

Condition Assessment and Treatment Plan for Maurice Bathhouse

PRE-DESIGN SERVICES

359 CENTRAL AVENUE
HOT SPRINGS NATIONAL PARK
HOT SPRINGS, ARKANSAS 71901



June 30, 2022
NPS PMIS # 318915
NPS TIC #128-180181



Table of Contents

Table of Contents

1.0 Chapter 1 - Project Summary and Information

1.1 Project Summary	
1.1.1 Introduction.....	1.1
1.1.2 Project Purpose	1.1
1.2 Summary of Existing Conditions and Recommended Treatment.....	1.1
1.3 Physical Description and Significance	
1.3.1 Location.....	1.3
1.3.2 Maurice Bathhouse Historical Summary and Timeline	1.3
1.3.3 Character-Defining Features.....	1.6
1.3.4 Preservation Zones.....	1.9
1.4 Administrative Data	
1.4.1 Holistic Pre-Design Approach	1.9
1.4.2 Project Resources	1.10
1.4.3 Recommendations for Future Research and Investigation.....	1.11
1.4.4 Project Team	1.13

2.0 Chapter 2 - Existing Conditions Assessment

2.1 Introduction	2.1
2.2 Chapter Organization	2.1
2.3 Site Context – Existing Conditions.....	2.3
2.4 Exterior Architectural – Existing Conditions	2.10
2.5 Interior Architectural – Existing Conditions	2.11
2.6 Structural – Existing Conditions.....	2.34
2.7 Mechanical – Existing Conditions	2.36
2.8 Plumbing Existing – Conditions	2.39
2.9 Electrical Services – Existing Conditions.....	2.43
2.10 Fire Prevention – Existing Conditions.....	2.49
2.11 Accessibility – Existing Conditions.....	2.50
Existing Conditions Drawings	

3.0 Chapter 3 - Treatment Recommendations

3.1 Introduction	3.1
3.2 Preservation Zones	3.1
Preservation Zone Diagrams	
3.3 Programming, Building, and Site Information.....	3.3
3.4 Building Limitations, Challenges, and Opportunities	3.6
3.5 Recommended Treatment Approach and Use – Spa and Café	3.9
3.6 Pre-Design Program Plans.....	3.11

3.7 Code Analysis	3.13
Treatment Recommendations	
3.8 Accessibility – Treatment.....	3.19
3.9 Site – Proposed Treatment.....	3.20
3.10 Exterior Architectural – Proposed Treatment.....	3.22
3.11 Interior Architectural – Proposed Treatment	3.23
3.12 Structural – Proposed Treatment	3.27
3.13 MEPF General – Proposed Treatment	3.29
3.14 Mechanical – Proposed Treatment.....	3.29
3.15 Plumbing – Proposed Treatment.....	3.31
3.16 Electrical – Proposed Treatment	3.32
3.17 Fire Protection – Proposed Treatment.....	3.34
3.18 Basement Pool Rehabilitation Considerations	3.36
3.19 Skylight Laylight Restoration.....	3.38
Pre-Design Programming and Treatment Recommendation Drawings	

Appendices

Appendix A – Reference Documents	
Appendix B – Meeting Notes	
Appendix C – Existing Window Survey Schedule	
Appendix D – Universal Design and Scoping Form for ABAAS Facilities	
Appendix E – Mechanical and Electrical Equipment Cut Sheets	
Appendix F – NPS Fire Reference Manual 58, Structural Fire Management, Chapter 7	
Appendix G – Existing Conditions Tables	
Existing Conditions Tables – Site and Architectural Exterior	
Existing Conditions Tables – Architectural	
Existing Conditions Tables – Structural	
Existing Conditions Tables – Mechanical and Plumbing	
Existing Conditions Tables – Electrical and Fire Prevention	
Appendix H – Treatment Tables	
Treatment Tables – Site	
Treatment Tables – Architectural Exterior	
Treatment Tables – Architectural Interior	
Treatment Tables – Structural	
Treatment Tables – MEPF	
Appendix I – Cost Estimate	



Maurice Bathhouse, Exterior Southwest Corner (STRATA, 2022)

1 PROJECT SUMMARY AND INFORMATION

1.0 - Chapter 1 – Project Summary and Information

1.1 - Project Summary

1.1.1 - Introduction

This Maurice Bathhouse Pre-Design Condition Assessment and Treatment Plan Report is intended to update the conditions assessments and treatment recommendations from the previous 2004 Maurice Bathhouse Historic Structure Report and the 2010 Hot Springs National Park Cultural Landscape Report and Environmental Analysis. This report documents the Pre-Design efforts of the Design Team to inform the Schematic Design for the future rehabilitation project of the Maurice Bathhouse and the surrounding site for leasing by others.

1.1.2 - Project Purpose

This Pre-Design study is based on the Scope of Work provided by the NPS, dated February 15, 2022. The primary focus of this report is to define facility improvements required to prepare the Maurice Bathhouse for future leasing by others. This overall project will include the rehabilitation of the shell of the building, restoration of primary historic interior spaces and features, addressing Universal accessibility, and installation of new electrical, mechanical, plumbing, and fire protection systems to prepare the building for a future lease. In commercial real estate terms, the desired condition will be a “white box,” or a partially finished building that the NPS may offer for lease and customization. The intent of this project is to complete most of the up-front capital investment for the significant work components so future leaseholders can focus their efforts and costs on designing and undertaking additional facility improvements to satisfy their operational needs. Leaseholder finishes may include furthering the interior build-out, customizing mechanical, electrical, plumbing, and fire protection systems, and installing required operational systems.

The NPS will lease the building to a suitable tenant who will make additional improvements to suit their intended use. Potential Occupancies may include various Assembly uses (spa facilities, restaurants, exhibition halls, etc.), Business, and Mercantile uses. This report evaluates some of these uses for code and life safety compliance.

This project supports the mission of Hot Springs National Park to preserve the unimpaired natural and cultural resources and value of the national park system for the enjoyment, education, and inspiration of this and future generations. Through cooperation with partners, such as leaseholders for these historic bathhouses, they can extend the benefits of these natural and cultural resources.

1.2 - Summary of Existing Conditions and Recommended Treatment

The exterior of the Maurice Bathhouse is in overall good condition, with typical maintenance required and upgrades to site walkways to address accessibility. The existing mechanical equipment yard to the north of the building contains electrical distribution equipment, condensing unit, and two air handling units. This equipment is not screened from the public view. The interior of the building is in fair to poor condition. Having been vacant for 28 years with

minimal maintenance, multiple renovation projects, and little ventilation, the interior of the building has suffered. Several primary historic spaces have retained their original materials and finishes, while other spaces have deteriorated or were partially demolished.

Renovations, including interior demolition and some rehabilitation work, have been ongoing since the Maurice Bathhouse closed in 1974. These significant interior changes have resulted in the current condition of the building being well suited for **rehabilitation**, as identified in the 2004 HSR. The CLR also recommends **rehabilitation** as the treatment for historic landscapes and related features of Bathhouse Row, one of the most prominent park historic landscapes and a National Historic Landmark.

After consideration of the options, the Park has identified a spa and café with event spaces to be the most suitable building use. The spa may include areas for treatment in the basement (pool), the eastern portion of the first floor, and portions of the second floor. The café may utilize the NW 105 Room as a low-impact kitchen (no frying, grilling, or hood) with areas for dining and entertainment on the first and third levels. There are site and building limitations for constructing a full-service kitchen if a larger restaurant is to be considered, including location and maintenance of a grease trap, commercial exhaust hood, product delivery, and storage. However, a non-commercial warming kitchen, typically suitable for catered or prepared foods, would be easily achievable.

The Maurice Bathhouse rehabilitation will consist of shell and core rehabilitation for lease. Preservation Zones are designated to assist in directing the level of expected rehabilitation. These zones are discussed in detail in Chapter 3 – Treatment Recommendations. All recommended treatments for the interior and exterior of the Maurice Bathhouse must meet The Secretary of the Interior’s Standards for the Treatment of Historic Properties, specifically for *Rehabilitation*.

This Pre-Design Treatment Recommendations include:

- Repairs to the site, exterior shell, and interior architectural components and finishes
- Required repair and upgrades for concrete structure and prescribed structural capacities
- Mechanical, electrical, plumbing, and fire protection systems upgrades
- Building code and life safety upgrades, including addressing egress
- Accessibility upgrades per ADA, ADAAG, ABAAS, and applicable state accessibility standards and requirements as applied to leased facilities.
- Identification of remaining hazardous materials deficiencies (will follow in Schematic Design)
- Identification of existing site utilities and municipal water pressure to determine capacity for fire suppression systems

Architectural and structural features that are inherent to the construction of the historic Maurice building present both limitations and opportunities. These are discussed further in Chapter 3 – Treatment Recommendations. A few examples include:

- The reinforced concrete structure (slab and beams) is exposed in most of the building, limiting available overhead height for installing ductwork, piping, and conduit. Several primary historic spaces have suspended historic decorative plaster ceilings. Decorative ceilings warrant preservation and should not be removed or destroyed to install new HVAC, plumbing, or fire prevention systems, limiting the adaptive use options for the second floor rooms above.
- The low floor-to-floor height and clearance under the concrete beams in the basement and third floor limit the installation of ductwork, piping, and conduit.
- The Creek Arch, which provides routing for the thermal waters, city water, and sanitary services, is located directly in front of and partially below the west side of the Sunporch. The location of the Arch restricts work and excavations in the front yard of the building.
- The Maurice is prominently located on Bathhouse Row, with the front façade facing west and the south side facing the historic Formal Entrance to the Park. The site surrounding the building is highly visible, limiting the location and size of new equipment required to upgrade mechanical and electrical systems in the building and limiting available services, such as trash collection.
- Previous archeological inventories have indicated the possibility of structural remains predating the current Maurice Bathhouse structure that may exist below the current structure. It will be necessary to address these preservation issues during the planning, design, and construction of this project to protect potential archeological resources that may be present. Excavations will require archeological monitoring.

1.3 - Physical Description and Significance

1.3.1 - Location

The Maurice is a three-story building in the Mediterranean Revival style facing Central Avenue and is one of eight bathhouses remaining on Bathhouse Row in Hot Springs, Arkansas. Bathhouse Row is the front door to Hot Springs National Park, with the historic Formal Entrance to the Park on the south side of Maurice. The study area included the Maurice Bathhouse and the immediate property associated with the building.

1.3.2 - Maurice Bathhouse Historical Summary and Timeline

The Maurice Bathhouse is one of eight bathhouses remaining on Bathhouse Row. Bathhouse Row was initially listed as a National Register Historic District in 1974 and designated a National Historic Landmark in 1987 for containing the “*largest collection of twentieth century bathhouses remaining in the United States.*”¹ The sidewalks and green space in front of the building were also noted as contributing features to the district.

Congress set aside 2,529 acres of the hot springs park area as a U.S. government Reservation in 1832 and under the jurisdiction of the Government Land Office, the precursor to the Department of the Interior which was formed in 1849. The site was quickly developed to take

¹ Hot Springs National Park Cultural Landscape Report and Environmental Analysis, Quinn Evans Architects, 2010, p. 4.

advantage of the hot springs, with buildings developed along the creek on government reservation property. By 1877, Hot Springs was platted, and leases were granted on Reservation property. In the 1880s, the Department of the Interior made beautification efforts throughout the reservation to improve the character, with formal landscaping.² The current Maurice Bathhouse is the second structure on this site. The original bathhouse was constructed of wood. After the Department of the Interior required all bathhouses to be upgraded, the building was replaced by the current reinforced concrete structure in 1911. When the National Park Service was created in 1916, the Hot Springs Reservation was placed under its jurisdiction.

The three-story reinforced concrete and masonry structure has an exterior stucco finish, and a flat roof with green tile parapet roofs. The nearly square building footprint encompasses 31,350 gross square feet. The building was designed to incorporate private bathing compartments and public spaces. Overall, at its longest dimensions, the building measures 100' north/south and 109'-6" east/west.

The original portion of the 1911 structure was designed by Chicago architect George R. Gleim, Jr., in a synthesis of revival styles and is notable for its symmetrical massing, regularly spaced windows, and large, hipped skylight centered on the west elevation. A significant renovation of the building in 1915 was designed by Mann and Stern Architects (designers of adjacent bathhouses) and included both interior and exterior remodeling. The Maurice operated until 1974, when it closed to the public and was purchased by the NPS. In 1987, the NPS leased the building for use as a modern health spa. Subsequently, that plan, and at least one additional lease, were unsuccessful, with no work accomplished. For the last 48 years, the Maurice Bathhouse has remained vacant.

Major Known Renovations/Milestones Include:³

- 1911 – Existing Maurice Bathhouse Constructed. No original drawings exist. Architect was George Gleim, Jr., Cost was \$150,000. The bathhouse opened with 30 tubs.
- 1915⁴ – Major interior and exterior renovations designed by Little Rock architects George R. Mann and Eugene J. Stern, including:
 - Construction of the Sunporch
 - Renovation of the Lobby
 - Renovation of the third floor Solarium into the Roycroft Den to its current configuration
 - Renovation of the second floor Billiard Room
 - Other miscellaneous renovations throughout
 - Construction of the green tile roofs at the parapets

² Chamberlin Architects, "The Maurice Bathhouse Historic Structure Report," 2004.

³ Dates and information contained in the list are from the 2004 HSR.

⁴ NPS Project HOSP_128_60092

- 1921 – HSR states significant physical improvements were undertaken and designed by Mann and Stern. Work may have included roof modifications and construction of a new cooling tank.
- 1930 – Roycroft Den converted into a gymnasium.
- 1931 – NPS required improvements for new lease. Basement pool was constructed at this time to offer exercise and treatment for ailments. Manager Relyea was lauded for pioneering the under water therapy with the thermal water.
- 1934 – Sun parlor re-roofed. This may be when the skylight was covered.
- 1937⁵ – Renovations for new pool addition over the second floor (east side of building) were designed but never constructed.
- 1937⁶ – South elevator shaft was lengthened to add a stop at the roof level for sunbathers. The original skylight over the shaft was replaced at the top of the taller shaft.
- Post-1947 – 1947 was the peak year of visitors, after which began a steady decline.
- 1951 – Windows on the sunporch were changed from the small-pane windows to accommodate large viewing, at the request of the NPS. Also, the cooling tanks at the back of the building were enclosed, and the cooling towers and baffles were removed.
- 1958 – Maurice pool closed because the Libbey PMC opened pools.
- 1974 – Maurice Bathhouse closed. The NPS paid the Owner, Van Smith, \$5,688.50 for the Bathhouse.
- 1978⁷ – Reroofing Portions of Fordyce & Maurice Bathhouses. Project replaced flat roof areas. Project may have included work on skylights which were noted as Alternate work.
- 1984⁸ – Investigative Study of Five Bathhouses by Pitts & Associates Engineers undertaken.
- 1987 – Maurice leased for adaptive use as modern health spa.
- 1991⁹ – Asbestos Survey Hazardous Materials Inventory conducted on Bathhouse Row, including Maurice.
- 1992¹⁰ – Asbestos and Hazardous Materials Remediation Construction Documents for building along Bathhouse Row outlined the required remediation work.
- 1994 – Masonry repair and repainting of the exterior.
- 1996 – New roof installed
- 1999-2000 – New windows and front door installed in the Sunporch.
- 2002-2003¹¹ – Stabilization of Six Bathhouses, included structural underpinning and stabilization repairs, infill of shafts between floors, installation of new concrete catch basins in basement to capture spring water to direct to new sump, vapor barrier in basement crawl space, install new exterior ramp, replace flat roofing throughout (R-22 installed at upper roof), install louvers in existing window openings, (4) new skylights and

⁵ NPS Project HOSP_128_60497

⁶ NPS Project HOSP_128_60095

⁷ NPS Project HOSP_128_60582

⁸ NPS Project HOSP_128_70001

⁹ NPS Project HOSP_128_41052

¹⁰ NPS Project HOSP_238_41046

¹¹ NPS Project HOSP_128-80030

repair of Roycroft skylight, new doors at stairs (floors 2 and 3), demo of MEP throughout, new Mechanical and ventilation systems installed.

- 2004 – Historic Structure Report produced by Chamberlin Architects.
- 2004¹² – Schematic Design for Superior and Maurice Bathhouses.
- 2006¹³ – Construction Documents produced for full building rehabilitation (full project did not happen).
- 2009¹⁴ – Construction Documents address construction of new elevator in the center of the building.
- Prior to 2016 – Removal of bathing stall partitions, tubs, shower stalls, and other items on the first floor during building stabilization and rehabilitation efforts. Park staff began abatement of lead paint throughout the building and rehabilitation of some rooms on the first floor.
- 2016 – Minor demolition of partitions walls.
- 2018 – Removal of dressing stall walls on the third floor.
- Since 2018 – Installation of the central elevator and partial construction of new public restrooms on the first floor.

1.3.3 - Character-Defining Features

The period of significance for the Bathhouse Row is 1911 – 1947, as outlined in the 2004 HSR. This covers the period beginning with construction of the “new” bathhouse and ended after their peak year of business. While renovations have occurred throughout the occupation and later during the period of the building’s vacancy, the Maurice Bathhouse retains a significant amount of its historic integrity and exterior and interior character-defining features.

The Maurice Bathhouse possesses historic integrity through the following:

- Although the building has undergone significant alterations on the interior, the overall exterior form and fenestration openings remain from the period of significance are relatively unchanged.
- Architectural detailing and construction materials from the period of significance are preserved on both the exterior and interior of the building.
- Bathhouse use of the building was continuous from its construction until its closure in 1974.
- The original setting has been preserved, with Maurice an integral part of the overall Bathhouse Row along Central Avenue.

Significant character-defining features are those which have historic character from the period of significance and have continued to convey the appearance and feeling of the building. Retention of these features maintains the historic integrity of the building, making it a priority to preserve, maintain, and repair these features.

¹² NPS Project HOSP_128_056091D

¹³ NPS Project HOSP_128_41070

¹⁴ NPS Project HOSP_128_056091D

Location, Site, and Environment:

- As one of eight bathhouses along Central Avenue, collectively known as Bathhouse Row, the integrity of this bathhouse within the collection is important.
- Landscape follows traditional planting patterns prevalent throughout the Bathhouse Row.
- The front entrance with the concrete steps and ramp follows the entrance patterns of adjacent bathhouses.

Plan and Volume:

- The overall building footprint and volume have not changed since the period of significance. The interior plan and circulation have not changed significantly since the original construction.

Envelope:

- The white stucco cladding and stucco features, such as the built-in cornice/gutter at the third floor, all with a highly textured finish, remain.
- Window and door (fenestration) patterns remain. Although new louvers and a new exit door were installed, they were installed in original opening locations.
- Front entry concrete ramps and steps
- Two primary facades – West - facing Central Avenue, and South - facing the walkway of the historic Formal Entrance to the Park.
- Two secondary facades – North - facing Hale Bathhouse, and East - facing the Park and the upper Promenade.

Interior Features and Finishes:

- Many significant interior rooms, features, and materials remain.
 - Walls:
 - Painted flat plastered walls over masonry and plastered ceilings and beams
 - Flooring:
 - Terrazzo flooring and integral terrazzo and concrete cove bases
 - Concrete flooring with integral concrete cove bases
 - Wood Trim, Doors, Windows, and Features:
 - Interior paneled and glass wood doors and hardware
 - Interior wood millwork at windows, doors, and miscellaneous trim and framing
 - Interior wood distinctive features, such as swinging gates, check-in counter and desk, built-in bench and mirror, and all the paneling and millwork features in the Lobby and Roycroft Den
 - Wood casement windows and hardware
 - Wood lockers on the third floor
 - Tile:
 - Rectangular tile walls and wainscoting (three periods of installation)

- Mosaic tile flooring
- Quarry tile flooring and base
- Marble base
- Faux tile plastered finishes
- Decorative Finishes
 - Stenciling on walls (Men's Massage 116)
 - Decorative plaster and painted finishes on the Lobby 110 ceiling, including stenciling and wood graining.
 - Stenciling on walls (Billiard Room 210)
 - In addition, there is potential stenciling and decorative painting in other spaces that have not been uncovered to date.
 - The painted mural from the Billiard Room 210 was removed and is in curatorial storage.
- Features
 - Four skylight openings in the first floor spaces. The skylights have been replaced, but the original size and shape of the historic openings remain. The Laylights are missing.
 - Roycroft skylight was partially reconstructed during the 2003 repair project. This hipped skylight is unique. The decorative laylights are missing. The Park has one of the stained glass laylight panels in storage that was previously damaged.
 - Several small skylights were removed during earlier roofing projects and infilled with concrete. One provided light into the Maurice Office 311, and the others provided light into light wells in areas without windows.
 - The plaster Bacchus figures under the wood ceiling beams in the Roycroft Den are missing; however, the Park has two of these plaster figures in storage.
 - Wire-caged original shafts and elevator cabs
 - Painted cast iron stairs with marble treads
 - Woven wire at tops of third floor day room walls
 - Marble toilet room panels
 - Metal ventilation grates or grilles
 - Steam cabinets (Mechanical 103 and Men's Cool Room 115)
 - Metal cornice and ceiling grid system in the Sunporch 109.
- General Circulation and Special Organization
 - Room arrangement, Corridors, Stairways, and Elevator Core.
- Pool
 - The existing concrete basement therapy pool is one of the unique historic features of the building.
- Fixtures
 - Plumbing fixtures, miscellaneous thermostats, and other similar equipment remain throughout the building.

- Painted decorative radiators
- Neon sign spelling 'MAURICE' once mounted on the wall behind the front desk.

1.3.4 - Preservation Zones

The preservation of the Maurice Bathhouse is essential as an integral building within the National Historic Landmark Bathhouse Row District. Buildings along Bathhouse Row reflect the chronological history and development of Hot Springs during the period of significance from 1911 to 1947.

Preservation Zones for the Maurice Bathhouse are identified to guide the maintenance, repairs, design, and construction for work on the exterior and interior of the building. The Zones identify the current level of historic significance and integrity of specific building elements and individual spaces identified as significant in the HSR. These zones identify high, intermediate, and low levels of historic integrity to assist with planning and prioritization of appropriate levels of rehabilitation intervention in each space. These zones are outlined in Chapter 3 – Treatment Recommendations.

1.4 - Administrative Data

1.4.1 - Holistic Pre-Design Approach

The AE Design Team consulting on the Maurice Bathhouse Pre-Design Study has worked closely to assess and develop treatment recommendations. The report delivers current information about the building conditions and updates the recommendations made in the 2004 HSR and 2010 CLR reports. These recommendations will assist the future design and further programming efforts in Schematic Design.

The AE Design Team consists of experts who have experience and enjoy rehabilitating historic buildings. The team includes historical architects from STRATA Architecture Inc. and Quinn Evans; structural engineers with Structural Engineering Associates; MEPF engineers with IMEG; historical landscape architect from Quinn Evans; and an independent cost estimator. The existing conditions assessments were recorded in the field by the team members, including existing conditions, photographs, and measurements. The structural team supplemented their inspections by engaging with an outside contractor. The contractor provided ground penetrating radar (GPR) and destructive testing to confirm concrete reinforcing placement and condition.

Throughout the project, the team held internal meetings to coordinate life safety code requirements, required repairs, and an understanding of the building limitations for installing updated mechanical, plumbing, electrical, and fire prevention systems. Experts, including a pool consultant, stained glass consultant, skylight manufacturer, and a code consultant, were brought to the team to discuss future rehabilitation methodologies and possibilities. Regional NPS experts in museum management and curatorial storage, fire prevention, and code compliance were included in the online meetings to offer their experience and advice for

addressing the unique challenges and opportunities for the rehabilitation of the Maurice Bathhouse.

The team held numerous in-person and online meetings with the Park and Regional staff to review critical items, including fire prevention, code analysis, programming, expected level of rehabilitation, and potential treatments. These meetings informed the recommended treatment presented in Chapter 3. The notes for these meetings are in Appendix B. While onsite, the team met with leaseholders for the Superior Bathhouse and the Quapaw Bathhouse to understand their use and needs for their buildings. These meetings were essential for our team to understand the importance of delivering a building ready for leasing that has considered the potential future uses and provided the best solutions for fire prevention and HVAC systems that are ready to customize for the tenant finish.

1.4.2 - Project Resources

Codes and Standards Related to the Rehabilitation

- IBC 2021
- IEBC 2021
- NFPA
- *Secretary of the Interior's Standards for the Treatment of Historic Properties*
 - *Rehabilitation*
 - *Guidelines for the Treatment of Cultural Landscapes*
- National Park Service Preservation Briefs
- NPS Management Policies 2006
- Architectural Barriers Act Accessibility Standards (ABAAS), ADA, ADAAB, and applicable state accessibility requirements as applied to leased facilities
- ABA Universal Design Standards for Outdoor Developed Areas, Public Rights of Way, Transportation Facilities
- 7 Principles of Universal Design
- Accessible Route Design Standards, DSC

Drawings

AutoCAD drawings of the Maurice Bathhouse were provided by the NPS that were prepared in 2004 for a large rehabilitation project by Chamberlin Architects. A building walk-through verified these drawings for use in this Pre-Design effort, and critical differences were noted and updated. A subsequent task order will include the production of updated, field-verified, electronic drawings in Revit for use during Schematic Design.

Documents

The "Maurice Bathhouse Historic Structure Report" was prepared in 2004 by Chamberlin Architects¹⁵ and was referenced throughout this report. This HSR provided the history and basis for the current treatment recommendations. In addition, drawings, historical postcards,

¹⁵ Chamberlin Architects, "The Maurice Bathhouse Historic Structure Report," 2004.

and historical photographs were provided by the Park Curator, Tommy Hill. A list of these documents can be found in Appendix A: Reference Documents.

1.4.3 - Recommended Next Steps

The following outlines areas of life safety and building preservation concerns that were found during the AE Design Team site visit in March 2022.

1. **Life Safety:** The AE Design Team recommends the Park install a fence or gate at the northeast corner of the building to prevent public access to the northeast yard above the retaining wall. This is a life-safety fall hazard.
2. **Building Preservation:** The AE Design Team recommends the repair of the exhaust fan that serves the confined crawlspace under the east side of the building and vents out the north side of the building. This fan needs to be repaired to working condition. Once repaired, it should alleviate some of the steam and humidity build-up that is migrating into the basement and first floor above.
3. **Building Preservation:** The AE Design Team recommends the drain in the exterior north runnel alongside the north basement wall be unblocked. Remove debris, and ensure the drain is clean and in working condition. Consider installing a dome over the drain to catch debris.

The following items are recommended to be completed to set up the project for success prior to or as part of the next phase of Schematic Design:

4. **Site Survey:** Production of a new site survey to include topography, drainage, all utilities (including depth of sanitary and water pipes), landscape, location and depth of the Creek Arch, all related site features, and building first floor elevations at each entrance (basement and first floor).
5. **Hazardous Materials testing, specifically for:**
 - a. Asbestos – Pyroblock wall units, mortar used for the Pyroblock, ceiling material in Roycroft Room, terrazzo, etc.
 - b. Lead Paint
 - c. Radon
 - d. Soils Testing for Heavy Metals
 - e. Mercury in pipes
6. **Revit As-Built Drawings:** Production of field-verified building models in Revit for use during Schematic Design.
7. **Piping Scoping:** Scope and document all existing sanitary sewer pipes in the basement, including where they drain and condition. Plumbing engineer should be present for this exercise to assist in documenting/mapping piping. This information is required for Schematic Design

8. Hot Spring: Schematic Design must address the conditions of the spring in the basement crawlspace. It is recommended to contract with a civil engineer or consultant who has experience in addressing the distribution of hot springs and thermal water.
9. Crawl Space Concrete Structure Verification: The confined crawl space beneath the existing east bath halls was not accessible during the Pre-Design efforts. The spacing of any columns or walls are not shown on the plan, and there is no information on the size, spacing, and location of reinforcement within the slabs or beams. Selective demolition for the underside of the typical slab and beam in the crawlspace is recommended as an additional service needed early in the schematic design phase. The crawlspace is considered a confined entry space, and the presence of flowing water will impact electrical equipment use. In addition, the space is hot and humid, with little or no fresh air exchanges. These considerations will require specific precautions for the testing contractor. Concrete will be patched following the chipping and investigation.
10. Masonry Exterior Walls Grout Injections: Although grout injection was specified in the 2002 stabilization drawings and some amount of that work was clearly performed, it is unknown if the work was successful or completed as thoroughly as intended. The structural engineer recommends that GPR scanning in the early Schematic Design phase as additional services. This scanning would attempt to determine the approximate volume of voids within the wall for future grout injection repairs at the exterior brick walls. Along with the scanning, some selective demolition should be performed for the brick walls to confirm the findings of the GPR.
11. Wood Framing Investigation: Investigation wood framing members in the previously reconstructed skylights to confirm if they are pressure treated.
12. Geotechnical Investigation: Perform geotechnical investigation at NE corner of full-height portion of the building to determine underpinning requirements for this corner. This section of the building was not underpinned in 2002, and the cracks in this area appear to be moving.
13. Historic Finishes / Materials Conservator: Engage a specialty historic finishes and paint analysis conservation company with AIC Membership to explore decorative paint finishes in several primary areas and typical historic colors from primary and secondary spaces. Primary spaces would include: Sunporch metal ceiling grid and walls; Lobby ceiling and walls; Women's Cool Room (look for decorative painting and potential wall coverings); Women's Pack Room (look for potential wallcoverings); Women's Bath Hall; Men's Pack Room and Bath Hall; Men's Massage Room (decorative stenciling); Billiard Room Ceiling and Soffits (consider windows too); Roycroft ceiling; Check-In and Coat Room walls and ceilings; elevator halls and grilles; and miscellaneous walls and trim throughout the building. Exposures may include the Men's massage room and Billiard Room. Consultant may also view the murals removed from the Billiard Room 210 to determine their condition and whether they can be conserved and reinstalled or replicated as part of a rehabilitation of that space.

14. Roof and Skylights: Explore top of elevator shafts to see if they can be restored with skylights to allow natural light into the multi-story stair shafts. Park may provide ladders for access.
15. Pest Management: Confirm termites are not active (evidence in first floor Lobby west wall door openings at base of doors and throughout third floor).
16. Architectural Salvage Reuse: Architects to work with Park Curatorial and Facilities staff to sort through architectural salvage in storage in Women's Bath Hall 114 and Men's Bath Hall 113 (and other locations in building) to determine what will be reused as part of the rehabilitation project and what needs to move to park storage. Determine if Park will remove items, or if the relocation needs to be included in contractor's bid.
17. Materials Cleaning: Test clean wall tiles in Men's and Women's Bath Halls. If the stains cannot be removed, they will likely need to be replaced or removed. Tests may be performed by the historic materials conservator.
18. Hale Air Handling Unit: Schematic Design will need to further study the potential relocation of the Hale Air Handling Unit that is currently installed directly north of the Maurice. Pre-Design calls for relocating the existing unit to the Hale Bathhouse property.
19. Provide some time for an architectural historian or the AE Team to continue research on the Maurice building to look for historic photographs that may further document the building interiors and exteriors, such as the rear skylights, the roof of the Sunporch, and other key spaces on the interior.

1.4.4 - Project Team

Client

Hot Springs National Park

Hot Springs, Arkansas

Laura Miller, Superintendent

Mark Scott, Facilities Manager

Tommy Hill, Museum Curator

Laura_miller@nps.gov

Mark_scott@nps.gov

Tom_hill@nps.gov

Midwest Region National Park Service

John Rosemurgy, Project Manager

Brian Leaders, GAOA Program Lead

Nicholas Murray, Contracting Officer

John_rosemurgy@nps.gov

Brian_leaders@nps.gov

Nicholas_m_murray@nps.gov

Denver Service Center

Andrea Lind, Branch Chief
David Lieb, PM
Jennifer Claster, PS
Andrea_lind@nps.gov
David_lieb@nps.gov
Jennifer_claster@nps.gov

Architect / Contract Manager

STRATA Architecture Inc.
Angie Gaebler, AIA, Principal
Trudy Faulkner, AIA, Principal
Claire Ashbrook, AIA, PM
1701 Oak Street, Suite 100
Kansas City, MO 64108
Phone: 816-474-0900
angie@strata-arch.com
claire@strata-arch.com
trudy@strata-arch.com

Consulting Architect and Historical Landscape Architect

Quinn Evans
Jennifer Henriksen, AIA Principal Architect
Brenda Williams, FALA, Principal Landscape
Gania Kandalraft, Designer
219 ½ N Main Street
Ann Arbor, MI 48104
Phone: 734-834-1646
jhenriksen@quinnevans.com
gkandalraft@quinnevans.com

Structural Engineer

Structural Engineering Associates, Inc.
Ralph Jones, RA, Principal
Philip Steed, RA, PM
1000 Walnut, Suite 1570
Kansas City, MO 64106
Phone: 816-421-1042
rjones@seassociates.com
psteed@seassociates.com

MEP & Fire Protection Engineering

IMEG Corp.
Phillip Parra, PE, Principal Electrical Eng.
Stuart Braden, PE, Mech/Plumb Eng.
1600 Baltimore, Suite 300
Kansas City, MO 64108
Phone: 816-842-8437
Phillip.p.parra@imegcorp.com
Stuart.g.braden@imegcorp.com

Cost Estimating

CMR
Michael Orel, CPE
11006 Parallel Parkway, Suite 200
Kansas City, KS 66109
Phone: 913-262-6715
Michael.orel@cmrcosts.com

Expert Consulting Parties:

Code Consultant Service, LLC

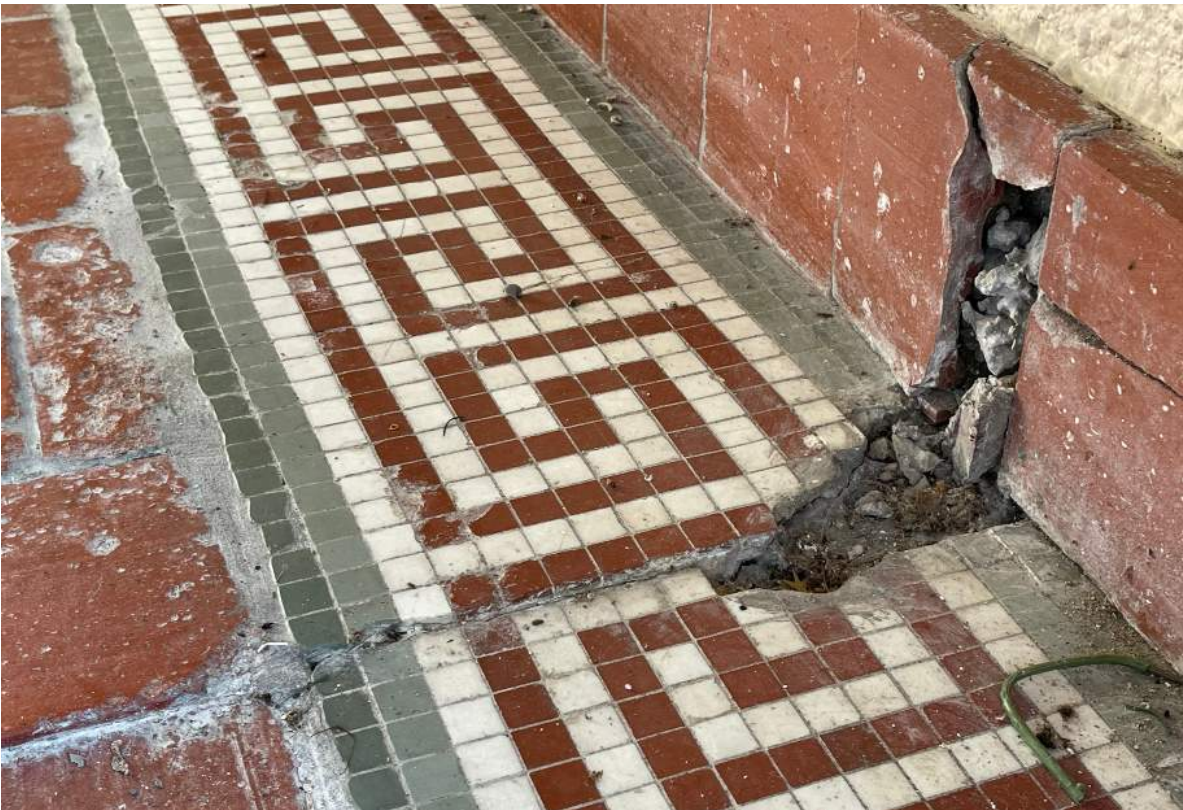
Jeff Boyle, Owner

Julie L. Sloan, LLC

Consultants in Stained Glass

Waters Edge Aquatic Design

Jeff Bartley, Principal



Maurice Bathhouse, Sun Porch Tile Detail (STRATA, 2022)

2 EXISTING CONDITIONS ASSESSMENT

2.0 Chapter 2 – Existing Conditions

2.1 - Introduction -

The Design Team members were on site in March 2022 to assess the Maurice Bathhouse. The team took photographs and documented the existing conditions of the interior and exterior of the building to update treatment recommendations for the rehabilitation of the building, to assist with the development of the scope work and specialty consulting, services, or testing to be accomplished during the next phase of Schematic Design.

Overall, the building exterior has been well maintained and is in good condition. The interior conditions vary by floor and by room. Many renovations have occurred inside the building since the Maurice Bathhouse closed to the public in 1974, with most of the bathhouse fixtures and partitions having been removed. Asbestos and hazardous materials were abated from the building in 1992, although as-built documentation of this project has not been found. A major structural stabilization project in 2002 included underpinning and other significant structural stabilization procedures. The project also attempted to harness the hot spring in the NE corner of the basement crawlspace with concrete catch basins, replaced four skylights, repaired the Roycroft skylight, and installed new mechanical and ventilation systems to distribute fresh air. Between 2002 and 2009, the park began construction of restrooms on the first floor. This progress was interrupted in 2009 when a new elevator was installed in the center of the building. The elevator was constructed within a portion of the area where the new restrooms were located. Park staff mentioned that the space required for the elevator was taken from the restrooms, resulting in the restroom layout no longer complying with the ABAAS accessibility requirements. Therefore, the construction of the restrooms was halted.

2.2 - Chapter Organization

This Chapter includes brief narratives of the existing conditions by category of work, i.e., Site, Architectural, Structural, MEP, etc. with photographs at the end of each narrative section. Existing Conditions drawings are found after the chapter narrative. Tables were compiled to record the existing conditions of each category of work and are the basis for the treatment recommendations in Chapter 3. These tables can be found in Appendix G. Where applicable, the tables may reference photographs included in this chapter, and where available, quantities of the existing materials are listed.

The following standard condition assessment definitions were used to identify overall deficiency and conditions of the interior and exterior of the Maurice. These are typical industry definitions, utilized to prioritize preservation, maintenance, repair, and rehabilitation work.

Deficiency ratings are defined as:

Critical – Emergency / Immediate / Life Safety -

- This rating indicates an advanced state of deterioration or ongoing maintenance issue which may result in the failure of a specific feature or component if not corrected within the near future (typically less than 1 year).
- This rating may indicate an immediate threat to life safety of building occupants or visitors.
- This rating may indicate a serious building code violation.

Serious – Short Term –

- This rating indicates a deteriorated or missing condition which may result in failure of a specific feature of component if not corrected in the short term (typically 1-3 years).
- This rating does not currently reflect an immediate threat to life safety but does require corrective action.
- This rating may indicate code violation or accessibility issue.

Minor – Short or Long Term –

- This rating may indicate a component of or an overall building system that requires regular maintenance or preservation which may affect overall building performance or affect the long term preservation of the building (typically 3-5 years or further).
- This rating may identify recommended work to address non-life-safety issues or building upgrades to improve building occupant comfort and satisfaction.

Condition ratings are defined as:

Good – Rating identifies that the component or system is in overall operable condition with little wear. Item may require only routine maintenance but is not deteriorated or showing signs of deferred maintenance or need of repair.

Fair – Rating identifies the component or system is in overall operable condition with wear or showing signs of minor deterioration. Item may require maintenance or repair.

Poor – Rating identifies the component or system is in overall non-operable or overall deteriorated condition. Item may require significant maintenance, repair, or replacement.

2.3 - Site Context – Existing Conditions

The Maurice is located within three Landscape Character Areas identified in the CLR: Bathhouse Row/Architectural Park, Foreground Park, and the Formal Entrance. The Maurice primary façade faces west, towards Central Avenue. The historic Formal Entrance into Hot Springs National Park and the Grand Promenade is between the Maurice and Fordyce Bathhouses. The landscaped yard directly surrounding the Maurice to the north (between the building and the sidewalk), west (to the main sidewalk), and south (to, but not including, the stone planter), are included in this study area. The Formal Entrance to the south, as well as the monuments and fountain southwest of the Maurice, are not included in the study area. Evaluation of the current site conditions was coordinated with the 2010 Bathhouse Row Cultural Landscape Report.

Refer to the Site Existing Conditions Drawings at the end of this chapter and the Site Assessment Tables in Appendix G.

Grade and Accessibility

The Maurice Bathhouse is built into the hillside, with the east side of the first floor being partially below grade. The site is generally flat, with the building's first floor elevated about 24 inches above the surrounding grade. The concrete ramps and stairs required to enter the front and side entrances are in fair to good condition. The only accessible approach is the ramp on the north side of the building. The ramps located in front (west) of the building and at the south side of the building have slopes greater than 8% and do not meet accessibility requirements. This is discussed further in Section 2.11 Accessibility Existing Conditions of this report.

Mechanical equipment is on the north side of the building. Grade in this area slopes towards the building. The hillside behind the building slopes up to heavier greenery and the Display Springs and Grand Promenade. The retaining walls to the south of the building are in fair condition.

Drainage

Site drainage around the building is managed by concrete runnels adjacent to the building walls. The concrete runnels have deteriorated and cracked, with plant growth adding to the deterioration.

The drain in the runnel that runs along the north foundation wall has a flat grate covering and is easily clogged with soil and debris. The AE Team observed that the drain was plugged while on site during a rain event, and the runnel almost overflowed. The team removed some of the debris from the grate to ensure there was a drain in this location. This north runnel collects water from the site, from the NE lower roof, and from the hillside behind and adjacent to the building. Drainage from the north side of the Sunporch roof drains below the ramp into the north runnel near the drain. This extra roof drainage could result in a substantial amount of water in this area. Water backing up in the runnel can easily make it into the basement windows and seep into the ground through cracks in the runnel. This flat grate should be replaced with beehive-type dome to help reduce the chances of blockage.

The runnel also needs to be continually maintained to ensure it is not cracked (leaking water) and does not fill with debris.

Drainage from the Display Springs is channeled into an underground pipe northeast of the building. It is not clear where the pipe drains, but it likely drains into the stormwater in the Stone Arch.

Irrigation

Sprinkler heads for the irrigation system are not all located in ideal areas. One such sprinkler head is installed up tight to the west foundation wall, creating erosion of the grade and damage to the building.

Pedestrian and Vehicular Circulation

There is no on-site or on-street parking in front of the Maurice. There is a drop-off area south of the Maurice, between the Maurice and Fordyce buildings. This drop-off area is used for all of the buildings along Bathhouse Row, including loading and unloading for the Hale Bathhouse overnight guests and restaurant supplies for the Superior Bathhouse.

Walkways on the site are concrete of various ages and aggregate textures. The exit door on the north side of the building was added in 2002 and lands in mid-air – the ramp or stairs that had been designed to serve this exit were not constructed.

Site Utilities

Utilities and services to the Maurice are addressed in the Mechanical, Plumbing, and Electrical sections below. All utilities (gas, electric, water, thermal water, cable, and sewer) are from the street in front of the Maurice. Water pressures should be adequate for water service and sprinkling the building. It is assumed sanitary piping and water service will be replaced. Cable will need to be relocated.

Life Safety

No public walkway extends around the east side of the building; however, it is possible to walk along the edge of the building across the concrete runnel towards the top of the hillside. Near the northeast corner of the building, the grade turns to the west and slopes downhill to the top of the very high stone retaining wall with a steep drop-off. There are large stones on the ground that create tripping hazards. This area presents a very precarious fall hazard to the public. This area is mostly blocked by a chain link fence near the Promenade; however, there is no block between the fence and the northeast corner of the building. Access should be blocked near the northeast corner of the building to prevent public access to the northeast portion of the yard above the retaining wall.

Landscape Existing Conditions -

Plantings

The edges of the site are lined with a holly hedge with lawn infill like the other bathhouses along Bathhouse Row. Plantings overall are in good to fair condition. The planting areas on

the north side of the building have been disturbed by the addition of mechanical units and the accessible route to the main entry. The volunteer brush and trees growing on the hillside northeast of the building is overgrown. One tree produces black berries that fall onto the northeast roof and skylight. These berries have stained the skylight and create a mess on the roof.

Features

The landscaping is consistent with those of the surrounding buildings. The manicured hedges at the front entrances are a common feature consistent throughout Bathhouse Row. The Formal Entrance leading to the Grand Promenade is on the south side of the Maurice.

Photographs – Site and Exterior



XAE.1 – Exterior. West façade of the Maurice with the park at the Formal entrance.



XAE.3 – Exterior. North face of the Maurice with the equipment yard.



XAE.2 – Exterior. West façade of the Maurice.



XAE.4 – Exterior. East face of the Maurice from the Promenade.



XAE.5 – Exterior. South face of the Maurice from the Promenade.



XAE.8 – Exterior. Damaged tile, cornice, and wall.



XAE.6 – Exterior. North equipment yard, looking east.



XAE.9 – Windows. Damaged plaster.



XAE.7 – Exterior. Patched stucco where previously cracked.



XAE.10 – Sunporch. Damaged stair, window, door.



XAE.11– Exterior at West. Damaged ramp and landing at entrance.



XAE.12– Exterior at North. Damaged runnel and louver.



XAE.13 - Exterior at South. Deteriorated concrete ramp to basement and concrete retaining wall.



XAE.14– Exterior at North. Exit with no stair to grade.



XAE.15 – Exterior at South. Deteriorated stone retaining wall and concrete runnel.



XAE.16 – Clogged drain in north side runnel. Note, the drainage (large white pipe) from the north side of the Sunporch roof also drains into this runnel.



XAE.18 – Access to Display Spring drainage at NE of building.



XAE.17– Access to Display Spring drainage at NE of building.



XAE.19 – Yellowed plexiglass coverings over historic stained glass windows. Coverings are not properly vented.



XAE.20 – Skylight. Deteriorated to be replaced.



XAE.23 – Skylight. Deteriorated to be replaced.



XAE.24 – Roof parapet with clay tiles at east wall, northeast roof.



XAE.21 – Roof. Parapet clay cap tile.



XAE.25 – Northeast skylight staining from berries from tree above roof.



XAE.22 – Roof. Damaged green glazed vitrified clay roof tiles and copper flashing.

Architectural - Existing Conditions

This section includes the review and assessment of the existing conditions of the exterior shell of the building and the building interior, including finishes.

Refer to the Existing Conditions Drawings at the end of Chapter 2 and the Architectural Assessment Tables in Appendix G.

2.4 - Exterior – Existing Conditions

The Maurice is a three-story building in the Mediterranean Revival style. The exterior walls feature a painted stucco exterior with multi-color decorative tile panels accenting the upper level. A one-story five-bay sun porch projects from the west façade and creates the main building entry. Green glazed clay tile roofing forms the roof perimeter, and a skylight sits prominently centered on the building. The building's north, west, and south sides are visible from Central Avenue, with the west façade facing Central Avenue and the south side of the building facing the Formal Entrance. The rear (east) side comprises shorter building elements featuring green glazed clay tile roofs, skylights, and flat roof areas.

The exterior of the building is in fair to good condition. Hairline cracks are seen throughout the exterior walls and stucco, particularly around the windowsills, window heads, and cornices. The windows and doors are in fair to good condition. The condition of the original wood windows varies. In general, the wood windows are in fair condition, with some deteriorated sections and some windows that are out of plumb. The metal windows and doors in the Sunporch are not original and do not reflect the historic design. The stained glass windows on the north elevation are protected by yellowed plexiglass coverings and are not properly vented. A detailed window conditions schedule is included in Appendix 'C.'

The skylight centered on the west façade, located above the Roycroft Den, has deteriorated since being repaired in 2002. In addition to bowing structural members and corrosion on metal elements, a significant amount of condensation was observed on the interior of the skylight. The low-slope roofing at the upper roof, the roofs surrounding the skylights, and the roof over the west sunporch, are nearing 20 years since they were replaced. The roofing has no longer adhered to the roof deck near the parapets, and ponding water was observed at the center around the penthouse and fan house. There is a small number of damaged clay tiles throughout the mansard roofs and corrosion on the metal flashing that is part of the clay tile roofing system. The existing roof hatch cannot fully open due to its location adjacent to the gutter on the Roycroft Skylight. The access ladder is steep and does not meet OSHA access requirements.

Several smaller skylights were removed during previous roofing projects. These include the two skylights over the original elevator shafts, one above the third floor Maurice Office 311, and several (approximately 8 or 9) scattered small skylights. These smaller skylights and curbs were removed, and the concrete deck openings were repaired and infilled in 2002.

2.5 - Interior - Existing Conditions

Interior Conditions

The conditions of the interior vary between the floors and rooms. Several rooms retain character-defining features and are identified in the Preservation Zones as primary history spaces. These spaces include: the basement Pool; first floor Sunporch; first floor Lobby, Check-in, and Cloakroom; Men's Bath Hall; the Roycroft Den and the Maurice Office on the third floor; and the historic stair towers with original caged elevators.

Interior finishes include terrazzo, mosaic tile, and clay tile flooring; terrazzo, integral concrete, and marble baseboards; plaster, faux tile, marble, and white ceramic tile walls; exposed concrete structure (deck and beams) with plaster finish; steel stairs with marble treads; wood trim and doors; built-in wood cabinetry; wire mesh ventilation panels; wood paneling and architectural components (Roycroft Den); historic decorative painting (plan colors, stenciling, and faux finishes); and various other fixtures and building elements. The overall condition of the interior elements and finishes varies floor by floor and room by room.

The building was initially constructed with chases in the corners of many of the rooms, which allowed for piping and ventilation ducts to travel between floors. Many of these were demolished during earlier renovation and abatement projects, but the outlines are visible on the floor where the integral terrazzo base remains. In 2002, many of these chases between the floors were infilled with concrete. The building was also originally built with a sophisticated ventilation system that ran through ducts in the chases and in overhead metal lath and plaster soffits. Most of this has been demolished.

The language of the building with the exposed structure and beams that were plastered, and dropped horizontal soffits and vertical chases, will assist in the installation of various mechanical, electrical, plumbing, ventilation systems, and fire prevention systems.

Concrete Structure and Floor to Floor Heights and Clearances

The concrete slab and beams are exposed above-head in rooms without dropped ceilings. The concrete slab and beams are concealed with a thin layer of smooth, painted plaster on the first through third floors. It is delaminating and in poor condition in some areas. Some rooms have dropped or suspended metal lath and plaster ceilings and soffits.

Floor to floor heights and clearances vary per floor. Because there is no interstitial or joist space to run conduit, piping, or ducts, the floor to floor heights and clearance to the underside of the concrete beams will drive the treatment recommendations for the design and installation of new mechanical, electrical, plumbing, and fire suppression systems.

Typical Vertical Dimensions – *Provided to illustrate areas with low head height clearance and areas with greater height.*

Basement Floor to First Floor – 8'-4"

Basement Floor to Underside of Concrete Deck – 7'-10"

Basement Floor to Underside of Beams – approx. 6'-9-3/4" to 7'-0"

First Floor to Second Floor – 13'-9 3/8"
First Floor to Underside of Second Floor Concrete Deck – 12'-9 1/2"
First Floor to Underside of Beams – 11'-10 1/4"
First Floor to Underside of Ceiling at Lobby – 12'-8-1/2"
First Floor to Underside of Beam at Lobby – 11'-1"
Second Floor to Third Floor – 11'-0"
Second Floor to Underside of Third Floor Concrete Deck – 10'-4-1/8"
Second Floor to Underside of Beams – 9'-4"
Third Floor to Underside of Roof Structural Concrete Deck – 8'-0 1/8"
Third Floor to Underside of Beams – 7'-0-1/2"

Basement

The basement houses mechanical and support spaces and the pool and pool support spaces. The exposed finishes are mostly exposed concrete foundation and load-bearing interior walls; exposed concrete slab, columns, and beams; exposed masonry; and concrete floors. Most of the walls and portions of the underside of concrete slab are painted white.

First, Second, and Third Floors

Finishes in the primary historic rooms have been partially restored and are in fair condition on the first floor. Finishes in the remainder of the first floor and second and third floors vary from fair to poor. Previous interior demolition related to the 2002 structural stabilization project and other interior renovation projects has left the secondary spaces in disarray. These areas are missing sections of plaster, exposing brick or Pyroblok masonry. Rooms in the back of the first floor were the Women's and Men's Bath Halls and Pack Rooms. Spaces that had 'water' treatment had white ceramic tile wainscoting or full-height tile walls and, in the case of the Men's Bath Hall, also had tiled ceilings. Spaces that were 'dry' – used for massages, changing clothing, and day rooms - have faux plaster wall tiles created by scoring a rectangular tile pattern into a hard cementitious wall plaster and painted to appear like the white ceramic tiles.

There are three types of white, rectangular ceramic tiles installed throughout the building. The original 1911 or 1915 tile has squared edges and very tight grout joints. Many of these tiles are crazed, cracked, or discolored from water infiltration. The second type of white ceramic tiles is also historic and dates from either the 1915 or later renovations. These tiles have slightly eased edges and slightly wider grout joints. In some areas, these are installed directly over the original, older tiles. These are also crazed, cracked, and stained. The third type of white tiles dates to the more recent renovations done by the NPS. These tiles have eased edges and wider grout joints. They are often interlaced with the older tiles. In addition to the wall and ceiling tiles, there are historic and contemporary replacement cap tiles and edge tiles.

There are two primary colors of gray terrazzo used throughout the first through third floors. The terrazzo flooring throughout the building has cracking, offsets due to building

settlement, holes drilled and cut through, and sections that are stained and worn. The terrazzo flooring is integral, with a coved terrazzo base in some areas. Some spaces have terrazzo floors with an integral coved concrete base that was painted.

The first floor Sunporch and the third floor Roycroft Den have quarry clay tile floors. These were installed in 1915. The first floor Lobby and Check-in also had quarry tile floors that are either missing or have been covered with mosaic ceramic tile flooring. Base in the Sunporch is clay tile, while the base in the Roycroft Den is marble.

Mosaic tile flooring remains in the first floor Lobby, Toilet Room 333, and remnants of mosaic tile can be found scattered throughout the bath halls and other partially demolished service rooms in the building.

Historic decorative painting is found in several areas of the building. The AE Team is not aware of any comprehensive historic finishes study. Exposures in several spaces are visible. The decorative stenciling and faux painting on the Lobby ceiling have mostly been exposed to view. Stenciling is visible in the Men's Massage 116 and the second floor Billiard Room 210. Potential decorative painting may also lie beneath the walls in the Women's Cool Room 105, as well as other rooms throughout the building. Postcards show painted mural wallcoverings in the Billiard Room 105 and Roycroft Den. Remnants of potential addition painted wallcoverings were found in Women's Pack Room 101 and Women's Cool Room 105. Aside from the decorative painting, analysis of the flat painted walls and trim should also be done to document the paint layers prior to future rehabilitation.

Wood trim, paneling, cabinetry, architectural features, and doors are found throughout the first through third floors. They are in various states, depending on location. Most woodwork was left stained with a clear finish, while some locations appear to have been painted. These areas could be included in the historic paint analysis study. Providing paint analysis for the Lobby green-colored paneling should also be included, as there is no documentation found to date that identifies how that color was selected.

An updated lead paint study will be completed prior to the work. It is assumed at this time that all painted surfaces and even clear finishes on wood may contain lead.

Photographs – Interior



XA.1 – Basement B01 – Typical Conditions.



XA.2 – Basement B01 – Typical Conditions in east rooms with standing water and low head-height at ductwork in basement.



XA.3 – B10 Pool. Typical conditions at south end of pool with utilities, structural stabilization steel, and low ductwork.



XA.4 – B10 Pool – Typical conditions at pool with roof drains into pool and ductwork overhead.



XA.5 – B10 Pool Deck – Typical conditions at pool deck with low ductwork, piping, and equipment. Note, the ductwork is over the entrance stairs into the pool.



XA.6 – Elevator Pit. Typical historic elevator pit.



XA.7 – B11 Hall with low overhead beam.



XA.9 – B01 Room with standing hot spring water from crawspace.



XA.8 – B11 Hall with low overhead ducts and door to the exterior ramp. Note the sandbags in the door opening.



XA.10 – B19 Steps into crawlspace with hot spring.



XA.11 – B19 Crawlspace looking east.



XA.12 – B19 Crawlspace looking south.



XA.15 – B22 Blocked floor drain in elevator machine room.



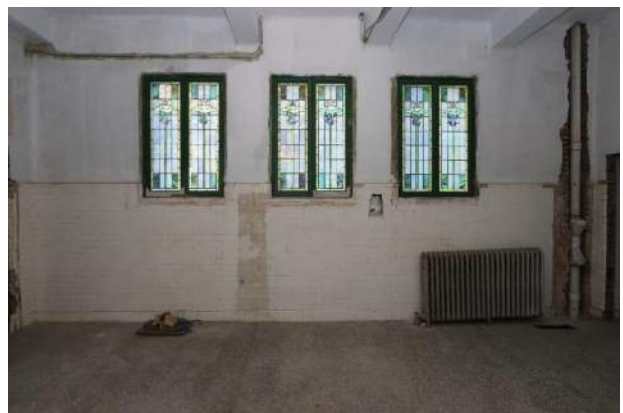
XA.13 – B01 Clogged hot spring water cistern.



XA.16 – B13 Typical low ductwork in basement.



XA.14 – B15 Typical low ductwork.



XA.17 – Women's Pack Room 101. Looking north at stained glass windows.



XA.18 – Women's Pack Room 101. Looking west.



XA.21 – Mechanical 103. Looking north.



XA.19 – Women's Pack Room 101. Looking east.



XA.22 – Check-In Office 104. Looking south.



XA.20 – Women's Hall 102. Looking west.



XA.23 – Women's Cool Room 105 Looking east.



XA.24 – Women's Hall 102. Looking west.



XA.27 – Sunporch 109. Looking south.



XA.25 – Women's Hall 102. Built-in bench and mirror.



XA.28 – Sunporch 109. Looking east toward Lobby.



XA.26 – Men's Pack Room. Looking north.



XA.29 – Sunporch 109. Looking west at main entrance.



XA.30 – Sunporch 109. Looking north.



XA.33 – Sunporch 109. Damaged mosaic border and base to be replaced.



XA.31 – Sunporch 109. Detail of light fixture and ceiling.



XA.34 – Lobby 110. Lobby, looking east.



XA.32 – Sunporch 109. Damaged mosaic border and base to be replaced.



XA.35 – Lobby 110. Lobby, looking northwest.



XA.36 – Lobby 110. Lobby, looking west.



XA.37 – Lobby 110. Lobby, looking southeast.



XA.38 – Hall 110A. Restored hallway with mosaic flooring and coffered ceilings.



XA.39 – Hall 110A. Restored hallway with mosaic flooring and coffered ceilings.



XA.40 – Hall 110E. Contemporary elevator in old hall. Note the decorative plaster ceiling.



XA.41 – Hall 110E. View from elevator hall into Lobby.



XA.42 – Stair Hall 112B. Original caged elevator.



XA.44 – Stair Hall 112B. Original cast iron stairs with marble treads.



XA.43 – Stair Hall 112B. Original cast iron stairs with marble treads.



XA.45 – Stair Hall 112B. Concrete stair to basement.



XA.46 – Men's Bath Hall 113. Skylight in Men's Bath Hall, looking south.



XA.49 – Men's Bath Hall 113. Detail of center skylight.



XA.47 – Men's Bath Hall 113. Skylight in Men's Bath Hall, looking north.



XA.50 – Men's Bath Hall 113. Detail of stained wall tiles and tiled ceiling.



XA.48 – Men's Bath Hall 113. Detail of tiles barrel vaults.



XA.51 – Men's Bath Hall 113. Detail of flooring variations.



XA.54 – Women's Bath Hall 114. Looking northwest.



XA.52 – Women's Bath Hall 114. Bath Hall, looking east.



XA.55 – Women's Bath Hall 114. Bath Hall, Skylight, looking north.



XA.53 – Women's Bath Hall 114. South wall.



XA.56 – Men's Cool Room 115. Looking east.



XA.57 – Men's Cool Room 115. Tile wainscoting and sink



XA.60 – Men's Cool Room 115. Steam cabinet or laundry.



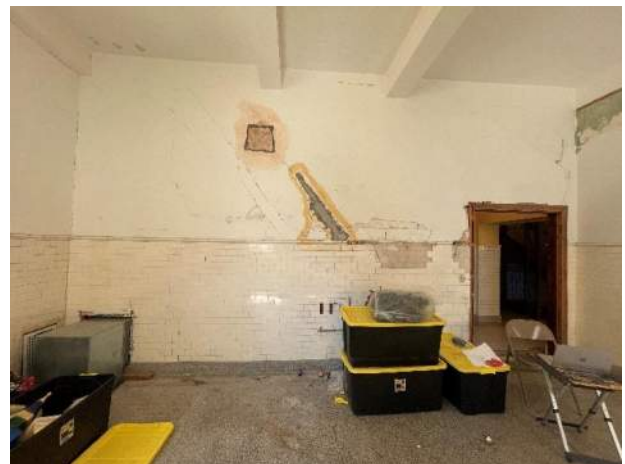
XA.58 – Men's Cool Room 115. Looking South at chases.



XA.61 – Men's Massage Room 116. Looking southwest.



XA.59 – Men's Cool Room 115. Looking west toward Room 116.



XA.62 – Men's Massage Room 116. Looking north.



XA.63 – Men's Massage Room 116. Duct through floor and wall.



XA.66 – Women's Massage 201. Looking east.



XA.64 – Women's Hall 200. Looking west.



XA.67 – Women's Massage 202. Looking east.



XA.65 – Women's Massage 201. Looking south.



XA.68 – Women's Dressing 203. Looking north.



XA.69 – Women's Dressing 203. Looking south.



XA.72 – Women's Dressing 203. Looking west.



XA.70 – Women's Cool Room. Looking southeast.



XA.73 – Men's Dressing 205. Looking north.



XA.71 – Women's Dressing 203. Detail of faux tile walls.



XA.74 – Men's Dressing 205. Detail of cracks in floor.



XA.75 – Men's Dressing 205. Looking south.



XA.78 – Billiard Room 210. Looking south.



XA.76 – Employee Lounge 206. Looking north.



XA.79 – Billiard Room 210. Looking west.



XA.77 – Employee Lounge 206. Looking south.



XA.80 – Billiard Room 210. Looking north.



XA.81 – Billiard Room 210. Looking east.



XA.84 – Stair Hall 217.



XA.82 – Hall 211. Looking north.



XA.85 – Roycroft Den 300. Looking south.



XA.83 – Stair Hall 216. Looking south. Note the wood treads on the stairs.



XA.86 – Roycroft Den 300. Looking northeast.



XA.87 – Roycroft Den 300. Detail of nook



XA.90 – Hall 302. Looking north.



XA.88 – Women's Stair 310. Looking east.



XA.91 – Men's Stair 303. Looking west. Note the ladder on the wall is the roof hatch.



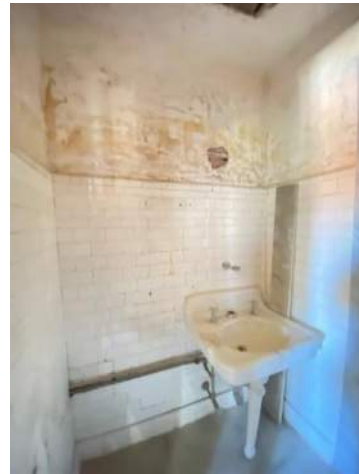
XA.89 – Hall 302. Looking northwest.



XA.92 – Men's Stair 303. Looking northeast.



XA.93 – Women's Lounge 304. Looking southwest.



XA.96 – Women's Toilet 304A.



XA.94 – Women's Lounge 304. Looking north.



XA.97 – Women's Toilet 304A.



XA.95 – Women's Lounge 304. Looking east.



XA.98 – Women's Closet 304B.



XA.99 – Women's Lounge 305. Looking north.



XA.102 – Men's Lounge 306. Looking east.



XA.100 – Women's Toilet 305.



XA.103 – Men's Lounge 306. Looking northeast.



XA.101 – Women's Lounge 305. Looking east.



XA.104 – Men's Lounge 306. Looking northwest.



XA.105 – Men's Lounge 306. Looking west.



XA.108 – Dressing Rom 309. Looking south.



XA.106 – Toilet 308. Looking east.



XA.109 – Dressing Rom 309. Looking south at detail at top of wall.



XA.107 – Toilet 308A.



XA.110 – Hall 310. Looking east.



XA.111 – Hall 310. Looking west.



XA.114 – Maurice Office 311. Looking at infilled skylight.



XA.112 – Maurice Office 311. Looking west.



XA.115 – Dressing Room 312. Looking north.



XA.113 – Maurice Office 311. Looking north.

2.6 - Structural - Existing Conditions

Refer to the Existing Conditions Drawings at the end of Chapter 2 and the Structural Assessment Tables in Appendix G.

The Maurice Bathhouse is constructed of reinforced concrete slabs and beams, with brick masonry load bearing walls. Several previous reports and documents for the structure were reviewed during this assessment.

The assessment of the Maurice building was primarily visual in nature, with some selective demolition performed. Ground penetrating radar (GPR) was used by an independent contractor in several locations, such as slabs and beams, to determine the approximate location and spacing of reinforcing steel within the concrete substrate. In three locations on overhead beams, chipping of the concrete and some plaster finishes was performed to accurately measure the location and size of reinforcement, which could not be accomplished with GPR alone. The crawlspace in the east side of the basement was not able to be tested as part of the Pre-Design phase, due to the confined and temperature conditions. This space is very hot and humid, with water dripping from the underside of the concrete first floor structure. It is very likely that a significant amount of deterioration may be found in this area.

Current findings were compared to the 1984 Pitts and Associates report and drawings, which performed similar tasks in other locations. The findings of the Pitts report, as well as the 1973 HSR, 1991 Investigation of Deterioration, and 2004 HSR were somewhat consistent, with some reports going into greater detail of the existing conditions than others. Additionally, with several rounds of previous repair efforts, many but not all the structural concerns have been addressed over the years. The observations and documented deterioration for this current assessment highlight repairs that are still needed at this time.

Consistently throughout the previous reports were comments regarding the downward movement of the west elevation and cracking on the exterior walls. The floors of the front rooms are sloped downward to the west. In Room 105 (Women's Cool Room), the difference in the floor elevation from the east wall to the west wall was over 4-inches.

Based on the 2002 stabilization drawings and evidence of concrete slab replacement in the basement, the west portion of the structure has been stabilized with underpinning piers. In the same project, cracks on the interior of the brick were addressed, and where crack repairs have been performed, the cracks on the interior have not recurred, indicating that at the present time, the underpinning is performing adequately. Other cracks are present throughout the remainder of the structure, and these were documented in this assessment.

In the first floor framing below Cloakroom 117, there is a large penetration made for HVAC over the basement pool. This cutout has severely weakened the slab in the surrounding area.

The skylights in the northeast (1-NE) and southeast corners (3-SE) of the Maurice are supported on short wood stud walls over the concrete framing. One of the short stud walls was measured to be out of plumb, leaning outward due to lateral thrust from the skylight. The northeast skylight has two horizontal wood members spanning across the skylight opening, helping to alleviate this condition. The southeast skylight has no such members and is more susceptible to outward leaning or rotation of these walls. It is recommended that new tension

members be installed. In addition, it is unclear if the existing wood framing is pressure treated or otherwise able to perform adequately in high moisture conditions.

The framing above the Roycroft Den 300 on the third floor under the skylight is problematic. The existing construction includes large wood joists and steel tension rods. Decorative woodwork that once supported the laylights hides the structural components from view. The woodwork has become disconnected in places, and temporary straps were added to hold it in place. There are signs of deterioration on the joists, and it is unclear if the steel rods are performing as intended.

The attic over the easternmost portion of the Maurice is accessed via Window 237. The attic has a concrete floor and short concrete walls. On top of the walls are short stud walls supporting wood framing for the roof. Outward thrust from the roof has caused the short stud walls to lean or rotate outwards. This is very apparent within the attic space, and the transition line between the concrete and the stud walls is visible on the exterior.

Photographs – Structural



S.1 – Typical overhead beam repair due to original construction.



S.2 – Typical overhead slab repair area due to corrosion of reinforcing steel.

2.7 - Mechanical - Existing Conditions

Refer to the Mechanical Existing Conditions Drawings at the end of Chapter 2 and the Mechanical Assessment Tables in Appendix G.

Cooling

The building is currently only cooled by an existing air handling unit (AHU-1) that was installed in the early 2000's. This unit serves the first floor only and the ductwork is routed in the basement. Therefore, the remainder of the building, except for the elevator equipment room is neither cooled nor dehumidified. The cooling source for the air handling is a 30 ton condensing unit located on the north side of the building. As these units were installed in around 2004, the units are almost 20 years old and close to their useful life spans

Heating

The building was originally heated by gas fired steam boilers located in the basement of the building. Those boilers served steam radiators and a heating-ventilating unit to provide heating for throughout the building. The boilers, heating-ventilating unit, and most of the radiators have been removed and what remains appears to be original to the building.

Like cooling, the building is currently only heated by AHU-1. The heating source is provided by a gas fired hot water boiler installed at the same time as the air handling unit. This boiler was designed to serve both AHU-1 and zoned duct heating coils located in the main ductwork in the basement. These coils were never connected and therefore, the only heating is provided by the main heating coil in AHU-1. This boiler was installed at the same time as the air handling unit and is not sized to serve the remainder of the building and is more than half-way into its typical lifespan.

Ventilation

As noted above, the old heating-ventilating unit has been removed as well as most of the original ductwork. The air-handling unit installed around 2004 only serves the first floor and was designed to provide the estimated minimum outside air (not economizer cycle) to the first-floor areas it was designed to serve. A series of propeller exhaust fans and louvered intakes were installed around 2004 to provide ventilation to the basement, second, and third floor areas not served by AHU-1. The propeller fans are typically located interior to the building on the north side of the building with the intake louver/dampers located on the south side of the building to draw air across the interior of the building when either the space temperatures became too warm or humid. These systems will not be required when the building becomes occupied.

Since the building is not occupied, there are no functional general exhaust systems. There is, however, an exhaust fan located in the basement and ducted to the east basement confined crawlspace where the spring is flowing. The fan was designed to operate when the humidity level in the crawlspace became too high and is to exhaust the humid air to the outside with make-up air coming through louvers located on the south side of the basement.

The fan was not working automatically during the AE Team field work, but team members were able to manually start the fan to determine that the fan was functional. The fan controls need to be repaired to working condition, so the fan will run when the crawlspace becomes too humid.

Photographs – Mechanical



XM.1 Hale and Maurice
Condensing Units



XM.3 Existing Ductwork



XM.5 Crawlspace Exhaust Fan



XM.2 Existing Air Handling Unit



XM.4 Existing Boiler



XM.6 Propeller Exhaust Fan



XM.7 Elevator Equipment Room
Condensing Unit



XM.9 Abandoned Steam Piping



XM.8 Abandoned Radiator



XM.10 Abandoned Ductwork

2.8 - Plumbing - Existing Conditions

Refer to the Plumbing Existing Conditions Drawings at the end of Chapter 2 and the Plumbing Assessment Tables in Appendix G.

Domestic Water Service

The building is currently served by a 2" water service entering the south end of the building in the southwest corner of the basement pool room. The service is protected by a 1-1/2" reduced pressure principal backflow preventer. Both the service and backflow preventer will be too small to serve the future use of the building. They are also located where the possible future reuse of the pool is proposed and will need to be removed.

Domestic Hot Water

There is currently no domestic hot water located in the building except for a small electric water heater serving the temporary restroom located on the first floor.

Domestic Water Piping

There is no currently operating domestic water piping distribution except that serving the temporary restroom in Room 105 and an irrigation system manifold located in the southwest corner in the basement. Most of the original water distribution has been removed and what remains is too old to reuse. There is a relatively new irrigation manifold system located in the northwest corner of the basement pool room. The irrigation manifold locations will conflict with the proposed future use of the basement and need to be relocated.

Sanitary Waste

An existing 4" sanitary main exits the building on the north side of the building in the basement. Depending on the number of plumbing fixtures utilized by future tenants this main may be big enough to serve the future use of the building. Most of the original waste and vent piping has been removed and any remaining piping shall be removed and not reused due to the age of that piping.

Storm Water

The main roof is currently drained by 4 newer roof drains located in the corners of the building. Overflow protection is provided by parapet scuppers at the drain locations. The drains appear to be in good shape except that they have plastic strainer domes that are loosely connected to the drain body. The drains are connected to risers routed down in the exterior walls to the basement where the southeast and northeast risers collect and dump into the abandoned pool. The northwest and southwest risers dump directly into the pool. The pool drain appears to be connected to the city storm sewer. This is acceptable for drainage of the roof. However, if the pool is reused, the drain piping needs to be rerouted from the pool and pool drain removed from the storm sewer system. The lower interior roof is also served by similar drains, but overflow protection for that roof was not readily visible. The routing of the roof drain for the interior roof was not visible. The lower southeast corner roof and center east roof slope to drain off the roof to gutter systems and do not have roof

drains. The northeast lower roof slopes to the northeast corner of that roof and is drained through a parapet scupper.

The main lobby roof is drained by two small roof drains located at the northwest and southwest corners of the roof and are connected to interior downspout leaders within the corner walls of the lobby and daylight out the north and south faces of the lobby walls.

There is an area drain located towards in the west end of a storm drainage runnel on the north side of the building. This runnel is discussed further in the Drainage and Irrigation section above.

Natural Gas

The existing gas service and meter is located at the northwest corner of the building and the building service enters the north wall and routes east and then rises into the first floor mechanical room to serve the existing boiler. The building piping will be too small to serve the entire future use of the building and is routed through the proposed reuse of the pool area and should be replaced.

Thermal Spring Water

There are three thermal spring water pipes roughed into the north basement. There is a 2-1/2" line, a 3" line, and a 4" line. The 2-1/2" and 3" lines are tied together in an exterior manhole located on the northwest corner of the site. One of these systems is the "cold" water system at 90 degrees F, and the other is the "hot" 140 degrees F system.

Thermal Springs

There is one or more active springs flowing into the east basement confined crawlspace. An attempt at controlling the water entering the building was installed in 2002 as part of the larger structural stabilization project. This system is failing. A waterproof barrier material was installed on top of the grade in the crawlspace to collect the water and was directed through the basement wall into four concrete cisterns located on the basement side of the wall. Drains were installed in the bottom of the cisterns and piped to a sump pit in the center of the north portion of the basement. That water is discharged to the sanitary waste main exiting the north wall of the basement by duplex sump pumps. The AE Team observed that the two eastern cisterns appeared to be dry, and the two northern pits were full. The full cisterns were not draining properly. The center/northern cistern had a pipe run across the floor to syphon off the water from the top of the basin. That basin is also leaking around its connection to the basement wall and needs to be repaired. The AE Team believes the drains in the bottom of the basins are plugged and not draining. This is causing the water in the crawlspace to overflow the collection points and back up into the stair at the access door to the crawl space. The water pours down the stairs, under the door, and into the basement. This situation needs to be further investigated to determine how to keep water out of the basement.

Photographs – Plumbing



XP.1 Fire and Water Service



XP.3 Gas Service



XP.5 Roof Drain



XP.2 Backflow Preventer



XP.4 Existing Gas Piping



XP.6 Entry Roof Drain



XP.7 Roof Drainage to Pool



XP.10 Springs Flooding Basement



XP.13 Silted Up Runnel Drain



XP.8 Existing Waste Piping



XP.11 Springs Collection Basin Leak



XP.9 Existing Plumbing Fixture



XP.12 Existing Irrigation System

2.9 - Electrical - Existing Conditions

Refer to the Electrical Existing Conditions Drawings at the end of Chapter 2 and the Electrical Assessment Tables in Appendix G.

Service to Building

The existing electrical service originates from a utility transformer that is installed near Hale Bath House to the north of Maurice Bathhouse. The service is metered at the utility transformer. Underground conductors are routed from the transformer to an exterior mounted 1200 amp, service disconnect switch that is fused at 1200 amps. The existing service voltage is 120/208 volt, three phase, 4 wire. The existing system does not have surge protection.

Distribution

Conductors leave the exterior disconnecting point and enter the basement of Maurice and then route up to a main distribution panel on first floor in Mechanical 103. The first floor distribution panel is in good condition but will need to be upgraded to accommodate future tenant functions. The existing distribution panel serves existing panelboards on first, second, and third floors. All existing panelboards should be removed due to future tenant needs and existing damage or issues noted in the assessment.

Generator

The building does not have any existing emergency lighting or exit signage that is functional. The existing emergency back-up, where required, was accomplished using batteries. There is no generator.

Lighting

It is planned to remove all existing exterior and interior light fixtures. Most of the existing lighting in the building is of the temporary type. There is a small amount of LED lighting at the main entry way. The existing LED lighting control at the main entry was not functional.

Branch Circuits

It is recommended to remove all existing conduit and branch circuits due to the deterioration of the historic conduit and receptacles that are buried in the concrete structure. A large percentage of the existing conduit system is damaged and therefore unusable.

Information Technology (IT)

The existing IT service enters the basement of the building at the southwest corner. The service is installed at the south end of the pool and spa area. The existing service will need to be relocated if the pool is to be used. Special consideration will need to be given to the relocation as the service also provides connectivity to the pump house and visitor's center. More investigation is needed with the Park and Service Provider to determine exact course of action for relocation.

Security

The existing security system is not functional. The existing security system is not functional. All existing security alarm devices and associated wiring should be removed. A new security system is planned and should be provided based on the requirements of the potential tenant.

Lightning Protection

The existing building does not have a lightning protection system. It should be discussed if the renovated building should be provided with one.

Photographs – Electrical



XE.1 Existing Panel with FACP CB in Off position



XE.3 Existing Panelboard to be Removed



XE.5 Exterior Splices



XE.2 Basement Wireway



XE.4 Roof Hatch



XE.6 Exposed Wiring



XE.7 Temporary Lighting



XE.10 Existing Damaged Conduit



XE.13 Panel for Temporary Service



XE.8 Temporary Wiring



XE.11 Existing Security System



XE.14 Missing Light Fixture Openings



XE.9 Temporary Wiring and Distribution



XE.12 Open Wiring



XE.15 Junction Box with Missing Cover Plate



XE.16 Junction Box with Partial Cover Plate



XE.19 Open Conduit System



XE.22 Light Fixture Support



XE.17 Junction Box with Missing Cover Plate



XE.20 Junction Box with Partial Cover Plate



XE.23 Seal Openings



XE.18 Junction Box with Missing Cover Plate



XE.21 Ground Connection



XE.24 Exterior Exit Door



XE.25 Elevator Equipment
Entry Door



XE.28 Rust on Electrical
Equipment



XE.31 Rusted Conduit



XE.26 Elevator Equipment
Entry Door



XE.29 Open Dead Front



XE.32 Rusted Conduit



XE.27 IT Service



XE.30 Seal Penetrations



XE.33 Support Wiring



XE.34 Missing Cover Plates



XE.37 Broken
Conduit/Grounding System



XE.40 Broken
Conduit/Grounding System



XE.35 Support Wiring



XE.38 Façade Lighting



XE.41 Rust on Electrical
Equipment



XE.36 Incomplete Open
Wiring



XE.39 Broken
Conduit/Grounding System

2.10 - Fire Protection Existing Conditions -

Refer to the Existing Conditions Drawings at the end of Chapter 2 and the Fire Protection Assessment Tables in Appendix G.

Fire Water Service

The building is currently served by a 6" fire water service located in the southwest corner of the basement pool room, adjacent to the domestic water service. As noted for the domestic water service, this location conflicts with the proposed future use of rehabilitating the pool.

If standpipes are required, it will need to be determined what the required pressure is at the top of the standpipes.

Fire Suppression

The building is not currently sprinklered and has no other means of fire suppression.

Fire Alarm

The building has an existing fire alarm system in limited areas. The existing system is not functional. All existing fire alarm devices and associated wiring should be removed.

Photograph – Fire Protection



XF.1 Fire and Water Service

2.11 - Accessibility - Existing Conditions

Refer to Appendix 'D' for the Universal Design and Scoping Form for ABAAS Facilities.

NPS Management Policies 2006 and NPS Director's Order #42 requires facilities to be universally designed and accessible to every segment of the population. The existing building and site were reviewed as part of the overall building assessment, considering the 7 Principles of Universal Design, the Architectural Barriers Act Accessibility Standards (ABAAS), and the United States Access Board's Americans with Disabilities Act Accessibility Guidelines for buildings and facilities (ADAAG). Both ABAAS and ADAAG are considered because the building may be utilized by the NPS or a public tenant. Additionally, Accessibility & Universal Design Standards for Outdoor Developed Areas, Public Rights of Way, Transportation Facilities, and DSC requirements were considered.

Exterior

The Maurice Bathhouse is on Central Avenue within the Bathhouse Row/Architectural Park. Although pedestrian routes through the building and site do not follow the same path, equivalent means of accessibility are provided. The primary (west) building entrance is accessed via a stair from the west sidewalk to the entry landing centered on the front door and a ramp accessed from the north.

The ramp from the north of the building to the main entrance is the only accessible route to the building's interior. The ramp slope is approximately 5%. Although this is greater than DSC design requirements for sloped walking surfaces, it does align with ABAAS and ADAAG maximum slope requirements. The width and landings are sized appropriately. Railings do not include required extensions at the top and bottom, and there is no railing at ramp sections that are immediately adjacent to the building. Per ABAAS and ADAAG requirements, this would be categorized as a sloped walking surface and would not require handrails.

Ramps positioned on both sides of the west entry stair do not meet accessibility requirements for reasons including ramp slope greater than 7.5%, handrails positioned on only one side of each ramp, handrails without extensions at top and bottom, and concrete settlement resulting in a step at the top of each ramp.

An exterior ramp to the basement level is on the south side of the building. This ramp also does not meet accessibility requirements for reasons including a 6-inch step at the top landing, slope greater than 7.5%, a textured ramp surface with protrusions spaced approximately 12-inches on center, and lack of intermediate landings and railings.

The accessible components found throughout the site are in fair condition overall. The accessible route from the north of the building was installed as part of the 2002 building

stabilization project and is in good condition. The other building access ramps and the main stair are in poor condition with settlement and cracking in the concrete.

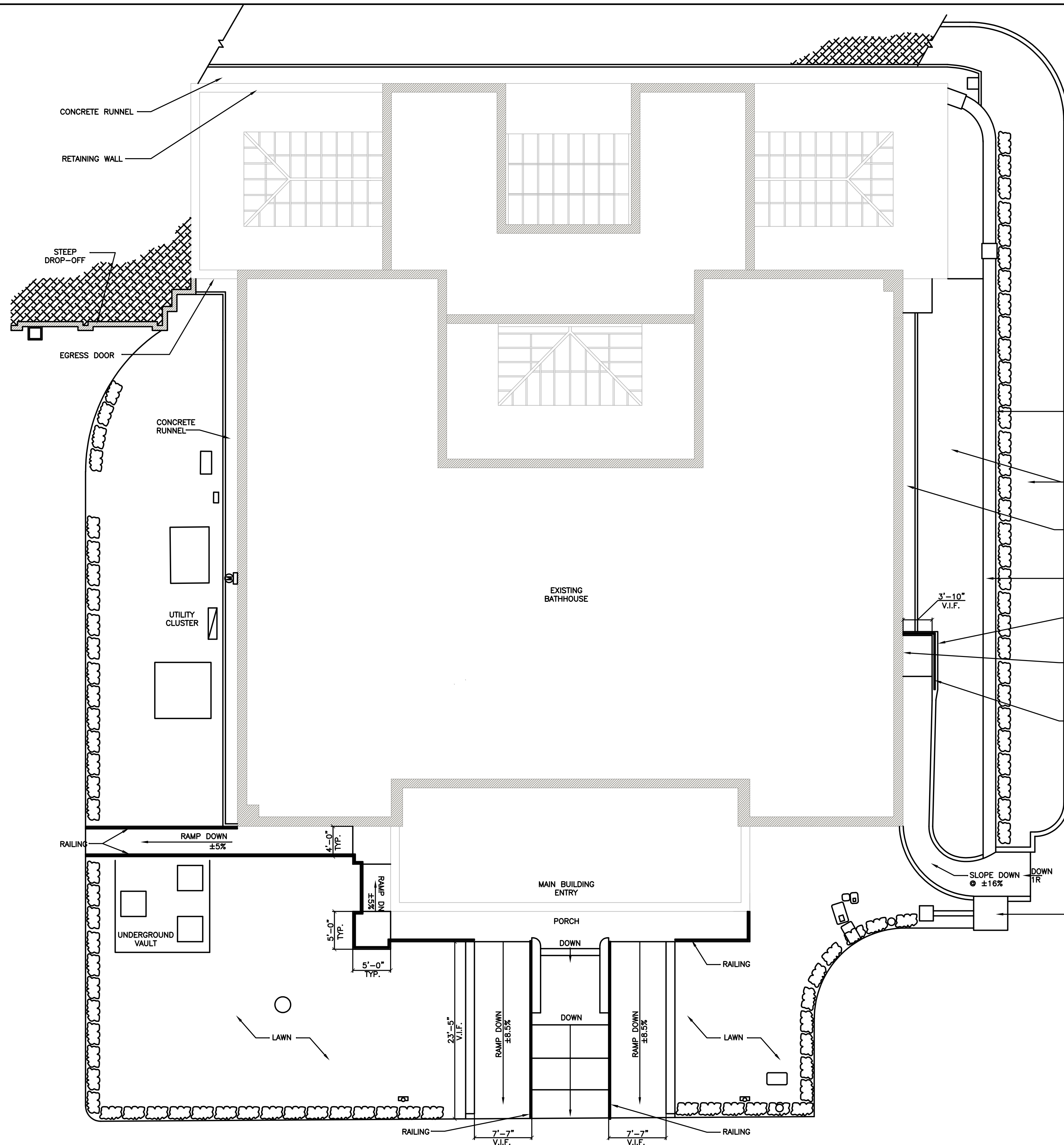
The site does not include any dedicated parking. A shared drop-off area outside of the project boundary is located within 200 feet of the entry at the Formal Entry. There is no existing permanent signage identifying this as a drop-off area. The area is designated by a low curb at the street, change in paving, and a series of concrete bollards. Information about the drop-off area including compliance with accessibility requirements, will be explored further during the Schematic Design (SD) phase after the site survey is complete.

Interior

The building includes three floors and a basement. Access between interior floor levels is provided by stairs and an elevator. Due to the historic components, such as the doors and countertops, many minimum dimension accessibility standards are not fulfilled.

Contemporary requirements, such as drinking fountains and railing extensions are missing. Because the building has been abandoned, the toilet rooms have deteriorated or are missing and do not fulfill the accessibility minimums.

EXISTING CONDITIONS DRAWINGS



LEGEND

	EXISTING SHRUB
	EXISTING SIGN
	PROJECT BOUNDARY

PROJECT BOUNDARY AT RETAINING WALL. SCOPE OF WORK DOES NOT INCLUDE LANDSCAPING BEYOND THIS POINT.

LAWN

CONCRETE RUNNEL

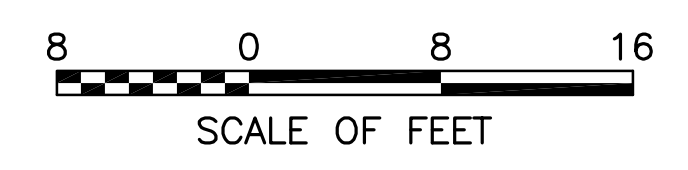
STONE RETAINING WALL

CONCRETE RETAINING WALL

LOWER LEVEL SERVICE ENTRY

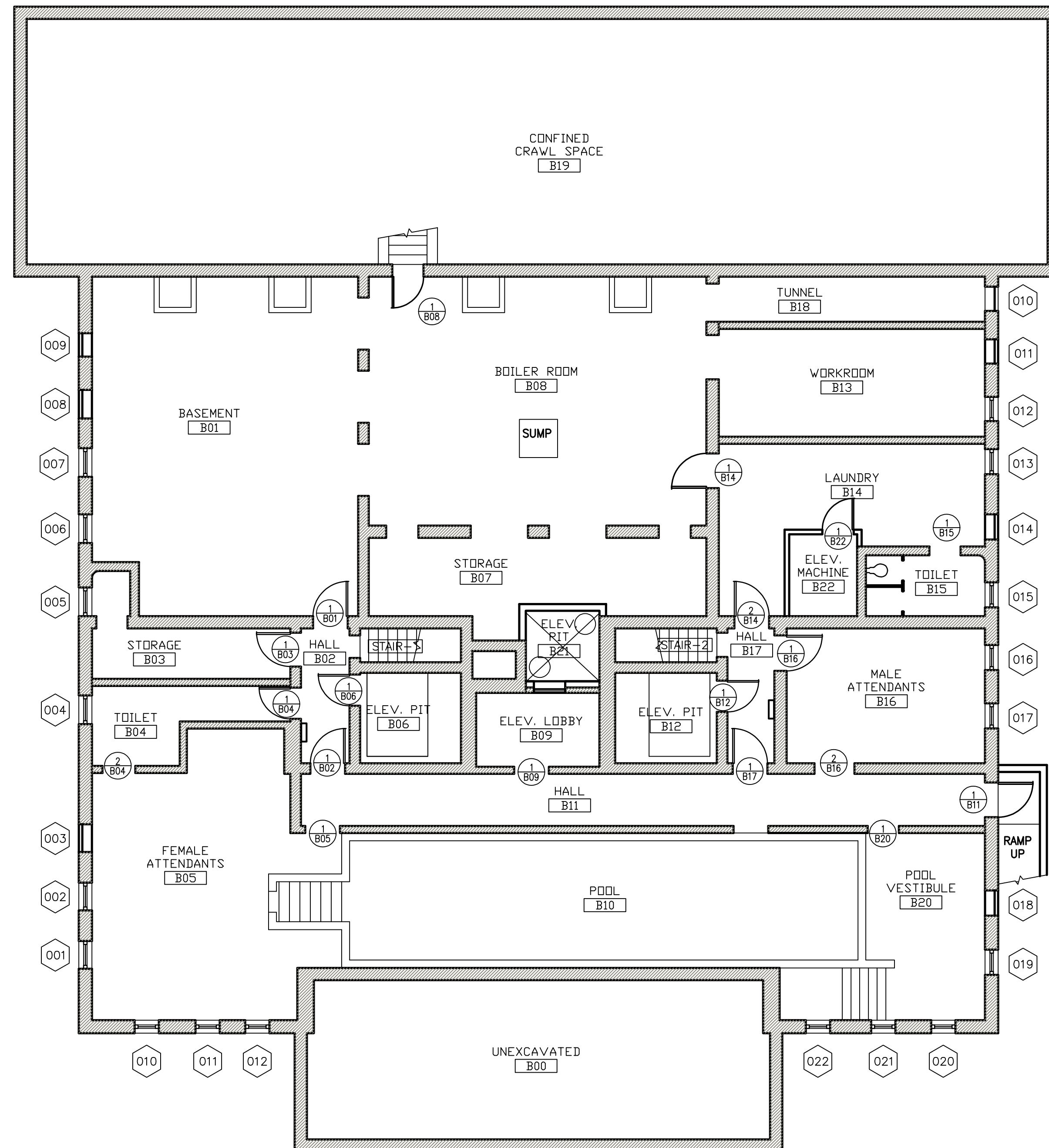
GUARDRAIL

PROJECT BOUNDARY DOES NOT INCLUDE SCULPTURAL ELEMENTS.

