Water Service		
			D2222 Hot Water Service		
			D2223 Domestic Water Supply Equipment		
		D23 Sanitary Water	D2331 Waste Piping	D203001	WASTE PIPE AND FITTINGS
			D2332 Vent Piping	D203002	VENT PIPE AND FITTINGS
			D2333 Floor Drains	D203003	FLOOR DRAINS
			D2334 Sanitary Waste Equipment	D203004	SANITARY AND VENT EQUIPMENT
			D2335 Pipe Insulation		
		D24 Rain Water Drainage	D2441 Pipe & Fittings	D204001	PIPE AND FITTINGS
			D2442 Roof Drains	D204002	ROOF DRAINS
			D2443 Rainwater Drainage Equipment	D204003	RAINWATER DRAINAGE EQUIPMENT
			D2444 Pipe Insulation		
		D29 Other Plumbing Systems	D2991 Gas Distribution		
			D2992 Acid Waste Systems	D209002	ACID WASTE SYSTEMS
			D2993 Interceptors	D209003	INTERCEPTORS
			D2994 Pool Piping and Equipment	D209004	POOL PIPING AND EQUIPMENT
			D2995 Decorative Fountain Piping Devices		
			D2999 Other Piping Systems		

Appendix B

Metro's Asset Classification Hierarchy				ASTM UniFormat II (2024)	
Level 1	Level 2	Level 3	Level 4	UniFormat Code #	UniFormat 2024 - Level 4 Category
	D3 HVAC	D31 Energy supply	D3111 Oil Supply System	D301001	OIL SUPPLY SYSTEM
			D3112 Gas Supply system	D301002	GAS SUPPLY SYSTEM
			D3113 Coal Supply System	D301003	COAL SUPPLY SYSTEM
			D3114 Steam Supply System	D301004	STEAM SUPPLY SYSTEM (FROM CENTRAL PLANT)
			D3115 Hot Water Supply System	D301005	HOT WATER SUPPLY SYSTEM (FROM CENTRAL PLANT)
			D3116 Solar Energy System	D301006	SOLAR ENERGY SUPPLY SYSTEMS
			D3117 Wind Energy System	D301007	WIND ENERGY SUPPLY SYSTEM
		D32 Heat Generating Systems	D3221 Boilers		
			D3222 Boiler Room Piping & Specialties		
			D3223 Auxiliary Equipment	D302005	AUXILIARY EQUIPMENT
		D33 Cooling Generating Systems	D3224 Insulation	D302006	EQUIPMENT THERMAL INSULATION
			D3331 Chilled Water Systems	D303001	CHILLED WATER SYSTEMS
			D3332 Direct Expansion Systems	D303002	DIRECT EXPANSION SYSTEMS
		D34 Distribution Systems	D3441 Air Distribution Systems	D304001	AIR DISTRIBUTION, HEATING, AND COOLING
			D3442 Exhaust Ventilation Systems	D304007	EXHAUST SYSTEMS
			D3443 Steam Distribution Systems	D304002	STEAM DISTRIBUTION SYSTEMS
			D3444 Hot Water Distribution	D304003	HOT WATER DISTRIBUTION SYSTEMS
			D3445 Chilled Water Distribution	D304006	CHILLED WATER DISTRIBUTION SYSTEMS
			D3446 Change-over Distribution system	D304004	CHANGE OVER DISTRIBUTION SYSTEMS
			D3447 Glycol Distribution Systems	D304005	GLYCOL DISTRIBUTION SYSTEMS
		D35 Terminal & Package Units	D3551 Terminal Self-Contained Units		
			D3552 Package Units	D305006	PACKAGE UNITS
		D36 Controls & Instrumentation	D3661 Heating Generating Systems		
			D3662 Cooling Generating Systems		
			D3663 Heating-Cooling Air Handling Units		
			D3664 Exhaust & Ventilating Systems		
			D3665 Hoods and Exhaust Systems		
			D3666 Terminal Devices		
