



FACILITY
MANAGEMENT

Olbrich Botanical Gardens

Facility Assessments



FACILITY
MANAGEMENT

Assessment Timeline

- In 2018, during the construction of the Learning Center, Roberta S. asked about the feasibility of doing a full Facility assessment.
 - Due to the facility now being 30+ years old
 - Issues with some items pass life expectancy
 - MSR completed a full assessment of emergency egress and how each exit door needed to be addressed for current code compliance.

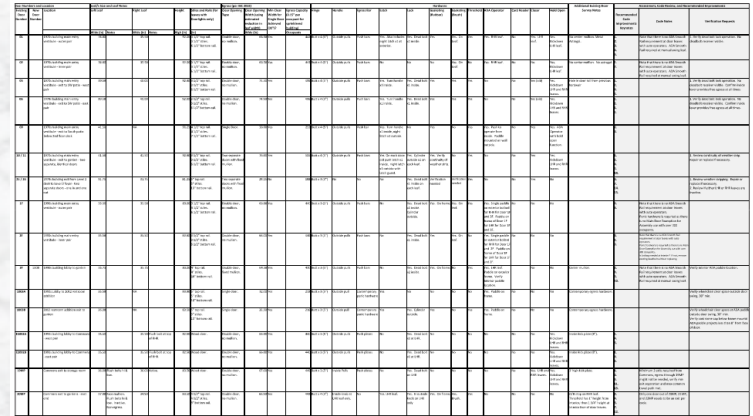
- In 2022 RFP 11059-0-2022 for a Structural Engineer Consultant and RFP 11060-0-2022 for a Mechanical Engineer Consultant
 - Both contracts were awarded to IMEG, Inc.
 - First assessment of structural and all mechanical, electrical, and plumbing thorough out the entire building complex.

- In 2023 Randy and Amy began an internal assessment of the entire facility, including buildings and grounds, for everything else not previously covered

- In 2024 a Non-Competitive POS was conducted by IMEG specifically to do an enhanced assessment of the Bolz Conservatory.



- MSR provided a final door assessment report to us in 2022.
 - The assessment reviewed all exits, assessed door condition and identified what (if any) code upgrades were needed.
 - Also provided and 2019 Allegion Code Reference Guide with related MSR notes.



Project Overview										Project Details										Project Performance																			
Project Name		Project Location		Project Dates		Project Status		Project Budget		Project Progress		Project Risks		Project Deliverables		Project Resources		Project ID		Project Name		Project Location		Project Dates		Project Status		Project Budget		Project Progress		Project Risks		Project Deliverables		Project Resources			
001	Project A	Location A	2023-01-01 to 2023-03-31	Completed	\$100,000	100%	Low	Deliverable A	Resource A	002	Project B	Location B	2023-04-01 to 2023-06-30	In Progress	\$200,000	50%	Medium	Deliverable B	Resource B	003	Project C	Location C	2023-07-01 to 2023-09-30	Planned	\$150,000	0%	High	Deliverable C	Resource C	004	Project D	Location D	2023-10-01 to 2023-12-31	On Hold	\$120,000	0%	Low	Deliverable D	Resource D
Project A Summary: Completed on time and within budget. All deliverables met.										Project B Summary: On track for completion. Minor risks identified.										Project C Summary: Planning phase. High risks require attention.										Project D Summary: On hold due to budget constraints.									

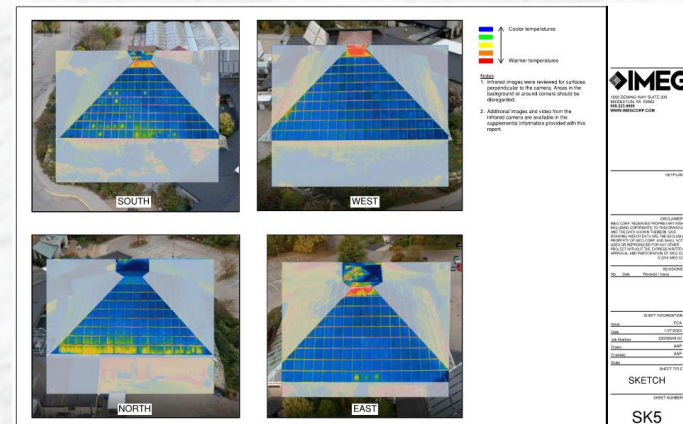
[illegible]