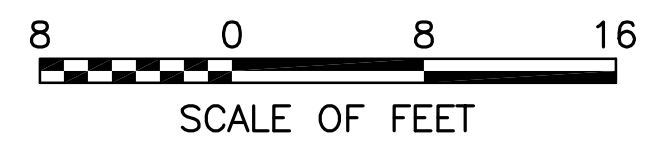


1 SITE PLAN
c1 1/8" = 1'-0"

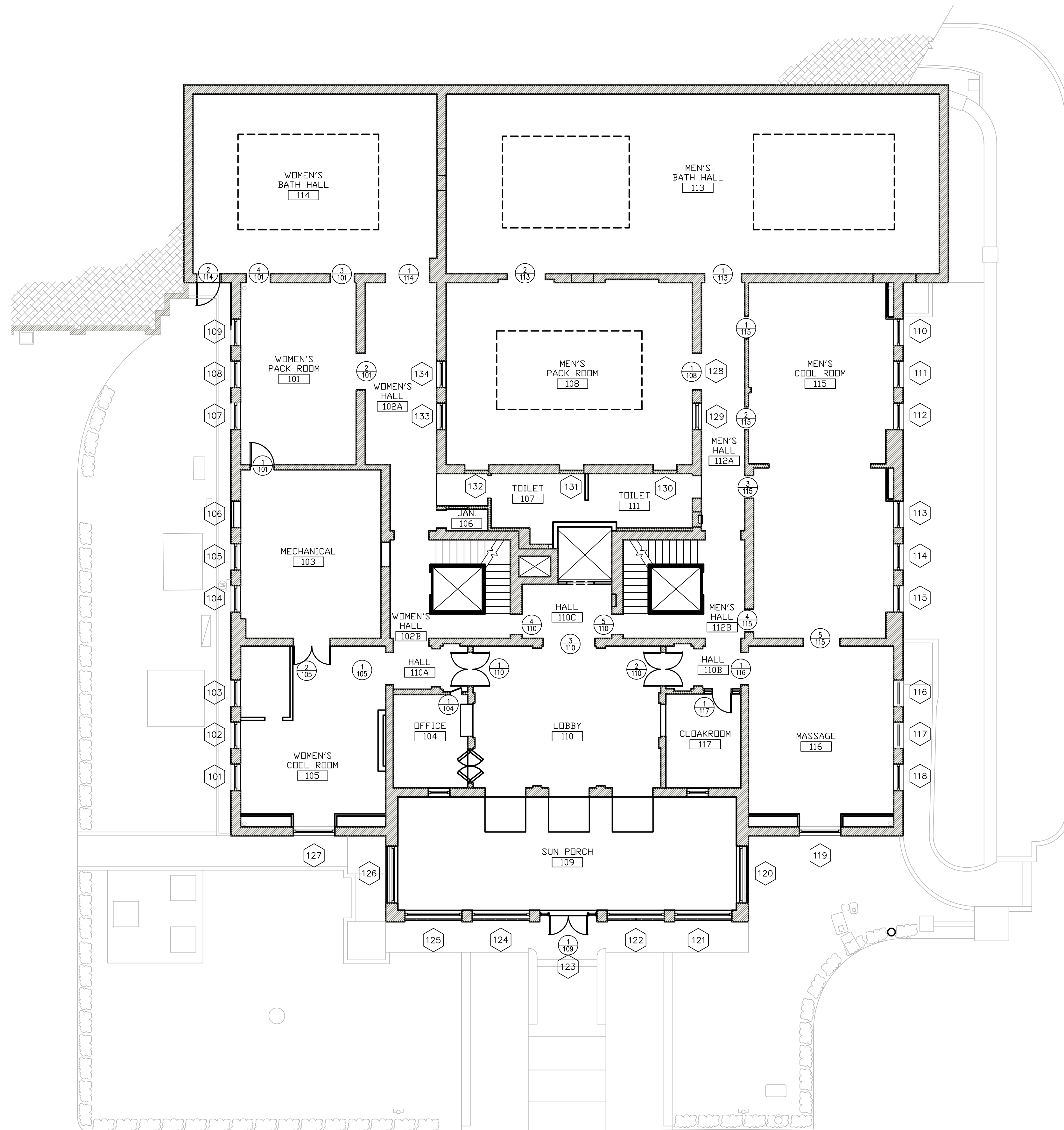
 1701 Oak Street, Suite 100 Ph. 816-474-0900 www.strata-arch.com	DESIGNED: JH GK	SUB SHEET NO. C1	TITLE OF SHEET MAURICE BATHHOUSE SITE PLAN	DRAWING NO. 128 180181
	TECH. REVIEW: JH		PRE-DESIGN CONDITION ASSESSMENT AND TREATMENT PLAN FOR THE MAURICE BATHHOUSE AND LIBBY MEMORIAL PMC	PMIS/PKG NO. 318915
	DATE: 6/29/22		HOT SPRINGS NATIONAL PARK	SHEET 1 OF 24



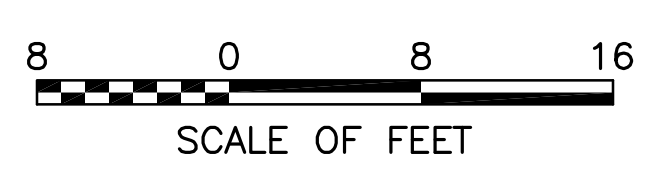
1 MAURICE EXISTING BASEMENT FLOOR PLAN
 AO 1/8" = 1'-0"



 1701 Oak Street, Suite 100 Ph. 816-474-0900 www.strata-arch.com	DESIGNED: CA	SUB SHEET NO. AO	TITLE OF SHEET MAURICE BATHHOUSE EXISTING BASEMENT FLOOR PLAN PRE-DESIGN CONDITION ASSESSMENT AND TREATMENT PLAN FOR THE MAURICE BATHHOUSE AND LIBBEY MEMORIAL PMC HOT SPRINGS NATIONAL PARK	DRAWING NO. 128 180181
	TECH. REVIEW: AG			DATE: 6/29/22



1 MAURICE EXISTING FIRST FLOOR PLAN
 A1 1/8" = 1'-0"



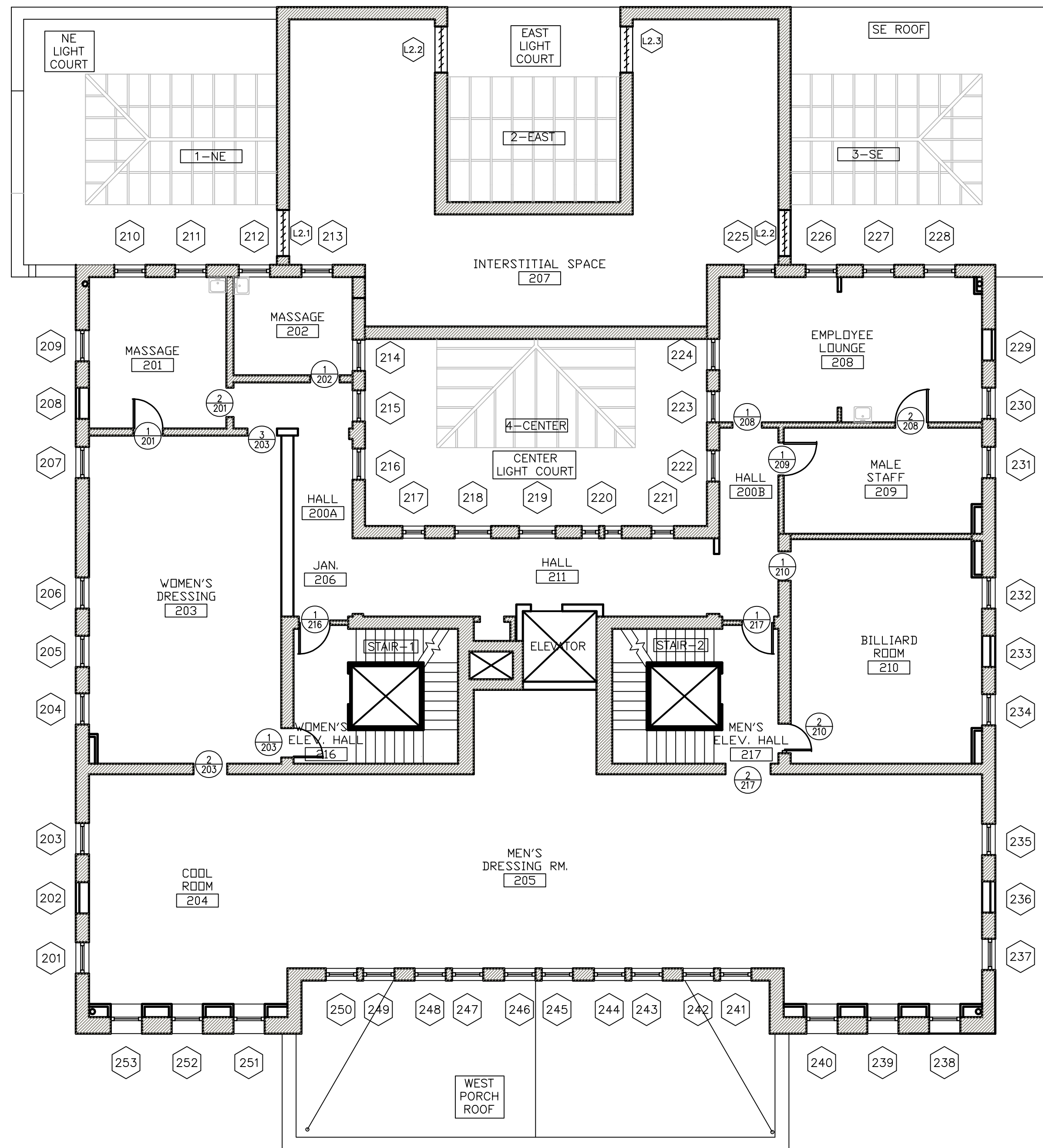
STRATA
 ARCHITECTURE + PRESERVATION
 1701 Oak Street,
 Suite 100
 Ph. 816-474-0900
 www.strata-arch.com

DESIGNED:
 CA
 GADD
 CA
 TECH. REVIEW:
 AG
 DATE:
 06/29/22

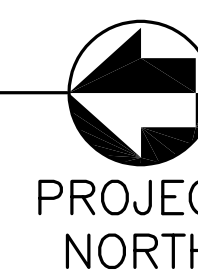
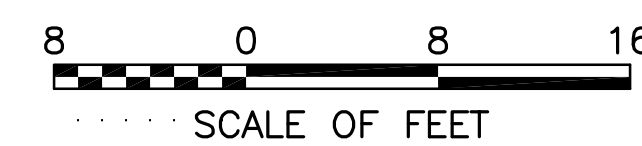
SUB SHEET NO.
 A1

TITLE OF SHEET
 MAURICE BATHHOUSE EXISTING
 FIRST FLOOR PLAN
 PRE-DESIGN
 CONDITION ASSESSMENT AND TREATMENT
 PLAN FOR THE MAURICE BATHHOUSE
 AND LIBBEY MEMORIAL PMC
 HOT SPRINGS NATIONAL PARK

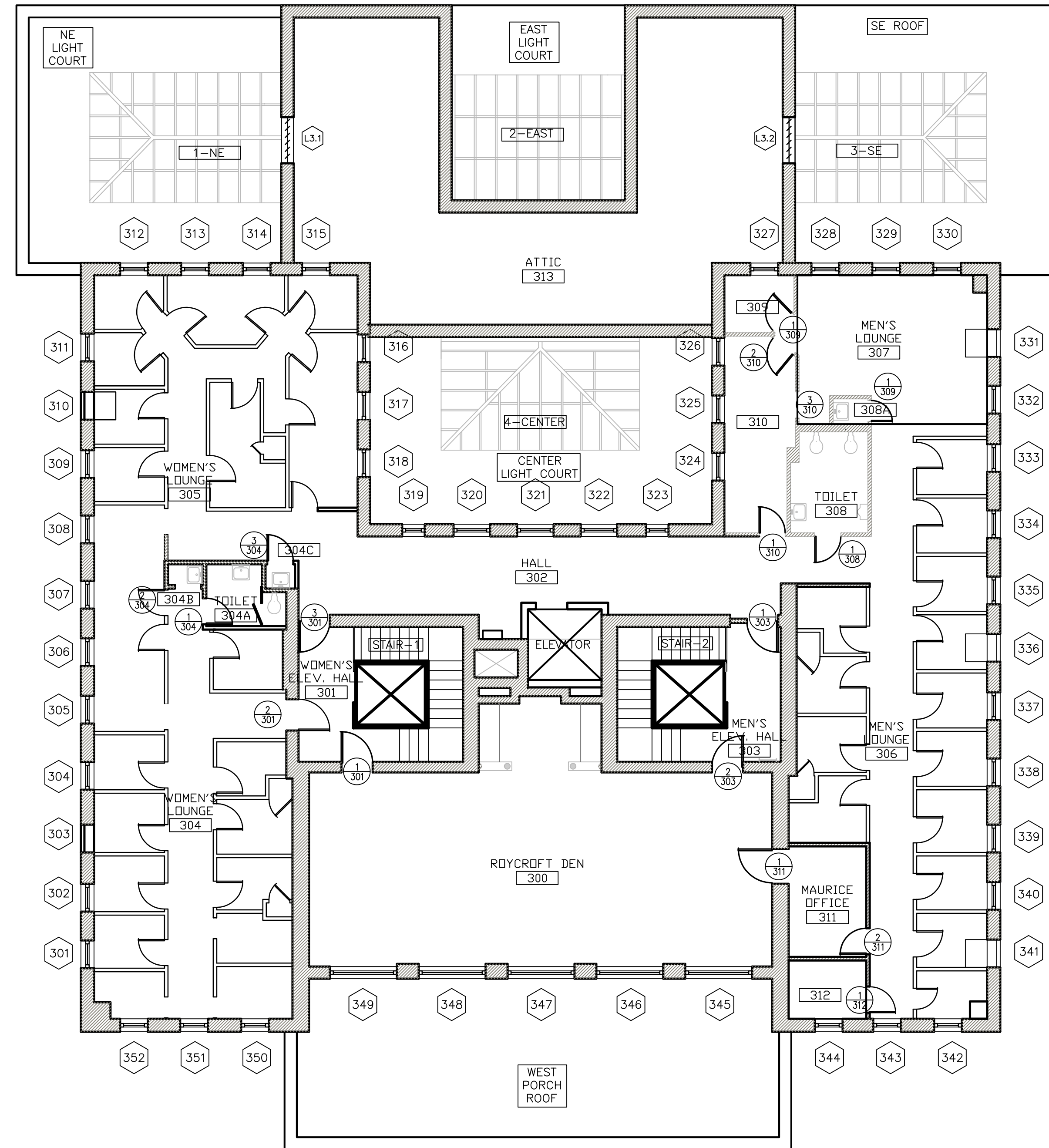
DRAWING NO.
 128
 180181
 PMIS/PKG NO.
 318915
 SHEET
 3 OF 24



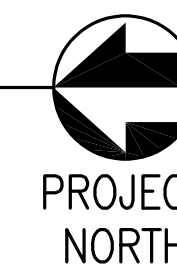
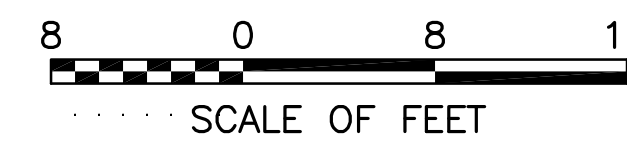
1 MAURICE EXISTING SECOND FLOOR PLAN
 A2 1/8" = 1'-0"



 1701 Oak Street, Suite 100 Ph. 816-474-0900 www.strata-arch.com	DESIGNED: CA	SUB SHEET NO. A2	TITLE OF SHEET MAURICE BATHHOUSE EXISTING SECOND FLOOR PLAN PRE-DESIGN CONDITION ASSESSMENT AND TREATMENT PLAN FOR THE MAURICE BATHHOUSE AND LIBBEY MEMORIAL PMC HOT SPRINGS NATIONAL PARK	DRAWING NO. 128
	TECH. REVIEW: AG			DATE: 06/29/22
				SHEET 4 OF 24



1 MAURICE_EXISTING THIRD FLOOR PLAN
 A3 1/8" = 1'-0"



 1701 Oak Street, Suite 100 Ph. 816-474-0900 www.strata-arch.com	DESIGNED: CA	SUB SHEET NO. A3	TITLE OF SHEET MAURICE BATHHOUSE EXISTING THIRD FLOOR PLAN	DRAWING NO. 128 180181
	TECH. REVIEW: AG		PRE-DESIGN	PMIS/PKG NO. 318915
	DATE: 06/29/22		CONDITION ASSESSMENT AND TREATMENT PLAN FOR THE MAURICE BATHHOUSE AND LIBBEY MEMORIAL PMC	SHEET
			HOT SPRINGS NATIONAL PARK	5 OF 24



Maurice Bathhouse, Sun Porch Tile Detail (STRATA, 2022)

3 TREATMENT RECOMMENDATIONS

3.0 - Chapter 3 – Treatment Recommendations

3.1 - Introduction

The treatment recommendations for the core and shell rehabilitation of the Maurice Bathhouse to prepare the building for future leasing are outlined in this chapter. These recommendations are based on the updated conditions assessment of the Maurice and reference the recommendations from the Maurice Bathhouse Historic Structure Report, produced in 2004, and the Cultural Landscape Report from 2010. Proposed Pre-Design Plans can be found at the end of this chapter, Proposed Treatment Tables are in Appendix H, and the Treatment Cost Estimate is in Appendix I.

The existing condition of the building and the significant upgrades required have deterred previously interested parties from moving forward with leasing the building. The costs associated with the mechanical, plumbing, electrical, and fire protection system upgrades and physical improvements were too high to make the project financially feasible. The NPS believes it can attract more interested leaseholders for the Maurice Bathhouse by completing a significant portion of the required core and shell rehabilitation work. In commercial real estate terms, this would be a 'white box,' or a partially finished building ready for the leaseholders to customize for their intended use.

The building has been vacant since 1974. Since then, exterior maintenance has been ongoing. Windows and doors in the Sunporch were replaced in 1999. The Park contracted an extensive structural stabilization and roof repair project in 2002, which included concrete slab and beam stabilization, harnessing the hot spring in the east crawlspace, replacement of four of the skylights, repairs of the Roycroft Den skylight, construction of the accessible ramp at the front entry, demolition of mechanical, electrical, and plumbing systems throughout the building, installation of temporary mechanical ventilation systems and louvers, installation of steel doors and frames at the stair towers, and replacement of the flat roofs. Park staff completed lead paint abatement; however, the extent of the work was not documented. Park staff also began repairs in several of the first floor spaces, restoring tile wainscoting, plaster walls and ceilings, painting the Lobby woodwork, installing some contemporary and temporary lighting, and cleaning terrazzo flooring. Park staff had also begun the installation of new restrooms on the first floor, but that work halted when the new central elevator was installed. The elevator took space from the new restrooms required to meet required accessibility clearances, so the restroom project was not completed. Before 2016, the bathing stall partitions, tubs, shower stalls, and other items from the bath halls were removed. In 2018, the interior third floor dressing room partition walls were removed.

3.2 - Preservation Zones

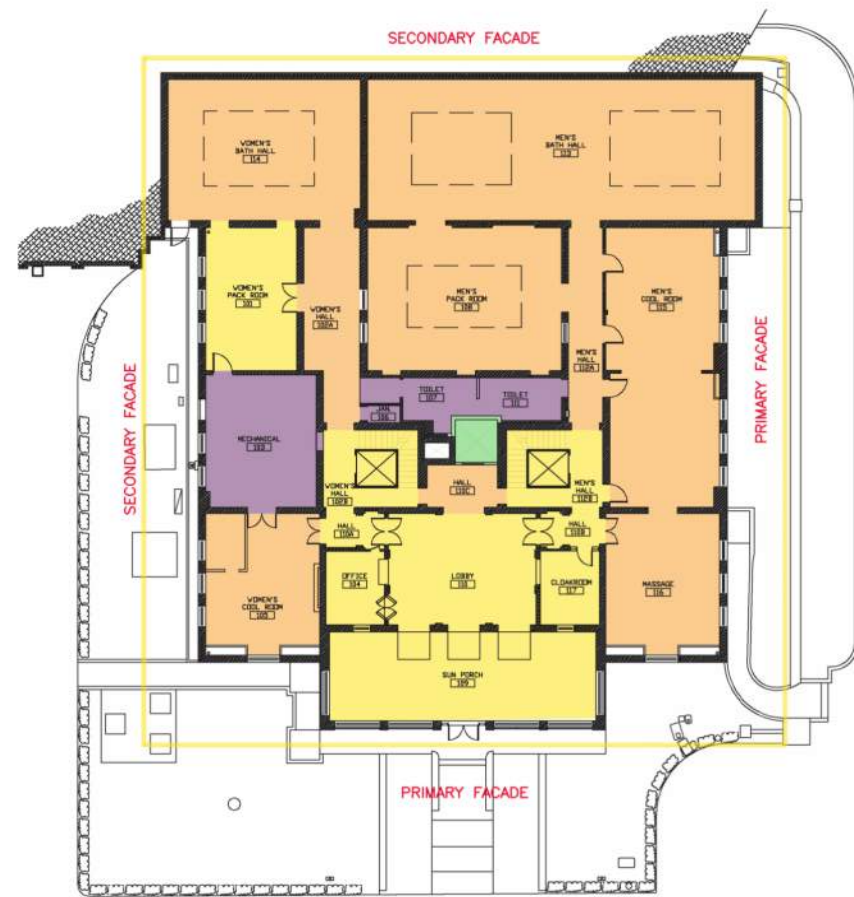
As an integral building within the National Historic Landmark Bathhouse Row District, the preservation of the Maurice building is essential. Buildings along Bathhouse Row reflect the chronological history and development of Hot Springs during the period of significance 1911 – 1947. The Maurice is a part of the cohesive row of buildings, with unique design and

construction that reflect the period of their development and address the function of providing the spring water for healing and relaxation.

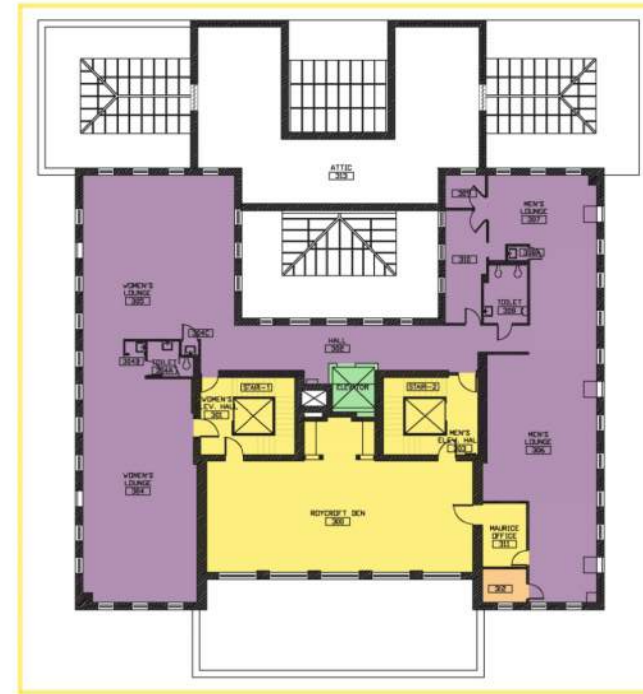
Preservation Zones for the Maurice Bathhouse are defined to inform recommended treatments for prominent spaces with historic integrity, differentiating them from spaces that have diminished integrity or are secondary in function. The Zones identify the current level of historic significance and integrity of specific building elements and individual spaces identified as significant in the HSR. These preservation zones are important to understand and apply to the design for the initial rehabilitation and future leaseholder improvements.

Preservation Zones:

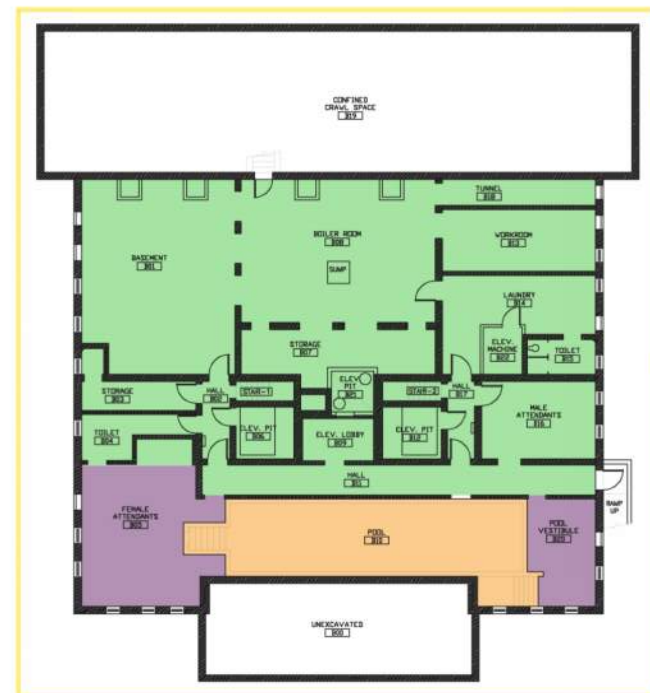
- Zone 1 (Yellow) - This preservation zone is the highest zone and includes the exterior envelope of the building and interior rooms. This zone identifies the exterior building faces and related interior components that contain significant, character-defining features of the building from the period of significance. These building elements, including materials, form, function, and craftsmanship, should be retained, preserved, or rehabilitated to the highest level within each of these designated areas. Missing items may be recreated if reliable documentation exists. Every effort should be made to conceal ductwork, conduit, piping, and fire suppression systems. New MEP equipment, grilles, receptacles, and other items should be sensitive to the historic fabric.
- Zone 2 (Orange) – This preservation zone is the second-highest zone and includes interior spaces or features with a high level of importance within the building, but they may have been modified since the original construction. These spaces contain some character-defining elements from the period of significance. Within each of these areas, original materials should be retained, preserved, or rehabilitated. However, there is more flexibility for a new use for the space or in the installation of appropriate, modern elements or equipment that should not create false historic features.
- Zone 3 (Purple) – This preservation zone is the third zone. This includes spaces that have been previously altered or spaces where historic material is lost, is represented in many other areas, or is not significant to the overall historic understanding of the building. These spaces present an opportunity for more alteration. Some historic materials that are not significant character-defining features, such as remnants of plaster walls or wall trim, may be concealed by furring walls as part of building renovations. Some historic fixtures, finishes, and equipment will be removed.
- Zone 4 (Green) – This preservation zone is the lowest zone. This includes spaces that have been significantly altered or spaces where much of the historic material is lost or is not significant to the overall historic understanding of the building. These spaces present an opportunity for more extensive alteration. Walls may be furred, and new finishes installed. Some spaces may be unfinished.



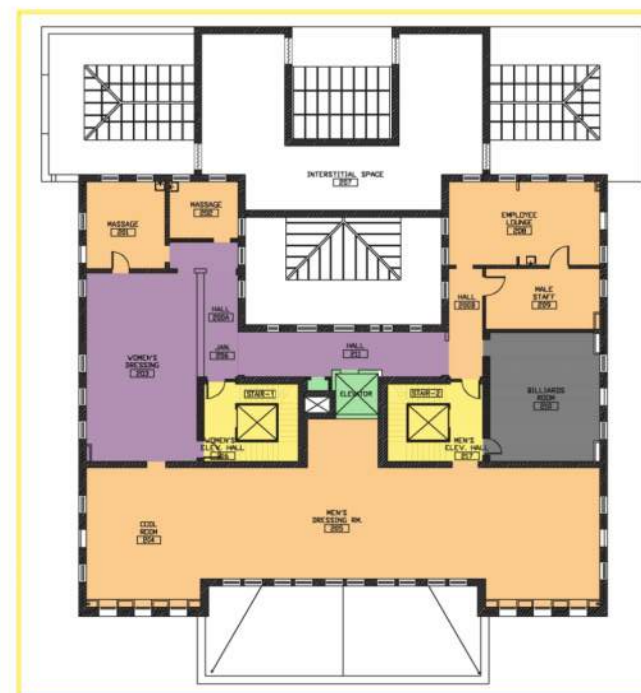
FIRST FLOOR







THIRD FLOOR



BASEMENT



SECOND FLOOR

- 
ZONE 1 (Yellow) – PRIMARY PRESERVATION ZONE – Building elements, materials, form, and craftsmanship to be retained, preserved, or rehabilitated to the highest level.
- 
ZONE 2 (Orange) – SECONDARY PRESERVATION ZONE – Original materials should be retained, preserved, or rehabilitated. This category offers some flexibility for rehabilitation and installation of appropriate, modern elements or equipment.
- 
ZONE 3 (Purple)– TERTIARY PRESERVATION ZONE – Original materials are encouraged to be retained, preserved, or rehabilitated, if possible. These areas may not contain a high number of historic features, or contains features that are numerous in other locations. This category offers more flexibility for rehabilitation and installation of modern elements or equipment, including removal of original walls and elements.
- 
ZONE 4 (Green) – NO PRESERVATION ZONE – Little or no original historic or character-defining features remain. These may be spaces that were previously renovated and historic materials were removed, or they may be tertiary spaces, such as mechanical rooms, where no character-defining features were originally present. Remaining historic features may be covered or concealed. This zone offers opportunity for extensive rehabilitation and alteration.

MAURICE PRESERVATION ZONES

3.3 - Programming, Building, and Site Information

The Design Team met with the Park, Region, and DSC to discuss the opportunities available for the rehabilitation and adaptive use of the Maurice Bathhouse. These meetings aimed to establish a baseline use for the building to design a 'white box' for future tenant finish. By selecting a preferred use for the building in Pre-Design, the Design Team can address life-safety code review, recommendations for installing new mechanical, electrical, and fire prevention systems, and identify the level of interior finishes for the planned rehabilitation. Notes from these meetings are in Appendix B.

Features and functional issues specific to the adaptive use and rehabilitation of the Maurice Bathhouse were discussed.

1. The Park would like to see a use for the Maurice that would include a level of access to the visiting public.
2. Serve pedestrians.
3. Access to the WATER. Whether through a spa type of use or other delivery.
4. Offer something that is family-oriented.
5. Parking, drop-off, and delivery are crucial functions.
6. Central Avenue traffic is a challenge. It is also a State Highway 7.
7. It would be advantageous to include a loading dock on one of the side elevations.
8. Trash storage and pickup are issues, as are cardboard storage.
9. The building is highly visible from nearly every angle, and the site is comparatively small. Therefore, the installation of specialty restaurant equipment, such as grease trap, exhaust hood fan, and mechanical systems, must avoid negative visual impacts.
10. The building is within the Hot Springs National Historic Landmark District. All work must be reviewed and approved by the Arkansas State Historic Preservation Office and the Midwest Regional Cultural Resource Specialist.
11. Mechanical and plumbing systems must address Legionella bacteria prevention.
12. Aim for a high level of 'white box' finishes to attract and accommodate a variety of tenants for optimal leasing flexibility.
13. A new fire suppression system is necessary.
14. Restoration of the historic features, such as stained glass laylights and decorative painting, may help attract a leaseholder.
15. Friends of Hot Springs has raised partial funding for restoring the Roycroft Room.

Several options for future use of the building were discussed. These included:

1. Spa –
 - a. This seems to be the best fit for the building. However, none of the original spa equipment remains, and the overall condition of much of the interior finishes in the original treatment areas is poor. Many of the features in the building remain useful in a modern spa design, such as the high windows on the second floor that allow privacy and natural light.

- b. There is a need for additional spa services in town. The Buckstaff and Quapaw are often full.
 - c. Rehabilitation of the basement pool may be an asset to future spa use.
2. Museum/Exhibit Space –
- a. Next door, the Fordyce Bathhouse provides a museum and exhibits about the Hot Springs bathhouses and the services and treatments they historically offered, so there is no need for another museum.
 - b. The building could be adaptively rehabilitated for another type of museum or exhibition space.
3. Restaurant –
- a. Parts of the Maurice would make a beautiful and unique restaurant and accommodate medium to large event spaces. However, adapting the entire building for a full-service restaurant has its challenges.
 - b. A distillery or brewpub may be an option for future use, similar to the Superior Bathhouse.
 - c. The building's various sized spaces with historic features, skylights, and stained glass windows could be ideal for events of dining rooms.
 - i. The Roycroft Den could be a memorable cocktail lounge or dining experience. The third floor location presents a concern with remotely located kitchen facilities on lower floors.
 - ii. The second floor windows are high above the finish floor, so there are no 'views' from the second floor spaces. The lack of viewing might be acceptable for event spaces but maybe not as attractive for typical dining rooms. The best views are from the third floor and the Sunporch.
 - d. Circulation for a restaurant in this multi-level building is a challenge.
 - i. The only space on the first floor suitable for a kitchen is the Women's Bath Hall in the NE corner of the floor. This area includes a skylight and a required exit from the first floor. If a kitchen were to be located in this space, a new first floor exit would be required.
 - ii. Multiple floors for a restaurant add complexity for serving food, busing tables, and internal communications. Additionally, patrons may have difficulty navigating multiple levels. Some of these challenges can be overcome by installing a freight elevator and/or a dumb waiter and offering redundant services on each level, such as beverage stations. The kitchen at the Superior Bathhouse has the kitchen on the second floor. This works because food is served on only the first and second levels. The Maurice layout is more complicated, with primary historic spaces like the Roycroft Den on the third floor.

- iii. Installing an additional elevator is costly and structurally difficult to locate and construct.
 - e. Locating a grease trap or interceptor is difficult. There is likely not enough yard space to install outdoors. The Superior Bathhouse has its grease trap indoors. These require regular service and are sized based on the volume and frequency of the restaurant and available servicing. These need to be accessible by a service truck to be pumped.
 - f. Kitchen Location and Exhaust Hood:
 - i. Appropriate locations for a kitchen in the Maurice are limited.
 - ii. Locating a full exhaust hood requires a minimum 10' ceiling, exhaust, and fresh air intake. The installation of large exterior equipment is complicated for an historic building that is visible to the public on all sides.
 - iii. A full kitchen would only work on the first and second floors due to the required ceiling height for a new commercial hood. Either area will present challenges with locating the hood, exhaust, plumbing, and food storage. Floor to ceiling height on the third floor is several feet short for a commercial exhaust hood.
 - iv. The second floor space on the west side of the building presents challenges for adaptive reuse as kitchen space since the historic suspended plaster ceilings below cannot be demolished to install MEP services.
 - g. Deliveries and Food Storage:
 - i. Deliveries are difficult, with only one drop-off for all of Bathhouse Row. Additional drop-offs will not be possible.
 - ii. Basement Deliveries - Currently, the ramp to the basement is narrow and steep, with a step at the sidewalk. The ramp could be reconstructed and widened to allow for larger deliveries. The door at the bottom could also be widened.
 - iii. First Floor Deliveries – Currently, the ramp to the front entry is narrow for maneuvering restaurant deliveries. Using the front entrance is not desired for daily deliveries. The exit door installed on the north side of the building currently has no stairs or ramp. A ramp could be installed here but would require space that may be needed for new mechanical equipment.
 - iv. Suggestions were made that food storage and walk-in coolers/freezers could be located in the basement.
- 4. Café - A limited-kitchen café would complement one of the other uses, specifically a spa. The Hale and Quapaw Bathhouses have cafes that serve drinks and a limited food menu. A limited-use kitchen is mainly for food prep and reheating. No grilling or frying is allowed. Limiting the menu options would negate the requirement for a full kitchen exhaust hood.

5. Retail – Due to its location, it is unlikely the building would be fully used for retail. Retail is a possibility as part of a potential multi-use option.
6. Offices – Due to the building’s location and lack of onsite parking, it is unlikely the Maurice would be fully rehabilitated for office space. Office use is possible as part of a multi-use option for limited office space only.
7. Overnight –
 - a. The Park does not think that overnight use is the best fit for this project.
 - b. There is no parking on the east side of Central Avenue.
 - c. The only drop-off zone for all of Bathhouse Row is in front of the Maurice. It is already very busy with deliveries for the Superior Bathhouse and the loading and unloading of overnight visitors to the Hale Bathhouse next door. The staff at Hale are often seen pushing the brass luggage carts up and down the sidewalk to cars parked in lots, not near the building.
 - d. Code requirements and upgrades for overnight lodging will add costs and result in more changes with impacts to the structure.
8. Multi-Use – A leaseholder may combine two or more functions. For instance, a spa and a café; a restaurant and retail; a spa, retail, and café; or a restaurant and a few offices. Ultimately, a multi-use option is what the park selected as the Pre-Design focus.

3.4 - Building Limitations, Challenges, and Opportunities

Some existing features of the Maurice Bathhouse present a challenge for adaptive reuse and satisfying current requirements for use and occupancy. Other features, such as historic chases, may promote overall rehabilitation by providing opportunities for the installation of new systems.

1. The Creek Arch, located in front of the Maurice, poses some restrictions for work in the front yard and routing for the distribution of the thermal waters, city water, and sanitary services. The Creek Arch is a large sub-grade structure that was constructed over the historic creek bed. This structure contains a free-flowing creek and many of the city water, thermal water, and sanitary distribution lines for the Park. The western-most portion of the front porch of the Maurice was constructed over a portion of the Creek Arch. This may have led to the uneven settlement of the Sunporch and the primary west wall of the building.
Solution: All work in the front yard area must account for the location of the Arch. An updated site survey should be provided for the Schematic Design to understand the location and depth of the arch and the routing of all water and sanitary piping, and all other utilities, such as data lines. Installation of all new utilities will need to work with the subgrade existing conditions.

2. The Maurice Hot Spring, which flows under the east basement crawl space, is overflowing into the basement. The spring creates a hot, damp environment, similar to a steam room. This humid air can accelerate damage to the reinforced concrete structure and escapes the basement into upper floor spaces through holes in the floor. A project in 2002 attempted to collect the water and direct it into a sump in the center of the Boiler Room B08. The four catch basins that were constructed to collect the water have failed, and the water now flows down from the crawl space into the basement boiler room and across the floor to the sump. There are several inches of standing, steamy water in this space. The exhaust fan that is supposed to vent this space is also not currently functioning for an unknown reason.

Solution: Engage a qualified civil engineer with experience harnessing hot springs. Attempts may be made to repair the existing system, modify the system, or introduce another option to collect and redistribute the hot water from the crawl space and basement areas. Adequate ventilation needs to be provided to protect the concrete structure. It is an objective to prevent water from entering Boiler Room B08.

3. The Maurice structure presents some challenges and limitations for rehabilitation. The site surrounding Maurice is small, with very little space available for a mechanical yard, trash collection, loading docks, and building access. With two primary facades (west and south), and the east side of the building constructed into the hillside, only the north yard is available for new mechanical, electrical, and generator equipment.

Solution: The drawings propose to relocate the Hale air handling unit back to the Hale yard. Screening of the new equipment may include low walls and shrubbery.

4. The existing ramp to the basement is too steep to meet accessibility guidelines and standards, and even with reconstruction, there is not enough length available with the existing site constraints to construct a compliant ramp.

Solution: The team proposes reconstructing the ramp to the basement to be wider than the existing ramp. Reconstructing the ramp would allow deliveries to the building, and a flat landing near the bottom of the ramp could double as a place to store trash bins and recycling. This ramp will be too steep to meet accessibility requirements.

5. The reinforced concrete structure of the building (underside of floor slab, beams, and columns) is exposed in most rooms and is plastered for a finished appearance. Only a handful of historic rooms have suspended plaster or more decorative ceilings. The exposed structure presents a challenge when introducing new mechanical, electrical, plumbing, and fire prevention systems since there are no concealed joist bays. New equipment will be installed exposed in most rooms.

Solutions: Where possible, gang conduit and piping together for a tidy installation. Install only paintable conduits and piping. To conceal equipment and piping, the tenant may install a dropped ceiling below the equipment by furring down a few inches and installing drywall. These areas of infill may be installed fully from beam to beam or float within the space with finished edges. On the second floor, the tenant may choose to install suspended acoustic ceilings in non-primary spaces. Where ducts are installed,

construction of new soffits may be necessary. Historically, the building had soffits as part of the original construction, so this feature is compatible with the historic building. Addressing the finishing of the ceilings to conceal pipes, conduit, and equipment will need to be further addressed in design guidelines developed for a future tenant.

6. Rooms with decorative suspended plaster ceilings, including the Lobby 110, Halls 110A and 110B, and Elevator Hall 110C, should be protected. In addition, rooms in Preservation Zones 1-2 with exposed concrete structure with plaster finish (including Women's Cool Room 105, Women's Pack Room 101, Men's Massage 116 and Cool Room 115, and Billiards Room 210) are spaces where the plastered structure may remain exposed. Where existing decorative suspended plaster ceilings remain, installing new piping, ducts, or conduit to serve rooms above will not be possible. Where the exposed plastered structure remains, installing new exposed piping, drains, ducts, or other systems should be avoided or carefully considered. These issues may limit the potential adaptive use for rooms located on the floor above these spaces.

Considerations: This means that the uses above these spaces must consider that the decorative plaster ceilings below cannot be removed to install new piping, conduit, or other systems, and that the other historic rooms with exposed plastered decks and beams should have minimal interruptions. In conclusion, toilets, showers, and sinks may not be installed in rooms above these areas in Preservation Zone 1, or in the case of rooms designated as Preservation Zone 2, the layout of new piping and conduit must be thoughtfully engineered to have as minimal effect as possible.

7. Floor to floor heights are low in the basement and on the third floor. The ceiling and exposed beam heights in the basement and on the third floor are very low, and it may not be possible to install ductwork or piping in these areas along the ceilings due to the lack of clearance under the beams.

Solutions: In the basement, the team proposes running as much ductwork and piping to serve the first floor and basement rooms along furred-out perimeter walls. This will prevent ducts overhead in critical spaces in the basement.

8. The original building was constructed with chases and plaster soffits in many rooms. These typically stack from the basement through to the third floor. These chases and soffits contained ventilation ducts and piping.

Solutions: A previous stabilization project blocked these chases with concrete. However, due to the terrazzo floor and integral terrazzo cove bases that outlined these chases, they should be reconstructed. Many of these chases may be reconstructed and utilized to run pipes and ventilation ducts. Building codes shall be followed regarding providing fire stopping in the chases, where required.

9. Historic architectural salvage from the building is stored in the Women’s Bath Hall and other building areas.

Recommendation: The Architect and Park Curatorial and Facilities Staff should review all items stored in the Maurice and other park storage to determine the feasibility of reuse as part of the building rehabilitation. Salvage may include doors, marble treads, tiles and bases, fixtures, and other building elements. All items not to be reused as part of the rehabilitation should be labeled with the original location in an inconspicuous manner that is removable and should be removed from the building by park staff to a secure park storage location. All other items may be disposed of at the Park’s discretion.

3.5 - Recommended Treatment Approach and Use – Spa and Café

Refer to the Proposed Programming Plans and Treatment Drawings at the end of this chapter.

Renovations, including interior demolition and some rehabilitation work, have been ongoing since the Maurice Bathhouse closed in 1974. These significant interior changes have resulted in the current condition of the building being appropriate for **rehabilitation**, as identified in the 2004 HSR. The NPS defines rehabilitation as the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values. These character-defining features are outlined in Chapter 1 and informed the development of the Preservation Zones.

Exterior site work related to the rehabilitation of the Maurice Bathhouse will reference recommendations in the Hot Springs National Park Cultural Landscape Report and Environmental Assessment, produced in 2010 by Quinn Evans Architects. The CLR recommends **rehabilitation** as the treatment for historic landscapes and related features of Bathhouse Row, one of the most prominent park historic landscapes and a National Historic Landmark. Bathhouse Row is within a larger area designated as ‘Reservation Front,’ containing the most intensive collection of historic designed landscape resources within the park. The landscape character area is designated as Bathhouse Row and is the front door for Hot Springs National Park.¹ The formal park entrance into the National Park is between the Maurice Bathhouse and the Fordyce Bathhouse. Bathhouse Row was designated as an “architectural park” where buildings and landscape unite into one cohesive space.² As an important pedestrian promenade, the sidewalks, fountains, building and park entrances, plantings, and porches all enforce a feeling of grandeur that encouraged strolling and social interaction along the corridor.

¹ Hot Springs National Park Cultural Landscape Report, Quinn Evans Architects, 2010, p. 8.

² Ibid, p. 90.

For this Pre-Design Study, the proposed use for the Maurice is a spa and a café. The program includes areas for spa treatments and support spaces in the basement, first, and portions of the second and third floors, including the reuse of the basement pool. A limited-use kitchen (no hood for grilling or frying) for the café is shown on the first floor; however, the kitchen could also be located on the second floor. The café spaces include areas for seating, such as the Sunporch and other first floor dining rooms, and additional dining and support spaces on the third floor, utilizing the Roycroft Den.

After meetings with the Park, Region, and DSC, the proposed programming plans have been developed. The drawings are attached after this section. These plans should be considered a Pre-Design stage and are not complete. The drawings focus on this option for a spa and café while preserving the historic primary spaces and features. The leaseholder will ultimately be responsible for the final interior design and layout of the overall building interior, as required for their use and occupancy.

The Maurice Bathhouse rehabilitation will consist of shell and core rehabilitation for adaptive use and finishing by the future leaseholder. The focus of this rehabilitation is to address:

- Life safety and egress upgrades
- Accessibility upgrades
- Repairs to decrease ongoing deterioration (harnessing and redirection of the spring water)
- Repairs to the exterior shell to prevent water and weather infiltration
- MEP and fire protection upgrades
- Identification and abatement of hazardous materials
- Address critical items that may prevent adaptive reuse of the building by the future lessee, such as relocating major utilities that prevent the use of the pool.
- Rehabilitation of primary historic spaces
- Recommended treatments shall meet the Secretary of the Interior's Standards for the Treatment of Historic Properties for Rehabilitation and for Cultural Landscapes
- Recommended treatment shall meet the requirements outlined in the Preservation Zones, protecting significant character-defining features and finishes.
- The building is within the Hot Springs National Historic Landmark District. All work must be reviewed and approved by the Arkansas State Historic Preservation Office and the Midwest Regional Cultural Resource Specialist.
- The National Park Service Preservation Briefs and Technical Bulletins shall serve as supplemental guides for the rehabilitation.
- Previous archeological inventories have indicated the possibility of structural remains predating the current Maurice Bathhouse structure that may exist below the current structure. It will be necessary to address these preservation issues during the planning, design, and construction of this project to protect potential archeological resources that may be present. Excavations will require archeological monitoring.

3.6 - Pre-Design Program Plans

Refer to the Proposed Programming Plans and Treatment Drawings at the end of this chapter.

The Pre-Design plans were developed to show how a spa and café might function within the four levels of the Maurice. These plans require further program development and may be redesigned by a leaseholder to fit their requirements. For instance, restrooms and locker rooms will not be constructed in this phase of the building rehabilitation. The final layout and use of the spaces, including restrooms, will be determined by the leaseholder, based on the final occupancy counts.

The existing Pre-Design plans include a single tenant. The code review was completed assuming a single tenant. If multiple tenants were to lease the building, the design would need to be reviewed on that premise. The separation between tenants and full enclosure of the stairs would likely be required for multiple building tenants to occupy the building.

Overall, the Maurice Bathhouse is approximately 30,569 gross square feet (this does not include the crawl space in the east section of the basement). Currently, the Pre-Design plans show approximately 15,858 net square feet of spa space, 3,770 net square feet of café space, and nearly 3,000 net square feet of mechanical and equipment area. The remaining square footage includes areas that are not usable, walls, chases, and elevator shafts.

The Pre-Design Plans include the following:

Basement:

- Renovated Pool
- Pool Decks at the north and south sides of the pool
- Pool Equipment Room
- Shower and Locker Rooms
- Laundry
- Mechanical, Electrical, and Elevator Machine Rooms
- Stair and Elevator Core

First Floor:

- Sunporch/Lobby (could potentially be used for some café seating)
- Restored Lobby
- Check-In Room and Office flanking Lobby
- Café Prep Kitchen (light-use with no hood for grilling or frying)
- 5 Large Spa Treatment Rooms
- Restroom Core
- Stair and Elevator Core

Second Floor:

- Large area for Spa Treatment Rooms
- Lounge area in the historic Billiard Room to be restored (could also be another treatment room)
- Locker Rooms
- Mechanical and Electrical Rooms
- Stair and Elevator Core

Third Floor:

- Treatment Rooms
- Employee Lounge
- Restrooms
- Restored Roycroft Den for Café use
- Potential Event space adjacent to the Roycroft Den
- Café Support / Back of House adjacent to the Roycroft Den
- Stair and Elevator Core

3.7 - Code Analysis

Code Review: Maurice Bathhouse

Address: 341 Central Ave, Hot Springs National Park, Arkansas 71901

Scope of Work: This preliminary analysis outlines the fire protection and life safety provisions of the 2021 International Building Code and the 2021 International Existing Building Code for a planned rehabilitation of the building.

The current review is based on Pre-Design Program Plan for a single tenant with a fully sprinklered building, which is subject to change as the design process moves forward. Code should be reviewed at each phase of the design.

The Maurice is a Contributing building within the Bathhouse Row National Historic Landmark District and is owned by the National Park Service (Federal Government).

Building Code Edition: 2021 International Building Code
 2021 International Existing Building Code

Dates of Original Building Construction: 1911, remodeled with addition 1915

1. Uses and Occupancy Classifications:

Existing:

Basement: A3 (pool deck); B (mechanical and support spaces)

First: A3 (Lobby and Sun Porch); B (Remainder of Floor)

Second: B

Third: A3 (Roycroft Room); B (Remainder of Floor)

Proposed Change of Use:

Option 1: Spa and Cafe

Basement: A3 (pool deck); B (mechanical and support spaces)

First: A3 (Lobby and Sunporch)

A2 (Café seating if over 50 – Can be B if less than 50 per room);

B remainder of floor

Second: B (locker rooms and treatment rooms)

Third: A2 (Roycroft Room) / (Event Space)

B (Remainder of Floor)

2. Change of Use: This proposed plan is **not** considered a Change of Use to a higher hazard. A2 and A3 are equivalent hazards.

a. Change of Occupancy needs to comply with Chapter 10, Table 1011.6

b. Change of Occupancy needs to comply with Chapter 12, 1204.1

c. For Example, Roycroft Den was originally an 'A3' gymnasium. New occupancy is an 'A2'.

i. A3 and B Use Groups at third floor - existing unseparated and unsprinklered.

ii. Change of use from A3 to A2 unseparated use ground is an equivalent hazard per Table 1011.5, 1011.6, and 1011.7.

3. Occupancy Separation Requirements – Or Nonseparated Occupancies:
Existing: N/A
Proposed: Nonseparated per 508.3
4. Floor Area Per Floor, Total Floor (No change in square footage):
Basement: 8,739 GSF (6,154 GSF without crawl space)
First Floor: 9,492 GSF
Second Floor: 5,431 GSF
Third Floor: 9,492 GSF
5. Building Area: Total above grade is: SM, Type IIIB, 24,415 GSF, Allowable per 506.2 as a single-occupancy building.
6. Compliant with Allowable Floor Area per 506.3 with open yards
7. 1011.6.2 IEBC – Change of Occupancy to equal or lesser hazard, building height and area are acceptable.
8. Construction:
Reinforced Concrete Structure (Floors, Beams, Columns)
Exterior Non-Structural Masonry Wall Infill and Stucco Finish
Some wood framing used in the eastern gabled roof area
9. Construction Type (602): IIIB
10. Building Height (504.3 and 504.4):
Existing (Non-Sprinklered): Allowed 55 ft. and 2 stories (Not Compliant due to A3 on 3rd Floor; A3 cannot be over 2 stories)
Proposed (Sprinklered): Allowed 75 ft. and 3 stories (Will be Compliant)
11. Fire Sprinkler Provided (yes/no), location and type:
Current: NO
Proposed: YES – A2 on 3rd Floor
12. Fire alarm pull stations and notification provided (yes/no):
Current: NO
Proposed: YES
13. Exterior Wall Fire Resistance Based on Fire Separation Distance (602.1):
Distance to Property Line: Open Yard All Sides
14. Tabular Floor Area for Each Occupancy: See Chart at End of Section.
15. IEBC Chapter 7 – Scope of work is more than Level 1 Alteration; therefore, Chapter 8 Level 2 Alterations apply – reconfiguring space for mechanical and electrical rooms is part of the current project. In the future, a tenant interior rehabilitation will also likely be a Level 2.

16. Number of standard and accessible parking spaces required/provided: 0

17. Number of plumbing fixtures required/provided (IBC 2902.1):

#	OCC.	W.C. MALE	W.C. FEMALE	LAV/EA.	DF	JAN.
306	A	1.59	3.05	2	1	2
160	B	2	2	2	1	
	TOTALS	4	5	4 EA.	2	2

18. Building Entrances are Accessible: Yes

19. Compliant/Noncompliant:

- A) 4-Story Open Stair is Allowed per 2021 IEBC Section 1203.2. This section allows the stair to be open and exit through the level of discharge through a non-rated lobby because the building will be sprinklered. Also, refer to IEBC 2018 Section 1203 Commentary.
- B) IEBC 1203.6 Stairway Enclosure requires buildings of three stories or less to limit spread of smoke by use of tight-fitting doors and solid elements. Such elements are not required to have a fire-resistance rating. Not required, per IEBC Section 1203.2. Also, per IEBC Section 802.2.3 Supplemental stairway enclosure is not required, per the Exception. However, the plans will provide doors at the basement, second, and third floors at the stair enclosure.
- C) IEBC 804.10.1 – Handrails in exit stairs, not applicable, Exception per IEBC Section 1203.9 existing handrails and guards at all stairways shall be permitted to remain.
- D) IEBC 1204.6 – Existing door openings less than those required is allowable if sufficient width for exiting.
- E) Egress – IBC 1007.1.1, Exception 2. Two exits or exit access doorways. Where two exits are required from any portion of the building, they shall be placed a distance apart equal to not less than one-half the length of the maximum overall diagonal dimension of the building area or be served measured in a straight line between them. Exception 2. When equipped with a sprinkler, the separation distance shall not be less than one-third of the length of the maximum overall diagonal dimension of the area served.
 - Two Exits at Existing Second and Third Floor Stairs Are Allowable:
 - Diagonal Distance of Upper Floors is 109'-8"
 - Distance Between Doors at Stairs is 45'-6"
 - 1/3 of Diagonal Distance is: 36'-6" is minimum
- F) In a sprinklered building, no area of refuge is required, per Section 1009.3.3, Exception 2. However, the NPS has requested areas of refuge be incorporated into the upper floors and basement area. The proposed design will designate areas of

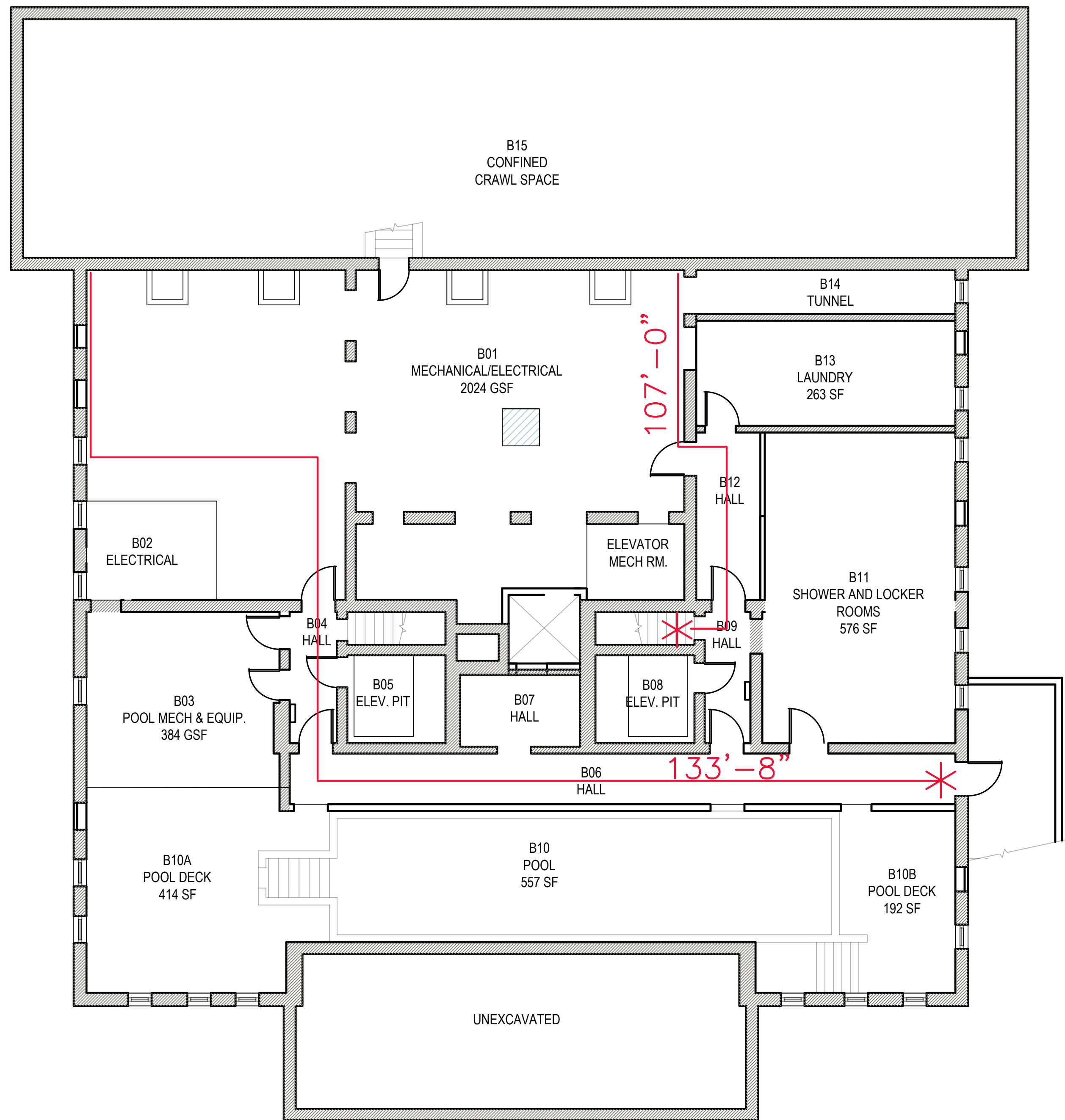
- refuge or designate rooms, as such, and provide the required signage and two-way communication. These will be designed during the Schematic Design phase of work.
- G) Fire Alarm is required for Group A occupancies for > 100 persons above or below the level of exit discharge, or 300 anywhere. IBC 907.2.1. For Group B, it is required for > 100 persons above or below the level of exit discharge. IBC 907.2.2
 - H) Existing contemporary elevator provides the accessible route to all levels containing primary functions.

MAURICE BATHHOUSE CODE REVIEW & OCCUPANT LOADS

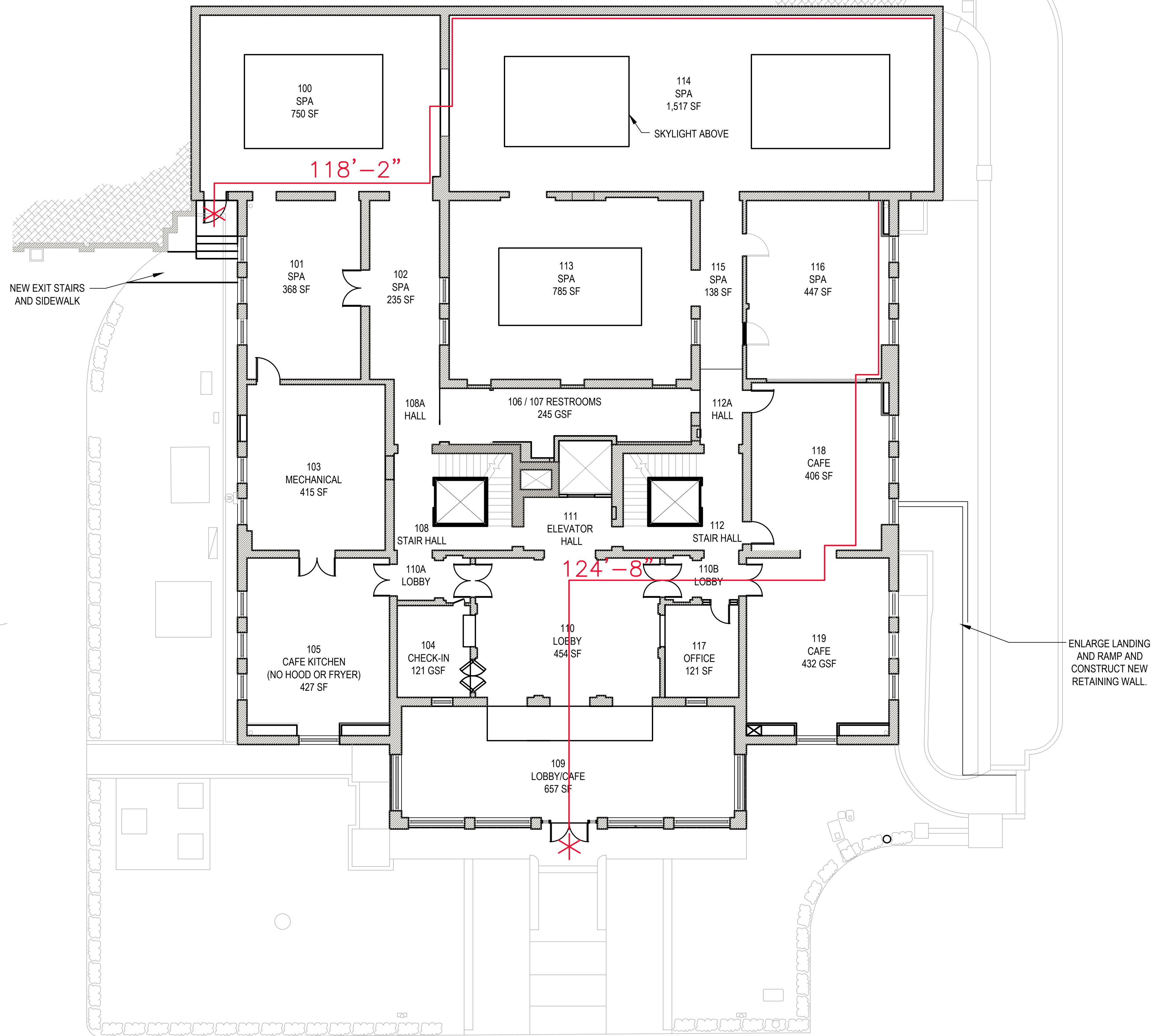
Basement = 8,739 GSF (not including unexcavated area)		Ancillary Spaces Net SF	'B' Net SF	'A' Net SF	Storage Net SF	Occupant Load (Req'd SF per occupant)	Total Max. Allowable Occupants
Basement = 6,154 GSF (without crawl space and unexcavated area)							
B01 / B02 / B14	Mechanical / Electrical / Elev Mech Rm.	2021				300	7
B03	Pool Mech & Equip	384				300	1
B04 / B06 / B07 / B09	Halls	549				300	2
B05	Elevator Pit					0	0
B08	Elevator Pit					0	0
B10	Pool			557		50	11
B10A	Pool Deck			414		15	28
B10B	Pool Deck			192		15	13
B11	Shower and Locker Rooms		576			50	12
B12	Hall	108				300	0
B13	Laundry		263			300	1
First Floor 9,492 GSF		Ancillary Spaces Net SF	'B' Net SF	'A' Net SF	Storage Net SF	Occupant Load (Req'd SF per occupant)	Total Max. Allowable Occupants
100	Spa			750		150	5
101	Spa			368		150	2
102	Spa Hall	235				150	2
103	Mechanical	415				300	1
104	Check-In		121			150	1
105	Kitchen or Retail		427			200	2
106 / 107	Restrooms		245			150	2
108 / 110A / 110B / 111 / 1112	Halls	813				150	5
109	Lobby / Café			657		15	44
110 / 110A / 110B	Lobby			454		15	30
111 - above	Elevator Hall						
112 - above	Stair Hall						
113	Spa			785		150	5
114	Spa		1517			150	10

Maurice Bathhouse
 AE Pre-Design Services – Condition Assessment / Treatment Plan
 Hot Springs National Park, Arkansas

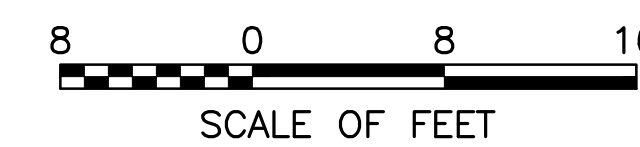
115	Spa Hall	138				150	1
116	Spa			447		150	3
117	Office		121			150	1
118	Café			406		15	27
119	Café			432		15	29
Second Floor 5,431 GSF		Ancillary Spaces Net SF	'B' Net SF	'A' Net SF	Storage Net SF	Occupant Load (Req'd SF per occupant)	Total Max. Allowable Occupants
200	Hall	876				150	6
201	Locker Rooms		616			50	12
202	Mechanical	277				300	1
203	Electrical	168				300	1
204	Spa		1586			150	11
205	Mechanical	95				300	1
206	Lounge		387			15	26
207	Interstitial Space (No Access)						
208	Locker Room		618			50	12
Third Floor 9,492 GSF		Ancillary Spaces Net SF	'B' Net SF	'A' Net SF	Storage Net SF	Occupant Load (Req'd SF per occupant)	Total Max. Allowable Occupants
300	Roycroft Den			900		15	60
301	Stair	203				150	1
302	Hall	407				150	3
303	Stair	303				150	2
304	Event Space			835 / 735		15	49
305	Treatment Rooms		643			150	4
306	Maurice Office		84			150	1
307	Day Room		41			150	1
308	Employee Lounge		308			15	26
309	Restrooms	217				150	1
310	Café Support / Back of House		645			200	3
						TOTAL BUILDING	466
						TOTAL A	306
						TOTAL B	125

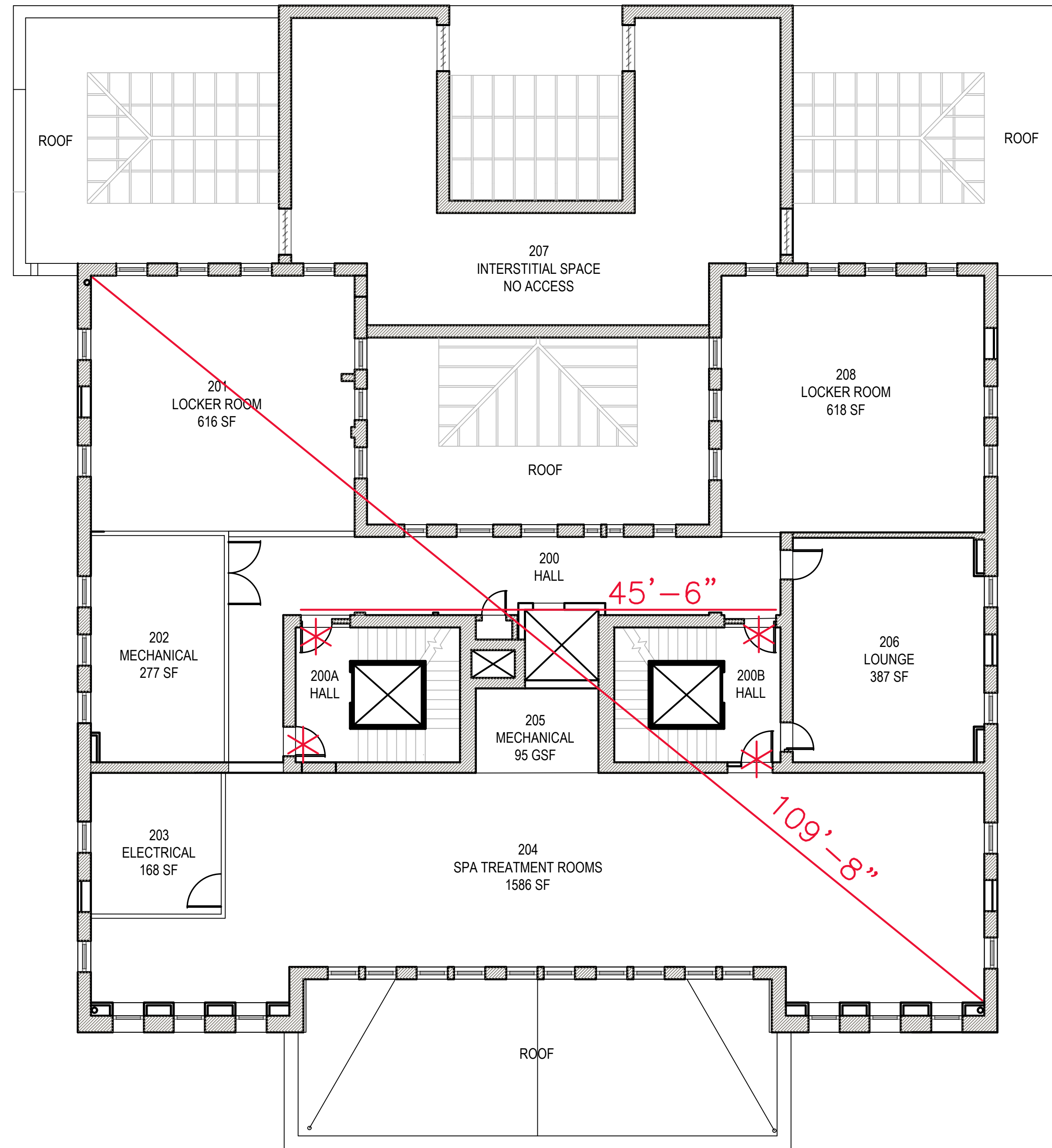


1 MAURICE BATHHOUSE – BASEMENT EGRESS PLAN
1/8" = 1'-0"

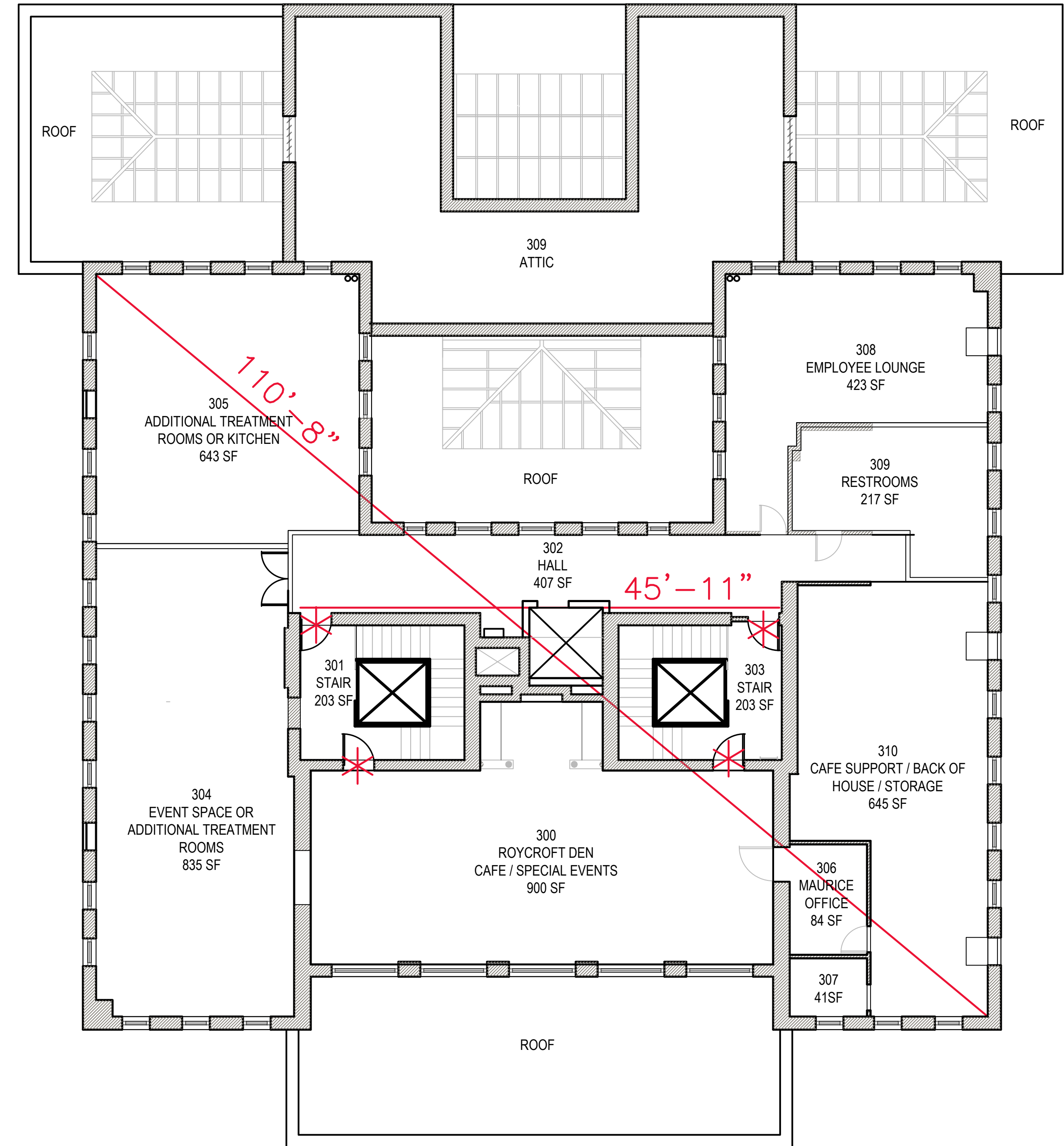


2 MAURICE BATHHOUSE – FIRST FLOOR EGRESS PLAN
1/8" = 1'-0"





3 MAURICE BATHHOUSE – SECOND FLOOR EGRESS PLAN
 1/8" = 1'-0"



4 MAURICE BATHHOUSE – THIRD FLOOR EGRESS PLAN
 1/8" = 1'-0"



Treatment Recommendations

3.8 - Accessibility – Proposed Treatment

Refer to Appendix B for the ‘NPS Universal Design and Accessibility Scoping Form for ABAAS Facilities’

NPS Management Policies 2006 and NPS Director’s Order #42 require that facilities are universally designed and accessible to every segment of the population. This project shall be designed to incorporate the 7 Principles of Universal Design, including singular path design (site arrival point to entry), close-by parking and drop-off (per DSC standards). Design features intended to eliminate common mobility obstacles (interior doorways or demising walls) where more seamless approaches can provide privacy, safety, and environmental performance (sound and light control and physiological comfort).

Section 504 of the Rehabilitation Act of 1973, as amended, requires programs and services provided in a facility to be accessible to people with disabilities. This includes physical programs such as parking, picnicking, and hiking, as well as interpretive and media programs such as exhibits, films, and ranger-led programs. This project shall be designed so programs included are universally designed and accessible.

This project shall meet the requirements of the Architectural Barriers Act Accessibility Standards (ABAAS) for facilities for visitors and employees. Americans with Disabilities Act (ADA)/ADAAG standards will be applicable if the building is adapted for use by a non-federal tenant. Additional requirements are provided on the Accessibility & Universal Design Standards for Outdoor Developed Areas, Public Rights of Way, Transportation Facilities, and DSC requirements. Signage is recommended for accessible routes to entry. Additional accessible elements, such as power doors and controllers at the entry doors will be explored during the Schematic Design (SD) phase.

Exterior -

The north entrance ramp meets accessibility requirements and will be maintained. The existing historic west entry landing will be modified to provide appropriate clearance around the entry doors and at the top of the stair and ramp. The west (primary) entry stairs and ramp are historic and cannot be reconfigured to meet current design requirements without negatively impacting the historic three-part design and site configuration. Signage to direct visitors to the compliant north ramp is recommended

Interior -

New components will be designed to meet the accessibility requirements noted above. The existing elevator will remain to provide an accessible route between floors.

Areas of Refuge – The project will be designed to provide adequate areas of refuge at each floor with appropriate safety equipment.

3.9 - Site – Proposed Treatment

Refer to the Site Treatment Drawings at the end of Chapter 3 and the Site Treatment Tables in Appendix H.

Because the Maurice is located within three Landscape Character Areas: Bathhouse Row/Architectural Park, Foreground Park, and the Formal Entrance, exterior work proposed must be sensitive to these areas. Treatments should follow the guidance outlined in the Hot Springs Cultural Landscape Report and Environmental Assessment. *Refer to the Drawing Sheet C1 for Site Treatment.*

Previous archeological inventories have indicated the possibility of structural remains predating the current Maurice Bathhouse structure that may exist below the current structure. Monitoring may be required during excavations for new utilities, expansion of the south retaining wall, and any recommended underpinning activities.

Grade and Accessibility -

The deteriorated ramps and stairs to the west entrance are to be replaced due to their deteriorated condition. These ramps do not meet current accessible design requirements. Replacement of the ramps is recommended to improve the design and life safety deficiencies of the existing construction in the following ways: eliminating steps/settlement at the top of the slope, providing adequate accessible clearance at the top landing to allow space for turning and door clearances, and installing handrails. The reconstructed west (primary) entry stairs and ramp will maintain the three-part design of the existing and the original entry element. Signage to direct visitors to the compliant north ramp is recommended to prevent confusion.

The retaining wall to the basement areaway on the south side of the building will be reconstructed to enlarge the ramp width. Modifications proposed to this basement entrance on the south side of the building will not negatively impact the Formal Entrance leading to the Grand Promenade.

Mechanical equipment will be located on the north side of the building in the general location where it currently exists. A screen wall is proposed to minimize the view of mechanical equipment from public pathways.

The reconstructed ramp and retaining walls to the basement at the south side of the building will be enlarged to permit more convenient loading and trash storage at the base of the ramp. The enlarged areaway will be constructed of concrete to match the historic walls and topped with a painted black pipe railing, similar to the historic railing. This reconstructed areaway will maintain the features of the adjacent Formal Entry including the low stone site wall.

Drainage -

The deteriorated runnels will be replaced with new concrete and sloped appropriately with drains that will prevent clogging.

Irrigation –

The irrigation system will receive some upgrades and replacement areas to not spray onto or directly adjacent to the building.

Features -

South Site Wall: Minor cleaning and spot repointing of the stone retaining wall south of the building is included in the project.

Screening: Provide new screening at the north equipment yard that is visually unobtrusive and compatible with the historic context. Explore options during Pre-Design in keeping with recommendations in the CLR.

Landscape -

Plantings -

The existing plantings around the building will remain, maintaining the consistent landscape along Bathhouse Row. Plantings will be restored after construction work and mechanical installation on site. Additional plantings are proposed near the new mechanical screen on the north side of the building and at the revised concrete stairs and ramps at the west entry.

The Park may want to remove the tree that overhangs the NE roof. This volunteer tree drops berries onto the skylight and roof, staining the surfaces. If this is not done by the Park, this could be included in the Scope of Work.

Architectural – Proposed Treatment

Refer to the Architectural Exterior Treatment Drawings at the end of Chapter 3 and the Architectural Exterior Treatment Tables in Appendix H.

This section includes the treatment recommendations for the maintenance and rehabilitation of the exterior shell of the building and the building interior.

3.10 - Exterior Architectural – Proposed Treatment:

1. Exterior Walls:
 - a. The deteriorated and damaged elements on the exterior of the building require repair, and replacement is recommended for some elements.
 - b. Repairs are recommended where cracking is present in the stucco, cornice, and decorative tile panels.
2. Windows:
 - a. The deteriorated wood sections of the original windows require repair, and frames that are out of plumb require correction. Exterior storm windows with a Low-e coating are recommended to be installed to improve the building envelope (energy efficiency) and occupant comfort. It would be preferable for the storm windows in some areas to provide a venting option for fresh air.
 - b. Storm windows protecting the stained glass windows may be laminated for extra protection.
 - c. The large aluminum windows in the Sunporch are recommended to be replaced with steel windows that more accurately reflect the historic steel window profiles and configuration.
3. Skylights:
 - a. Replacement of the four skylights at the east side of the building is proposed to provide better natural light quality to the interior of the building.
 - b. Due to deterioration observed, the central skylight over the Roycroft Den is recommended to be replaced with a new metal skylight that mimics the original design, profiles, and features. Work would include replacement of the gutter, as well.
4. Roofing:
 - a. The low-slope membrane roofing at all levels requires replacement. Tapered insulation should be added where the roof slope is too flat to slope to drain.
 - b. Flashing at the clay tile roofing that exhibits surface corrosion is recommended to be replaced along with damaged and displaced roofing tiles.
 - c. Roof drains are discussed in the Plumbing section below.
 - d. Consideration for a new roof access hatch to meet OSHA requirements is recommended. Since the roof is being replaced, relocating the access hatch may be an option. Currently, it cannot fully open due to its location adjacent to the gutter on the Roycroft Skylight, and the ladder is too steep. This will require further study during Schematic Design.

3.11 - Interior Architectural – Proposed Treatment

Refer to the Architectural Interior Treatment Drawings at the end of Chapter 3 and the Architectural Interior Treatment Tables in Appendix H.

1. The building will be brought up to current fire and life safety code by including the installation of a fire suppression, detection and alarm system, exit signs, and emergency lighting.
2. Spaces designated as being of primary importance (Preservation Zone 1) will be rehabilitated to retain as much original historic material as possible. Primary historic interior spaces include the Sunporch, the Lobby, second floor Billiards Room, and the Roycroft Den and Maurice Office on the third floor. In these areas, new mechanical, electrical, plumbing, and fire prevention systems should be concealed wherever possible. Restoration of existing or missing features (with documentation) may be appropriate. Historic chases and soffits may be used for concealing new systems and may be reconstructed where missing.
3. Spaces designated as important (Preservation Zone 2) will be rehabilitated to retain as much historic material as possible, but a more intensive level of rehabilitation may be undertaken than in the Zone 1 spaces. If historical documentation is available, missing features in these spaces may be replicated or restored. In these areas, new mechanical, electrical, plumbing, and fire prevention systems should be concealed where possible. Historic chases and soffits may conceal new systems and may be reconstructed where missing. New chases and soffits that mimic the historic soffits may be installed, where appropriate.
4. Spaces designated as Preservation Zone 3 are tertiary spaces that may undergo more intensive rehabilitation. This work may include a balance between preserving remaining historic features, removal of some walls and finishes, and installing new equipment to support the overall building function
5. Spaces designated as Preservation Zone 4 are tertiary spaces with little or no significant character-defining historic features. These spaces may undergo intensive rehabilitation, including demolishing interior walls and finishes and incorporating new finishes, features, and equipment.
6. New mechanical and electrical rooms and equipment will be installed to provide ventilation, service, and distribution to all four levels of the building.
7. Work in the basement will include dehumidification and repairs to the spring water collection.

8. Interior work includes demolition of deteriorated interior finishes and some interior walls and elements. Work also includes repair, patching, and installation of new finishes to provide a complete core finish. This includes repairs to terrazzo and tile flooring and bases, repair of plaster walls and ceilings, and painting.
9. Restrooms and drinking fountain locations are designated on the proposed plans but are not included in the shell and core rehabilitation. Restroom counts and locations will be determined after the tenant identifies the final use and designs the interior spaces.
 - a. Park will need to ensure that any lease agreement for future repositioning of the Maurice Bathhouse includes language clearly identifying roles and responsibilities for accessibility compliance as it pertains to restroom facilities that may be part of the tenant's scope of fit-out.
10. AE Team to work with Park Curatorial and Facilities staff to sort through architectural salvage in storage in Women's Bath Hall 114 and Men's Bath Hall 113 (and other locations in the building) to determine what will be reused and what needs to move to park storage. Determine if Park will remove items, or if it needs to be included in the contractor's bid.

Typical Treatments for Interior Finishes:

Historic Finishes Study

- The team recommends performing a historic finishes study of the Maurice Building.
 - Document historic paint finishes (colors) throughout the building before they are destroyed during the rehabilitation efforts.
 - Document historic stenciling and decorative painting that is found in primary historic spaces (Lobby 109, Men's Massage Room 116) and other locations by performing exposures and laboratory testing.
 - Examine surfaces for remnants of previous wallcoverings, noted in Women's Cooling Room 105, Women's Pack Room 101, and potential for other locations.
 - Study to be performed by a qualified AIC historic finishes consultant.
 - Consultant may also review the condition of the murals that were removed from the Billiard Room 210 to determine their condition and if it is possible to reinstall or replicate the murals.

Floors –

- Terrazzo –
 - In finished areas:
 - Remove pipes through floor
 - Holes through floor – Infill concrete structural deck and repair terrazzo topping.
 - Repair cracks and offsets in floor that present tripping hazards
 - Where interior partition walls are removed, sawcut base and wall sections out of floor and infill with decorative metal strip and complimentary terrazzo.

- Concrete –
 - Repair holes through floor, as recommended by structural engineer

Walls –

- Spot repoint brick masonry walls where currently exposed or where plaster is removed as part of the rehabilitation process.
- Contemporary construction – Remove contemporary construction (metal studs and drywall), as noted, for access to run new conduit, plumbing, etc.
- Tile Wainscotting
 - Retain tile wainscotting in primary spaces.
 - Utilize salvaged tile from other spaces that are scheduled for demolition for repairs for areas to remain, including field tiles and caps.
 - There are at least 3 campaigns of white tile installations. When salvaging tiles for reuse in other locations, separate tiles by type.
 - Original white field tiles have sharp edges and very thin grout joints.
 - 1915 remodels and later remodels use white tiles that have slightly eased edges and slightly wider mortar joints.
 - Contemporary tiles from the 2000s also have slightly eased edges and are clearly new.
 - Tile that has minor cracks or crazing to remain. Only replace tiles that are broken or missing sections.
 - RegROUT tiles, as necessary.
 - All tile to receive deep cleaning to remove staining and dirt.
- Plaster Walls
 - For areas to Remain:
 - Remove areas of deterioration to sound structure.
 - Patch plaster with traditional 3-coat process
 - Where minor crazing and spot repairs are made, consider skim coating wall for a clean finish.
- Ceilings
 - Ceilings in most spaces are exposed concrete slab and beams with a thin layer of plaster coating. Much of the plaster is in poor condition.
 - Patch repair plaster where ceilings will be exposed.
 - Future tenants may need to install conduit and extend fire suppression systems. They may elect to install slightly dropped ceilings with drywall finish or float gypsum board 'clouds' between beams to clean up the ceilings and not have exposed conduit, piping, and fire suppression piping. This would be up to the future tenant and not included in this scope of work.
- Interior Finish
 - Include painting for all exposed plaster walls and ceilings throughout the building

Stairs and Historic Elevator Shafts

- Existing historic iron staircase structure to remain.
- Confirm historic staircase paint color through historic paint analysis.
- Confirm quantity of marble treads stored in Women’s Bath Hall 114 for reinstallation on Stair 1. Supply replica treads for those missing.
- Consider adding striping or non-slip applications at marble treads.
- Repaint iron staircase structure (underside and all visible areas)
- Install accessibility-compliant handrails on both sides of staircases from basement through third floor. Consider brass railings.
- Restore tile wainscotting (replace missing tiles and deep clean) and plaster walls at stair walls from basement to third floor. Paint plaster walls.
- Restore terrazzo floor and base at landings on floors 1-3.
- Stairs to basement are concrete. Consider installation of epoxy coating.
- Install adequate lighting throughout stairs and landings.
- Confirm historic elevator shaft cage color through historic paint analysis.
- Strip paint and repaint elevator shaft cage from basement through 3 floors.
- Repair elevator shaft cage, as required, leaving no gaps less than 3” in diameter.
- Consider shortening shaft on south elevator to original height.
- Clean and paint interior of shaft
- Consider installation of ‘fixed’ wood doors with glass at basement elevator pit locations for viewers to see historic pit equipment. Install lighting inside pit.
- Restore historic elevator cabs to rest at first floor level.
- Consider installation of skylights at the top of the elevator shafts to match the historic condition and add natural light into the stairs.

Existing Elevator

- Confirm accessibility compatibility with current requirements.
- Confirm date of last service and provide inspection by elevator manufacturer representative.
- Upgrade systems and controls, for current life safety requirements
- Install accessible-compliant thresholds at each level.
- Update interior finishes to coordinate with new finishes.

Lighting

- Provide adequate lighting throughout the building. Lighting in primary spaces will be architecturally compatible with the space, while lighting throughout the remainder of the building may be simplified and compatible for temporary or long-term use.

3.12 - Structural – Proposed Treatment

Refer to the Structural Treatment Drawings at the end of Chapter 3 and the Structural Treatment Tables in Appendix H.

Concrete Repairs: Typical concrete repairs are recommended for the concrete decks and beams throughout the building. These repairs are detailed in the Maurice Structural Treatment Checklist attached. These repairs include overhead beam repairs, underside and through-slab concrete deck repairs, shotblasting and cleaning of exposed reinforcing along with concrete repairs, epoxy injections for cracks in concrete slabs, and infill and repairs to large openings in the concrete slabs.

Foundation Underpinning: Cracks in the concrete and the brick masonry walls are present throughout the structure. In addition to what was included in the 2002 stabilization project, one area that may require stabilization is on the north elevation, at the eastern corner of the taller portion of the structure. A schematic plan is provided to show this area and the associated cracks observed in the slabs (Figure S.1). The cracking pattern indicates the corner has moved or rotated away from the rest of the structure. Underpinning in this location would stabilize the areas from continued movement and could be performed from the interior in the basement. Work here would have limited equipment access, and any excavations or other work would need to be performed by hand tools or very small equipment. This work will require geotechnical investigation at the NE corner of the building.

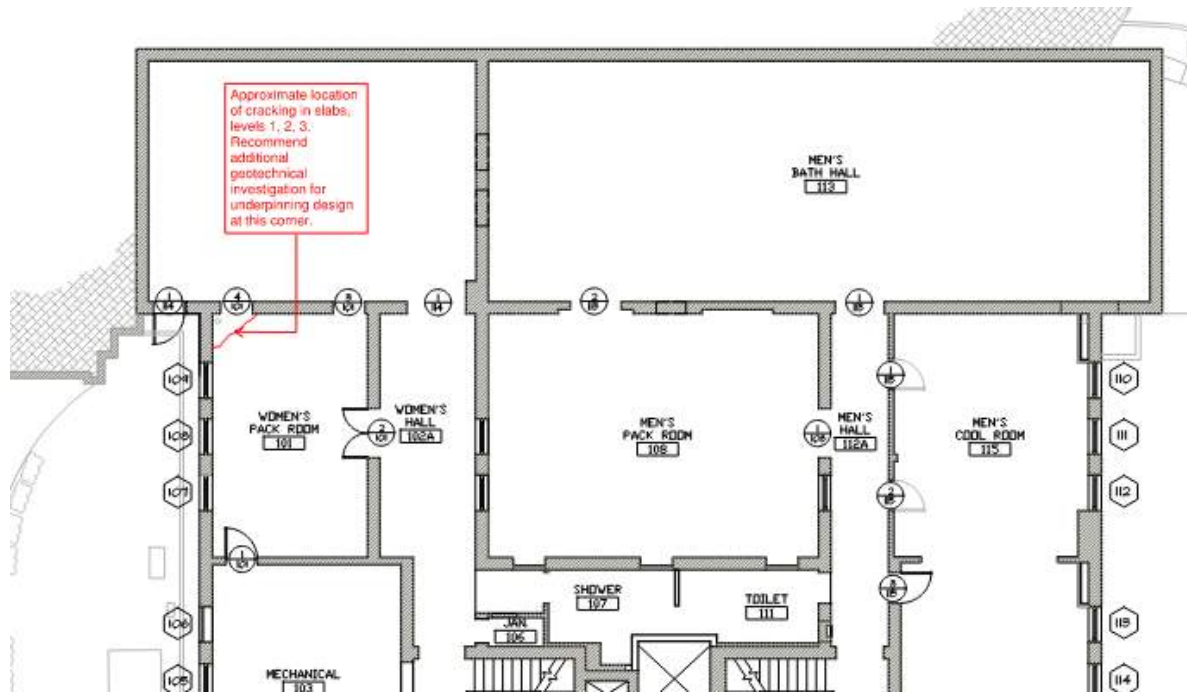


Figure 3.1. Structural crack in northeast corner of Maurice.

Masonry Exterior Wall Grout Injections: Although grout injection was specified in the 2002 stabilization drawings and some amount of that work was clearly performed, it is unknown if the work was successful or completed as thoroughly as intended. The structural engineer recommends that GPR scanning be done in the early Schematic Design phase as additional

services. This scanning would attempt to determine the approximate volume of voids within the wall for future grout injection repairs. Along with the scanning, some selective demolition should be performed for the brick walls to confirm the findings of the GPR.

Roycroft Room Ceiling Framing and Exterior Wall Repairs and Reinforcing: The wood framing and metal ties above the Roycroft Room on the third floor need to be removed and replaced. Removal of the overhead framing in the Roycroft Room will need to be done delicately. The four masonry pilasters on the west side of the room support the framing and have horizontal cracks near the top of them. These unsupported pilasters create a hinge effect which will leave the wall unstable as the overhead framing is removed. The pilasters will require lateral shoring, and the cracks need to be repaired. Repairs would likely include vertical anchors installed down through the top of the pilasters to effectively pin the separated sections of masonry back together. CINTEC has a proprietary anchoring system that is well suited for this condition. The system uses a long steel threaded rod inside of a sleeve or sock, which is inserted into a core drilled hole in the masonry. Cementitious grout is then injected into the sleeve which expands and conforms to the irregularities of the masonry, effectively engaging it. It is estimated that 8 total anchors, each 8 to 10-feet long, would need to be installed. Portions of the skylight above would need to be removed for this installation, or while the skylight was in the process of being replaced.

The concrete framing for the first floor structure of bath halls in the easternmost portion of the structure could not be safely accessed at the time of the assessment. The area beneath the bath halls is a confined crawlspace with an active hot spring water flow. A previous structural study provides a plan showing concrete beams running north/south; however, additional information is needed for analysis of the slabs. The spacing of any columns or walls are not shown on the plan, and there is no information on the size, spacing, and location of reinforcement within the slabs or beams. Due to the constant humidity and damp conditions, it is likely that repairs will be required throughout the crawlspace. Selective demolition for the underside of the typical slab and beam in the crawlspace is recommended as an additional service needed early in the schematic design phase. The crawlspace is considered a confined entry space, and the presence of flowing water will impact electrical equipment use. In addition, the space is hot, with little fresh air exchanges. These considerations will require specific precautions for the contractor. Concrete will be patched following the chipping and investigation.

Supplemental steel is needed at the large floor penetration over the basement pool. It is recommended that steel beams be installed under the slab for support. For estimating purposes, anticipate (2) W10 or W12 steel beams, approximately 12'-6" in length.

In the attic space on the east side of the structure, additional wood members are needed to tie the walls together, to resolve the tension forces in this area. For estimating purposes, anticipate installation of (12) 2x4 members, each 15-feet long.

It is recommended that additional investigation be performed to determine if the wood framing members in the previously reconstructed skylights are pressure treated. If they are not, the stud walls should be removed and rebuilt. If they are pressure treated, new tension members should be installed for the framing. It is anticipated that four new steel tension rods would be needed in each skylight.

3.13 - MEPF General – Proposed Treatment

Refer to the MEPF Treatment Drawings at the end of Chapter 3 and the MEPF Treatment Tables in the Appendix H.

All MEPF systems will be designed to the 2021 International Codes not limited to the International Plumbing Code, International Mechanical Code, International Fire Code, International Life Safety Code, International Energy Conservation Code, as well as the latest adopted National Electric Code (NFPA 70 NEC), Installation of Air Conditioning and Ventilating Systems (NFP90A), National Fire Alarm Code (NFPA 72), Standard for the Installation of Standpipes, Private Hydrants and Hose Systems (NFPA 13) and ASHRAE 90.1 - Energy Standard for Buildings.

All current National Park Service guidelines will be followed where applicable. Work shall comply with all National Park Service Preservation Briefs and Technical Narratives.

3.14 - Mechanical – Proposed Treatment

An online workshop was held with the Park, Regional Staff, and the DSC Project Mangers to discuss options for HVAC systems for both the Maurice and the Libbey Bathhouses on April 10, 2022. Multiple options were discussed for each building. A table of the options discussed are in Appendix B, Online Meeting Notes dated March 28, 2022.

- Hydronic systems, chilled water and heating water, were IMEG's preferred option for both buildings with air handling units proposed to serve most of the spaces in those buildings.
- It was determined that due to low structural clearances on the third floor of Maurice that hydronic fan coils would be required to serve that floor.
- DX (direct expansion) air handling units were also discussed, but IMEG has concerns about their dehumidification control as well as the need for multiple condensing units located on the site.
- VRF (Variable Refrigerant Flow) systems were also discussed, which can be very efficient, but IMEG is concerned about the need for DX air handling units still being required to serve the larger and higher occupancy spaces.