			D3667 General Monitoring & Control		
			D3668 Building Automation Systems		
		D37 Systems Testing & Balancing	D3669 Other Controls and Instrumentation	D306099	OTHER CONTROLS INSTRUMENTATION
			D3771 Piping System Testing & Balancing		
			D3772 Air systems Testing & Balancing	D307002	AIR SIDE TESTING AND BALANCING—HEATING, COOLING, AND EXHAUST
			D3773 HVAC Commissioning	D307003	HVAC COMMISSIONING
			D3779 Other Systems Testing and Balancing	D307099	OTHER SYSTEMS TESTING AND BALANCING
		D39 Other HVAC Systems & Controls	D3991 Special Cooling Systems & Devices		
			D3992 Special Humidity Control		
			D3993 Dust & Fume Collectors		
			D3994 Air Curtains		
			D3995 Air Purifiers		
			D3996 Paint Spray Booth Ventilation		
			D3997 General Construction Items (HVAC)		
		D41 Fire Protection	D4111 Sprinkler Water Supply		
			D4112 Sprinkler Pumping Equipment		
			D4113 Dry Sprinkler System		
			D4114 Wet Sprinkler Systems		
		D42 Standpipes	D4221 Standpipe Water Supply		
			D4222 Pumping Equipment		
			D4223 Standpipe Equipment		
			D4224 Fire Hose Equipment		
		D43 Fire Protection Specialties	D4331 Fire Extinguishers		
			D4332 Fire Extinguisher Cabinets		
		D49 Other Fire Protection Systems	D4991 Carbon Dioxide Systems	D409001	CARBON DIOXIDE SYSTEMS
			D4992 Foam Generating Equipment	D409002	FOAM GENERATING EQUIPMENT
			D4993 Clean Agent Systems	D409003	CLEAN AGENT SYSTEMS
			D4994 Dry Chemical System		
			D4995 Hood & Duct Fire Protection	D409005	HOOD AND DUCT FIRE PROTECTION
	D5 Electrical	D51 Electrical Service & Distribution	D5111 High Tension Service & Dist.		
			D5112 Low Tension Service & Dist.		
		D52 Lighting & Branch Wiring	D5221 Branch Wiring Devices	D502001	BRANCH WIRING
			D5222 Lighting Equipment	D502002	LIGHTING EQUIPMENT
			D5223 Lighting Controls		
		D53 Communications & Security	D5331 Public Address & Music Systems	D503004	PUBLIC ADDRESS SYSTEMS
			D5332 Intercommunication & Paging System	D503005	INTERCOMMUNICATIONS SYSTEMS - Intercom and Paging system
			D5333 Telephone System		
			D5334 Call Systems		
			D5335 Television Systems	D503007	TELEVISION SYSTEMS - Video management and Recording System
			D5336 Clock and Program systems	D503006	CLOCK AND PROGRAM SYSTEMS

Appendix B

Metro's Asset Classification Hierarchy				ASTM UniFormat II (2024)	
Level 1	Level 2	Level 3	Level 4	UniFormat Code #	UniFormat 2024 - Level 4 Category
E Equipment & Furnishin	E1 Equipment	D59 Other Electrical System	D5337 Fire Alarm systems		
			D5338 Security and Detection Systems		
			D5339 Local Area Networks		
			D5991 Grounding Systems	D509003	GROUNDING SYSTEMS
			D5992 Emergency Light & Power Systems		
			D5993 Floor Raceway Systems		
			D5994 Other Special Systems & Devices	D509099	OTHER SPECIAL SYSTEMS AND DEVICES
			D5995 General Construction Items (Elect.)		