FACILITY
MANAGEMENT

2022 - Structural Assessment

- Reviewed structural systems of the entire building complex.
- Provided individual summaries for each building (Atrium, Visitor Center, etc.)
 - Identified and documented issues with each building.
 - Identified level of urgency with each issue.
 - Used a drone with an infrared camera looking for heat loss on the Bolz Conservatory.
 - Provided recommendations for next steps; repairs or enhanced assessments.



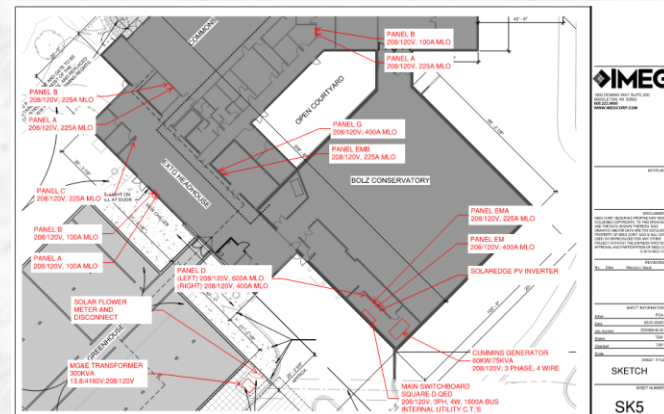
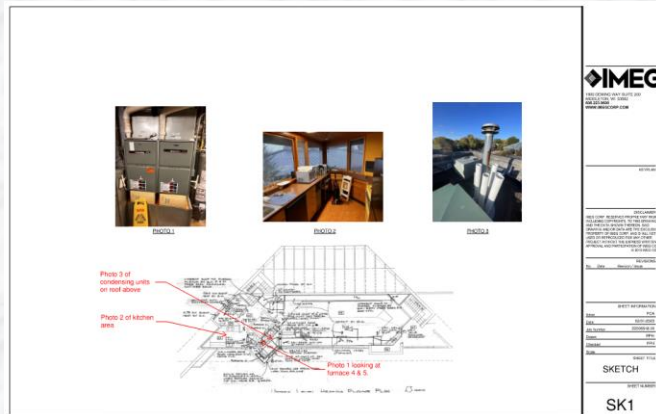
Item	Action Period	Description
Code Compliance / Life Safety	< 1 year	Does not meet current code or poses a life safety concern
Former Codes (Grandfathered)		Does not meet current code, but is grandfathered by the AHJ until renovation work occurs (Building Code, current material standards, etc.)
Business Interruption	< 3 years	Recommended investment due to end-of-life cycle, critical system
Scheduled Replacement	< 5 years	Recommended investment due to end-of-life cycle, currently not critical



FACILITY
MANAGEMENT

2022 - Mechanical Assessment

- Reviewed mechanical systems of the entire building complex, primarily HVAC and electrical.
- Provided individual summaries for each building (Atrium, Visitor Center, etc.)
 - Identified and documented issues with each building.
 - Identified level of urgency with each issue.
 - Provided recommendations for next steps; repairs or enhanced assessments.



Item	Action Period	Description
Code Compliance / Life Safety	< 1 year	Does not meet current code or poses a life safety concern
Former Codes (Grandfathered)		Does not meet current code, but is grandfathered by the AHJ until renovation work occurs (Building Code, current material standards, etc.)
Business Interruption	< 3 years	Recommended investment due to end-of-life cycle, critical system
Scheduled Replacement	< 5 years	Recommended investment due to end-of-life cycle, currently not critical



- Assessment is being done internally by Engineering-Facility Management (Amy Scanlon and Randy Wiesner).
- Reviewing all building components not previously assessed by MSR or IMEG.
 - Includes general building materials, paint & caulk, condition of doors and windows, etc.
 - Review of the general site plan and parking lot.
 - Review of the gardens, paths and miscellaneous structures.
 - Review for ADA compliance and other applicable codes.
- Anticipate completing final report with an out brief presentation in summer of 2025.