Air Conditioning

1. As noted above, the existing air handling unit and condensing unit will be removed as well as the associated ductwork, piping, and controls.
2. A new air handling unit will be provided to serve the First Floor. This will be a variable volume unit with a relief fan. VAV boxes with hot water reheat will be used to provide temperature control of the various spaces.
3. Note that the previous 2004 plans included all ductwork serving the first floor in the basement, which resulted in the basement being essentially unusable. This proposal

includes ducts installed as soffits throughout the first floor, in keeping with Preservation Brief 24: Heating, Ventilating, and Cooling Historic Buildings. This will allow minimal ductwork in the basement to be installed, only to serve the basement.

4. A similar air handling unit system will be provided to serve the Second Floor.
5. An independent constant volume air handling unit will be provided on Second Floor to serve the Third Floor Roycroft Den.
6. Due to low structure height on Third Floor, an air handling unit and associated ductwork to serve those Third Floor spaces is not feasible. Therefore, we propose to provide wall mounted or vertical heating and cooling fan coil units to serve the Third Floor.
7. Since fan coil units will be used to serve the Third Floor, separate outside air ventilation will be required. We propose that a packaged, roof mounted DOAS (Dedicated Outdoor Air Supply) unit with an energy recovery wheel be installed to provide conditioned ventilation air to the Third Floor spaces.
8. Mini-split DX cooling systems will be provided to cool the space between the Roycroft Den skylight and lay-light with the remote condensing units located on the roof adjacent to the skylight.
9. Since the elevator equipment room will move and the cooling equipment is over 12 years old, the existing equipment will be removed, and a new mini-split system will be provided with an indoor cooling unit and remote condensing unit located on the south side of the building.
10. Self-contained dehumidifiers will be provided in the basement to help dehumidify the basement.

Ventilation

1. The intake louvers and all associated propellor exhaust fans will be removed. These systems will not be required when the building becomes occupied.
2. Ventilation for most of the building will be by the various air handling units and the DOAS unit.
3. The exhaust fan located in the basement and ducted to the east basement crawlspace provides ventilation and some amount of removal of humidity in the crawlspace. However, as noted previously the fan was not currently operating under automatic control. The fan control needs to be repaired as soon as possible so that the fan will run when the crawlspace becomes too humid. Schematic Design may later reveal other options for addressing the hot spring and humidity.

3.15 - Plumbing – Proposed Treatment

Domestic Water Service

The existing 2" water service and associated 1-1/2" backflow preventer will be removed. A new 3" water service and backflow preventer will be located in the northeast basement area to serve the building.

Domestic Hot Water

The existing water heater serving the temporary restroom will be removed. Water heater(s) will be provided as part of tenant finish of the individual spaces. Natural gas fired water heaters should be used where possible.

Domestic Water Piping

Any remaining domestic water piping distribution will be removed. Cold water piping will be routed to wall hydrants, hose bibbs in mechanical rooms, make up water systems for the new heating water system, general areas where water for tenants may be required and to the irrigation systems. The existing irrigation manifold assembly will be relocated out of the future pool use area.

Natural Gas

The existing building side natural gas service and distribution piping will be removed. The capacity of the existing gas service provider main will be coordinated to provide adequate service for the new boilers, emergency engine generator, and future water heaters. A new 3" building side gas service will be installed and will enter the northeast basement area and will extend to the emergency engine generator, boilers, DOAS unit and to potential water heater locations.

Sanitary Waste

All above grade waste and vent piping will be removed. The existing below slab waste piping will need to be scoped to determine its location, elevation, and condition. We recommend replacing all the under slab waste piping, but reuse of existing piping can be evaluated once scoping is completed. New waste and vent piping will be provided to serve new floor drains and will be roughed into areas where future tenant plumbing may be required.

Storm Water

It is recommended to reroute the existing main building roof drainage risers to the exterior and connect to the city storm sewer system, regardless if the pool area is reused. If they cannot be rerouted to the exterior, they can remain in chases and then tied to the storm sewer at the basement level. The existing pool drain should be rerouted to the City sanitary sewer main. Overflow scuppers shall be added for the Sunporch roof.

Repair the runnel on the north side of the building. Install a new cast iron beehive type dome on the existing runnel area drain to help reduce the chances of blockage at each drain. The runnel must be continually maintained to ensure it does not fill with debris.

Thermal Spring Water

There are three thermal spring water pipes roughed into the north basement. There is a 2-1/2" line, a 3" line, and a 4" line. The 2-1/2" and 3" lines are tied together in an exterior manhole located on the northwest corner of the site. One of these systems is the "cold" water system at 90 degrees F and the other is the "hot" 140 degrees F system. The "hot" system will be extended and utilized to provide preheating of the boiler return water via a water-to-water heat exchanger.

Thermal Springs

Engage a civil engineer with experience with the collection and distribution of hot springs. The east crawlspace should be further investigated to determine how to keep water out of the basement. The ideal solution would keep the water from entering the basement in the first place. However, this may not be possible. Otherwise, the collection system and connecting piping need to be reworked so that they drain properly to the sump.

3.16 - Electrical – Proposed Treatment

Service to Building

The treatment plans show potential locations for all anticipated electrical distribution equipment.

1. It is recommended to replace the existing electrical service that originates from a utility transformer installed near the Hale Bath House (north of the Maurice).
2. Install a new electrical service to accommodate possible tenant use.
3. The new service voltage that is recommended is 120/208 volt, three phase, 4 wire.
4. Surge suppression is recommended for the new service.
5. More investigation is needed with the Utility Service Provider to determine exact course of action for new service connection to the existing transformer and how that service should be metered.
6. An exterior service disconnect is anticipated to be provided.
7. The new service will need a new grounding electrode system.

Distribution

The treatment plans show potential locations for all anticipated electrical distribution equipment.

1. The first-floor main distribution panel is in relatively good condition but will need to be upgraded to accommodate possible tenant functions.
2. The existing distribution panel serves existing panelboards on first, second and third floor.

3. All existing panelboards should be removed due to future tenant needs and existing damage or issues noted in the assessment.
4. New distribution is recommended throughout for a potential new tenant.
5. If a kitchen is provided in the building, it is recommended to provide a panelboard in the new kitchen space to minimize homerun lengths and additional disconnect switch requirements.

Generator

1. A new natural gas generator is planned to be installed to provide service for the elevator and emergency lighting. The current generator is not sized to meet the entire electrical load of the facility.
2. The gas service to the generator will need to be carefully looked at to ensure proper service to generator.
3. The new generator is planned to be 120/208 volt, three phase, 4 wire.
4. Two new transfer switches are planned to be served from the generator. One transfer switch is planned to serve emergency lighting loads, fire alarm system, and the security system. The other transfer switch is planned to serve the elevator and the elevator space conditioning equipment.
5. Surge suppression is recommended for all generator services.

Lighting

1. It is planned to remove all existing exterior and interior light fixtures. Most of the existing lighting in the building is of the temporary type.
2. All new LED lighting and controls should be provided.
 - a. Decorative lighting may be required in various spaces throughout the building like the spa areas, café, and special event spaces.
 - b. Primary historic spaces may have specialty or period-appropriate fixtures installed.
 - c. Lighting to be provided as part of the 'white box' may be limited to period lighting in historic spaces and circulation areas. Temporary lighting may be installed throughout the other spaces.
 - d. Lighting throughout the tenant spaces will be provided by the tenant.
3. Install new emergency lighting and exit signage.
4. If a tenant is not in place, basic strip lighting and minimal lighting control would be needed throughout.
5. Certain areas in the basement may need light fixtures rated for damp environments if humidity cannot be controlled.

Branch Circuits

1. It is recommended to remove all existing conduit and branch circuits. A large percentage of the existing conduit system is damaged and therefore unusable.
2. Special consideration will need to be given for routing for all new conduits. In some cases, it may be necessary to use surface raceway. All new conduit and raceway should

be carefully routed to coordinate with and maintain historic nature of building and be paintable to match the surrounding finishes.

3. If a tenant is not in place a basic convenience receptacle layout would be needed throughout.

Information Technology (IT)

1. The existing IT service enters the basement of the building at the southwest corner. The service is installed at the south end of the pool and spa area. The existing service will need to be relocated if the pool is to be used. Special consideration will need to be given to the relocation, as the service also provides connectivity to the pump house and visitor's center. More investigation is needed with the Owner and Service Provider to determine the exact course of action for relocation.
2. The new service control panel (s) should be in a controlled environment.
3. Wiring for the system should be planned to be routed in conduit where same would be visible.
4. Exposed wiring may be a consideration where ceilings are installed.

Security

1. The existing security system is not functional. Remove existing system.
2. A new security system is planned and should be provided based on the requirements of the potential tenant. The new security control panel should be in a controlled environment. Wiring for the system should be planned to be routed in conduit where same would be visible. Exposed wiring may be a consideration where ceilings are installed.

Lightning Protection

The existing building does not have a lightning protection system. It should be discussed if the rehabilitated building should be provided with one. A high-level assessment has been performed. The assessment shows that a lightning protection system is recommended.

3.17 - Fire Protection – Proposed Treatment

Fire Water Service

1. The building is currently served by a 6" fire water service located in the southwest corner of the basement pool room, adjacent to the domestic water service. As noted for the domestic water service, this location is in conflict with the proposed future use of rehabilitating the pool.
2. A new 6" fire water service line will be installed into the northeast basement area.
3. A 6" double check backflow preventer will be installed on the service entrance.

Fire Suppression

1. Recent water pressure reports show that a new 6" fire water service should be adequate to sprinkler the entire building. This is based on the best available information. Fire hydrant test data from the hydrant at 356 Central Avenue is 100 psi static pressure with 65 psi residual pressure with 1404 gpm flowing.
2. Provide new service, standpipe risers (if required) per NFPA 14, and provide full wet sprinkler protection of the building per NFPA 13 with at least one sprinkler zone per floor.
 - a. If the required pressure is higher than the building supply pressure can provide, wet manual standpipe system can be provided which will rely on the fire department pumper truck for the required added pressure since 1-1/2" fire hoses are no longer required and the 2-1/2" hose connections will only be used by the fire department. This can be accomplished when the pressure is adequate for sprinklers but not for standpipes, which avoids installing a fire pump.
3. Due to the nature of the exposed reinforced concrete slab and beam structure throughout the building, many of the spaces that do not have suspended ceilings will have exposed fire suppression lines. Every effort should be made to design the piping layouts that follow the pattern of the beams and condense to locations that are not highly visible. Piping should be painted to match the ceiling or wall surfaces.

Fire Alarm

1. The existing fire alarm system is not functioning and should be removed.
2. A new fire alarm system should be installed throughout to service the building.
3. The new system should be planned to serve possible future tenant use.
4. The new system should be connected into a central station for remote monitoring.
5. The new fire alarm control panel should be in a controlled environment.
6. Wiring for the system should be planned to be routed in conduit where same would be visible.
7. Exposed wiring may be a consideration where ceilings are installed.
8. The fire alarm system should be planned to monitor the sprinkler system.

3.18 - Basement Pool Rehabilitation Considerations

STRATA met with Jeff Bartley from Waters Edge, an expert in pool design, to discuss the options available for the future tenant rehabilitation of the pool in the basement.

The existing concrete therapy pool was added to the basement in 1931 and is considered to be one of the primary historic spaces in the building. Most of these items listed below are for consideration and general knowledge and will be applicable only if the future tenant chooses to keep and rehabilitate the pool as part of their spa or therapy services.

1. Discuss with the health department the viability of using the thermal spring water in the pool and what types of treatment are required for the water.
 - a. Park charges for the use of the thermal water.
 - b. Could also use treated water and add minerals back in.
2. Water should turn over several times an hour.
3. The pool will need all new equipment and piping. These would include a recirculating pump, filter, treatment, and heat.
4. The existing concrete pool structure is cracked.
 - a. The structure should be tested to see if it holds water. If it does not hold water, this may have contributed to the west wall settlement by washing out the grade below the footings.
 - b. A pool consultant may also require a core of the bottom pool concrete to determine its thickness.
 - c. If it does not hold water, the bottom could be reconstructed (build new floor).
 - d. If it does hold water, the pool will need a new coating.
5. Reconstruction of the pool might include:
 - a. Raising bottom of pool slightly. Ideal height for spa setting is 3-feet with a max of 4-feet.
 - b. New ADA access (lift at the end of the pool). Installing a ramp in the pool would take up too much space. Another option would be to raise the pool and use the edge/curbing for ADA transfer into the pool.
 - c. Could surround edges of interior of pool with benches, which could be used to route new piping.
 - d. New distribution piping.
 - e. Add a false stainless steel cavity wall to use for skimming and routing pipes.
 - f. Add inlets, main drain, sanitary drain, and new equipment. Equipment would mostly be remote. It would be ideal for the pump to be at the same level as the bottom of the pool. An equipment room would likely be about 10-feet square, with the pump, water heater, filter, and a separate ventilated closet for storing chemicals.
 - g. Might consider salt water or bromine in lieu of chlorine.
 - h. For recirculating/skimming, the pool could be designed to add a continuous lip around the edge of the pool that would act as a skimmer. For hot water, the lip drainage is the ideal solution.
 - i. Add tiles to the pool
 - j. Add a curtain waterfall or a wall of cascading water.

- k. Add water into the lighting for effect.
- l. Add bubble jets.
- m. A variety of options could be included in the design, such as tiled lounge seating that reclines or other furnishings that are fabricated of stainless steel tubing.
- n. If chlorine is used, all of the exposed concrete in the pool area should be coated to prevent deterioration.
- o. The pool could be made smaller, like a lap pool or endless pool.

3.19 - Skylight Laylight Restoration

STRATA met with Julie L. Sloan, LLC, a stained glass expert consultant, to review the options and potential costs associated with restoring the stained glass laylights at each of the skylights. There are five skylights – four on the east side of the building provide light into first floor rooms and one above the Roycroft Den on the third floor. Several smaller skylights that were once located above the elevators and scattered throughout the upper flat roof area were removed during previous renovations. The laylights in the bath halls were very detailed with hand-painted and possibly fused glass used to create depth.

A goal of the rehabilitation project would be to restore laylights, where possible. The restoration of the laylights in the Roycroft Den would be the top priority. Laylights in the bath halls could be done with less expensive colored glass.

Roycroft Den

The Roycroft Den Laylights were designed and specified in the Chamberlin Architects Construction Documents from 2006.³ There are 15 unique panels of leaded glass with 20 colors and textures of glass identified. The park has retained one of the original panels to match. The panels range in approximate size from 6'-0" x 4'-10" to 5'-0" x 7'-7."

- Estimate to include all travel, installation, and provision of new 2" x 2" L-bar frames around all skylights. (taxes not included)
- Estimate to reproduce each panel: \$87,000-\$114,000 (approx. \$3,000/sf)
 - (4) A – 37.2 sf x \$3,000 = \$446,400
 - (2) B – 38 sf x \$3,000 = \$228,000
 - (6) C – 29 sf x \$3,000 = \$522,000
 - (3) D – 30 sf x \$3,000 = \$270,000

TOTAL = \$1,466,400 + tax

- Estimate to reproduce each panel with colored sheet glass: \$850/sf
 - 489 sf x \$850/sf = **\$415,650 + tax**

Bath Hall Laylights –

- 2 Total – Each approximately 190 s.f.
Estimate to glaze with colored sheet glass: 190 s.f. x \$850/s.f. = **\$161,500 each + tax**
- 1 Total – Approximately 162 s.f.
Estimate to glaze with colored sheet glass: 162 s.f. x \$850/s.f. = **\$137,700 + tax**

Men's Pack Room Laylight

Estimate to glaze with colored sheet glass: 158 x.f. x \$850/s.f. = **\$134,300 + tax**

³ 128-41070, Rehabilitate Bathhouses, HOSP.

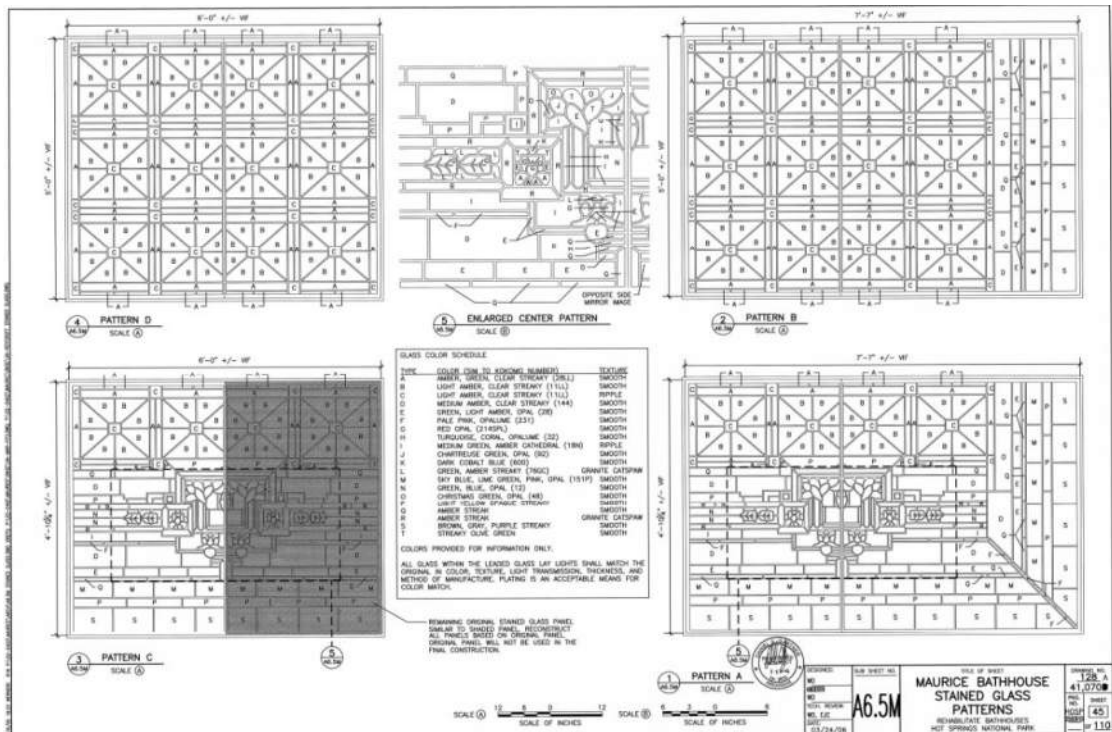
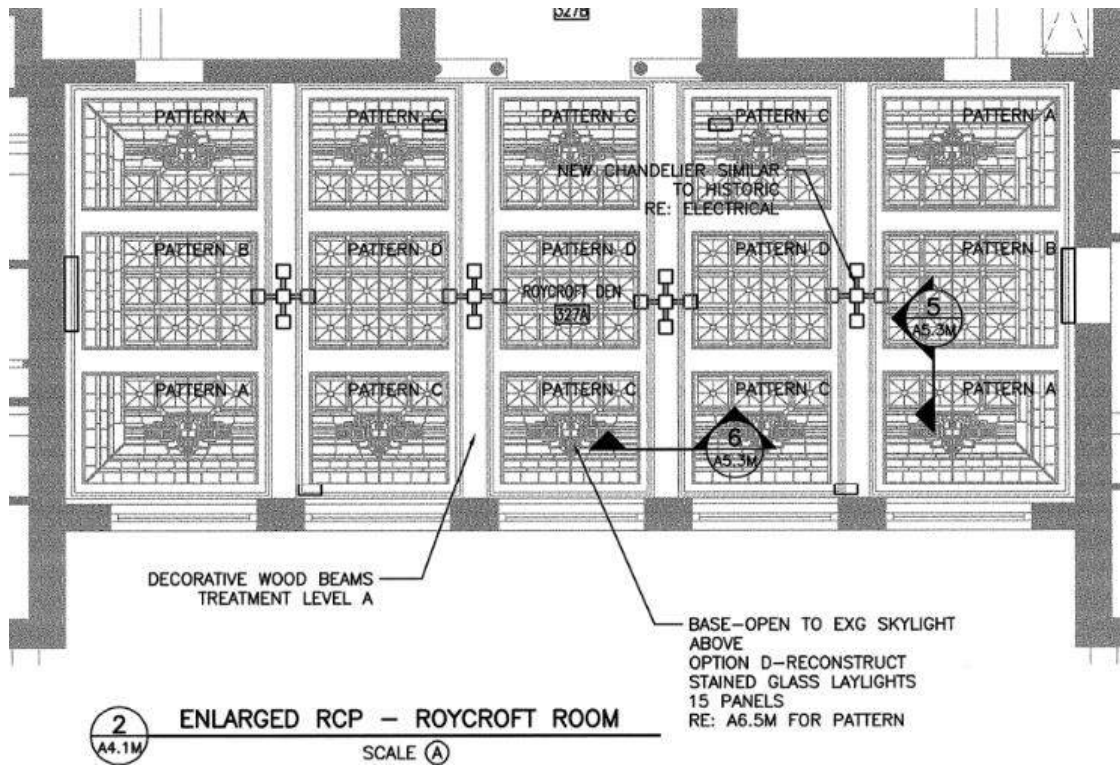
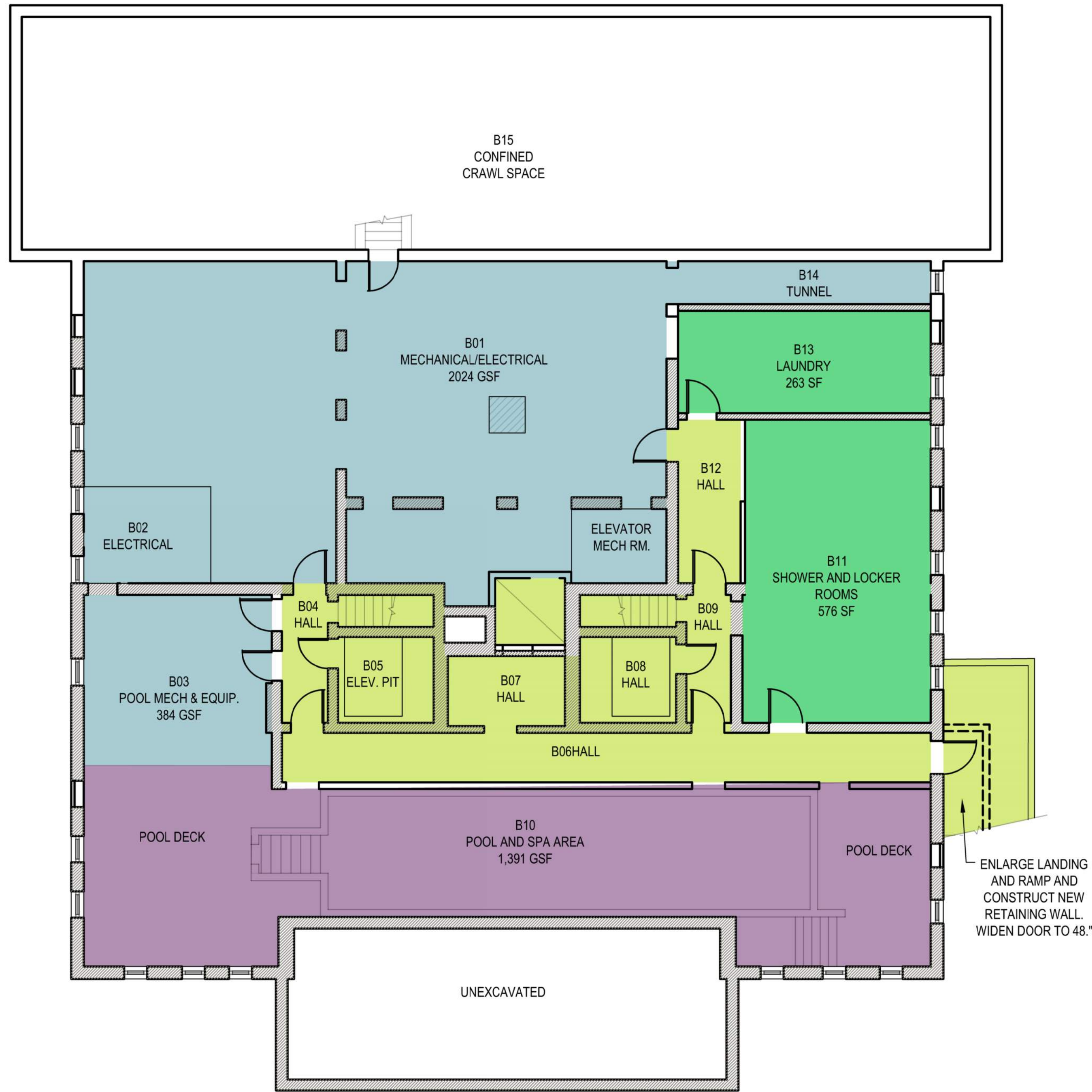


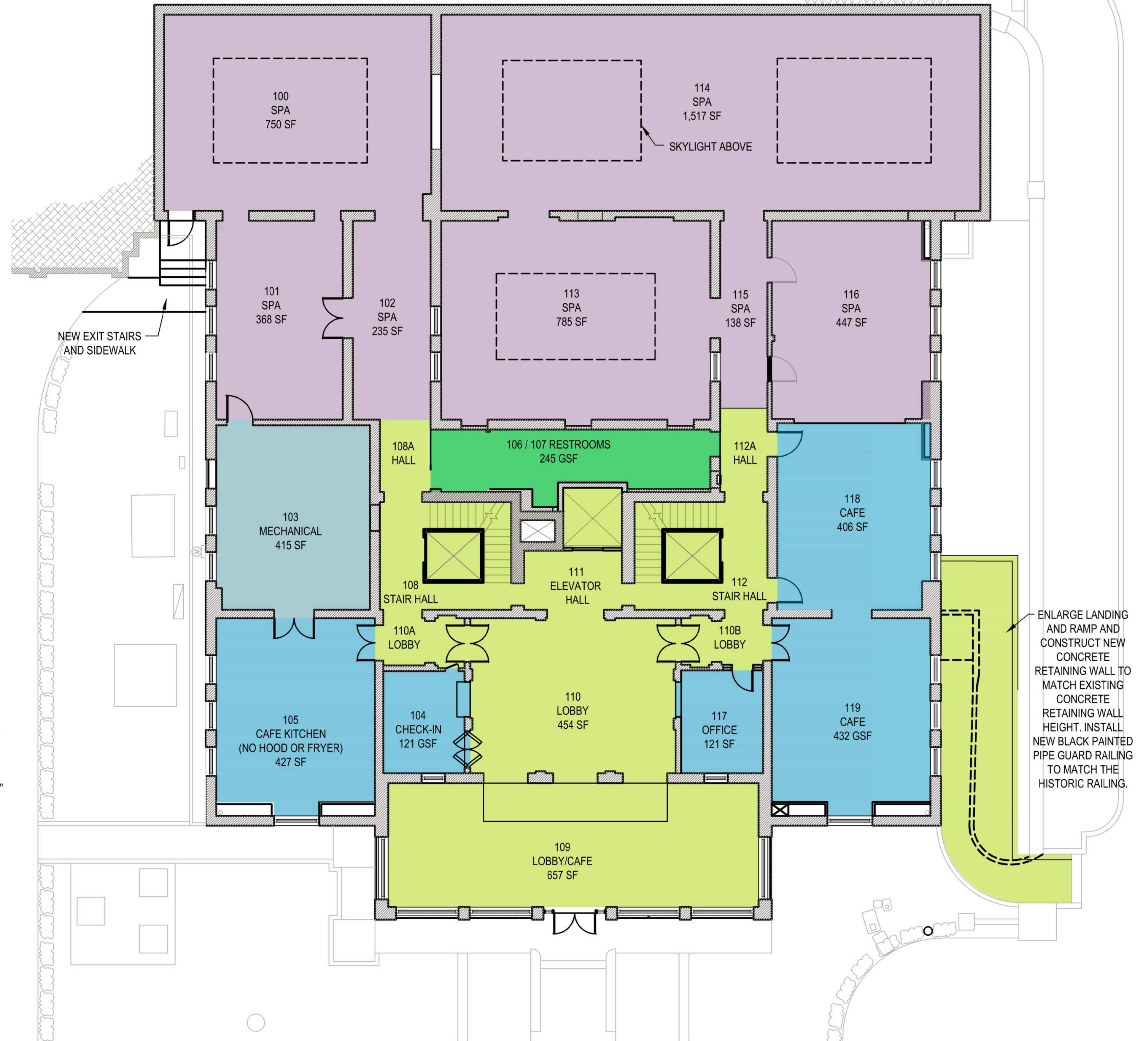
Figure 3.2. Drawings from National Park Service Project 128-41070_A, 2004.

PRE-DESIGN PROGRAMMING
AND TREATMENT
RECOMMENDATION DRAWINGS

Pre-Design Programming
and Treatment
Recommendation Drawings



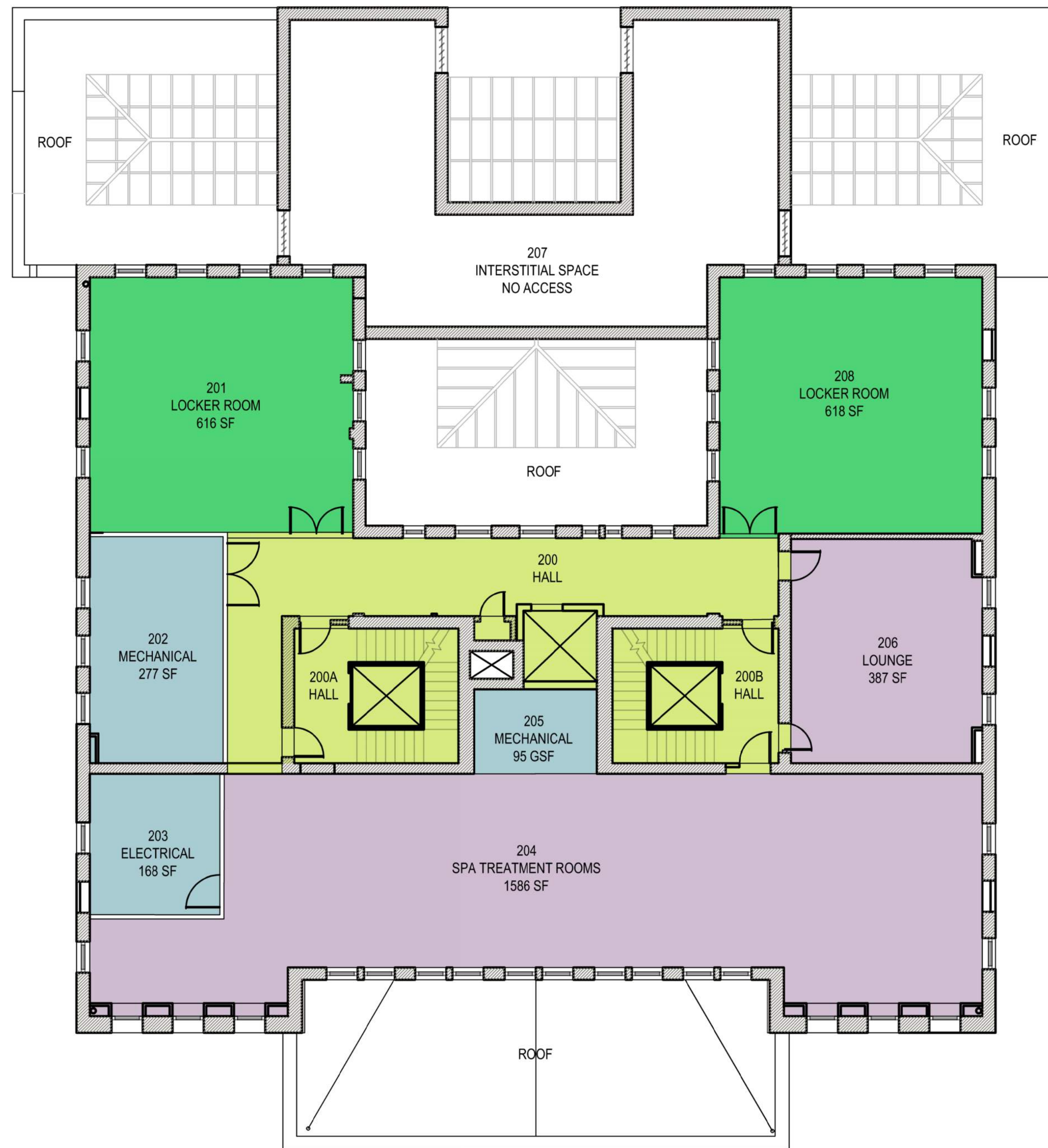
1 SPA AND CAFE -- BASEMENT FLOOR PLAN
A5 1/8" = 1'-0"



2 SPA AND CAFE -- FIRST FLOOR PLAN
A5 1/8" = 1'-0"



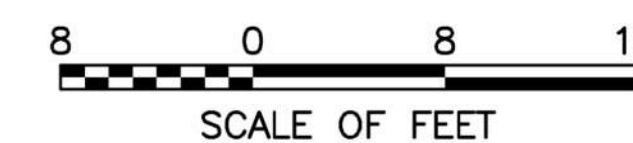
 1701 Oak Street, Suite 100 Ph. 816-474-0900 www.strata-arch.com	DESIGNED: CA	SUB SHEET NO. A5	TITLE OF SHEET SPA AND CAFE -- MAURICE BATHHOUSE FIRST FLOOR PLAN PRE-DESIGN CONDITION ASSESSMENT AND TREATMENT PLAN FOR THE MAURICE BATHHOUSE AND LIBBEY MEMORIAL PMC HOT SPRINGS NATIONAL PARK	DRAWING NO. 128 180181
	TECH. REVIEW: AG			DATE: 06/29/22



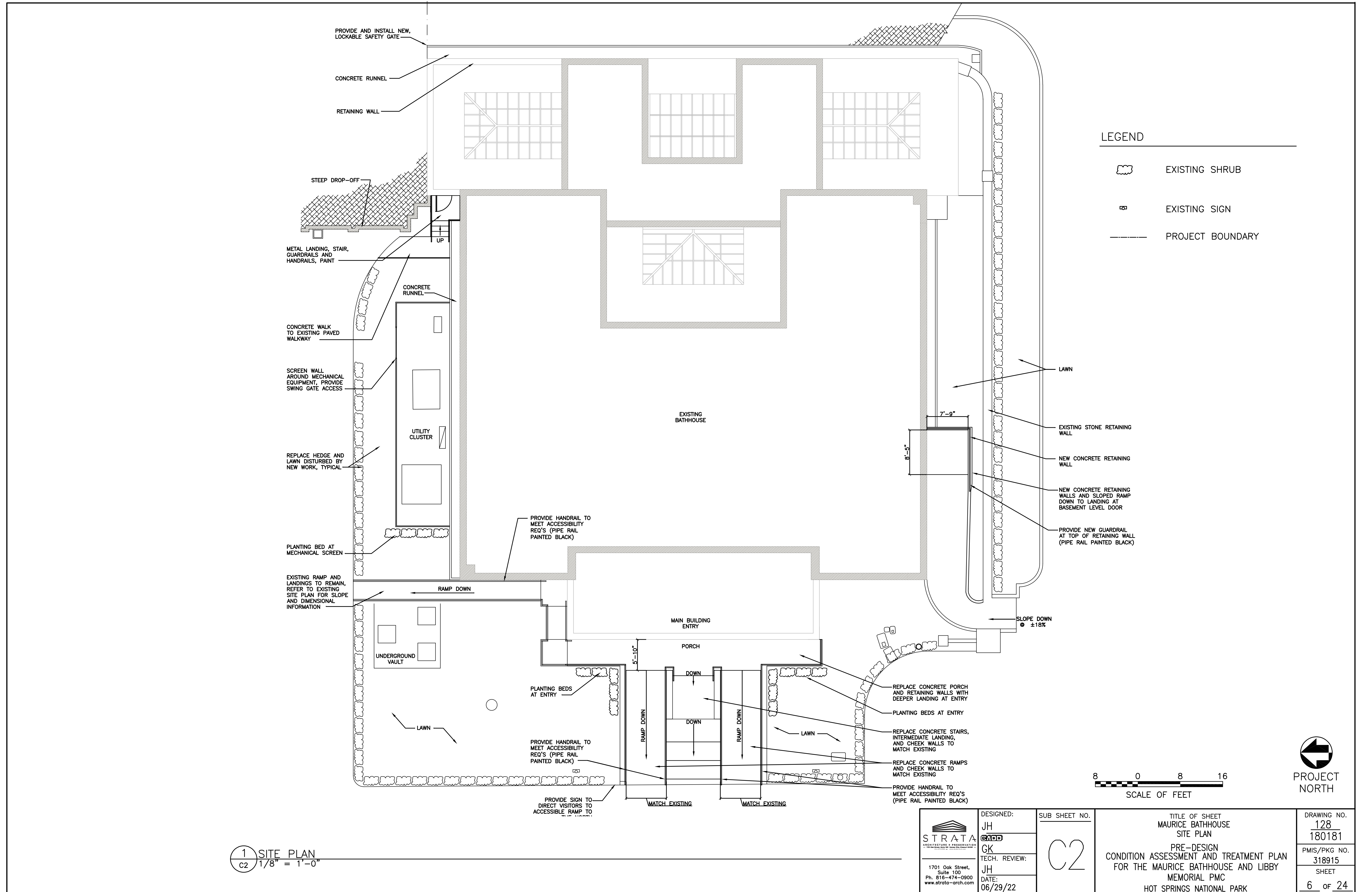
1 SPA AND CAFE - SECOND FLOOR PLAN
 A6 1/8" = 1'-0"



2 SPA AND CAFE - THIRD FLOOR PLAN
 A6 1/8" = 1'-0"

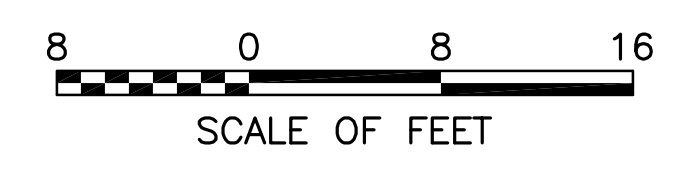


 1701 Oak Street, Suite 100 Ph. 816-474-0900 www.strata-arch.com	DESIGNED: CA	SUB SHEET NO. A6	TITLE OF SHEET SPA AND CAFE- MAURICE BATHHOUSE THIRD FLOOR PLAN PRE-DESIGN CONDITION ASSESSMENT AND TREATMENT PLAN FOR THE MAURICE BATHHOUSE AND LIBBEY MEMORIAL PMC HOT SPRINGS NATIONAL PARK	DRAWING NO. 128 180181
	TECH. REVIEW: AG			DATE: 06/29/22



LEGEND

	EXISTING SHRUB
	EXISTING SIGN
	PROJECT BOUNDARY

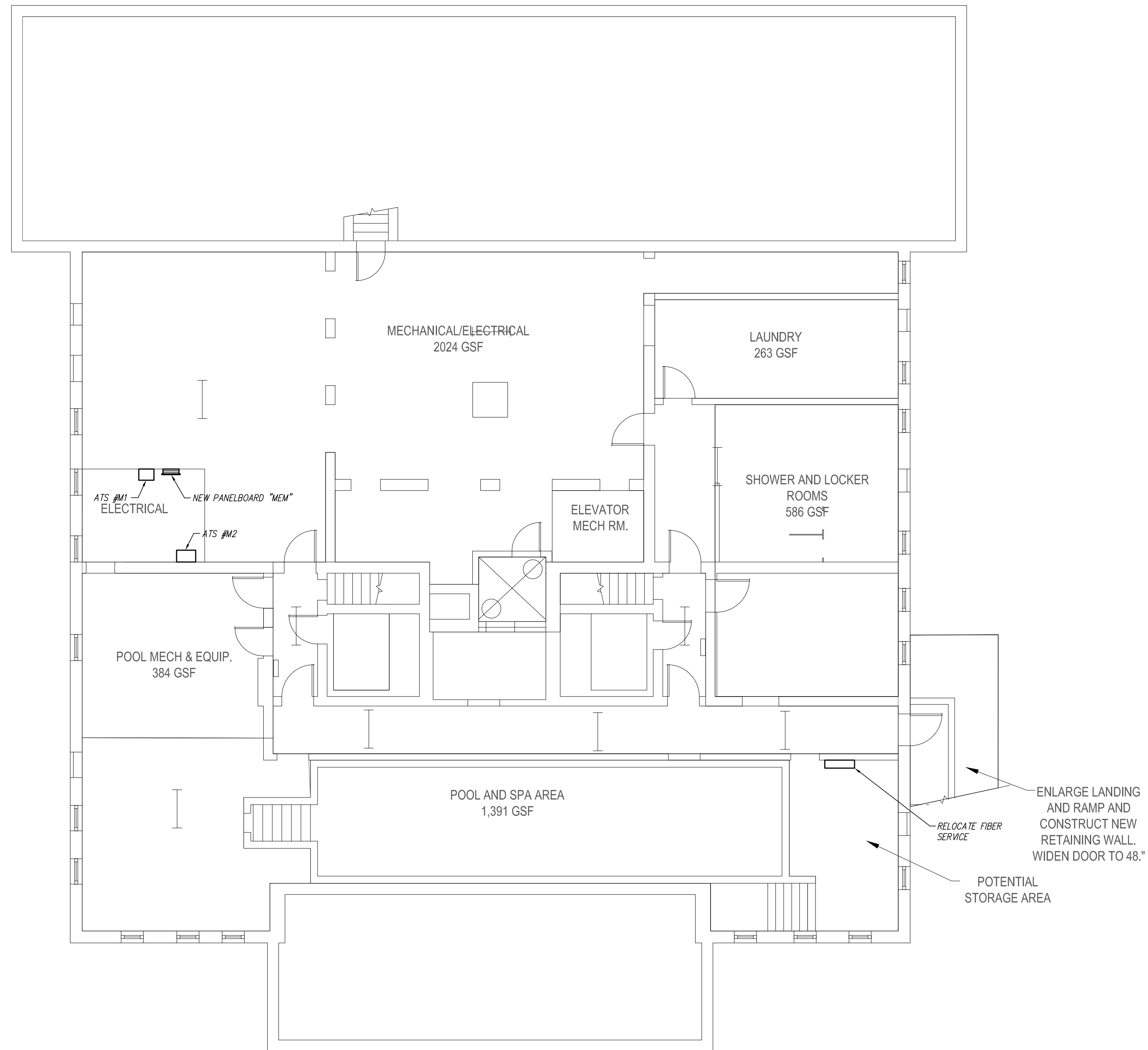


1 SITE PLAN
C2 1/8" = 1'-0"

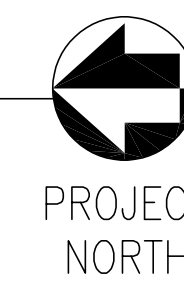
 1701 Oak Street, Suite 100 Ph. 816-474-0900 www.strata-arch.com	DESIGNED: JH	SUB SHEET NO. C2	TITLE OF SHEET MAURICE BATHHOUSE SITE PLAN	DRAWING NO. 128 180181
	TECH. REVIEW: JH		PRE-DESIGN CONDITION ASSESSMENT AND TREATMENT PLAN FOR THE MAURICE BATHHOUSE AND LIBBY MEMORIAL PMC	PMIS/PKG NO. 318915
	DATE: 06/29/22		HOT SPRINGS NATIONAL PARK	SHEET 6 of 24


GENERAL NOTES:

1. REFER TO MECHANICAL PLANS FOR ALL MECHANICAL EQUIPMENT LOCATIONS.



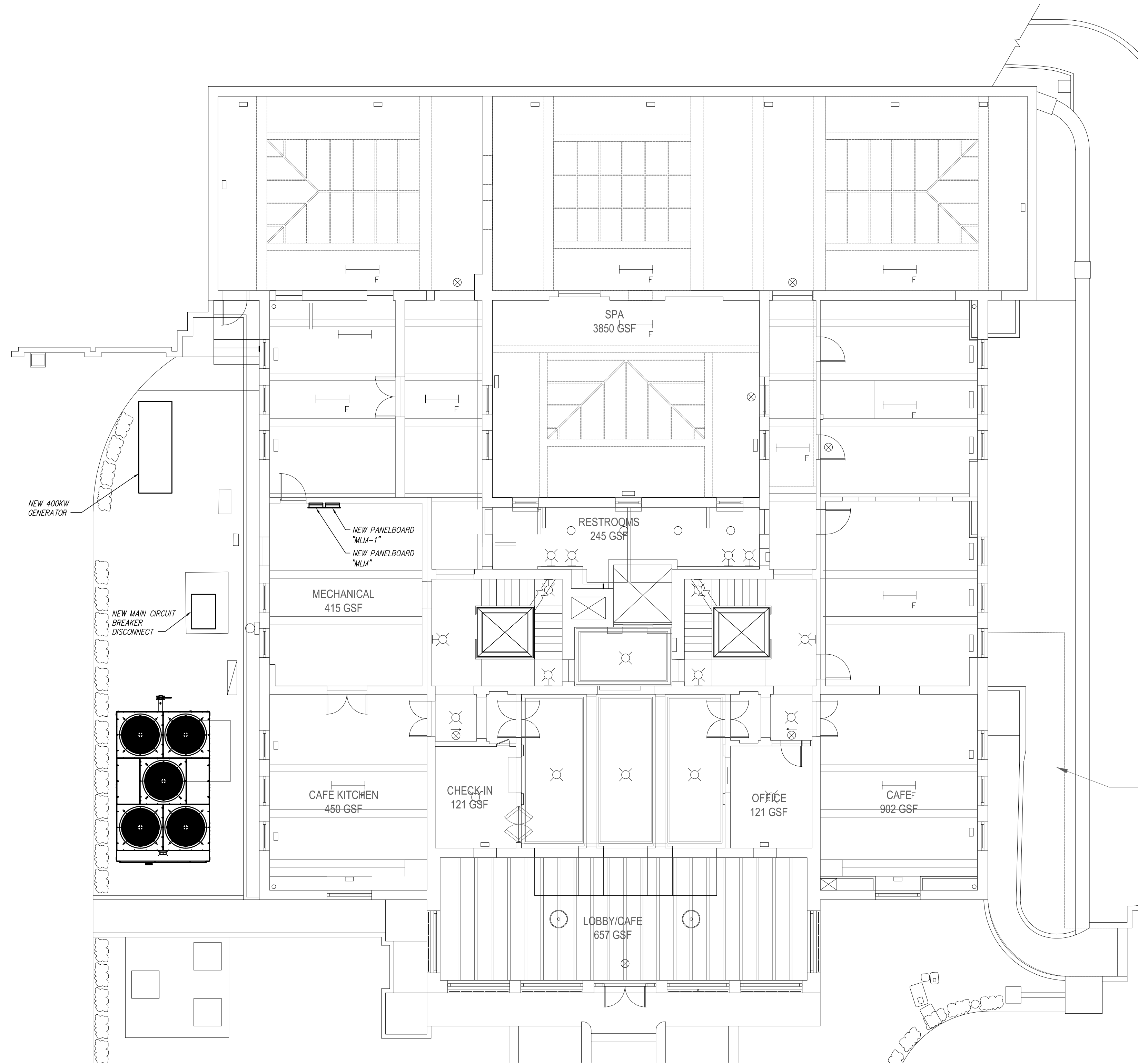
1 BASEMENT ELECTRICAL PLAN -- MAURICE
E1 1/8" = 1'-0"



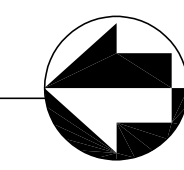
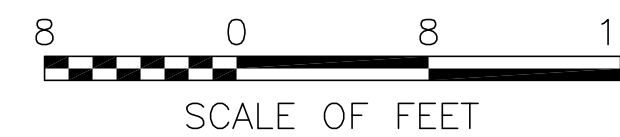
 1600 Baltimore, Suite 300 Kansas City, MO 64108 Ph. 816-842-8437 WWW.IMEG-CORP.COM	DESIGNED: PIP MWM/BWC TECH. REVIEW: PIP DATE: 6/29/22	SUB SHEET NO. E1	TITLE OF SHEET BASEMENT ELECTRICAL PLAN -- MAURICE PRE-DESIGN CONDITION ASSESSMENT AND TREATMENT PLAN FOR THE MAURICE BATHHOUSE AND LIBBEY MEMORIAL PMC HOT SPRINGS NATIONAL PARK	DRAWING NO. 128 180181 PMIS/PKG NO. 318915 SHEET 9 OF 24

GENERAL NOTES:

1. REFER TO MECHANICAL PLANS FOR ALL MECHANICAL EQUIPMENT LOCATIONS.



1 FIRST FLOOR ELECTRICAL PLAN -- MAURICE
E2 1/8" = 1'-0"

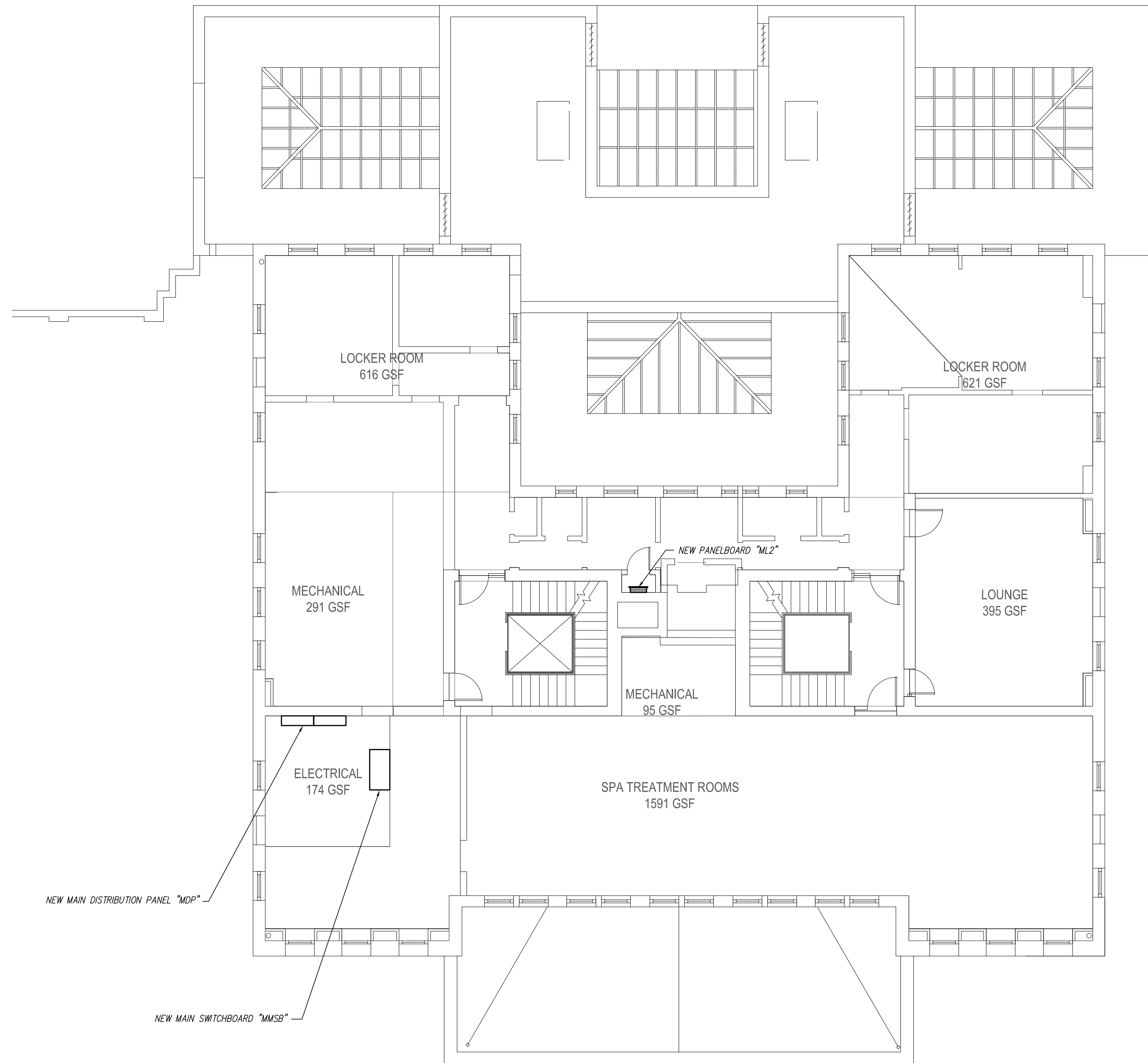


PROJECT
NORTH

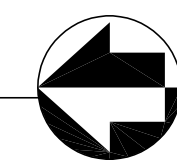
 <small>1600 Baltimore, Suite 300 Kansas City, MO 64108 Ph. 816-842-8437 WWW.IMEG-CORP.COM</small>	DESIGNED: PIP	SUB SHEET NO. E2	TITLE OF SHEET FIRST FLOOR ELECTRICAL PLAN -- MAURICE	DRAWING NO. 128 180181
	TECH. REVIEW: MWM/BWC PIP		PRE-DESIGN CONDITION ASSESSMENT AND TREATMENT PLAN FOR THE MAURICE BATHHOUSE AND LIBBEY MEMORIAL PMC HOT SPRINGS NATIONAL PARK	PMIS/PKG NO. 318915 SHEET 10 OF 24
DATE: 6/29/22				

GENERAL NOTES:


1. REFER TO MECHANICAL PLANS FOR ALL MECHANICAL EQUIPMENT LOCATIONS.



1 SECOND FLOOR ELECTRICAL PLAN - MAURICE
E3 1/8" = 1'-0"

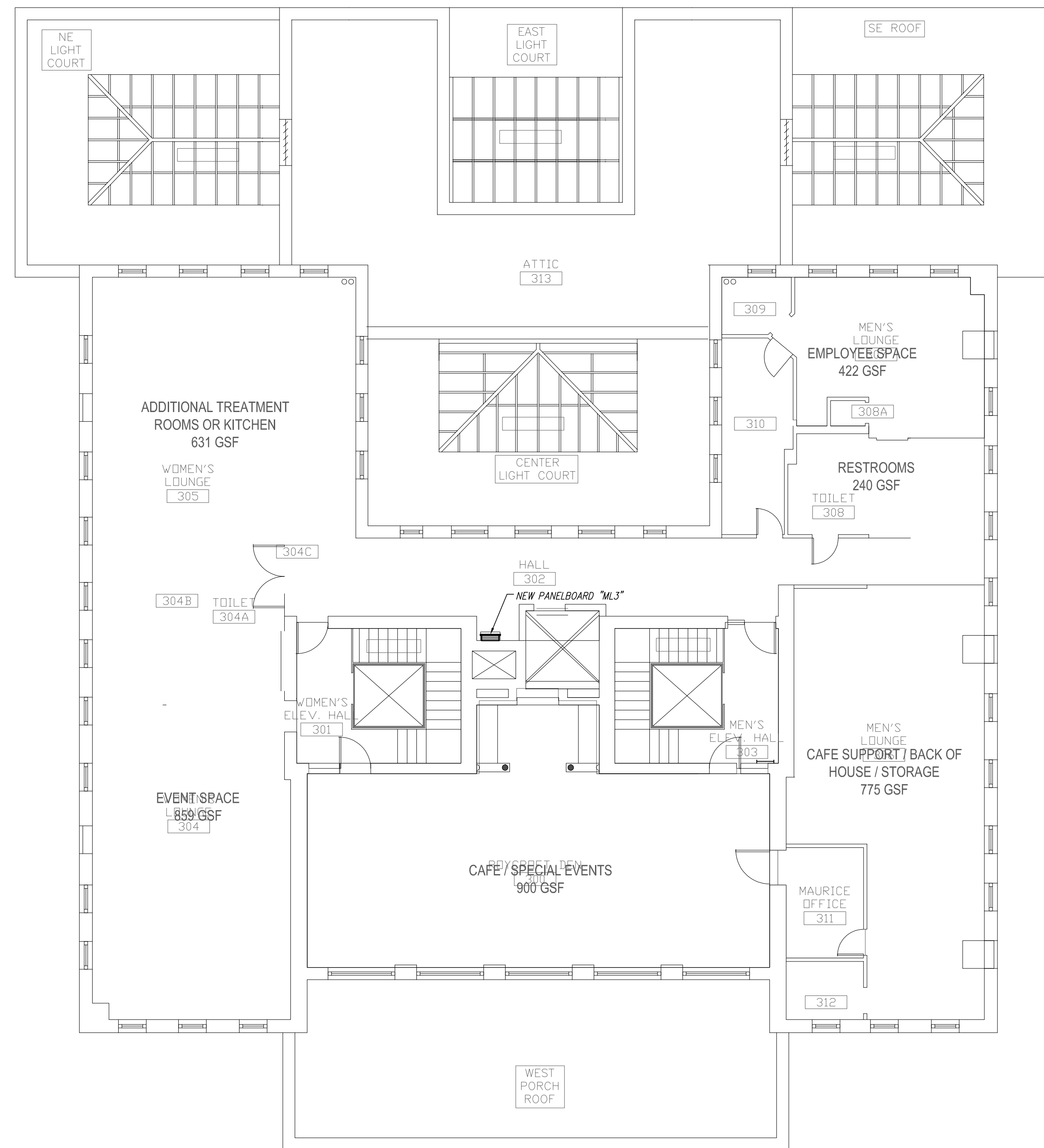


PROJECT NORTH

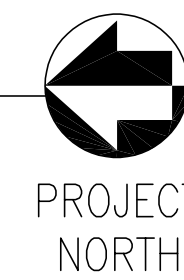
 1600 Baltimore, Suite 300 Kansas City, MO 64108 Ph. 816-842-8437 WWW.IMEG-CORP.COM	DESIGNED: PIP CAD: MWM/BWC TECH. REVIEW: PJP DATE: 6/29/22	SUB SHEET NO. E3	TITLE OF SHEET SECOND FLOOR ELECTRICAL PLAN - MAURICE PRE-DESIGN CONDITION ASSESSMENT AND TREATMENT PLAN FOR THE MAURICE BATHHOUSE AND LIBBEY MEMORIAL PMC HOT SPRINGS NATIONAL PARK	DRAWING NO. 128 180181 PMIS/PKG NO. 318915 SHEET 11 OF 24


GENERAL NOTES:

1. REFER TO MECHANICAL PLANS FOR ALL MECHANICAL EQUIPMENT LOCATIONS.



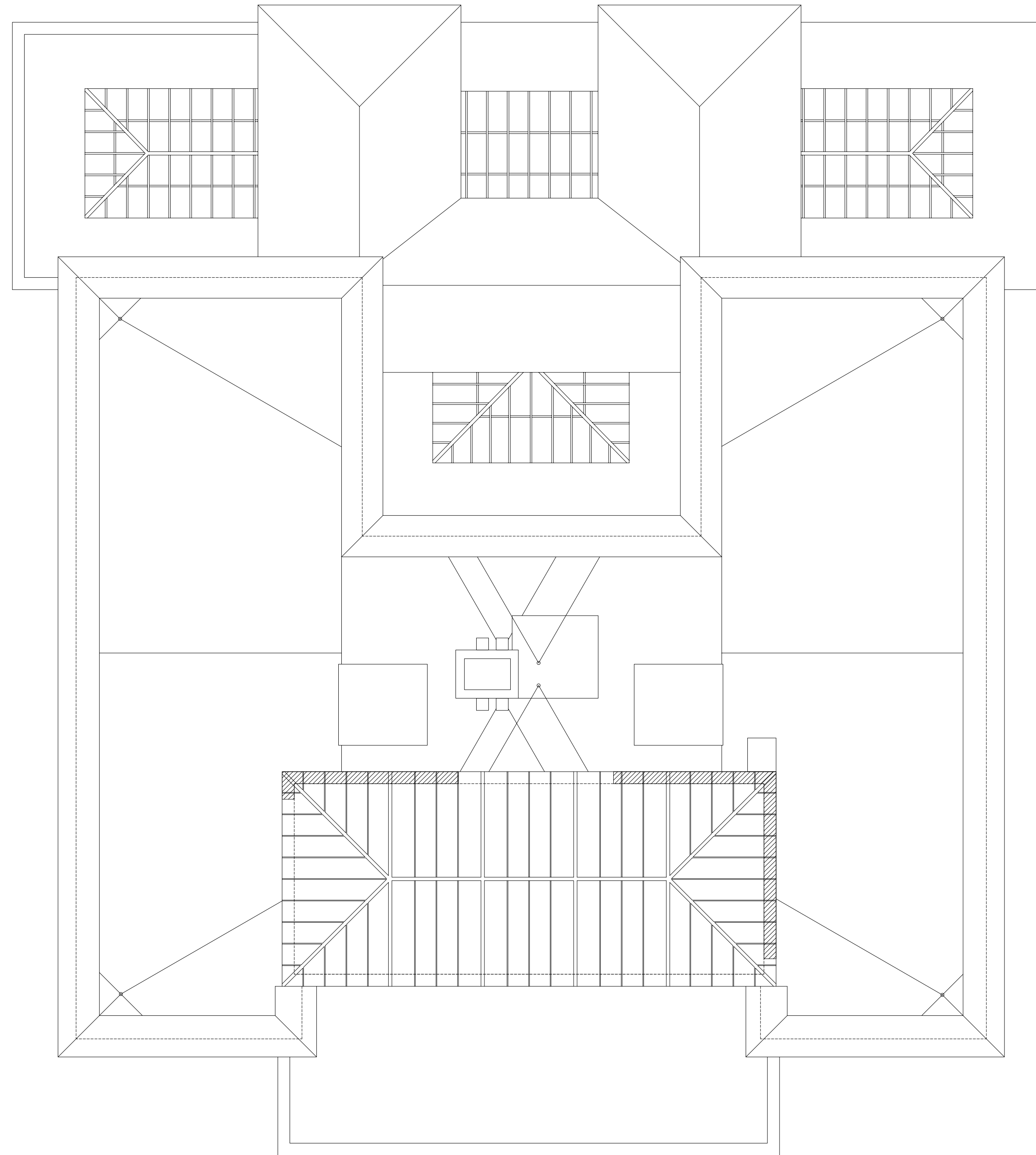
1 THIRD FLOOR ELECTRICAL PLAN - MAURICE
E4 1/8" = 1'-0"



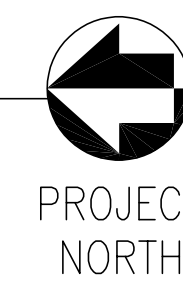
 1600 Baltimore, Suite 300 Kansas City, MO 64108 Ph. 816-842-8437 WWW.IMEG-CORP.COM	DESIGNED: PIP CAD MWM/BWC TECH. REVIEW: PIP	SUB SHEET NO. E4	TITLE OF SHEET THIRD FLOOR ELECTRICAL PLAN - MAURICE PRE-DESIGN CONDITION ASSESSMENT AND TREATMENT PLAN FOR THE MAURICE BATHHOUSE AND LIBBEY MEMORIAL PMC HOT SPRINGS NATIONAL PARK	DRAWING NO. 128 180181 PMIS/PKG NO. 318915 SHEET 12 OF 24
	DATE: 6/29/22			


GENERAL NOTES:

1. REFER TO MECHANICAL PLANS FOR ALL MECHANICAL EQUIPMENT LOCATIONS.



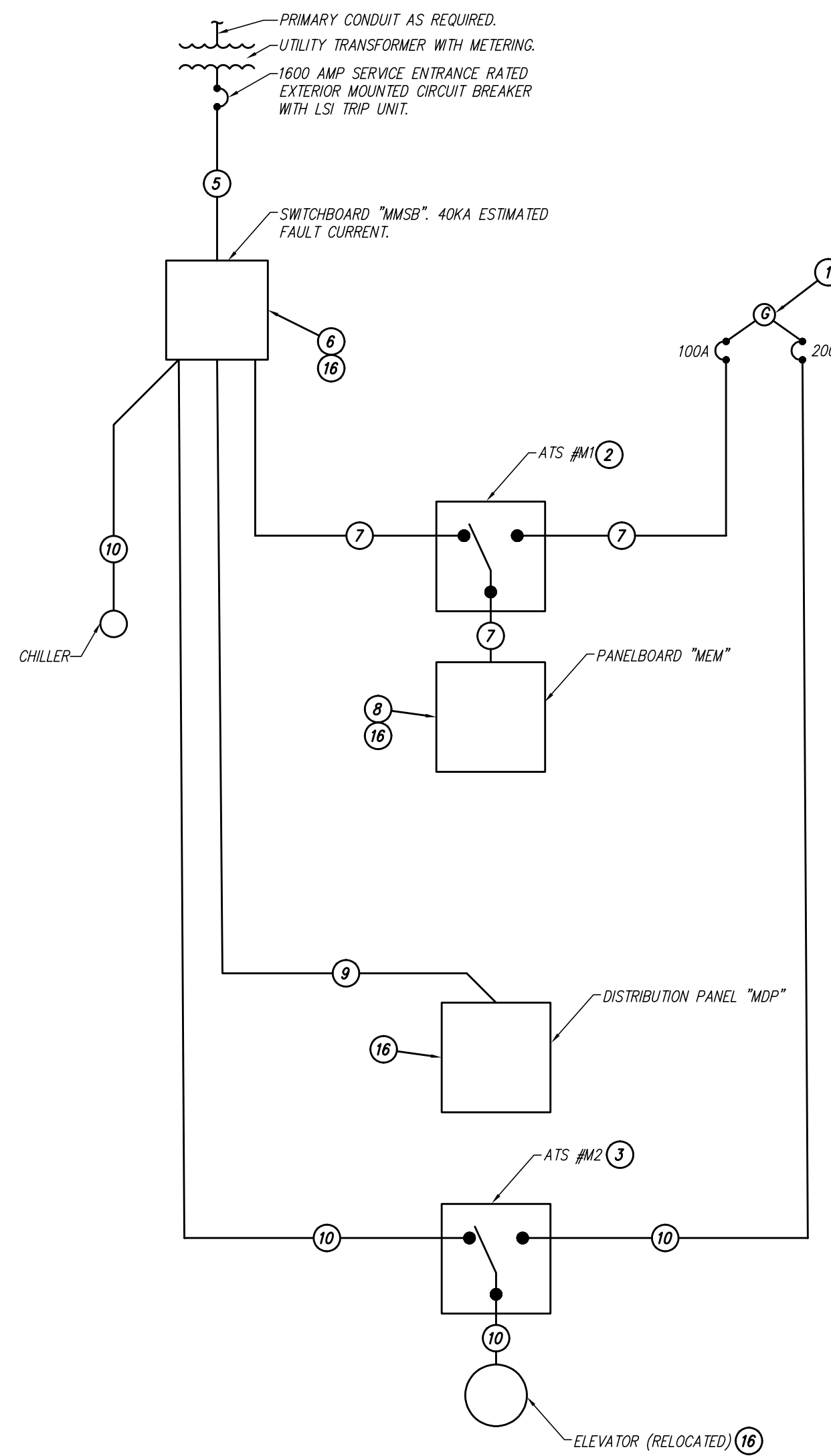
1 ROOF ELECTRICAL PLAN - MAURICE
E5 1/8" = 1'-0"



 1600 Baltimore, Suite 300 Kansas City, MO 64108 Ph. 816-842-8437 WWW.IMEG-CORP.COM	DESIGNED: PIP	SUB SHEET NO. E5	TITLE OF SHEET ROOF ELECTRICAL PLAN - MAURICE	DRAWING NO. 128 180181
	TECH. REVIEW: PIP	PRE-DESIGN CONDITION ASSESSMENT AND TREATMENT PLAN FOR THE MAURICE BATHHOUSE AND LIBBEY MEMORIAL PMC HOT SPRINGS NATIONAL PARK	PMIS/PKG NO. 318915	SHEET 13 OF 24


KEYED NOTES:

- ① 400 KW NATURAL GAS GENERATOR, 120/208 VOLT, 3 PHASE, 4 WIRE. PROVIDE WITH THREE OUTPUT CIRCUIT BREAKERS. THE PROVIDED CIRCUIT BREAKERS SHALL BE SELECTIVELY COORDINATED WITH DOWNSTREAM CIRCUIT BREAKERS. A COORDINATION STUDY SHALL BE PROVIDED. THE CIRCUIT BREAKERS PROVIDED SHALL HAVE LSI ADJUSTMENT. GENERATOR SHALL BE INSTALLED AS A SEPARATELY DERIVED SYSTEM. FURNISH AND INSTALL APPROPRIATELY DESIGNED GROUNDING ELECTRODE SYSTEM.
- ② 100 AMP, 4 POLE OPEN TRANSITION TRANSFER SWITCH.
- ③ 200 AMP, 4 POLE OPEN TRANSITION TRANSFER SWITCH.
- ④ 600 AMP, 4 POLE OPEN TRANSITION TRANSFER SWITCH.
- ⑤ 5 SETS (4 #500 MCM W IN EACH 4" C.)
- ⑥ FURNISH AND INSTALL APPROPRIATELY DESIGNED GROUNDING ELECTRODE SYSTEM.
- ⑦ 4 #1 W, 1 #8 GND IN 1 1/2" C.
- ⑧ 42 POLE LIFE SAFETY PANEL.
- ⑨ 3 SETS (4 #500 MCM W, 1 #2/0 GND IN EACH 4" C.)
- ⑩ 2 SETS (3 #250 MCM W, 1 #2 GND IN EACH 3" C.)
- ⑪ 260 KW NATURAL GAS GENERATOR, 120/208 VOLT, 3 PHASE, 4 WIRE. PROVIDE WITH THREE OUTPUT CIRCUIT BREAKERS. THE PROVIDED CIRCUIT BREAKERS SHALL BE SELECTIVELY COORDINATED WITH DOWNSTREAM CIRCUIT BREAKERS. A COORDINATION STUDY SHALL BE PROVIDED. THE CIRCUIT BREAKERS PROVIDED SHALL HAVE LSI ADJUSTMENT. GENERATOR SHALL BE INSTALLED AS A SEPARATELY DERIVED SYSTEM. FURNISH AND INSTALL APPROPRIATELY DESIGNED GROUNDING ELECTRODE SYSTEM.
- ⑫ 2 SETS (4 #350 MCM W, 1 #1 GND IN EACH 3" C.)
- ⑬ 3 SETS (4 #500 MCM W, IN EACH 4" C.)
- ⑭ 3 #500 MCM W, 1 #3 GND IN 4" C.)
- ⑮ 400 AMP, 4 POLE OPEN TRANSITION TRANSFER SWITCH.
- ⑯ PROVIDE WITH TVSS.



MAURICE ONE LINE

SCALE: NOT TO SCALE

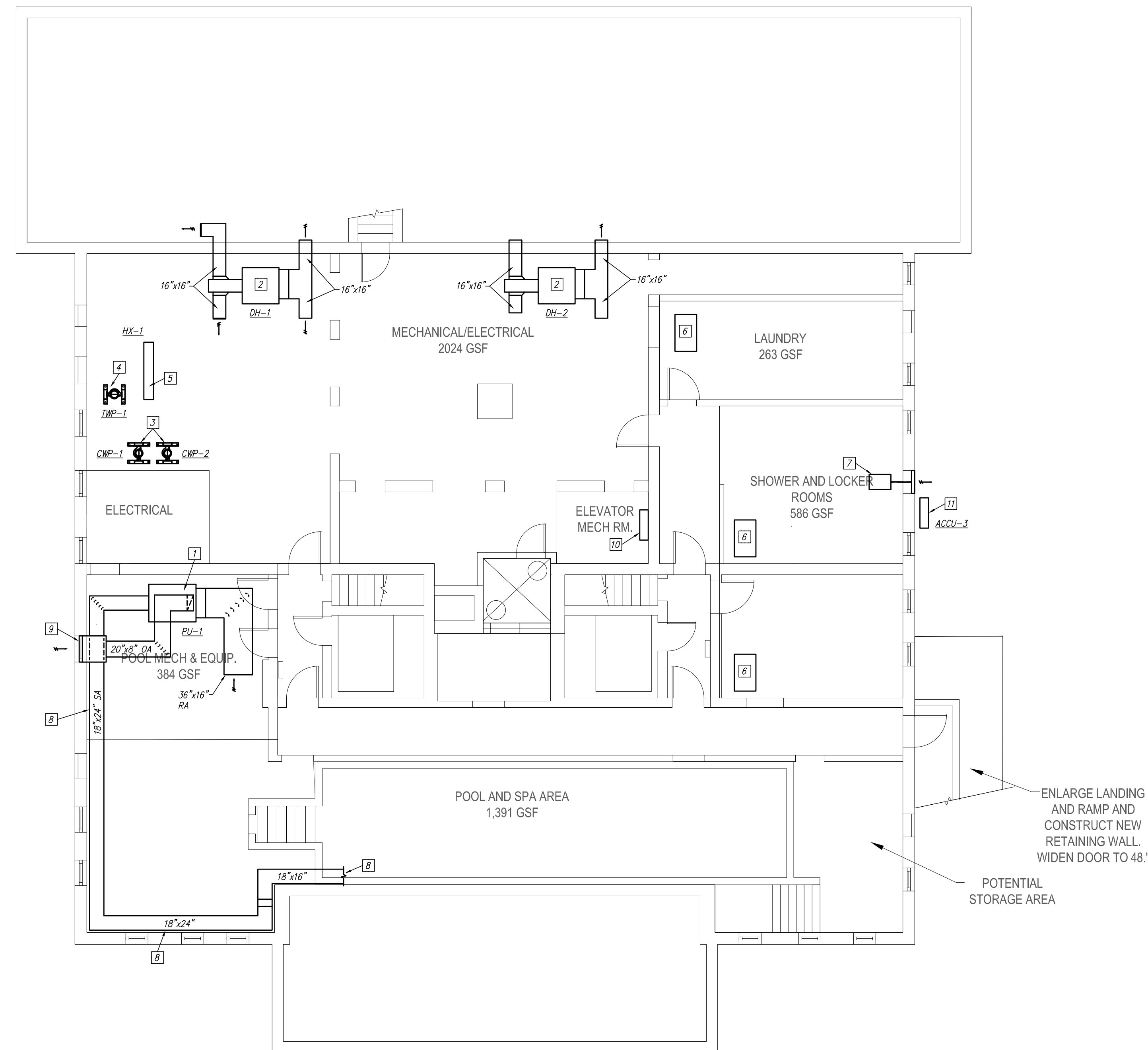
 1600 Baltimore, Suite 300 Kansas City, MO 64108 Ph. 816-842-8437 WWW.IMEG-CORP.COM	DESIGNED: PIP	SUB SHEET NO. E6	TITLE OF SHEET MAURICE ELECTRICAL ONE LINE	DRAWING NO. 128 180181
	TECH. REVIEW: PJP		PRE-DESIGN CONDITION ASSESSMENT AND TREATMENT PLAN FOR THE MAURICE BATHHOUSE AND LIBBEY MEMORIAL PMC HOT SPRINGS NATIONAL PARK	PMIS/PKG NO. 318915
	DATE: 6/29/22			SHEET 14 OF 24

GENERAL NOTES:

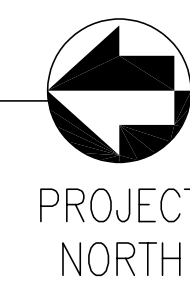
1. DEMO ALL EXISTING MECHANICAL EQUIPMENT PIPING & DUCTWORK, EXCEPT CRAWL SPACE EXH FAN & INTAKE.
2. ROUTING OF TERMINAL EQUIPMENT, DUCTWORK AND PIPING SHALL BE VERY CAREFULLY COORDINATED WITH EXISTING CONDITIONS, PRESERVATION ZONES AND HISTORIC NATURE OF BUILDING DURING SCHEMATIC DESIGN OF THE PROJECT TO CONFORM WITH THE NATIONAL PARKS REQUIREMENTS AND GUIDELINES.

KEYED NOTES:

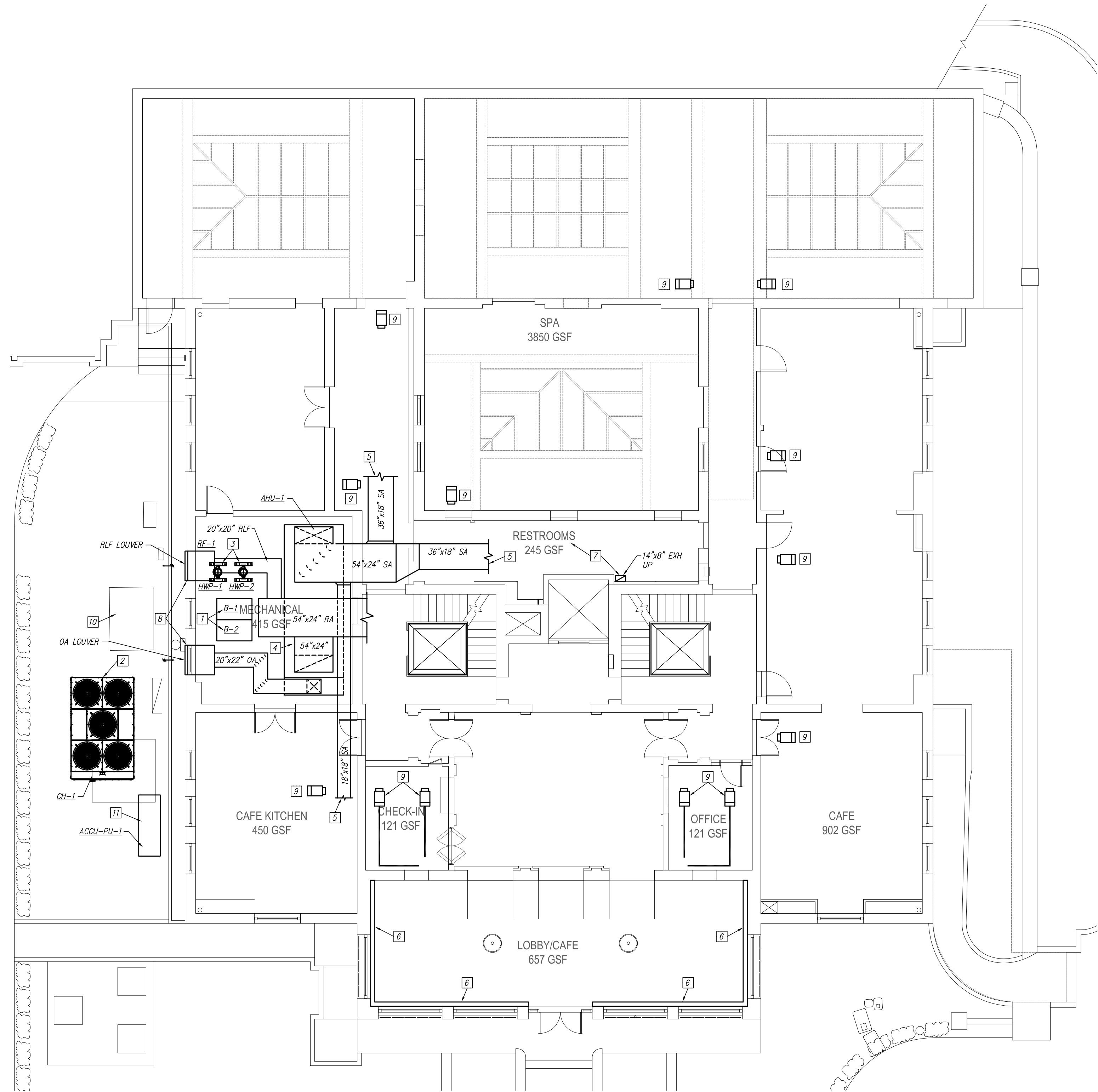
1. DESERT AIR L06R7NB7JLCE0 OR EQUAL PACKAGED POOL DEHUMIDIFICATION UNIT W/REMOTE RC55051 CONDENSER & HOT WATER HEATING. 3000 CFM. ROUTE REFRIGERANT PIPING TO OUTDOOR CONDENSER. MOUNT UNIT ON 24" MIN HIGH PLATFORM MOUNT ON HOUSEKEEPING PAD. UNIT FURNISHED UNDER TENANT FINISH ONLY.
2. DESERT AIR LW05ANTD OR EQUAL SELF CONTAINED DEHUMIDIFIER MOUNTED HIGH AS POSSIBLE.
3. B&G E-BOSC 2.5x2.5x7B OR EQUAL INLINE CHILLED WATER PUMP MOUNTED 24" AFF. 155 GPM @ 80FT HEAD. CONNECT TO CHILLER & ROUTE TO AIR HANDLING UNITS & FCU'S VIA SPIRO THERM OR EQUAL AIR & DIRT SEPARATOR. PROVIDE GYCOL FILL SYSTEM.
4. B&G 3x3x7C OR EQUAL INLINE THERMAL WATER HEAT EXCHANGER PUMP MOUNTED 24" MIN. AFF. 100 GPM @ 20 FT HEAD. PIPE TO HEAT EXCHANGER & HEATING WATER RETURN MAIN.
5. B&G OR EQUAL SHELL AND TUBE HEAT EXCHANGER TO TRANSFER HEAT FROM THERMAL SPRING WATERS TO PREHEAT BOILER HEATING WATER. CONNECT TO EXISTING THERMAL WATER PIPING.
6. 4-PIPE FAN COIL UNIT DUCTED TO SPACE. UNDER TENANT FINISH ONLY.
7. INLINE EXHAUST FAN CONNECTED TO EXISTING LOUVER. UNDER TENANT FINISH ONLY.
8. ROUTE DUCTWORK LOW ON WALL. DUCTWORK SHALL BE ALUMINUM. UNDER TENANT FINISH ONLY.
9. NEW LOUVER IN EXISTING WINDOW OPENING. UNDER TENANT FINISH ONLY.
10. MINI-SPLIT DX INDOOR UNIT. ROUTE REFRIGERANT PIPING TO REMOTE CONDENSING UNIT.
11. CONDENSING UNIT.



1 BASEMENT MECHANICAL PLAN - MAURICE
M1 1/8" = 1'-0"



<p>1600 Baltimore, Suite 300 Kansas City, MO 64108 Ph. 816-842-9437 WWW.IMECCORP.COM</p>	DESIGNED: SGB	SUB SHEET NO. M1	TITLE OF SHEET BASEMENT MECHANICAL PLAN - MAURICE	DRAWING NO. 128 180181
	MWM/BWC TECH. REVIEW: SGB		PRE-DESIGN CONDITION ASSESSMENT AND TREATMENT PLAN FOR THE MAURICE BATHHOUSE AND LIBBEY MEMORIAL PMC HOT SPRINGS NATIONAL PARK	PMS/PKG NO. 318915 SHEET 15 OF 24
DATE: 6/29/22				



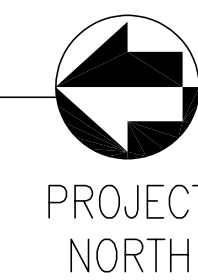
GENERAL NOTES:

1. DEMO ALL EXISTING MECHANICAL EQUIPMENT PIPING & DUCTWORK.
2. ROUTING OF TERMINAL EQUIPMENT, DUCTWORK AND PIPING SHALL BE VERY CAREFULLY COORDINATED WITH EXISTING CONDITIONS, PRESERVATION ZONES AND HISTORIC NATURE OF BUILDING DURING SCHEMATIC DESIGN OF THE PROJECT TO CONFORM WITH THE NATIONAL PARKS REQUIREMENTS AND GUIDELINES.

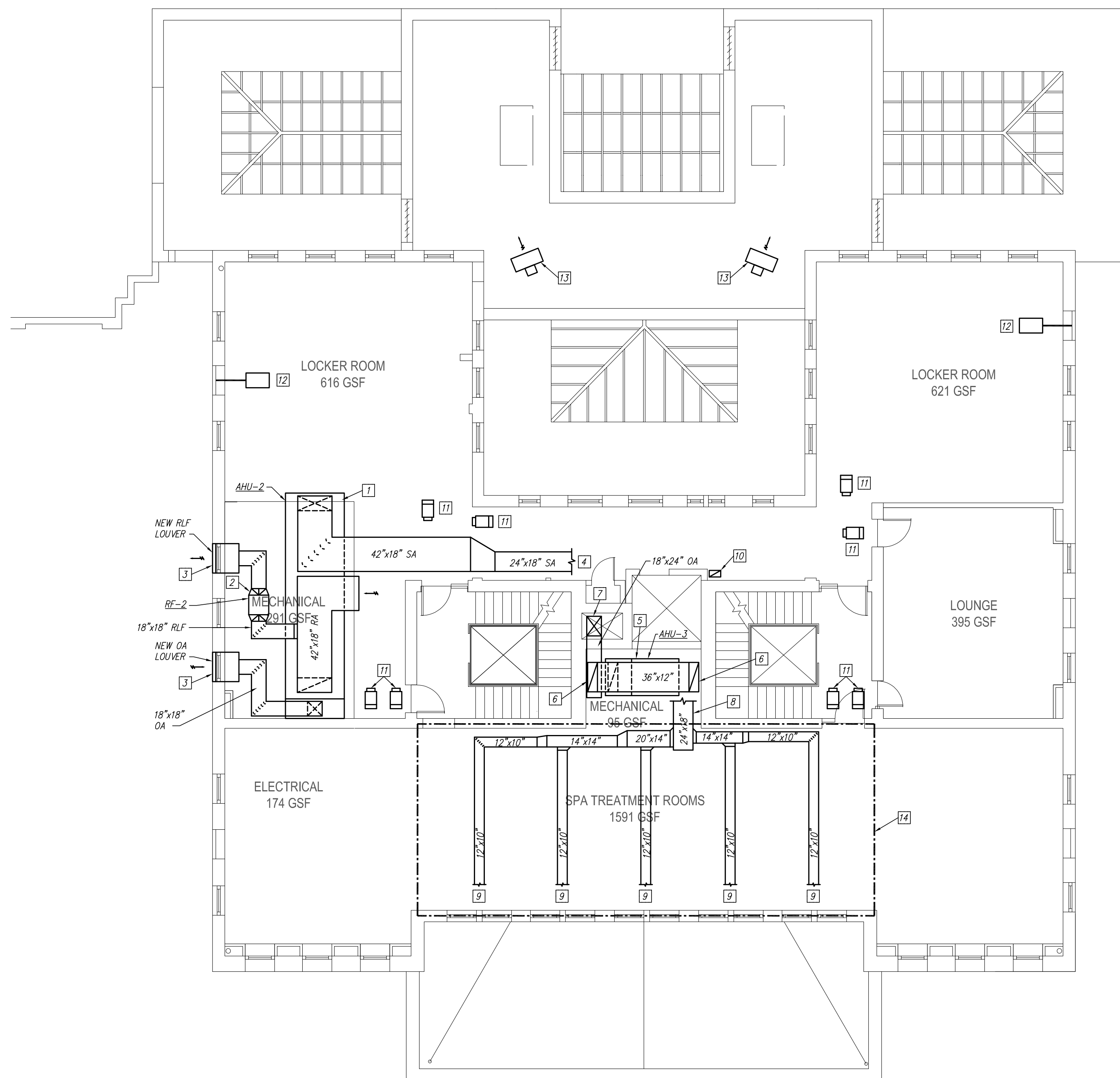
KEYED NOTES:

- 1 LOCHINVAR FBH1001 OR EQUAL HIGH EFFICIENCY HOT WATER CONDENSING BOILER. 750 MBH MIN. AHR1 OUTPUT.
- 2 YORK YLAAD1000SE OR EQUAL AIR COOLED CHILLER SET ON CONCRETE PAD. EXTEND CHILLED WATER TO PUMPS IN BASEMENT.
- 3 LOREN COOK 180QMX OR EQUAL RELIEF FAN SUSPENDED FROM STRUCTURE. 3000 CFM @ 0.5" E.S.P.
- 4 YORK SOLUTIONS OR EQUAL COOLING ONLY VAV UNIT W/AIR BLENDERS MERV11 FILTRATION, PREHEAT COIL, FAN ARRAY, COOLING COIL & UV LIGHTS. 13,000 CFM.
- 5 EXTEND DUCTWORK TO SERVE THIS FLOOR. SPACE TEMPERATURE WILL BE CONTROLLED W/NAV BOXES W/REHEAT COILS.
- 6 CONTINUOUS HOT WATER FINNED TUBE RADIATION IN MANUFACTURER PROVIDED ARCHITECTURAL STYLE METAL ENCLOSURE.
- 7 EXTEND EXHAUST DUCT TO SERVE RESTROOMS. UNDER TENANT FINISH ONLY.
- 8 EXISTING LOUVERS TO REMAIN. CONNECT NEW PLENUMS TO LOUVERS.
- 9 VAV BOX W/REHEAT COIL.
- 10 RELOCATE EXISTING CONDENSING UNIT SERVING THE HALL BUILDING TO THE HALL SITE. REMOVE AND RECONNECT REFRIGERANT PIPING & CONTROL WIRING.
- 11 CONDENSER FOR POOL AIR HANDLING UNIT. UNDER TENANT FINISH ONLY.

1 FIRST FLOOR MECHANICAL PLAN - MAURICE
M2 1/8" = 1'-0"



<p>1600 Baltimore, Suite 300 Kansas City, MO 64108 Ph. 816-842-8437 WWW.IMEG-CORP.COM</p>	<p>DESIGNED: SGB</p>	<p>SUB SHEET NO. M2</p>	<p>TITLE OF SHEET FIRST FLOOR MECHANICAL PLAN - MAURICE</p>	<p>DRAWING NO. 128 180181</p>
	<p>TECH. REVIEW: SGB</p>		<p>DATE: 6/29/22</p>	<p>PRE-DESIGN CONDITION ASSESSMENT AND TREATMENT PLAN FOR THE MAURICE BATHHOUSE AND LIBBEY MEMORIAL PMC HOT SPRINGS NATIONAL PARK</p>



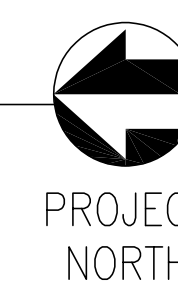
GENERAL NOTES:

1. DEMO ALL EXISTING MECHANICAL EQUIPMENT PIPING & DUCTWORK.
2. ROUTING OF TERMINAL EQUIPMENT, DUCTWORK AND PIPING SHALL BE VERY CAREFULLY COORDINATED WITH EXISTING CONDITIONS, PRESERVATION ZONES AND HISTORIC NATURE OF BUILDING DURING SCHEMATIC DESIGN OF THE PROJECT TO CONFORM WITH THE NATIONAL PARKS REQUIREMENTS AND GUIDELINES.

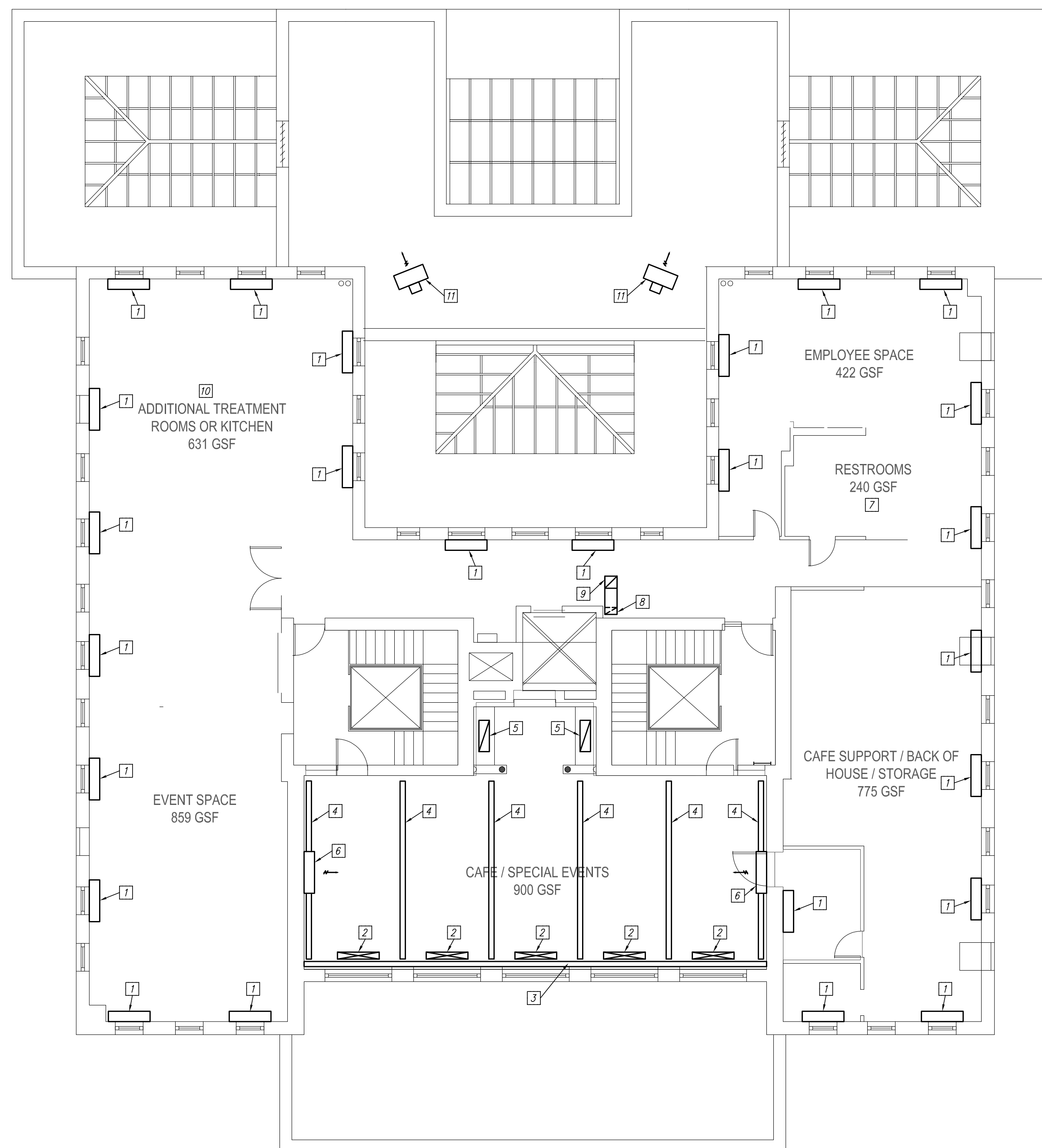
KEYED NOTES:

- 1 YORK SOLUTIONS OR EQUAL COOLING ONLY VAV UNIT W/AIR BLENDERS, MERV 11 FILTRATION, PREHEAT COIL, FAN ARRAY, COOLING COIL & UV LIGHTS. 7,000 CFM.
- 2 LOREN COOK 165 QMx OR EQUAL RELIEF FAN SUSPENDED FROM STRUCTURE 2000 CFM @ 0.5 ESP.
- 3 NEW LOUVERS IN EXISTING WINDOW OPENING W/PLENUMS.
- 4 EXTEND DUCTWORK TO SERVE THIS FLOOR. SPACE TEMPERATURE WILL BE CONTROLLED W/VAV BOXES W/REHEAT COILS.
- 5 YORK SOLUTIONS OR EQUAL SINGLE ZONE AHU WITH ECONOMIZER, MERV 11 FILTRATION, PREHEAT COIL, COOLING COIL, REHEAT COIL & FLENUM FAN. 3000 CFM
- 6 36"x12" RA UP TO BELOW BENCHES ABOVE.
- 7 18"x24" OA UP TO INTAKE LOUVER ABOVE ROOF.
- 8 24"x18" SA TO AHU-3.
- 9 EXTEND TO LINEAR FLOOR SUPPLY GRILLES ABOVE.
- 10 14"x8" EXH DN & UP TO ROOFTOP EXHAUST FAN UNDER TENANT FINISH ONLY.
- 11 VAV BOX W/REHEAT COIL.
- 12 INLINE EXH FAN CONNECTED TO EXISTING LOUVER & EXTENDED TO LOCKER ROOM EXHAUST GRILLES. UNDER TENANT FINISH ONLY.
- 13 HORIZONTAL HOT WATER UNIT HEATER.
- 14 NO PIPING OR DUCTWORK SHALL PENETRATE THE SECOND FLOOR IN THIS AREA.