		E11 Commercial Equipment	E1111 Security & Vault Equipment	E101005	SECURITY AND VAULT EQUIPMENT
			E1112 Teller and Service Equipment	E101006	TELLER AND SERVICE EQUIPMENT
			E1113 Registration Equipment		
			E1114 Checkroom Equipment		
			E1115 Mercantile Equipment	E101007	MERCANTILE EQUIPMENT
			E1116 Laundry & Dry Cleaning Equipment		
			E1117 Vending Equipment		
			E1118 Office Equipment		
		E12 Institutional Equipment	E1221 Ecclesiastical Equipment	E102007	ECCLESIASTICAL EQUIPMENT
			E1222 Library Equipment	E102006	LIBRARY EQUIPMENT
			E1223 Theater & Stage Equipment		
			E1224 Instrumental Equipment	E102008	INSTRUMENTAL EQUIPMENT
			E1225 Audio-visual Equipment	E102009	AUDIO-VISUAL EQUIPMENT
			E1226 Detention Equipment	E102010	DETENTION EQUIPMENT
			E1227 Laboratory Equipment	E102003	LABORATORY EQUIPMENT
			E1228 Medical Equipment	E102002	MEDICAL EQUIPMENT
			E1229 Other Institutional Equipment		
		E13 Vehicular Equipment	E1331 Vehicular Service Equipment		
			E1332 Parking Control Equipment	E103001	PARKING CONTROL EQUIPMENT
			E1333 Loading Dock Equipment	E103002	LOADING DOCK EQUIPMENT
			E1339 Other Vehicular Equipment		
		E19 Other Equipment	E1991 Maintenance Equipment	E109001	BUILT-IN MAINTENANCE EQUIPMENT
			E1992 Solid Waste Handling Equipment	E109003	WASTE HANDLING EQUIPMENT
			E1993 Food Service Equipment	E109002	FOOD SERVICE EQUIPMENT
			E1994 Residential Equipment	E109004	RESIDENTIAL EQUIPMENT
			E1995 Unit Kitchens	E109005	UNIT KITCHENS
			E1997 Window Washing Equipment		
			E1998 Radios		
			E1999 Other Equipment		

Appendix B

Metro's Asset Classification Hierarchy				ASTM UniFormat II (2024)	
Level 1	Level 2	Level 3	Level 4	UniFormat Code #	UniFormat 2024 - Level 4 Category
F Special Construction &	E2 Furnishings	E21 Fixed Furnishings	E2111 Fixed Artwork	E201001	FIXED ARTWORK
			E2112 Fixed Casework		
			E2113 Blinds and Other Window Treatment		
			E2114 Fixed Floor Grilles and Mats		
			E2115 Fixed Multiple Seating		
			E2116 Fixed Interior Landscaping	E201005	FIXED INTERIOR LANDSCAPING
		E22 Movable Furnishings	E2221 Movable Artwork	E202001	MOVEABLE ART WORK
			E2222 Furniture & Accessories		
			E2223 Movable Rugs and Mats	E202004	RUGS AND ACCESSORIES
			E2224 Movable Interior Landscaping		
	F1 Special Construction	F11 Special Structures	F1111 Air Supported Structures	F101003	AIR-SUPPORTED STRUCTURES
			F1112 Pre-engineered Structures		
			F1113 Other Special Structures	F101099	OTHER SPECIAL CONSTRUCTION
		F12 Integrated Construction	F1221 integrated Assemblies		
			F1222 Special Purpose Rooms	F102001	SPECIAL PURPOSE ROOMS
			F1223 Other Integrated Construction	F102099	OTHER INTEGRATED CONSTRUCTION
		F13 Special Construction Systems	F1331 Sound, Vibration & Seismic Const.		