Sunkin Apartment, Melbourne

Project completed: May 2016 (a further refitting of the living areas is to be completed)

Architect: S&B



FACILITY
MANAGEMENT

2024 – Enhanced Assessment

- Conducted within the Bolz Conservatory only.
 - Was one of the recommended enhanced assessments.
 - Was selected due because of the high visitation and revenue generation.
 - Requires some of the most critical repairs due to the internal environment.
- IMEG, Inc.
 - Reviewed specific issues of the main structural framing system.
 - Facility Engineering, Inc., sub-consultant to IMEG
 - Reviewed connection and construction details of the cupola mechanical enclosure.
 - Reviewed Conservatory glazing panels and framing system.
- Bauer Builders, Inc.
 - Supported consultants with general construction tasks as needed.
 - Hooper as sub-consultant to assess Cupola mechanical ventilation equipment
- Hooper, under separate PO did some immediate and critical maintenance to the cupola exhaust fans and louvers.



FACILITY
MANAGEMENT

2025 – What's Next

- Reviewed all assessments, recommended repairs and associated estimated costs with Olbrich staff.
- Prioritized the Bolz Conservatory repairs as top priority due to the critical nature of some of the assessment findings and because of the high visitation rate and amount of revenue generated.
- Scope of work includes all of the following:
 - Cupola, reconstruction and insulation of the cupola to ensure it remains weather tight.
 - Structural framing, clean, repair, prime and paint all steel connections as needed including welded joints and bolted connections.
 - Remove all glazing panels, clean and repair existing framing, install new energy efficient panels. Includes removal of the curtain system that is no longer needed.
 - Install an exterior ships ladder to allow better maintenance access to the cupola mechanical systems.
 - Install new water barrier systems in upper planer beds to prevent leakage of water into mechanical and electrical rooms below.
 - Replace all hydronic heat piping and fin tubing.
 - Replace/upgrade ventilation motors, louvers and system controls.
 - Bring Conservatory up to code on fire alarm strobes and audible alarms.
 - Address other life safety concerns and exiting requirements.



FACILITY
MANAGEMENT

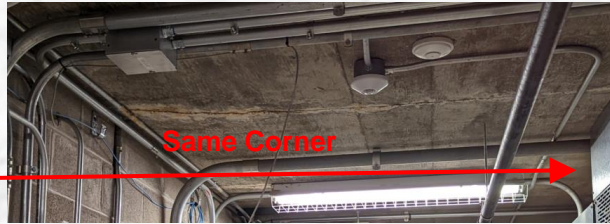
2025 – What's Next (cont.)

- Remove and replace elevated concrete walkway to improve drainage and widen walkway to ADA standards.
- Remove and replace existing precast stair treads and landing.
- Design and install a vertical lift into the elevated walkway so handicap/elderly visitors do not have to negotiate the stairs or return along original path back to ground level.
- Work with donor artist to provide connection points for permanent exhibition wall panels along upper walkway.
- Address exterior retaining wall, drainage, and building envelope finish on public facing side of the conservatory.
- Proposed Schedule:
 - Design and Bidding – remainder of 2025
 - Bids due Jan 2026
 - Start work April 2026
 - Orchid Escape February and March 2026
 - Glazing work to only be done May-September 2026 and 2027
 - All other work to be concurrent
 - Construction complete September 2027, begin warranty period
- To minimize business interruption it is better to do all in 2 years instead of 4 summers.



FACILITY
MANAGEMENT

Other Assessment Photos



Water leaks from planter box over main electrical distribution box



Water leaks from planter box and/or upper waterfall over plumbing mechanical equip.



Cracks and spalling at elevated walkway



Cracked glass panel.



This photo was taken by Olbrich staff during a major rainstorm event outside. Through our assessment we believe the driving rain was either coming through the base of the Cupola or at a compromised glazing seal and traveled down structural members inside the Bolz Conservatory until it got to a drip point.