1 SECOND FLOOR MECHANICAL PLAN – MAURICE
M3 1/8" = 1'-0"



<p>1600 Baltimore, Suite 300 Kansas City, MO 64108 Ph. 816-842-8437 WWW.IMEG.CORP.COM</p>	DESIGNED: SGB	SUB SHEET NO. M3	TITLE OF SHEET SECOND FLOOR MECHANICAL PLAN – MAURICE		DRAWING NO. 128 180181
	MWM/BWC TECH. REVIEW: SGB		PRE-DESIGN CONDITION ASSESSMENT AND TREATMENT PLAN FOR THE MAURICE BATHHOUSE AND LIBBEY MEMORIAL PMC HOT SPRINGS NATIONAL PARK		PMS/PKG NO. 318915 SHEET 17 OF 24
DATE: 6/29/22					



GENERAL NOTES:


1. DEMO ALL EXISTING MECHANICAL EQUIPMENT PIPING & DUCTWORK.
2. ROUTING OF TERMINAL EQUIPMENT, DUCTWORK AND PIPING SHALL BE VERY CAREFULLY COORDINATED WITH EXISTING CONDITIONS, PRESERVATION ZONES AND HISTORIC NATURE OF BUILDING DURING SCHEMATIC DESIGN OF THE PROJECT TO CONFORM WITH THE NATIONAL PARKS REQUIREMENTS AND GUIDELINES.

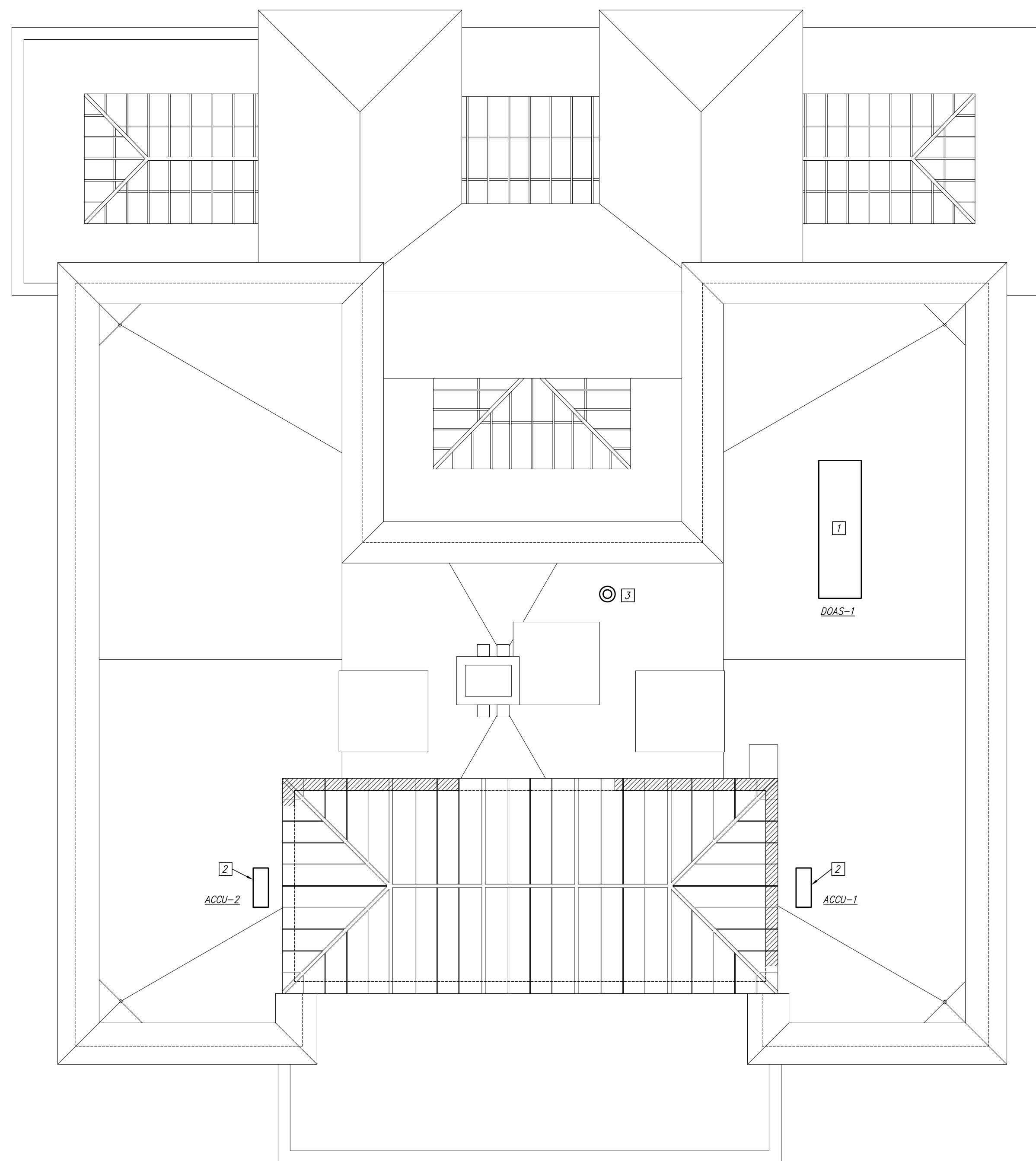
KEYED NOTES:

- 1 4-PIPE FAN COIL UNIT W/CHILLED WATER, HEATING WATER & CONDENSATE DRAIN PIPING FED FROM BELOW. VENTILATION AIR FOR SPACES SERVED BY FAN COIL UNITS WILL BE PROVIDED BY DOAS UNIT MOUNTED ON ROOF WITH DUCTWORK ROUTED DOWN & ACROSS SECOND FLOOR & UP TO THIRD FLOOR IN EXISTING OR NEW CHASE LOCATIONS.
- 2 LINEAR FLOOR BAR GRILLE. TITUS CT-380 OR EQUAL.
- 3 WALL MOUNTED FINNED TUBE IN METAL ENCLOSURE.
- 4 BARE FINNED TUBE MOUNTED ON TOP OF BEAM.
- 5 36"x12" FLOOR RETURN OPENINGS UNDER BENCHES.
- 6 SPLIT SYSTEM INDOOR UNIT ABOVE LAYLIGHT.
- 7 RESTROOMS EXHAUSTED BY DOAS UNIT ON ROOF.
- 8 14"x8" EXH DUCT DN. UNDER TENANT FINISH ONLY.
- 9 EXHAUST DUCT UP TO ROOFTOP EXHAUSTER. UNDER TENANT FINISH ONLY.
- 10 IF TENANT SPACE BECOMES A KITCHEN, KITCHEN EQUIPMENT REQUIRING COMMERCIAL KITCHEN HOODS CANNOT BE USED DUE TO LOW STRUCTURAL CLEARANCES.
- 11 HORIZONTAL HOT WATER UNIT HEATER.

1 THIRD FLOOR MECHANICAL PLAN – MAURICE
M4 1/8" = 1'-0"



 1600 Baltimore, Suite 300 Kansas City, MO 64108 Ph. 816-842-8437 WWW.IMEG.CORP.COM	DESIGNED: SGB MWM/BWC TECH. REVIEW: SGB	SUB SHEET NO. M4	TITLE OF SHEET THIRD FLOOR MECHANICAL PLAN – MAURICE PRE-DESIGN CONDITION ASSESSMENT AND TREATMENT PLAN FOR THE MAURICE BATHHOUSE AND LIBBEY MEMORIAL PMC HOT SPRINGS NATIONAL PARK	DRAWING NO. 128 180181 PMS/PKG NO. 318915 SHEET 18 OF 24
	DATE: 6/29/22			



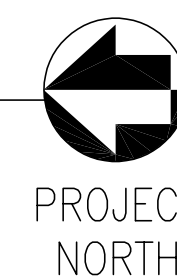
GENERAL NOTES:

1. DEMO ALL EXISTING MECHANICAL EQUIPMENT PIPING & DUCTWORK, EXCEPT CRAWL SPACE EXH FAN & INTAKE.

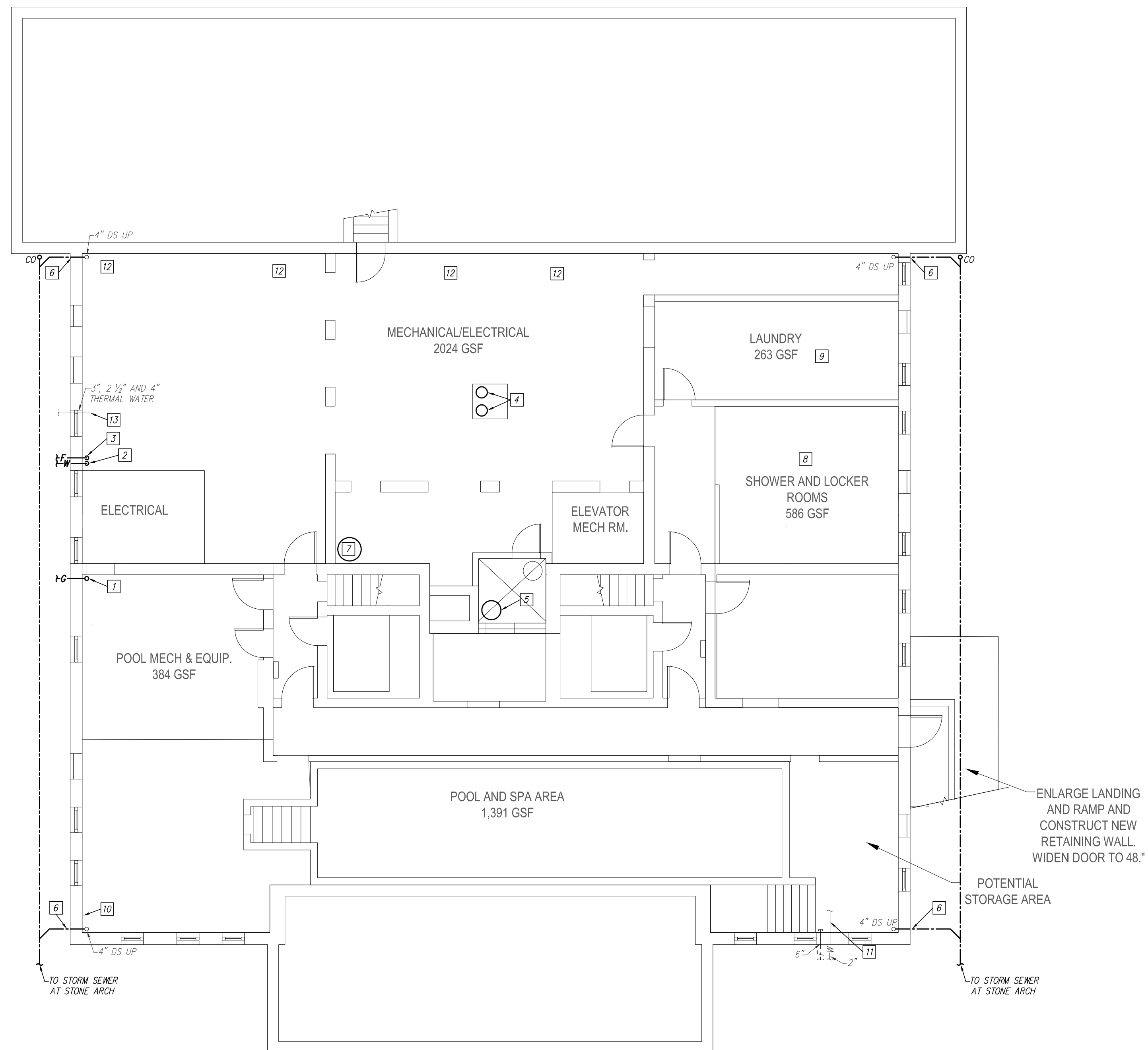
KEYED NOTES:

1. 500 CFM PACKAGED DOAS UNIT W/ DX COOLING & GAS HEAT TO SERVE THIRD FLOOR SPACE W/ FAN COIL UNITS. ROUTE 10"x10" SUPPLY DUCTWORK TO AND ACROSS SECOND FLOOR AND UP TO 3RD FLOOR SPACES IN EXISTING CHASES WHERE POSSIBLE ROUTE EXHAUST TO RESTROOMS ON 3RD BELOW.
2. MINI-SPLIT SYSTEM CONDENSING UNIT SERVING INDOOR UNIT IN SKYLIGHT.
3. LOREN COOK ACED-EC 101 OR EQUAL ROOFTOP EXHAUSTER SET ON 18" HIGH CURB. 500 CFM @ 0.38" ESP. UNDER TENANT FINISH ONLY.

1 ROOF MECHANICAL PLAN - MAURICE
 M5 1/8" = 1'-0"



 1600 Baltimore, Suite 300 Kansas City, MO 64108 Ph. 816-842-9437 WWW.IMEG.CORP.COM	DESIGNED: SGB CAD: MWM/BWC TECH. REVIEW: SGB	SUB SHEET NO. M5	TITLE OF SHEET ROOF MECHANICAL PLAN - MAURICE PRE-DESIGN CONDITION ASSESSMENT AND TREATMENT PLAN FOR THE MAURICE BATHHOUSE AND LIBBEY MEMORIAL PMC HOT SPRINGS NATIONAL PARK	DRAWING NO. 128 180181 PMS/PKG NO. 318915 SHEET 19 OF 24
	DATE: 6/29/22			



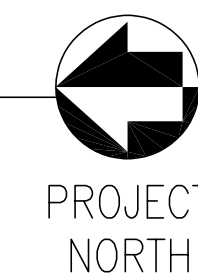
GENERAL NOTES:

1. DISCONNECT AND REMOVE ALL EXISTING PIPING AND EQUIPMENT UNLESS NOTED OTHERWISE.
2. EXISTING UNDERSLAB WASTE PIPING SHALL BE SCOPED FOR LOCATION, ELEVATION AND CONDITION TO DETERMINE IF PIPING CAN BE REUSED.
3. NOT ALL WORK IS SHOWN. FLOOR DRAINS SHALL BE PROVIDED AT MECHANICAL AND PLUMBING EQUIPMENT. HOSE BIBBS SHALL BE PROVIDED IN MECHANICAL ROOM AND WALL HYDRANTS AT EXTERIOR.
4. ROUTING OF TERMINAL EQUIPMENT, DUCTWORK AND PIPING SHALL BE VERY CAREFULLY COORDINATED WITH EXISTING CONDITIONS, PRESERVATION ZONES AND HISTORIC NATURE OF BUILDING DURING SCHEMATIC DESIGN OF THE PROJECT TO CONFORM WITH THE NATIONAL PARKS REQUIREMENTS AND GUIDELINES.

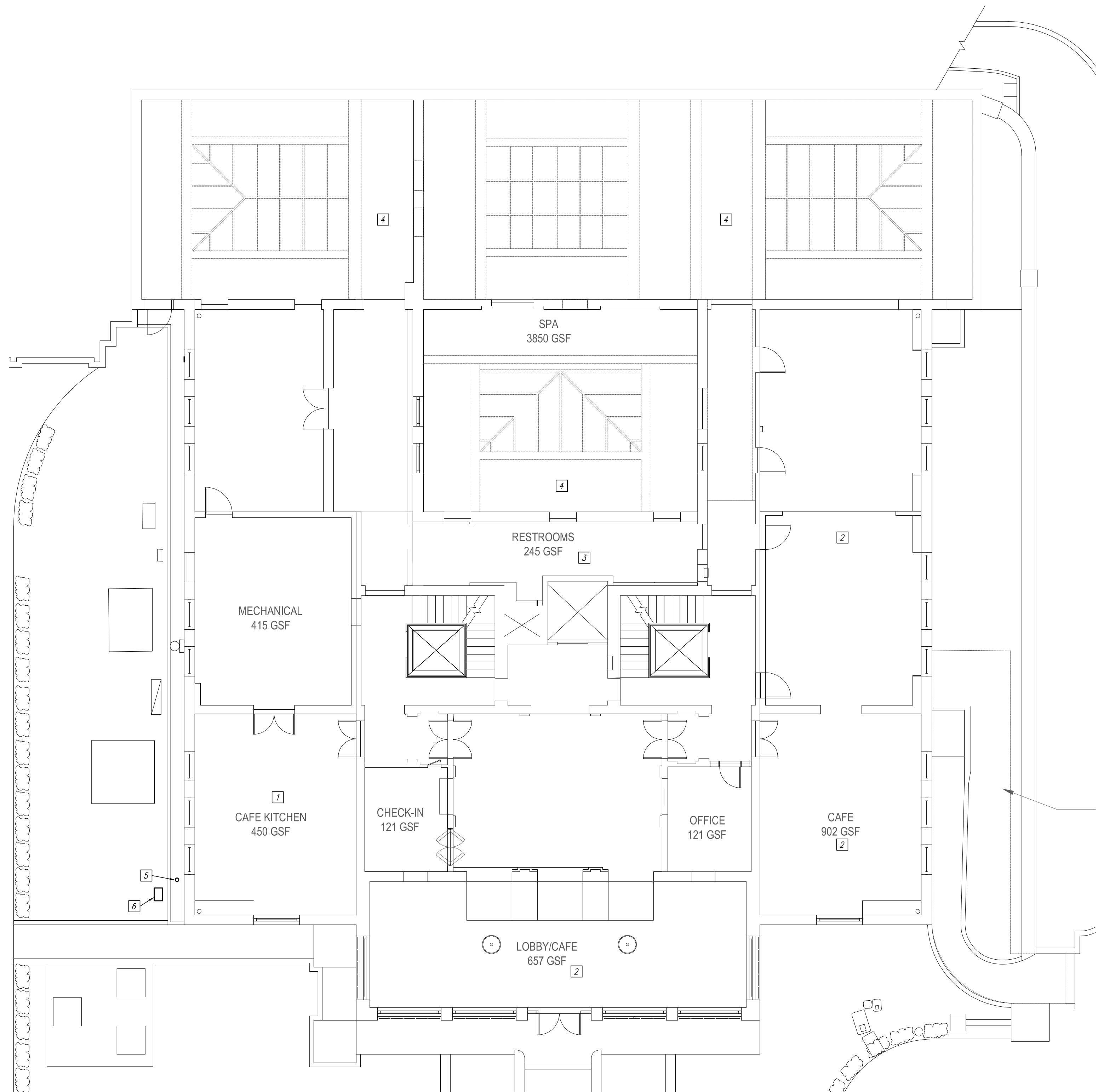
KEYED NOTES:

- 1 NEW 3" GAS SERVICE. EXTEND AND CONNECT TO BOILERS, NEW EQUIPMENT. ROUGH-IN TO POTENTIAL KITCHEN LOCATIONS AND WATER HEATERS.
- 2 NEW 3" MIN WATER SERVICE AND RPZ BACKFLOW PREVENTER. EXTEND AND CONNECT TO EQUIPMENT, WALL HYDRANTS AND HOSE BIBBS. ROUGH-IN TO POTENTIAL KITCHEN & WATER HEATER LOCATIONS.
- 3 NEW 6" FIRE WATER SERVICE AND DOUBLE CHECK BACKFLOW PREVENTER. EXTEND AND SPRINKLER ENTIRE BUILDING PER NFPA 13. PROVIDE SEPARATE SPRINKLER ZONE PER FLOOR.
- 4 REPLACE EXISTING GROUNDWATER SUMP PUMPS AND ASSOCIATED DISCHARGE PIPING.
- 5 NEW ELEVATOR OIL MINDER TYPE SUMP PUMP IN EXISTING PIT. ROUTE DISCHARGE PIPING TO SANITARY WASTE.
- 6 CONNECT NEW 4" DOWNSPOUT PIPING TO EXISTING RISER AND ROUTE OUTSIDE, COLLECT AND ROUTE TO CITY STORM SEWER SYSTEM.
- 7 POTENTIAL LOCATION FOR CONDENSING GAS FIRED WATER HEATER AND CIRCULATING PUMP ROUTE HOT WATER AND CIRCULATING PIPING TO BASEMENT PLUMBING FIXTURES AND SHOWERS UNDER TENANT FINISH ONLY.
- 8 NEW PLUMBING FIXTURES W/VITRIOUS CHINA LOW FLOW WALL MOUNTED WATER CLOSETS (1.28 GPF) & URINALS (0.25 GPF), 0.5GPM LAV FAUCETS & TERRAZZO JANITORS SINK W/FAUCET AND PAIL HOOK. SHOWERS SHALL BE COMMERCIAL LOW FLOW PRESSURE BALANCED. UNDER TENANT FINISH ONLY.
- 9 PROVIDE WASHER SERVICE BOXES WITH HOT, COLD AND WASTE CONNECTIONS. UNDER TENANT FINISH ONLY.
- 10 RELOCATE AND RECONNECT IRRIGATION SYSTEM MANIFOLD.
- 11 REMOVE EXISTING 6" FIRE SERVICE AND 2" WATER SERVICE AND DOWNSTREAM PIPING AND UPSTREAM TO STONE ARCH. PATCH OLD PENETRATIONS AT BUILDING AND ARCH.
- 12 REWORK EXISTING THERMAL SPRING WATER COLLECTION BASINS WITH NEW 4" SIDE OUTLETS CONNECTED TO COVERED TRENCHES ROUTED TO SUMP PIT.
- 13 EXTEND THERMAL WATERS TO POOL EQUIPMENT UNDER TENANT FINISH ONLY.

1 BASEMENT PLUMBING PLAN – MAURICE
P1 1/8" = 1'-0"



<p>1600 Baltimore, Suite 300 Kansas City, MO 64108 Ph. 816-842-8437 WWW.IMEG-CORP.COM</p>	<p>DESIGNED: SGB</p>	<p>SUB SHEET NO. P1</p>	<p>TITLE OF SHEET BASEMENT PLUMBING PLAN – MAURICE</p>	<p>DRAWING NO. 128 180181</p>
	<p>TECH. REVIEW: SGB</p>		<p>DATE: 6/29/22</p>	<p>PRE-DESIGN CONDITION ASSESSMENT AND TREATMENT PLAN FOR THE MAURICE BATHHOUSE AND LIBBEY MEMORIAL PMC HOT SPRINGS NATIONAL PARK</p>



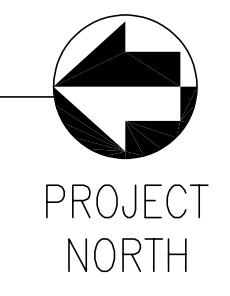
GENERAL NOTES:

1. DEMO ALL EXISTING PIPING AND EQUIPMENT EXCEPT WHERE NOTED OTHERWISE.
2. NOT ALL WORK IS SHOWN. FLOOR DRAINS SHALL BE PROVIDED AT MECHANICAL AND PLUMBING EQUIPMENT. HOSE BIBBS SHALL BE PROVIDED IN MECHANICAL ROOM AND WALL HYDRANTS AT EXTERIOR.
3. ROUTING OF TERMINAL EQUIPMENT, DUCTWORK AND PIPING SHALL BE VERY CAREFULLY COORDINATED WITH EXISTING CONDITIONS, PRESERVATION ZONES AND HISTORIC NATURE OF BUILDING DURING SCHEMATIC DESIGN OF THE PROJECT TO CONFORM WITH THE NATIONAL PARKS REQUIREMENTS AND GUIDELINES.

KEYED NOTES:

1. ROUGH-IN COLD, HOT, HOT CIRCULATING, WASTE AND VENT PIPING TO AND FROM CAFE KITCHEN AREA.
2. ROUGH-IN COLD, HOT, HOT CIRCULATING, WASTE AND VENT PIPING TO CAFE AREA.
3. NEW PLUMBING FIXTURES W/ATTRITIOUS CHINA LOW FLOW WALL MOUNTED WATER CLOSETS (1.28 GPF) & URINALS (0.25 GPF), 0.50PM LAV FAUCETS & TERRAZZO JANITORS SINK W/FAUCET AND PAL HOOK. UNDER TENANT FINISH ONLY.
4. ROUGH-IN COLD, HOT, HOT CIRCULATING, WASTE AND VENT PIPING TO SPA PLUMBING FIXTURES. EXTEND THERMAL WATERS FROM BASEMENT TO SPA AREA.
5. REPLACE EXISTING AREA DRAIN WITH NEW DRAIN WITH BEEHIVE STRAINER.
6. COORDINATE WITH THE GAS SERVICE PROVIDER TO INCREASE THE EXISTING GAS SERVICE CAPACITY TO SERVE THE BOILERS, EMERGENCY ENGINE GENERATOR, DOAS UNIT AND FUTURE WATER HEATERS. ROUTE GAS PIPING FROM NEW REGULATOR/METER TO THE EMERGENCY GENERATOR AND INTO BUILDING.

1 FIRST FLOOR PLUMBING PLAN – MAURICE
P2 1/8" = 1'-0"



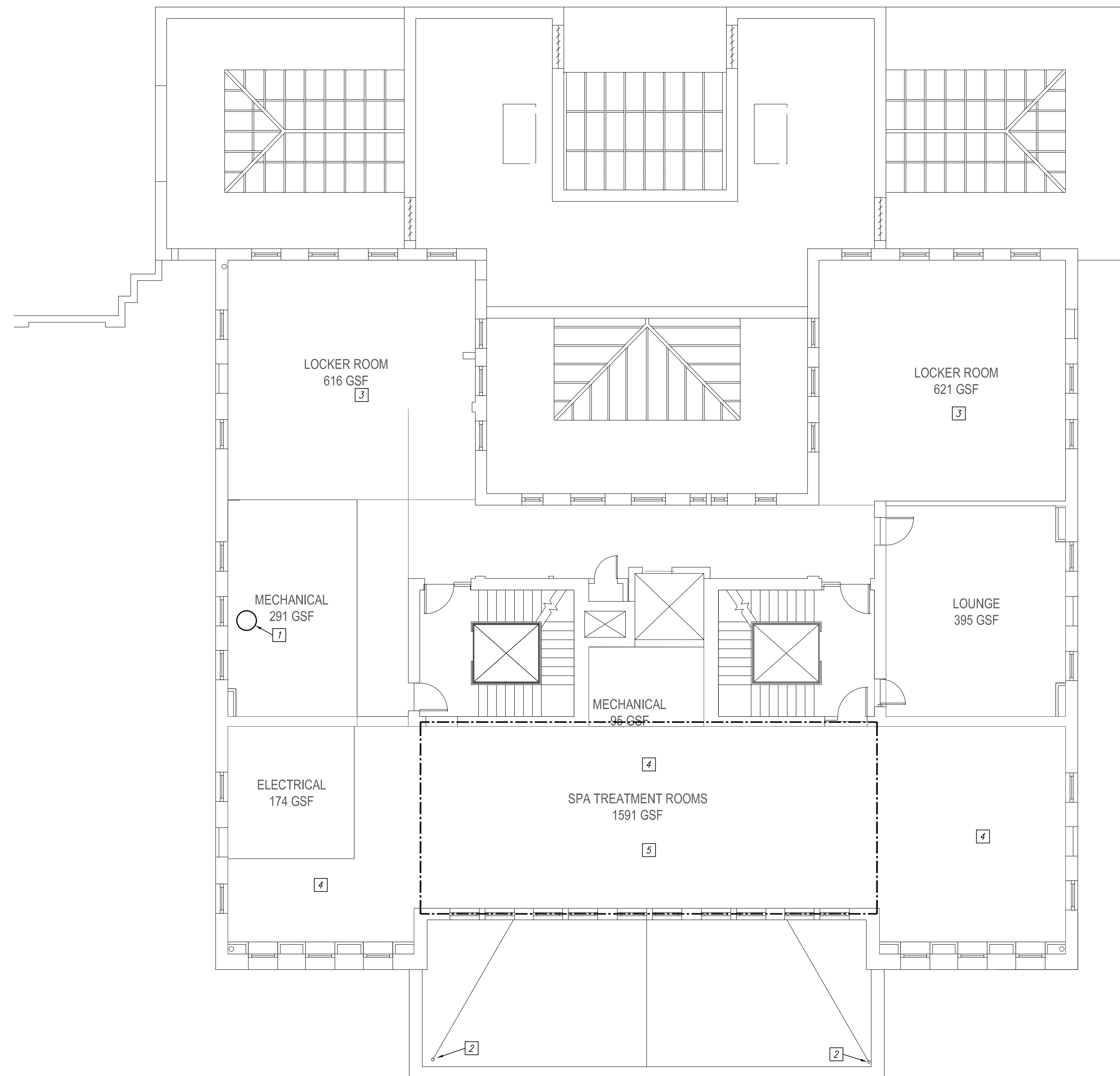
IMEG
1600 Baltimore,
Suite 300
Kansas City, MO 64108
Ph. 816-842-9437
WWW.IMEG-CORP.COM

DESIGNED:
SGB
MWM/BWC
TECH. REVIEW:
SGB
DATE:
6/29/22

SUB SHEET NO.
P2

TITLE OF SHEET
FIRST FLOOR PLUMBING PLAN – MAURICE
PRE-DESIGN
CONDITION ASSESSMENT AND TREATMENT PLAN
FOR THE MAURICE BATHHOUSE AND LIBBEY
MEMORIAL PMC
HOT SPRINGS NATIONAL PARK

DRAWING NO.
128
180181
PMS/PKG NO.
318915
SHEET
21 OF 24



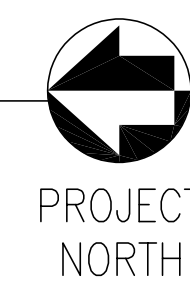
GENERAL NOTES:

1. DEMO ALL EXISTING PIPING AND EQUIPMENT EXCEPT WHERE NOTED OTHERWISE.
2. NOT ALL WORK IS SHOWN. FLOOR DRAINS SHALL BE PROVIDED AT MECHANICAL AND PLUMBING EQUIPMENT. HOSE BIBBS SHALL BE PROVIDED IN MECHANICAL ROOMS.
3. ROUTING OF TERMINAL EQUIPMENT, DUCTWORK AND PIPING SHALL BE VERY CAREFULLY COORDINATED WITH EXISTING CONDITIONS, PRESERVATION ZONES AND HISTORIC NATURE OF BUILDING DURING SCHEMATIC DESIGN OF THE PROJECT TO CONFORM WITH THE NATIONAL PARKS REQUIREMENTS AND GUIDELINES.

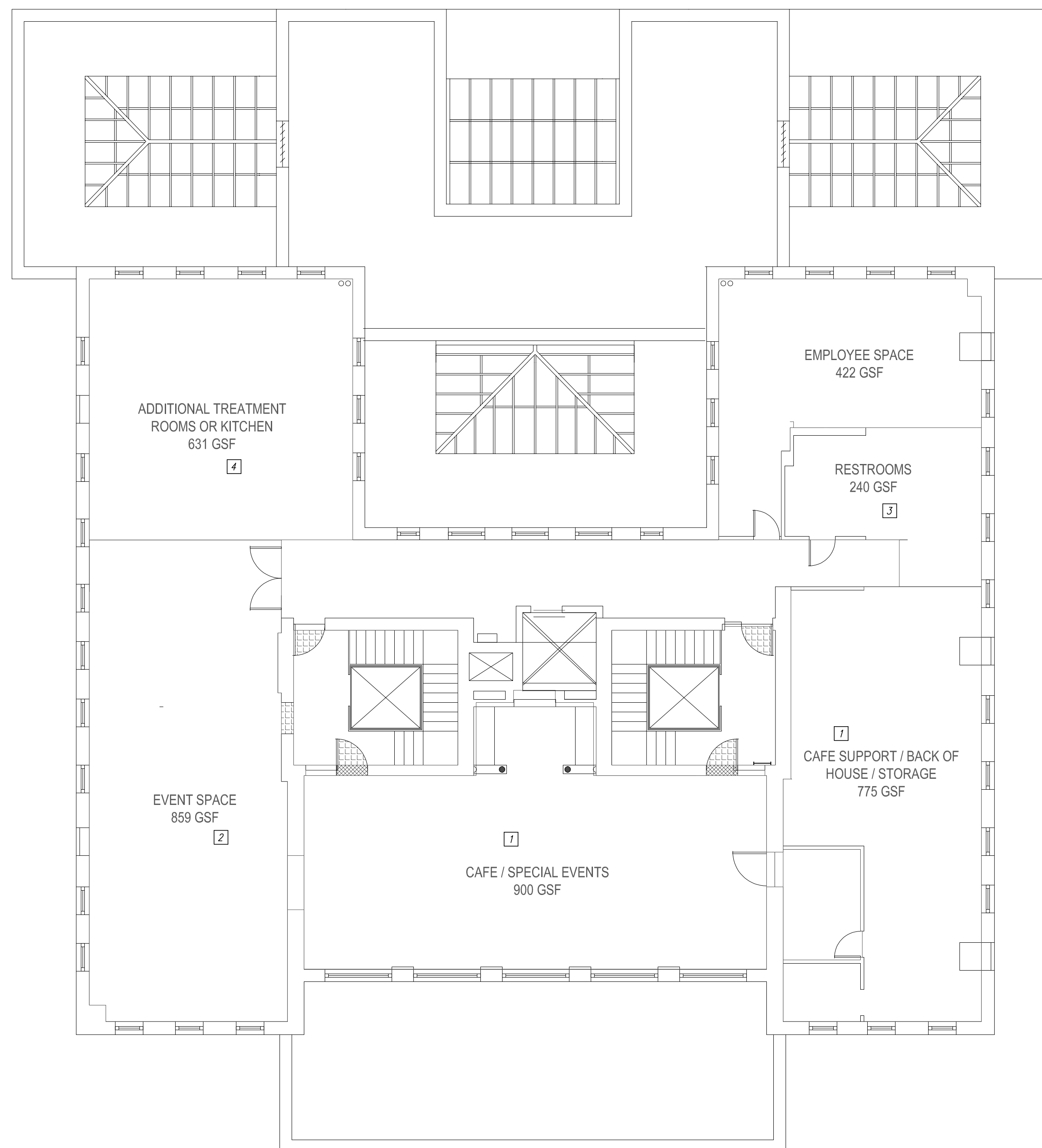
KEYED NOTES:

1. POTENTIAL LOCATION FOR HIGH EFFICIENCY GAS FIRED CONDENSING WATER HEATER AND CIRCULATING PUMP. ROUTE HOT AND HOT CIRCULATING PIPING TO FIRST, SECOND AND THIRD FLOOR PLUMBING FIXTURES, SPA EQUIPMENT AND SHOWERS. UNDER TENANT FINISH ONLY.
2. PROVIDE SECONDARY EMERGENCY ROOF DRAIN AND ASSOCIATED DOWNSPOUT PIPING OR PROVIDE PARAPET SCUPPERS.
3. PLUMBING FIXTURES W/ VITRIOUS CHINA LOW FLOW WALL MOUNTED WATER CLOSETS (1.28 GPF) & URINALS (0.25 GPF), 0.5GPM LAV FAUCETS & TERRAZZO JANITORS SINK W/ FAUCET AND PAIL HOOK. SHOWERS SHALL BE COMMERCIAL LOW FLOW PRESSURE BALANCED. UNDER TENANT FINISH ONLY.
4. ROUGH-IN COLD, HOT, HOT CIRCULATING, WASTE AND VENT PIPING TO SPA TREATMENT AREA. EXTEND THERMAL WATERS FROM BASEMENT TO SPA AREA. UNDER TENANT FINISH ONLY.
5. NO PIPING MAY PENETRATE THE SECOND FLOOR IN THIS AREA.

1 SECOND FLOOR PLUMBING PLAN - MAURICE
P3 1/8" = 1'-0"



<p>1600 Baltimore, Suite 300 Kansas City, MO 64108 Ph. 816-842-9437 WWW.IMEG-CORP.COM</p>	DESIGNED: SGB	SUB SHEET NO. P3	TITLE OF SHEET SECOND FLOOR PLUMBING PLAN - MAURICE PRE-DESIGN CONDITION ASSESSMENT AND TREATMENT PLAN FOR THE MAURICE BATHHOUSE AND LIBBEY MEMORIAL PMC HOT SPRINGS NATIONAL PARK	DRAWING NO. 128 180181
	MWM/BWC TECH. REVIEW: SGB			PMS/PKG NO. 318915
DATE: 6/29/22			SHEET 22 OF 24	



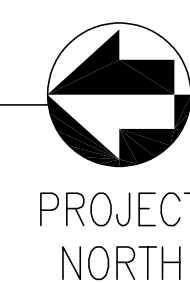
GENERAL NOTES:

1. DEMO ALL EXISTING PIPING AND EQUIPMENT EXCEPT WHERE NOTED OTHERWISE.
2. NOT ALL WORK IS SHOWN. FLOOR DRAINS SHALL BE PROVIDED AT MECHANICAL AND PLUMBING EQUIPMENT. HOSE BIBBS SHALL BE PROVIDED IN MECHANICAL ROOMS AND WALL HYDRANTS AT EXTERIOR.
3. ROUTING OF TERMINAL EQUIPMENT, DUCTWORK AND PIPING SHALL BE VERY CAREFULLY COORDINATED WITH EXISTING CONDITIONS, PRESERVATION ZONES AND HISTORIC NATURE OF BUILDING DURING SCHEMATIC DESIGN OF THE PROJECT TO CONFORM WITH THE NATIONAL PARKS REQUIREMENTS AND GUIDELINES.

KEYED NOTES:

1. ROUGH-IN COLD, HOT, HOT CIRCULATING, WASTE AND VENT PIPING TO CAFE AREAS.
2. EXTEND COLD, HOT, HOT CIRCULATING, WASTE AND VENT PIPING TO AND FROM EVENT SPACE AREA.
3. NEW PLUMBING FIXTURES W/VIETRIUS CHINA LOW FLOW WALL MOUNTED WATER CLOSETS (1.28 GPF) & URINALS (0.25 GPF), 0.50PM LAV FAUCETS & TERRAZZO JANITORS SINK W/FAUCET AND PAIL HOOK. UNDER TENANT FINISH ONLY.
4. ROUGH-IN COLD, HOT, HOT CIRCULATING, WASTE AND VENT PIPING TO SPA AREA. EXTEND THERMAL WATERS FROM BASEMENT TO SPA AREA UNDER TENANT FINISH ONLY.

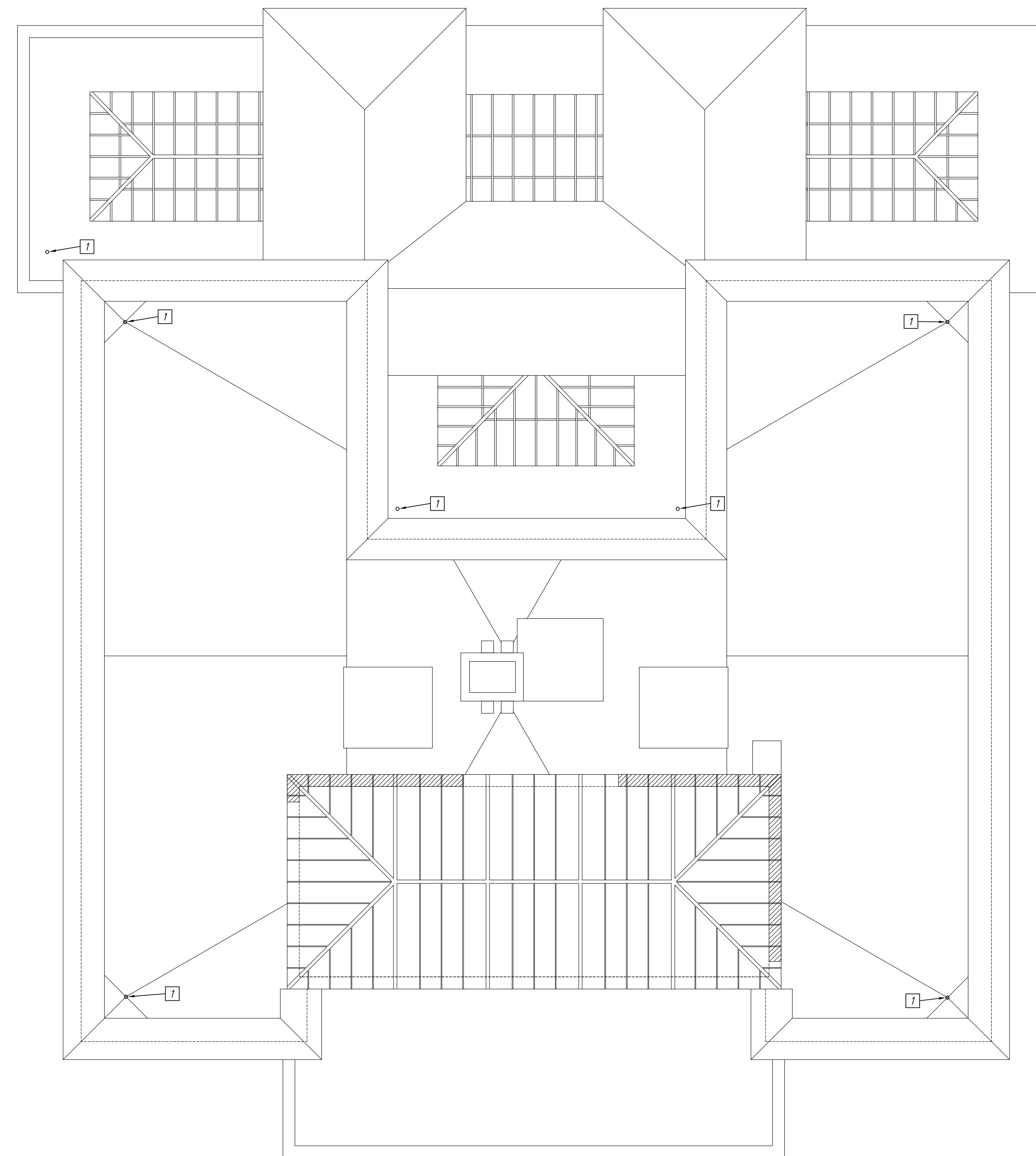
1 THIRD FLOOR PLUMBING PLAN – MAURICE
P4 1/8" = 1'-0"



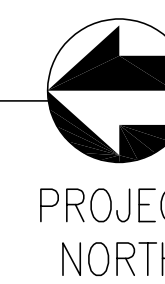
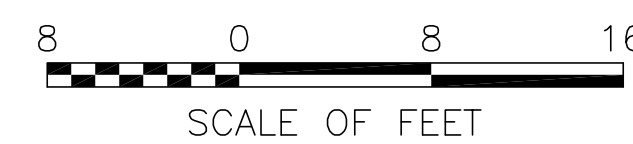
<p>1600 Baltimore, Suite 300 Kansas City, MO 64108 Ph. 816-842-9437 WWW.IMEG.CORP.COM</p>	DESIGNED: SGB MWM/BWC TECH. REVIEW: SGB	SUB SHEET NO. P4	TITLE OF SHEET THIRD FLOOR PLUMBING PLAN – MAURICE PRE-DESIGN CONDITION ASSESSMENT AND TREATMENT PLAN FOR THE MAURICE BATHHOUSE AND LIBBEY MEMORIAL PMC HOT SPRINGS NATIONAL PARK	DRAWING NO. 128 180181 PMS/PKG NO. 318915 SHEET 23 OF 24
	DATE: 6/29/22			


KEYED NOTES:

1 REPLACE EXISTING LOOSE PLASTIC ROOF DRAIN DOME WITH DUCTILE IRON DOME BOLTED TO ROOF DRAINS. CLEAN OVERFLOW SCUPPERS.



1 ROOF PLUMBING PLAN - MAURICE
P5 1/8" = 1'-0"



 1600 Baltimore, Suite 300 Kansas City, MO 64108 Ph. 816-842-8437 WWW.IMECCORP.COM	DESIGNED: SGB	SUB SHEET NO. P5	TITLE OF SHEET ROOF PLUMBING PLAN - MAURICE PRE-DESIGN CONDITION ASSESSMENT AND TREATMENT PLAN FOR THE MAURICE BATHHOUSE AND LIBBEY MEMORIAL PARK HOT SPRINGS NATIONAL PARK	DRAWING NO. 128 180181
	CAD: MWM/BWC TECH. REVIEW: SGB DATE: 6/29/22			PMS/PKG NO. 318915 SHEET 24 OF 24



Maurice Bathhouse, Roycroft Den (STRATA, 2022)

APPENDICES

APPENDIX A - REFERENCE DOCUMENTS

HOSP - Condition Assessment and Treatment Plan - Maurice Bathhouse and Libbey Memorial Physical Medicine Center

Hot Springs National Park

PMIS 318915B

NPS MWRO Contract: 140P6020D0004 - Task Order:

LIST OF DOCUMENTS FOR REFERENCE

Received by AE Team	Title	NPS File / Drawing No.	Date	Consultant	Sheets	Format	Repository	Repository
LIBBEY								
x	Original Drawings	128/80066	Undated	Mann & Stern Architects, Little Rock, AR	15 pages		Came from QEA	Not in Park Archives - in State Archives - See Below
x	Second Floor Plan	128/60379		Mann & Stern Architects, Little Rock, AR	1		Came from QEA	
X	Original Specifications		1921	GFB General Specifications Part 1 and Part 2	2 books		Park	
x	Window Details Free Bath House	128/60380			1	PDF	Came from QEA	
x	U.S. Gov't Bath House Conversion	128/80063	1936	Erhart, Eichenbaum and Rauch Architects, Little Rock	3	PDF	Came from QEA	
			1940s	Drawings in mylar stored in archives			Park	in Park Archives
x	Profile of Water Line to Free Bath House	128/60276	1939					
X	Utilities for Free Bath House - Part of Master Plan	2107	1951	NPS Engineering	1 sheet	PDF	Came from QEA	
X	Alterations and Additions - Physical Medicine Center	HS / 3010	1956	Ebhart, Eichenbaum, and Rauch Architects, Little Rock, AR	24 Sheets	PDF	Park	
X	Libbey Memorial Physical Medicine Center Rehabilitation	128/25016A	1987 Repair Docs As-Constructed 1989	Demolition & Asbestos Containing Material Removal & Rehabilitation	9 Sheets	PDF		
	A Planting Plan		1992	NPS				
X	Property Capital Assessment - Libbey Memorial Physical Medicine Center		2003	Lakeshore Architects, Grafton, WI	396 pages	PDF	Park	
X	Historic Structure Report - Libbey Memorial Physical Medicine Center	128/143718	2009	Quinn Evans Architects	341 pages	PDF	Park	
X	RFP -		2014		35 pages	PDF	Park	
X	RFP -		2015		34 pages	PDF	Park	
	Floor Plans / Electronic Files		2009	Quinn Evans Architects		CAD		
MAURICE								
	Floor Plans / Electronic Files					CAD		missing external reference links
	Site Plans							Yes, some of Stone Arch Projects available
	Original Drawings - None exist							
x	1915 Maurice Renovations	126/60092	1915		8	PDF	From HSR	
x	1937 Proposed Additions - Not Built	125/60095	1937		1	PDF		
x	1937 Proposed Additions - Not Built	125/60497	1937		5	PDF		
x	1943 Pool Ramp	125/8021	1943		1	PDF		
x	Historic Structure Preservation Guide for the Maurice Bathhouse		?	DSC, NPS	168	PDF	IRMA	

x	Historic Structures Report Hot Springs National Park	156/001	1973	Cromwell, Neyland, Truemper, Millett & Gatchell, Inc. , Little Rock	207	PDF	IRMA	
x	Investigative Study of Five Bathhouses	HOSP 128/70001	1984	Pitts & Associates Engineers, Little Rock, AR	22 sheets	PDF	Park	
x	Interim Report Phase II Testing on Site - Study of Five Bathhouses	HOSP 128/70001	1984	Pitts & Associates Engineers, Little Rock, AR	283 sheets	PDF	Park	
x	Bathhouse Row Adaptive Use Program - Maurice Technical Report 4	156_012	1985	NPS	52 sheets	PDF	Park	
x	Water, Water Everywhere: A Brief investigation of Deterioration in the Superior, Hale, Maurice, Quapaw, and Ozark Bathhouses	156_030	1991	Laura Soulliere Harrison, Architectural Historian, HOSP	78	PDF	IRMA	
x	Asbestos and Hazardous Materials Remediation (7 buildings)	128/41046	1992	NPS	32 sheets	PDF	Park	
x	Lead Base Paint and Soil Assessment		1995	Division of Federal Occupational Health U.S. Public Health Service, Region VI, Dallas, TX	344 pages	PDF	Park	
x	Historic Structure Report		2004	Chamberlin Architects	600 pages	PDF	Park	
x	Schematic Design Report	128/D200 056091D	2004	Chamberlin Architects	339 pages	PDF	Park	
x	Value Analysis Report - Maurice, Hale, and Superior Bathhouses	128/D200 056091C	2004	Chamberlin Architects	219 pages	PDF	Park	
x	Maurice Bathhouse Rehabilitation	HOSP 128/41070_A	2006	Chamberlin Architects	110	PDF	Park	
x			2006	Specifications				
x	Maurice Bathhouse Rehabilitation - Elevator Bid Package	HOSP 128/41070_B	2009	Chamberlin Architects	39	PDF	Park	
x	Maurice Bath House HABS Drawings	128/25028		HABS	3	PDF	Park	3 elevations - no east elevation, no plans
x	Ceiling Mold Abatement		2014			jpgs	Park	
x	RFP Maurice Bathhouse		2020	NPS	28	PDF	Park	
GENERAL								
	Studies on capturing and dispersal of hot springs to the buildings							
x	Hot Springs National Park Cultural Landscape Report and Environmental Assessment	Q6068060019	2010	Quinn Evans Architects	707	PDF		

ARKANSAS STATE ARCHIVES / LITTLE ROCK - Tommy Hill is having these scanned for our team

	U.S. Free Bath House, Hot Springs, Arkansas,"		7/24/1919	Mann & Stern Architects				
			6/12/1920	Mann & Stern Architects				
	Plan of Grounds of Government Free Bath House, Hot Springs, Arkansas		n.d.	Mann & Stern Architects				
	U.S. Government Bath House and Clinic, Layout, Hot Springs, Ark		2/11/1920	Fordyce and Field Engineers				

Meeting Notes

1. Site Visit Closeout Meeting Notes, 3/10/2022
2. Online Discussion on Uses to Explore for Pre-Design Efforts for Maurice and Libbey, 3/24/2022
3. Online HVAC Alternatives Workshop for Maurice and Libbey (with comparison tables), 3/28/22
4. Online Libbey Multi-Park Storage Facility Discussion, 3/31/2022
5. Online Fire Protection Meeting, 4/5/2022
6. Online Fire and Life Safety Code Review Meeting, 4/7/2022
7. Online Libbey Multi-Park Facility Programming and Maurice Spa Café Programming Discussion, 4/11/2022

APPENDIX B - MEETING NOTES

SITE VISIT MEETING NOTES

Predesign Services - Condition Assessment and Treatment Plan Maurice Bathhouse and Libbey Memorial Physical Medicine Center (LMPMC)

Hot Springs National Park (HOSP)
PMIS 318915B

Re: Site Visit Closeout Meeting

Date: 3/10/2022

Attendees:

Laura Miller, Superintendent, HOSP
Mark Scott, Facility Manager, PM, HOSP
Tom Hill, Curator, HOSP
Angie Gaebler, STRATA
Jennifer Henriksen, Quinn Evans
Phil Parra, Electrical Engineer, IMEG
Stuart Braden, Mechanical Engineer, IMEG
Ralph Jones, Structural Engineer, SEA
Philip Steed, Structural Engineer, SEA
John Rosemurgy, COR, Historical Architect, Cultural Resources (Phone)
Brian Leaders, GAOA Program Lead (Phone)
David Lieb, PM, DSC (Phone)
Missy Smothers, Chief of Business Services, HOSP (Phone)

Discussion:

1. Introductions
2. Drawing and Document Coordination
 - a. Many thanks to Tom and Mark for tracking down drawings for us this week (both hard copies and electronic scans)
 - b. Libbey - Are there drawings available for the Libbey Roof replacement project? If not, any project files or photographs?
 - c. Are there historic paint analysis documents available for Libbey?
3. Schedule upcoming Mechanical/Electrical Meeting. Park has requested the week of March 28. John will coordinate this.
4. Items to be Provided (Not in Current Contract):
 - a. Scoping of all drains in Maurice and Libbey
 - b. Site Survey at Maurice and Libby to update utilities
 - c. Hazardous Materials – existing reports are out of date.
 - d. Attic Access in Libbey – may need to provide some type of platforms for access to assess attic space.
 - e. Civil Engineer for Spring Management in Maurice
 - f. Historic paint analysis
5. Thermal Water project that is concurrent with our project (KHA and HDR) collection and distribution study.
 - a. KHA project will provide new thermal water to both buildings.

- b. Our team is responsible for water inside the building.
 - i. 4" hot and 3" cold thermal water is roughed-in.
 - ii. What is capacity/flow of the thermal water system? Park will assist.
6. Libbey –
- a. Architectural –
 - i. Door not latching in men's shower room (second level) to the exterior stair.
 - 1. Mark will check this.
 - ii. Leak at west wall not readily visible. Leak is active, as there is water in the wall.
 - 1. May require tile removal during SD to inspect flashing and detailing at wall and gutters.
 - 2. Are there documents/photographs available for the new roof installation?
 - b. Structural –
 - i. Not a lot of life safety concerns
 - ii. Use caution – there is delaminating concrete overhead
 - iii. Park may want to finish cleaning up loose glass from laylights
 - iv. SEA is hoping that the high-resolution scans of the original drawings may yield further information that will help with the documentation of the reinforcing.
 - c. Mechanical
 - i. Vintage boilers.
 - ii. Gas service not on.
 - iii. New mechanical equipment will need to be placed on site.
 - iv. Thermal water drain in north areaway – portion of the boot is missing, and the grate is not draining all of the water. There is standing water in the areaway.
 - v. 4" hot and 4" cold thermal water is roughed-in.
 - d. Electrical
 - i. Electrical Services (Existing and New)
 - 1. Grounded leg – system is active
 - 2. Could not find the second service outside – it is possible this is an underground splice?
 - ii. Generator will need to run the entire building if archival storage OR business
 - 1. Would want natural gas generator
 - iii. New electrical equipment will need to be placed on site.
 - e. Fire Protection
 - i. The existing fire alarm system is not active
 - ii. There is no water line rough-in for a fire sprinkler system at Libbey
 - iii. Will need to look at water service pressure, flow, and available city main size.
7. Maurice –
- a. Architectural –
 - i. Does the part anticipate repairing or replacing the skylights?
 - 1. Replace
 - ii. Elevators
 - 1. Existing elevators may stay as historic artifacts, if allowed by code.
 - iii. Roof:
 - 1. Due to the rain, we were able to identify a few roof leaks over the south and west sides of the north stair.
 - 2. There are areas of the roof that are not draining properly (ponding).
 - 3. Drains that use the old flue (boiler stack) are very close to where these leaks are located.
 - 4. Will need overflows...parapet drains may be an option. There are existing overflow scuppers on most of the roofs.
 - 5. The NE roof is bucking and bubbling.
 - 6. Looked at clay tile roof

- a. Some areas where valley flashing does not appear to have been installed as it should be.
 - 7. Park may want to remove the voluntary tree over the NE roof that is dropping berries and discoloring the skylight and roof.
 - iv. Fall Protection:
 - 1. The public can easily access the area north of the Maurice (from the hillside). This is a very unsafe condition and a potential fall hazard. The team recommends the Park install a fence at the NE corner of the building to prevent the public from accessing the hillside.
- b. Structural
 - i. Settlement Issues
 - 1. As-built drawings found yesterday show underpinning during an earlier project.
 - 2. Grouting at corners does not appear to have been done to the level needed. These areas would benefit from additional GPR testing to confirm extent of grouting during Schematic Design.
 - ii. Testing On-Site This Week:
 - 1. Included GPR testing on reinforcing steel at beams and slabs.
 - 2. Western Specialties (Contractor) chipped out concrete to view size and spacing at areas approved by Mark. These areas were patched.
 - iii. Crawlspace:
 - 1. This is considered to be a 'confined entry' space. Therefore, no testing was done in this area.
 - 2. This will need further testing during Schematic Design.
 - iv. Findings:
 - 1. All steel reinforcing bars are smooth (not deformed like we use today)
 - 2. There is some debonded concrete at beams. The Park might proceed with removal of these loose materials, so they do not fall and hurt anyone.
 - v. The Roycroft Room has cracks in the brick pilasters between the windows which is directly below the beams. These will need to be braced during repairs.
 - vi. Skylights in the bath house (first floor men's and women's) need tension bracing. The thrust of the skylights is pushing walls outward. This is the same issue with the walls at the back U-shaped gabled roof areas, where the roof framing is creating thrust and causing movement in the walls. Some additional framing has been added, but it is likely not adequate.
 - vii. HVAC equipment on the first floor may not have had loads calculated/structural analysis. There are very large penetrations through the slabs.
- c. Mechanical –
 - i. Note that major mechanical systems are on the first floor of all buildings on Bathhouse Row due to flooding.
 - ii. Gauge of existing ductwork may be an issue, as they are sagging. This will require further inspection if any is to be reused.
 - iii. Can use existing chases and soffits for mechanical, fire prevention, and electrical distribution
 - iv. Existing exhaust fan in the basement is not on. May be a faulty humidistat? IMEG was able to hotwire this to turn it on, so it works. This needs to be addressed to provide some air movement in the crawlspace and basement.
 - v. Has 2" water service.
 - vi. Has 6" water service roughed-in for fire.
 - vii. Will explore different types of mechanical systems.
 - viii. Thermal water in place could be used for preheating. Thermal water could also be used for pool.
 - ix. Internal roof drains are collected in the basement pool. This needs to be changed. The roof will require new overflows. See note on overflows above.
- d. Civil –
 - i. The exterior runnel along the north side of the building has a drain that was covered with several inches of mud, debris, and trash. We attempted to clean this out, but this needs a more aggressive cleaning. A beehive strainer should be installed over the

drain. This area likely fills with water and leaks into the north wall of the building during heavy rains. This runnel drains an enormous amount of water from the NE roof, the hillside, the north lawn, and the west roof over the sunporch.

- ii. Spring management in the basement will be required as part of the Schematic Design services.
- iii. Previous attempts have not worked.
 - 1. The drains in the bottoms of the concrete collector boxes are plugged or draining very slowly.
 - 2. The park might be able to temporarily bring water from the side of the tank (above the drain line) instead of the bottom to avoid silting up.
 - a. Long-Term: Design team suggested running covered trenches from collection basins to the sump pit to allow cleaning of trenches, so they do not plug up.
- e. Electrical
 - i. Reviewed existing electrical service. 1st floor panel was meant to be temporary and is possibly over-dutied. It also does not meet fault current requirements.
 - ii. Panels on 2nd and 3rd floor may remain.
 - iii. Will not reuse branch circuit conduit. They are all too rusted out. Some of the conduit has been reused for current lighting, which is not recommended.
- f. Fire Protection
 - i. Fire alarm system is not active.
 - ii. Will need to look at water service pressure
- g. Fiber Service
 - i. Existing fiber service at the end of the pool services other buildings. This will need to be relocated prior to construction.

Action Items:

- A. Mark will check out the humidistat/exhaust fan in Maurice basement/crawlspace to get it working.
- B. Tom will check to see if there are any documents for paint analysis at Maurice.
- C. Mark – Our team will need capacity/flow of thermal water systems into Maurice and Libbey from KHA/HDR team when available.

END OF NOTES

ONLINE MEETING NOTES

Predesign Services - Condition Assessment and Treatment Plan Maurice Bathhouse and Libbey Memorial Physical Medicine Center (LMPMC)

Hot Springs National Park (HOSP)
PMIS 318915B

Re: Discussion on Uses to Explore for Pre-Design Efforts for Maurice and Libbey

Date: March 24, 2022

Attendees:

Laura Miller, Superintendent, HOSP
Angie Gaebler, STRATA
John Rosemurgy, COR
Brian Leaders, Regional Office

Discussion:

1. Building Code:
 - a. Region wants the team to use 2021 Building Code.
 - b. City of Hot Springs uses 2012.
2. We briefly discussed the upcoming HVAC/Electrical online meeting for next Monday. Our team has prepared an agenda. The focus will be on the tight space available and constraints for equipment at Maurice.
3. Maurice Uses
 - a. Option 1 –
 - i. Spa with support Café (may use the Roycroft Room as part of the care/bar/tasting room).
 - ii. Basement to emphasize reuse of the pool.
 - iii. Not interested in overnight use due to code requirements.
 - b. Option 2 –
 - i. Restaurant and retail with event space.
 - ii. Upper floor spaces may become office, but it's unlikely these would be good office spaces due to no onsite parking.
4. Libbey Uses
 - a. Option 1 – Combined Curatorial Archives and Law Enforcement with Museum use in the west side second level bathing room (locker room (maybe), bathing room, toilet room, and shower room).
 - b. STRATA provided an overlay of the available square footages per floor to show where mechanical, circulation, toilets, and available office areas are located.
 - i. There is not enough room to accommodate both programs provided by the park for the Curatorial and Law Enforcement uses.
 - ii. It was agreed that Angie would work on a few 'test fit' options to demonstrate to the park what will fit. It is understood that certain items on the department's wish-lists may not be accounted for in the building and may remain off-site in another park building.
5. Regional Head Curator – John will set up a time to discuss further required programming and security requirements with Heather Young for next week.

Action Items:

- STRATA to provide test fit options for Libbey

END OF NOTES

ONLINE MEETING NOTES

Predesign Services - Condition Assessment and Treatment Plan Maurice Bathhouse and Libbey Memorial Physical Medicine Center (LMPMC)

Hot Springs National Park (HOSP)
PMIS 318915B

Re: Discussion on HVAC Alternatives for Maurice and Libbey

Date: March 28, 2022

Attendees:

Laura Miller, Superintendent, HOSP
Mark Scott, Facility Manager, HOSP
John Rosemurgy, COR, NPS
Brian Leaders, Regional Office, NPS
David Lieb, Project Manager Denver Center, NPS
Angie Gaebler, STRATA
Claire Ashbrook, STRATA
Phillip Parra, IMEG
Stuart Branden, IMEG
Philip Steed, SEA
Gania Kandalajt, Quinn Evans

Action Items:

1. STRATA to draft an e-mail to Brian Leaders outlining the Design Teams questions about NPS requirements for Energy Modeling and Efficiency. Email to outline what energy updates will be happening at the building.
2. NPS to provide Design Team with information about water pressure for both Maurice and Libbey.
3. STRATA to provide a list of supplemental work that needs to happen including hazmat testing and site survey work.

Discussion:

1. Objectives: online workshop objective is to arrive at a preferred system for the buildings.
2. See attached Tables attached: *Maurice and Libbey Mechanical Systems Comparisons*.
2. Maurice Existing Systems:
 - a. 6" water line roughed in, which should be more than enough. It is in a bad place if the pool will be rehabilitated.
 - b. No fire pumps and booster pumps in other bathhouses reviewed.
 - c. 2" water main comes into the southeast corner of the building, which seems small for the size of the building (this could handle 13 water closets). Also has a 1.5-inch backflow preventer is installed.
 - d. Gas service is too small and currently only provided to the water heater. Needs to be upgraded.
 - e. Basement is getting drainage from the springs. There were attempts to harness that water, but they have failed. This is an immediate repair.
 - f. There is currently a 30-ton chiller installed and the building most likely needs a 90-ton chiller (7-feet wide and 20-feet long). Currently, the Hale has part of its equipment housed on the

- Maurice property. To have enough room to house the new Maurice equipment, the Hale equipment would need to move.
- g. The design team does not know the waste and vent piping system routing. If NPS wants to continue using these pipes, then it would be worth scoping these pipes to determine their routes and condition.
 - h. Single Zone Direct Expansion System (DX) system (routed in the basement) was installed. The ductwork is too light-gauged and needs to be replaced. Steam piping remaining throughout the building needs to be removed.
 - i. Roof drains are currently piped into the basement pool. The Team is not sure if the pool drains to the stormwater drain or the sanitary drain. If it drains into the sanitary drain, this does not meet code.
 - j. Fordyce does have a hydronic system (VAV System). Quapaw Baths have a DX system with several mini-split systems. Superior Bathhouse voices they have concerns about their current system heating and cooling the front space.
 - k. The existing site sets roughly 4'-0" below the first floor.

3. Maurice Proposed Mechanical Systems:

- a. Option 1A (Preferred): Chilled system (Air-cooled chiller) that would serve VAV air handling units with VAV boxes with hot water reheat coils per space. High-efficiency hot water condensing boilers would be the building heating source that would serve the air handling units, VAV box coils, and unit heaters. The Hot Springs would be used for preheating water. A dedicated aquatics-type air handling unit with dehumidification would be provided to serve the thermal pool. This is the design team's preferred option.
- b. Option 1B: This option is similar to Option 1A except that smaller spaces and spaces with limited ceiling heights (such as offices and small retail spaces) could be served by 4-pipe fan coil units. These units can be horizontally ducted in a ceiling plenum, vertical ducted in a mechanical closet, or horizontal exposed wall-mounted units below a window. Areas served by these fan coil units would require the use of a dedicated outdoor air system (DOAS), hopefully with some sort of energy recovery (enthalpy wheel, flat plate heat exchanger, or hydronic loop) to supply ventilation and pressurization air to those spaces. The DOAS units can be packaged (self-contained cooling and gas heating) roof-mounted units or hydronic indoor units
- c. Option 2: VRF (Variable Refrigerant Flow) system teamed with DOAS Units. We recommend that the VRF system be a heat recovery system as there will likely be spaces that will require heating year-round and systems in cooling mode can transfer heat to those areas requiring heating. Some air handling units will still be required to serve larger spaces and would need to be DX split systems.
- d. Add dehumidifiers in the unoccupied spaces in the basement to keep it dry.
- e. If the kitchen requires a Type 1 grease hood, a kitchen hood exhaust fan will be required along with a hood make-up air handling unit with both heating and cooling. These can either be self-contained or hydronic like the DOAS units.
- f. Air handling unit is a unit that is inside the building. A roof unit is a self-contained unit that is either on the roof or on the side of the building. A dedicated outdoor air system is a means to temp outside air prior to bringing it into the building.
- g. The park has a project at Lowell where they looked at a VRF system and discovered they would not have had much money savings. VRF can minimize the need for ductwork, the outdoor system exchange will also be smaller. The disadvantage is that they are not really made to support large spaces and so you would need several of them.
- h. One mechanical room vs. mechanical room on every floor: If multiple mechanical rooms were installed, the Team would keep mechanical rooms stacked on the north side of the building.
 - The group also discussed installing a north mechanical room and a south mechanical room on the third floor and not having a mechanical room on the second floor.
 - The park noted that the third floor has better views compared to the second floor.

- j. How do you separate utility costs? Team thinks they would have an energy management system installed that could track and calculate usage. The usage numbers could be used by the leaser to divide usage costs. The team could also design sub-metering.
- Currently, the park buildings are all single-use occupancy and NPS believes that the Maurice will be a single user that would sublease the space.
 - The design team will provide a guideline within the report on what the system can handle when it comes to future tenants.
4. Libbey Existing Systems:
- a. 3" water line that enters the building.
 - b. No booster into the building and no fire suppression within the building. A new fire service line would need to be brought into the building.
 - c. Thermal water system is leaking and the overflow of the thermal fountain ties into the roof drainage system.
 - d. HVAC system was served by three boilers. A lot of the steam piping has been removed. The air-system that is existing is almost 80 years old. A lot of the main ductwork has been removed.
 - e. Attic is full of large ductwork that serviced the second floor. The ductwork was installed independently per floor.
5. Libbey Proposed Mechanical Systems:
- a. Option 1 (Preferred): An air-cooled chiller that would serve dedicated air handling units for the three defined spaces including Law Enforcement, Curatorial, and Museum. The Law Enforcement AHU would likely be a VAV air handling unit with individual VAV boxes with hot water reheat coils to serve those spaces. Depending on the size and number of rooms in the Museum area, the AHU serving that space could be either a VAV AHU like noted above, or a single zone air handling unit. Curatorial would have an upgraded system that would include high-efficiency filtration, carbon/potassium permanganate filtration, humidification, dehumidification with minimum outside air. High-efficiency condensing water boilers would be provided to supply heating water to the air handling units, VAV reheat coils, and unit heaters. This is the design team's preferred option.
 - b. Option 2: A VRF system teamed with DOAS Units could be provided to serve smaller spaces similar to the systems discussed in Option 2 for Maurice.
6. Libbey Electrical:
- a. (2) 200 amp system that enters the building on the northwest side of the building. These are older systems that we would not recommend using anymore. Recommend removing both services and installing a new 800 amp system. The design team is currently planning for a 120/208 volt system.
 - The Design Team believes it would support two elevators.
 - 250 kVA natural gas generator is planned to be installed. Space will be needed on site for the new generator. It will be very large.
 - Plan on all new IT set-up
 - New fire alarm system would need to be replaced.
 - Plan on all new services for Libbey
 - Gas service will need to be confirmed as acceptable to serve the generator.
 - The IT system is old and appears to be copper. A new IT service will need to be planned.
 - The fire alarm system is not active. It is likely that a new system will be needed for the new space function.
7. Maurice Electrical:
- a. 120/208 volt system enters on the north side of the building. There is an exterior disconnect located on the north. The existing system is in good condition, and the existing service could

remain. One panel located in Mechanical 103 may need to be replaced. The other panels throughout the building most likely can remain. The existing panels are single-section panels, which might require additional sub-panels.

- There is an existing fire alarm system in Maurice. It is currently not on and not providing any coverage. It is likely that a new system will be needed for the new space function.
- The IT system enters the building at the south end of the pool. The service provides connections for the pump house and the visitors center. If the pool is to be activated the IT services will need to be planned to be moved.
- Generator to provide full back-up, 450 kVa natural gas generator would be required. It would need to be located on the north side of the building. The Design Team is currently looking at natural gas generators. Gas service will need to be confirmed as acceptable to serve the generator.

8. Energy Modeling and Efficiency:

- a. Does the park want the exterior walls to be insulated? NPS will run the question by the facility management team and requested that STRATA draft an e-mail explaining the situation.
- b. Will be replacing windows at Libbey. Storm windows will be installed a Maurice. Exterior doors will be upgraded.

9. Additional Discussion:

- a. Updated site survey for Maurice and Libbey needs to be completed. This will help with accessibility studies, documenting utilities, and drainage.
- b. Manholes at Libbey on the east side that has values. The design team and park believe it is connected to pool drainage.
- c. The design team has identified concerns where additional testing is required for hazardous material.
- d. Finding pressure for City water at Libbey and Maurice. The Park will work to get that information for the design team.

END OF NOTES

NPS HOSP - Maurice Mechanical Systems Comparisons - Online Meeting 3/28/2022

System	Component	Pros	Cons
Hydronic Systems with Air Handling Units (Preferred System)	Chiller	More efficient than equipment with DX coils and remote condensing units.	Can be more expensive than one-to-one AHU's with DX coils depending on number of AHU's required
		Better unloading capabilities and dehumidification control than straight DX systems	Requires more equipment
		Only one outdoor unit to serve multiple pieces of equipment	Requires more qualified maintenance experience
	Chilled Water Pumps	Required for circulating chilled water to air handling units and fan coil units	Additional equipment to maintain
	Hot Water Boilers	Very efficient heat source	Venting and combustion air ducting required
		Better temperature control and unloading than gas furnaces or electric coils	Requires more qualified maintenance experience
	Heating Water Pumps	Required for circulating chilled water to air handling units and fan coil units	Additional equipment to maintain compared to electric coil heating sources
	Hydronic Piping	Required for chilled and hot water distribution piping	Larger than refrigerant piping or electric conduit
	Air Handling Units	Generally one source of maintenance compared to fan coil units	Requires single larger mechanical room
		More options such as higher levels of filtration, humidification, dehumidification, free cooling with economizer	Larger ductwork
	Terminal Units	More robust and longer life span than fan coil units	Unless serving single zones, requires terminal units or reheat coils
		Typically variable air volume boxes (VAV) provide more precise temperature and ventilation control	Typically requires either heating water or electric reheat coils
	Fan Coil Units	Less maintenance than a fan coil unit (box damper and coil)	Fan coils require regular filter replacement, motor and coil maintenance
		Will be required for 3rd floor spaces due to low floor-to-floor height. Units are smaller than air handling units	More units are required
Ductwork is typically smaller		More units are required	
DOAS Unit	Can be horizontal concealed above a ceiling, horizontal exposed, vertical concealed, vertical exposed or closet mounted	Each unit requires motor, filter, coil and controls maintenance.	
	Each unit supplying occupied spaces requires separate outside air ventilation	Requires dedicated outside air supply (DOAS) units or separate ducted outside air connections	
	Can be supplied with energy recovery (wheel, flat plate heat exchanger or run-around) loop to preheat and/or precool outside air using exhaust air or relief air as the heat exchange source.	An extra piece of equipment to maintain. If supplied with energy recovery, this would require a higher level of maintenance technician.	
Hydronic Systems with Fan Coil Units	Chiller	Decouples conditioning of outside air from the air handling units.	Requires mounting outside of building (self contained) or indoors with ducted outside air and exhaust to unit to the outside and supply and exhaust air to the indoor units or spaces.
		See comments above	See comments above
	Chilled Water Pumps	See comments above	See comments above
	Hot Water Boilers	See comments above	See comments above
	Heating Water Pumps	See comments above	See comments above
	Hydronic Piping	See comments above	See comments above
	Fan Coil Units	Units are smaller than air handling units	Fan coil units do not have as wide of options as air handling units such as high efficiency filtration options, unit mounted humidification, access and other options than AHU's do. Air handling units may be required to serve areas needing more options than can be provided by fan coil units.
		Ductwork is typically smaller	More units are required
DOAS Unit	Can be horizontal concealed above a ceiling, horizontal exposed, vertical concealed, vertical exposed or closet mounted	Each unit requires motor, filter, coil and controls maintenance.	
	Each unit supplying occupied spaces requires separate outside air ventilation	Requires dedicated outside air supply (DOAS) units or separate ducted outside air connections	
Heat Pump Condensing Units	Can be supplied with energy recovery (wheel, flat plate heat exchanger or run-around) loop to preheat and/or precool outside air using exhaust air or relief air as the heat exchange source.	An extra piece of equipment to maintain. If supplied with energy recovery, this would require a higher level of maintenance technician.	
	Decouples conditioning of outside air from the air handling units.	Requires mounting outside of building (self contained) or indoors with ducted outside air and exhaust to unit to the outside and supply and exhaust air to the indoor units or spaces.	
Variable Refrigerant Flow System	Heat Pump Condensing Units	In heat recovery form they can be very efficient. Indoor units requiring cooling can exchange heat with those requiring heating.	Requires multiple indoor units similar to the fan coil units noted above. Large spaces may require multiple units to serve the same
	Indoor Units	Can exchange heat between individual indoor units	Indoor units, like the fan coil units noted above, can not serve as large spaces as air handling units and do not have as many options as air handling units.
		Can be horizontal concealed above a ceiling, horizontal exposed, vertical concealed, vertical exposed or closet mounted	Each indoor unit requires motor, filter, coil and controls maintenance.
		Each unit supplying occupied spaces requires separate outside air ventilation	Requires dedicated outside air supply (DOAS) units or separate ducted outside air connections
	DX Air Handling Units	May be required if space is larger than a single VRF unit can serve or if rooms need components to provide environmental requirements that the VRF indoor units can't provide	Since this is not a hydronic system the air handling units require a DX cooling coil and remote condensing unit and depending on size that can be large. If the unit requires heat an electric heating coil would be required.
DX cooling is a simpler system than chilled water		DX cooling does not provide as precise part load control and dehumidification	
Refrigerant Piping	Refrigerant piping is typically smaller for the same capacity (tonnage) than chilled water piping	Refrigerant piping lengths are elevation changes are limited and must be run at the correct slopes and other requirements to not trap oil in the system	

NPS HOSP - Libbey Mechanical Systems Comparisons - Online Meeting 3/28/2022

System	Component	Pros	Cons
Hydronic Systems with Air Handling Units (Preferred System)	Chiller	More efficient than equipment with DX coils and remote condensing units.	Can be more expensive than one-to-one AHU's with DX coils depending on number of AHU's required
		Better unloading capabilities and dehumidification control than straight DX systems	Requires more equipment
		Only one outdoor unit to serve multiple pieces of	Requires more qualified maintenance experience
	Chilled Water Pumps	Required for circulating chilled water to air handling units and fan coil units	Additional equipment to maintain
	Hot Water Boilers	Very efficient heat source	Venting and combustion air ducting required
		Better temperature control and unloading than gas furnaces or electric coils	Requires more qualified maintenance experience
	Heating Water Pumps	Required for circulating chilled water to air handling units and fan coil units	Additional equipment to maintain compared to electric coil heating sources
	Hydronic Piping	Required for chilled and hot water distribution piping	Larger than refrigerant piping or electric conduit
	Air Handling Units	Generally one source of maintenance compared to fan coil units	Requires single larger mechanical room
		More options such as higher levels of filtration, humidification, dehumidification, free cooling with economizer	Larger ductwork
More robust and longer life span than fan coil units		Unless serving single zones, requires terminal units or reheat coils	
Terminal Units	Typically variable air volume boxes (VAV) provide more precise temperature and ventilation control	Typically requires either heating water or electric reheat coils	
	Less maintenance than a fan coil unit (box damper and coil)	Fan coils require regular filter replacement, motor and coil maintenance	
Hydronic Systems with Fan Coil Units	Chiller	See comments above	See comments above
	Chilled Water Pumps	See comments above	See comments above
	Hot Water Boilers	See comments above	See comments above
	Heating Water Pumps	See comments above	See comments above
	Hydronic Piping	See comments above	See comments above
	Fan Coil Units	Units are smaller than air handling units	Fan coil units do not have as wide of options as air handling units such as high efficiency filtration options, unit mounted humidification, access and other options that AHU's do. Air handling units may be required to serve areas needing more options
		Ductwork is typically smaller	More units are required
		Can be horizontal concealed above a ceiling, horizontal exposed, vertical concealed, vertical exposed or closet mounted	Each unit requires motor, filter, coil and controls maintenance.
	DOAS Unit	Each unit supplying occupied spaces requires separate outside air ventilation	Requires dedicated outside air supply (DOAS) units or separate ducted outside air connections
		Can be supplied with energy recovery (wheel, flat plate heat exchanger or run-around) loop to preheat and/or precool outside air using exhaust air or relief air as the heat exchange source.	An extra piece of equipment to maintain. If supplied with energy recovery, this would require a higher level of maintenance technician.
Decouples conditioning of outside air from the air handling units.		Requires mounting outside of building (self contained) or indoors with ducted outside air and exhaust to unit to the outside and supply and exhaust air to the indoor units or spaces.	
Variable Refrigerant Flow System	Heat Pump Condensing Units	In heat recovery form they can be very efficient. Indoor units requiring cooling can exchange heat with	Requires multiple indoor units similar to the fan coil units noted above. Large spaces may require
	Indoor Units	Can exchange heat between individual indoor units	Indoor units, like the fan coil units noted above, can not serve as large spaces as air handling units and do not have as many options as air handling units.
		Can be horizontal concealed above a ceiling, horizontal exposed, vertical concealed, vertical exposed or closet mounted	Each indoor unit requires motor, filter, coil and controls maintenance.
		Each unit supplying occupied spaces requires separate outside air ventilation	Requires dedicated outside air supply (DOAS) units or separate ducted outside air connections
	DX Air Handling Units	May be required if space is larger than a single VRF unit can serve or if rooms need components to provide environmental requirements that the VRF indoor units can't provide	Since this is not a hydronic system the air handling units require a DX cooling coil and remote condensing unit and depending on size that can be large. If the unit requires heat an electric heating coil
		DX cooling is a simpler system than chilled water	DX cooling does not provide as precise part load control and dehumidification
Refrigerant Piping	Refrigerant piping is typically smaller for the same capacity (tonnage) than chilled water piping	Refrigerant piping lengths are elevation changes are limited and must be run at the correct slopes and other requirements to not trap oil in the system	

ONLINE MEETING NOTES

Predesign Services - Condition Assessment and Treatment Plan Maurice Bathhouse and Libbey Memorial Physical Medicine Center (LMPMC)

Hot Springs National Park (HOSP)
PMIS 318915B

Re: Libbey Multi-Park Storage Facility Discussion

Date: March 31, 2022

Attendees:

Laura Miller, Superintendent, HOSP
Tommy Hill, Museum Curator, HOSP
John Rosemurgy, COR, NPS
Brian Leaders, GAOA Program Manager, NPS
Heather Young, Museum Program Manager, Region, NPS
Angie Gaebler, STRATA
Claire Ashbrook, STRATA

Action Items:

1. NPS (John Rosemurgy) to schedule a meeting with Don Boucher. Meeting to include Tommy Hill, Laura Miller, Angie Gaebler, Claire Ashbrook, IMEG, Brian Leaders, and Heather Young.
2. Heather Young to determine what parks would be interested in using the multi-park storage facility and what their archival/storage needs are.
3. NPS (John Rosemurgy) to schedule a meeting with STRATA and Kevin Schluckebier for code questions.

Discussion:

Meeting Objective: Review the needs for a multi-park storage facility and determine if the needs can be met within Libbey.

1. Program needs were reviewed.
 - a. Law Enforcement and Curatorial Uses:
 - i. 12,000 net square feet of program space was wanted by both groups, and Libbey only has 10,000 gross square feet per floor).
 - ii. That 10,000 gross square feet per floor includes a large amount of circulation, mechanical, storage, and restroom spaces, which were not included in the programming efforts of the Curatorial or Law Enforcement uses.
 - b. Even with reducing square footage requests for several areas, The Design Team determined there is not enough square feet available in the Libbey for both uses to share the building without making major cuts to each of their programming requirements.
 - c. Square Footage Available for Archival Space: Upper Floor is 6200 SF. On the lower level roughly 5800 SF.
2. Multi-Park Storage Needs:
 - a. Heather identified that for a multi-park storage facility to be successful and approved, it needs to be beneficial for all parks that would use the facility.
 - a. Question for NPS: How many museum facilities are we eliminating at other parks? What storage facilities are being relocated at Hot Springs?

- b. Question for NPS: What are the curatorial and archives special needs of the other parks?
 - c. Question for NPS: Are there any risks with the Libbey Facility? Is the Libbey Facility going to be a higher-risk building or a lower-risk building compared to current park archival storage?
 - d. Current Hot Springs Curatorial Facility: Hot Springs plans to move all curatorial departments and storage out of the Lamar facility and into the Libbey.
 - Natural Resources (currently on the second floor) might remain at Lamar, as well as the NPS training rooms.
 - Current SF Requirements for Archival: (Tom at Hot Springs calculated the SF of what Hot Springs is already using and increased the number. NPS notes that with the new facility, the archival materials will be stored in a new way that will require less storage space (shelves will stack). The square footage figured includes all Hot Springs storage, including the Bally building, not just the storage in Lamar.
 - e. Other Hot Springs Archival Items: Ozark Bathhouse currently has art on display that is owned by NPS. If Ozark Bathhouse was leased, the art would need to move to the new archival storage.
 - f. Another Consideration for Libbey: The Forest Service might consider curatorial and lab space in the Libbey. This would make Libbey a Multi-Park / Multi-Agency Facility. Heather mentioned this gets complicated, and the facility would have to have clear entrances and interior separations.
 - g. Other Parks that might use the Facility:
 - William Clinton Birthplace
 - Arkansas Post (archeology collection is stored at the University)
 - Fort Smith Fort Smith is stored at the maintenance building in the park and mainly consists of historical items and archives. Fort Smith's storage might be the same size as Lamar's training room and has rolling shelves, as well as a workspace for cataloging. Fort Smith does have furniture within their archives, but it is held at another building in town. Fort Smith's building is around 20 feet long and 10 feet wide (Bally building) without HVAC.
 - Buffalo (a portion of Buffalo archives are stored in Bally building - Laura could see Buffalo interested in moving).
 Parks not likely to move:
 - Pea Ridge (Currently stored in Independence)
 - Central High School (Heather does not see Central interested in moving. They have a good facility)
3. Heather mentioned that Midwest Region has MWAC as a back-up archeology storage facility.
4. Keweenaw is only 11,000 SF (only storage space), and their collections are much bigger than Hot Springs and the other parks identified as possible tenants of the Multi-Park Storage Facility.
5. Programming Specific to Libbey:
- a. Aisle space and space for movement needs to be considered for the new facility.
 - b. Libbey's historic lobby could have open offices located there or even the training space.
 - The Design Team found evidence that the interior of the lobby was divided for office space (in historic pictures).
 - c. Elevators:
 - Libbey currently has one normal-sized elevator. It's not clear if this meets current accessibility requirements.
 - The Park discussed adding a new freight elevator.
 - Does the Park want to maintain two elevators?
 - Long-term, the Park believes that one option would be to demolish the existing elevator and install a single freight elevator. STRATA pointed out that the existing elevator location will not work for a larger freight elevator – the constraints are too small.
 - The other option, which the Park agreed to, is that the existing elevator will remain and be upgraded, and that large items can be brought to the north (front) entry, if

needed to store on the upper level. This will save funding to be spent on structural improvements required.

- b. Fire Suppression:
 - There is no current system installed at Libbey.
 - John will schedule meeting with Don Boucher at Region.
 - Look at all options
 - There is no insulation in the attic.
6. Libbey Project Moving Forward:
- a. What does it mean to the Park if the Libbey cannot serve both Law Enforcement and Curatorial? Laura indicated that Law Enforcement can maintain using the space in the Duplex.
 - b. Is there support within the Region to have a Multi-Park Storage Facility?
 - i. It was believed by the group that it was supported within the region. It was noted that the regional facility plan has been updated.
 - ii. Region has a 5 to 10-year plan that currently identifies Keweenaw as the region's first multi-park facility priority, and Hot Springs is second on the list.
 - iii. For a Multi-Park Storage Facility to be fully supported, the park will need to get commitment and support from other parks.
 - c. If the Libbey Storage Facility moved forward as a single park, the Park may face questions from DC on why they are not creating a white box facility.
 - d. GAOA money is for the shell of the building and white box of the building interior.
 - e. If the Park moves forward with the Libbey as the Multi-Park facility, and the funding only pays for the shell and white box interior, the park does not know what funding source would be available for completing the interior.
 - f. The Park has a gift (roughly \$400,000) that is supposed to be used for curatorial shelving. The Park has not brought this idea in front of BIRB.
 - g. The group has agreed that the location for Libbey may not attract leasees. The best use for the structure, is likely the Park.
 - h. Are there other funds available to convert Libbey into a Multi-Park Storage Facility? Currently, no one is aware of any funding.
 - i. The group discussed talking with BIRB about planning and remodeling of Libbey for the multi-park facility was the best move. There are concerns about this conflicting with the GAOA money statement, as this project was initially developed to fund a white box for leasing. Laura said she spoke with Tokey Boswell and understood it was okay to proceed forward with BIRB identifying Libbey as a storage facility.
 - j. The existing Hot Springs empty archival storage cabinets weigh +/-800 pounds.
 - k. STRATA mentioned that the upper level cannot structurally support heavy loads without modification.
 - l. Conservatively, Libbey might provide 8000+/- sq/ft of storage space.

END OF NOTES

ONLINE MEETING NOTES

Predesign Services - Condition Assessment and Treatment Plan Maurice Bathhouse and Libbey Memorial Physical Medicine Center (LMPMC)

Hot Springs National Park (HOSP)
PMIS 318915B

Re: Discussion on Fire Protection

Date: April 5, 2022

Attendees:

John Rosemurgy, COR, NPS
Don Boucher, Structural Fire Management Officer, NPS
David Lieb, Project Manager, NPS
Jennifer Claster, Project Manager, Denver Service Center, NPS
Mark Scott, Facility Manager, HOSP
Angie Gaebler, STRATA
Claire Ashbrook, STRATA
Stuart Braden, IMEG

Action Items:

1. Don Boucher indicated he would reach out to Hot Spring Fire Department and determine how they would use a standing pipe system (to be included with the schematic design efforts)
2. STRATA to discuss options for the systems with Heather and the Park for Libbey.

Discussion:

- Objectives: Review the needs for fire protection for Libbey and Maurice
- Libbey Fire Protection
 - Reviewed the plan.
 - Building has smoke detectors, but they are not hooked up.
 - We do have enough water pressure to support a wet fire suppression line.
 - General philosophy is to keep it as simple as possible. Use Dry or Pre-action systems if there is major concern for the objects.
 - Better if you could do a separate system for archival areas of the building.
 - The more compartmentalization in the design, the better. (Create fire rating between different departments to contain highly flammable materials). Consider 2-hours walls for fire ratings.
 - Initial system could be a Clean Agent system with the sprinkler as a backup.
 - Nitrogen is what is being used for a dry pipe system. Want to go with a nitrogen generator (not bottles).
 - Dry may require a pump to meet the sixty second regulation requirements.
 - In locations where there is a true archival system, the design team might want to look at a Clean Agent system. The sprinkler system would be retained in those locations as a backup. NPS does this where the storage is in a more remote location (45 min response time by fire department). This type of system was installed at Effigy Mounds. This is not the case here.
 - Archives can be placed in fire-rated cabinets for important archival material (they already have several of these cabinets).

- Maurice Fire Protection
 - Reviewed the plan.
 - With a Pre-action system, you add an alarm system into the mix. Typically, the alarm system will pick up the smoke before the sprinkler head. Use a smoke sampling system within the area using the Clean Agent system. (A Pre-action System is a sprinkler system employing closed automatic sprinklers connected to a piping system that contains air or nitrogen that may or may not be pressurized. A supplemental detection system (release line) is installed in the same area as the sprinklers).
 - Don's preference is a wet system because much less can go wrong, and it is easier to maintain.
 - The Pre-action systems have value where you have a cross zone that must have two heads respond.
 - Basement Confined Area (crawl space that has the active spring). It is noncombustible material. If there is nothing combustible there, then Don is not concerned about that area have a sprinkler.
 - The design team could start with a dry system and move to a wet (if the building is going to set vacant).
 - What is the pressure that needs to be at the top of the system (if standpipe system)? Don would want to talk to the fire department to see what their approach is locally.
 - Don thinks there will be a standpipe because of the 3 stories. Don noted he has a good relationship with the Hot Springs Fire Department.
 - Dry might be an option as a cost savings system if the building is vacant?
- No fire pumps in any of the buildings. Fordyce does not have a sprinkler system.
- Predesign, perhaps we capture the advantages and disadvantages of viable systems in a matrix (Noted by John R.).
 - (David Lieb) I agree-I think the park may need to re-evaluate what they must store, how they currently store / how they may want to store, and those program components can be flushed out during SD.
 - (John Rosemurgy) Good point, we also may need to lean on Heather Young, MWR Museum Program Lead, to assist the park with preliminary planning for storage.

END OF NOTES

ONLINE MEETING NOTES

Predesign Services - Condition Assessment and Treatment Plan Maurice Bathhouse and Libbey Memorial Physical Medicine Center (LMPMC)

Hot Springs National Park (HOSP)
PMIS 318915B

Re: Fire and Life Safety Codes Discussion for Libbey and Maurice Bathhouses

April 7, 2022

Attendees:

John Rosemurgy, COR, NPS
Brian Leaders, NPS (Joined at the end)
Kevin Schluckebier, Regional Chief in Design and Construction, NPS
David Lieb, Project Manager, DSC, NPS
Jennifer Claster, Project Manager, DSC, NPS
Mark Scott, Facility Manager, HOSP
Angie Gaebler, STRATA
Claire Ashbrook, STRATA
Jeff Boyle, Code Consultant Services

Action Items:

1. STRATA will provide NPS with the 2018 IEBC 1203.2 Code Commentary (see attached at end of notes).
2. STRATA will present the plans to the Park.

Discussion:

Objectives: Review the needs for fire protection for Libbey and Maurice and discuss Life Safety Building Code Requirements.

1. NPS wants the project to utilize IBC 2021 and Existing Building Code 2021

Libbey Codes Discussion

1. Reviewed the plan and use of the spaces.
2. Libbey is not in the National Register district, but it is eligible to be individually listed in the National Register of Historic Places.
3. They have updated the exiting on the building as part of a previous renovation.
4. Areaway is on the north side of the building and provides an exit from the basement mechanical room.
5. The doors in the lower level lobby swing out.
6. Plan to keep an exit door somewhere on the south (east) side of the lower level of Libbey. Existing door will not work since it's at the raised pool height. Door will need to be lowered and can also be relocated.
7. Toilet/plumbing counts have not been done yet.
8. Open stair between the lower level and upper level. This is a historic condition.
9. Rehabilitation occupancy use is from an existing use A3 to less hazardous use B and S1 (upper and lower).
10. Warehouse occupancy is going to be used for the archival storage areas.
11. The building will be full sprinklered.

12. Accessible means of egress in Libbey: During Schematic Design, the design shall include areas of refuge. They are not required by code, but the NPS wants these included where fully accessible exits are not possible. This applies to the upper level only.
13. Has any consideration been given to gender neutral spaces?
 - a. Adding a family restroom on the lower and upper levels, or make all restrooms single-use?
14. Watch dead end corridors (needs to be 75 feet).