			F1332 Radiation Protection	F103003	RADIATION PROTECTION
			F1333 Special Security Systems		
			F1334 Vaults	F103001	VAULTS
			F1339 Other Special Construction Systems	F103099	OTHER SPECIAL CONSTRUCTION SYSTEMS
		F14 Special Facilities	F1441 Aquatic Facilities	F104001	INTERIOR SWIMMING POOLS
			F1442 Ice Rinks	F104005	ICE RINKS
			F1443 Site Constructed Incinerators		
			F1444 Kennels & Animal Shelters	F104003	KENNELS AND ANIMAL SHELTERS
			F1445 Liquid & Gas Storage Tanks	F104002	LIQUID AND GAS STORAGE TANKS
			F1449 Other Special Facilities	F104099	OTHER SPECIAL FACILITIES
		F15 Special Controls & Instrumentation	F1551 Recording Instrumentation	F105001	RECORDING INSTRUMENTATION
			F1552 Building Automation System	F105001	RECORDING INSTRUMENTATION
			F1559 Other Special Controls & Instrumentation	F105099	OTHER SPECIAL CONTROLS AND INSTRUMENTATION
	F2 Selective Building Demolition	F21 Building Elements Demolition	F2111 Building Interior Demolition		
			F2112 Building Exterior Demolition		
		F22 Hazardous Components	F2221 Removal of Hazardous Components		
			F2222 Encapsulation of Hazardous Components		
G Building Sitework	G1 Site Preparation	G11 Site Clearing	G1111 Clearing & Grubbing		
			G1112 Tree Removal & Thinning		
		G12 Site Demolition & Relocation	G1221 Building Demolition	G102001	BUILDING MASS DEMOLITION
			G1222 Demolition of Site Components	G102002	ABOVE GROUND SITE DEMOLITION
			G1223 Relocation of Building & Utilities		
			G1224 Utilities Relocation	G102005	UTILITY RELOCATION
		G13 Site Earthwork	G1331 Site Grading Excavation		
			G1332 Borrow Fill	G103004	FILL AND BORROW
			G1333 Soil Stabilization & Treatment		
			G1334 Site Dewatering		
			G1335 Site Shoring	G103009	SHORING
			G1336 Embankments		
			G1337 Erosion Control	G103011	TEMPORARY EROSION AND SEDIMENT CONTROL
		G14 Hazardous Waste Remediation	G1441 Removal of Contaminated Soil	G104001	REMOVAL OF CONTAMINATED SOIL
			G1442 Soil Restoration & Treatment	G104002	SOIL RESTORATION AND TREATMENT
	G2 Site Improvements	G21 Roadways	G2111 Bases and Sub-Bases	G201001	BASES AND SUBBASES
			G2112 Paving & Surfacing	G201003	PAVED SURFACES
			G2113 Curbs, Gutters and Drains		
			G2114 Guardrails and Barriers	G201005	GUARDRAILS AND BARRIERS
			G2115 Painted Lines		
			G2116 Markings & Signage		
			G2117 Vehicular Bridges		
		G22 Parking Lots	G2221 Bases and Sub-Bases	G202001	BASES AND SUBBASES
			G2222 Paving & Surfacing		
			G2223 Curbs, Rails & Barriers	G202003	PAVED SURFACES
			G2224 Parking Booths & Equipment		
			G2225 Markings & Signage	G202004	MARKING AND SIGNAGE
		G23 Pedestrian Paving	G2331 Paving & Surfacing		
			G2332 Edging		
			G2333 Exterior Steps		
		G24 Site Development	G2334 Pedestrian Bridges		
			G2244 Signage		
			G2441 Fences & Gates	G204001	FENCING AND GATES
			G2442 Retaining Walls	G204002	RETAINING WALLS
			G2443 Terrace & perimeter Walls		
			G2444 Signage	G204005	SIGNAGE
			G2445 Site Furnishings		

Appendix B

Metro's Asset Classification Hierarchy				ASTM UniFormat II (2024)	
Level 1	Level 2	Level 3	Level 4	UniFormat Code #	UniFormat 2024 - Level 4 Category
			G2446 Fountains, Pools & Watercourses		
			G2447 Playing Fields	G204007	PLAYING FIELDS
			G2448 Flagpoles	G204009	FLAGPOLES
			G2449 Miscellaneous Structures		