Maurice Codes Discussion

1. Reviewed the plan and use of the spaces at each floor.
2. It is listed in a national historic district and is a contributing building.
3. Type IIIB construction because of some of the wood framing at the back roof.
4. Overnights Rooms: There is no loading nearby and it is bit of a nightmare to get people into the building with all of their stuff. Therefore, overnight rooms have not been considered in the reuse options.
5. Accessible means of ingress/egress in Maurice:
 - a. Ramp was added to the front of the building to make it accessible.
6. Basement historically was A3, First Floor A3 and B, Second Floor B, and Third Floor is B and A2.
7. Basement will remain A3 if pool is opened.
8. With a sprinkler system - Assembly to B occupancy
9. It is important to identify the exiting and separation requirements.
10. Upper levels may be an A2 use.
11. 2021 IBC Section 1009.3.3 Exceptions 1 and 2.
 - a. While areas of refuge are not required, NPS wants these included.
 - b. Plan to include a space at each floor with signage and 2-way communication.
 - c. Area of refuge may be designated room or space with the signage and communication.
12. 1203.2 Existing Code: Allows the stair to be open. 2018 Commentary on this furthers this explanation. The commentary is attached at the end of these notes.
 - a. Leave the stairs open on the first floor.
 - b. Kevin has not had this occur on other buildings.
 - c. Everyone agrees that closing the stair at the first floor would damage the first floor flow and historic integrity of the circulation.
 - d. Will keep doors at the basement, second, and third floor levels.
13. Rating 1203.6 of stairway. Existing enclosure for tight fitting doors.
14. Kevin indicated that he would rather waive an additional stair requirement.
15. If the tenant decides to have multiple tenants in the building, they will have to close the stair.
16. What is the longest common path? The first floor has the longest common path, that you currently access. This will need to be explored further during schematic design.
17. 508.3 of IBC indicates that this building complies with nonseparation.
18. May need a second exit in Mechanical Rooms (determine how many BTU).

END OF NOTES

SECTION 1203 FIRE SAFETY

1203.1 Scope. *Historic buildings* undergoing alterations, changes of occupancy, or that are moved shall comply with Section 1203.

❖ This section recognizes the unique aspects associated with older historical structures. It reinforces the importance of the means of egress pathway while granting the code official some latitude in accepting some degree of variance in the egress components. (for example, direction of exit door swing, egress path width and height).

1203.2 General. Every *historic building* that ~~does not conform to the construction requirements~~ specified in this code for the occupancy or use and that constitutes a distinct fire hazard as defined herein ~~shall be provided with an approved automatic fire-extinguishing system~~ as determined appropriate by the *code official*. However, an automatic fire-extinguishing system shall not be used to substitute for, or act as an alternative to, the required number of exits from any facility.

❖ Fire-extinguishing systems are effective substitutes for some requirements that are typical for new construction, ~~particularly passive systems such as rated doors and corridors.~~ By slowing or suppressing the development of a fire, a sprinkler system will make passive fire resistance unnecessary. This section also establishes that an automatic sprinkler system is not considered appropriate as a substitution for a reduction in the required number of exits.

1203.3 Means of egress. ~~Existing door openings and corridor and stairway widths less than those specified elsewhere in this code may be approved,~~ provided that, in the opinion of the *code official*, there is sufficient width and height for a person to pass through the opening or traverse the means of egress. Where *approved* by the *code official*, the front or ~~main exit doors need not swing in the direction~~ of the path of exit travel, provided that other *approved* means of egress having sufficient capacity to serve the total occupant load are provided.

❖ This provision would permit the continuance of a structure no more hazardous than before rehabilitation, with minimum standards of usability. Provisions for new construction would require that exit doors swing in the direction of exit travel for an occupant load exceeding 50.

1203.4 Transoms. In fully sprinklered buildings of Group R-1, R-2 or R-3 occupancy, existing transoms in corridors and other fire-resistance-rated walls may be maintained if fixed in the closed position. A sprinkler shall be installed on each side of the transom.

❖ This permits the retention of nonwired/nonrated glass in historic transoms in rated walls in residential occupancies where protected by an automatic fire sprinkler system throughout the building. This section requires the transoms to be closed and specific protection on both sides of the transoms. This approach

basically affords a level of safety equivalent to the passive protection provided by a rated corridor or other rated construction.

1203.5 Interior finishes. The existing interior finishes shall be accepted where it is demonstrated that they are the historic finishes.

❖ While existing wood paneling or other finishes may not meet flame spread requirements for walls or ceilings, this section allows the finishes to remain in place if they can be shown to be historic in nature. If not, there should be no reason not to address the flame spread rating of the materials since the sensitivity of the historic nature of the building is no longer an issue.

1203.6 Stairway enclosure. In buildings of ~~three stories or less~~, exit enclosure construction shall limit the spread of smoke by the use of ~~tight-fitting doors~~ and solid elements. Such elements are not required to have a fire-resistance rating.

❖ Enclosure of stairways to control smoke would provide an improvement, but permitting the enclosure to be nonrated would allow for use of traditional materials. Example enclosures include plain or wired glass, smoke-activated doors and similar assemblies. This provides for flexibility, but requires at least a minimum level of passive smoke control to protect stairways for exiting.

1203.7 One-hour fire-resistant assemblies. Where 1-hour fire-resistance-rated construction is required by these provisions, it need not be provided, regardless of construction or occupancy, ~~where the existing wall and ceiling finish is wood or metal lath and plaster.~~

❖ The substitution of standard, old-fashioned lath and plaster for 1-hour-rated wall construction is a well-established alternative and is considered as meeting the intent of the code to provide a safe path for exit.

1203.8 Glazing in fire-resistance-rated systems. Historic glazing materials are permitted in interior walls required to have a 1-hour fire-resistance rating where the opening is provided with *approved* smoke seals and the area affected is provided with an automatic sprinkler system.

❖ Glazing of interior partitions can be vulnerable because of potential leakage around the edge of the glazing or because of heat-induced glass breakage. This provision addresses both concerns. The sprinkler system should be provided on both sides of the wall containing the glazing.

1203.9 Stairway railings. Grand stairways shall be accepted without complying with the handrail and guard requirements. ~~Existing handrails and guards at all stairways shall be permitted to remain,~~ provided they are not structurally *dangerous*.

❖ New construction requirements for handrail and guardrail height have increased over the years. Since an ornamental railing is typically difficult to modify, however, particularly without significant architectural change, the code permits historic railings that are

ONLINE MEETING NOTES

Predesign Services - Condition Assessment and Treatment Plan Maurice Bathhouse and Libbey Memorial Physical Medicine Center (LMPMC)

Hot Springs National Park (HOSP)
PMIS 318915B

Re: Libbey Multi-Park Facility Programming and Maurice Spa/Cafe Programming Discussions

Date: April 11, 2022

Attendees:

John Rosemurgy, COR, NPS
Laura Miller, Superintendent, HOSP
Heather Young, Museum Program Manager, Region, NPS
David Lieb, Project Manager, DSC, NPS
Jennifer Claster, Project Manager, DSC, NPS
Tommy Hill, Museum Curator, HOSP
Angie Gaebler, STRATA
Claire Ashbrook, STRATA

Discussion:

Objective: Review overall programming needs and adjacencies for Libbey to be renovated as a Multi-Park Storage Facility.

The review today is of the pre-design program layouts for test-fits and cost estimating. Further programming efforts will be undertaken as part of Schematic Design.

Libbey Multi-Park Facility Program

1. Reviewed the preliminary program plans. Updated them in real-time to address adjacencies and needs.
2. Include map/map cases.
3. Think about cold storage. It is costly to maintain/replace/utilities.
 - o How much space is required, and what type of storage room is actually needed?
 - o Can the items be stored in cold storage cabinets instead of in a room?
4. Need a loading door. Large, double-doors preferred with a loading dock, or something at grade.
5. Park has 3 total Fire King cabinets for storage that can be in hallways and are fire-rated. They would like two more. They should not be housed in collection spaces.
6. Will need to review if generator needs to run ALL systems? The generator required for this facility is very large.
7. Wet lab in processing will need a hood.
8. In-processing and Isolation need to be adjacent to one another. Would be best to go directly from in-processing to isolation.
9. Loading doors/dock directly into in-processing.
10. Best of Archeologist is near the entrance door. They drag a lot of tools and equipment in and out. Archeologist needs a shower. This can be in one of the restrooms. Archeologist may remain at Lamar. This is not determined yet.
11. Custodial closet near restrooms on each floor.
12. Space for interns can be flexible. Lower level or upper level.

13. Photography space is for taking digital photographs of objects. Currently, the photography spaces get set-up and broken down.

Maurice – Spa/Café Program

1. Reviewed the preliminary program plans. Updated them in real-time to address adjacencies and needs.
2. Prefer to identify potential locker rooms without specifying gender.
3. Communal pools will likely use chlorine.
4. Not all bathhouses on Bathhouse Row have back-up generators. Is it possible to have a smaller generator for systems only? Yes! No need for a generator to run all systems. Is this a definite requirement? It will take up quite a bit of space in the north yard.
5. Would like to have loading/receiving dock?
 - o Worked with team to remove existing basement ramp and construct new, wider ramp with a wider basement entrance door. Include a flat landing at bottom of ramp to store small trash roll-aways.
6. Explore options for freight elevator in Schematic Design? Or, perhaps dumbwaiters, if café or restaurant functions better with a kitchen at a different level?
7. Park thinks restaurant may need to be more than a café.
8. Do we need to keep the Maurice Office? HSR indicates it should be maintained. This hinders the use of the large area south of the Roycroft Den.
9. Will need to address air handling unit relocation to Hale property during Schematic Design.
10. The area to the south of the pool could be a product in-take area/storage space instead of serving the pool area. This would be up to the tenant.

END OF NOTES

APPENDIX C - EXISTING WINDOW SURVEY SCHEDULE

WINDOW SCHEDULE - Maurice

NUMBER	WINDOW DIMENSION		TYPE	REMARKS	STORM WDW	OVERVIEW
	WIDTH	HEIGHT				
BASEMENT						
001	2'-3"	1'-7"	WD	Paint, new weather stripping, replace hardware	Y	Paint is faded and/or peeling on majority of windows. There is no weatherstripping. The glass is in good condition. Some of the frames are broken.
002	2'-3"	1'-7"		Existing mechanical louver to remain		
003	2'-3"	1'-7"	WD	Paint, new weather stripping, replace hardware	Y	
004	2'-3"	1'-7"	WD	Paint, new weather stripping, replace hardware	Y	
005	2'-3"	1'-7"	WD	Paint, new weather stripping, replace hardware	Y	
006	2'-3"	1'-7"	WD	Paint, new weather stripping, replace hardware	Y	
007	2'-3"	1'-7"	WD	Paint, new weather stripping, replace hardware	Y	
008	2'-3"	1'-7"		Existing mechanical louver to remain		
009	2'-3"	1'-7"	WD	Paint, new weather stripping, replace hardware	Y	
010	2'-3"	1'-7"	WD	Paint, new weather stripping, replace hardware	Y	
011	2'-3"	1'-7"	WD	Paint, new weather stripping, replace hardware	Y	
012	2'-3"	1'-7"	WD	Paint, new weather stripping, replace hardware, repair bottom	Y	
013	2'-3"	1'-7"		Existing mechanical louver to remain		
014	2'-3"	1'-7"	WD	Paint, new weather stripping, replace hardware	Y	
015	2'-3"	1'-7"	WD	Paint, new weather stripping, replace hardware	Y	
016	2'-3"	1'-7"	WD	Paint, new weather stripping, replace hardware	Y	
017	2'-3"	1'-7"	WD	Paint, new weather stripping, replace hardware	Y	
018	2'-3"	1'-7"		Existing mechanical louver to remain		
019	2'-3"	1'-7"	WD	Paint, new weather stripping, replace hardware, repair bottom	Y	
020	2'-3"	1'-7"	WD	Paint, new weather stripping, replace hardware	Y	
021	2'-3"	1'-7"	WD	Paint, new weather stripping, replace hardware	Y	
022	2'-3"	1'-7"	WD	Paint, new weather stripping, replace hardware	Y	
023	2'-3"	1'-7"	WD	Paint, new weather stripping, replace hardware	Y	
024	2'-3"	1'-7"	WD	Paint, new weather stripping, replace hardware	Y	
025	2'-3"	1'-7"	WD	Paint, new weather stripping, replace hardware	Y	
FIRST FLOOR						
101	3'-6"	5'-6"	WD	Repair bottom, repair displacement, paint, new weather stripping, replace hardware	Y	Paint is faded and/or peeling on majority of windows. Blocks and/or screws are used to hold the windows closed. There is no weatherstripping. The glass is in good condition with some broken or missing panes. The glazing is in okay condition with some being miss-matched in color.
102	3'-6"	5'-6"	WD	Paint, new weather stripping, replace hardware	Y	
103	3'-6"	5'-6"	WD	Paint, new weather stripping, replace hardware	Y	
104	3'-6"	5'-6"	WD	Remove mechanical louver, provide new wood window and trim matching existing adjacent, paint	Y	
105	3'-6"	5'-6"	WD	Paint, new weather stripping, replace hardware	Y	
106	3'-6"	5'-6"	WD	Remove mechanical louver, provide new wood window and trim matching existing adjacent, paint	Y	
107	3'-6"	5'-6"	WD	Existing stained glass: paint, new weather stripping, replace hardware	Y	
108	3'-6"	5'-6"	WD	Existing stained glass: repair bottom, paint, new weather stripping, replace hardware	Y	
109	3'-6"	5'-6"	WD	Existing stained glass: paint, new weather stripping, replace hardware	Y	
110	3'-6"	5'-6"	WD	Paint, new weather stripping, replace hardware	Y	
111	3'-6"	5'-6"	WD	Paint, new weather stripping, replace hardware, cracked pane, repair bottom	Y	
112	3'-6"	5'-6"	WD	Paint, new weather stripping, replace hardware, repair bottom	Y	
113	3'-6"	5'-6"	WD	Paint, new weather stripping, replace hardware	Y	
114	3'-6"	5'-6"	WD	Paint, new weather stripping, replace hardware	Y	
115	3'-6"	5'-6"	WD	Paint, new weather stripping, replace hardware, repair bottom	Y	
116	3'-6"	5'-6"	WD	Paint, new weather stripping, replace hardware	Y	
117	3'-6"	5'-6"	WD	Paint, new weather stripping, replace hardware	Y	
118	3'-6"	5'-6"	WD	Paint, new weather stripping, replace hardware, repair bottom	Y	
119	5'-3"	6'-0"	WD	Paint, new weather stripping, replace hardware, repair bottom	Y	
120	7'-6"	11'-5"	WD	Replace aluminum window with custom wood fixed window (4 units mullied together) custom profiles to mimic original, true divided light muntins, paint		
121	7'-6"	11'-5"	WD	Replace aluminum window with custom wood fixed window (4 units mullied together) custom profiles to mimic original, true divided light muntins, paint		
122	7'-6"	11'-5"	WD	Replace aluminum window with custom wood fixed window (4 units mullied together) custom profiles to mimic original, true divided light muntins, paint		
123	1'-0"	8'-8"	WD	Replace aluminum double door, sidelite, and transom with custom wood door, sidelites, and transom, custom profiles to mimic original, true divided light muntins at sidelites and transom, paint		
124	1'-0"	8'-8"	WD	Replace aluminum window with custom wood fixed window (4 units mullied together) custom profiles to mimic original, true divided light muntins, paint		
125	7'-6"	11'-5"	WD	Replace aluminum window with custom wood fixed window (4 units mullied together) custom profiles to mimic original, true divided light muntins, paint		
126	7'-6"	11'-5"	WD	Replace aluminum window with custom wood fixed window (4 units mullied together) custom profiles to mimic original, true divided light muntins, paint		
127	5'-3"	6'-0"	WD	Paint, repair trim and frame, paint, new weather stripping, replace hardware	Y	
128	3'-6"	1'-0"	WD	Paint, new weather stripping, replace hardware	Y	
129	3'-6"	1'-0"	WD	Paint, new weather stripping, replace hardware	Y	
130	3'-6"	1'-0"	WD	Paint, new weather stripping, replace hardware	Y	
131	3'-6"	1'-0"	WD	Paint, new weather stripping, replace hardware	Y	
132	3'-6"	1'-0"	WD	Paint, new weather stripping, replace hardware	Y	
133	3'-6"	1'-0"	WD	Paint, new weather stripping, replace hardware	Y	
134	3'-6"	1'-0"	WD	Paint, new weather stripping, replace hardware	Y	
135	3'-3"	5'-6"	WD	Interior window - paint		
136	3'-3"	5'-6"	WD	Interior window - paint		
SECOND FLOOR						
201	2'-8"	3'-5"	WD	Repair racked frame, repair stool and apron, paint, new weather stripping, replace hardware	Y	Paint is faded and/or peeling on majority of windows. Blocks and/or screws are used to hold the windows closed. There is no weatherstripping. The glass is in good condition with some broken or missing panes. The glazing is in okay condition.
202	2'-8"	3'-5"	WD	Remove mechanical louver, provide new wood window and trim matching existing adjacent, paint	Y	
203	2'-8"	3'-5"	WD	Repair stool and apron, paint, new weather stripping, replace hardware	Y	
204	2'-8"	3'-5"	WD	Repair right side, paint, new weather stripping, replace hardware	Y	
205	2'-8"	3'-5"	WD	Replace stool and apron, paint, new weather stripping, replace hardware	Y	
206	2'-8"	3'-5"	WD	Repair stool and apron, paint, new weather stripping, replace hardware	Y	
207	2'-8"	3'-5"	WD	Replace stool and apron, paint, new weather stripping, replace hardware	Y	
208	2'-8"	3'-5"	WD	Remove mechanical louver, provide new wood window and trim matching existing adjacent, paint	Y	
209	2'-8"	3'-5"	WD	Repair racked frame, repair bottom, paint, new weather stripping, replace hardware	Y	
210	2'-8"	3'-5"	WD	Repair racked frame, repair bottom, paint, new weather stripping, replace hardware	Y	
211	2'-8"	3'-5"	WD	Repair racked frame, repair bottom, paint, new weather stripping, replace hardware	Y	
212	2'-8"	3'-5"	WD	Repair racked frame, repair bottom, paint, new weather stripping, replace hardware	Y	

213	2'-8"	3'-5"	WD	Replace apron, paint, new weather stripping, replace hardware	Y
214	2'-8"	3'-5"	WD	Repair, paint, new weather stripping, replace hardware	Y
215	2'-8"	3'-5"	WD	Repair racked frame, repair bottom, paint, new weather stripping, replace hardware	Y
216	2'-8"	3'-5"	WD	Paint, new weather stripping, replace hardware	Y
217	2'-4"	3'-5"	WD	Repair bottom, paint, new weather stripping, replace hardware	Y
218	4'-0"	3'-5"	WD	Repair wood damage, paint, new weather stripping, replace hardware	Y
219	4'-0"	3'-5"	WD	Replace top trim, paint, new weather stripping, replace hardware	Y
220	2'-0"	3'-5"	WD	Replace missing pieces, paint, new weather stripping, replace hardware, replace missing stool and apron	Y
221	2'-0"	3'-5"	WD	Replace missing pieces, paint, new weather stripping, replace hardware, replace missing stool and apron	Y
222	2'-4"	3'-5"	WD	Paint, new weather stripping, replace hardware	Y
223	2'-8"	3'-5"	WD	Paint, new weather stripping, replace hardware	Y
224	2'-8"	3'-5"	WD	Paint, new weather stripping, replace hardware	Y
225	2'-8"	3'-5"	WD	Repair racked frame, repair bottom, paint, new weather stripping, replace hardware	Y
226	2'-8"	3'-5"	WD	Paint, new weather stripping, replace hardware	Y
227	2'-8"	3'-5"	WD	Paint, new weather stripping, replace hardware	Y
228	2'-8"	3'-5"	WD	Repair racked frame, repair bottom, paint, new weather stripping, replace hardware	Y
229	2'-8"	3'-5"	WD	Repair racked frame, paint, new weather stripping, replace hardware	Y
230	2'-8"	3'-5"	WD	Remove mechanical louver, provide new wood window and trim matching existing adjacent, paint	Y
231	2'-8"	3'-5"	WD	Repair racked frame, repair top, paint, new weather stripping, replace hardware	Y
232	2'-8"	3'-5"	WD	Repair racked frame, repair top, paint, new weather stripping, replace hardware	Y
233	2'-8"	3'-5"	WD	Repair racked frame, paint, new weather stripping, replace hardware	Y
234	2'-8"	3'-5"	WD	Remove mechanical louver, provide new wood window and trim matching existing adjacent, paint	Y
235	2'-8"	3'-5"	WD	Repair bottom, paint, new weather stripping, replace hardware	Y
236	2'-8"	3'-5"	WD	Repair racked frame, paint, new weather stripping, replace hardware	Y
237	2'-8"	3'-5"	WD	Remove mechanical louver, provide new wood window and trim matching existing adjacent, paint	Y
238	2'-8"	3'-5"	WD	Repair racked frame, paint, new weather stripping, replace hardware	Y
239	2'-8"	3'-5"	WD	Repair racked frame, paint, new weather stripping, replace hardware	Y
240	2'-8"	3'-5"	WD	Repair racked frame, paint, new weather stripping, replace hardware	Y
241	2'-8"	3'-5"	WD	Repair racked frame, paint, new weather stripping, replace hardware	Y
242	2'-8"	3'-5"	WD	Repair racked frame, repair bottom, paint, new weather stripping, replace hardware	Y
243	2'-8"	3'-5"	WD	Repair racked frame, repair bottom, paint, new weather stripping, replace hardware	Y
244	2'-8"	3'-5"	WD	Repair racked frame, repair bottom, paint, new weather stripping, replace hardware	Y
245	2'-8"	3'-5"	WD	Repair bottom, paint, new weather stripping, replace hardware	Y
246	2'-8"	3'-5"	WD	Repair racked frame, paint, new weather stripping, replace hardware	Y
247	2'-8"	3'-5"	WD	Repair racked frame, repair bottom, paint, new weather stripping, replace hardware	Y
248	2'-8"	3'-5"	WD	Repair racked frame, repair corners, paint, new weather stripping, replace hardware	Y
249	2'-8"	3'-5"	WD	Repair racked frame, repair corners, paint, new weather stripping, replace hardware	Y
250	2'-8"	3'-5"	WD	Repair racked frame, repair corners, paint, new weather stripping, replace hardware	Y
251	2'-8"	3'-5"	WD	Repair racked frame, repair bottom, replace trim, paint, new weather stripping, replace hardware	Y
252	2'-8"	3'-5"	WD	Repair racked frame, repair bottom, replace trim, paint, new weather stripping, replace hardware	Y
253	2'-8"	3'-5"	WD	Repair racked frame, repair bottom, replace trim, paint, new weather stripping, replace hardware	Y
254	2'-8"	3'-5"	WD	Repair racked frame, repair bottom, replace trim, paint, new weather stripping, replace hardware	Y

THIRD FLOOR

301	2'-8"	3'-5"	WD	Paint, new weather stripping, replace hardware, broken pane	y	Paint is faded and/or peeling on majority of windows. Blocks and/or screws are used to hold the windows closed. There is no weatherstripping. The glass is in good condition with some broken or missing panes. Paint = 46 Missing Hardware = 46 Damaged Pieces = 11 Broken/Missing Panes = 5
302	2'-8"	3'-5"	WD	Paint, new weather stripping, replace hardware	y	
303	2'-8"	3'-5"	WD	Remove mechanical louver, provide new wood window and trim matching existing adjacent, paint	y	
304	2'-8"	3'-5"	WD	Paint, new weather stripping, replace hardware	y	
305	2'-8"	3'-5"	WD	Paint, new weather stripping, replace hardware	y	
306	2'-8"	3'-5"	WD	Remove mechanical louver, provide new wood window and trim matching existing adjacent, paint	y	
307	2'-8"	3'-5"	WD	Repair trim, paint, new weather stripping, replace hardware	y	
308	2'-8"	3'-5"	WD	Remove mechanical louver, provide new wood window and trim matching existing adjacent, paint	y	
309	2'-8"	3'-5"	WD	Paint, new weather stripping, replace hardware	y	
310	2'-8"	3'-5"	WD	Paint, new weather stripping, replace hardware	y	
311	2'-8"	3'-5"	WD	Paint, new weather stripping, replace hardware, replace missing stool and apron	y	
312	2'-8"	3'-5"	WD	Paint, new weather stripping, replace hardware	y	
313	2'-8"	3'-5"	WD	Paint, new weather stripping, replace hardware	y	
314	2'-8"	3'-5"	WD	Paint, new weather stripping, replace hardware	y	
315	2'-8"	3'-5"	WD	Paint, new weather stripping, replace hardware, broken pane	y	
316	2'-8"	3'-5"	WD	Paint, new weather stripping, replace hardware	y	
317	2'-8"	3'-5"	WD	Paint, new weather stripping, replace hardware	y	
318	2'-8"	3'-5"	WD	Paint, new weather stripping, replace hardware	y	
319	2'-2"	3'-5"	WD	Paint, new weather stripping, replace hardware	y	
320	3'-6"	3'-5"	WD	Paint, new weather stripping, replace hardware	y	
321	3'-6"	3'-5"	WD	Paint, new weather stripping, replace hardware	y	
322	3'-6"	3'-5"	WD	Paint, new weather stripping, replace hardware	y	
323	2'-2"	3'-5"	WD	Repair bottom, paint, new weather stripping, replace hardware	y	
324	2'-8"	3'-5"	WD	Repair trim, paint, new weather stripping, replace hardware	y	
325	2'-8"	3'-5"	WD	Paint, new weather stripping, replace hardware	y	
326	2'-8"	3'-5"	WD	Paint, new weather stripping, replace hardware	y	
327	2'-8"	3'-5"	WD	Paint, new weather stripping, replace hardware	y	
328	2'-8"	3'-5"	WD	Paint, new weather stripping, replace hardware	y	
329	2'-8"	3'-5"	WD	Paint, new weather stripping, replace hardware	y	
330	2'-8"	3'-5"	WD	Paint, new weather stripping, replace hardware	y	
331	2'-8"	3'-5"	WD	Paint, new weather stripping, replace hardware	y	
332	2'-8"	3'-5"	WD	Remove mechanical louver, provide new wood window and trim matching existing adjacent, paint	y	
333	2'-8"	3'-5"	WD	Paint, new weather stripping, replace hardware	y	
334	2'-8"	3'-5"	WD	Paint, new weather stripping, replace hardware	y	
335	2'-8"	3'-5"	WD	Repair bottom, paint, new weather stripping, replace hardware	y	
336	2'-8"	3'-5"	WD	Remove mechanical louver, provide new wood window and trim matching existing adjacent, paint	y	
337	2'-8"	3'-5"	WD	Paint, new weather stripping, replace hardware, cracked pane	y	
338	2'-8"	3'-5"	WD	Paint, new weather stripping, replace hardware, cracked pane	y	
339	2'-8"	3'-5"	WD	Paint, new weather stripping, replace hardware	y	
340	2'-8"	3'-5"	WD	Remove mechanical louver, provide new wood window and trim matching existing adjacent, paint	y	
341	2'-8"	3'-5"	WD	Repair trim, paint, new weather stripping, replace hardware, cracked pane	y	
342	2'-8"	3'-5"	WD	Paint, new weather stripping, replace hardware	y	
343	2'-8"	3'-5"	WD	Paint, new weather stripping, replace hardware	y	
344	2'-8"	3'-5"	WD	Repair frame, paint, new weather stripping, replace hardware	y	
345	6'-2"	7'-10"	WD	Paint, new weather stripping, replace hardware	y	
346	6'-2"	7'-10"	WD	Repair frame, paint, new weather stripping, rehab existing hardware	y	

347	6'-2"	7'-10"	WD	Repair frame, paint, new weather stripping, rehab existing hardware	y
348	6'-2"	7'-10"	WD	Repair sill, paint new weather stripping, replace missing hardware	y
349	6'-2"	7'-10"	WD	Repair frame, paint, new weather stripping, rehab existing hardware	y
350	2'-8"	3'-5"	WD	Paint, new weather stripping, replace hardware, replace missing stool and apron	y
351	2'-8"	3'-5"	WD	Paint, new weather stripping, replace hardware	y
352	2'-8"	3'-5"	WD	Repair bottom, paint, new weather stripping, replace hardware	y

APPENDIX D - UNIVERSAL DESIGN AND SCOPING FORM FOR ABAAS FACILITIES

NPS UNIVERSAL DESIGN and ACCESSIBILITY SCOPING FORM for ABAAS FACILITIES

Use for facilities, buildings (new and existing), parking and drop-off areas, and sites (walks, ramps, plazas, lawns, etc.)



PROJECT & PMIS NO.: 318915B

DATE: 26 April 2022

Prepared by: Quinn Evans

Programs and activities provided at this facility (existing and proposed):			
Site Programs	Amenities	Building Programs	Interpretive Programs
<input type="checkbox"/> Car Parking	<input type="checkbox"/> Benches/Seating	<input type="checkbox"/> Visitor Use Building	<input type="checkbox"/> Information Desk
<input type="checkbox"/> Bus Parking	<input type="checkbox"/> Restrooms	<input checked="" type="checkbox"/> Historic Building	<input type="checkbox"/> Brochures/Handouts
<input type="checkbox"/> RV Parking.	<input type="checkbox"/> Family Restrooms	<input type="checkbox"/> Maintenance Building	<input type="checkbox"/> Audiovisual Programs
<input type="checkbox"/> Employee Parking	<input type="checkbox"/> Employee Restrooms	<input type="checkbox"/> Museum	<input type="checkbox"/> Exhibits
<input checked="" type="checkbox"/> Building Entrance	<input type="checkbox"/> Public Telephones	<input type="checkbox"/> Theater	<input type="checkbox"/> Interactive Exhibits
<input type="checkbox"/> Drop-off Area	<input type="checkbox"/> Drinking Fountains	<input type="checkbox"/> First Aid/ Wellness Room	<input type="checkbox"/> Large Scale Map
<input type="checkbox"/> Alt. Transportation	<input type="checkbox"/> Vending Machines	<input type="checkbox"/> Information desk	<input type="checkbox"/> Tactile Map
<input type="checkbox"/> Bus/Shuttle Stop	<input type="checkbox"/> Concessions - Food	<input type="checkbox"/> Visitor Lodging	<input type="checkbox"/> Guided Tours
<input type="checkbox"/> Service Area	<input type="checkbox"/> Concessions - Ticketing	<input type="checkbox"/> Employee Housing	<input type="checkbox"/> Educational Programs
<input checked="" type="checkbox"/> Walks	<input type="checkbox"/> Gift Shop	<input type="checkbox"/> Conference Room(s)	<input type="checkbox"/> Museum Objects
<input type="checkbox"/> Shelters	<input type="checkbox"/> Bookstore	<input type="checkbox"/> Office Space	<input checked="" type="checkbox"/> Waysides
<input type="checkbox"/> Seating/Gathering Space	<input type="checkbox"/> Trash/Recycling	<input type="checkbox"/> Kitchen/Break Room	<input type="checkbox"/> Special Events
<input checked="" type="checkbox"/> Cultural Landscape	<input type="checkbox"/> Bicycles – racks/rental	<input type="checkbox"/> Elevator	<input type="checkbox"/> Self-Guided Walks
<input type="checkbox"/> Other:	<input type="checkbox"/> Other:	<input checked="" type="checkbox"/> Other: Future tenant TBD	<input type="checkbox"/> Other:
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1. **Universal Design:** Universal Design is the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design. Most simply, Universal Design is human-centered design with all users in mind.

The Seven Principles of Universal Design. Project utilizes the seven principles of universal design throughout the design process to provide a facility that is useable by all.

Yes No N/A

- Principle 1: Equitable Use.** The design is useful and marketable to people with diverse abilities. Is the same means of use provided for all users: identical whenever possible; equivalent when not?
The existing building includes equivalent means of access into and through the building. The project will rehabilitate the building for use by a future tenant TBD. The assumed uses include a spa with café on the ground and second floors and an event space on the third floor.
- Principle 2: Flexibility in Use.** Does the design accommodate a wide range of individual preferences and abilities? Is a choice of method provided?
The ultimate fit-out of the tenant space is TBD. The project establishes zones for future fit-out based on assumed use and existing architecture.
- Principle 3: Simple and Intuitive Use.** Use of the design is easy to understand, regardless of the user’s experience, knowledge, language skills, or current concentration level.
The ultimate fit-out of tenant space is TBD. The project establishes a consistent path of travel through the building with stairs and elevator access on axis from the main entry through the lobby. A central corridor is stacked on floors 2 and 3 and provides access to/from stairs, elevator, and future tenant spaces.
- Principle 4: Perceptible Information.** Does the design communicate necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities?
At this point in project development, signage and wayfinding have not been studied, but as it is designed it is

expected to meet Principle 4.

5. **Principle 5: Tolerance for Error.** Is there a tolerance for error? Does the design minimize hazards and the adverse consequences of accidental or unintended actions?
The project proposes expanding the exterior entry landing to provide additional space for comfortable movement around doors and other people. Additionally, handrails will be added to stairs and ramps as part of the proposed revisions to the exterior entry. Although not currently described, the project should consider the addition of a barrier at the top of the new sloped ramp to the basement level since the slope is greater than 7.5% and intended only for service loading/unloading.
6. **Principle 6: Low Physical Effort.** Does the design require low physical effort? Can the design be used efficiently and comfortably and with a minimum of fatigue?
Existing landings at the exterior ramp are placed appropriately. Although the ultimate fit-out of tenant space is TBD, the minimal number of doors necessary for security and privacy are included in the current design.
7. **Principle 7: Size and Space for Approach and Use.** Is there appropriate size and space provided for approach, reach, manipulation, and use regardless of user's body size, posture, or mobility. Is there adequate space provided for the use of assistive devices or personal assistance?
The project proposes expanding the exterior entry landing to provide appropriate size and space at the main entry doors.

2. **DSC Universal Design Best Practice Requirements** (* if requirement cannot be met, describe reason for departure and accommodations provided)

Yes No* N/A

- b) **Integrated Pedestrian Routes.** Project is designed so that all users follow the same routes through the facility and site. Describe any departure: *The existing building includes equivalent means of access into and through the building. The exterior entry is accessed by a central stair from the sidewalk and a separate ramp. The building includes three floors plus a basement level. Vertical circulation through the building is via two stairways and one elevator.*
- c) **Level Entrance.** Project is designed so the primary entrances (visitor and employee) do not have steps. Staired secondary routes can be included on sloped sites. Describe any departure: *The existing building includes equivalent means of access into and through the building. The exterior entry is accessed by a central stair from the sidewalk and a separate ramp.*
- d) **Covered Entry.** Project provides a covered entry and roof drains away from entry walk and entrance. Describe any departure: *The main entry is the historic main entry and does not include a canopy. The roof does not slope onto the entry elements; it incorporates parapet walls and internal rainwater conductors.*
- e) **Close-in parking and drop-off.** Distance from drop-off and closest accessible parking space (car and RV/Bus) to accessible entrance of facility is 200' or less. Describe any departure: *A designated drop-off area is located at the southwest corner of the building. This is a shared drop-off area for Bathhouse Row and is also used for loading/unloading. Street parking (across the street) is available on a first-come/first-serve basis, and a free public parking garage is located approximately 550 feet away from the building.*
- f) **Power Assist Entrance Doors.** Visitor use buildings provide power assist door openers on main accessible entrances. Describe any departure:
- g) **Accessibility Plans.** Provide accessibility plans to identify project universal design and accessibility goals. Include site plan with all accessible parking and accessible routes with slope requirements; floorplans with accessible features, accessible routes, turning space, maneuvering space and reach ranges shown. *(To be included in Schematic Design)*

ABAAS Chapter 2: Scoping Requirements

3. **F202 Existing Buildings and Facilities** (Renovations and additions including historic facilities)

Yes No N/A

- a) **F202.2.1 Accessible Route.** An accessible route is provided from accessible parking spaces (car and bus/RV), accessible drop off; public sidewalks; and public transportation to accessible entrances.
- b) **F202.2.3 Toilet Facilities.** Project provides at least one men's and one women's accessible toilet facility on an accessible route.
- c) **F202.3.1 Prohibited Reduction in Access.** Project does not decrease or have the effect of decreasing the accessibility of a building or facility below the requirements for new construction.
- d) **Entrances to existing facilities.** If Project is a historic building, is the accessible route the same as general public route? If not, does the accessible route rejoin the general route quickly and intuitively?
- e) **Exception.** The only exceptions used for qualified historic buildings and facilities are one accessible route to one accessible entrance (instead of standard 60% of entrances), at least one accessible floor in a multi-story building, and no less than one toilet room for each sex complying with ABAAS 603 or one unisex toilet room.
- f) **SHPO Concurrence.** If any of these exceptions are taken, is there a concurrence memo from the SHPO? ABAAS Advisory F202.5 - These exceptions apply only when the State Historic Preservation Officer agrees that compliance with requirements for the specific element would threaten or destroy the historic significance of the building or facility. *The project will seek SHPO Concurrence for any exceptions but has not at this phase of project development.*

4. **F203 General Exceptions** (facility spaces not required to comply with ABAAS requirements) A project element meets one of these exceptions:

Yes No N/A

- a) **F203.4 Raised Areas.** Areas raised primarily for purposes of security, life safety, or fire safety, including but not limited to, observation or lookout towers, or fire towers
- b) **F203.5 Limited Access Spaces.** Spaces accessed only by ladders, catwalks, crawl spaces, or very narrow passageways. *Yes, but crawl spaces is considered a 'confined space' and is not easily accessible by the public or Park staff.*
- c) **F203.6 Machinery Spaces.** Spaces frequented only by service personnel for maintenance, repair, or occasional monitoring. Machinery spaces include, but are not limited to, elevator, mechanical, electrical or communications equipment rooms; piping or equipment catwalks; water or sewage treatment pump rooms and stations; electric substations and transformer vaults; and highway and tunnel utility facilities.
- d) **F203.7 Single Occupant Structures.** Single occupant structures accessed only by passageways below grade or elevated above standard curb height, including but not limited to, toll booths that are accessed only by underground tunnels.

5. **F205 Operable Parts**

Yes No N/A

- a) **Hardware.** Door, window, restroom and furnishing hardware, levers, knobs, openers, etc. can be operated with one hand and do not require tight grasping, pinching, or twisting of the wrist; are designed between 15" minimum and 48" maximum above the finished floor. The force required to operate hardware is 5 pounds maximum.
- b) **Operable Parts.** Light switches, electrical outlets, appliance controls, window blind controls, etc. are designed between 15" minimum and 48" maximum above the finished floor. The force required to activate operable parts is 5 pounds maximum.

6. **F206 Accessible Routes**

Yes No N/A

- a) **F206.2.2 Within a Site.** At least one accessible route connects accessible buildings, accessible facilities, accessible elements, and accessible spaces that are on the same site.
- b) **F206.2.3 Multi-Story Buildings and Facilities.** At least one accessible route connects each story in multi-story buildings and facilities.
- c) **EXCEPTION** used for this project: Where a two story building or facility has one story with an occupant load of five or fewer persons that does not contain public use space, that story shall not be required to be connected to the story above or below.

- d) **EXCEPTION** used for this project: Where exceptions for alterations to qualified historic buildings or facilities are permitted by ABAAS F202.5, an accessible route shall not be required to stories located above or below the accessible story. – note – programmatic access is required for all programs provided on all floors
- e) **F206.3 Location.** Accessible routes coincide with or are located in the same area as general circulation paths. Where circulation paths are interior, accessible routes are also interior.
- Advisory F206.3 Location. The accessible route must be in the same area as the general circulation path. This means that circulation paths, such as vehicular ways designed for pedestrian traffic, walks, and unpaved paths that are designed to be routinely used by pedestrians must be accessible or have an accessible route nearby. Additionally, accessible vertical interior circulation must be in the same area as stairs and escalators, not isolated in the back of the facility.*
- f) **F206.4 Entrances.** At least 60 percent of all public entrances and the employee entrance comply with 404, and are on an accessible route complying with ABAAS 402.
- There is only one public entrance, and it is on an accessible route. There are two potential employee entrances and only one is on an accessible route.*

7. **F206.5 Doors, Doorways and Gates**

Yes No N/A

- a) **Clear Floor Space on both sides of accessible doors.** Accessible doors are designed to have adequate clear floor space meeting ABAAS Figure 404.2.4.1.
- b) **F206.5.1 Entrances.** Each entrance to a building or facility complying with ABAAS F206.4 has at least one accessible door, doorway, or gate complying with ABAAS 404.
- The service entry is accessed vis a non-compliant ramp.*
- c) **F206.5.2 Rooms and Spaces.** Within a building or facility, at least one door, doorway, or gate serving each accessible room or space is designed to comply with ABAAS [404](#).

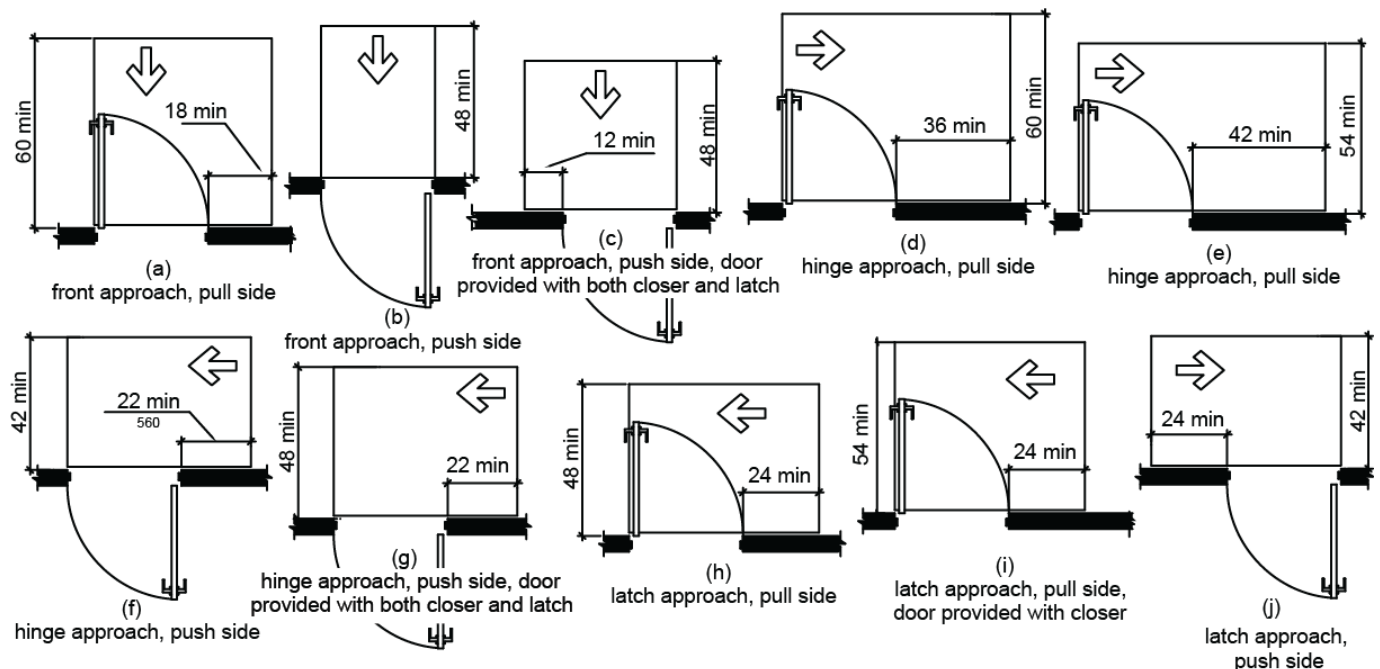


Figure 404.2.4.1 Maneuvering Clearances at Manual Swinging Doors and Gates

8. **F207 Accessible Means of Egress**

Yes No N/A

- a) **F207.1 General.** Means of egress complies with applicable section of the 2009 International Building Code

(IBC). The accessible egress route is shown on code plan.

- b) **Areas of Refuge.** This project includes areas of refuge complying with 2009 IBC that serve as a part of the accessible means of egress. The accessible egress route is shown on code plan.
- c) **F207.2 Platform Lifts.** Standby power is provided for platform lifts that serve as a part of the accessible means of egress.

9. **F208 Parking Spaces** Newly constructed parking facilities shall provide accessible parking spaces in accordance with Table F208.2. Where a parking facility provides separate types of parking spaces (car, recreational vehicle, bus, drop off/unloading, etc.), ABAAS Table F208.2 shall apply to each separate type of parking space provided.

Yes No N/A

- a) **Accessible Parking Spaces.** F208.2 Minimum number of accessible parking spaces meets Table F208.2
- b) **F208.2.4 Van Parking Spaces.** For every six or fraction of six accessible parking spaces required, at least one is an accessible van parking space complying with ABAAS [502](#).
- c) **F208.3 Location.** Accessible parking spaces are located on the shortest accessible route from parking to an accessible entrance, 200' or less from entrance.
- d) **F208.3 Oversized Vehicle Location.** Accessible oversized parking spaces for RV's and buses are located on the shortest accessible route from the oversized vehicle parking facility to an accessible entrance. Accessible spaces are 200' or less from entrance.
- e) **F208.3 Employee Parking Location.** Accessible employee parking spaces are located on the shortest accessible route from the employee parking area to an accessible employee entrance. Accessible spaces are 200' or less from entrance.
- f) **F208.3 Dispersed Locations.** Where parking serves more than one accessible entrance or program, accessible parking spaces are dispersed and located on the shortest accessible route (200' or less) to the accessible entrances or program.

Table F208.2 Parking Spaces:

Total Number of Parking Spaces Provided in Parking Facility	Minimum Number of Required Accessible Parking Spaces (including van spaces)	Minimum Number of Required van Accessible Parking Spaces	Minimum Number of Required RV/Bus Accessible Parking Spaces
1 to 25	1	1	1
26 to 50	2	1	2
51 to 75	3	1	3
76 to 100	4	1	4
101 to 150	5	1	5
151 to 200	6	2	6
201 to 300	7	2	7
301 to 400	8	2	8
Total Parking Spaces provided for this project: 0	# of accessible spaces provided: 0	# of van accessible spaces provided: 0	# of RV/bus accessible spaces provided: 0

10. **F209 Passenger Loading Zones and Bus Stops** Passenger loading zones (Drop-off areas) shall be provided in

accordance with F209.

Yes No N/A

- a) **F503 Passenger Loading Zones.** Passenger loading zones (Drop-off areas) meet the requirements of ABAAS 503, and are 200' or less of primary entrance.
Passenger loading zone is an existing loading zone shared by Bathhouse Row. The access aisle is not marked, but bollards are in place to separate vehicular and pedestrian zones.

11. [F211 Drinking Fountains](#)

Yes No N/A

- a) **F211.2 Drinking Fountains.** If provided; at least one has a spout height of 36" max. for wheelchair users; and at least one with a spout height between 38" and 43" for standing persons.

12. [F213 Toilet Facilities and Bathing Facilities](#)

NOTE: Toilet facilities and locker rooms are not designed at this phase in project development, but the intent is to meet requirements as the design is developed in future project phases.

Yes No N/A

- a) **F213.3.1 Toilet Compartments.** Where toilet compartments are provided, at least one accessible toilet compartment complies with ABAAS 604.8.1. In addition, at least one ambulatory accessible compartment complies with 604.8.2 where six or more toilet compartments are provided, or where the combination of urinals and water closets totals six or more fixtures.
- b) **1109.2.1(IBC) Unisex toilet rooms.** In assembly and mercantile occupancies, an accessible unisex toilet room is provided where an aggregate of six or more male and female water closets is required.
- c) **F213.3.3 Urinals.** Where more than one urinal is provided, at least one is accessible and meets ABAAS 605.
- d) **F213.3.4 Lavatories.** Where lavatories are provided, at least one is accessible and complies with ABAAS 606.
- e) **F213.3.5 Mirrors.** Where mirrors are provided, at least one is accessible and complies with ABAAS 603.3.
- f) **F213.3.6 Bathing Facilities.** Where bathtubs or showers are provided, at least one accessible bathtub or shower complying with ABAAS 607 or 608 is provided.
- g) **Coat hooks and/or Shelves.** Where provided, at least one accessible hook and/or shelf is provided between 40" and 48" above the finish floor in the accessible compartment or room.

13. [F215 Fire Alarm Systems](#)

NOTE: Fire alarm systems are not designed at this phase in project development, but the intent is to meet requirements as the design is developed in future project phases.

Yes No N/A

- a) **F215.2 Public and Common Use Areas.** Alarms in public use areas and common use areas have permanently installed audible and visible alarms complying with ABAAS 702.
- b) **F215.3 Employee Work Areas.** Where employee work areas have audible alarm coverage, the wiring system is designed so that visible alarms can be integrated into the system.
- c) **F215.4 Transient Lodging.** Guest rooms with communication features required by ABAAS F224.4 have permanently installed audible and visible alarms complying with ABAAS 702.
- d) **F215.5 Residential Facilities.** Accessible residences have alarm systems complying with ABAAS 809.5 and 702.

14. [F216 Signs](#)

NOTE: Signage is not designed at this phase in project development, but the intent is to meet requirements as the design is developed in future project phases.

Yes No N/A

- a) **F216.2 Designations.** Interior and exterior signs identifying permanent rooms and spaces have raised characters and braille complying with ABAAS 703.1, 703.2, and 703.5. Where pictograms are provided, they comply with

703.6 and have text descriptors with raised characters and braille complying with ABAAS 703.2 and 703.5.

- b) **F216.4 Means of Egress.** Signs for means of egress comply with ABAAS F216.4.
- c) **F216.4.1 Exit Doors.** Doors at exit passageways, exit discharge, and exit stairways are identified by signs with raised characters and braille complying with ABAAS 703.1, 703.2, and 703.5.
- d) **F216.4.2 Areas of Refuge.** Signs required by the 2009 IBC to provide instructions in areas of refuge comply with ABAAS 703.5.
- e) **F216.4.3 Directional Signs.** Signs required by the 2009 IBC to provide directions to accessible means of egress comply with ABAAS 703.5.
- f) **F216.5 Parking.** Accessible parking spaces have signs complying with ABAAS 502.6
- g) **F216.5 Parking.** Exception 1 - Parking area for this project has a total of four or fewer parking spaces, including accessible parking spaces; identification of accessible parking spaces is not required.
- h) **F216.6 Entrances.** Where not all entrances are accessible, accessible entrances are identified by the International Symbol of Accessibility (ABAAS 703.7.2.1). Directional signs (ABAAS 703.5) are provided at the non-accessible entrances to the nearest accessible entry.
- i) **F216.10 Assistive Listening Systems.** Assembly areas required by ABAAS F219 to provide assistive listening systems have signs informing patrons of the availability of the assistive listening system.

15. F219 Assistive Listening Systems

Yes No N/A

- a) **F219.2 Required Systems.** In each assembly area where audio amplification is provided or audible communication is integral to the use of the space, an assistive listening system is provided. Number of receivers meets requirements of ABAAS F219.

16. F221 Assembly Areas and Outdoor Seating Areas

Yes No N/A

- a) **F221.1 General.** Assembly areas provide wheelchair spaces, companion seats, and designated aisle seats complying with ABAAS F221 and ABAAS 802. In addition, lawn seating shall comply with ABAAS F221.5.
- b) **F221.2.1 Number.** Wheelchair spaces provided comply with figure ABAAS F221.2.1.1
- c) **F221.2.2 Integration.** Wheelchair spaces are integrated into the seating plan. Wheelchair spaces cannot be segregated from general seating areas.
- d) **F221.2.3 Lines of Sight and Dispersion.** Wheelchair spaces provide lines of sight complying with ABAAS 802.2. Wheelchair spaces provide spectators with choices of seating locations and viewing angles that are substantially equivalent to, or better than, the choices of seating locations and viewing angles available to all other spectators.
- e) **F221.2.3.1 Horizontal Dispersion** and **F221.2.3.2 Vertical Dispersion.** Wheelchair spaces are dispersed horizontally and vertically. Dispersion is not required for assembly areas with 300 or fewer seats **if** the wheelchair spaces provide viewing angles that are equivalent to, or better than, the average viewing angle provided in the facility.
- f) **F221.3 Companion Seats.** At least one companion seat complying with ABAAS 802.3 is provided for each wheelchair space required by ABAAS F221.2.1.
- g) **F221.4 Designated Aisle Seats.** At least 5 percent of the total number of aisle seats provided comply with ABAAS 802.4 (folding armrests and identification) and are the aisle seats located closest to accessible routes.
- h) **F221.5 Lawn Seating.** Lawn seating areas and exterior overflow seating areas, where fixed seats are not provided, connect to an accessible route.
- i) **F221.1 Exterior Seating Areas.** Site seating areas that accommodate 4 or more persons (2 benches or more) provide integrated wheelchair seating complying with Section ABAAS F221.

F221.2.1.1 Number of Wheelchair Spaces in Assembly Areas:

Number of Seats in theater or seating area	Minimum Number of Required Wheelchair	Number of Seats in Exterior Seating Areas (bench	Minimum Number of Required Wheelchair
--	---------------------------------------	--	---------------------------------------

(bench length/24")	Spaces	length/24")	Spaces
4 to 25	1	4 to 25	1
26 to 50	2	26 to 50	2
51 to 150	4	51 to 150	4
151 to 300	5	151 to 300	5
301 to 500	6	301 to 500	6
Number of seats in assembly area: N/A	# of accessible spaces provided:	Number of seats in exterior seating area:	# of accessible spaces provided:

17. [F226 Dining Surfaces and Work Surfaces](#)

Yes No N/A

- a) **F226.1 General.** Where dining surfaces or work surfaces are provided, at least 5 percent are accessible and comply with ABAAS 902.
- b) **F226.2 Dispersion.** Accessible dining surfaces and work surfaces are dispersed throughout the space or facility containing dining surfaces and work surfaces.

18. [F229 Windows](#)

Yes No N/A

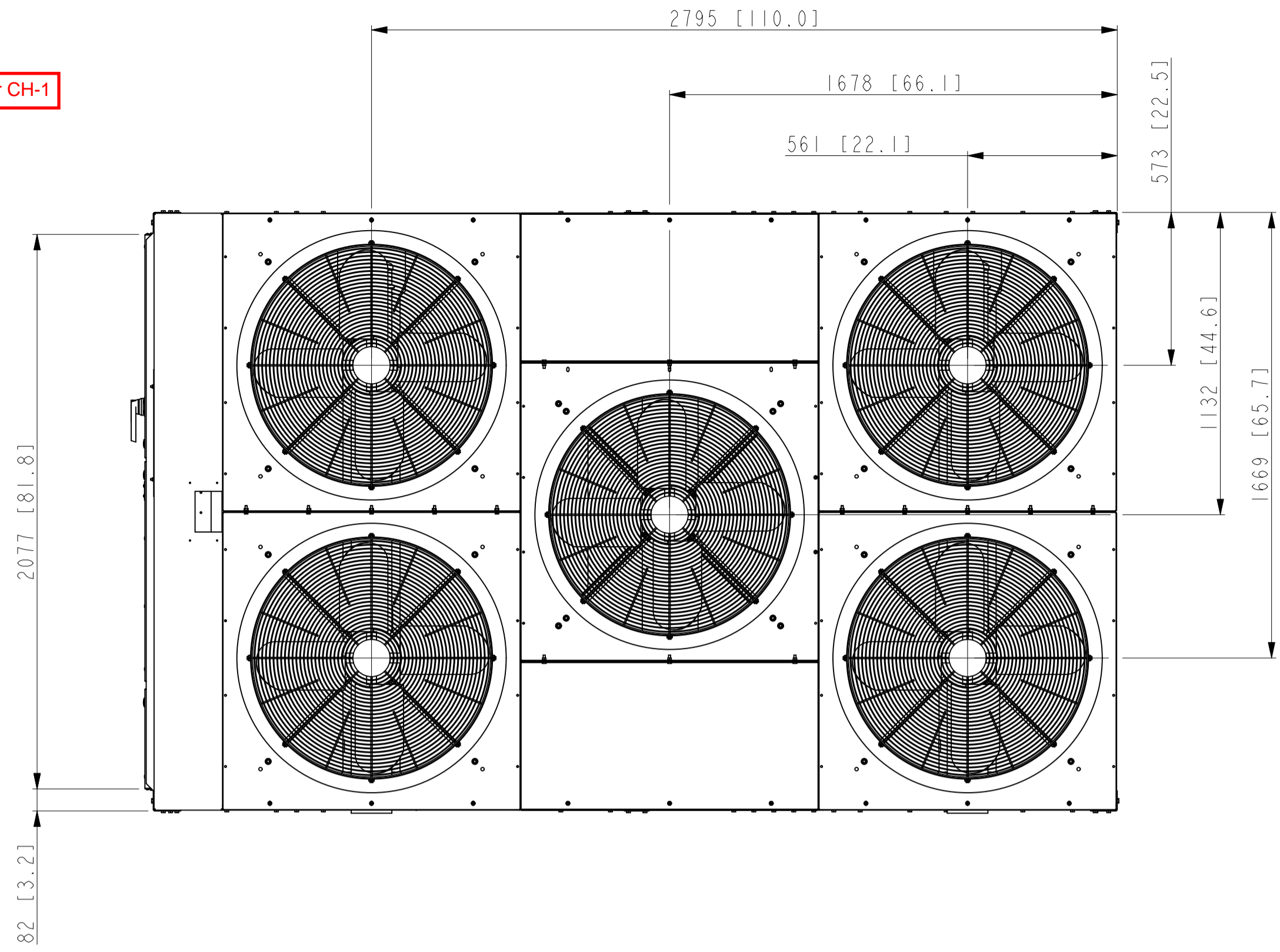
- a) **F229.1 General.** Where glazed openings are provided in accessible rooms or spaces for operation by occupants, at least one window is designed with accessible operable parts complying with ABAAS ([Section 309](#)). In accessible rooms or spaces, each glazed opening required by an administrative authority to be operable shall comply with ABAAS 309.
- b) **Window Coverings.** Window coverings, blinds, etc. provided in accessible rooms or spaces are designed to be operable at accessible reach ranges ([section 308](#)) less than 48" above floor, allow adequate clear floor space for operation and comply with ABAAS 309.

Notes:

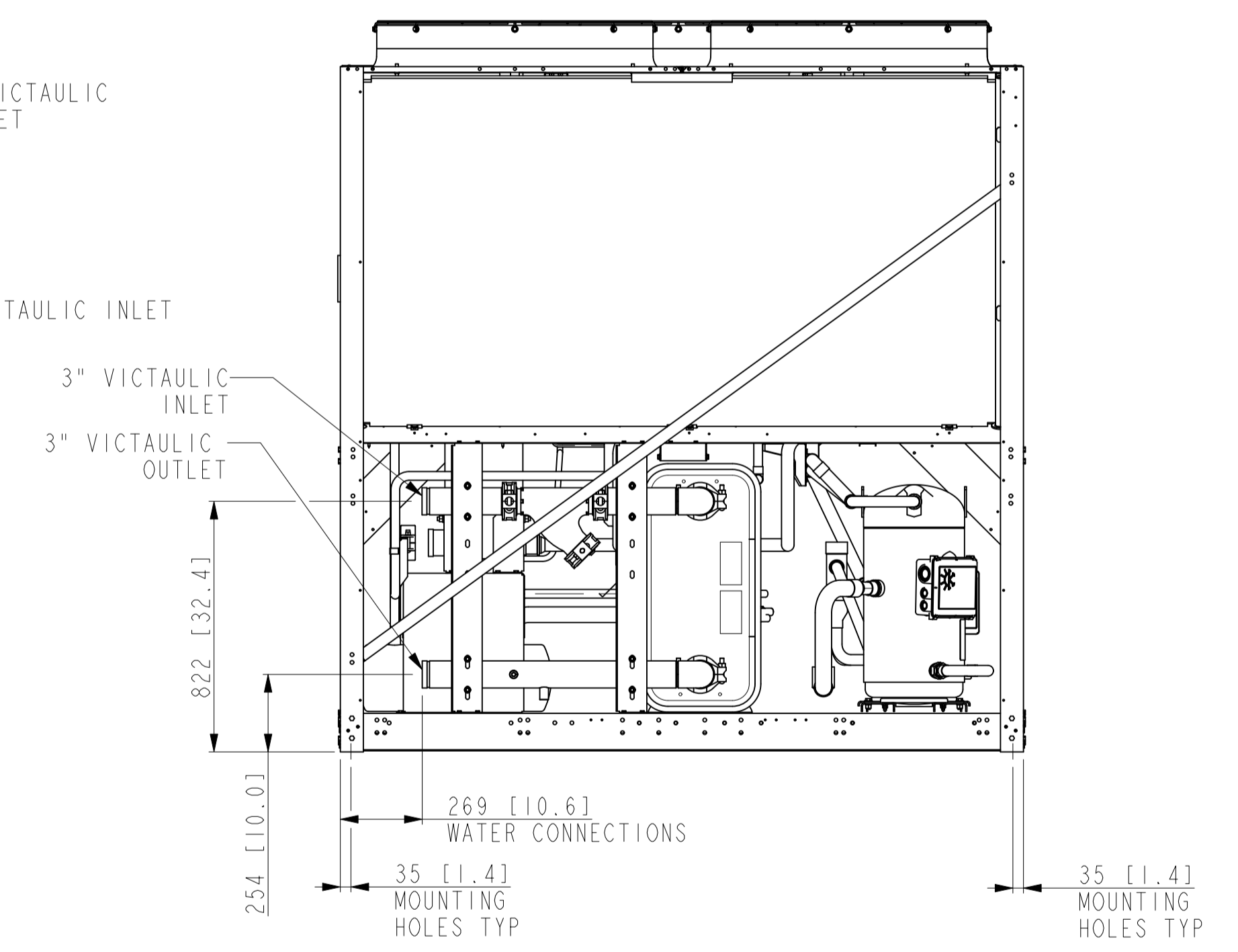
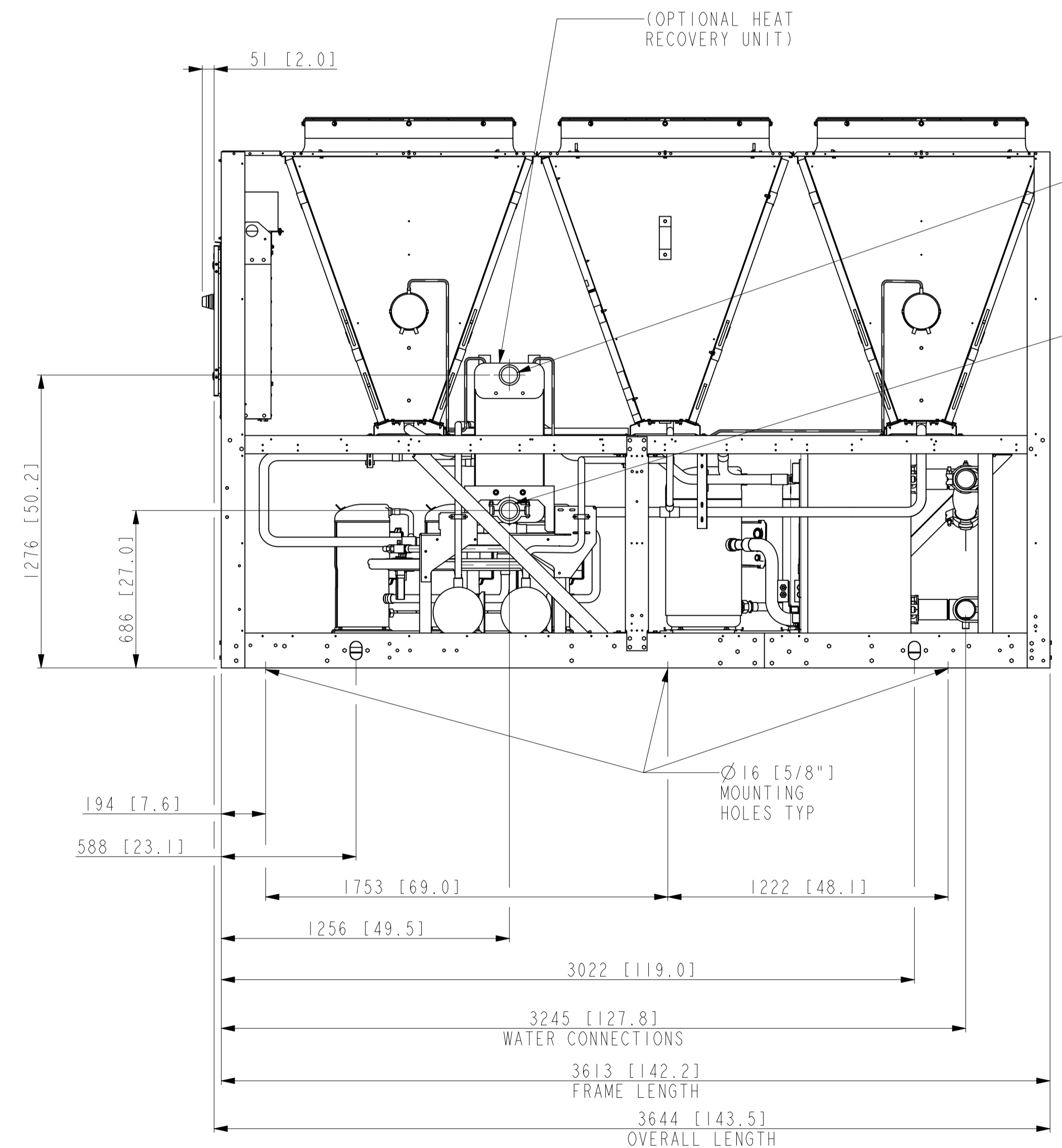
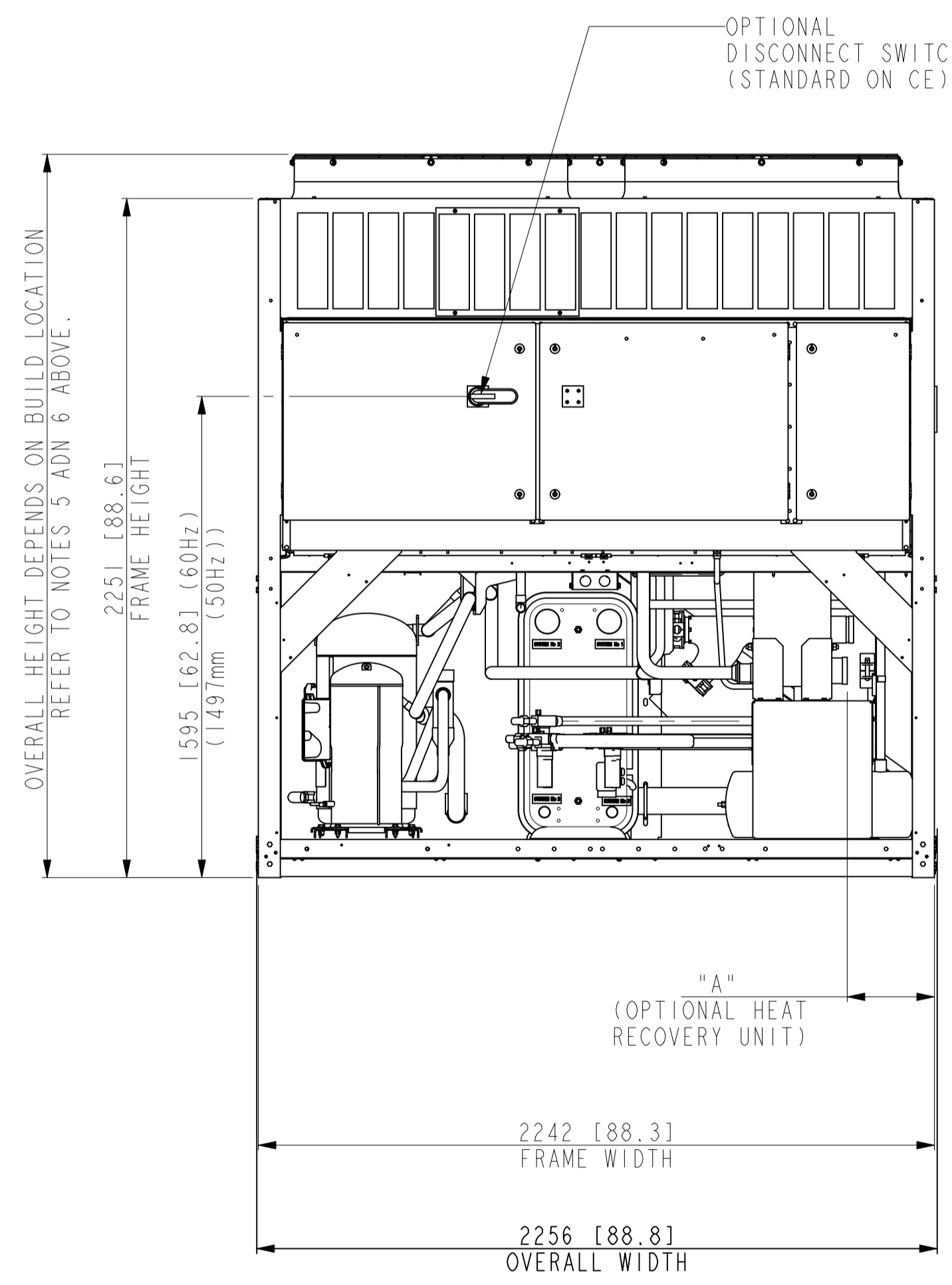
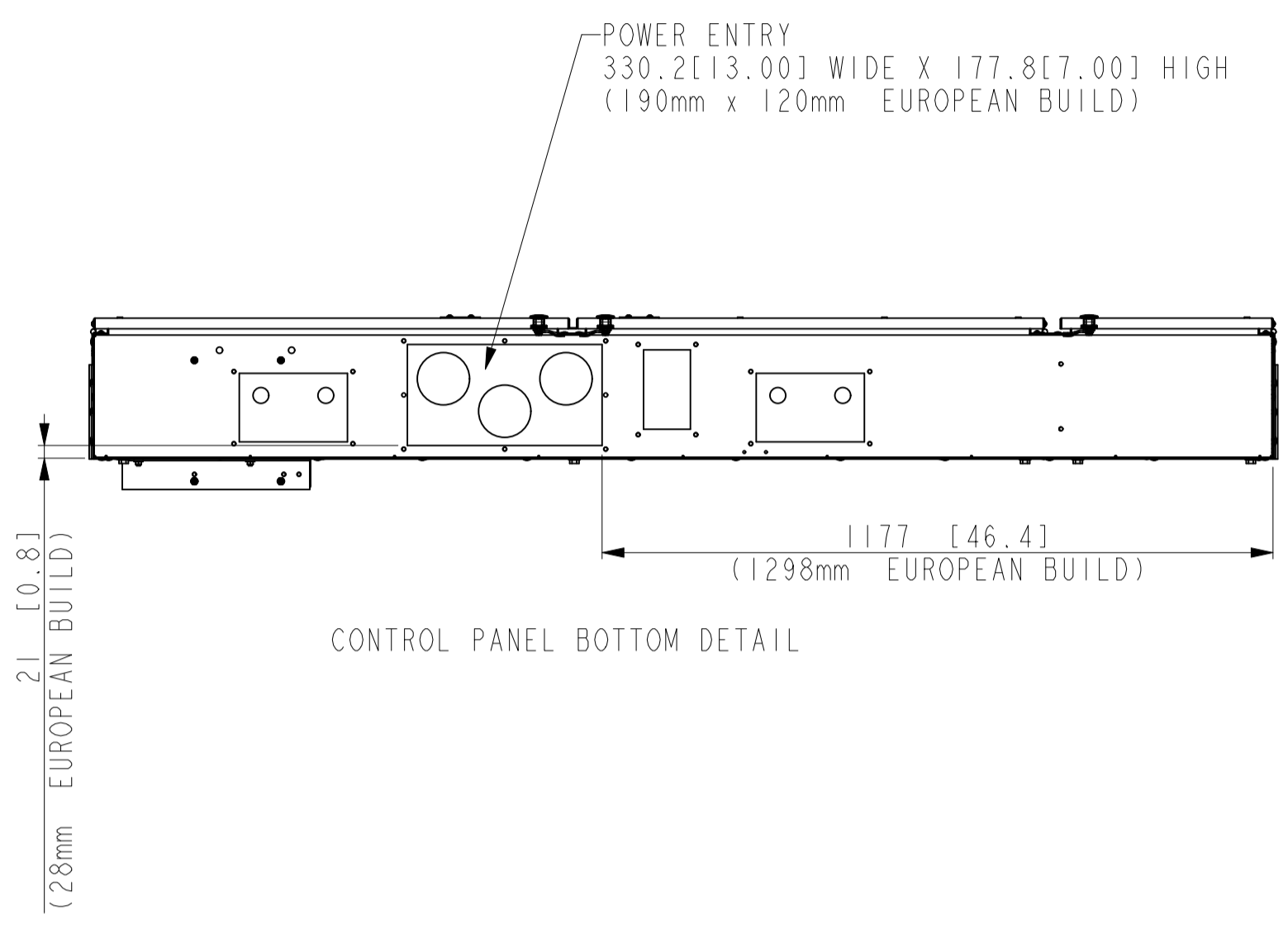
APPENDIX E - MECHANICAL AND ELECTRICAL EQUIPMENT CUT SHEETS

- NOTES:
- PLACEMENT ON A LEVEL SURFACE FREE OF OBSTRUCTIONS (INCLUDING SNOW, FOR WINTER OPERATION) OR AIR RE-CIRCULATION ENSURES RATED PERFORMANCE, RELIABLE OPERATION AND EASE OF MAINTENANCE. SITE RESTRICTIONS MAY COMPROMISE MINIMUM CLEARANCES INDICATED BELOW, RESULTING IN UNPREDICTABLE AIR FLOW PATTERNS AND POSSIBLE DIMINISHED PERFORMANCE. JOHNSON CONTROLS UNIT CONTROLS WILL OPTIMIZE OPERATION WITHOUT NUISANCE HIGH PRESSURE SAFETY CUTOUT. HOWEVER, THE SYSTEM DESIGNER MUST CONSIDER POTENTIAL PERFORMANCE DEGRADATION.
 - RECOMMENDED MINIMUM CLEARANCES:
 - SIDE TO WALL - 1828.8mm[6']
 - REAR TO WALL - 1828.8mm[6']
 - CONTROL PANEL TO WALL - 1219.2mm[4']
 - TOP - NO OBSTRUCTIONS ALLOWED.
 - DISTANCE BETWEEN ADJACENT UNITS - 3048mm[10']
 - NO MORE THAN ONE ADJACENT WALL MAY BE HIGHER THAN UNIT.
 - WEIGHT AND CENTER OF GRAVITY - REFER TO AVM REPORT.
 - INSTALLING CONTRACTOR MUST INCLUDE VENT AND DRAIN ACCOMMODATIONS IN CHILLED WATER PIPING NEAR THE EVAPORATOR.
 - NUMBER OF COMPRESSORS MAY VARY FROM DRAWING.
 - REFER TO YORKworks REPORTS.
 - OVERALL HEIGHT OF UNIT IS 2394.6mm-[94.27"] ON MONTERREY, MEXICO AND SAN ANTONIO, TEXAS BUILDS AND EUROPEAN BUILDS (VSD FANS ONLY).
 - ON EUROPEAN BUILDS, OVERALL HEIGHT OF UNIT IS 2507.0mm-[98.70"] WITH STANDARD FANS AND IS 2541.0mm [100.04"] WITH LOW AMBIENT KIT AND WITH C FAN.
 - FOR MONTERREY, MEXICO, SAN ANTONIO, TEXAS AND EUROPEAN BUILDS ONLY.

Chiller CH-1



MODEL NUMBER	DIMENSION "A"
YLAA 0100 SE	288 [11.3]
YLAA 0300 HE	288 [11.3]
YLAA 0301 HE	288 [11.3]
YLAA 0301 HJ	288 [11.3]
YLAA 0360 SE	288 [11.3]
YLAA 0400 SE	221 [8.7]



THIS DRAWING PERTAINS TO THE FOLLOWING MODELS:		
YLAA 0100 SE	YLAA 0301 HE	
YLAA 0300 HE	YLAA 0301 HJ	
YLAA 0360 SE		
YLAA 0400 SE		

REV.	DATE	EC. NO.	DR.	CHK.	ENG.
J	09-JUN-2020	ECN20-0441	GT	AS	XW

NOTE 6 AMENDED DIM 254MM WAS 2535MM. FAN TERMINAL BOX 6MM HIGHER.

CONTINUED

"ALL PROPRIETARY RIGHTS IN THE SUBJECT MATTER HEREOF ARE RESERVED AND NO PERMISSION IS GRANTED TO REPRODUCE THIS PRINT IN WHOLE OR IN ANY PART, OR DISCLOSE ANY OF THE INFORMATION UPON IT TO OTHERS WITHOUT WRITTEN RELEASE BY JOHNSON CONTROLS INCORPORATED"

Johnson Controls - BUILDING EFFICIENCY
 507 EAST MICHIGAN STREET, MILWAUKEE, WI, 53202 USA

DO NOT SCALE

YLAA 5-FAN 50 & 60HZ UNIT WITH OPTIONAL HEAT RECOVERY

MATERIAL: N/A
 ENG. STD.: N/A
 PART NO.:
 CUT SIZE: N/A

SCALE: 0.060 MASS (kg): 0.000 ORIG. NO.:

REVISION J
 VERSTON I
 Released

HIGH EFFICIENCY COMMERCIAL BOILERS

Boilers

CREST[®] CONDENSING BOILER

SMART  TOUCH[™]

CON-X-US[®] REMOTE CONNECT

MODBUS AND BACnet MSTP PROTOCOL

CASCADING SEQUENCER WITH
CASCADE REDUNDANCY

6 INPUTS FROM 750,000 TO 2.0 MILLION BTU/HR

UP TO 25:1 TURNDOWN RATIO

DIRECT-VENTING UP TO 100 FEET USING PVC, CPVC,
POLYPROPYLENE OR STAINLESS STEEL

FLEXIBLE FLOW RATES UP TO 350 GPM

FRONT END LOADING CAPABILITY



96.2% 
THERMAL EFFICIENCY



CREST[®]

CONDENSING BOILER

RIDE THE LOCHINVAR WAVE™ TO 96.2% EFFICIENCY

With the exclusive Wave fire-tube design, advancements in Lochinvar combustion technology and the SMART TOUCH™ control with CON-X-US®, CREST changed how the industry thinks about fire-tube boilers. Now, six new CREST boilers, with 750,000, 1.0 million, 1.25 million, 1.5 million, 1.75 million and 2.0 million Btu/hr inputs, deliver **96.2% thermal efficiency**.

THE CREST COMBUSTION SYSTEM

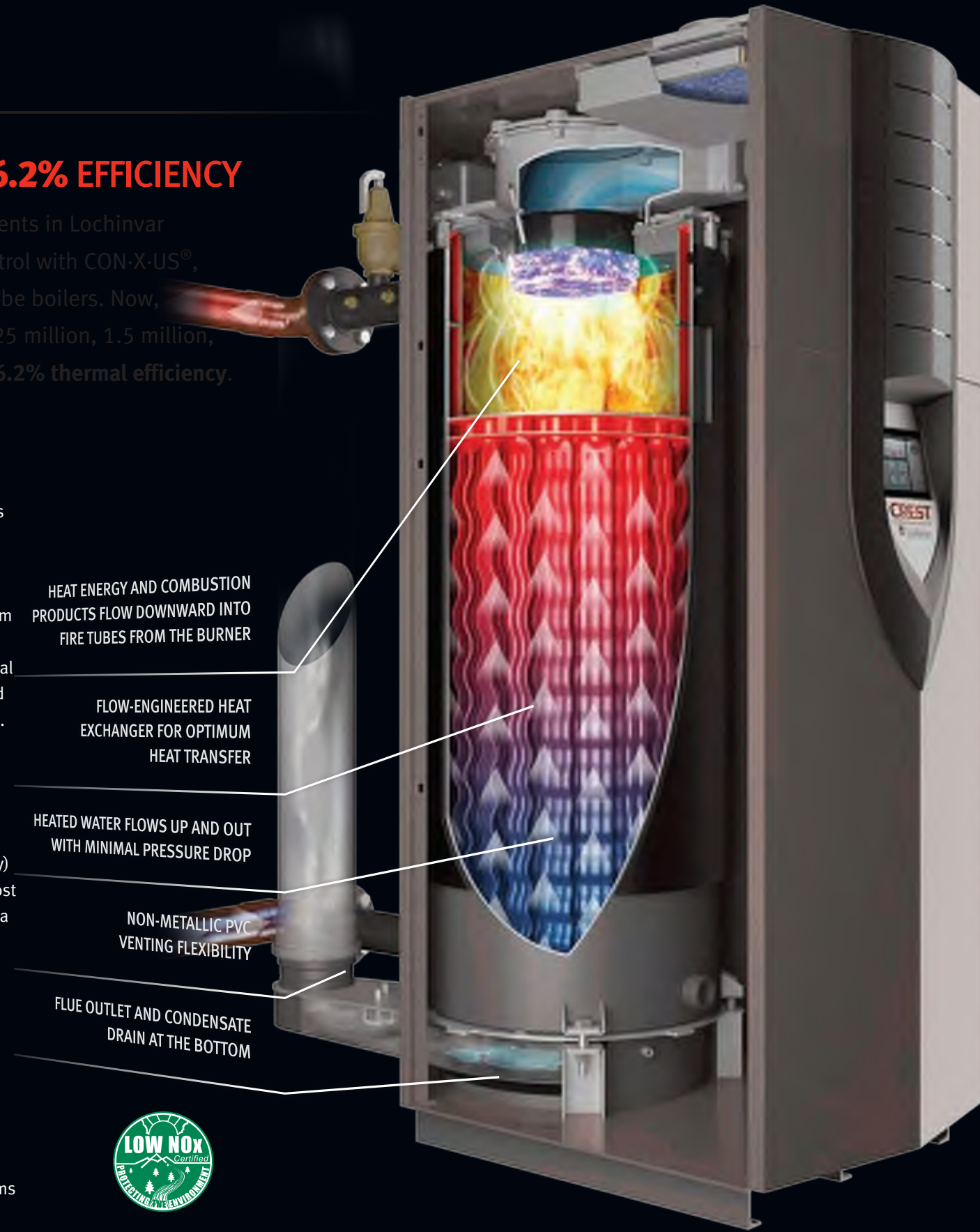
CREST boilers are equipped with a top-mounted micro-metal fiber burner, engineered specifically for fire-tube technology. The system is designed to ensure smooth, quiet modulating combustion with up to 25:1 turndown. A FBN-2001 fires at its maximum 2,000,000 Btu/hr rate when the heat load is highest, and then gradually turns down to as low as 4% (80,000 Btu/hr) as load decreases. A modulating system runs smoothly and efficiently, without frequent on/off cycling. When the system is zoned, CREST's high turndown works to match the actual system demand. In return, CREST reduces the customer's fuel bill and provides better comfort by load-matching the heat loss of the system.

REDUCE INSTALLATION COST WITH VARIABLE FLOW TECHNOLOGY

CREST can operate over a wide range of flow rates with very low pressure drop. This permits installation of a *full flow* (variable primary) system. Installation is streamlined, without the time and materials cost of primary/secondary piping, and pumps needed to maintain flow in a water-tube boiler. Variable flow also makes CREST more flexible at handling frequent fluctuations in the system flow rate.

HIGH EFFICIENCY WITH MINIMUM SUPPLY PRESSURE

CREST operates reliably with supply gas pressure as low as 4 inches water column. Negative Regulation technology draws gas into a pre-mix combustion system, instead of relying on utility pressure through the gas valve. Operation is steady in low gas pressure systems or when peak gas supply demand occurs. Plus, Neg/Reg fan control fine-tunes the fuel/air ratio entering the burner, providing an even, cleaner-burning flame, achieving high combustion efficiency.



SMART TOUCH

INTRODUCING BOILER PLANT CONTROL, FROM ANYWHERE.

Crest features the next generation of Lochinvar's all-in-one SMART TOUCH™ operating control with the integration of the CON-X-US® advanced technology. SMART TOUCH with CON-X-US provides outstanding functionality, and can be integrated directly into a Building Automation Systems via Modbus and BACnet MSTP as standard equipment.

And now, the CON-X-US mobile communication platform allows the SMART TOUCH to go where no other boiler has gone before.

CON-X-US provides the ability to monitor and manage multiple Crest boiler plants without ever stepping into the mechanical rooms. CON-X-US will send alerts via text or email notifying of changes in system status, and anytime, from anywhere, a user can check system status and re-program any boiler function. Once downloaded, the free CON-X-US mobile application allows for remote access to all SMART TOUCH functions using any internet-capable device.

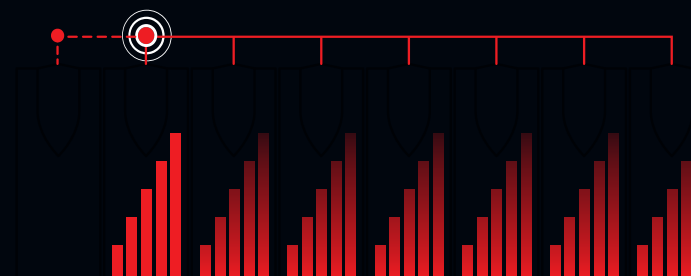


PEACE OF MIND, WHEN IT MATTERS MOST

Cascade Redundancy provides peace of mind because it helps ensure that a CREST boiler system will always deliver reliable performance with no downtime. If the lead boiler is turned off for maintenance, Cascade Redundancy automatically shifts the lead role to the second sequenced boiler. Up to eight CREST boilers can be sequenced using a 2-wire daisy-chain connection. Cascade sequencing can be programmed for Lead-Lag or Efficiency Optimized operation.

With Lead-Lag operation, one lead boiler modulates to capacity on demand. As load increases, the system then cascades to additional lag boilers in sequence. The first-on role shifts daily, distributing equal runtimes to each unit.

In an Efficiency Optimized system (see illustration below), all boilers fire and modulate simultaneously at the same Btu/hr input rates, maximizing thermal efficiency.



FLEXIBLE VENTING OPTIONS

CREST offers 6 venting options, and permits direct-vent air intake and exhaust runs up to 100 equivalent feet, using PVC, CPVC, polypropylene or stainless steel pipe. Plus, multiple units can be common-vented to reduce time and materials cost.

- Room Air Vertical
- Room Air Sidewall
- Direct-Vent
- Common-Vent*
- Direct-Vent Vertical
- Vertical w/Sidewall Air

*Contact Lochinvar for information on common venting of CREST boilers.

CREST[®]

CONDENSING BOILER

RIDE THE LOCHINVAR WAVE™ TO 96.2% EFFICIENCY

With the exclusive Wave fire-tube design, advancements in Lochinvar combustion technology and the SMART TOUCH™ control with CON-X-US®, CREST changed how the industry thinks about fire-tube boilers. Now, six new CREST boilers, with 750,000, 1.0 million, 1.25 million, 1.5 million, 1.75 million and 2.0 million Btu/hr inputs, deliver **96.2% thermal efficiency**.

THE CREST COMBUSTION SYSTEM

CREST boilers are equipped with a top-mounted micro-metal fiber burner, engineered specifically for fire-tube technology. The system is designed to ensure smooth, quiet modulating combustion with up to 25:1 turndown. A FBN-2001 fires at its maximum 2,000,000 Btu/hr rate when the heat load is highest, and then gradually turns down to as low as 4% (80,000 Btu/hr) as load decreases. A modulating system runs smoothly and efficiently, without frequent on/off cycling. When the system is zoned, CREST's high turndown works to match the actual system demand. In return, CREST reduces the customer's fuel bill and provides better comfort by load-matching the heat loss of the system.

REDUCE INSTALLATION COST WITH VARIABLE FLOW TECHNOLOGY

CREST can operate over a wide range of flow rates with very low pressure drop. This permits installation of a *full flow* (variable primary) system. Installation is streamlined, without the time and materials cost of primary/secondary piping, and pumps needed to maintain flow in a water-tube boiler. Variable flow also makes CREST more flexible at handling frequent fluctuations in the system flow rate.

HIGH EFFICIENCY WITH MINIMUM SUPPLY PRESSURE

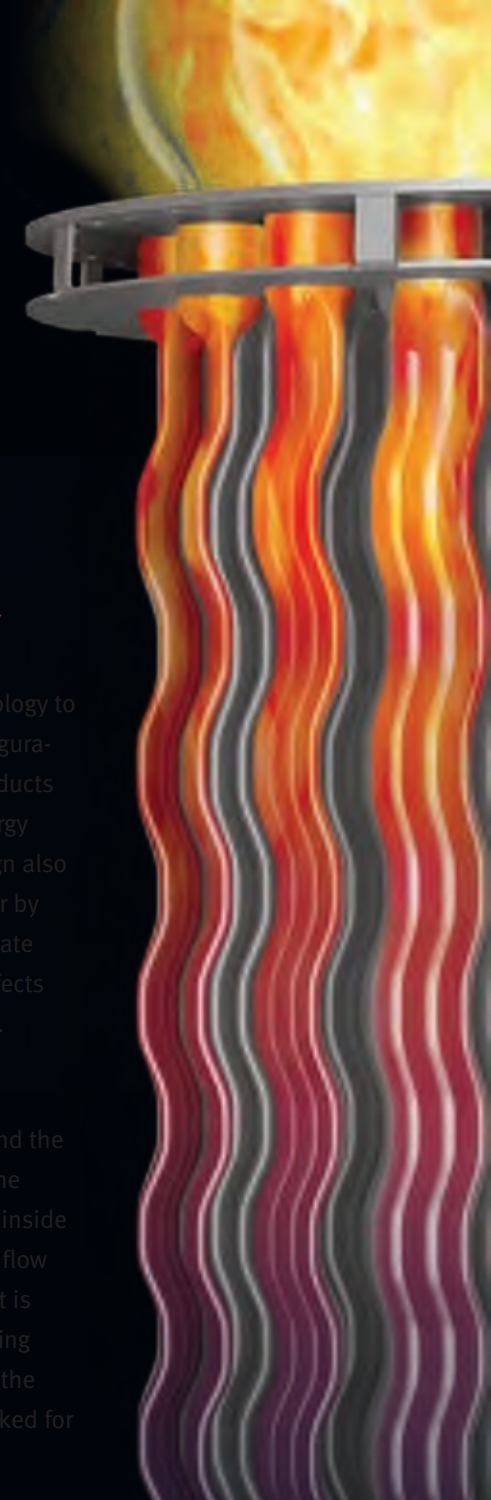
CREST operates reliably with supply gas pressure as low as 4 inches water column. Negative Regulation technology draws gas into a pre-mix combustion system, instead of relying on utility pressure through the gas valve. Operation is steady in low gas pressure systems or when peak gas supply demand occurs. Plus, Neg/Reg fan control fine-tunes the fuel/air ratio entering the burner, providing an even, cleaner-burning flame, achieving high combustion efficiency.



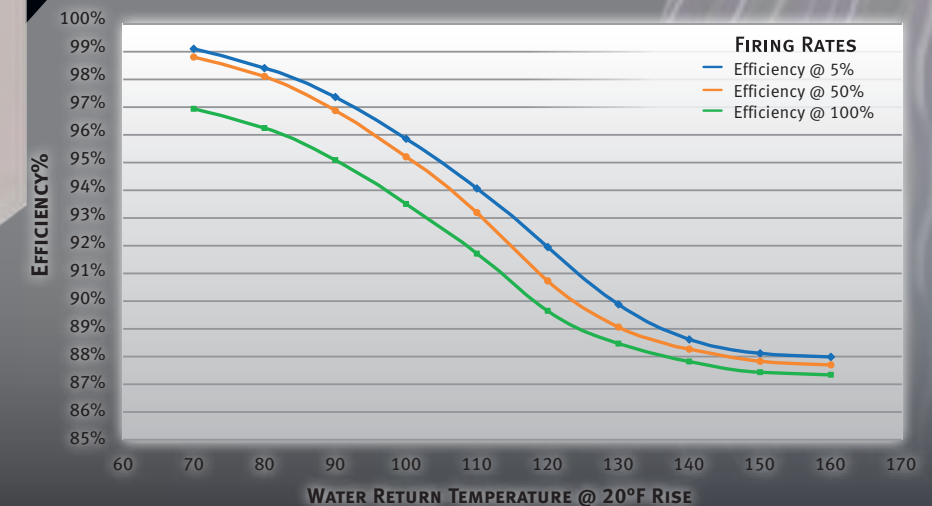
SUPERIOR FIRE-TUBE HEAT EXCHANGER DESIGN BOOSTS THERMAL EFFICIENCY

The CREST boiler takes fire-tube technology to a new level. The patented Wave™ configuration creates turbulence as flue gas products flow down the tube, scrubbing the energy from the flue products. The Wave design also enhances the life of the heat exchanger by allowing the tubes to flex, so they operate stress free with none of the adverse effects suffered by traditional fire-tube boilers.

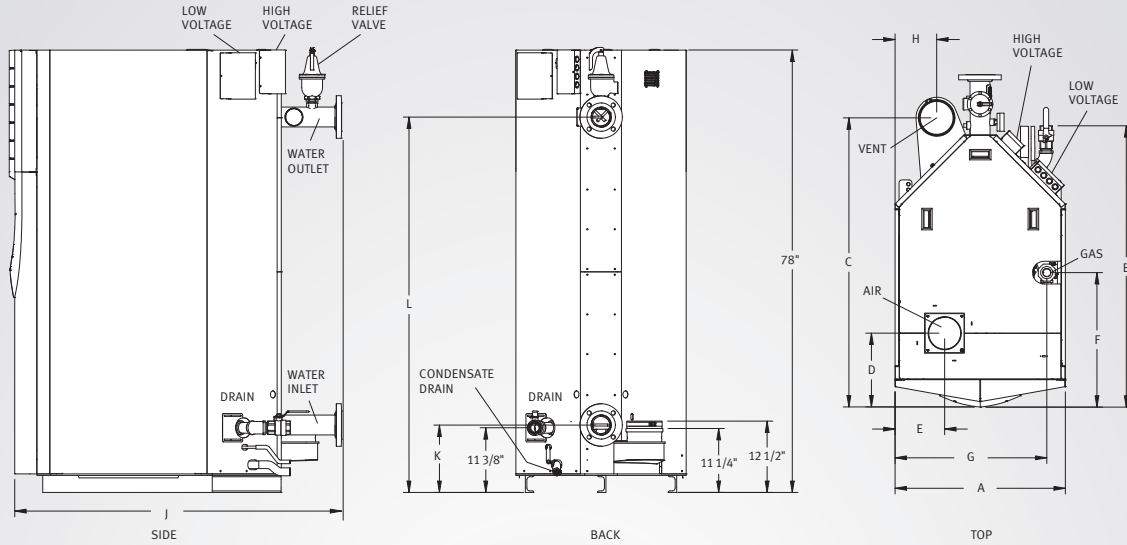
Each fire tube is welded into the heat exchanger and surrounded by water, and the heat transfer process is enhanced by the water's counterflow. As water flows up inside the vessel, super-heated flue products flow down the fire tube. With one pass, heat is effectively captured, reaching condensing temperatures. At the top of the vessel, the combustion chamber is also water-backed for additional heat transfer.



CREST BOILER EFFICIENCY



CREST® BOILER DIMENSIONS AND SPECIFICATIONS



Model Number	Input MBH		AHRI Thermal %	Output MBH	Net AHRI Rating MBH	Turndown	Dimensions (A-L)															Water				
	Min	Max					A	B	C	D	E	F	G	H	J	K	L	Gas Conn.	Inlet/Outlet	Air Intake	Vent Size	Oper. Weight	Ship. Weight			
FBN0751	50	750	96.2%	722	627	15:1	30"	49-1/2"	51"	13"	8-3/4"	23-3/4"	26-3/4"	7-3/8"	57-5/8"	11-7/8"	66-1/8"	1-1/4"	3"	6"	6"	1,768	1,560			
FBN1001	50	1,000	96.2%	962	837	20:1	30"	49-1/2"	51"	13"	8-3/4"	23-1/8"	26-3/4"	6-1/2"	57-5/8"	11-7/8"	66-1/8"	1-1/4"	3"	6"	6"	1,838	1,596			
FBN1251	63	1,250	96.2%	1,203	1,046	20:1	30"	49-1/2"	51-3/8"	13"	8-3/4"	21-5/8"	26-3/4"	6-1/2"	57-3/4"	11-7/8"	66-1/8"	1-1/4"	3"	6"	8"	1,975	1,648			
FBN1501	60	1,500	96.2%	1,443	1,255	25:1	30"	59-1/4"	62-3/8"	15-7/8"	9"	27-7/8"	26-7/8"	5-1/8"	68"	12-3/8"	65-3/8"	1-1/2"	4"	8"	8"	2,307	1,961			
FBN1751	70	1,750	96.2%	1,684	1,464	25:1	30"	58-3/4"	61-1/2"	15-7/8"	9"	27-1/8"	27"	5-1/8"	68"	12-3/8"	65-3/8"	1-1/2"	4"	8"	8"	2,458	2,017			
FBN2001	80	1,999	96.2%	1,924	1,673	25:1	30"	58-3/4"	61-1/2"	15-7/8"	9"	26-3/4"	27"	5-1/8"	68"	12-3/8"	65-3/8"	1-1/2"	4"	8"	8"	2,570	2,087			

NOTES: Indoor installation only. Change "N" to "L" for LP gas models and to "D" for dual fuel models. (Consult factory for availability of Dual Fuel models)
 *Information subject to change without notice

SMART TOUCH™ FEATURES

- CON-X-US Remote Connect**
- SMART TOUCH Touchscreen Operating Control**
- Full-Color 8" Touchscreen LCD Display**
- Built-in Cascading Sequencer for up to 8 Boilers**
 - Built-in Redundancy
 - Cascade Multiple Sized Boilers
 - Lead/Lag Cascade
 - Efficiency Optimized Cascade
- Front-End Loading Capability with Copper-Fin II® and Power-Fin® Boilers**
- Building Management System Integration with 0-10 VDC Input**
- BACnet MSTP Communications**
- Modbus Communication**
- Outdoor Reset Control with Outdoor Air Sensor**
- Password Security**
- Domestic Hot Water Prioritization**
 - DHW tank piped with priority in the boiler loop
 - DHW tank piped as a zone in the system with the pumps controlled by the Smart System
 - DHW Modulation Limiting
 - Separately Adjustable SH/DHW Switching Times
- Low Water Flow Safety Control & Indication**
- Inlet & Outlet Temperature Readout**
- Freeze Protection**
- Service Reminder**
- Time Clock**
- Data Logging**
 - Hours Running, Space Heating
 - Hours Running, Domestic Hot Water
 - Hours Running, Modulation Rate
 - Ignition Attempts
 - Last 10 Lockouts
- Programmable System Efficiency Optimizers**
 - Night Setback
 - Anti-Cycling
 - Outdoor Air Reset Curve
 - Ramp Delay
 - Boost Temperature & Time
 - Modulation Factor Control

- Three Pump Control**
 - System Pump
 - Boiler Pump
 - Domestic Hot Water Pump
- High-Voltage Terminal Strip**
 - 120 VAC / 60 Hertz / 1 Phase Power Supply
 - System Pump, Boiler Pump and DHW Pump Power
- Low-Voltage Terminal Strip**
 - 24 VAC Auxiliary Device Relay
 - Auxiliary Proving Switch Contacts
 - Alarm on Any Failure Contacts
 - Runtime Contacts
 - DHW Thermostat Contacts
 - Unit Enable/Disable Contacts
 - System Sensor Contacts
 - DHW Tank Sensor Contacts
 - Outdoor Air Sensor Contacts
 - Cascade Contacts
 - 0-10 VDC BMS External Control Contact
 - 0-10 VDC Variable Speed Boiler Pump Control Contact

OPTIONAL EQUIPMENT

- Alarm Bell
- BMS Gateway - BACnet IP or LonWorks
- Wireless Outdoor Temperature Sensor
- Condensate Neutralization Kit
- SMART TOUCH PC Software
- Common Vent Kits
- Dual Fuel Gas Train
- Motorized Isolation Valve
- Variable Speed Boiler Pump
- Electrical Options (Shipped Loose):
 - 208V/3Ø/60Hz
 - 480V/3Ø/60Hz
 - 600V/3Ø/60Hz

CODES & REGISTRATIONS

- ANSI Z21.13/CSA Certified
- ASME Certified, "H" Stamp / National Board
- California Code Compliant
- CSD1 / Factory Mutual / GE Gap Compliant
- Canadian Registration Number (CRN)
- South Coast Air Quality Management District Qualified
- AHRI Certified

STANDARD FEATURES

- 96.2% Thermal Efficiency (AHRI)
- Up to 99% Thermal Efficiency in Low-Temp. Applications
- Modulating Burner with up to 25:1 Turndown
- Direct-Spark Ignition
- Low NOx Operation
- Sealed Combustion
- Air Inlet Filter w/Replacement Reminder
- Low Gas Pressure Operation
- Vertical and Horizontal Direct Venting
 - Direct Vent up to 100 Feet
 - PVC, CPVC, Polypropylene or AL29-4C
- ASME "H" Stamped Heat Exchanger
- 316L Stainless Steel Fire Tubes
- 160 psi Working Pressure
- On/Off Switch
- Adjustable High Limit with Manual Reset
- Low Water Cutoff with Manual Reset & Test
- High & Low Gas Pressure Switches w/Manual Reset
- Low Air Pressure Switches
- Condensate Trap w/Blocked Drain Switch
- Drain Valve
- System Sensor
- Outdoor Air Sensor
- Inlet & Outlet Temperature Sensors
- High-Voltage Terminal Strip
- Low-Voltage Terminal Strip
- Downstream Gas Test Cocks
- 50 psi ASME Relief Valve
- Temperature & Pressure Gauge
- Zero Clearances to Combustible Materials
- 10-Year Limited Warranty (See Warranty for Details)
- 1-Year Warranty on Parts (See Warranty for Details)



Lochinvar, LLC
 300 Maddox Simpson Parkway
 Lebanon, Tennessee 37090
 P: 615.889.8900 | F: 615.547.1000
www.lochinvar.com



Job/Project:	Representative: Blackmore and Glunt, Inc.		
ESP-Systemwize: WIZE-D936F1F0	Created On: 04/07/2022	Phone: (314) 878-4313	
Location/Tag:	Email: sblackmore@b-g.com		
Engineer:	Submitted By:	Date:	
Contractor:	Approved By:	Date:	

Split-Coupled In-Line Centrifugal Pump

Series: e-80SC

Model: 1.5x1.5x7C

Features & Design

- Best in Class Hydraulic Performance
- Shaft Jacking Coupling
- Optional Flange Mounting Supports



*The Bell & Gossett Series e-80SC is available in stainless steel fitted construction, with flows to 8500 GPM, heads to 202 ft.

Pump Selection Summary

Duty Point Flow	50 US gpm
Duty Point Head	75 ft
Control Head	22.5 ft
Duty Point Pump Efficiency	53.6 %
Part Load Efficiency Value (PLEV)	49.3 %
Impeller Diameter	5.25 in
Motor Power	5 hp
Duty Point Power	1.69 bhp
Motor Speed	3600 rpm
RPM @ Duty Point	2911 rpm
NPSHr	8.56 ft
Minimum Shutoff Head	79.7 ft
Minimum Flow at RPM	13.7 US gpm
Flow @ BEP	68.5 US gpm
Fluid Temperature	68 °F
Fluid Type	Water
Weight (approx. - consult rep for exact)	0 lbs
Pump Floor Space Calculation	1.6 ft²

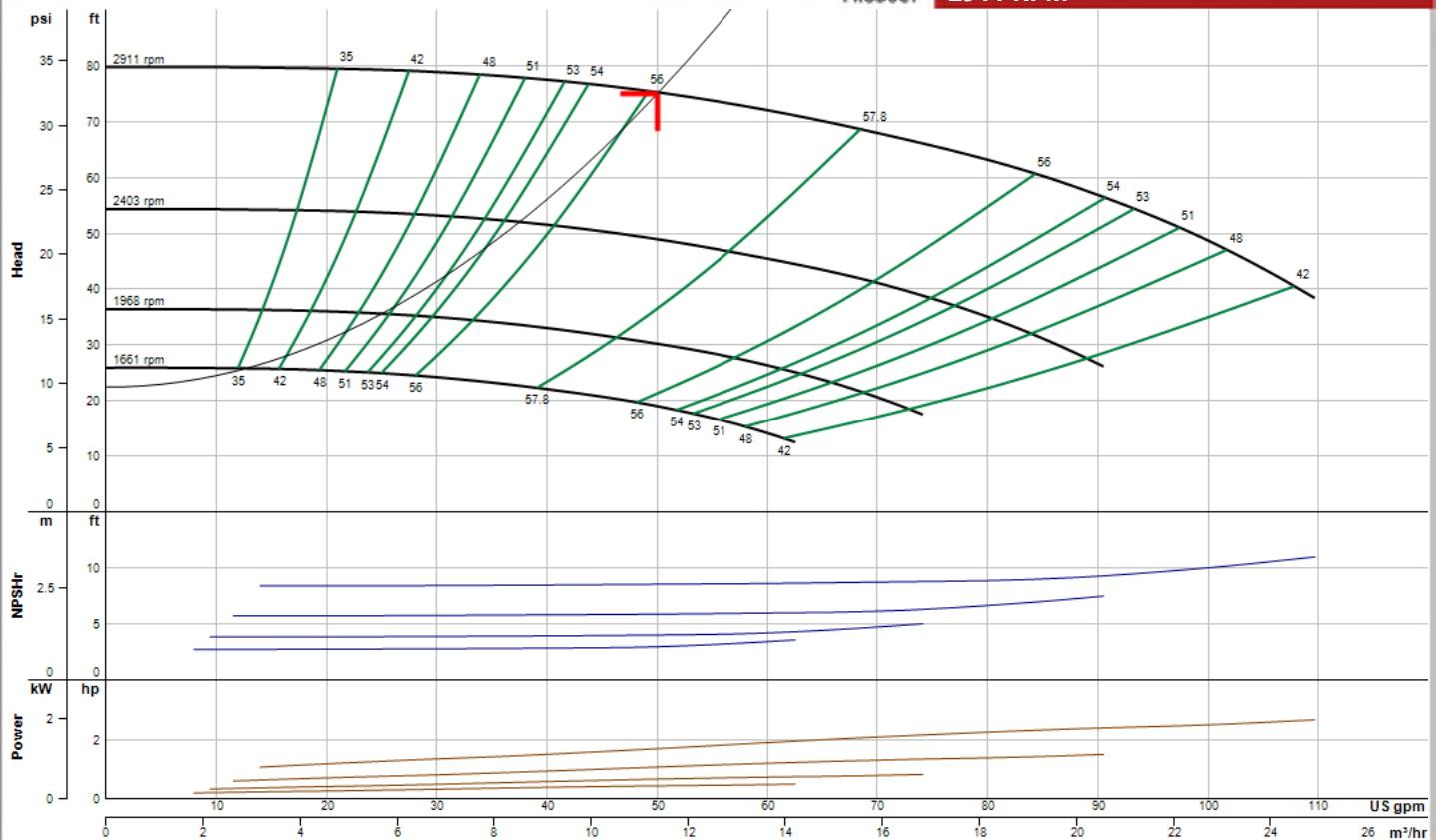
Performance Curve

Energy Efficiency Ratings:

Pump & Motor PEIc: 0.82 ERc: 18
Pump, Motor & Drive: PEIv: 0.42 ERv: 58

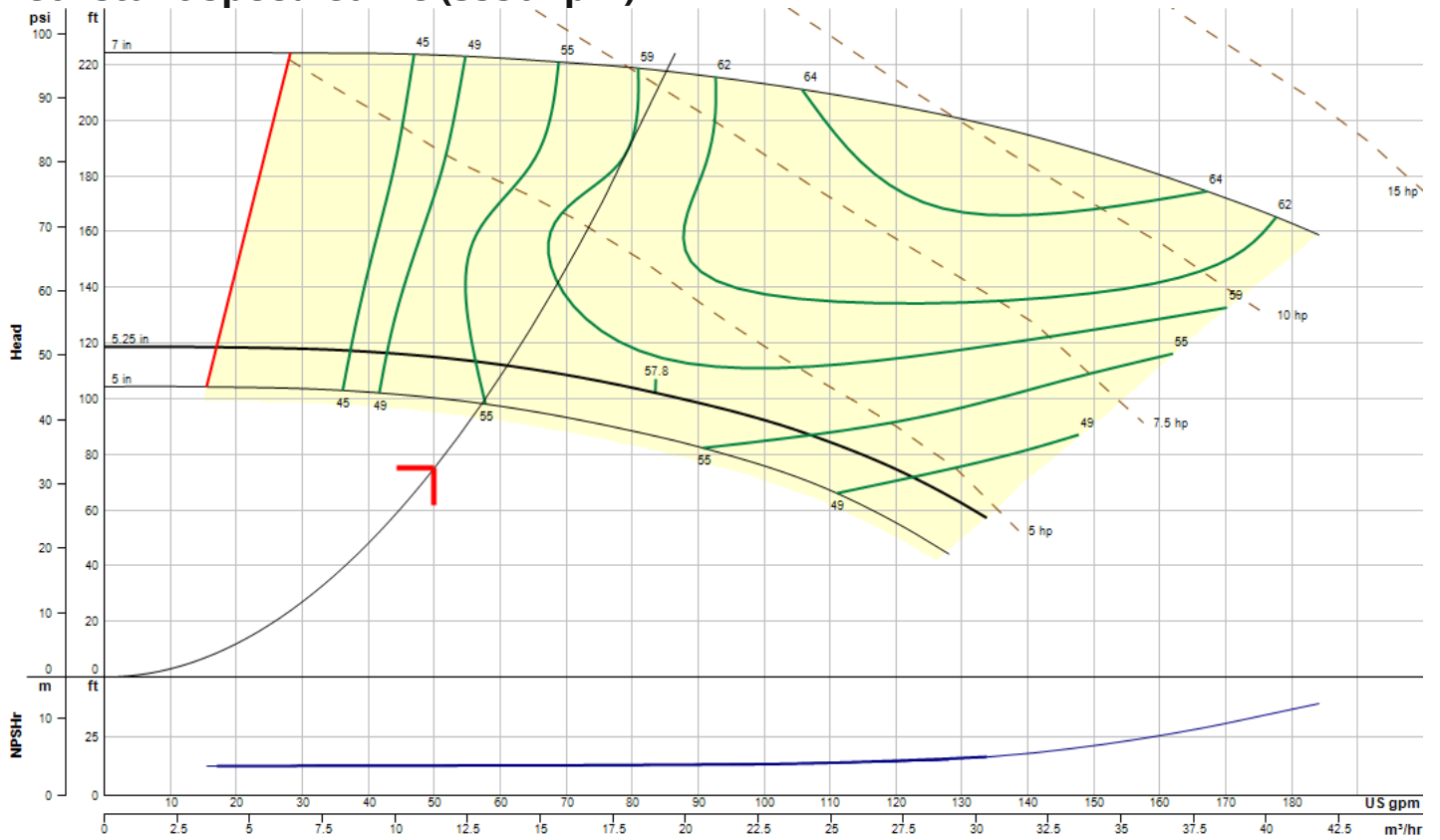


e-80SC
1.5x1.5x7C
2911 RPM



Performance curve meets 14.6 / ISO 9906 acceptance criteria

Constant Speed Curve (3550 rpm)

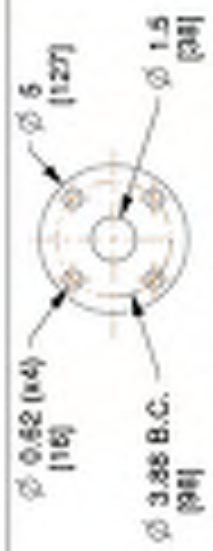
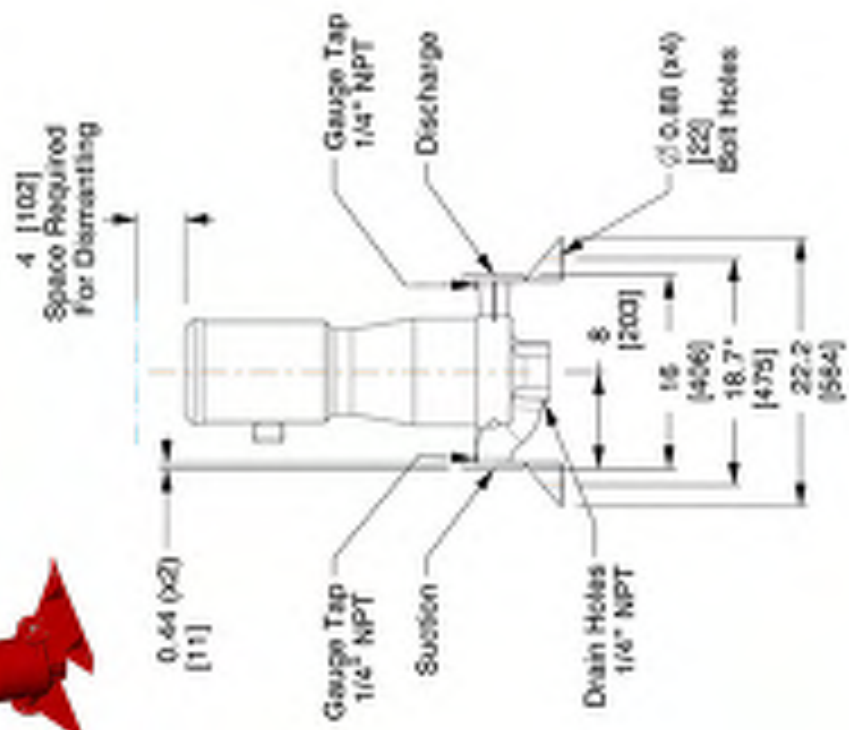


Operating Point

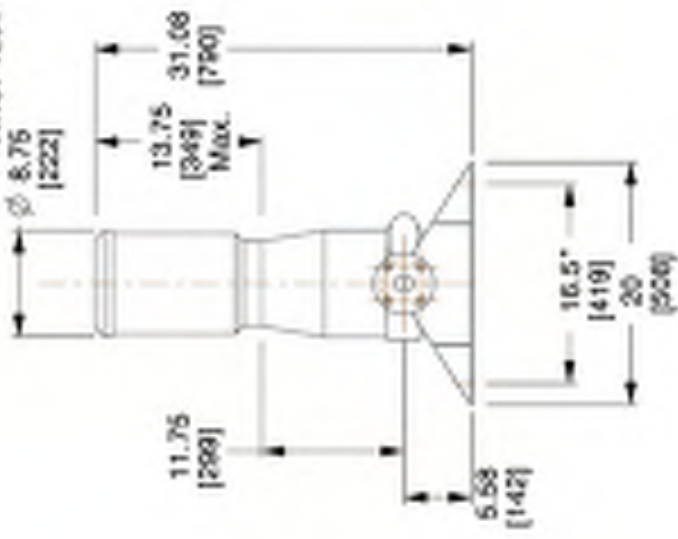
Flow: 50 US gpm **Head:** 74.9 ft **Speed:** 2911 **Efficiency:** 53.6% **Point BHP:** 1.69 **End Of Curve:** 45.6%

Maximum Duty Point (at rated motor speed)

Flow: 60.9 US gpm **Head:** 111 ft **Speed:** 3550 **Efficiency:** 55.5% **Point BHP:** 3.06 **NOL Flow:** 134 US gpm **Runout Flow:** 134 US gpm **NOL (BHP):** 4.82



1.5" SUCTION & DISCHARGE
FLANGE DETAILS
ANSI 125#



* Dist. Between Bolt Holes



8200 N. Austin Ave.
Morton Grove, IL 60053, USA

This drawing and the information depicted therein is the property of Xylem. Copies are issued in strict confidence and shall not be reprinted or copied, or used as the basis for the manufacture or sale of products without prior written permission of Xylem.

Dimensions are subject to change

Not to be used for construction unless certified

BG-E80SC-1.5x1.5x7C-182TC-1-FM

Series e-80SC In-Line Mounted Centrifugal Pump
Motor Frame-182TC | Flange-ANSI 125# | Flange mount

Dimensions : IM (mm) Scale : M.T.S. Submittal # : B-552

Materials of Construction

Description	Stainless Steel Fitted Pump
Shaft	416 Stainless Steel
Volute	Cast Iron ASTM A48 Class 30B
Impeller	ASTM A743 Grade CF8 (304SS)
Impeller Key	Stainless Steel
Impeller Lock Washer	Stainless Steel
Impeller Capscrew	Stainless Steel
Volute Gasket	Cellulose Fiber
Throttle Bushing	Carbon Graphite
Seal Assemblies	
• Standard Seal-Inside Flushed	
Bellows	EPR
Faces	Carbon-Ceramic
Metal Parts	Stainless Steel or Brass
Spring	Stainless Steel or Brass
• Optional Seal -Inside Flushed	
Bellows	EPR
Faces	Carbon-Tungsten Carbide
• Optional Seal-Outside Flushed	
O-Rings	EPR
Faces	Carbon-Ceramic
Metal Parts	Stainless Steel

Standard pump construction is 175 psi working pressure with 125 ANSI flange drilling. Optional 250 psi working pressure with 250 ANSI flange drilling is available.

Seal Selection Guide - Optional Outside Seal

A. Standard Seal - Inside with flush line.

EPR/Carbon-Ceramic; Temperature Range -20° to +250°F (-29° to +121°C).

*Maximum pressure is 175 psi (12 bar).

B. Optional Seal - Inside with flush line.

EPR/Carbon-Tungsten Carbide; Temperature Range -20° to +250°F (-29° to +121°C). * For use on open or closed water systems. Maximum pressure is 250 psi (17 bar).

C. Optional Seal - Outside with flush line.

EPR/Carbon-Ceramic Type "8B2"; Temperature Range -20° to +250°F (-29° to +121°C). * For use on closed or open systems where the pressure requirements exceed the limitations of the standard seal or an alternate seal design is desired. Maximum pressure is 250 psi (17 bar).

*For operating conditions above 250°F (121°C and no greater than 300°F (149°C) a cooled flush is required. On closed systems cooling is accomplished by inserting the optional heat exchanger kit in the flush line to cool the seal flushing fluid.

Flush line filters and sediment separators are available on request.

Configuration Options

Contact your local rep for assistance

Mounting

- In-Line Piping
- Flange Supports

Pump Variable Speed Control

- Integrated Technologic® Sensorless Control (ITSC)
- Integrated Technologic® (IT)
 - External input by others
 - Pressure Sensor(s)
 - Differential Pressure Sensor(s)
 - Flow Sensor(s)
- By Others

Type of Seal

- Standard Inside Unitized (EPR/Carbon-Ceramic)
- Inside Unitized (EPR/Carbon-Tungsten Carbide)-250#
- Inside Unitized (FKM/Carbon-Ceramic)
- Inside Unitized (EPR/SilCar/SilCar/SS)
- Other seal, see description
- Outside (EPR/Carbon-Ceramic)-250#
- Outside (FKM/Carbon-Ceramic)-250#



Shown with optional Technologic IPC variable frequency drive and Technologic PPS controller

Job/Project:	Representative: Blackmore and Glunt, Inc.		
ESP-Systemwize: WIZE-EC8A9D70	Created On: 04/11/2022	Phone: (314) 878-4313	
Location/Tag:	Email: sblackmore@b-g.com		
Engineer:	Submitted By:	Date:	
Contractor:	Approved By:	Date:	

Split-Coupled In-Line Centrifugal Pump

Series: e-80SC

Model: 3x3x7C

Features & Design

- Best in Class Hydraulic Performance
- Shaft Jacking Coupling
- Optional Flange Mounting Supports



*The Bell & Gossett Series e-80SC is available in stainless steel fitted construction, with flows to 8500 GPM, heads to 202 ft.

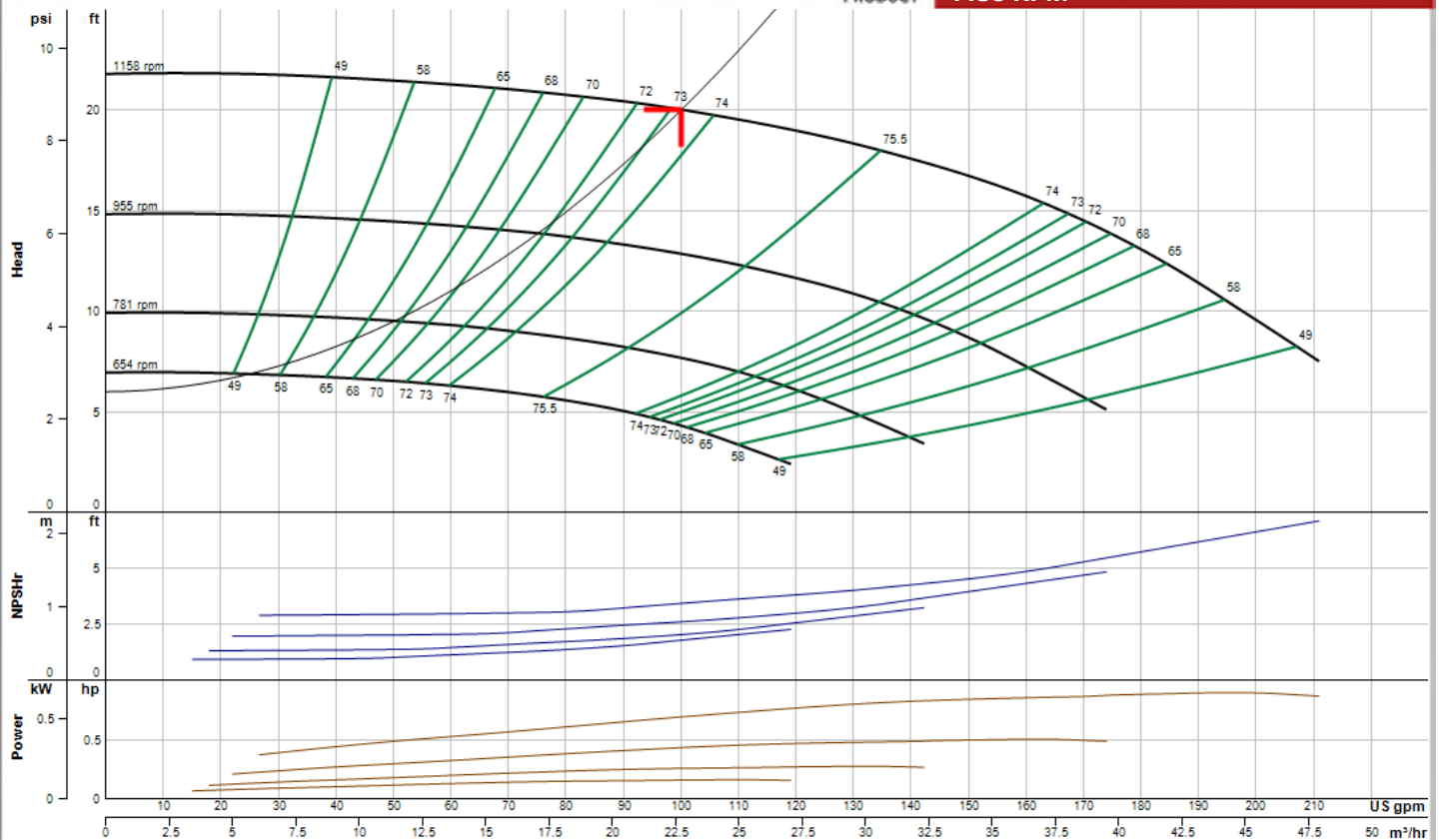
Pump Selection Summary

Duty Point Flow	100 US gpm
Duty Point Head	20 ft
Control Head	6 ft
Duty Point Pump Efficiency	73.2 %
Part Load Efficiency Value (PLEV)	66.6 %
Impeller Diameter	7 in
Motor Power	1 hp
Duty Point Power	0.69 bhp
Motor Speed	1200 rpm
RPM @ Duty Point	1158 rpm
NPSHr	3.43 ft
Minimum Shutoff Head	21.8 ft
Minimum Flow at RPM	26.9 US gpm
Flow @ BEP	135 US gpm
Fluid Temperature	68 °F
Fluid Type	Water
Weight (approx. - consult rep for exact)	0 lbs
Pump Floor Space Calculation	2.21 ft ²

Performance Curve

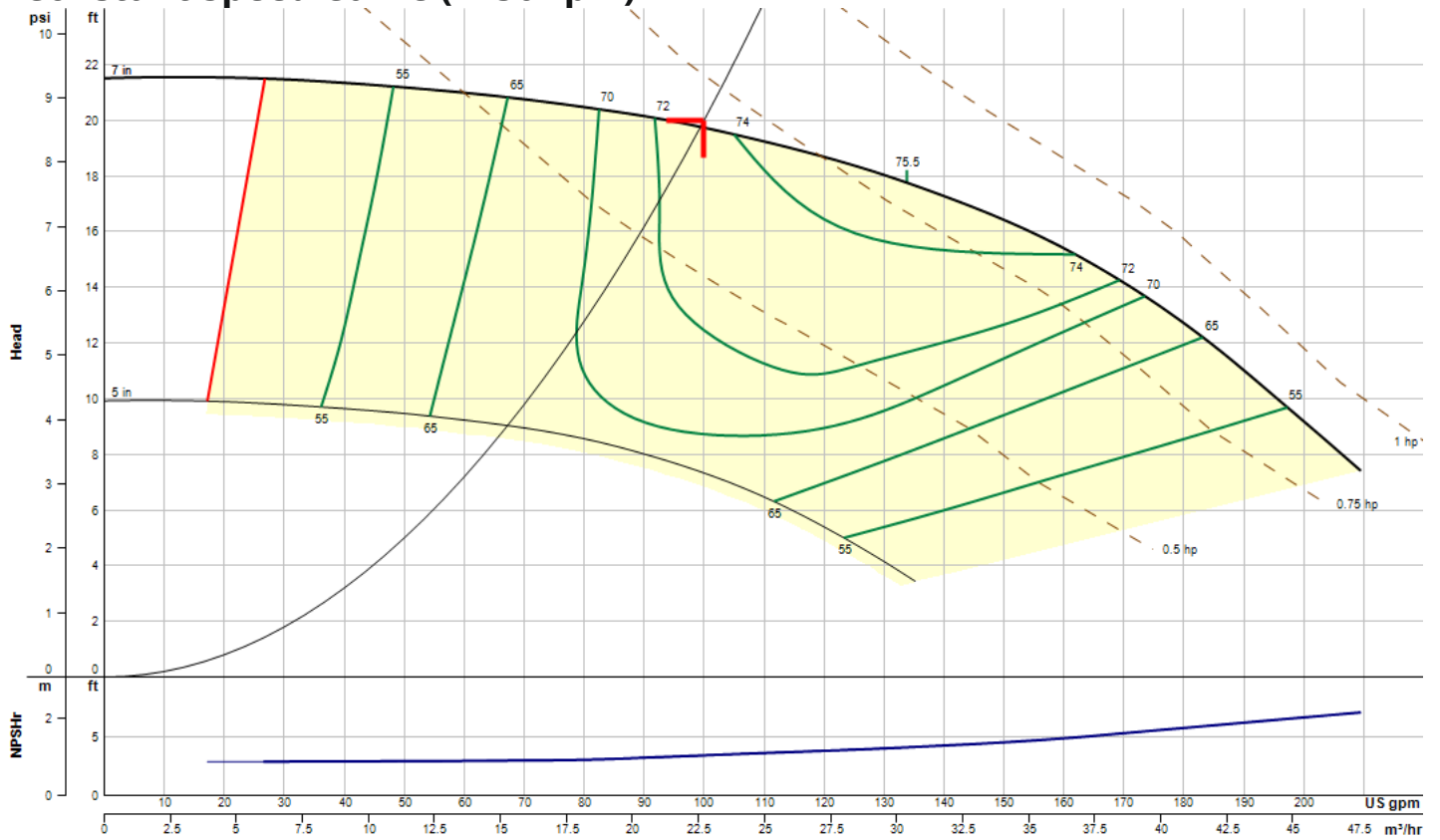


e-80SC
3x3x7C
1158 RPM



Performance curve meets 14.6 / ISO 9906 acceptance criteria

Constant Speed Curve (1150 rpm)



Operating Point

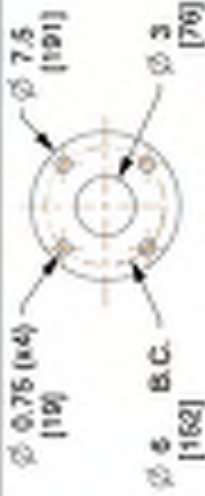
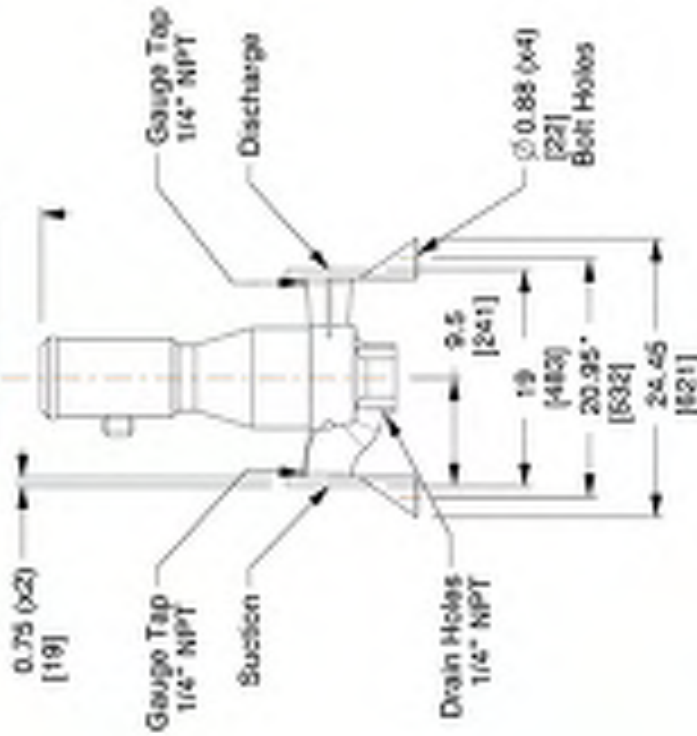
Flow: 100 US gpm **Head:** 20 ft **Speed:** 1158 **Efficiency:** 73.2% **Point BHP:** 0.69 **End Of Curve:** 47.4%

Maximum Duty Point (at rated motor speed)

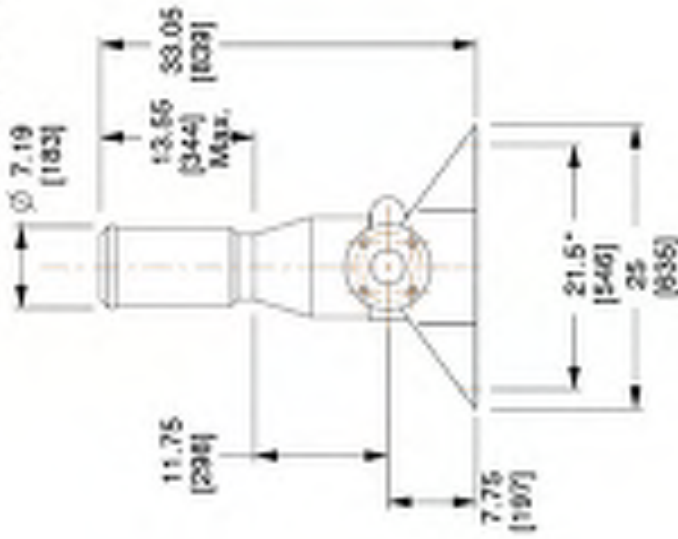
Flow: 99.4 US gpm **Head:** 19.7 ft **Speed:** 1150 **Efficiency:** 73.1% **Point BHP:** 0.676 **NOL Flow:** 197 US gpm **Runout Flow:** 209 US gpm **NOL (BHP):** 0.876



4.5 [114]
Space Required
For Dismantling



3" SUCTION & DISCHARGE
FLANGE DETAILS
ANSI 125#



* Dist. Between Bolt Holes

BG-E80SC-3x3x7C-145TC-1-FM

Series e-80SC In-Line Mounted Centrifugal Pumps
Motor Frame: 145TC | Flange: ANSI 125# | Flange mount

This drawing and the information depicted therein is the property of Xylem. Copies are issued in strict confidence and shall not be reprinted or copied, or used as the basis for the manufacture or sale of products without prior written permission of Xylem.

Dimensions are subject to change
Not to be used for construction unless certified

Bell & Gossett
a xylem brand

8200 N. Austin Ave.
Morton Grove, IL 60053, USA

Dimensions : IM (mm) Scale : M.T.S. Subtotal # : B-662.12

Materials of Construction

Description	Stainless Steel Fitted Pump
Shaft	416 Stainless Steel
Volute	Cast Iron ASTM A48 Class 30B
Impeller	ASTM A743 Grade CF8 (304SS)
Impeller Key	Stainless Steel
Impeller Lock Washer	Stainless Steel
Impeller Capscrew	Stainless Steel
Volute Gasket	Cellulose Fiber
Throttle Bushing	Carbon Graphite
Seal Assemblies	
• Standard Seal-Inside Flushed	
Bellows	EPR
Faces	Carbon-Ceramic
Metal Parts	Stainless Steel or Brass
Spring	Stainless Steel or Brass
• Optional Seal -Inside Flushed	
Bellows	EPR
Faces	Carbon-Tungsten Carbide
• Optional Seal-Outside Flushed	
O-Rings	EPR
Faces	Carbon-Ceramic
Metal Parts	Stainless Steel

Standard pump construction is 175 psi working pressure with 125 ANSI flange drilling. Optional 250 psi working pressure with 250 ANSI flange drilling is available.

Seal Selection Guide - Optional Outside Seal

A. Standard Seal - Inside with flush line.

EPR/Carbon-Ceramic; Temperature Range -20° to +250°F (-29° to +121°C).

*Maximum pressure is 175 psi (12 bar).

B. Optional Seal - Inside with flush line.

EPR/Carbon-Tungsten Carbide; Temperature Range -20° to +250°F (-29° to +121°C). * For use on open or closed water systems. Maximum pressure is 250 psi (17 bar).

C. Optional Seal - Outside with flush line.

EPR/Carbon-Ceramic Type "8B2"; Temperature Range -20° to +250°F (-29° to +121°C). * For use on closed or open systems where the pressure requirements exceed the limitations of the standard seal or an alternate seal design is desired. Maximum pressure is 250 psi (17 bar).

*For operating conditions above 250°F (121°C and no greater than 300°F (149°C) a cooled flush is required. On closed systems cooling is accomplished by inserting the optional heat exchanger kit in the flush line to cool the seal flushing fluid.

Flush line filters and sediment separators are available on request.

Configuration Options

Contact your local rep for assistance

Mounting

- In-Line Piping
- Flange Supports

Pump Variable Speed Control

- Integrated Technologic® Sensorless Control (ITSC)
- Integrated Technologic® (IT)
 - External input by others
 - Pressure Sensor(s)
 - Differential Pressure Sensor(s)
 - Flow Sensor(s)
- By Others

Type of Seal

- Standard Inside Unitized (EPR/Carbon-Ceramic)
- Inside Unitized (EPR/Carbon-Tungsten Carbide)-250#
- Inside Unitized (FKM/Carbon-Ceramic)
- Inside Unitized (EPR/SilCar/SilCar/SS)
- Other seal, see description
- Outside (EPR/Carbon-Ceramic)-250#
- Outside (FKM/Carbon-Ceramic)-250#



Shown with optional Technologic IPC variable frequency drive and Technologic PPS controller

Job/Project:	Representative: Blackmore and Glunt, Inc.		
ESP-Systemwize: WIZE-F9ABD784	Created On: 04/07/2022	Phone: (314) 878-4313	
Location/Tag:	Email: sblackmore@b-g.com		
Engineer:	Submitted By:	Date:	
Contractor:	Approved By:	Date:	

Split-Coupled In-Line Centrifugal Pump

Series: e-80SC

Model: 2.5x2.5x7B

Features & Design

- Best in Class Hydraulic Performance
- Shaft Jacking Coupling
- Optional Flange Mounting Supports



*The Bell & Gossett Series e-80SC is available in stainless steel fitted construction, with flows to 8500 GPM, heads to 202 ft.

Pump Selection Summary

Duty Point Flow	155 US gpm
Duty Point Head	80 ft
Control Head	24 ft
Duty Point Pump Efficiency	64.6 %
Part Load Efficiency Value (PLEV)	59.8 %
Impeller Diameter	5.375 in
Motor Power	7.5 hp
Duty Point Power	4.9 bhp
Motor Speed	3600 rpm
RPM @ Duty Point	3240 rpm
NPSHr	5.53 ft
Minimum Shutoff Head	94.6 ft
Minimum Flow at RPM	34.4 US gpm
Flow @ BEP	172 US gpm
Fluid Temperature	68 °F
Fluid Type	40% Propylene glycol
Weight (approx. - consult rep for exact)	0 lbs
Pump Floor Space Calculation	1.77 ft ²

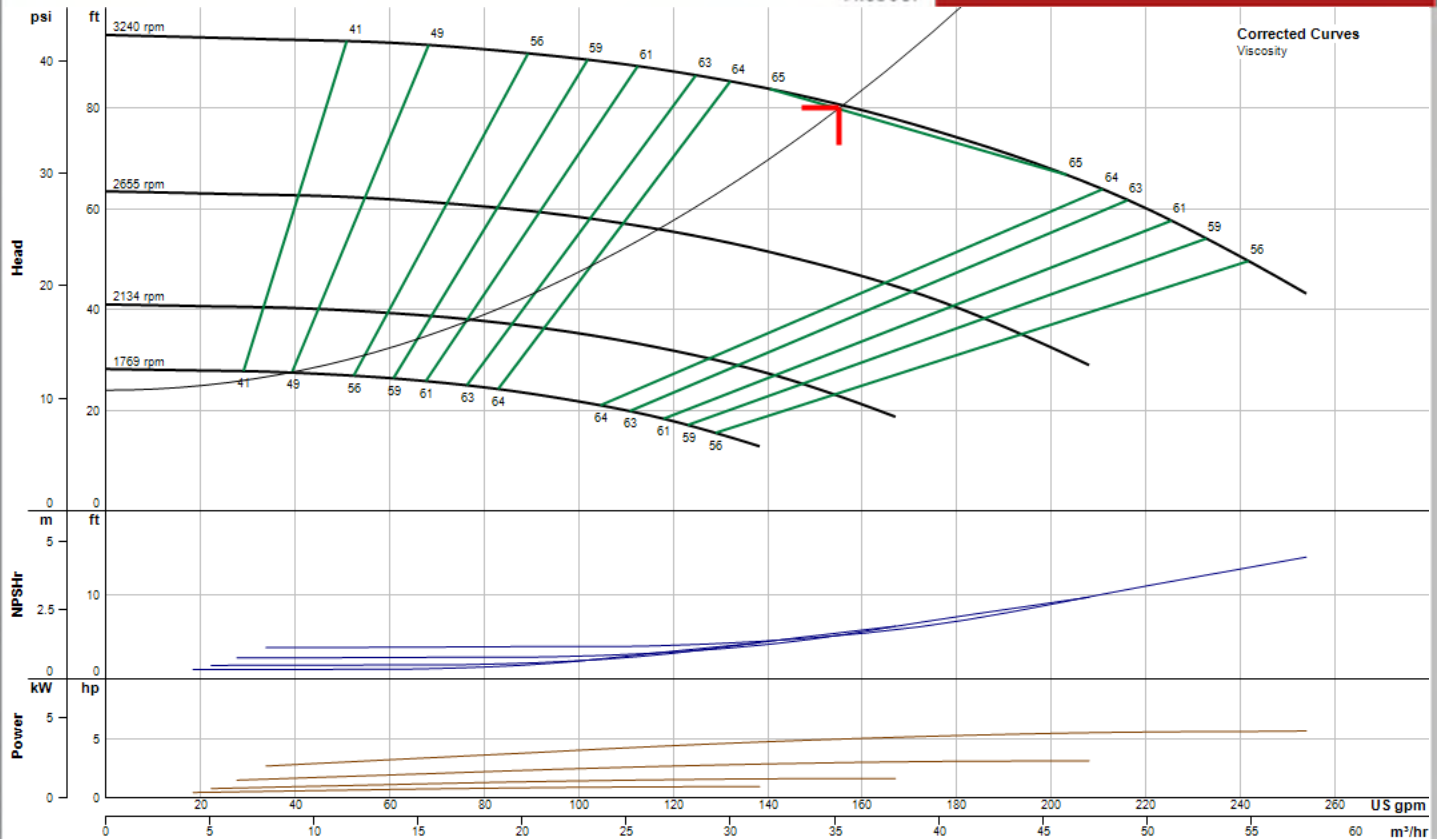
Performance Curve

Energy Efficiency Ratings:

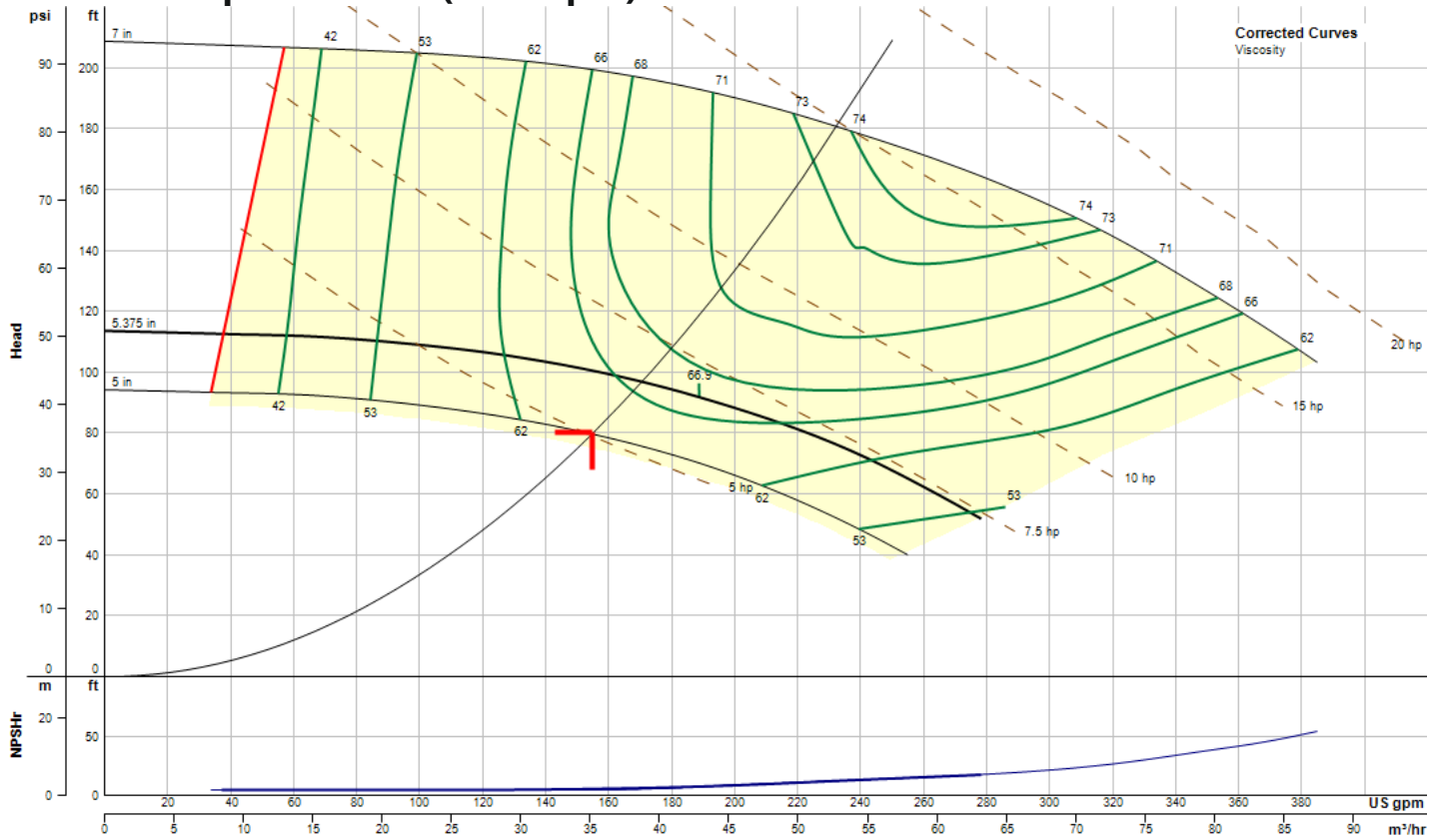
Pump & Motor PEIc: 0.89 ERc: 11
Pump, Motor & Drive: PEIv: 0.45 ERv: 55



e-80SC
2.5x2.5x7B
3240 RPM



Constant Speed Curve (3550 rpm)

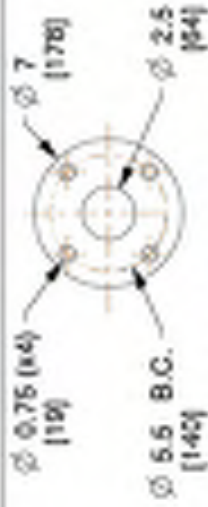
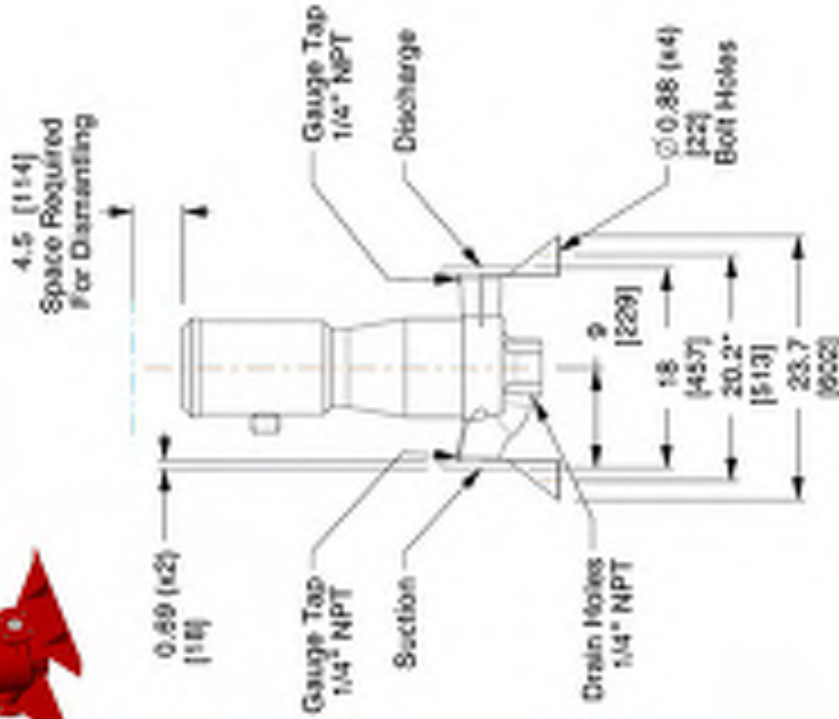


Operating Point

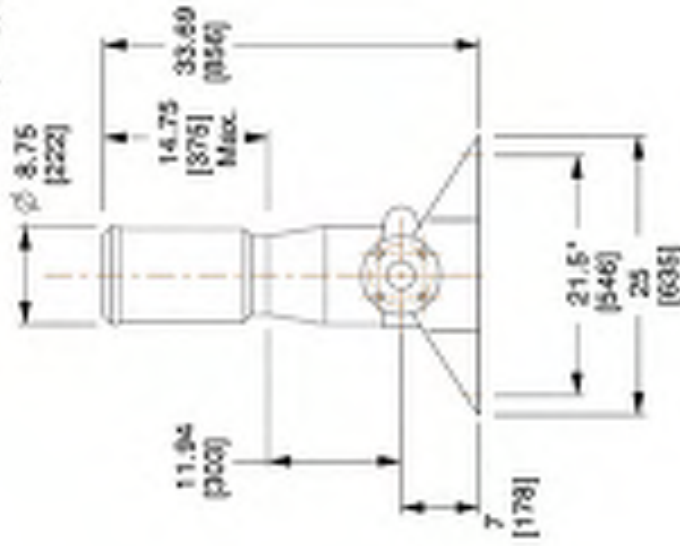
Flow: 155 US gpm **Head:** 80 ft **Speed:** 3240 **Efficiency:** 64.6% **Point BHP:** 4.9 **End Of Curve:** 61%

Maximum Duty Point (at rated motor speed)

Flow: 170 US gpm **Head:** 96 ft **Speed:** 3550 **Efficiency:** 65.3% **Point BHP:** 6.42 **NOL Flow:** 278 US gpm **Runout Flow:** 278 US gpm **NOL (BHP):** 7.38



2.5" SUCTION & DISCHARGE
FLANGE DETAILS
ANSI 125#



* Dist. Between Bolt Holes



8200 N. Austin Ave.
Morton Grove, IL 60053, USA

This drawing and the information depicted therein is the property of Xylem. Copies are issued in strict confidence and shall not be reproduced or copied, or used as the basis for the manufacture or sale of products without prior written permission of Xylem.

Dimensions are subject to change

Not to be used for construction unless certified

BG-E80SC-2.5x2.5x7B-184TC-1-FM

Series e-80SC In-Line Mounted Centrifugal Pumps

Motor Frame: 184TC | Flange: ANSI 125# | Flange mount

Dimensions : IM (mm)

Scale : N.T.S.

Subtotal # : B-552.8

Materials of Construction

Description	Stainless Steel Fitted Pump
Shaft	416 Stainless Steel
Volute	Cast Iron ASTM A48 Class 30B
Impeller	ASTM A743 Grade CF8 (304SS)
Impeller Key	Stainless Steel
Impeller Lock Washer	Stainless Steel
Impeller Capscrew	Stainless Steel
Volute Gasket	Cellulose Fiber
Throttle Bushing	Carbon Graphite
Seal Assemblies	
• Standard Seal-Inside Flushed	
Bellows	EPR
Faces	Carbon-Ceramic
Metal Parts	Stainless Steel or Brass
Spring	Stainless Steel or Brass
• Optional Seal -Inside Flushed	
Bellows	EPR
Faces	Carbon-Tungsten Carbide
• Optional Seal-Outside Flushed	
O-Rings	EPR
Faces	Carbon-Ceramic
Metal Parts	Stainless Steel

Standard pump construction is 175 psi working pressure with 125 ANSI flange drilling. Optional 250 psi working pressure with 250 ANSI flange drilling is available.

Seal Selection Guide - Optional Outside Seal

A. Standard Seal - Inside with flush line.

EPR/Carbon-Ceramic; Temperature Range -20° to +250°F (-29° to +121°C).

*Maximum pressure is 175 psi (12 bar).

B. Optional Seal - Inside with flush line.

EPR/Carbon-Tungsten Carbide; Temperature Range -20° to +250°F (-29° to +121°C). * For use on open or closed water systems. Maximum pressure is 250 psi (17 bar).

C. Optional Seal - Outside with flush line.

EPR/Carbon-Ceramic Type "8B2"; Temperature Range -20° to +250°F (-29° to +121°C). * For use on closed or open systems where the pressure requirements exceed the limitations of the standard seal or an alternate seal design is desired. Maximum pressure is 250 psi (17 bar).

*For operating conditions above 250°F (121°C and no greater than 300°F (149°C) a cooled flush is required. On closed systems cooling is accomplished by inserting the optional heat exchanger kit in the flush line to cool the seal flushing fluid.

Flush line filters and sediment separators are available on request.

Configuration Options

Contact your local rep for assistance

Mounting

- In-Line Piping
- Flange Supports

Pump Variable Speed Control

- Integrated Technologic® Sensorless Control (ITSC)
- Integrated Technologic® (IT)
 - External input by others
 - Pressure Sensor(s)
 - Differential Pressure Sensor(s)
 - Flow Sensor(s)
- By Others

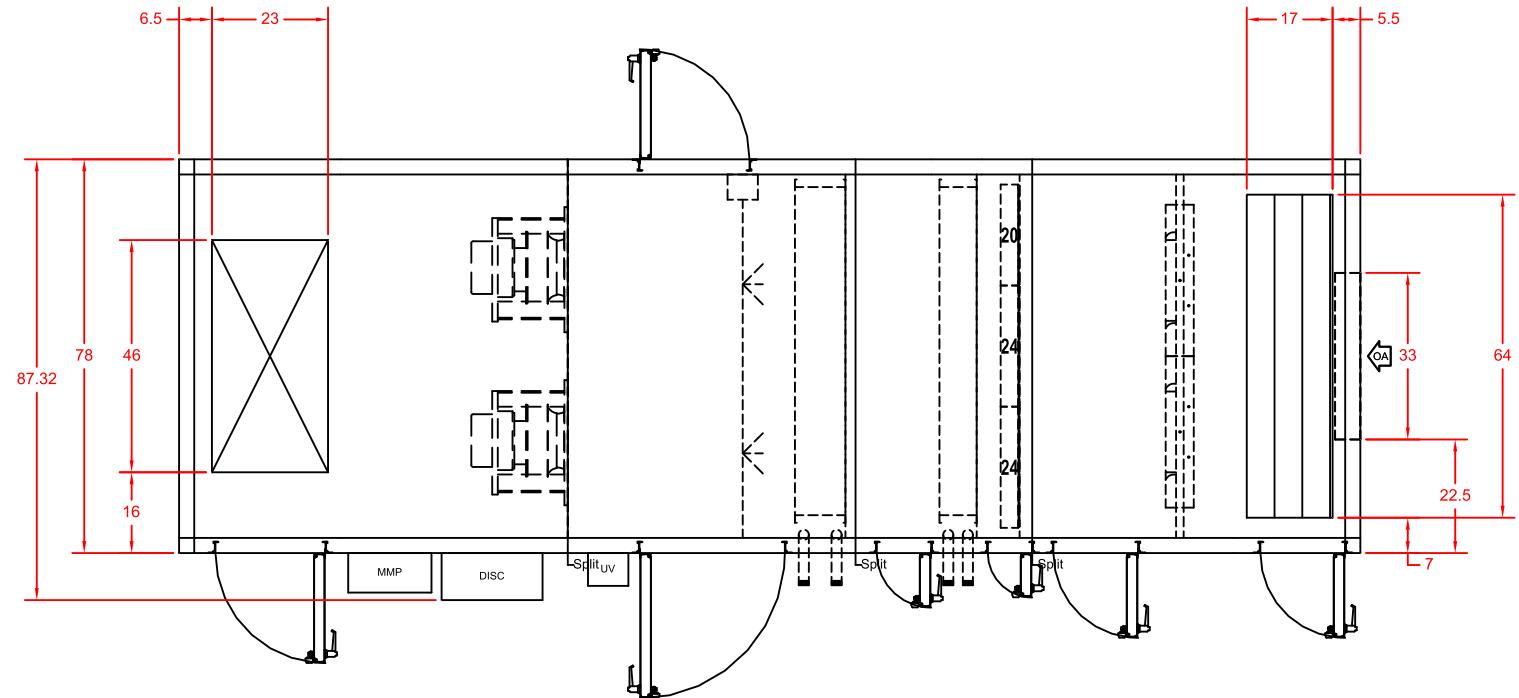
Type of Seal

- Standard Inside Unitized (EPR/Carbon-Ceramic)
- Inside Unitized (EPR/Carbon-Tungsten Carbide)-250#
- Inside Unitized (FKM/Carbon-Ceramic)
- Inside Unitized (EPR/SilCar/SilCar/SS)
- Other seal, see description
- Outside (EPR/Carbon-Ceramic)-250#
- Outside (FKM/Carbon-Ceramic)-250#

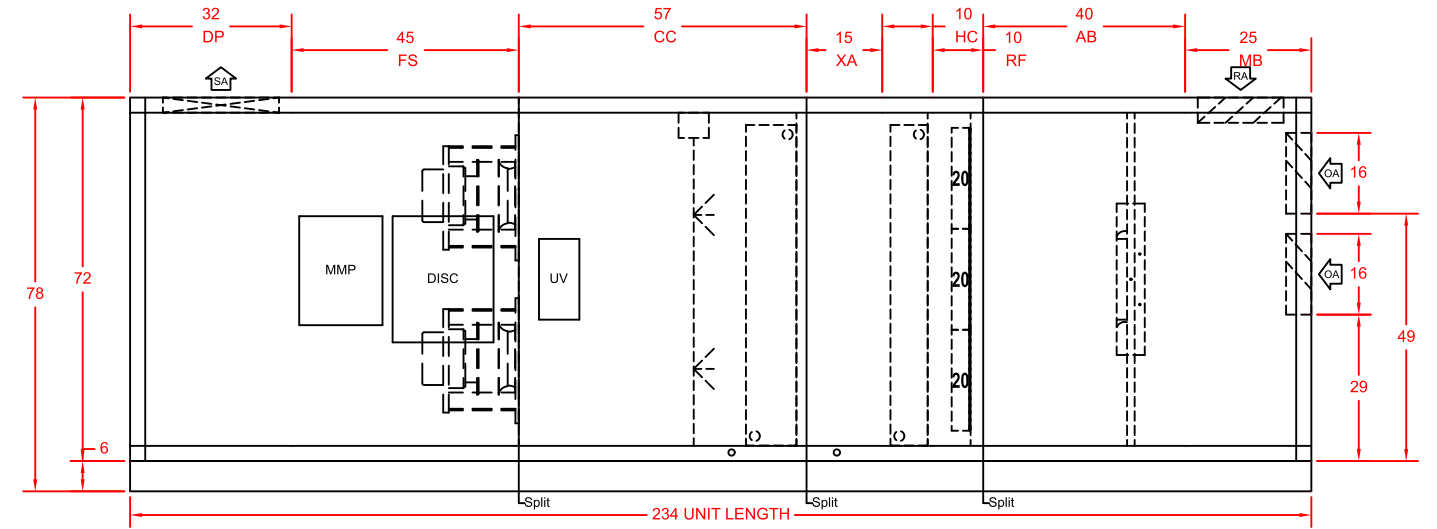


Shown with optional Technologic IPC variable frequency drive and Technologic PPS controller

AHU-1



PLAN VIEW



ELEVATION VIEW

* NOTE: MAX HEIGHT

UNIT CONSTRUCTION
 Model: Solution-XTI-72x78 Construction: Indoor
 Motor Location:
 Unit Weight: 5,402 lbs. (+/- 10%)

PLAN VIEW
 Rear (Supply) Right Front (Return) Left AIRFLOW

NOTES

Units with a baserail and a bottom opening: Duct connection flush with the bottom of unit, not flush with bottom of baserail.

Refer to performance report for shipping split details. Allow sufficient space around the unit for removing the access panels and various parts of the unit. A minimum clearance equal to the width of the unit must be provided on one side of the unit for removing the coil or fan assembly.

Contractor responsible for penetrations and connections of all electrical boxes and internal coil connections.

Overall dimensions account for: outdoor roof peak and overhang, motor control and/or factory package control boxes, coil connections, rain hoods, pipe chases, AMS-60 damper/EAML louver (if applicable,) base rail - in order to convey the true space requirements for the unit.

Certain items may extend beyond cabinet dimensions including: door handles, light switches, electrical boxes, lifting lugs, gas fuel system, etc.

The overall unit length includes an additional 1/4" per shipping split due to additional gasketing and split connection hardware.

Dimension tolerances: Unit (+/- 1/2"); Piping (+/- 2")

Ⓢ - Designates Shipped Loose Item(s)

PIPING CONNECTIONS
(In order of Airflow)

Segment	Type	Hand	Quantity	Supply	Return
HC	MPT	Left	1 Sup 1 Ret	2"	2"
CC	MPT	Left	1 Sup 1 Ret	2"	2"

Drain pan connection size 1 1/4" MPT SCH 40 (Connections on Left Side of unit)

SECTION LIST

SECT	DESCRIPTION
MB	Mixing Box
AB	Air Blender
RF	High Efficiency Filter
HC	Heating Coil
XA	Variable Length Access
CC	Cooling Coil
FS	Supply Fan - EG1R-240-450-68 - EBM 6.00 kW
DP	Discharge Plenum

PRODUCT DRAWING
 SOLUTION XT AIR HANDLING UNIT DETAIL
 MODEL: Solution-XTI-72x78
NOT FOR CONSTRUCTION

Project Name: Hot Springs National Park
 Location:
 Engineer:
 Contractor:
 For:

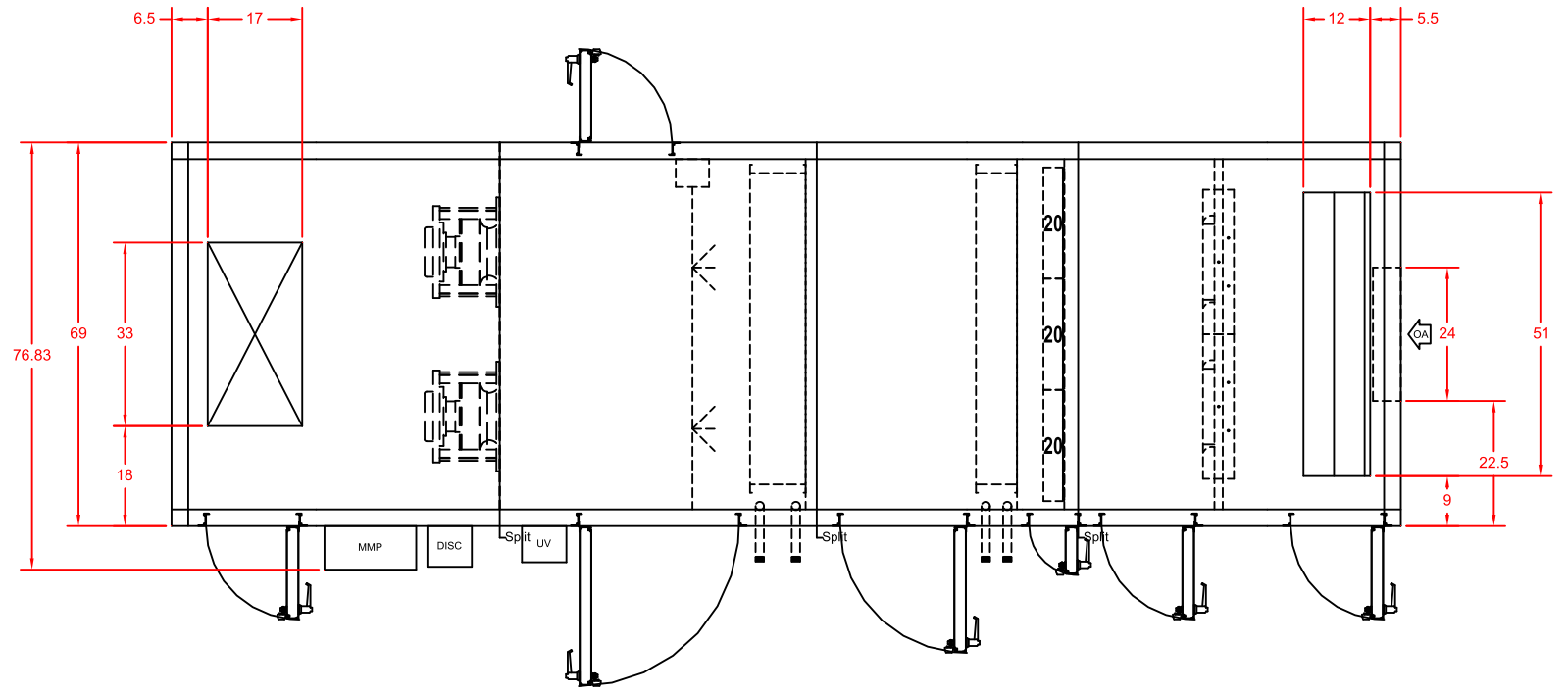
Sold To:
 Cust Purch Order#:
 Contract#:
 UNIT TAG: **AHU-1M - Sheet 1**

Date: 4/13/2022 18:13:10
 Version:
 Form No.:
 Dwg. Lev.: 5/03
 Dwg. Scale: NTS

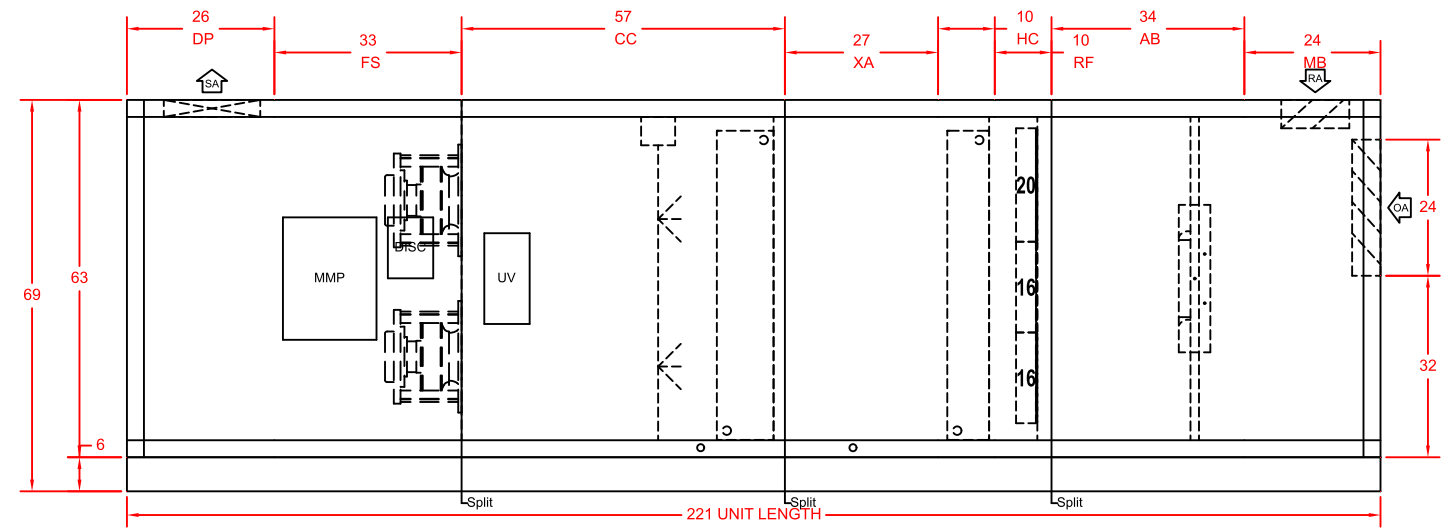
Serial Number:
 SQ Database Number:
 YORKworks Release:
 Dwg. Name:
 Dwg. Location:



AHU-2



PLAN VIEW



ELEVATION VIEW

* NOTE: MAX HEIGHT

UNIT CONSTRUCTION
 Model: Solution-XTI-63x69 Construction: Indoor
 Motor Location:
 Unit Weight: 4,184 lbs. (+/- 10%)

Right
 Rear (Supply) Front (Return)
 Left AIRFLOW

NOTES

Units with a baserail and a bottom opening: Duct connection flush with the bottom of unit, not flush with bottom of baserail.

Refer to performance report for shipping split details. Allow sufficient space around the unit for removing the access panels and various parts of the unit. A minimum clearance equal to the width of the unit must be provided on one side of the unit for removing the coil or fan assembly.

Contractor responsible for penetrations and connections of all electrical boxes and internal coil connections.

Overall dimensions account for: outdoor roof peak and overhang, motor control and/or factory package control boxes, coil connections, rain hoods, pipe chases, AMS-60 damper/EAML louver (if applicable,) base rail - in order to convey the true space requirements for the unit.

Certain items may extend beyond cabinet dimensions including: door handles, light switches, electrical boxes, lifting lugs, gas fuel system, etc.

The overall unit length includes an additional 1/4" per shipping split due to additional gasketing and split connection hardware.

Dimension tolerances: Unit (+/- 1/2"); Piping (+/- 2")

Ⓢ - Designates Shipped Loose Item(s)

PIPING CONNECTIONS
(In order of Airflow)

Segment	Type	Hand	Quantity	Supply	Return
HC	MPT	Left	1 Sup 1 Ret	1 1/2"	1 1/2"
CC	MPT	Left	1 Sup 1 Ret	1 1/2"	1 1/2"

Drain pan connection size 1 1/4" MPT SCH 40 (Connections on Left Side of unit)

SECTION LIST

SECT	DESCRIPTION
MB	Mixing Box
AB	Air Blender
RF	High Efficiency Filter
HC	Heating Coil
XA	Variable Length Access
CC	Cooling Coil
FS	Supply Fan - EG1R-240-310-35 - EBM 3.00 kW
DP	Discharge Plenum

PRODUCT DRAWING
 SOLUTION XT AIR HANDLING UNIT DETAIL
 MODEL: Solution-XTI-63x69
NOT FOR CONSTRUCTION

Project Name: Hot Springs National Park
 Location:
 Engineer:
 Contractor:
 For:

Sold To:
 Cust Purch Order#:
 Contract#:
 UNIT TAG: **AHU-2M - Sheet 1**

Date: 4/13/2022 18:19:5
 Version:
 Form No.:
 Dwg. Lev.: 5/03
 Dwg. Scale: NTS

Serial Number:
 SQ Database Number:
 YORKworks Release:
 Dwg. Name:
 Dwg. Location:





COOK

Relief Fan RF-1

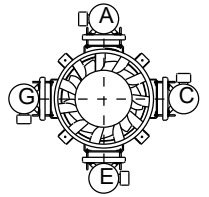
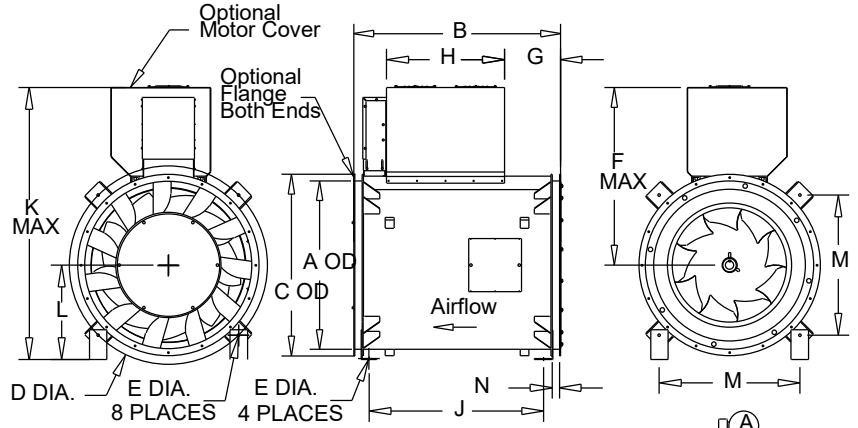


MARK: RF-1
PROJECT: MAURICE FANS
DATE: 4/11/2022

QMX

Mixed Flow Inline
Vertical/Horizontal Mount
Belt Drive
Arrangement 9
Level 1

STANDARD CONSTRUCTION FEATURES:
 High efficiency mixed flow wheel - Continuously welded steel housing with Lorenized powder coating
 - Welded aerodynamic straightening vanes - Integral inlet and outlet collars for slip fit duct connections - Adjustable motor plate utilizing threaded studs for positive belt tensioning - Heavy duty ball or roller bearings with extended lube lines - Belt guard - Lifting lugs - Shaft locking collar.



MOTOR POSITION CHART
(View Facing Outlet)
Mounting positions are field adjustable.

Performance (*Bhp includes 14% drive loss)

Qty	Catalog Number	Flow (CFM)	SP (inwc)	Fan RPM	Power* (HP)	FEG
1	180QMX	3000	.500	851	.401	n/a(<1HP)

Altitude (ft): 1000 Temperature (F): 70

Motor Information

HP	RPM	Volts/Ph/Hz	Enclosure	FLA	Position	Mounted
3/4	1725	208/3/60	ODP -SE	3.5	E	Yes

FLA based on NEC (2014) Table 430.250

Fan Information

Level	OVel(fpm)	Fan Mount	Access
1	853	Horz. Ceiling	G

Sound Data Sound Power by Octave Band

	1	2	3	4	5	6	7	8	LwA	dBA
Inlet	68	69	73	70	64	59	51	42	71	59
Outlet	71	70	73	70	63	58	52	44	70	59

Accessories:

- SHAFT GROUNDING RING
- DRIVES (1.5 SF) @ 851 RPM
- SC-245 SET(4) - ISOLATORS

Dimensions (inches)

A	25-5/8
B	35
C	28-5/8
D	32-5/16
E	3/8
F	31-3/8
G	9-3/8
H	19-3/8
J	26-7/8
K	46-7/8
L	15-1/2
M	22-7/8
N	1-15/16

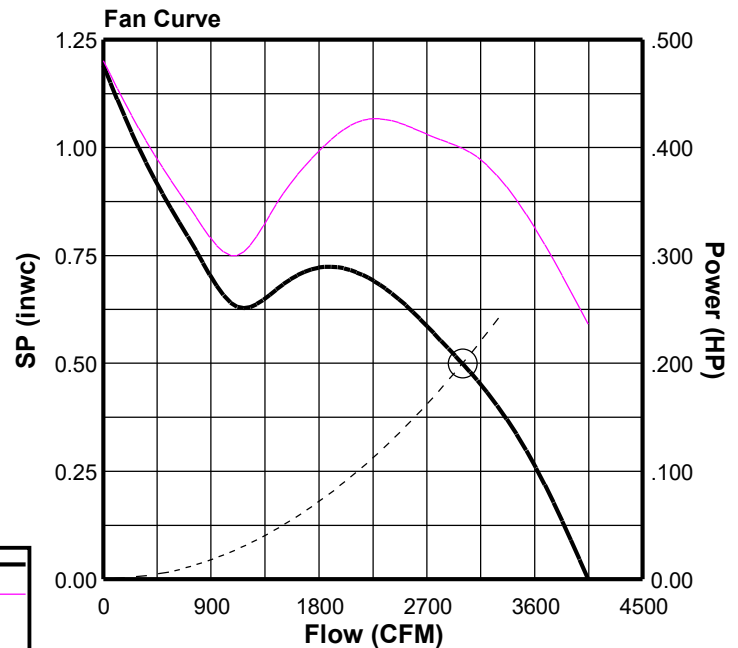
NOTE: Accessories may affect dimensions shown.

Weight(lbs)***	Shipping	504	Unit	356
----------------	----------	-----	------	-----

***Includes fan, motor & accessories.

Fan Curve Legend

CFM vs SP	—
CFM vs HP	—
Point of Operation	○
System Curve	-----





COOK

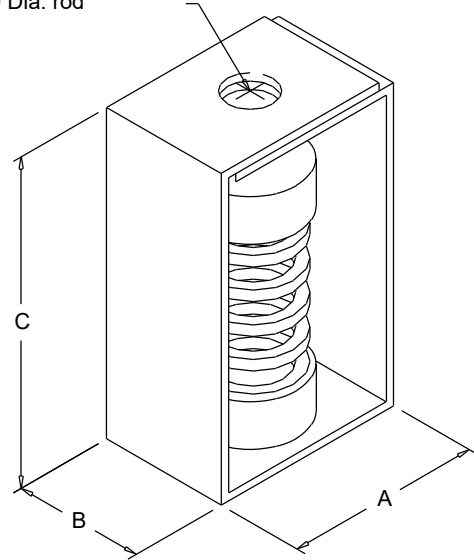
PROJECT: MAURICE FANS

DATE: 4/11/2022

SPRING CEILING

Spring
Isolator
Ceiling Mounted

for D Dia. rod



Dimensions (inches)

Mark	Qty	Description	A	B	C	D Dia.	Rated Deflection
RF-1	1	SC-245 SET(4)	3-11/16	2-1/4	5-1/4	1/2	1.19



COOK

Relief Fan RF-2

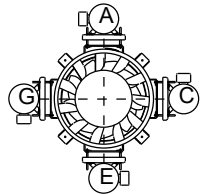
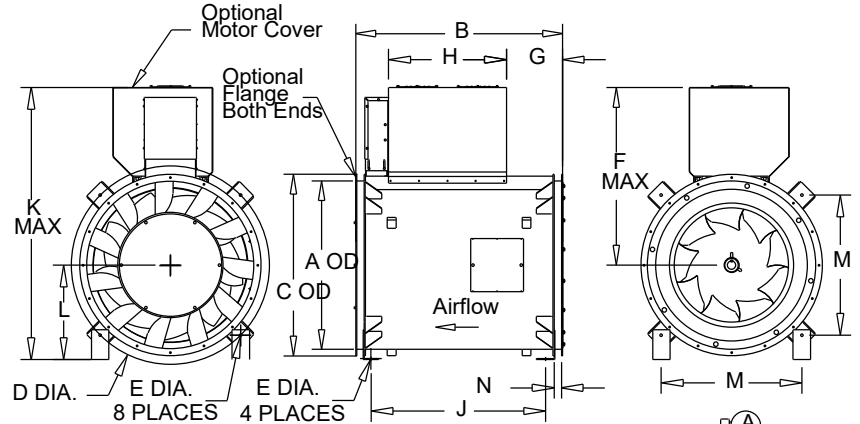


MARK: RF-2
PROJECT: MAURICE FANS
DATE: 4/11/2022

QMX

Mixed Flow Inline
Vertical/Horizontal Mount
Belt Drive
Arrangement 9
Level 1

STANDARD CONSTRUCTION FEATURES:
High efficiency mixed flow wheel - Continuously welded steel housing with Lorenized powder coating
- Welded aerodynamic straightening vanes - Integral inlet and outlet collars for slip fit duct connections - Adjustable motor plate utilizing threaded studs for positive belt tensioning - Heavy duty ball or roller bearings with extended lube lines - Belt guard - Lifting lugs - Shaft locking collar.



MOTOR POSITION CHART
(View Facing Outlet)
Mounting positions are field adjustable.

Performance (*Bhp includes 16% drive loss)

Qty	Catalog Number	Flow (CFM)	SP (inwc)	Fan RPM	Power* (HP)	FEG
1	165QMX	2000	.500	842	.266	n/a(<1HP)

Altitude (ft): 1000 Temperature (F): 70

Motor Information

HP	RPM	Volts/Ph/Hz	Enclosure	FLA	Position	Mounted
3/4	1725	208/3/60	ODP -SE	3.5	E	Yes

FLA based on NEC (2014) Table 430.250

Fan Information

Level	OVel(fpm)	Fan Mount	Access
1	677	Horz. Ceiling	G

Sound Data Sound Power by Octave Band

	1	2	3	4	5	6	7	8	LwA	dBA
Inlet	72	68	71	67	61	55	47	39	68	56
Outlet	74	68	70	67	60	54	48	40	68	56

Accessories:

- SHAFT GROUNDING RING
- DRIVES (1.5 SF) @ 842 RPM
- SC-125 SET(4) - ISOLATORS

Dimensions (inches)

A	23-1/2
B	33
C	26-1/2
D	30-1/8
E	3/8
F	29-13/16
G	11-7/8
H	15-5/8
J	24-1/2
K	44-1/8
L	14-5/16
M	21-5/16
N	1-15/16

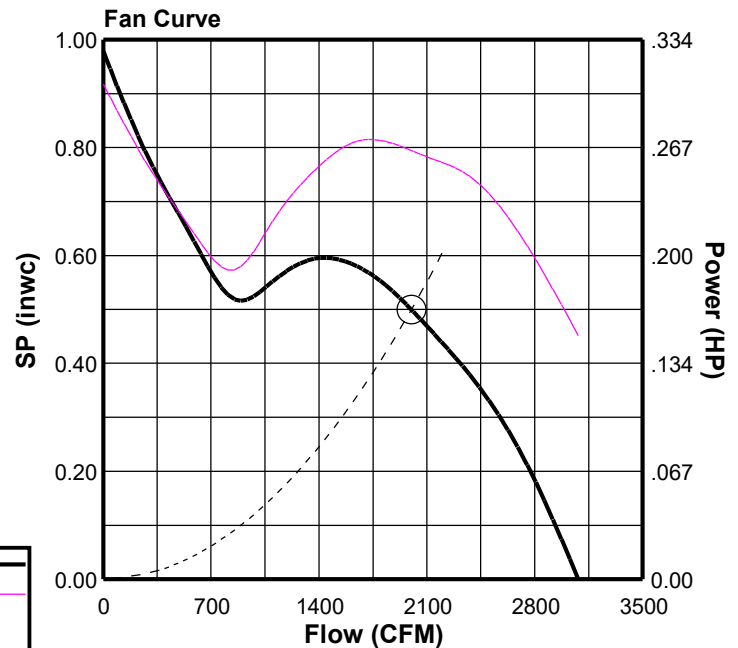
NOTE: Accessories may affect dimensions shown.

Weight(lbs)***	Shipping	437	Unit	309
----------------	----------	-----	------	-----

***Includes fan, motor & accessories.

Fan Curve Legend

CFM vs SP	—
CFM vs HP	—
Point of Operation	○
System Curve	-----





COOK

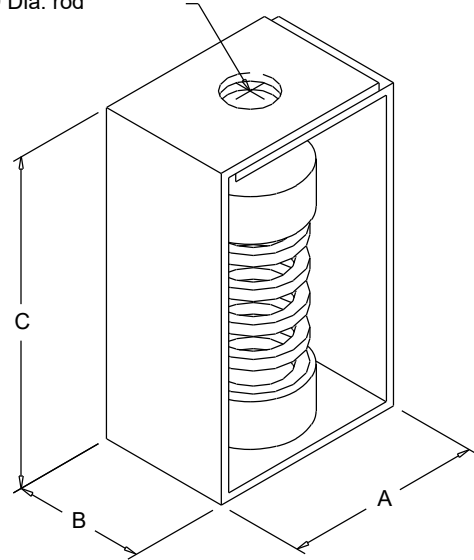
PROJECT: MAURICE FANS

DATE: 4/11/2022

SPRING CEILING

Spring
Isolator
Ceiling Mounted

for D Dia. rod



Dimensions (inches)

Mark	Qty	Description	A	B	C	D Dia.	Rated Deflection
RF-2	1	SC-125 SET(4)	2-5/32	1-1/2	3-15/32	1/2	1.10



LW Series Dehumidifiers

Project: Basement Dehumidifier

Self-Contained Dehumidifiers

Location:

Unit Model #: LW05AN7DNNNNNL

System Tag: DH-1, DH-2

Date:



DESERT AIRE REPRESENTATIVE

Firm: Fawcett Mechanical Sales Inc

Address: 2310 Pheasant Place

City, State Zip Code: Eudora, KS, 66025

Phone: (913) 269-0287

Fax: (785) 542-1305

Contact: John Fawcett

E-Mail: jfawcett@sunflower.com



LW Series Dehumidifiers

PRODUCT SCOPE

Quantity: 1
Model #: LW05AN7DNNNNNLL
Tag #: DH-1, DH-2
Unit Weight: 1000 lbs

Capacities:

- Supply Air: 2750 CFM
- Outside Air: 0 CFM
- Dehumidification
- EAT: 65.0 °F DB / 57.7 °F WB
- Total Cooling Capacity: 58 MBH
- Total Sensible Capacity: 36.44 MBH
- Moisture Removal Capacity: 19.9 lb/hr
- Total Heat of Rejection: 74 MBH

DX Refrigeration System:

- Refrigerant Type: R-407C
- Scroll Compressor(s), Nominal Tons: 05
- Hot Gas Reheat Condenser Coil
- Coil Coating: Standard Coating
- Receiver w/ Flooding Valve
- Evaporator Coil Defrost
- Remote Option: Reheat Only

Supply Airflow Configuration:

- Supply Discharge Location: Horizontal
- Outdoor Intake Location: Horizontal
- Supply ESP: 0.5 in WC
- Supply TSP: 1.17 in WC

Air Filters:

- Supply Filters: Standard

Enclosure:

- Location: Indoor
- Separate Electrical Compartment
- Galvanneal with Powder Coat Finish

Condensate Drain Pan:

- 20-Gauge Stainless Steel, Sloped
- 1 in. MPT Drain Connection

Unit Electrical:

- Main Power (V/Ph/Hz): 208/3/60
 - MCA (Amps): 24
 - MOPD (Amps): 40
 - SCCR (kA): 65
- When protected by Class J, T, or RK1 fuses

Controls:

- Model CM3540
- Temp & RH Sensors: Duct Mount
- Occupancy Timer w/ BMS Override
- Remote Display Terminal: Included
- BMS Compatibility: None

Warranties (Parts Only):

- Standard Warranty: 2 years
- Compressor Warranty: 5 Years
- Air Side Coil Warranty: 2 Years

MCA/MOPD Calculation

Pool Price 2018_02B

Project Basement Dehumidifier
Tag DH-1, DH-2

Series LW05
Aux Heat No Aux Heat Selected
Refrigerant R-407C

S/A Airflow	2750	cfm @	0.5	in ESP
S/A Blower Motor	2	HP		
E/A Airflow	0	cfm @	N/A	in ESP
E/A Blower Motor 1	0	HP		
E/A Blower Motor 2	0	HP		

Voltage 208/3/60

FLA		
Compressor 1	18.6	
Compressor 2	0.0	
Compressor 3	0.0	
Compressor 4	0.0	
S/A Blwr Motor	#N/A	
E/A Blwr Motor 1	0.0	
E/A Blwr Motor 2	0.0	
Electric Heater (single point)	N/A	N/A
Total Transformer (VA)	190	kW MCA

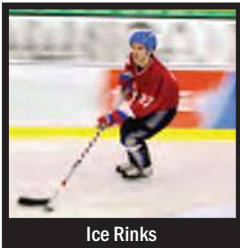
Unit MCA	24	Amps
Unit MOPD	40	Amps

Electric Heater (for separate power circuit)

kW	N/A
FLA	N/A
MCA	N/A

LW SERIES

Dehumidifiers for Wide Temperature Applications



Ice Rinks



Water Treatment Plants



Pumping Stations



Food Storage & Processing



Desert Aire's ExpertAire has product lines that are designed to operate in two different temperature ranges. The LW Series covers the widest range operating from 45 to 80°F (7 to 26°C). The LC and LV Series are for higher temperature applications such as special manufacturing facilities and pools. Please refer to the LC/LV brochure for details on these systems.

Manufacturing, storage, public works and indoor ice rinks are just a few of the many applications that our ExpertAire™ dehumidifiers effectively cover. ExpertAire™ is an enduring product line for Desert Aire that represents the culmination of our core expertise in dehumidification. The ability of these units to be applied to diverse applications combined with their flexibility to appropriately regulate the introduction of outdoor air to a facility makes them a true energy efficient workhorse that consistently performs time and again.

OPTIMIZING SOLUTIONS THROUGH SUPERIOR DEHUMIDIFICATION TECHNOLOGY





CM3540 Series Controller for LW Dehumidifiers

• ADVANCED COMMUNICATIONS CAPABILITIES • EASY INSTALLATION AND OPERATION • CONTINUOUS MONITORING

Advanced LW Microprocessor Controller



CM3540 Controller
Used on LW Dehumidifier

FEATURES

- Backlit LCD User Interface
- Custom programming for complex dehumidification, temperature and humidity control.
- Multiple communication options
- Alarm history retention

DESCRIPTION

The CM3540 controllers are uniquely programmed for each Desert Aire application providing energy efficient moisture removal and precise temperature & humidity control.

The CM3540 controllers offer greater compatibility with building management systems (BMS) than previous control platforms. Optional communication modules for the CM3540 include: LonWorks®, BACnet™ Ethernet™, BACnet™ MS/TP or Modbus®. The CM3540 has a built in time clock for occupied scheduling should a BMS not be present on your project.

An integral user interface is standard with the CM3540 controls. This is located on the face of the controller in the unit electrical compartment. An optional Remote Display Terminal is available where access to the electrical panel is difficult or a secondary display in a remote location is desired. These backlit LCD displays provides easy to navigate screens for setpoint adjustment and unit monitoring. All Inputs and Outputs along with alarm history can be viewed from either user interface to aid in unit or system diagnostics.