		G25 Landscaping	G2551 Fine Grading & Soil Preparation	G205001	FINE GRADING AND SOIL PREPARATION
			G2552 Erosion Control Measures	G205002	EROSION CONTROL MEASURES
			G2553 Top Soil & Planting Beds	G205003	TOPSOIL AND PLANTING BEDS
			G2554 Seeding & Sodding	G205004	SEEDING, SPRIGGING, AND SODDING
			G2555 Planting	G205005	PLANTINGS
			G2556 Planters	G205006	PLANTERS
			G2557 Irrigation Systems	G205007	IRRIGATION SYSTEMS
			G2558 Other Landscape Features	G205099	OTHER LANDSCAPING
			G2559 Trees		
	G3 Site Mechanical Util	G31 Water Supply	G3111 Potable Water Distribution & Storage		
			G3112 Non-Potable Water Distribution & Storage		
			G3113 Well Systems	G301001	WELL SYSTEMS
			G3114 Fire Protection Distribution & Storage		
			G3115 Pumping Stations	G301007	PUMPING STATIONS
			G3116 Package Water Treatment Plants	G301008	PACKAGED WATER TREATMENT PLANTS
		G32 Sanitary Sewer	G3221 Piping	G302001	SANITARY SEWER PIPING
			G3222 Manholes & Cleanouts	G302002	SANITARY SEWER MANHOLES AND CLEANOUTS
			G3223 Septic Disposal Systems		
			G3224 Lift Stations	G302003	LIFT STATIONS AND PUMPING STATIONS
			G3225 Packaged Water Waste Treatment Plants	G302004	PACKAGED SANITARY SEWER TREATMENT PLANTS
			G3226 Septic tanks	G302005	SEPTIC TANKS
			G3227 Drain Fields	G302006	DRAIN FIELDS
		G33 Storm Sewer	G3331 Piping	G303001	STORM SEWER PIPING
			G3332 Manholes		
			G3333 Headwalls & Catch Basins		
			G3334 Lift Stations	G303003	LIFT STATIONS
			G3335 Retention Ponds		
			G3336 Ditches & Culverts	G303004	CULVERTS
		G34 Heating Distribution	G3441 Steam Supply		
			G3442 Condensate Return		
			G3443 Hot Water Supply System	G304003	UNDERGROUND HOT WATER SYSTEMS
		G35 Cooling Distribution	G3444 Pumping Stations	G304006	PUMPING STATIONS
			G3551 Chilled Water Piping		
			G3552 Wells for Cooling	G305004	WELLS FOR COOLING
			G3553 Pumping Stations	G305005	PUMPING STATIONS
		G36 Fuel Distribution	G3554 Cooling Towers on Site	G305006	ON-SITE COOLING TOWERS
			G3661 Fuel Piping	G306001	LIQUID FUEL DISTRIBUTION PIPING
			G3662 Fuel Equipment	G306003	LIQUID FUEL DISPENSING EQUIPMENT
			G3663 Fuel Storage Tanks	G306004	LIQUID FUEL STORAGE TANKS
			G3664 Fuel Dispensing Stations		
		G39 Other Site Mechanical Util	G3991 Industrial Waste Systems		
			G3992 Petroleum Oil & Lubricants Dist Systems		
	G4 Site Electrical Utiliti	G41 Electrical Distribution	G4111 Substations	G401001	SUBSTATIONS
			G4112 Overhead Power Distribution	G401004	OVERHEAD ELECTRIC CONDUCTORS
			G4113 Underground Power Distribution	G401006	UNDERGROUND ELECTRIC CONDUCTORS
		G42 Site Lighting	G4221 Fixtures & Transformers		
			G4222 Poles		
			G4223 Wiring & Conduits & Ductbanks		
			G4224 Site Lighting Controls		
		G43 Site Communications & Security	G4331 Site Communications Systems	G403001	TELECOMMUNICATIONS SYSTEMS
			G4332 Site Security & Alarm Systems		
		G49 Other Site Electrical Util	G4991 Cathodic Protection		
			G4992 Site Emergency Power Generation		
	G9 Other Site Construc	G91 Service and Pedestrian	G9111 Service Tunnels	G901001	CONSTRUCTION OF SERVICE AND PEDESTRIAN TUNNELS
			G9112 Trench Boxes		
			G9113 Pedestrian Tunnels	G901002	PREFABRICATED SERVICE AND PEDESTRIAN TUNNELS
		G99 Other Site Systems & E	G9991 Snow Melting Systems		