Optional CM3540 Series
Remote Display Terminal (RDT)



Duct Mount
Temperature &
Humidity Sensor



Wall Mount
Temperature &
Humidity Sensor

ORDER OPTIONS

Controller and Sensor without RDT

- CA3540ND-DUCT Duct Mount Temp & RH Sensor
- CA3540ND-WALL Wall Mount Temp & RH Sensor

Controller and Sensor with RDT

- CA3540WD-DUCT Duct Mount Temp & RH Sensor
 - CA3540WD-WALL Wall Mount Temp & RH Sensor
- RDT = remote display terminal with 20ft. cord

Communication Configuration

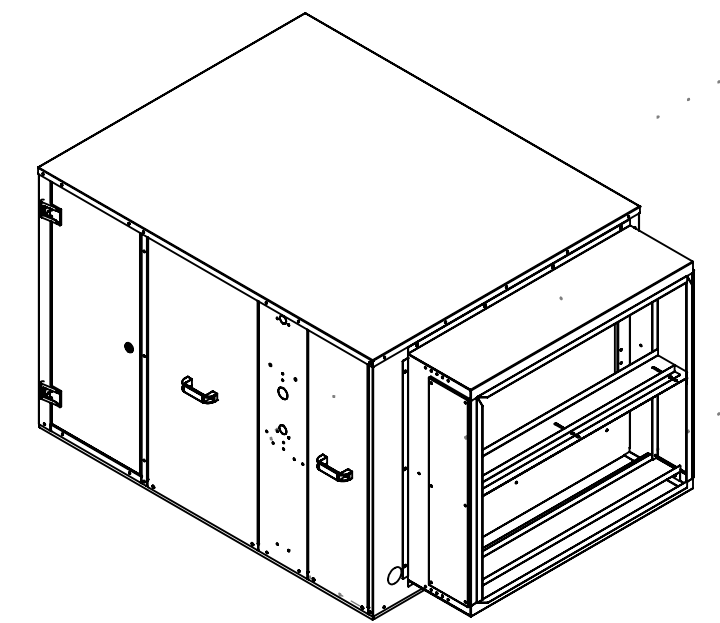
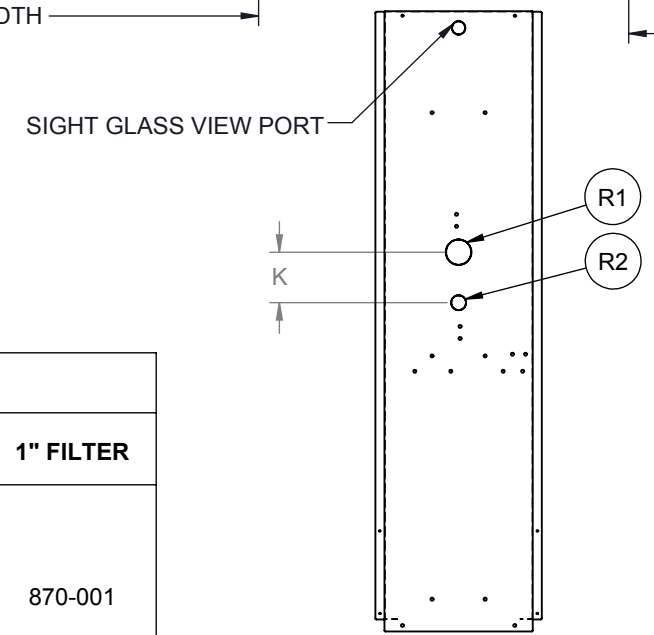
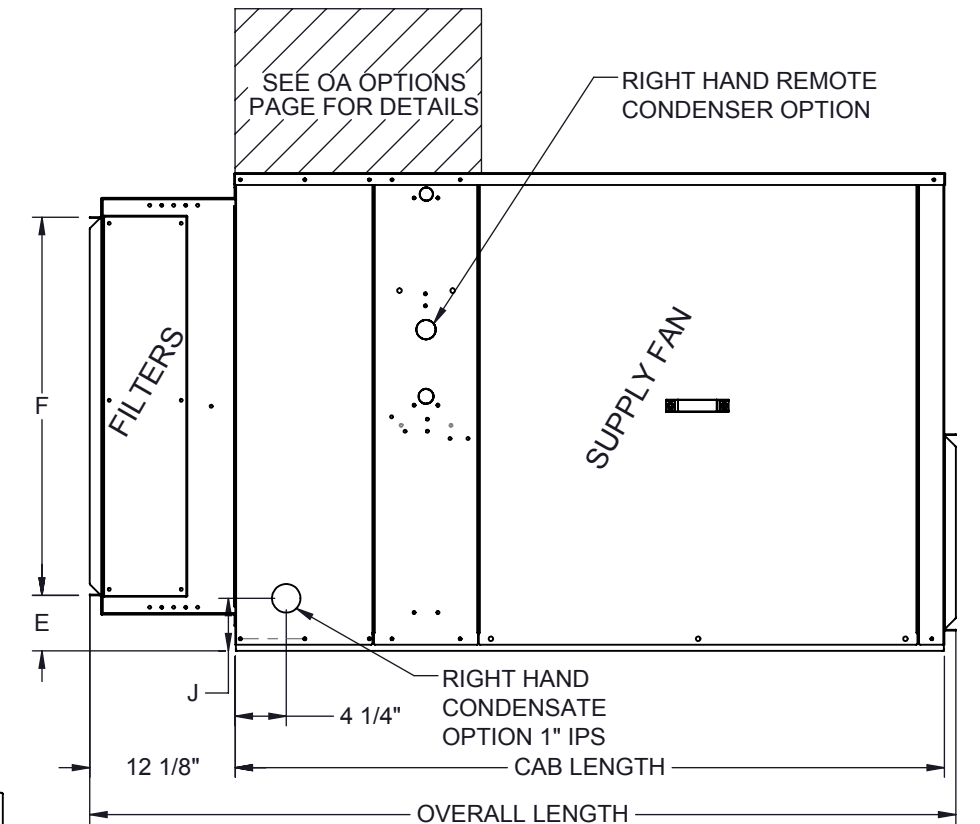
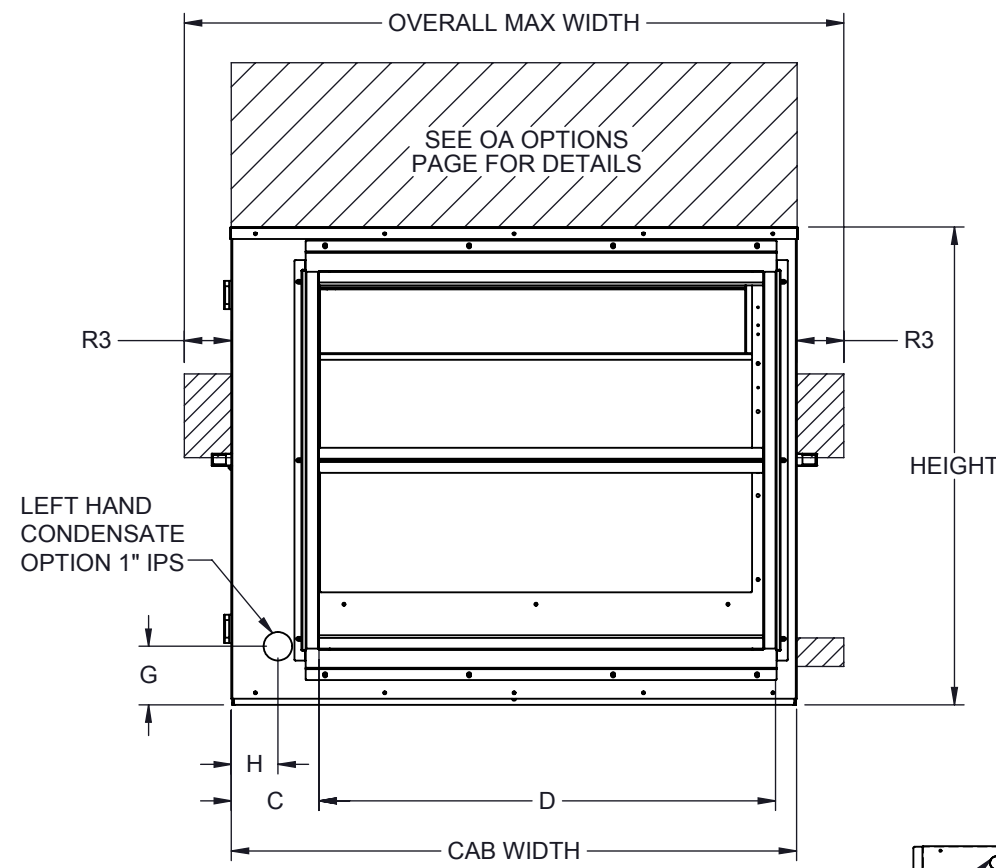
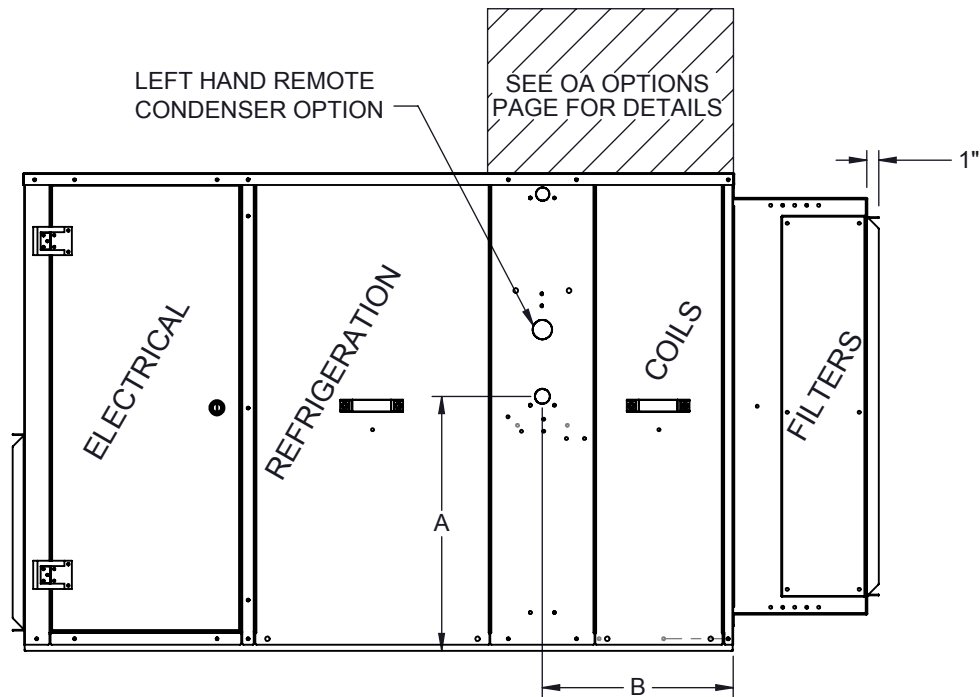
- Standard - No BMS Communication
- LONWORKS® Module
- BACnet™ Ethernet™ Module
- BACnet™ MS/TP Module
- Modbus® RTU Module (RS-485)

All trademarks hereby referenced are the property of their respective owners.

LEFT SIDE ACCESS VIEW

FRONT/INTAKE/RETURN VIEW

RIGHT SIDE ACCESS VIEW



#	DESCRIPTION OF LABELED AREAS	LW03	LW05	LW08	LW10	LW12	LW15
R1	REMOTE COND. SUPPLY (TUBE)	5/8	7/8			1 1/8	
R2	REMOTE COND. RETURN (TUBE)		1/2		5/8		
R3	REMOTE COND VALVE WIDTH	5 1/8	5 3/4			6 1/2	

WEIGHTS REFLECT FULLY OPTIONED UNIT ESTIMATE

NOMINAL TONNAGE	WEIGHT (LBS)
LW03	800
LW05	1000
LW08	1300
LW10	1600
LW12	1600
LW15	2050

EXPERT AIRE FILTER INFORMATION

UNIT	RETURN AIR	DA PART NUMBER
	FILTER SIZE	QTY
LW03	20x25	1
LW05	20x20	2
LW08	16x20	4
LW10	20x25	
LW12		
LW15		

OUTSIDE AIR BOX FILTERS

UNIT	FILTER SIZE	QTY.	1" FILTER
LW03	16x16	2	870-001
LW05			
LW08			
LW10			
LW12			
LW15	3		

UNIT	OVERALL WIDTH	OVERALL LENGTH	CABINET HEIGHT	CABINET WIDTH	CABINET LENGTH	A	B	C	D	E	F	G	H	J	K		
LW03	37 1/4	59 1/4	30 3/8	34 3/8	46 1/4	15	16 7/8	6 1/2	22 3/4	6 1/2	19 3/4	2 3/8	4 5/8	2 3/8	4		
LW05	48 1/4			45 3/8	6	37 1/8											
LW08	50 1/4	72 1/4	39 7/8	47 3/8	59 1/4	21 1/4	15 7/8	6	37 1/8	4 5/8	31 1/2	4 7/8	3 7/8	4 3/8	5 1/2		
LW10	56 1/8	77 1/8	52 7/8	53 1/4	64 1/8	27 7/8	17 3/4			3 1/8	47 1/8	9 1/2		39 1/2	5 3/8	4 7/8	4 1/4
LW12																	
LW15																	

Desert Aire has a policy of continuous product and quality improvement. Specifications and dimensions are subject to change without notice. This drawing and information contained herein are the exclusive property of the Desert Aire Corporation. Any use detrimental to the interests of Desert Aire is prohibited.

All Dimensions in Inches
All Angles 90°
All outside corners 0.125" fillet
Unless Otherwise Specified

Third Angle Projection

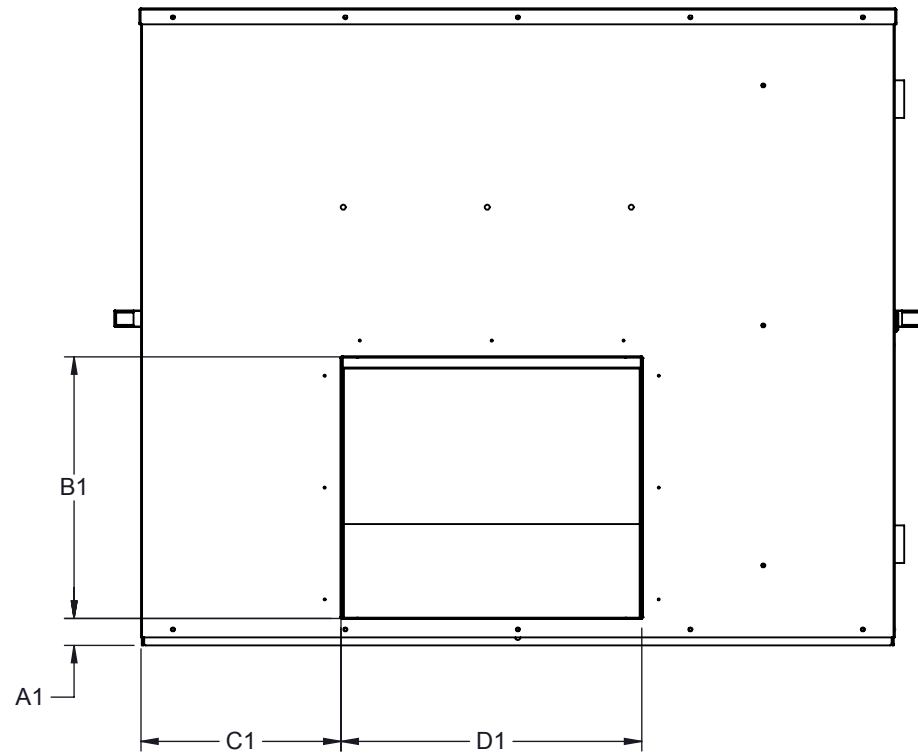
Tolerance Unless Otherwise Specified
X.X ±.125
X.XX ±.060
X.XXX ±.030
Angles ±1°



Drawn	ASV	Date Released	07/22/2016	Description	EXPERTAIRE GA
Sheet	1/3	Page Title	LW CAB LAYOUT		
Scale	NTS	Rev.	0	Drawing Number	G305-001

ALL DIMENSIONS ARE IN INCHES
TOLERANCE ± 1/8"

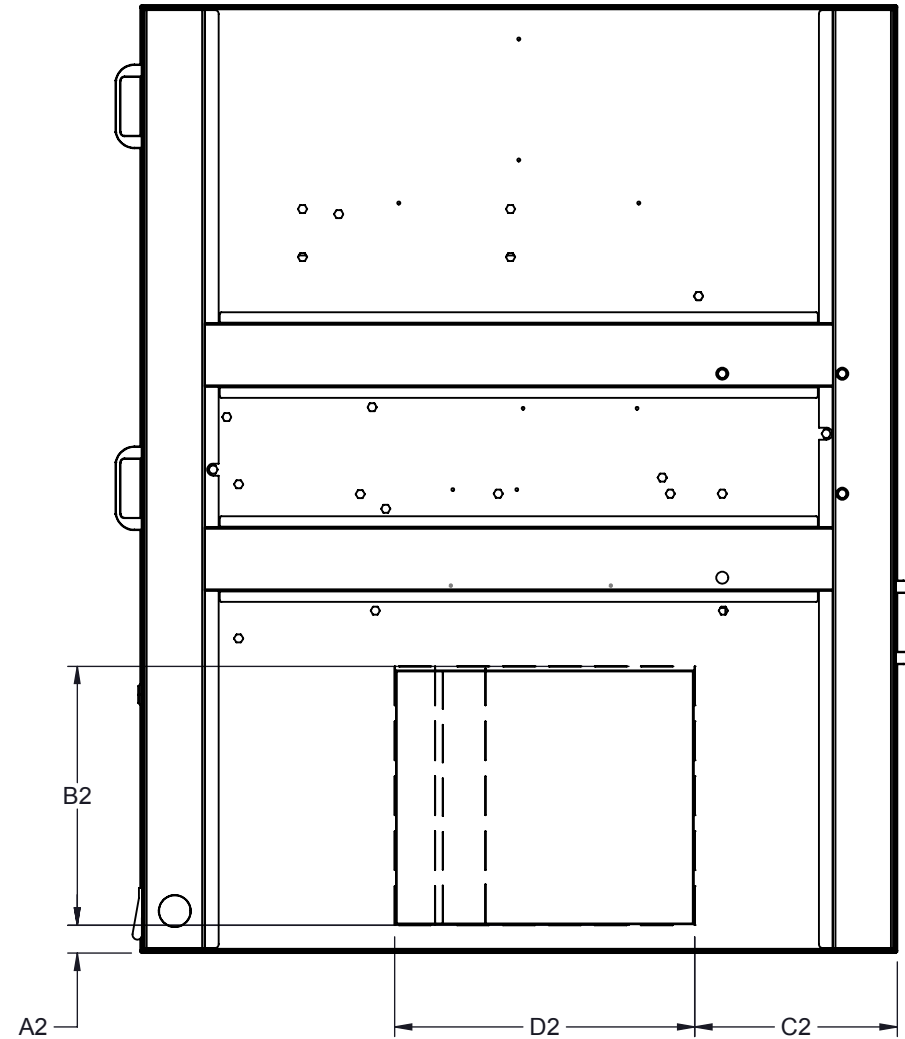
HORIZONTAL DISCHARGE



HORIZONTAL DISCHARGE				
UNIT	A1	B1	C1	D1
LW03	1 1/4	12 3/4	8 1/2	13 3/8
LW05		13 3/4	14	15 7/8
LW08	1 3/4	16 3/8	12 1/2	18 7/8
LW10	2 1/4	19 1/8		
LW12				
LW15				

BOTTOM DISCHARGE

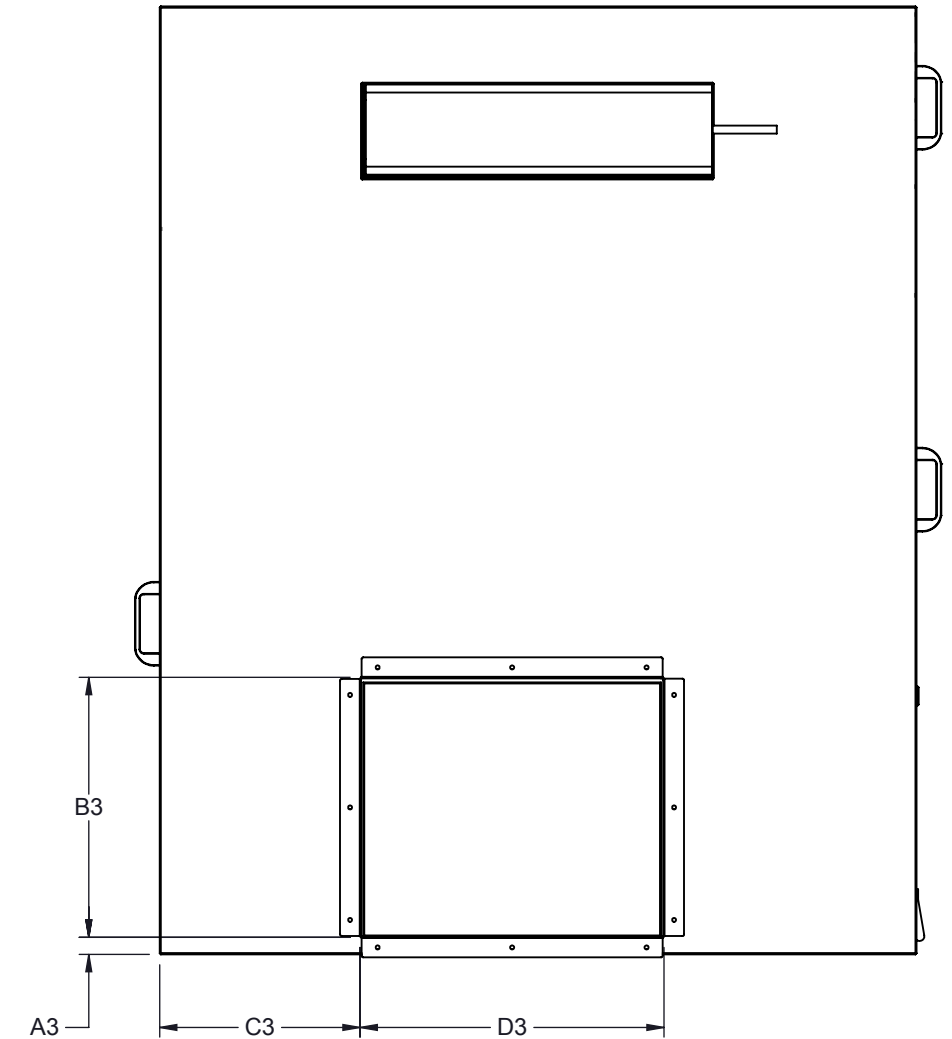
FRONT/INTAKE/RETURN END



BOTTOM DISCHARGE				
UNIT	A2	B2	C2	D2
LW03	1 3/4	13	8 1/2	13 1/4
LW05		14	14 1/8	15 3/4
LW08		16 1/4	12 5/8	18 3/4
LW10				
LW12		19	12 1/2	
LW15				

TOP DISCHARGE

FRONT/INTAKE/RETURN END



TOP DISCHARGE				
UNIT	A3	B3	C3	D3
LW03	1 1/4	12 7/8	8 1/2	13 1/2
LW05		14	14	16
LW08		16 1/4	12 1/2	17 3/4
LW10				
LW12		19 1/4		
LW15				

NOTES:

FILTER RACK HAS BEEN REMOVED FOR CLARITY

TOP DISCHARGE VIEW HAS OPTIONAL DUCT DAMPER SHOWN

Desert Aire has a policy of continuous product and quality improvement. Specifications and dimensions are subject to change without notice. This drawing and information contained herein are the exclusive property of the Desert Aire Corporation. Any use detrimental to the interests of Desert Aire is prohibited.

ALL DIMENSIONS ARE IN INCHES
TOLERANCE ± 1/8"

All Dimensions in Inches
All Angles 90°
All outside corners 0.125" fillet
Unless Otherwise Specified



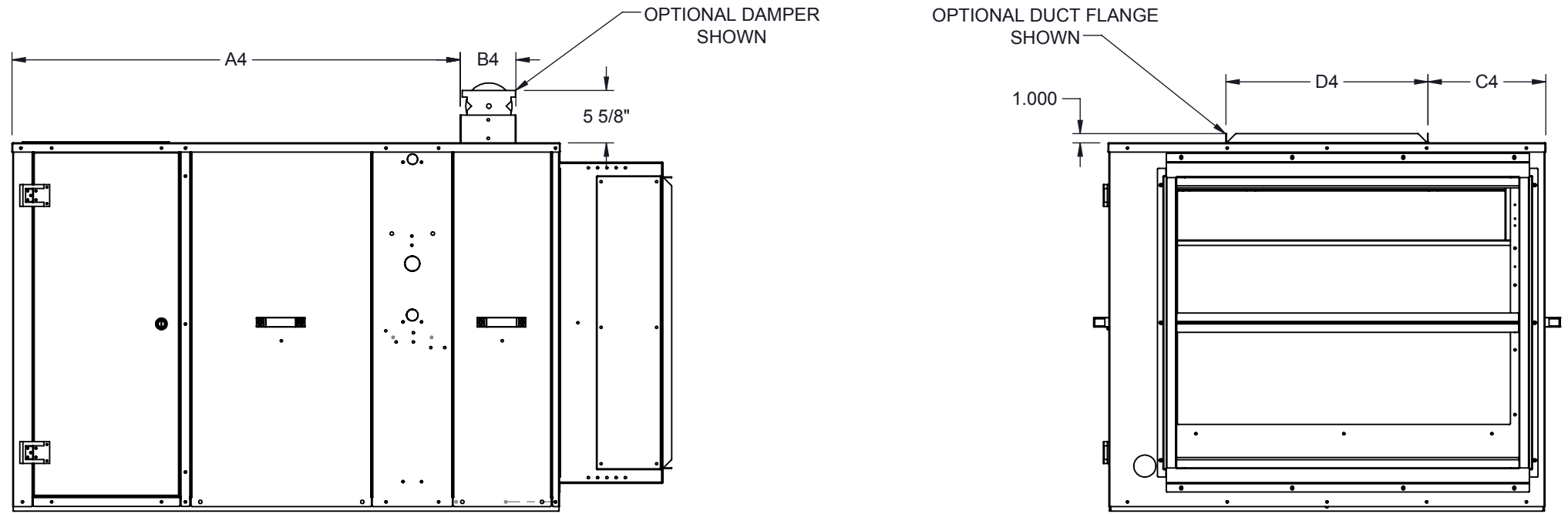
Part weight

Tolerance Unless Otherwise Specified
X.X ±.125
X.XX ±.060
X.XXX ±.030
Angles ±1°

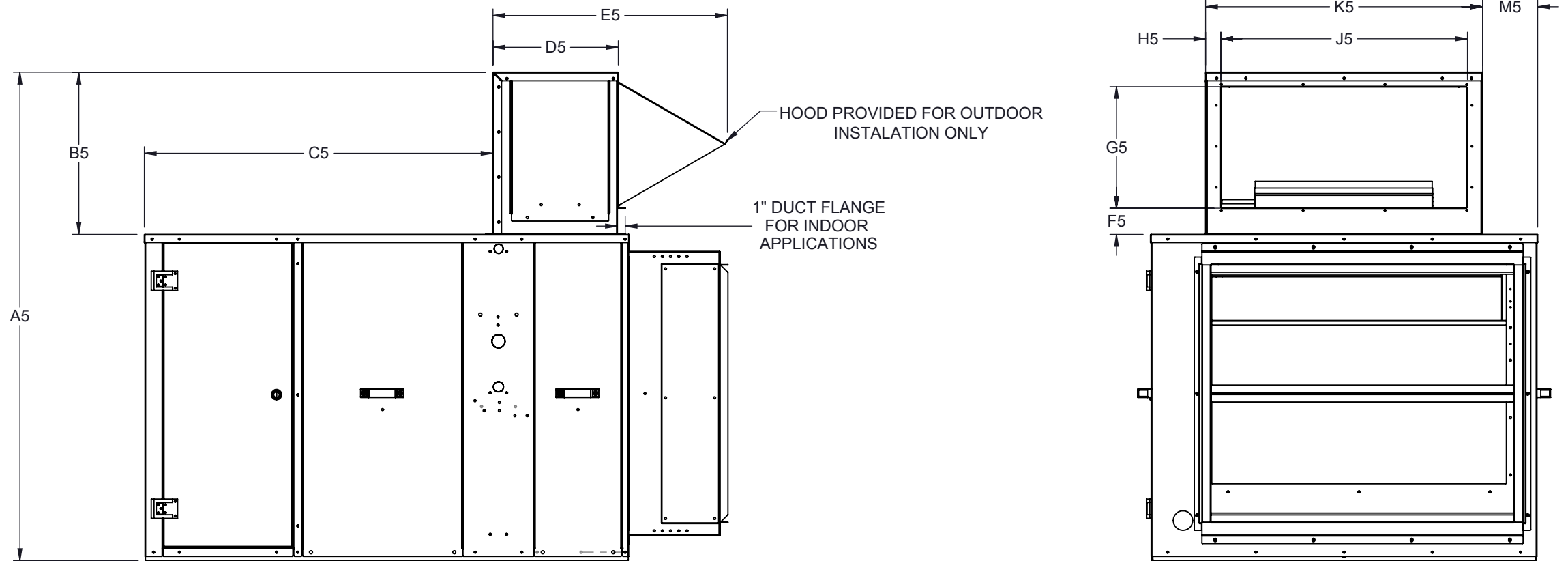
Drawn	Date Released	Description
ASV	07/22/2016	EXPERTAIRE GA
Sheet	Page Title	
2/3	LW DISCHARGE OPTION	
Scale	Rev.	Drawing Number
NTS	0	G305-001



N120 W18485 FREISTADT RD
GERMANTOWN, WI 53022
Tel: (262) 946-7400
Fax: (262) 946-7401



OPTIONAL DAMPER/DUCT FLANGE DIMENSIONS				
UNIT	A4	B4	C4	D4
LW03	35 1/2	6	6 1/2	21 7/8
LW05			11 3/4	
LW08			12 3/4	
LW10	51 3/8	8	4 5/8	43 7/8
LW12				
LW15				



OPTIONAL OUTSIDE AIRE BOX DIMENSIONS											
UNIT	A5	B5	C5	D5	E5	F5	G5	H5	J5	K5	M5
LW03	50 1/4	19 7/8	29 5/8	15 3/8	28 5/8	3 1/4	14 7/8	1 7/8	30 1/4	33 7/8	1/4
LW05			42 5/8								5 3/4
LW08			43 1/2								6 3/4
LW10	72 3/4	19 7/8	43 1/2	19 3/8	32 5/8	3 1/4	14 7/8	1 5/8	45 1/4	48 3/8	2 1/2
LW12											
LW15											

Desert Aire has a policy of continuous product and quality improvement. Specifications and dimensions are subject to change without notice. This drawing and information contained herein are the exclusive property of the Desert Aire Corporation. Any use detrimental to the interests of Desert Aire is prohibited.

All Dimensions in Inches
All Angles 90°
All outside corners 0.125" fillet
Unless Otherwise Specified

Tolerance Unless Otherwise Specified
X.X ±.125
X.XX ±.060
X.XXX ±.030
Angles ±1°

DESERT AIRE
N120 W18485 FREISTADT RD
GERMANTOWN, WI 53022
Tel: (262) 946-7400
Fax: (262) 946-7401



Third Angle Projection

Part weight

ALL DIMENSIONS ARE IN INCHES
TOLERANCE ± 1/8"

Drawn	ASV	Date Released	07/22/2016	Description	EXPERTAIRE GA
Sheet	3/3			Page Title	LW OPTIONAL OUTSIDE AIR
Scale	NTS	Rev.	0	Drawing Number	G305-001



DOAS Unit with Energy Recovery Wheel

TotalAire™ Series Dehumidifiers

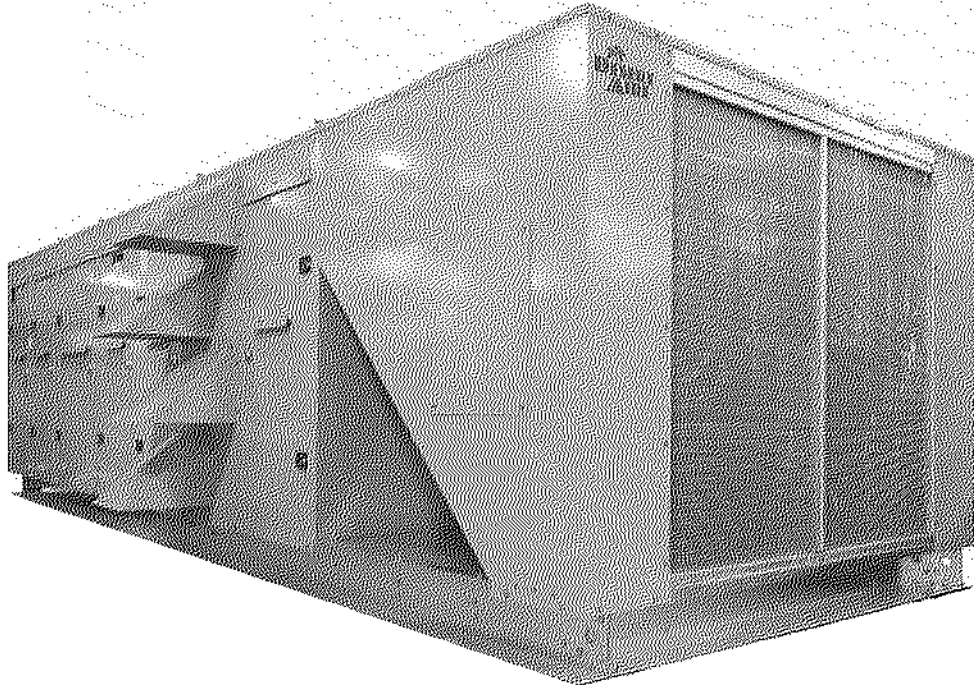
Project:

Location:

Unit Model #: QS03F3E_____

System Tag: DOAS-1

Date: 12/21/2017



DESERT AIRE REPRESENTATIVE

Firm: Fawcett Mechanical Sales Inc

Address: 2310 Pheasant Place

City, State Zip Code: Eudora, KS, 66025

Phone: (913) 269-0287

Fax: (785) 542-1305

Contact: John Fawcett

E-Mail: jfawcett@sunflower.com



TotalAire™ Series Dehumidifiers

Section 1 Product Scope & Details

- Product Scope
- Engineering Specialties
- Calculated Performance Data Information



TotalAire™ Series Dehumidifiers

PRODUCT SCOPE

Quantity: 1
Model #: QS03F
Tag #: DOAS-1
Unit Weight: 2311 lbs

Capacities:

- Supply Air: 950 CFM
 - Outdoor Air: 950 CFM
 - Exhaust Air: 800 CFM
- Dehumidification
- EAT: 79.0 °F DB / 66.3 °F WB
 - Total Cooling Capacity: 83 MBH
 - Leaving Air Dew Point: 50.7 ° F dp
 - Moisture Removal Capacity: 33.3 lb/hr
 - Total Heat of Rejection: 53 MBH

DX Refrigeration System:

- Refrigerant Type: R-410A
- Scroll Compressor(s), Nominal Tons: 03
- Hot Gas Reheat Condenser Coil
- Coil Coating: No Coating
- Modulating Reheat Valve, +/- 0.2 °F
- Hot Gas Bypass
- Receiver w/ Flooding Valve

Airflow Configuration:

- Supply Discharge Location: Down
- Return Intake Location: Down
- Supply ESP: 0.5 in WC
- Exhaust ESP: N/A in WC
- Supply TSP: 1.2 in WC
- Exhaust TSP: 0.8 in WC
- Supply Blower VFD: VFD for Air Balance
- Exhaust Blower VFD: VFD for Air Balance

Air Filters:

- Supply Filters: MERV 13
- Return Filters: MERV 7

Exhaust Energy Recovery System:

- Wheel Motor HP: 0.13
- 4Å Enthalpy Wheel
- VFD Defrost Protection w/ RH Sensors
- No Recirc Damper

Enclosure:

- Location: Outdoor
- Access: Left Side (LH)
- Double Wall w/ Access Panel
- Separate Electrical Compartment
- Galvanized w/ Powder Coated Paint
- Foam Board Insulation
- Roof Curb: 14 in. Curb

Condensate Drain Pan:

- 20-Gauge Stainless Steel, Sloped
- 1 in. MPT Drain Connection

Unit Electrical:

- Main Power (V/Ph/Hz): 230/3/60
- MCA (Amps): 58
- MOPD (Amps): 60
- SCCR (kA): 65
- When protected by Class J, T, or RK1 fuses
- Other Power: 120V GFI Outlet
 - Requires Separate 120/1 Service
- Disconnect: Non-Fused
- Voltage Monitor: Included

Controls:

- Model CM3500
- Outside Air Sensor – Provided
- SAT Control
- Duct Sensor: Provided
- Wall Temp Sensor(s) QTY: Not Included
- Wall Humidity Sensor: Average
- Occupancy Timer w/ BMS Override
- Controller w/ Mounted Display
- Remote Display Terminal: Included
- BMS Compatibility: BACnet MSTP



TotalAire™ Series Dehumidifiers

Auxiliary Heat:

- Electric
- Capacity: 015 kW
- Control Signal: SCR Control

Warranties (Parts Only):

- Standard Warranty: 2 years
- Compressor Warranty: 5 Years
- Air Side Coil Warranty: 2 Years



TotalAire™ Series Dehumidifiers

ENGINEERED SPECIALTIES



TotalAire™ Series Dehumidifiers

CALCULATED PERFORMANCE DATA INFORMATION

Capacity and efficiency values indicated are calculated based on specified input data and are estimates of nominal performance for the specific design. Due to the nature of mechanical equipment, variations in production components and configuration may result in variances from estimated data for a particular production unit.

Application variables in the system which the unit is attached will affect unit performance. Unit performance estimates shown are based on calculations and laboratory testing in controlled conditions. Installation conditions in the particular application may impact performance.

Desert Aire has comprehensive development process and quality control processes that help to assure the best possible correlation in the calculated values indicated, however, capacity and efficiency at the conditions specified are not guaranteed. Due to Desert Aire initiatives for continuous improvement and necessary component adjustments, software and/or unit design may be changed without notice.

Any indication of certified performance point or certification programs are indicators that samples of the production unit design that have been submitted and/or tested based on the stated certification test procedures and certification program rules. This is not a certification of a particular unit performance and does not constitute a warranty or guarantee of performance for any particular production unit at any condition.

Performance software and its output are provided “as is” and any express or implied warranties, including, but not limited to, the implied warranties of merchantability of fitness for a particular purpose are not provided. In no event shall Desert Aire be liable for any direct, indirect, incidental, special, exemplary, or consequential damages (including, but not limited to, procurement of substitute goods or services; loss of use, data, or profits; or business interruption) however caused and on any theory of liability, whether in contract, strict liability, or tort (including negligence or otherwise) arising in any way out of the use of this software and its output.

MCA/MFS Calculation Worksheet

TotalAire 2017_12A

Project: Missouri Governor's Mansion
Tag: DOAS-1

Series	03			
Choose Type of Aux. Heat	Electric			
	Packaged Air Cooled w/ Wheel			
Refrigerant	R410A			
System Airflow - S/A	950	cfm @	0.5	in ESP
System Airflow - E/A	800	cfm @	0.5	in ESP
System Voltage:	230			
System Phase	3			
Supply Blower Motor	1 HP			
Exhaust Blower Motor	1 HP			
Total Pkg. Cndnsr Fan Motor	Qty 1 @ 0.5 HP			
Enthalpy Wheel Motor	0.13 HP			

Electrical Data

Largest Load (Compressor 1)	13.1	Load 1: Rated Largest Load (RLA)
Other Compressor & Motors	12.2	Load 2: Rated Other Loads (RLA)
Heater	36.1	Load 3: Electric Heater Amp Draw Calculation
Transformers	1	Load 4: Total used in calculation

Unit MCA:	58	Amperes
Unit MOPD:	60	Amperes

Operating kW:	4.9	kW	Dehum/Clg Design Day
	20.8	kW	Heating Design Day

Notes

Unit Type for Calculations: **Non- Qpump Type Unit**

Q-Pump
Compressors and Electric Heater can operate simultaneously. Both are ALWAYS considered in calculations.

Non-Qpump
Compressors and Electric Heater can NOT operate simultaneously. The current demands of both are compared and ONLY the largest value is used in calculations.

Calculations are rated per the standards established by UL 1995



TotalAire™ Series Dehumidifiers

Section 2 Installation Overview

- Contractor's Scope of Work
- External System Wiring
- Unit Connections and Clearances



TotalAire™ Series Dehumidifiers

EXTERNAL SYSTEM WIRING

This external system-wiring sheet is provided as a summary detailing the external wiring for proper system operation. All listed components are field installed and wired to the unit's terminal block by the installing contractor. Others supply components unless stated otherwise.

HIGH VOLTAGE

- Dehumidifier Supply Power
- Separate 120/1 power (by others) required for Heat Trace, GFI, Lighting, or other options specified.

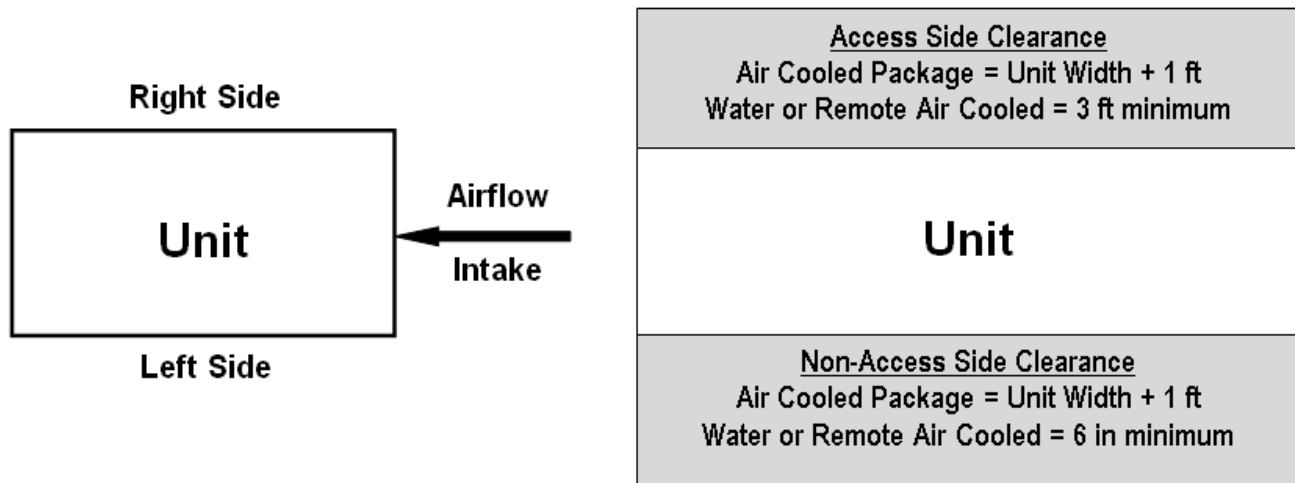
LOW VOLTAGE

- CM3500 Optional Remote Interface Panel
 - (Mounts up to 1,500 feet), Controller Provided by Desert Aire
 - Field Installed
- Supply Air Duct Sensor
 - Provided by Desert Aire
 - Field Installed
- General Fault Alarm for BMS
 - Optional for contractor to utilize
- Occupancy
 - Optional input for contractor to utilize with binary contact closure,
 - Start/Stop by BMS, or
 - Occupancy Timed Scheduling on DA controller
- Smoke Detector (by others) if applicable
 - See wiring diagram for proper termination & rating
 - Optional for contractor to utilize
- External Auxiliary Heater
 - Operated by the unit's controller
- External Auxiliary Heater Interlock
 - Operated by the unit's controller



TotalAire™ Series Dehumidifiers

UNIT CONNECTIONS & CLEARANCES



Utility	Location
Electrical, Filter and Service Access	Left Side
Remote Condenser Refrigerant Lines	Not Applicable
Water Cooled Piping Connection(s)	Not Applicable
Aux Heat Connection	Left Side
Condensate Drain	Left Side
Outdoor Intake	Horizontal
Supply Air Discharge	Down
Return Air Intake	Down
Exhaust Air Discharge	Horizontal



TotalAire™ Series Dehumidifiers

SEQUENCE OF OPERATION

SENSOR CONTROL DEFINITIONS AND LOCATION

Outdoor Air Temperature and Humidity Sensor

A temperature and humidity sensor will be located before the enthalpy wheel in the outdoor air flow. This set of sensors calculates the outdoor air enthalpy to control wheel operation.

Return Air Temperature and Humidity Sensor

A temperature and humidity sensor will be located before the enthalpy wheel in the return air flow. This set of sensors calculates the outdoor air enthalpy to control wheel operation in conjunction with the outdoor air temperature and humidity sensors.

Exhaust Air Humidity Sensor

A humidity sensor will be located after the enthalpy wheel in the exhaust air flow. This sensor will control the wheel defrost operation.

Intake Air Temperature and Humidity Sensor

A temperature and humidity sensor will be located before the evaporator coil. The sensor feeds back to the unit microprocessor for actuation of the compressor in conditions that require heating, cooling, or dehumidification.

Supply Air Temperature Sensor

The supply air sensor will be located in the supply air ductwork. This sensor controls modulating heating and cooling output and controls compressor operation in conjunction with the intake air sensors.

OCCUPIED COOLING AND DEHUMIDIFICATION COMPRESSOR CONTROL

Occupied Cooling Compressor Command

During occupied mode the intake air temperature sensor is compared to the supply air temperature set point. If the intake air is greater than the supply air temperature set point plus the programmed deadband, the compressors will start on a call for cooling. Units containing multiple stages of cooling will have the subsequent stages commanded as the intake air rises above the supply air temperature set point by a factory programmed value depending on the number of stages available, the unit design airflow, and the unit cooling capacity.

Occupied Dehumidification Compressor Command

During occupied mode the intake air temperature sensor and humidity sensor is compared to the unit supply air dew point set point. If the intake air is greater than the



TotalAire™ Series Dehumidifiers

dew point set point, the compressors will start on a call for dehumidification. Units containing multiple compressor stages will have the subsequent stages commanded as the intake air enthalpy rises above the dew point set point by a factory programmed value depending on the number of stages available, the unit design airflow, and the unit dehumidification capacity.

OCCUPIED TEMPERATURE CONTROL

Supply Air Temperature (SAT) Control

SAT Control scheme uses a duct-mounted sensor to maintain a constant supply air temperature. The system microprocessor PID loop receives an analog signal from the duct sensor. The controller then outputs a 0-10 VDC signal to modulate a hot gas reheat or an auxiliary heater in small incremental changes to provide a constant discharge temperature. During hot gas reheat mode the typical SAT control will be +/- 0.2 °F from the set point.

AIR REHEAT AND HEATING SEQUENCING

Vapor Compression Cycle Reheat

When compressor(s) are operational air reheating is accomplished by means of the hot gas refrigerant discharged from the compressor which feeds a hot gas reheat condenser coil (HGRH) in the air stream. The HGRH utilizes the energy in the refrigerant that passes through for air heating. The HGRH control valve is modulated by the unit's microprocessor to control heat output as based on the temperature control option selected.

Heating Mode Operation

In heating mode the unit controller will activate the auxiliary heater. The auxiliary heater capacity is modulated by the unit microprocessor to control heat output as based on the temperature control option selected.

If unit is equipped with an internal auxiliary heating option, the internal heater will be commanded by the unit controls. If no auxiliary heater option has been selected for factory installation, a 0-10 VDC signal and binary contact closure is provided for connection to field installed heating devices. Supply air temperature sensor must be installed downstream from field installed heater.

OCCUPIED MODE CONTROL

The unit will switch between occupied and unoccupied mode through any of three methods:



TotalAire™ Series Dehumidifiers

Controller Time Schedule

Unit is equipped with on-board real-time clock and scheduling capability. 7-day independent scheduling and holiday scheduled are available. Temporary occupancy override is available through the unit display or zone sensor/display (when equipped).

Binary Contact Closure (by others)

Terminal points are provided at the unit low voltage terminal block to activate occupancy. A switch or other contact closure will command the unit into occupied mode when closed. Opening the contact closure will command unit into unoccupied mode.

Building Management System (BMS)

When specified with a building management system protocol capability, the unit microprocessor can be commanded via a network point.

ENTHALPY WHEEL OPERATION

Enthalpy Wheel Total Energy Control

The enthalpy wheel is commanded on to reduce the sensible and/or latent energy of the outdoor air stream in the occupied mode of operation in the summer and increase the temperature and humidity of the outdoor air in the winter during occupied mode. During the spring and fall there may be some conditions that transfer the energy between the outdoor airstream and the exhaust airstream when this is not advantageous. The unit uses the outdoor air and return air temperature and humidity sensors to calculate enthalpy.

The wheel is disabled during these conditions:

When the outdoor air dew point is below the dew point set point and any one of the following is true:

- The outdoor air temperature is within the deadband range of SAT as previously defined by the compressor operation.
- The outdoor air temperature condition is lower than the SAT set point minus the heating deadband and the return air temperature is lower than the outdoor air temperature.
- The outdoor air condition is higher than the SAT Set point plus the cooling deadband and the return air temperature is greater than the outdoor air temperature.

Or

When the outdoor air dew point is above the dew point set point and return air enthalpy is greater than the outdoor air enthalpy.

Cleaning Sequence



TotalAire™ Series Dehumidifiers

If wheel has been locked out for more than 1 hour, the microprocessor will control the enthalpy wheel on for 1 minute. This allows any dust accumulation that may have infiltrated or bypassed filters to be purged.

Enthalpy Wheel Frost Control

A VFD is supplied to control the wheel speed. As the exhaust air relative humidity sensor approaches saturation, impending frost on the return area of the wheel is indicated. The microprocessor automatically adjusts the wheel speed to impact the effectiveness and temperature of the wheel surface. A PID loop maintains peak available wheel speed and effectiveness.

Enthalpy Wheel VFD Control of Wheel Speed

Wheel is modulated to maintain intake air temperature at SAT set point when OAT is lower than the SAT Set point minus the heating deadband. Wheel increases speed to increase off-wheel temperature and decreases to decrease off-wheel temperature. This allows for maximum outdoor air economizer cooling while maintaining tempered SAT based on the selected control algorithm.

EMERGENCY SYSTEM SHUTDOWN

Terminal points are available for a binary contact closure by others to control unit shutdown by smoke detector or other similar device. An open contact in the 24 VAC circuit will deactivate motors, fans and compressors.



TotalAire™ Series Dehumidifiers

DEHUMIDIFIER SPECIFICATIONS

Unit Description

Unit Enclosure:

- A 12-gauge galvanized base rail system or base pan shall be used.
- The unit shall be double wall with 16-gauge galvanized outer panels and 22-gauge galvanized metal inner liners.
- Hinged access doors shall allow easy access to internal components within each section. Each door shall have a minimum of two cam latches. Weatherproof compression gaskets shall seal between the door and unit casing to produce an airtight seal.
- Single side service access – The unit shall be designed for complete access for service and maintenance from one side only. See mechanical drawings for access side required. Right hand side service access is standard.
- The electrical control panel shall be in its own separate compartment.
- All external fasteners shall be stainless steel.
- Units with enthalpy wheel options shall also include a rain hood and gravity damper for the exhaust air opening.
- Outdoor cabinets shall include a rain hood and an outdoor air isolation damper with actuator. Outdoor cabinets shall be fully weatherproof with a cross broken roof for water drainage. The insulation shall be 1" closed cell solid foam sandwiched in the double wall cabinet with a minimum "R" factor of 5.0.

Paint and Finish: Prior to painting, all metal parts shall be pretreated to remove oils and dirt and rinsed with an ionized solution. Painting shall be by a powder coat technique to assure positive adherence with a high-impact finish. All sides of panels shall be painted after manufacturing. The paint shall be High Yield Polyester. The paint shall be rated to meet a minimum of 1,000-hour salt spray test (ASTM B117), have a minimum Direct Impact Resistance of 160 in-lbs (ASTM D2794), have a minimum flexibility of ¼" Mandrel (ASTM D522, Method B) and a minimum 1000-hour Humidity Resistance (ASTM D2247). Unit color shall be light gray.



TotalAire™ Series Dehumidifiers

Refrigeration System:

Refrigerant: The system's operating refrigerant shall be R-410A only.

Compressors: (<6 HP): The compressor shall be heavy-duty scroll type, single compressor complete with start kit on single-phase motors. Suction and discharge pressure valves shall be monitored on a continuous basis with high and low alarm / cutout settings. The compressor shall be externally vibration isolated.

Hot Gas Bypass: The unit shall include hot gas bypass for each system compressor set. The hot gas bypass shall be used for the prevention of coil freeze up and not for compressor unloading.

Receiver: The unit shall include a high-side refrigerant receiver.

Evaporator Dehumidifier Coils:

Fins: Fins shall be die-formed, raised lanced aluminum, and damage resistant. Extruded fin collars provide maximum heat transfer. Fin spacing shall be 10 fins per inch (FPI). On units without the enthalpy wheel option the coil shall be a maximum of 40" in height. On units with the enthalpy wheel option the coil shall be a maximum of 47" in height.

Tubes: Coil shall be fabricated from seamless drawn copper. The inner tubing shall be rifled to produce turbulent refrigeration flow to enhance the heat transfer process. The tubes shall be hydraulically expanded into the fins to form a permanent metal-to-metal bond for maximum heat transfer and stability. On units without the enthalpy wheel option the coil shall be a minimum of six (6) rows deep. On units with the enthalpy wheel option the coil shall be a minimum of three (3) rows deep.

Coils shall be leak tested with 420 psig nitrogen and U.L listed.

Refrigerant Condenser Coils:

Air-Cooled Condenser (Reheat Coil):

Fins: Fins shall be die-formed, raised lanced aluminum and damage resistant. Fin spacing shall be 12 FPI (fins per inch).



TotalAire™ Series Dehumidifiers

Tubes: Coil shall be fabricated from seamless drawn copper. The inner tubing shall be rifled to produce turbulent refrigeration flow to enhance the heat transfer process. The tubes shall be hydraulically expanded into the fins to form a permanent metal-to-metal bond for maximum heat transfer and stability. The coils shall be a minimum of two (2) rows deep.

Coils shall be leak tested and U.L. listed.

The reheat coil shall be positioned with a minimum of 5" clearance from the evaporator coil to prevent water re-evaporation. Direct connection of the reheat coil to the DX coil is not allowed.

Packaged Air-Cooled Condenser:

The dehumidifier shall be equipped with an integral, full-size, air-cooled condenser to reject excess heat to the outside. The system shall be able to reject all the recovered heat (T.H.R.) outdoors.

Condenser Coils: Coils shall be of 3/8-inch OD copper tubing in a staggered design. Tubes shall be mechanically expanded into full-collared plate type aluminum fins. The coil shall be sloped at least 20 degrees from the horizontal to protect the coil from damage.

Fan Motors: Fan motors shall be heavy-duty PSC or three-phase with permanently lubricated ball bearings and built-in overload protection.

Fans: Fan diameter shall not exceed 30 inches. All units shall have dynamically balanced fans with aluminum blades and painted steel hubs.

Fan Cycling: Fans shall be cycled based on internal head pressure.

Fan Guards: Guards shall be heavy-gauge, close-meshed steel wire with vinyl coating. Guards shall be contoured for maximum rigidity.

Auxiliary Heater

Electric Heater:

The capacity shall be in accordance with the schedule.

The heater shall be integral to the unit and wired to the unit as a single point power connection.

The heater coils shall be constructed of high grade nickel-chrome alloy and insulated by floating ceramic bushings from the galvanized steel



TotalAire™ Series Dehumidifiers

frame. Coil terminal points shall be stainless steel insulated by means of non-rotating ceramic bushings.

The heater shall be equipped with fail-safe disc-type thermal cut-outs.

The heater shall include high limit cut-outs, magnetic contactors as required, a control transformer, and an airflow switch.

Unit Location:

The unit shall be designed for outdoor (concrete slab or equipment rail) installation. The installing contractor shall provide 4" housekeeping pad or mounting rails.

The unit shall be designed for a rooftop, roof curb application with bottom return air connection and schedule supply air connection.

Electrical Control Panel: The electrical control panel shall be easily accessible. It shall be of adequate size to house all electrical controls and devices. The unit shall be provided with single point power connection to serve controls, fans, electrical auxiliary heater, and compressors, factory wired to the power connection lug set. The electrical controls shall include low voltage transformers to supply 24 VAC control power, and clearly labeled high- and low-voltage terminal strips. Electrical panels will house a control system that provides high- and low-pressure control (with manual reset of the high-pressure cutout and automatic reset of low-pressure cutout), anti-short-cycling timer to protect against compressor cycling, and all operational controls that command unit function and modes.

Disconnect: Provide with a factory mounted and wired disconnect switch.

GFI Outlet: Provide a 15-amp, 120-volt electrical outlet. Requires a separate electrical 120/1 power connection.

Phase / Voltage Monitor: Provide with a factory mounted and wired phase / voltage monitor.

Control System:

A digital control system shall be used to accurately and precisely control the DESERT AIRE dehumidification system and the supply air temperature requirements.



TotalAire™ Series Dehumidifiers

Controller: The controller shall provide precise system control and feature an easy-to-read control mounted display which indicates actual operating and set points.

Remote Display Terminal: The display shall be remote mountable up to 500 feet from the unit. The controller shall have a built-in occupancy timer.

The unit shall include factory-mounted temperature and humidity sensors in the filter section, pre-wired to controller in panel for actuation of compressor when intake temperatures at evaporator coil are above the programmed design dewpoint or above the supply air temperature setpoint.

Supply Air Temperature Sensor: The unit shall include a supply air temperature sensor used to control the supply air temperature +/- 0.2°F of supply air temperature setpoint under steady state conditions.

BMS Compatibility: The unit's controller shall have the following BMS compatibility: BACnet MSTP

Condensate Drain Pan: The drain pan shall be 20-gauge stainless steel, sloped, and positioned under the dehumidifier coil. The drain pan shall be TIG welded and securely attached to the evaporator endplates to avoid shifting. The drain pan shall be fitted with a minimum 1" non-corrosive plastic drain connection. The drain pan shall meet all the requirements of ASHRAE Standard 62.

Supply Air Blower Assembly:

The blower housing shall be made of galvanized steel and mounted on permanently lubricated sealed ball bearings. The blower assembly shall be forward curved, centrifugal; it shall be dynamically and statically balanced with a precision ground and polished hardened steel fan shaft. The blower housing shall be mounted on vibration pads.

Blower Discharge: The unit's air discharge shall be as shown on the mechanical drawings.

Blower Pulley Assembly: The driver pulley and the blower pulley shall be made of cast iron. The motor sheave shall be a variable pitch type to allow for field adjustment of CFM and external static pressure, and shall be dynamically and statically balanced. The drive service factor shall be a minimum of 1.4.



TotalAire™ Series Dehumidifiers

Blower Motor: Unless otherwise specified, blower motors 7.5 HP and less shall be TEFC, 10 HP and above shall be ODP class B insulated, continuous-duty, 40C ambient, three-phase overloads. The motor shall be UL listed. All motors above 3 HP shall be premium efficiency to comply with E.I.S.A where applicable.

Air Filters: The supply system shall be provided with MERV 13 disposable filters consisting of 4" pleated filter. The exhaust system shall be provided with MERV 7 disposable filters consisting of 4" pleated filter.

Roof Curb: The roof curb shall be a heavy-gauge galvanized steel construction, of box section design with integral base plate, and shall have continuously welded corner seams. The curb shall be internally insulated with three-pound density rigid fiberglass board insulation not less than 1-1/2" thick. The curb shall include a factory-installed wood nailer strip around the top perimeter. The roof curb shall be sized to fit the equipment to be supported, and shall not be less than a height of 14 inches.

Exhaust Air Energy Recovery Rotary Wheel System

Exhaust Enthalpy Wheel

Wheel Design: The rotor matrix shall be manufactured of a corrosion resistant aluminum alloy that is composed of alternating corrugated and flat, continuously wound layers of uniform widths to guarantee laminar air flow, and low static pressure loss. The matrix will have a minimum depth of 7.5 inches.

Desiccant Type: All corrugated surfaces must be coated with a thin non-migrating synthetic zeolite absorbent layer; with a pore size no greater than a 4 Angstrom; prior to being formed into the media structure to insure that all surfaces are coated and that adequate latent capacity is provided. The wheel's effectiveness is documented through a certification program conducted in accordance with ASHRAE 84 and ARI 1060 standards. The certification is conducted by a qualified independent organization that is recognized by AHRI.

Unit Housing: The self supported housing shall be made of galvanized steel to prevent corrosion. For rotor housings 2000 mm (79 inches) and less, the rotor wheel is supported by two internal, maintenance-free, antifriction, permanently sealed bearings that are located and protected within the surrounding wheel hub. For rotor housings larger than 2000 mm (79 inches), the rotor wheel shall be supported by two maintenance-free sealed pillow block bearings that are located within the housing and protected from the air stream.



TotalAire™ Series Dehumidifiers

Rotor Seals: The rotor shall be sealed with a wear resistant adjustable perimeter seal fitting completely around the rotor wheel. A purge shall be provided to minimize cross-contamination.

Drive System: The rotor wheel shall be driven by a self-adjusting belt system, which includes a A/C motor, nylon reinforced belt with linkage, and a spring-tensioned motor plate. The A/C motor shall be capable of performing under constant and variable speed applications.

Certification: The wheel's effectiveness shall be documented through a certification program conducted in accordance with ASHRAE 84 standards and ARI 1060. The certification shall be conducted by a qualified independent organization that is recognized by AHRI.

Frost Protection: The manufacturer shall provide a Variable Frequency Drive (VFD). The VFD shall drive the wheel at maximum speed until the exhaust air's relative humidity reaches 95% to eliminate wheel frosting. The VFD shall vary the wheel speed to maintain the RH maximum to optimize energy recovery.

Exhaust Air Blower Assembly

Blower Housing: The blower housing shall be made of galvanized steel and mounted on permanently lubricated sealed ball bearings. The blower assembly shall be forward curved, centrifugal. It shall be dynamically and statically balanced with a stainless steel fan shaft. The blower housing shall be mounted on vibration pads.

Blower Discharge: The unit's air discharge shall be horizontal discharge.

Blower Pulley Assembly: The driver pulley and the blower pulley shall be made of cast iron. The motor sheave shall be a variable pitch type to allow for field adjustment of CFM and external static pressure, and shall be dynamically and statically balanced with a precision ground and polished hardened steel fan shaft. The drive overload service factor shall be a minimum of 1.2.

Blower Motor: The motor shall be ODP (indoor) or TEFC (outdoor), class B insulated, continuous-duty, 40C ambient, three-phase overloads. The motor shall be UL listed. All motors above 3 HP shall be premium efficiency to comply with E.I.S.A where applicable.

DEDICATED OUTDOOR AIR SYSTEMS

**DOAS and HOAS Equipment
for 100% Outdoor Air and
Mixed Air Applications**



Office Environments



Hotels and Motels



Educational Environments



Restaurants



Medical Facilities



Desert Aire's TotalAire™ Series dehumidifiers provide you the most complete solution for your dedicated outdoor air system (DOAS) and high outside air system (HOAS) applications. Our many options allow you to design the highest energy saving solution for your compliance to ASHRAE 62.1 code ventilation requirements for new construction and renovation projects. This system allows the engineer to separate the latent load of the building and deliver conditioned air to the space which will optimize the performance of the buildings convention heating and cooling systems. Rely on Desert Aire for a solution for your complete outside air needs.

DEHUMIDIFY WITH THE EXPERTS ... 

ISSUES OF INDOOR AIR QUALITY (IAQ)

Several HVAC trade and professional organizations, including ASHRAE, have documented the need for suitable indoor air quality. A primary requirement for maintaining proper IAQ is through the introduction of varying amounts of outdoor air. The down side of adding outdoor air is that it also admits excess moisture into the facility. If this condition is not controlled, it can create an environment for mold, mildew, viruses and other potentially hazardous organisms to flourish. The key to preventing mold formation and growth is to control the relative humidity within the space. A standard air conditioner cannot achieve this since it controls only temperature. Instead, a system must be implemented that can provide full control of both temperature and relative humidity.



Figure 1 - Basic Refrigeration Circuit Diagram

DEHUMIDIFICATION

All TotalAire™ units are designed around a reliable, efficient dehumidification system. There are two main reasons for using the dehumidifier as a base to build a complete ventilation system:

- Significant additional energy costs will result if the latent cooling provided by a standard air handler is used for dehumidification. In contrast, dehumidifiers are the **only** efficient means to regulate moisture removal.
- TotalAire™ dehumidifiers are configured for the easy addition of optional components needed for a complete solution, options that offer effective solutions that are not otherwise available.

TotalAire™ units are engineered and manufactured for excellent performance, dependability and serviceability. Specially designed evaporator coils provide maximum moisture removal. Components are carefully selected for reliable long-term operation.

DEDICATED OUTDOOR AIR SYSTEMS (DOAS)

The most energy efficient method to remove moisture is through the use of a dedicated outdoor air system that lowers the dew point temperature of supply air to below 55° F. This also helps remove existing moisture from inside a facility. A DOAS design can also be optimized to remove maximum moisture at the lowest electrical consumption rate (Moisture Removal Efficiency, MRE) at both full and part-load conditions. Desert Aire manufactures DOAS units under our Aura™, TotalAire™ and VerticalAire™ product lines.

HIGH OUTDOOR AIR SYSTEMS (HOAS)

If the application requires an air handler to accept outside air volumes of 50% to 100% of the supply air volume, conventional sensible heating and cooling units cannot be used. The system must be designed to remove the outdoor air's moisture, but also incorporate a specialized sequence of operation to provide the appropriate sensible cooling and heating. A HOAS design can also be optimized to remove maximum moisture at the lowest electrical consumption rate (Moisture Removal Efficiency, MRE) during both full and part-load conditions. Desert Aire manufactures HOAS units under our Aura™, TotalAire™ and VerticalAire™ product lines..

DESIGN OPTIONS

Desert Aire's TotalAire™ Series offers the widest range of performance options while maintaining its main focus: Meeting the target dewpoint while attaining the lowest operational cost. In addition, the many options help to reduce the operating cost of the remainder of the building's sensible cooling and heating systems. The design engineer has the ability to configure the system with the following configuration options.

- **DOAS or HOAS** - System is flexible in the amount of outside air delivered
- **Energy Recovery** - An enthalpy wheel can recover energy from the exhaust air stream
- **Control Strategy** - Multiple choices allows better energy efficiency
- **Choice of Condensers** - Air, water or geothermal (or combinations)
- **Auxiliary Heating** - Many options including:
 - Gas
 - Electric
 - Hot water or Steam Coils
 - Geothermal
- **Miscellaneous Options** - Indoor/Outdoor systems, fan discharge direction, coated coils and better filtration are just a few of the many additional configuration options available for inclusion on the TotalAire™ Series.

CONDENSER DESIGN OPTIONS

Each unit includes a hot gas reheat coil that is integrated into the refrigeration circuit along with a modulating control system to maintain the discharge temperature based upon the choice of control algorithm. This coil reheats the leaving air to the precise temperature required and rejects any remaining energy to a second condenser.

A choice of secondary condenser options allows the design engineer to integrate the superior design features of the TotalAire™ system into any building type or location. The condensing system is selected to work in series with the hot gas reheat coil to implement the control option of choice. You may choose either an air-cooled condenser, that dissipates heat to the outdoors, or a water-cooled heat exchanger, which releases heat into a facility's chilled water or cooling tower loop.

Air-cooled condensers may be packaged with the dehumidifier on a single skid in an outdoor application. A split system allows the dehumidifier to

be located away from the condenser, indoors or outdoors. Desert Aire only requires two refrigeration pipes (suction and liquid lines) to be run between the dehumidifier and remote condenser.

An optional water-cooled condenser can also be selected for use in loop systems, hybrid systems or in geothermal applications.

AIR SEPARATED COILS

If a hot gas reheat coil is installed too close to the evaporator coil, re-hydration can occur. Water on the surface of the evaporator coil can be blown onto the hot gas reheat coil. This will convert it back into vapor which will then be returned to the space. This completely negates all dehumidification efforts and fails to meet basic IAQ design requirements. Consequently, the system will remove less moisture at a higher electrical cost. That's the reason we design our IAQ units with adequate separation between the outlet face of the evaporator coil and the inlet face of the hot gas reheat coil to prevent re-hydration.



Figure 2 - Water Condenser



Figure 3 - Packaged System

For more information visit www.desert-aire.com



CABINET AND CONSTRUCTION

The TotalAire™ Series features a double wall construction cabinet with a powder coated galvanized steel outer wall and a sturdy galvanized inner panel. Hinged access doors shall allow easy access to internal components within each section. Each door shall have a minimum of two cam latches. Weatherproof compression gaskets shall seal between the door and unit casing to produce an airtight seal. The unit is designed for complete access for service and maintenance from one side only.

Outdoor cabinets include a rain hood and isolation dampers with actuator and have a fully weatherproof roof with a cross broken roof for water drainage.

FILTRATION

Outdoor air contains many airborne particles and pollutants. Filtration is essential to prevent dirt from accumulating on coils and contaminating indoor spaces. When 1-inch or 2-inch wide filters are used, they must be frequently replaced. Therefore, our IAQ units are equipped with a minimum of 4-inch, MERV 8, pleated filters to reduce filter maintenance. Optional prefilters and higher efficiency MERV 13 filters are available as an option.

COIL COATINGS

Sea coast coil coatings are available. Desert Aire uses ElectroFin™ coil coatings to provide long life in corrosive environments.



Figure 4 - TotalAire™ Filter Rack With MERV 13 Filters Installed.

BUILDING MANAGEMENT INTEGRATION

The unit's controller has the following BMS choices:

- LonWorks® compatible.
- BACnet™ MSTP compatible.
- BACnet™ Ethernet compatible.
- Modbus® compatible.

COMPLETE SOLUTIONS FOR 100% OUTDOOR AIR

Solving the 100% outdoor air problem is easy with a TotalAire™ dehumidifier and the expertise of a Desert Aire representative. Complete solutions addressing moisture, cooling and heating loads while recovering and saving energy will help ensure proper indoor air quality and comfort. Contact Desert Aire for assistance when you need complete solutions for conditioning ventilation air.



Figure 5 - TotalAire™ Electrical Panel Detail

DEHUMIDIFY WITH THE EXPERTS!

N120 W18485 Freistadt Road, Germantown, WI 53022 FAX: (262) 946-7401

(262) 946-7400 - www.desert-aire.com





CM3500 Series Controller for QS/QV Dehumidifiers

ADVANCED COMMUNICATIONS CAPABILITIES EASY INSTALLATION AND OPERATION CONTINUOUS MONITORING

Advanced QS/QV Microprocessor Controller



CM3500 Controller Used on QS/QV (20-30 ton) Dehumidifier



Remote Display Terminal



Optional CM3500 Series Remote Display Terminal (RDT)



Wall Mount Temperature & Humidity Sensor



CM3500 Controller Used on QV (4-15 ton) Dehumidifier

FEATURES

- Backlit LCD User Interface
- Custom programming for complex dehumidification temperature and humidity control
- Multiple communication options
- Alarm history retention

DESCRIPTION

The CM3520 controllers are uniquely programmed for Desert Aire's DOAS application providing energy efficient moisture removal and precise temperature & humidity control.

The CM3520 controllers offer greater compatibility with building management systems (BMS) through the use of an options plug in communication module. Optional communication modules for the CM3520 include: LonWorks®, BACnet™ Ethernet™, BACnet™ MS/TP or Modbus®. The CM3520 has a built in time clock for occupied scheduling should a BMS not be present on your project.

A user interface to the CM3520 is supplied on each unit. This backlit LCD display provides easy to navigate screens for setpoint adjustment and unit monitoring. All Inputs and Outputs along with alarm history can be viewed from the user interface to aid in

ORDER OPTIONS

Controller Options: All QS and QV 20 to 30 ton

- CA3500-ND-T Duct Mount S/A Temp Sensor w/o RDT
- CA3500-WD-T Duct Mount S/A Temp Sensor with RDT

Controller Options: QV 4 to 15 ton

- CA3500-WD-T Duct Mount S/A Temp Sensor with RDT
- RDT = remote display terminal with 20ft. cord

Zone Sensor Options

- CA3500-RR-T Wall Mount Zone Temp Sensor
- CA3500-RR-TH Wall Mount Zone Temp & RH Sensor

Communication Configuration

- Standard - No BMS Communication
- LONWORKS® Module
- BACnet™ Ethernet™ Module
- BACnet™ MS/TP Module
- Modbus® Module

All trademarks hereby referenced are the property of their respective owners.

CM3500 Controller for QS/QV Dehumidifiers (cont.)

unit or system diagnostics. The interface is either supplied as a built-in display on the face of the controller or as a separate remote display terminal that is connected to the controller.

SYSTEM DISPLAY OPTIONS

Aura™ and TotalAire™ Series (QS)

The Aura™ and TotalAire™ Series use a controller with the integral user interface. As an option, a remote mounted display terminal (hand-held or wall mounted) can be ordered (See figure 4). The remote display terminal is shipped with a 20 ft. interconnection cable that has RJ11 6-pin termination plugs.

VertcalAire™ Series (QV)

For the QV 4 to 15 ton systems, the electrical control box is located in the base section where the compressors are located. For most users, this is too low to see the display easily, so the controller without an integral display is installed in the electrical enclosure and the remote display terminal is shipped as a separate device.

For the QV 20 to 30 ton systems, Desert Aire provides the controller with the integral user interface. As an option, a remote display terminal (hand-held or wall mounted) can be ordered.

BMS COMMUNICATION MODULES

LonWorks® - Echelon's LonWorks® is a dominant solution of control in industry, offices, homes and transport. Electric standard supported is FTT10.

Modbus® - One of the most widely used protocols. Supports Modbus Slave, RTU mode; communications standard RS485.

BACnet™ MS/TP and BACnet™ Ethernet - Based on EIA-485 and Ethernet™ standards. Connection is possible through the following networks:

- SNMP v1, v2, v3 networks
- BACnet™, Ethernet™, BACnet™/IP networks, BACnet™ MS/TP
- LAN or Internet

BMS COMMUNICATION - DETAILS

BACNET™ MS/TP

If the system was purchased with the BACnet MS/TP option, the BACnet Device Instance and Station Address will need to be set before connection to the control network. This is because the Station Address is set to 0 as a default, and will conflict with the device on the control network already set to 0.

Defining the station address prior to unit shipment will allow Desert Aire to correctly set the address. If the value is not known prior to the goods shipping, then the contractor must alter these default settings during unit commissioning. A software utility program will need to be used, allowing access to these settings. For more information, refer to the PCO1000BAO cut sheet shipped with the dehumidifier. Download the system BACnet Point List from the Desert Aire website (www.desert-aire.com).

BacNet™ Ethernet

If the system was purchased with the BACnet Ethernet option, it is strongly recommended that the network administrator be contacted, as the incorrect configuration of the Ethernet card may temporarily shut

down the entire network. For the correct operation of the Ethernet card, a number of basic parameters need to be set, such as the IP address and Netmask. Each device connected to an Ethernet network must have a unique IP address.

The Ethernet card is supplied with the DHCP function already active. Therefore, in a network served by a DHCP server, the Ethernet card will automatically acquire the necessary parameters without requiring configuration. In the case of a network without DHCP, these parameters need to be configured manually. For more information, refer to the PCO1000W*O cut sheet shipped with the dehumidifier. Download the SYSTEM BACnet Ethernet Point List from the Desert Aire website (www.desert-aire.com).

LonWorks®

If the system was purchased with the LonWorks option, the connection to the control network can be done without controller modification.

For more information, refer to the PCO1000FO cut sheet shipped with the dehumidifier. The system XIF file for system configuration, as well as the SYSTEM LON point list, is available from the Desert Aire website (www.desert-aire.com).

ModBus® Slave

If the system was purchased with the Modbus option, the controller network address and baud rate need to be set in the controller for proper communication operation. The default settings as shipped are 9600 for the baud rate and the address is 0.

Refer to the system controller manual for address and baud rate setting instructions. For more information, refer to the PCOS004850 cut sheet shipped with the dehumidifier. Download the Modbus Point List from the Desert Aire website (www.desert-aire.com).

AIREGUARD™

In order to utilize AireGuard™ on these units you must purchase the AireGuard™ Hardware Box and AireGuard™ subscription service. The AireGuard™ platform allows for remote monitoring, alarming, and data trending of connected Desert Aire equipment through a secure cloud based database. The owner must provide an Ethernet internet connection to the AireGuard™ Hardware Box to enable the data transmission to the cloud server. The connection communicates without opening additional ports in the systems firewall or requiring a virtual private network. Contact your local Desert Aire sales representative if you are interested in this service.

For those users with more than one dehumidifier, this system can act as their local building management system where all of the units are available with the same login credential. All that is required is an Ethernet cable to be connected to the AireGuard interface box. This connection will meet all of your IT department's security requirements and does not need to pass through your firewall.

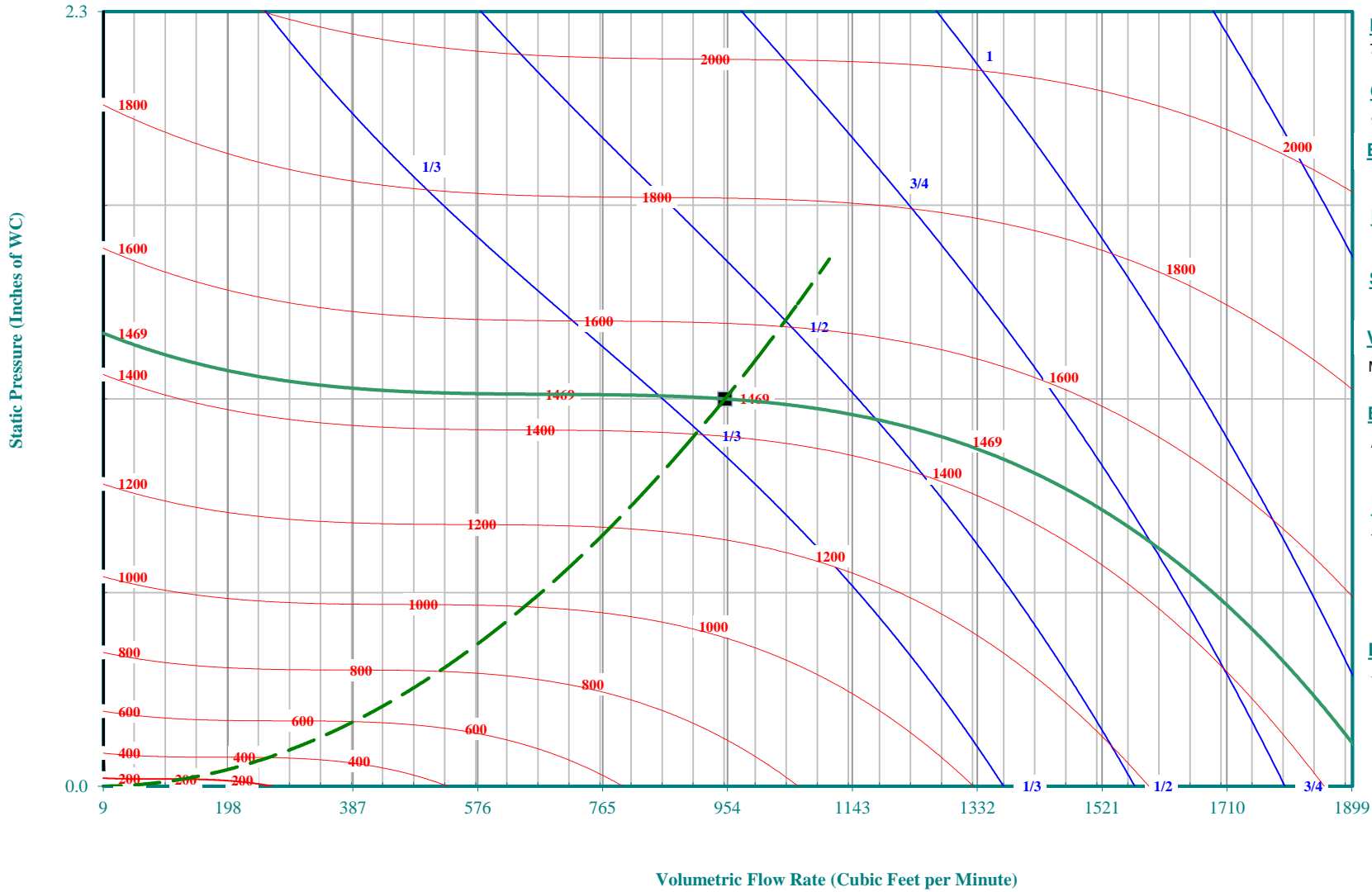
Please refer to the AireGuard™ brochure for additional details.



N120 W18485 Freistadt Road
Germantown, WI 53022
PH: (262) 946-7400
FAX: (262) 946-7401
www.desert-aire.com
E-mail: info@desert-aire.com



Supply Blower Performance Curve



BLOWER INFORMATION

710-180, ATLI 7-7 F, Comefri

CFM, TSP

950, 1.17

BHP (w/o Belt Loss, w/ Belt Loss)

0.41, 0.49

MOTOR P/N, HP

720-370, 01.00HP, 04.2A

STATIC EFFICIENCY, RPM

43%, 1469

VFD INFORMATION

Max (Hz):65 (default) Min (Hz):60

BELT INFORMATION

AX

QTY 1

DRIVER INFORMATION

750-009 1VL44

-

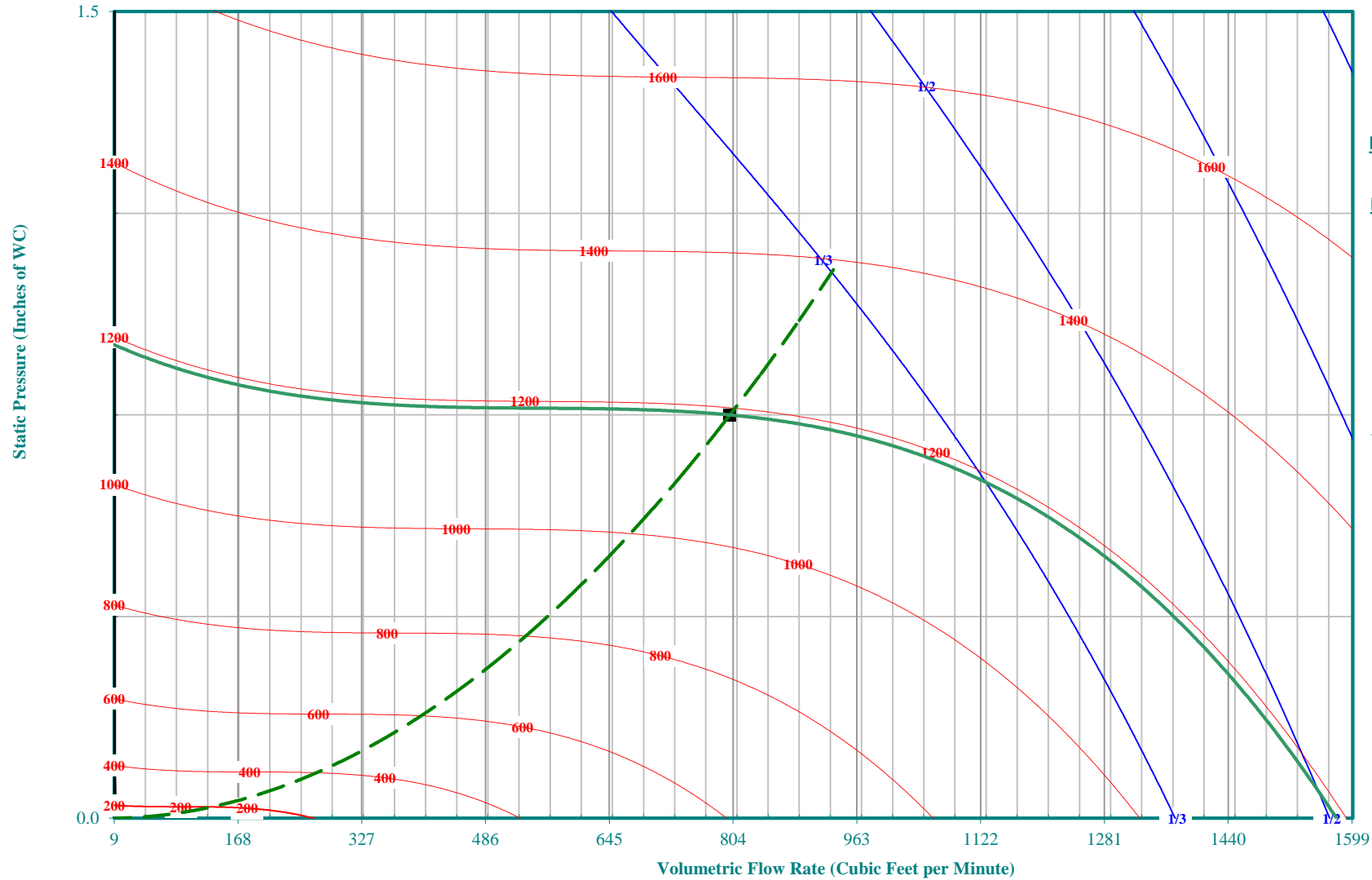
2 Turns Open

DRIVEN INFORMATION

750-122 AK44 x 3/4

Driven RPM: 1466

Exhaust Blower Performance Curve



BLOWER INFORMATION

710-180, ATLI 7-7 F, Comefri

CFM, TSP

800, 0.77

BHP (w/o Belt Loss, w/ Belt Loss)

0.23, 0.28

MOTOR P/N, HP

720-370, 01.00HP, 04.2A

STATIC EFFICIENCY, RPM

42%, 1190

VFD INFORMATION

Max (Hz):65 (default) Min (Hz):60

BELT INFORMATION

AX

QTY 1

DRIVER INFORMATION

750-009 1VL44

-

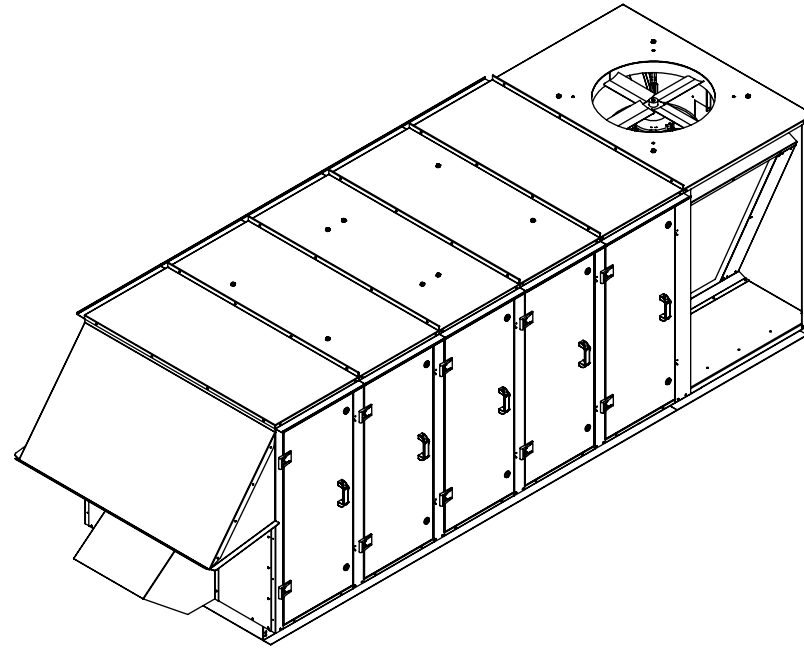
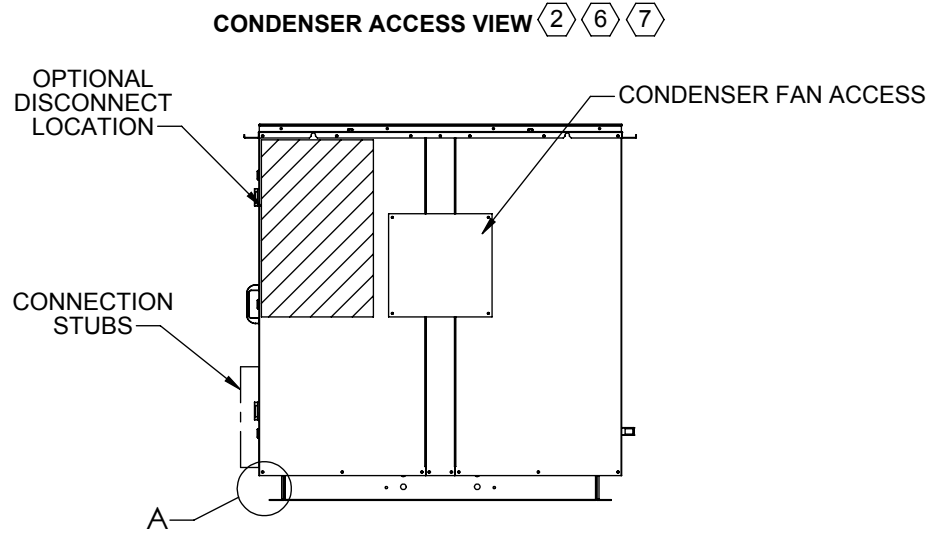
2 Turns Open

DRIVEN INFORMATION

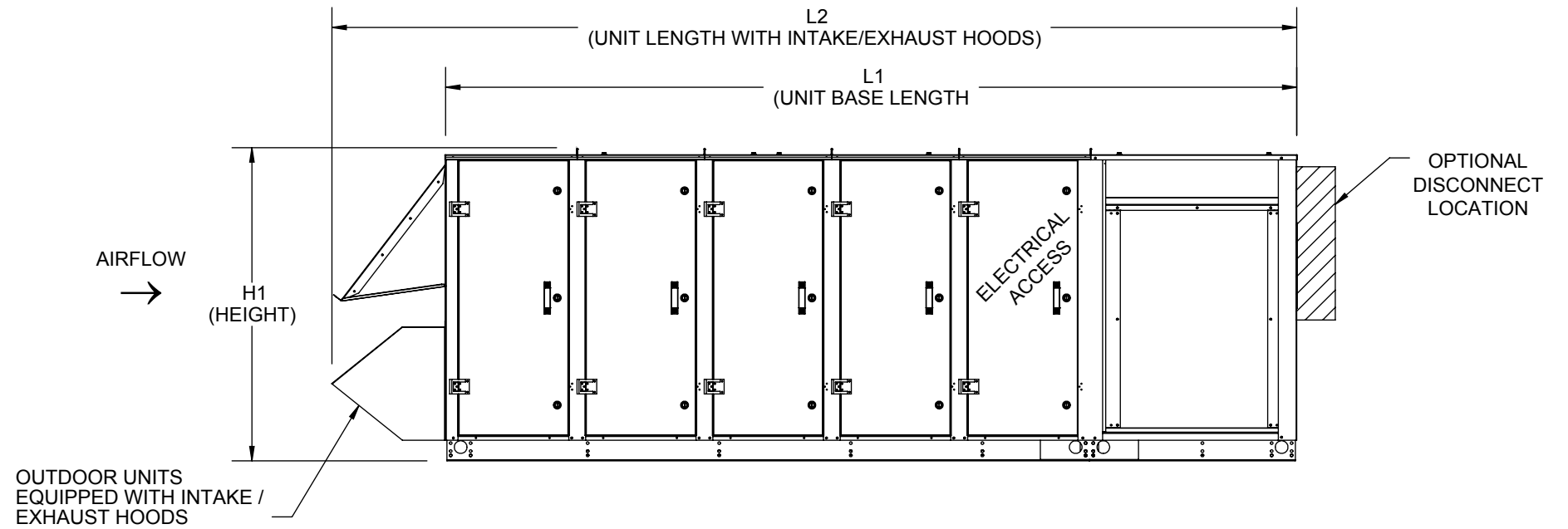
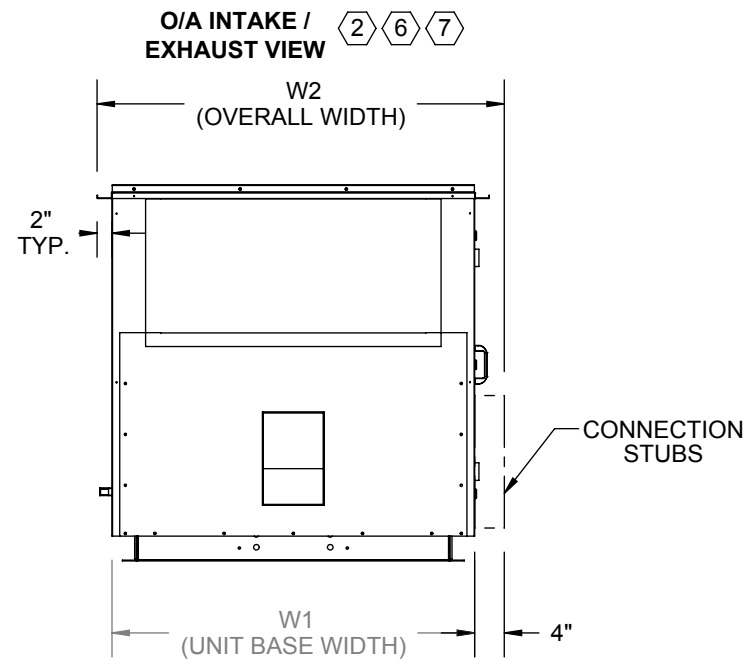
750-096 AK54 x 3/4

Driven RPM: 1173

AIR FLOW	UNIT SIZE (TONS)	UNIT CABINET SIZES	L1	W1	H1	L2	W2
DOWN FLOW	02	36-H	159 5/8	49 1/8	51 1/8	178 1/8	55 1/8
	03		159 5/8	49 1/8	51 1/8	178 1/8	55 1/8
	05	44-H	187 3/8	54 1/2	55	205 3/4	60 1/2
	08	50-H	217 1/2	61 1/8	63	240 3/4	67 1/8
	10	60-H	230 7/8	72 1/2	75 1/4	254 1/4	78 1/2
	15	72-H	246 7/8	87 1/2	83 3/8	275 1/4	93 1/2
	20	78-H	290 1/2	90 1/2	92 5/8	319 1/4	96 1/2
	25		290 1/2	90 1/2	92 5/8	319 1/4	96 1/2
	30		290 1/2	90 1/2	92 5/8	319 1/4	96 1/2



ACCESS SIDE VIEW (2) (6) (7)



GENERAL NOTES AS REFERENCED BY INDIVIDUAL SHEETS:

- (1) PORTION OF SECTIONED OR DETAILED DRAWING HAS BEEN OMITTED FOR CLARITY.
- (2) HOODS OMITTED FOR CLARITY.
- (3) VIEW IS FOR PICTORAL PURPOSES. REFER TO PAGE 1 FOR UNIT TYPE SPECIFIC VIEW.
- (4) REFER TO SUBMITTAL FOR CUSTOMER CONNECTION LOCATIONS.
- (5) DIMENSIONS ARE TO ACCESS SIDE OF UNIT.
- (6) RH ACCESS SHOWN FOR DISPLAY PURPOSES. ACCESS DOOR CONFIGURATION MAY CHANGE DEPENDING ON UNIT SIZE.
- (7) REFER TO SHEET 3,4, FOR INTAKE AND DISCHARGE CONNECTION DIMENSIONS.

Desert Aire has a policy of continuous product and quality improvement. Specifications and dimensions are subject to change without notice. This drawing and information contained herein are the exclusive property of the Desert Aire Corporation. Any use detrimental to the interests of Desert Aire is prohibited.

All Dimensions in Inches
All Angles 90°
All outside corners 0.125" fillet
Unless Otherwise Specified

Tolerance Unless Otherwise Specified
X.X ±.125
X.XX ±.060
X.XXX ±.030
Angles ±1°

DESERT AIRE
N120 W18485 FREISTADT RD
GERMANTOWN, WI 53022
Tel: (262) 946-7400
Fax: (262) 946-7401



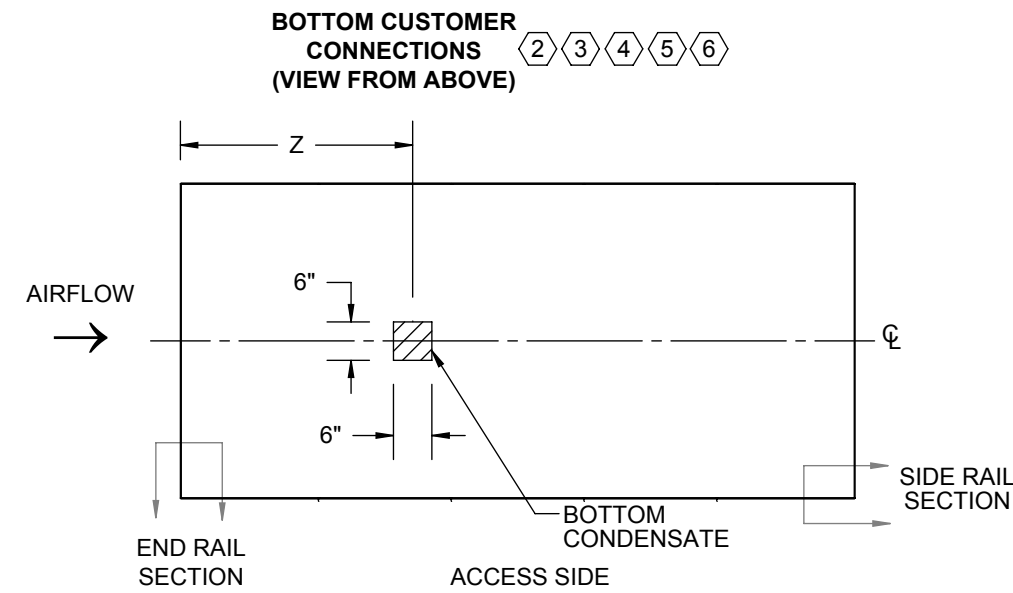
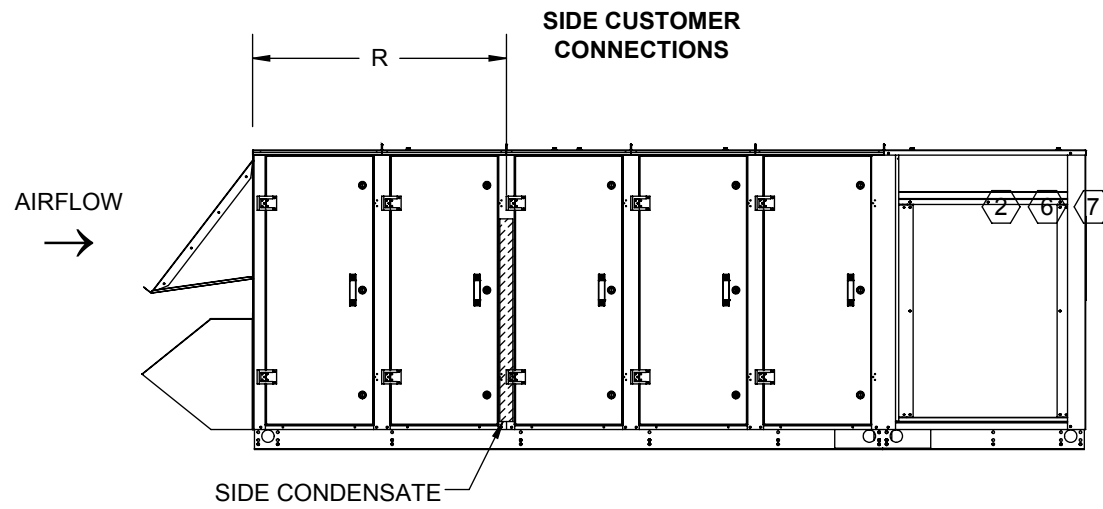
Third Angle Projection

Part weight

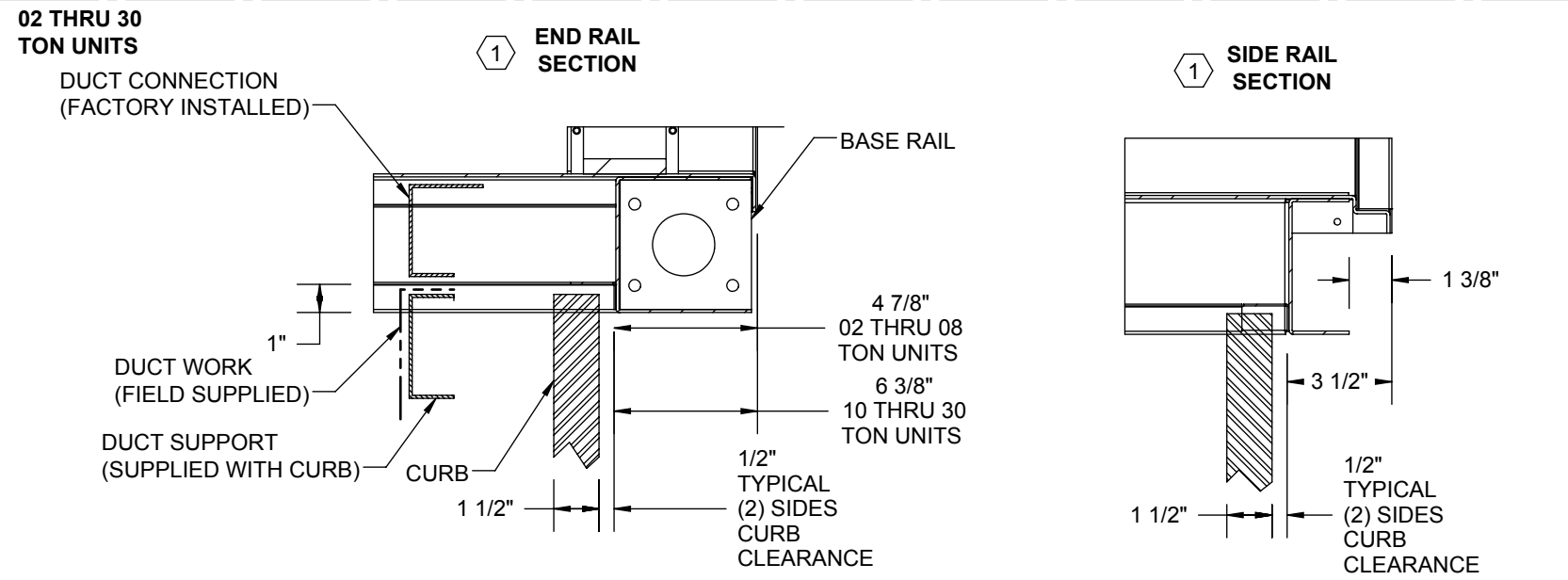
Drawn	BCL	Date Released	5/17/2011	Description	EXT PACKAGED w/ WHEEL
Sheet	1/4	Page Title	GENERAL ARRANGEMENT		
Scale	NTS	Rev.	3	Drawing Number	G805-011

ALL DIMENSIONS ARE IN INCHES
FRACTIONAL TOLERANCE ± 1/8"

NOTES:
REFER TO SHEET 1 FOR GENERAL NOTES.



AIR FLOW	UNIT SIZE (TONS)	UNIT CABINET SIZES	R	Z
DOWNFLOW	02	36-H	63 1/8	52 3/8
	03		63 1/8	52 3/8
	05	44-H	67	54 7/8
	08	50-H	68 5/8	55 3/4
	10	60-H	70 1/2	57
	15	78-H	75 3/8	60 1/4
	20		81 1/4	69 7/8
	25		81 1/4	69 7/8
30	81 1/4		69 7/8	



UNIT SIZE (TONS)	CAB	FILTER LOCATION	DA PART #			NOM W	NOM H	TOTAL QTY
			4" MERV	4" MERV	2" PRE			
2-3	36-H	S & E	870-041	870-131	870-043	20	24	4
5	44-H	S & E	870-056	870-133	870-057	18	24	6
8	50-H	S & E	870-041	870-131	870-043	20	24	6
10	60-H	S & E	870-012	870-130	870-009	24	24	6
15	72-H	SUPPLY	870-030	870-135	870-015	16	25	3
		SUPPLY	870-011	870-134	870-016	20	25	2
		EXHAUST	870-030	870-135	870-015	16	25	2
		EXHAUST	870-028	870-128	870-022	16	20	6
20-30	78-H	SUPPLY	870-010	870-129	870-005	20	20	4
		SUPPLY	870-011	870-134	870-016	20	25	4
		EXHAUST	870-030	870-135	870-015	16	25	4
		EXHAUST	870-028	870-128	870-022	16	20	4

CUSTOMER CONNECTION LINE SIZE SUMMARY (in.)									
Unit Size	2 TONS	3 TONS	5 TONS	8 TONS	10 TONS	15 TONS	20 TONS	25 TONS	30 TONS
CONDENSATE	1	1	1	1	1	1	1	1	1

Desert Aire has a policy of continuous product and quality improvement. Specifications and dimensions are subject to change without notice. This drawing and information contained herein are the exclusive property of the Desert Aire Corporation. Any use detrimental to the interests of Desert Aire is prohibited.

All Dimensions in Inches
All Angles 90°
All outside corners 0.125" fillet
Unless Otherwise Specified

Tolerance Unless Otherwise Specified
X.X ±.125
X.XX ±.060
X.XXX ±.030
Angles ±1°

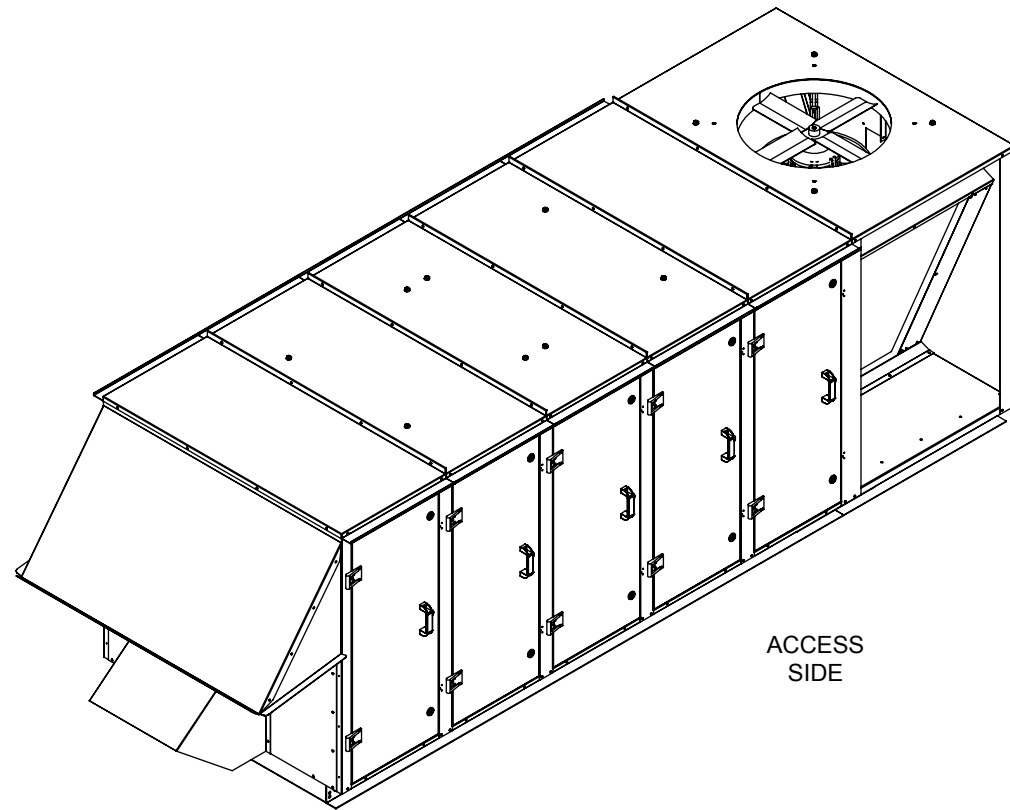
DESERT AIRE
N120 W18485 FREISTADT RD
GERMANTOWN, WI 53022
Tel: (262) 946-7400
Fax: (262) 946-7401

Third Angle Projection

Drawn	BCL	Date Released	5/17/2011	Description	EXT PACKAGED w/ WHEEL
Sheet	2/4		Page Title	CUSTOMER INTERFACE GA	
Scale	NTS		Rev.	3	
Part weight			Drawing Number	G805-011	

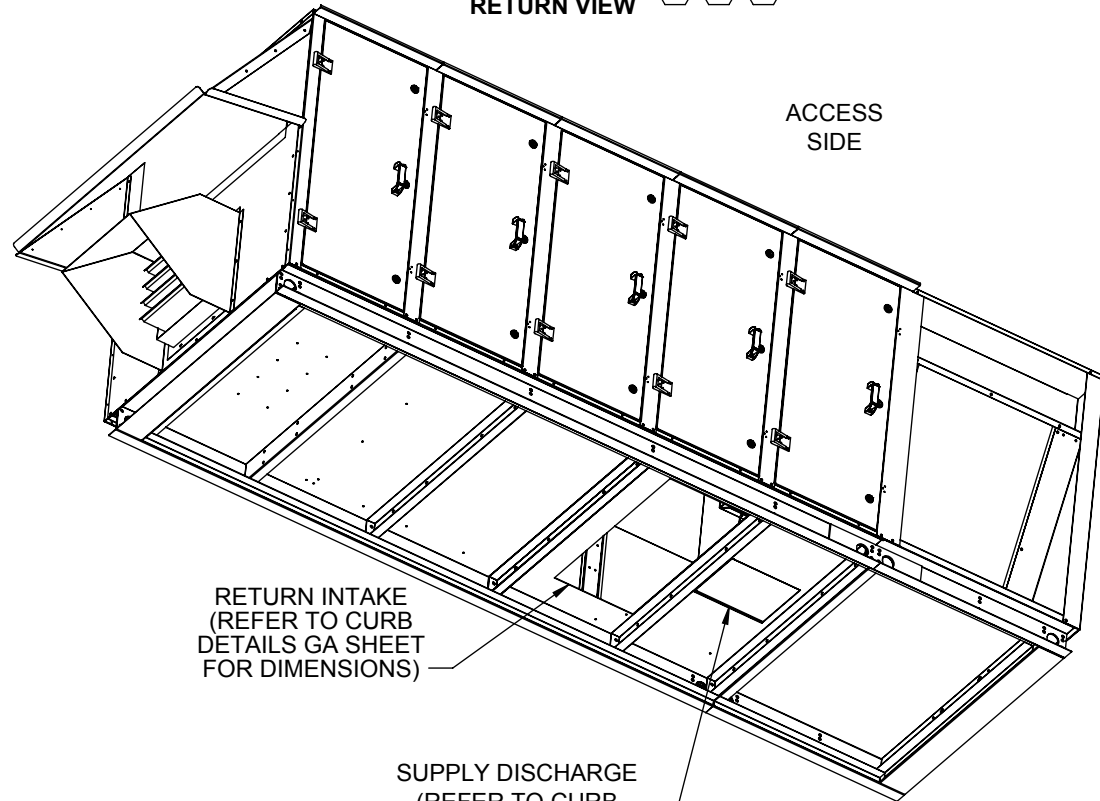
ALL DIMENSIONS ARE IN INCHES
FRACTIONAL TOLERANCE ± 1/8"

O/A INTAKE / EXHAUST VIEW 3 5 6



ACCESS SIDE

DISCHARGE / RETURN VIEW 3 5 6



ACCESS SIDE

RETURN INTAKE
(REFER TO CURB
DETAILS GA SHEET
FOR DIMENSIONS)

SUPPLY DISCHARGE
(REFER TO CURB
DETAILS GA SHEET
FOR DIMENSIONS)

NOTES:

REFER TO SHEET 1 FOR GENERAL NOTES.

WEIGHTS SHOWN REFLECT FULLY OPTIONED ESTIMATED UNIT WEIGHT.

REFER TO CURB DETAILS GA SHEET FOR SUPPLY DUCT DIMENSION AND LOCATIONS.

UNIT SIZE (TONS)	UNIT CABINET SIZES	DOWN DISCHARGE, DOWN RETURN
		TOTAL ESTIMATED WEIGHT (LBS)
02	36-H	2247
03		2311
05	44-H	2868
08	50-H	3601
10	60-H	4605
15	72-H	6388
20	78-H	7575
25		9616
30		9741

Desert Aire has a policy of continuous product and quality improvement. Specifications and dimensions are subject to change without notice. This drawing and information contained herein are the exclusive property of the Desert Aire Corporation. Any use detrimental to the interests of Desert Aire is prohibited.

All Dimensions in Inches
All Angles 90°
All outside corners 0.125" fillet
Unless Otherwise Specified

Tolerance Unless Otherwise Specified
X.X ±.125
X.XX ±.060
X.XXX ±.030
Angles ±1°



N120 W18485 FREISTADT RD
GERMANTOWN, WI 53022
Tel: (262) 946-7400
Fax: (262) 946-7401



Third Angle Projection

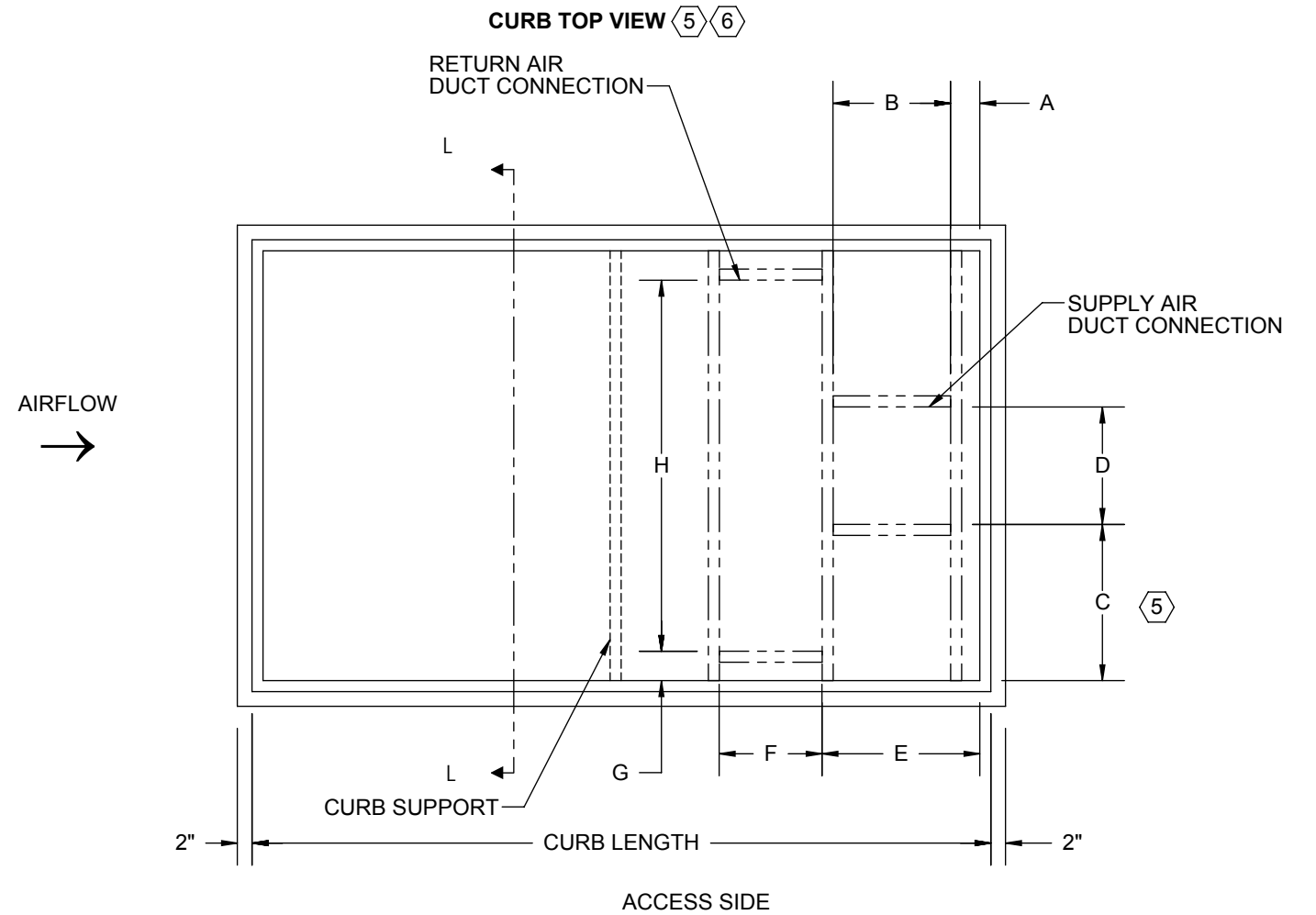
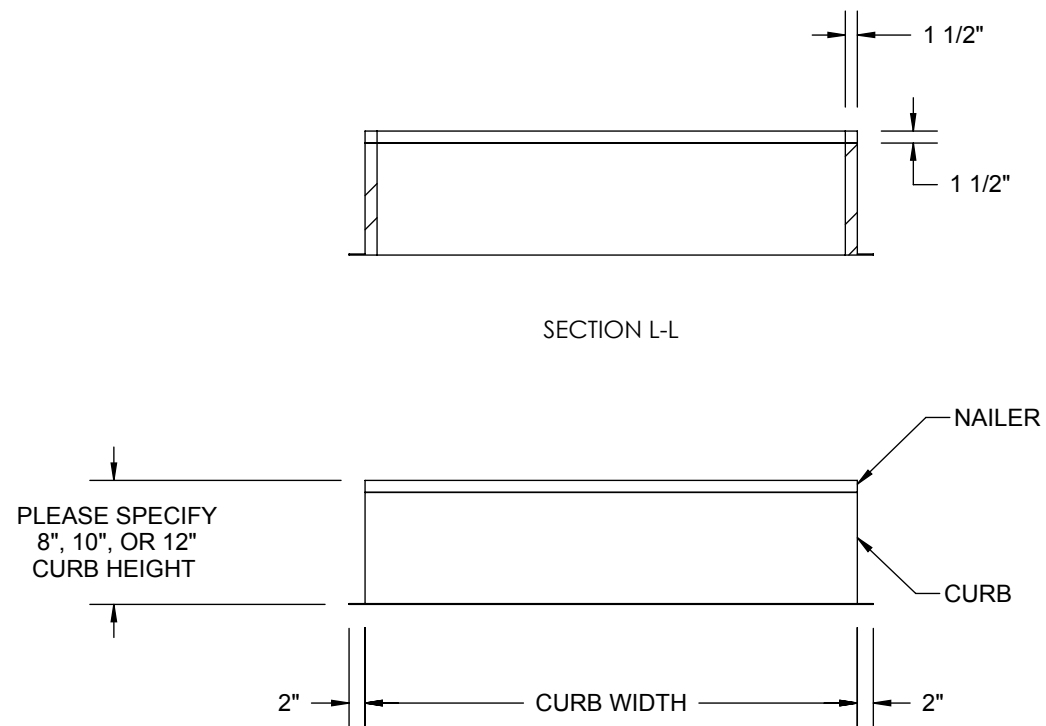
ALL DIMENSIONS ARE IN INCHES
FRACTIONAL TOLERANCE ± 1/8"

Part weight

Drawn	BCL	Date Released	5/17/2011	Description	EXT PACKAGED w/ WHEEL
Sheet	3/4			Page Title	DOWN DISCHARGE GA
Scale	NTS		Rev.	3	Drawing Number
					G805-011

NOTES:
 REFER TO SHEET 1 FOR GENERAL NOTES.
 CURBS 120" AND LESS ARE SHIPPED AS COMPLETE CURBS. GREATER THAN 120" ARE SHIPPED KNOCKED DOWN.
 NUMBER AND LOCATION OF CROSS SUPPORT(S) IS DEPENDANT UPON THE GAUGE OF MATERIAL USED TO CONSTRUCT THE CURB, DUCT SUPPORT CONFIGURATION, LENGTH OF CURB, AND WIDTH OF CURB. INSTALLATION INSTRUCTIONS INCLUDED WITH CURB SHIPMENT INDICATE THE REQUIRED POSITION FOR FIELD ASSEMBLED CURBS.

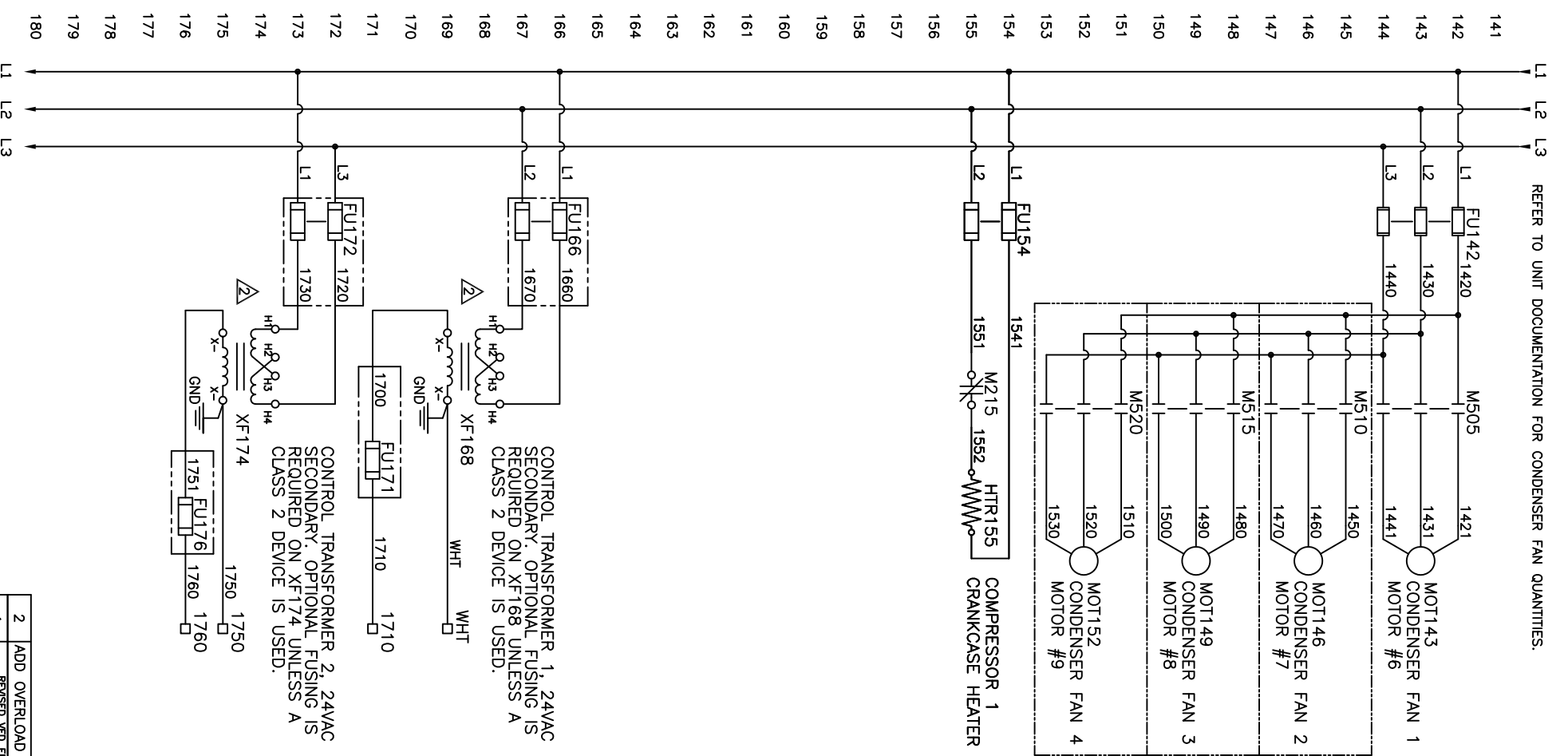
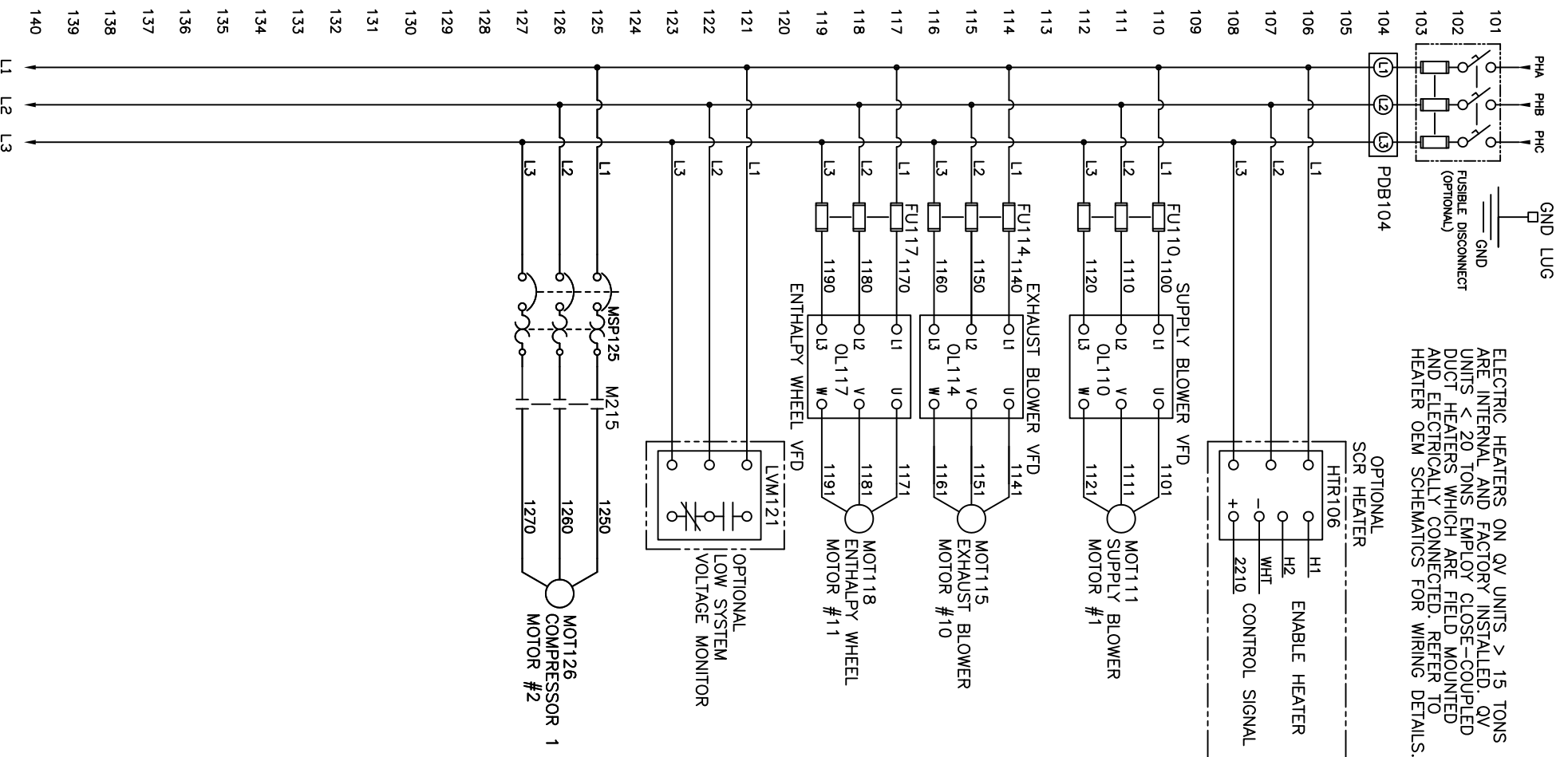
DOWN/DOWN FLOW ROOFCURB DIM S												
UNIT SIZE (TONS)	UNIT CABINET SIZES	CURB P/N	WIDTH (in.)	LENGTH (in.)	SUPPLY DISCHARGE (in.)				RETURN INTAKE (in.)			
					A	B	C (5)	D	E	F	G	H
02	36-H	CB02WPCN06-XX	41 1/8	148 7/8	33 1/2	12 3/4	12 3/8	13 1/4	47 3/4	13	9	31
03		CB03WPCN06-XX	41 1/8	148 7/8	33 1/2	12 3/4	12 3/8	13 1/4	47 3/4	13	9	31
05	44-H	CB05WPCN06-XX	46 1/2	176 5/8	53 1/2	11 1/2	15 3/4	12	66 5/8	17	9 1/4	36
08	50-H	CB08WPCN07-XX	53 1/8	206 5/8	57 3/8	16	17 1/4	15 3/4	75	18	9	43
10	60-H	CB10WPCN07-XX	64 1/2	217 1/8	66 3/8	16	21 3/8	18 3/4	84	30	9 1/4	54
15	72-H	CB15WPCN07-XX	79 1/2	233 1/8	71	16	28 7/8	18 3/4	88 1/2	31	9 1/4	69
20	78-H	CB20WPCN07-XX	82 1/2	276 5/8	101	28 3/8	25 5/8	28 3/8	130 7/8	32	9 1/4	72
25		CB25WPCN07-XX	82 1/2	276 5/8	101	28 3/8	25 5/8	28 3/8	130 7/8	32	9 1/4	72
30		CB30WPCN07-XX	82 1/2	276 5/8	101	28 3/8	25 5/8	28 3/8	130 7/8	32	9 1/4	72



----- DUCT CONNECTIONS FOR DOWN DISCHARGE / DOWN RETURN

Desert Aire has a policy of continuous product and quality improvement. Specifications and dimensions are subject to change without notice. This drawing and information contained herein are the exclusive property of the Desert Aire Corporation. Any use detrimental to the interests of Desert Aire is prohibited.	All Dimensions in Inches All Angles 90° All outside corners 0.125" fillet Unless Otherwise Specified	Tolerance Unless Otherwise Specified X.X ±.125 X.XX ±.060 X.XXX ±.030 Angles ±1°	N120 W18485 FREISTADT RD GERMANTOWN, WI 53022 Tel: (262) 946-7400 Fax: (262) 946-7401
ALL DIMENSIONS ARE IN INCHES FRACTIONAL TOLERANCE ± 1/8"	Third Angle Projection	Sheet: 4/4	Page Title: CURB DETAILS GA
Part weight	Scale: NTS	Rev: 3	Drawing Number: G805-011

ELECTRIC HEATERS ON QV UNITS > 15 TONS ARE INTERNAL AND FACTORY INSTALLED. QV UNITS < 20 TONS EMPLOY CLOSE-COUPLED DUCT HEATERS WHICH ARE FIELD MOUNTED AND ELECTRICALLY CONNECTED. REFER TO HEATER OEM SCHEMATICS FOR WIRING DETAILS.



REFER TO UNIT DOCUMENTATION FOR CONDENSER FAN QUANTITIES.

SUPPLY BLOWER VFD PARAMETERS

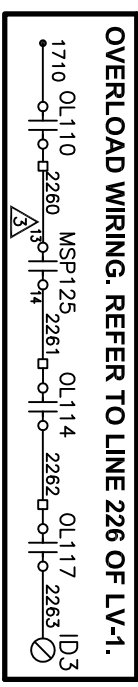
PARA #	SETTING	DESCRIPTION
0-03	SET TO 1	REGIONAL SETTINGS
1-20	FROM MOTOR NAMEPLATE	MOTOR POWER
1-22	FROM MOTOR NAMEPLATE	MOTOR VOLTAGE
1-24	FROM MOTOR NAMEPLATE	MOTOR CURRENT
4-12	FROM ORDER	MOTOR NOMINAL SPEED
4-14	FROM ORDER	MOTOR SPEED LOW LIMIT
		MOTOR SPEED HIGH LIMIT

EXHAUST BLOWER VFD PARAMETERS

PARA #	SETTING	DESCRIPTION
0-03	SET TO 1	REGIONAL SETTINGS
1-20	FROM MOTOR NAMEPLATE	MOTOR POWER
1-22	FROM MOTOR NAMEPLATE	MOTOR VOLTAGE
1-24	FROM MOTOR NAMEPLATE	MOTOR CURRENT
4-12	FROM ORDER	MOTOR NOMINAL SPEED
4-14	FROM ORDER	MOTOR SPEED LOW LIMIT
		MOTOR SPEED HIGH LIMIT

ENTHALPY WHEEL VFD PARAMETERS

PARA #	SETTING	DESCRIPTION
0-03	SET TO 1	REGIONAL SETTINGS
1-20	FROM MOTOR NAMEPLATE	MOTOR POWER
1-22	FROM MOTOR NAMEPLATE	MOTOR VOLTAGE
1-24	FROM MOTOR NAMEPLATE	MOTOR CURRENT
4-12	FROM ORDER	MOTOR NOMINAL SPEED
4-14	FROM ORDER	MOTOR SPEED LOW LIMIT
		MOTOR SPEED HIGH LIMIT



- NOTES**
- WIRING PER JIC COLOR CODE. WIRING LABELED WHT IS THE CONTROL COMMON AND IS TO REMAIN UNLABELLED.
 - TRANSFORMER CONNECTIONS H1, H2, H3, H4 AND X- ARE TYPICAL. REFER TO THE ACTUAL LINE VOLTAGE AND TRANSFORMER WIRING DIAGRAM FOR CORRECT TRANSFORMER WIRING.
 - MSP OVERLOAD CONTACTS ARE WIRED NORMALLY OPEN. THE CONTACT IS CLOSED NORMALLY AND OPENS ON A FAULT CONDITION.

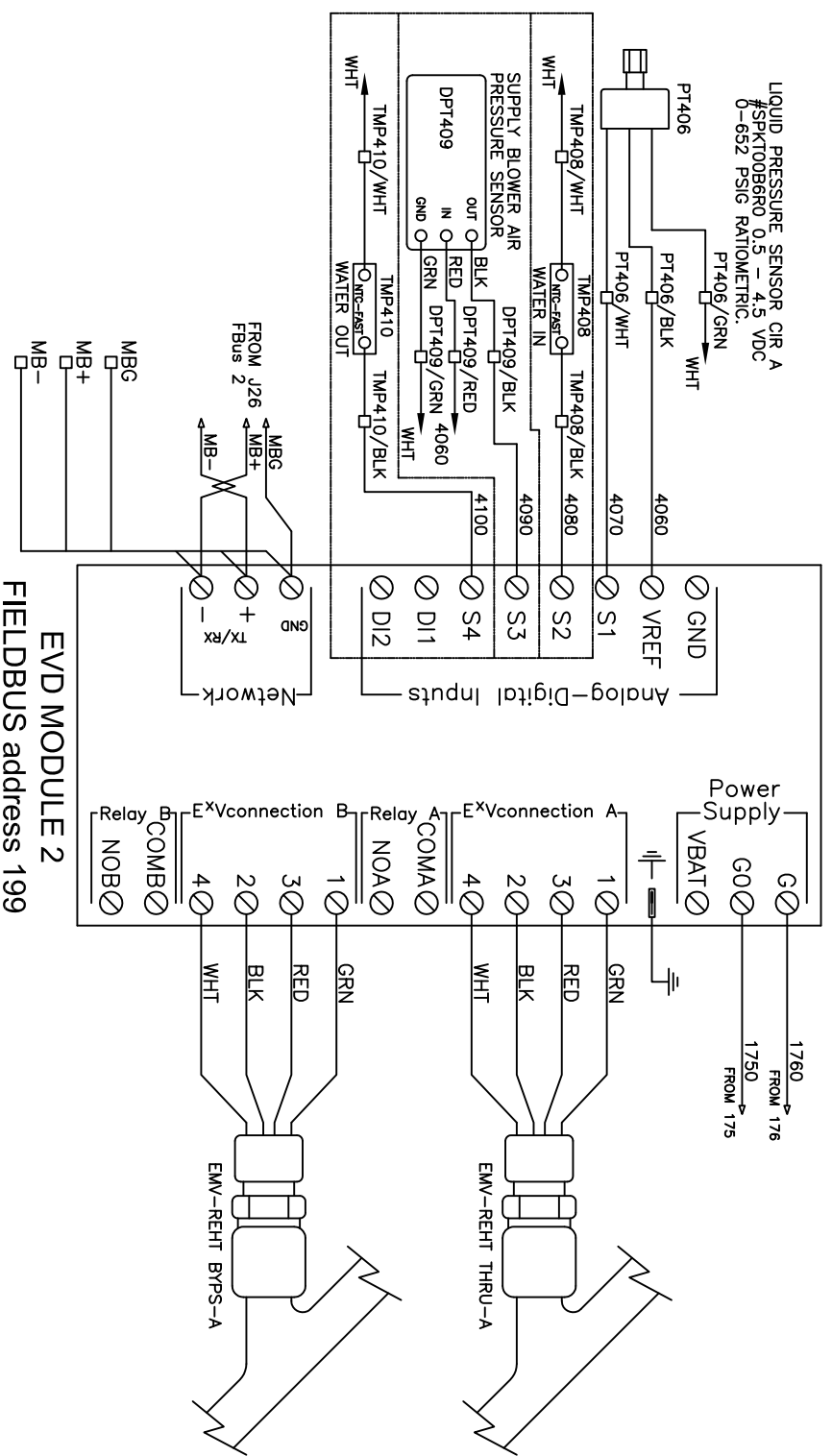
LEGEND

- FACTORY WIRING FROM COMPONENT TO T. STRIP
- OPTIONAL OR MODEL DEPENDANT COMPONENTS
- LOW VOLTAGE FIELD WIRING
- CONTRACTOR OR VFD MOUNTED OVERLOAD
- INTERNAL COMPRESSOR MOUNTED OVERLOAD
- INDICATES TERMINAL POINT
- INDICATES CONNECTION POINT

THREE PHASE ELECTRICAL SCHEMATIC

REVISION	DATE	INITIALS	DESCRIPTION
2	6/12/13	MTW	ADD OVERLOAD TB (S-151) 12/01/16
1	2/27/12	MTW	REVISED VFD ENABLE ON HIA03-DRAWINGS

EVD evolution twin
EVD0000T20



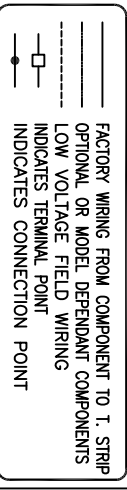
400
401
402
403
404
405
406
407
408
409
410
411
412
413
414
415
416
417
418
419
420
421
422
423
424
425
426
427
428
429
430
431
432
433
434
435
436
437
438
439

440
441
442
443
444
445
446
447
448
449
450
451
452
453
454
455
456
457
458
459
460
461
462
463
464
465
466
467
468
469
470
471
472
473
474
475
476
477
478
479

ADDITIONAL TERMINALS
OPTIONAL APPLICABLE
DPT409 (HT PUMP)
PT406 (HT PUMP)
TMP408 (HT PUMP)
TMP410 (HT PUMP)

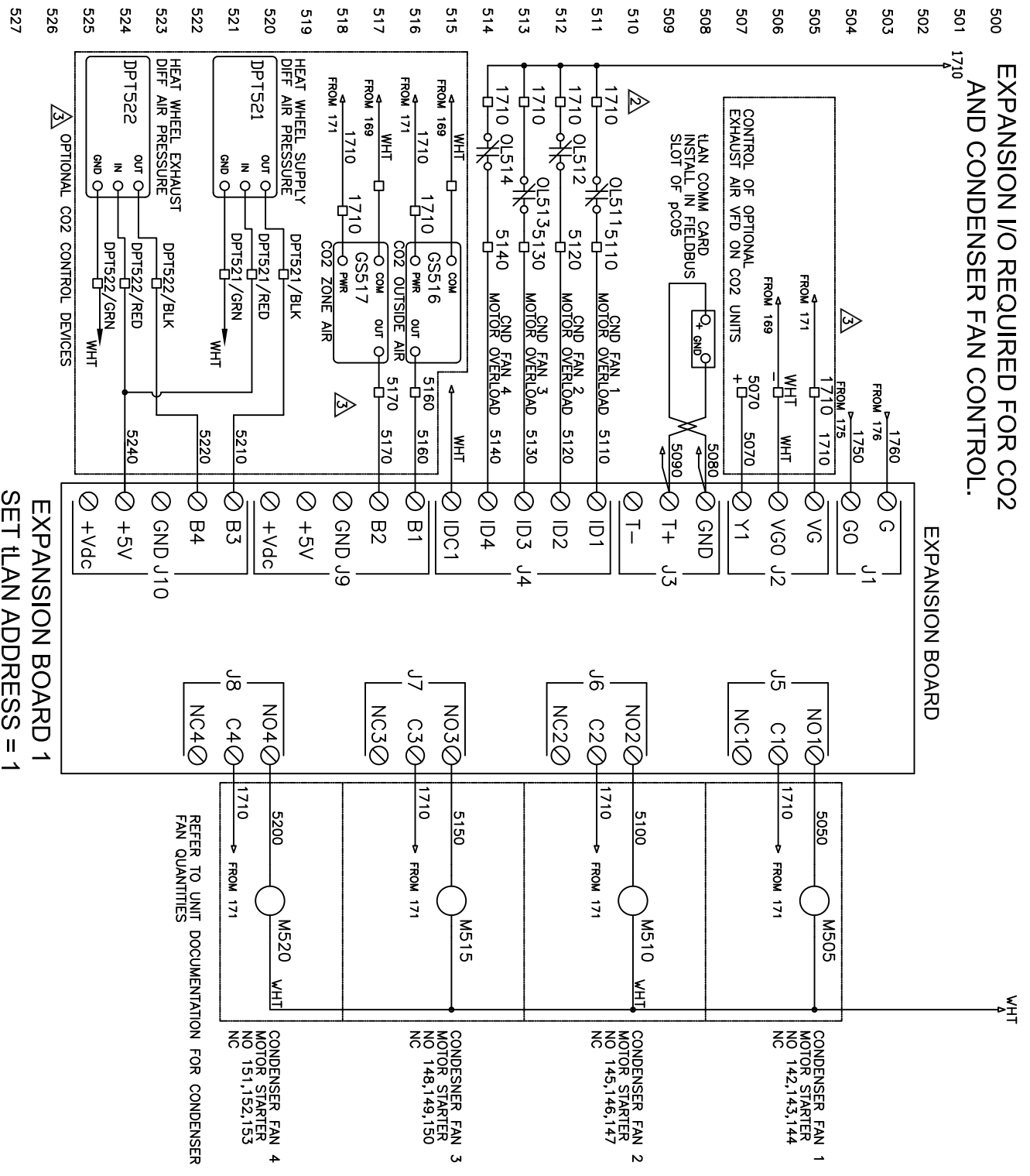
CONTROL TERMINALS STARTING WITH B, U, S, AND/OR Y SHALL BE WIRED WITH 18 AWG WIRE. ALL OTHER PER DOCUMENTATION UNLESS OTHERWISE DESIGNATED ON DRAWING.

LEGEND

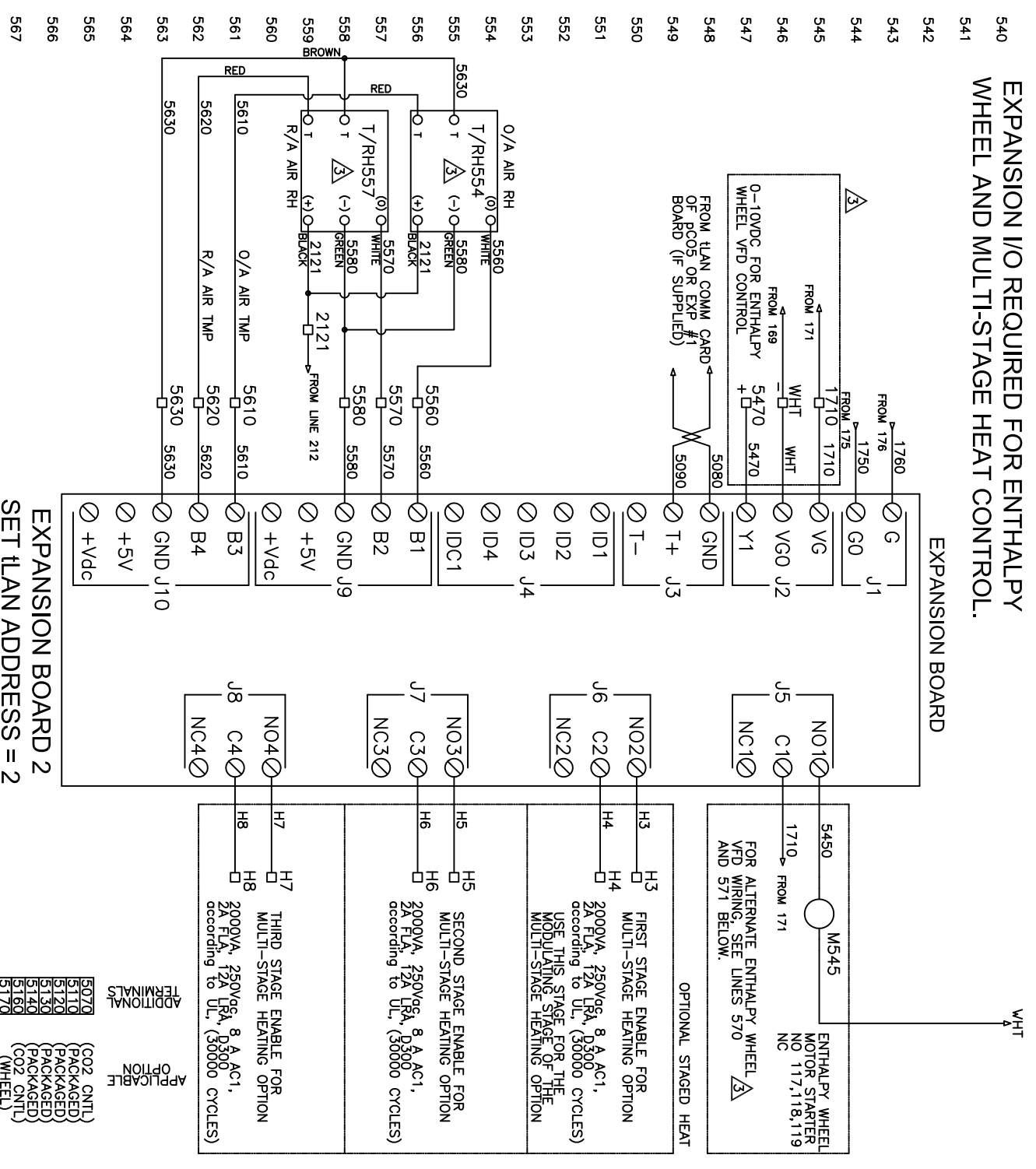


REV	DESCRIPTION	DATE	INITIALS	REV. #	TITLE
4	REVISE NOTE	08/03/16	LL	10127	IAQ DIGITAL CONTROL SCHEMATIC
3	REVD TERM BLOCKS	2/19/15	MTW	2453	CM3500 IAQ 3.0 CONTROL SYSTEM
2	REVD TERMS FOR COLOR CODES	11/7/14	CMB	2428	
1	ADD H2O AND LIQ TMP SENSORS	03/17/14	HMS	2312	

EXPANSION I/O REQUIRED FOR CO2 AND CONDENSER FAN CONTROL.



EXPANSION I/O REQUIRED FOR ENTHALPY WHEEL AND MULTI-STAGE HEAT CONTROL.



500
501
502
503
504
505
506
507
508
509
510
511
512
513
514
515
516
517
518
519
520
521
522
523
524
525
526
527
528
529
530
531
532
533
534
535
536
537
538
539

540
541
542
543
544
545
546
547
548
549
550
551
552
553
554
555
556
557
558
559
560
561
562
563
564
565
566
567
568
569
570
571
572
573
574
575
576
577
578
579

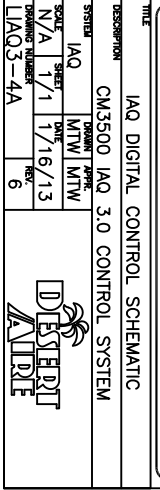
△ THESE OPTIONAL CONTROLS ARE PROVIDED ON TOTALAIRE UNITS ONLY. FOR UNITS USING AN EXTERNAL WHEEL MODULE, SEE THE EXTERNAL WHEEL MODULE SCHEMATICS FOR DETAILS. FOR AURA UNITS, CO2 ZONE SENSOR IS WIRED TO U8 OF IAO3-2. EXTERNAL WHEEL MODULE SCHEMATICS FOR DETAILS.

△ DIGITAL INPUTS 1-4 OF EXP. #1 ARE USED FOR THE CONDENSER FAN MOTOR THERMOSTATIC OVERLOAD CUTOUPS ON AURA UNITS. INSTALL A JUMPER FROM 1710 TO 51x0 FOR ANY INPUT WHICH REMAINS UN-USED. JUMP ALL FOUR INPUTS FOR TOTALAIRE UNITS.

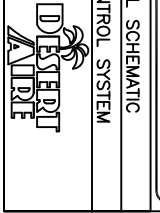
△ CONTROL TERMINALS STARTING WITH B, U, S, AND/OR Y SHALL BE WIRED WITH 18 AWG WIRE. WIRE ALL OTHER PER DOCUMENTATION UNLESS OTHERWISE DESIGNATED ON DRAWING.

REV.	DESCRIPTION	DATE	INITIALS	REV. #
1	REVISED TERM STRIP NOTES	2/19/15	MTW	2453
2	UPDATE PER PRODUCTION	3/6/15	MTW	2454
3	REMOVE CDR FAN QTY NOTE	08/24/15	LL	2540
4	REMOVE NOTE	08/03/16	LL	10127

TIME	DESCRIPTION	SYSTEM	DATE	INITIALS	REV. #
17/6/13	IAQ DIGITAL CONTROL SCHEMATIC	CM3500 IAQ 3.0 CONTROL SYSTEM	1/16/13	MTW	6

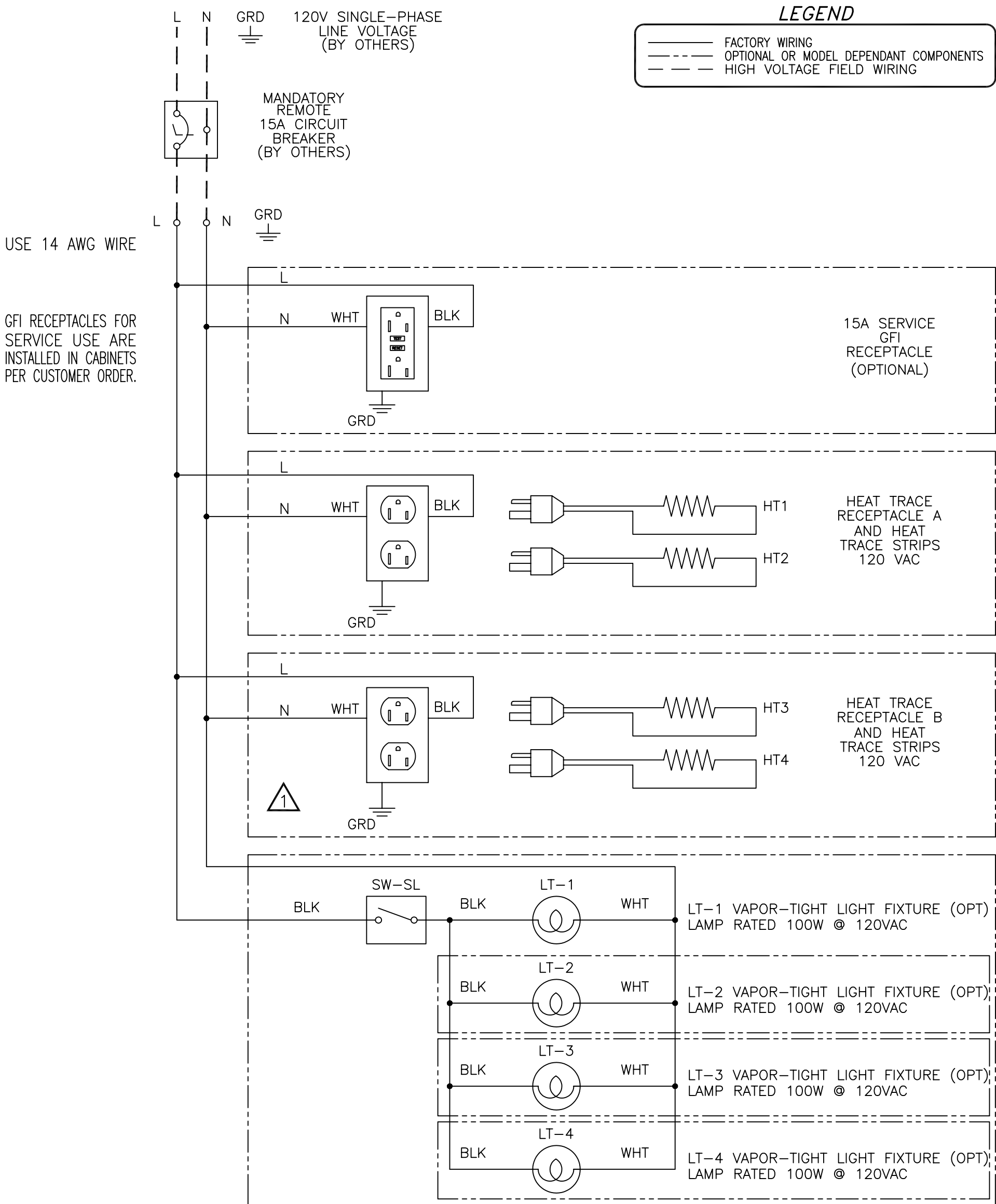


TERMINAL	DESCRIPTION	WIRE COLOR
5070	(CO2 CNTL)	WHITE
5110	(PACKAGED)	WHITE
5120	(PACKAGED)	WHITE
5130	(PACKAGED)	WHITE
5140	(PACKAGED)	WHITE
5160	(CO2 CNTL)	WHITE
5170	(WHEEL)	WHITE
5470	(WHEEL)	WHITE
5560	(WHEEL)	WHITE
5570	(WHEEL)	WHITE
5580	(WHEEL)	WHITE
5610	(WHEEL)	WHITE
5620	(WHEEL)	WHITE
5630	(WHEEL)	WHITE
5700	(WHEEL)	WHITE
5710	(WHEEL)	WHITE
5720	(WHEEL)	WHITE
5730	(WHEEL)	WHITE
5740	(WHEEL)	WHITE
5750	(WHEEL)	WHITE
5760	(WHEEL)	WHITE
5770	(WHEEL)	WHITE
5780	(WHEEL)	WHITE
5790	(WHEEL)	WHITE



LEGEND

	FACTORY WIRING
	OPTIONAL OR MODEL DEPENDANT COMPONENTS
	HIGH VOLTAGE FIELD WIRING



USE 14 AWG WIRE

GFI RECEPTACLES FOR SERVICE USE ARE INSTALLED IN CABINETS PER CUSTOMER ORDER.



UNIT TYPE	HEAT TRACE APPLICATION	STRIP ID	RECEPTACLE
QS	BRAZED PLATE CONDENSER	HT1	A
QS	BRAZED PLATE EVAPORATOR	HT2	A
QV	BRAZED PLATE CONDENSER (UNITS > 15 TONS)	HT1	A
QV	BRAZED PLATE EVAPORATOR (UNITS > 15 TONS)	HT2	A
LC (OUTDOOR UNITS)	POOL OR COOLING COAX. CONDENSER	HT1/2	A
ND/SA (OUTDOOR UNITS)	POOL OR COOLING COAX. CONDENSER (CIRCUITS A & B)	HT1/2	A
	POOL OR COOLING COAX. CONDENSER (CIRCUIT B)	HT3/4*	B*

* "B" RECEPTACLE REQUIRED FOR REF. CIRCUIT B ON DUAL WATER CIRCUIT SYSTEMS

REV.	DESCRIPTION	DATE	INITIALS	ECN #	DRAWING NUMBER	REV.
5	ADD SERVICE LAMPS, ADD WIRE GA, MOD DISC SWITCH	08/29/08	HMS	1467	HT-1	5
4	REMOVED FUSING AND ADDED LC NOTES & TABLE	01/16/07	AH	1235		
3	REMOVED GROUND LEG FUSE	11/15/06				
2	REDRAWN AND ADDED FUSE DETAIL/SVC RECEPTACLE	06/16/06	AH	1201		



Packaged 100% DOAS System with Energy Recovery

UNIT TAG	DOAS-1	
UNIT MANUFACTURE	DESERT AIRE	
MODEL NO	QS03F	
LOCATION	Outdoor	
SERVICE AREA	---	
UNIT WEIGHT	2,311 lbs	
FAN & MOTOR DATA		
OA ESP SA ESP	0.0 "wc 0.5 "wc	
EA ESP RA ESP	0.0 "wc 0.5 "wc	
SUPPLY AIR FLOW - CFM	950	
SUPPLY FAN ESP (OA MODE)	0.5 "wc	
SUPPLY FAN ESP (RECIRC MODE)	1 "wc	
SUPPLY AIR FAN HP BHP w/ DRIVE LOSS	01.00 00.49	
EXHAUST AIR FLOW - CFM	800	
EXHAUST FAN HP BHP w/ DRIVE LOSS	01.00 00.28	
ENTHALPY WHEEL DRIVE MOTOR HP	0.13	
COOLING / DEHUMIDIFICATION MODE		
EAT DB / WB °F	79.0 66.3	
SYSTEM TOTAL CAP BTUH	83,474	
SYSTEM SENSIBLE BTUH	48,119	
WHEEL EAT DB / WB DEG F	100.0	78.0
WHEEL LAT DB / WB DEG F	79.0	66.3
D/X COIL TOTAL CAP BTUH	41,573	
D/X SENSIBLE BTUH	27,527	
THR D/X BTUH	52,662	
TOTAL MOISTURE REMOVAL CAPACITY - LB/HR	33	
LEAVING AIR DEWPOINT F	50.7	
COMPRESSOR HP	3.0	
MAX NET SENSIBLE TO SPACE @ 60°F LAT WITH 75°F ZONE	14,702	
AUXILIARY HEATING		
ELECTRIC	SCR CONTROL	
EAT LAT	33.2° F	85.4° F
kW	015	
BTUH	51,195	
UNIT ELECTRICAL DATA		
VOLTAGE	230/3/60	
MOPD	60	
MCA	58	
SHORT CIRCUIT CURRENT RATING(SCCR)	65.0	
FUSED DISCONNECT	60	
NON-FUESED DISCONNECT	60	
SYSTEM REMARKS:	ALL	
AHRI 920 RATINGS		
AIR-COOLED PACKAGED		
INTEGRATED SEASONAL MRE	8.7	
INTEGRATED SEASONAL COP	-	



Approval Form

The submittal for this project has been reviewed and the order is approved for production as indicated below. Release to begin manufacturing (and purchasing of components) will only begin upon return of this form.

Submitted For Record Only (Applies Only if Check Marked). Unit has been released in to production based on this submittal information. Notify factory if any changes required before unit ships from factory.

- Approved as Submitted
- Approved as Noted (marked up set enclosed)

By:

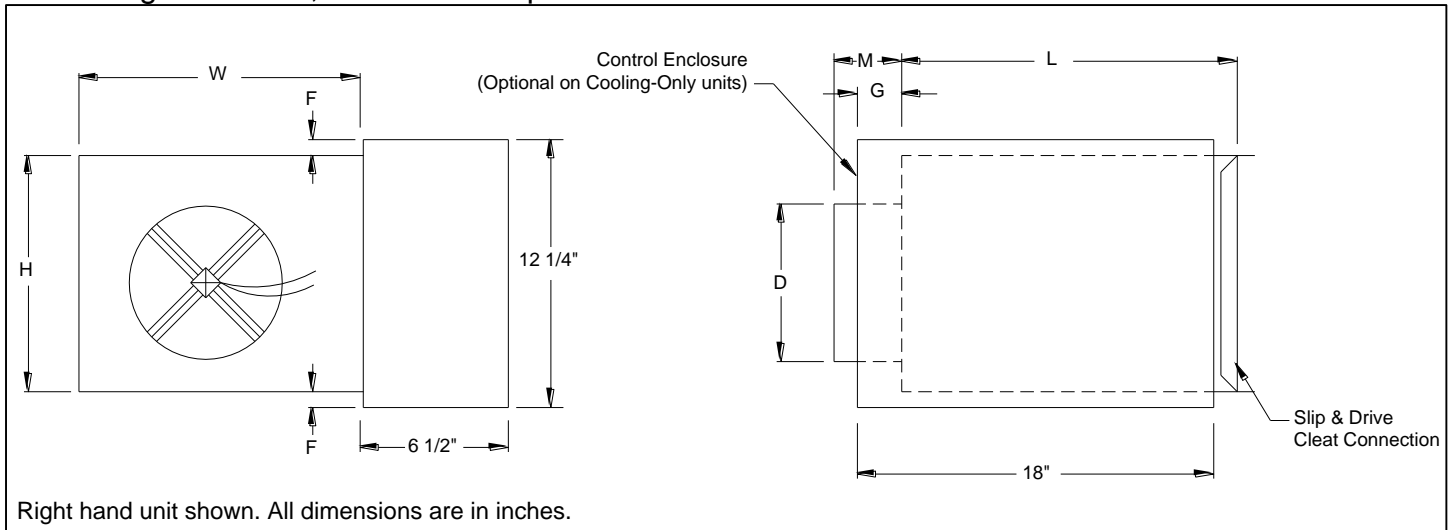
Date:

Company:

DESV

Single Duct Terminal Unit
Direct Digital Control, Pressure Independent

Typical VAV Box with Heating Coil



Inlet Size	CFM Range	D	F	G	H	L	M	W
4	0-225	3 ⁷ / ₈	2 ¹ / ₈	7 ³ / ₈	8	15 ¹ / ₂	5 ³ / ₈	12
5	0-350	4 ⁷ / ₈	2 ¹ / ₈	7 ³ / ₈	8	15 ¹ / ₂	5 ³ / ₈	12
6	0-500	5 ⁷ / ₈	2 ¹ / ₈	7 ³ / ₈	8	15 ¹ / ₂	3 ³ / ₈	12
7	0-650	6 ⁷ / ₈	1 ¹ / ₈	7 ³ / ₈	10	15 ¹ / ₂	3 ³ / ₈	12
8	0-900	7 ⁷ / ₈	1 ¹ / ₈	7 ³ / ₈	10	15 ¹ / ₂	3 ³ / ₈	12
9	0-1050	8 ⁷ / ₈	-	5 ³ / ₈	12 ¹ / ₂	15 ¹ / ₂	3 ³ / ₈	14
10	0-1400	9 ⁷ / ₈	-	5 ³ / ₈	12 ¹ / ₂	15 ¹ / ₂	3 ³ / ₈	14
12	0-2000	11 ⁷ / ₈	-	5 ³ / ₈	15	15 ¹ / ₂	3 ³ / ₈	16
14	0-3000	13 ⁷ / ₈	-	3 ³ / ₈	17 ¹ / ₂	15 ¹ / ₂	3 ³ / ₈	20
16	0-4000	15 ⁷ / ₈	-	3 ³ / ₈	18	15 ¹ / ₂	3 ³ / ₈	24
24 x 16	0-8000	23 ⁷ / ₈ x 15 ⁷ / ₈	1 ¹ / ₈	5 ³ / ₈	18	15	3 ³ / ₈	38



Accessories (Optional)

- Check if provided.
- | | | | |
|--|--|---|--|
| <input type="checkbox"/> 24 V Control Transformer | <input type="checkbox"/> 1" Fiberglass Liner | <input type="checkbox"/> UltraLoc Liner | <input type="checkbox"/> Removable Air Flow Sensor |
| <input type="checkbox"/> Dust Tight Enclosure Seal | <input type="checkbox"/> 1" EcoShield Liner | <input type="checkbox"/> ½" EcoShield Liner (Foil Face) | <input type="checkbox"/> Bottom Access Door |
| <input type="checkbox"/> Fibre Free Liner | <input type="checkbox"/> 1" Fibre Free Liner | <input type="checkbox"/> 1" EcoShield Liner (Foil Face) | <input type="checkbox"/> OSP & IBC Certification |
| <input type="checkbox"/> ½" EcoShield Liner | <input type="checkbox"/> Low Leakage Seal/Test/Certify | <input type="checkbox"/> Disconnect Switch | <input type="checkbox"/> Red List Compliant "Google" Gasketing |
| <input type="checkbox"/> ½" Fibre Free Liner | <input type="checkbox"/> SteriLoc Liner | <input type="checkbox"/> Hanger Brackets | <input type="checkbox"/> _____ |

General Description

- Heavy gauge steel housing. Mechanically sealed and gasketed, leak resistant construction. Less than 2% of nominal cfm at 1.5" sp wg.
- Dual density internal insulation, treated to resist air erosion. Meets requirements of NFPA 90A and UL 181.
- Rectangular discharge opening is designed for slip and drive cleat duct connection.
- Multipoint center averaging inlet velocity sensor.
- Digital control packages can be factory mounted by Titus.
- Choice of right hand or left hand control location.
- Model DESV without coils can be installed horizontally, vertically, or at any angle. Operation is not affected by position. For units with coils, consult technical support.
- Gauge tees for cfm measurement.
- OSHPD Seismic Certification: OSP-0352-10
- Only Titus Alpha digital controls package approved for seismic installation.

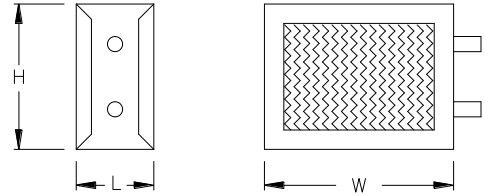
This submittal is meant to demonstrate general dimensions of this product. The drawings are not meant to detail every aspect of the product. Drawings are not to scale. Titus reserves the right to make changes without written notice.

Accessories (Optional)

Hot Water Coil Section

- Aluminum ripple fins, 10 per inch
- Coil pipe connections are male, sweat, type "L" copper. Connection sizes are 1/2" OD for 1 row coil unit sizes 04-08. All other coils have 7/8" OD.
- Coil is installed at discharge of unit.
- On units with attenuators, coil are installed at the discharge of attenuator.

- 1 Row
 2 Row
 3 Row
 4 Row



Electric Coil Section

Optional SCR Controlled Electric Heater

Optional Lynergy Controlled Electric Heater

Standard Features

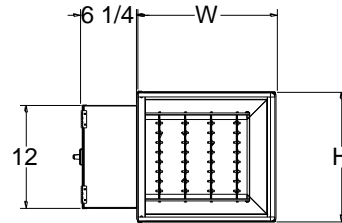
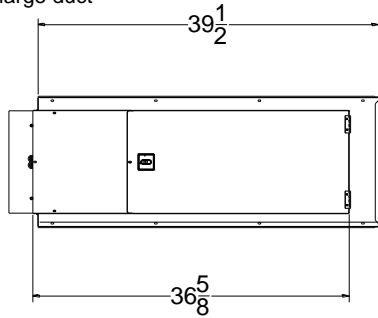
- Single side access to low voltage, high voltage, and electric heater controls.
- Automatic reset thermal cutouts, one per element
- Manual reset secondary protection.
- Positive pressure flow switch
- Magnetic contactor for each step.
- Slip and drive cleat discharge duct connection.

Options

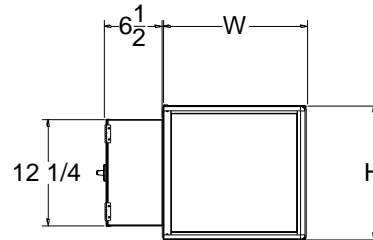
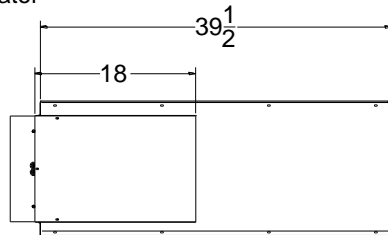
- Fuse Block
 Disconnect switch, door interlock type
 Dust tight construction
 Mercury contactors

Supply Voltage

- 120V, 1 ph, 60Hz
 208V, 1 ph, 60Hz
 240V, 1 ph, 60Hz
 277V, 1 ph, 60Hz
 208V, 3 ph, 60Hz
 480V, 3 ph, 60Hz (4 wire wye standard)



Integral Sound Attenuator



Inlet Size	H	W	Water Coil	
			L (1-2 Row)	L (3-4 Row)
4	8	12	5	7 1/4
5	8	12	5	7 1/4
6	8	12	5	7 1/4
7	10	12	5	7 1/4
8	10	12	5	7 1/4
9	12 1/2	14	5	7 1/4
10	12 1/2	14	5	7 1/4
12	15	16	5	7 1/4
14	17 1/2	20	7 1/2	9 3/4
16	18	24	7 1/2	9 3/4
24 x 16	18	38	5	7 1/4

The total length of the DESV unit is the summation of the unit length (with or without attenuator) and the length of the optional water coil.

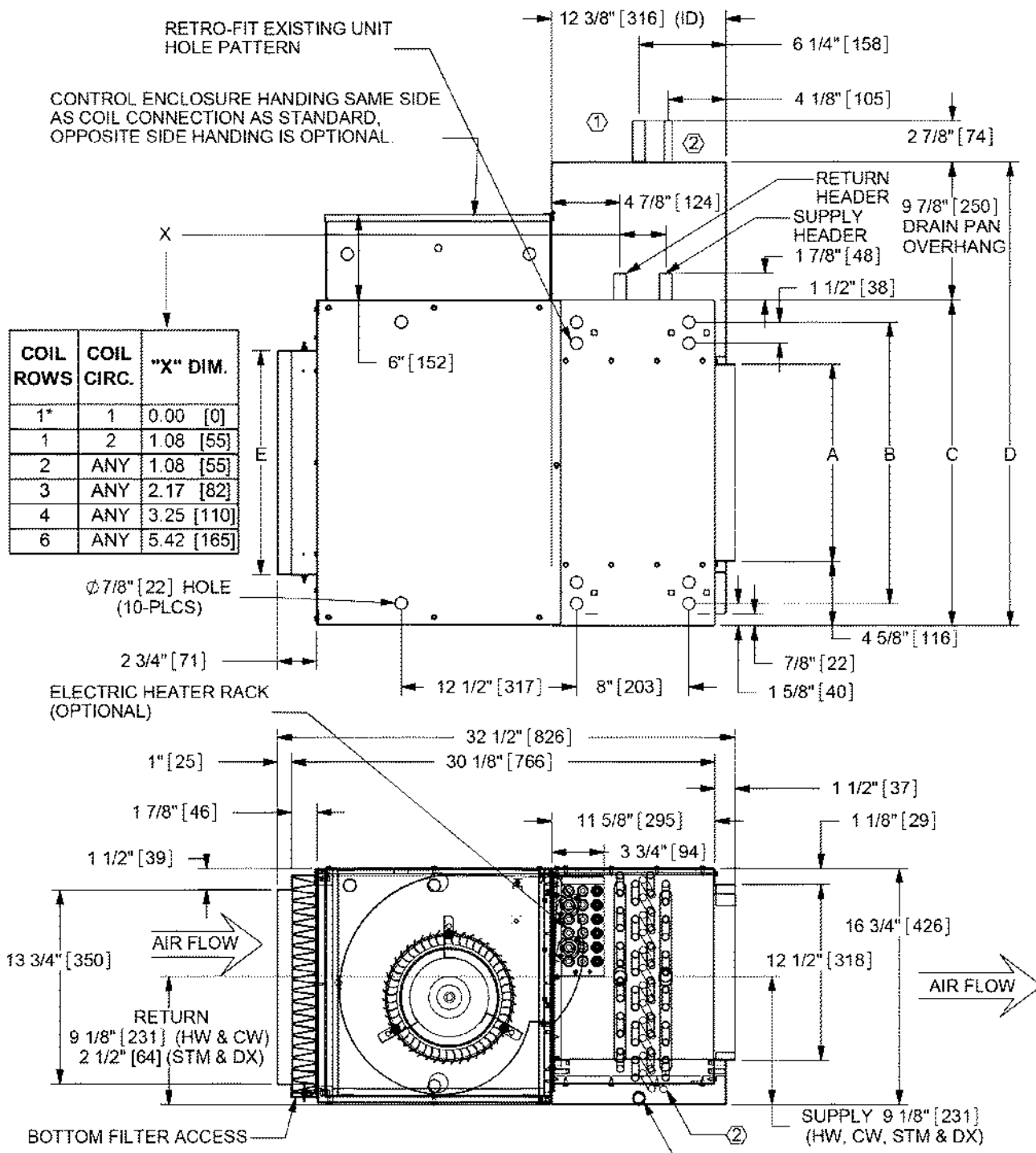
This submittal is meant to demonstrate general dimensions of this product. The drawings are not meant to detail every aspect of the product. Drawings are not to scale. Titus reserves the right to make changes without written notice.

All rights reserved. No part of this work may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, or by any information storage retrieval system without permission in writing from Air Distribution Technologies, Inc.

DIMENSIONAL DATA

FNP PLENUM UNITS

Drawings are not to scale and are not for installation purposes.



DRAIN PAN MATERIAL	SINGLE CONNECTION (STD) ①	SECONDARY CONNECTION (OPT) ②
GALVANIZED (STD)	7/8" OD COPPER	5/8" OD COPPER
STAINLESS (OPT)	3/4" MPT GALV.	1/2" MPT GALV.

CONTROL ENCLOSURE SIZES	
SIZE DETERMINED BY SELECTED COMPONENTS	
10 X 16 X 6	[250 X 406 X 152]
16 X 16 X 6	[406 X 406 X 152]

- NOTES:
- ALL DIMENSIONS ARE IN INCHES [mm] AND ARE +/- 1/8"
 - SEE SHEET 2 FOR SPECIFIC UNIT DIMENSIONS, OPTIONS & SPECIFICATIONS
 - * 1 ROW SINGLE CIRCUIT COILS ARE ON THE SAME AXIS, BUT ARE 13 3/4" APART IN HEIGHT
 - PROVIDE ACCESS CLEARANCE FOR ELECTRICAL ENCLOSURE PER LOCAL AND NATIONAL ELECTRICAL CODE REQUIREMENTS.
 - IT IS RECOMMENDED TO PROVIDE 3' ACCESS ON PIPE CONNECTION SIDE.

DIMENSIONAL DATA: FW SERIES

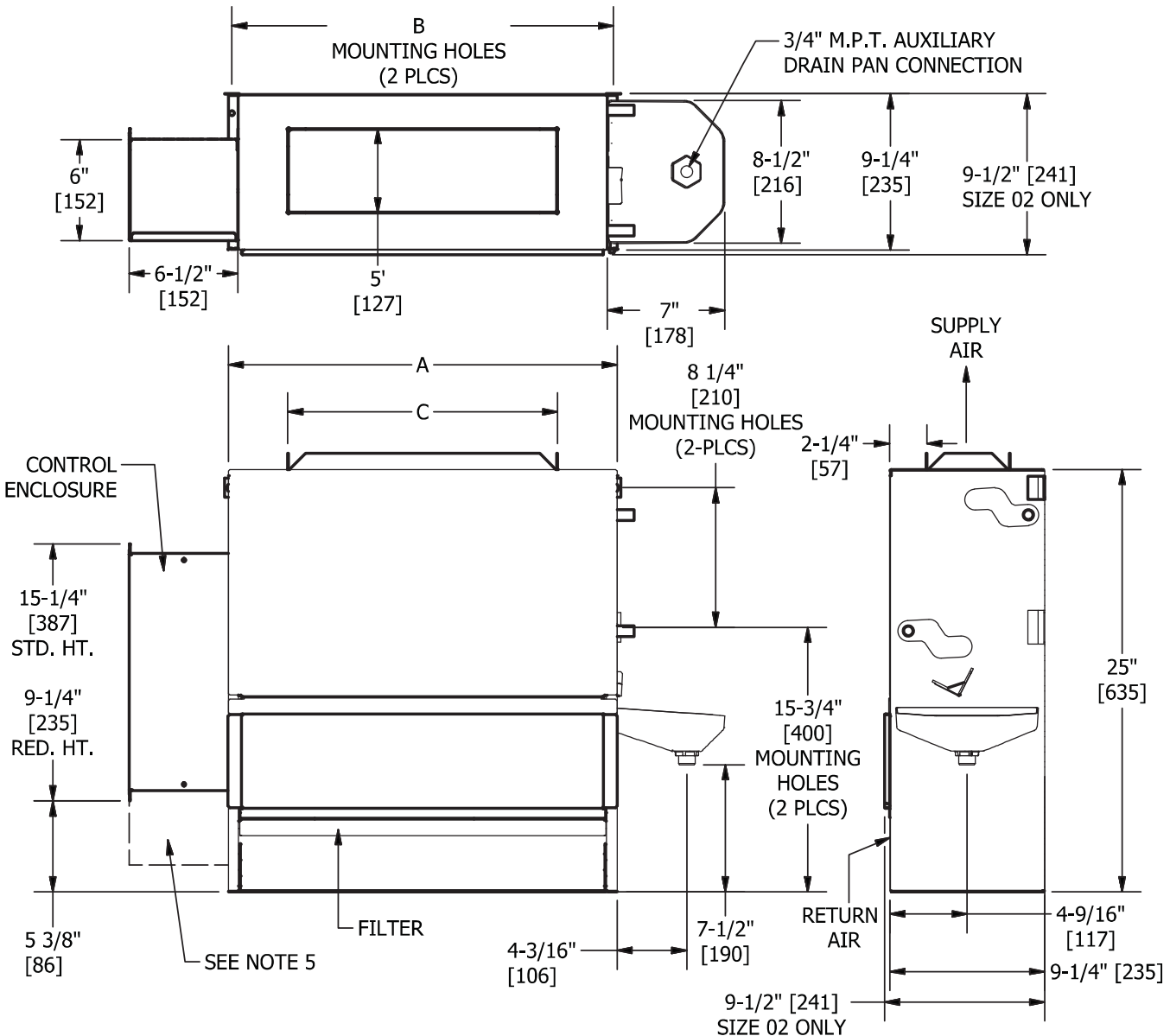
MODEL FWC CONCEALED UNIT

Drawings are not to scale and not for submittal or installation purposes.

NOTES:

1. All dimensions are in inches [millimeters]. All dimensions are $\pm 1/4"$ [6mm], Metric vales are soft conversion.
2. Junction box size and location varies w/unit features. Control options may be limited. Provide sufficient clearance to access electrical controls and comply w/applicable codes and ordinances. Reduced height control enclosure is standard with opposite end coils.
3. Right hand coil connection shown. Left hand unit similar but opposite.
4. Some piping package options may require extended drain pans.
5. Size 02 and 03 Models with 208/230vac or 277vac have $3\ 5/8"$ [92] extended control enclosure.

DIMENSIONS			
UNIT MODEL	A	B	C
FWC02	23 3/16 [589]	22 3/4 [578]	16" [406]
FWC03	27 3/16 [691]	26 3/4 [679]	20" [508]
FWC04	33 3/16 [843]	32 3/4 [832]	26" [660]
FWC06	43 3/16 [1097]	42 3/4 [1086]	36" [914]
FWC08	45 3/16 [1148]	44 3/4 [1137]	38" [965]
FWC10	59 3/16 [1503]	58 3/4 [1492]	52" [1320]
FWC12	67 3/16 [1707]	66 3/4 [1695]	60" [1524]



DIMENSIONAL DATA: VF SERIES

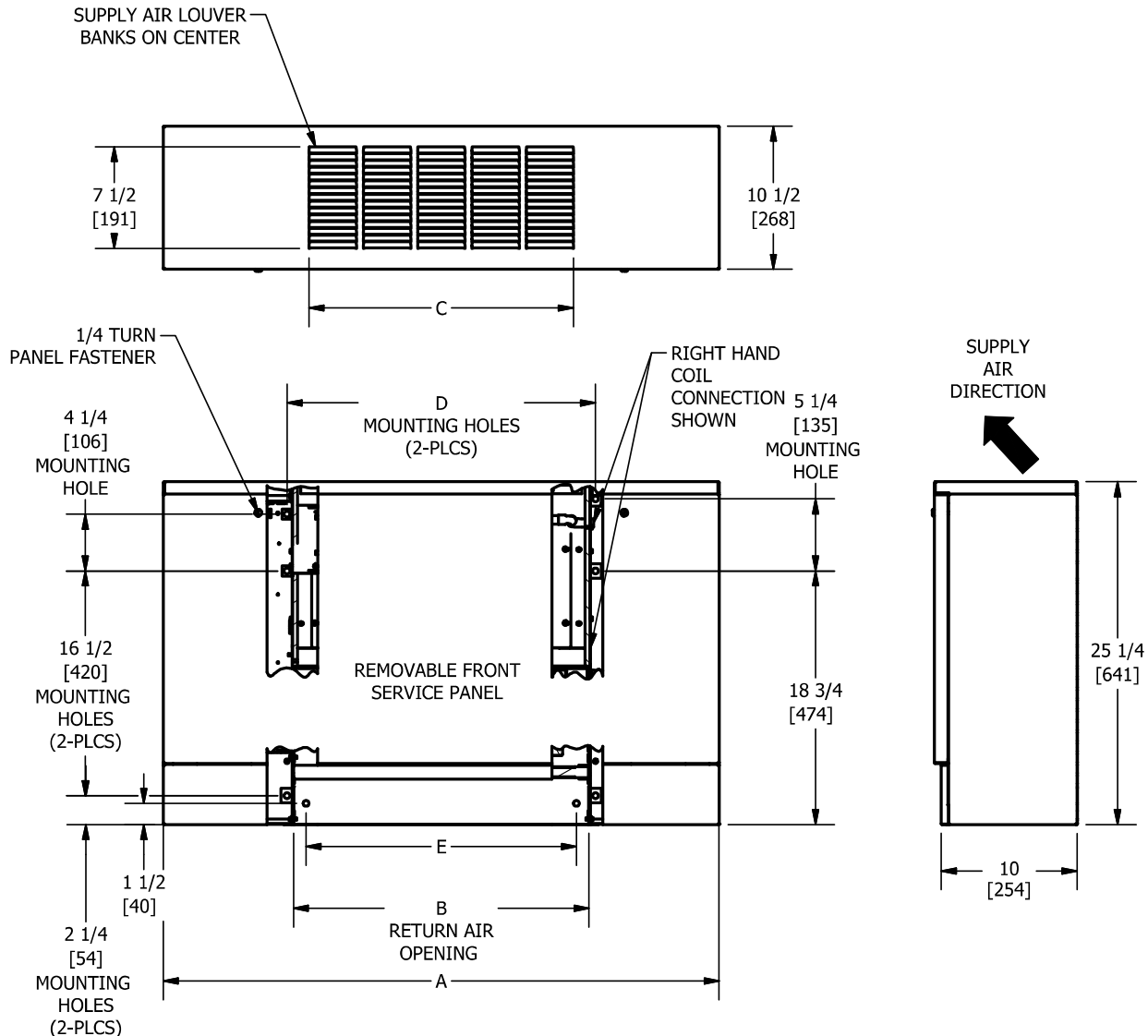
MODEL VFE EXPOSED UNIT

Drawings are not to scale and not for submittal or installation purposes.

NOTES:

1. All dimensions are Inches [millimeters]. All dimensions are $\pm 1/4"$ [6mm]. Metric values are soft conversion.
2. Junction box size and location varies with unit features. Control options may be limited. Provide sufficient clearance to access electrical controls and comply with applicable codes and ordinances.
3. Standard cabinet finish is "Pearl White Satin".
4. Parametric design available to increase Height or Width. (See parametric offerings drawing.)
5. Some control or piping package options may require extended end pockets and/or extended drain pans. (See extended end pocket drawing.)
6. False back extension available.

TABLE					
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
UNIT MODEL	DIM A	DIM B	DIM C	DIM D	DIM E
VFE02	41 [1041]	22 [559]	19 1/2 [495]	22 3/4 [578]	20 [508]
VFE03	45 [1143]	26 [660]	23 1/2 [597]	26 3/4 [679]	24 [607]
VFE04	51 [1295]	32 [813]	27 1/2 [699]	32 3/4 [832]	30 [762]
VFE06	61 [1549]	42 [1067]	39 1/2 [1003]	42 3/4 [1086]	40 [1016]
VFE08	63 [1600]	44 [1118]	39 1/2 [1003]	44 3/4 [1137]	42 [1067]
VFE10	77 [1956]	58 [1473]	55 1/2 [1410]	58 3/4 [1492]	53 [1347]
VFE12	85 [2159]	66 [1676]	63 1/2 [1613]	66 3/4 [1695]	64 [1626]





Pool Unit - Under Tenant Finish

ExpertAire™ Series Dehumidifiers

Project: Hot Springs National Park
Location: Hot Springs, Arkansas
Unit Model #: LC06R7NBATJLCED
System Tag: PDU-1 & PCU-1
Date: 4/3/2022



DESERT AIRE REPRESENTATIVE

Firm: Fawcett Mechanical Sales, Inc
Address: 610 W 58th Terrace
City, State Zip Code: Kansas City, MO, 64113
Phone: (913) 269-0287
Fax: -
Contact: John Fawcett
E-Mail: jfawcett@sunflower.com



ExpertAire™ Series Dehumidifiers

Section 1 Product Scope & Details

- Product Scope
- Engineering Specialties



ExpertAire™ Series Dehumidifiers

PRODUCT SCOPE

Quantity: 1
Model #: LC06R7NBATJLCED
Tag #: PDU-1 & PCU-1
Unit Weight: 1285 lbs

Capacities:

- Supply Air: 3000 CFM
- Outside Air: 800 CFM
- Dehumidification
- EAT: 84.0 °F DB / 73.0 °F WB
- Total Cooling Capacity: 99 MBH
- Total Sensible Capacity: 53.45 MBH
- Moisture Removal Capacity: 43.0 lb/hr
- Total Heat of Rejection: 121 MBH

DX Refrigeration System:

- Refrigerant Type: R-410A
- Scroll Compressor(s), Nominal Tons: 06
- Hot Gas Reheat Condenser Coil
- Coil Coating: Electrofin Coating
- Receiver w/ Flooding Valve
- Hot Gas Bypass Included

Supply Airflow Configuration:

- Supply Discharge Location: Horizontal
- Outdoor Intake Location: Horizontal
- Supply ESP: 0.5 in WC
- Supply TSP: 1.52 in WC

Air Filters:

- Standard Filters: MERV 8

Enclosure:

- Location: Indoor
- Separate Electrical Compartment
- Galvanneal with Powder Coat Finish

Condensate Drain Pan:

- 20-Gauge Stainless Steel, Sloped
- 1 in. Schedule 40 PVC Drain Connection

Unit Electrical:

- Main Power (V/Ph/Hz): 208/3/60
- MCA (Amps): 37
- MOPD (Amps): 60
- SCCR (kA): 65
- When protected by Class J, T, or RK1 fuses
- Disconnect: Included, Non-Fused

Controls:

- Model CM3530
- Temp & RH Sensors: Inside Dehumidifier
- Occupancy Timer w/ BMS Override
- BMS Compatibility: Remote Display Terminal

Air Cooled Condenser:

- Model #: RC5S051C3H21900
- # of Fans: 2
- Unit Weight: 315 lbs
- Voltage/Phase/Hz - 208/230-3-60
- MCA (Amps): 7.4
- MOPD (Amps): 15
- SCCR (Amps): 10kA
- Rated Ambient Condition - 105 °F
- Coil - Cu Tubing w/ Al Fins

Auxiliary Heat:

- Hot Water Coil
- Capacity: 140 - 164 MBH
- Control Signal: Modulating

Warranties (Parts Only):

- Standard Warranty: 2 Years w/ Internet Connection to AireGuard™
- Compressor Warranty: 5 Years
- Air Side Coil Warranty: 5 Years



ExpertAire™ Series Dehumidifiers

ENGINEERED SPECIALTIES

MCA/MOPD Calculation

2022_03B

Project Hot Springs National Park
Tag PDU-1 & PCU-1

Series LC06
Aux Heat Hot Water Coil
Refrigerant R-410A

S/A Airflow	3000	cfm @	0.5	in ESP
S/A Blower Motor (ea)	1.5	HP		
S/A Blower Motor (qty)	1			
E/A Airflow	0	cfm @	N/A	in ESP
E/A Blower Motor (ea)	0	HP		
E/A Blower Motor (qty)	0	HP		
Ext. Source Capture Mtr	0	HP		

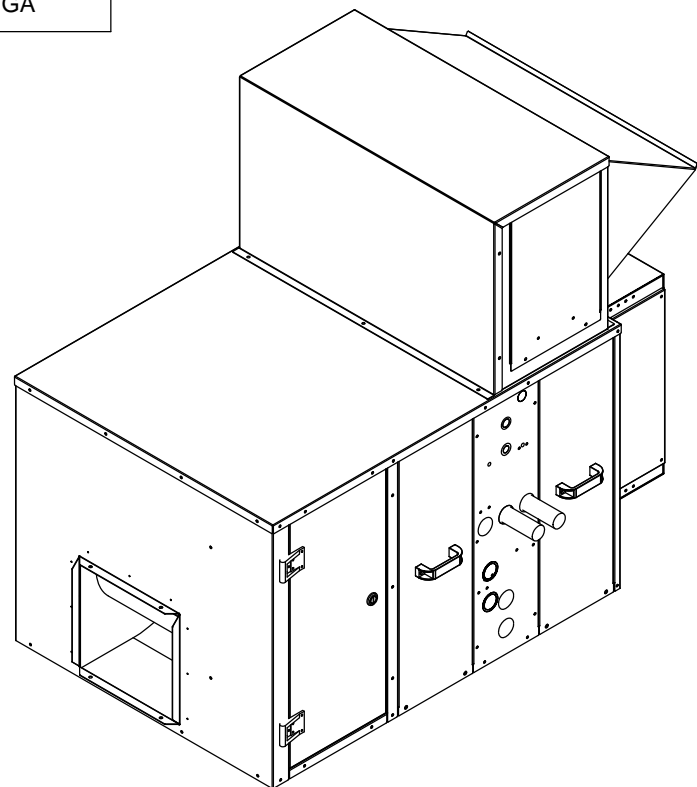
Voltage 208/3/60

FLA		
Compressor 1	25.0	
Compressor 2	0.0	
Compressor 3	0.0	
Compressor 4	0.0	
S/A Blwr Motor (ea)	4.8	
E/A Blwr Motor (ea)	0.0	
Ext. Source Capture Mtr	0.0	
Electric Heater (single point)	N/A	N/A
Total Transformer (VA)	150	kw MCA

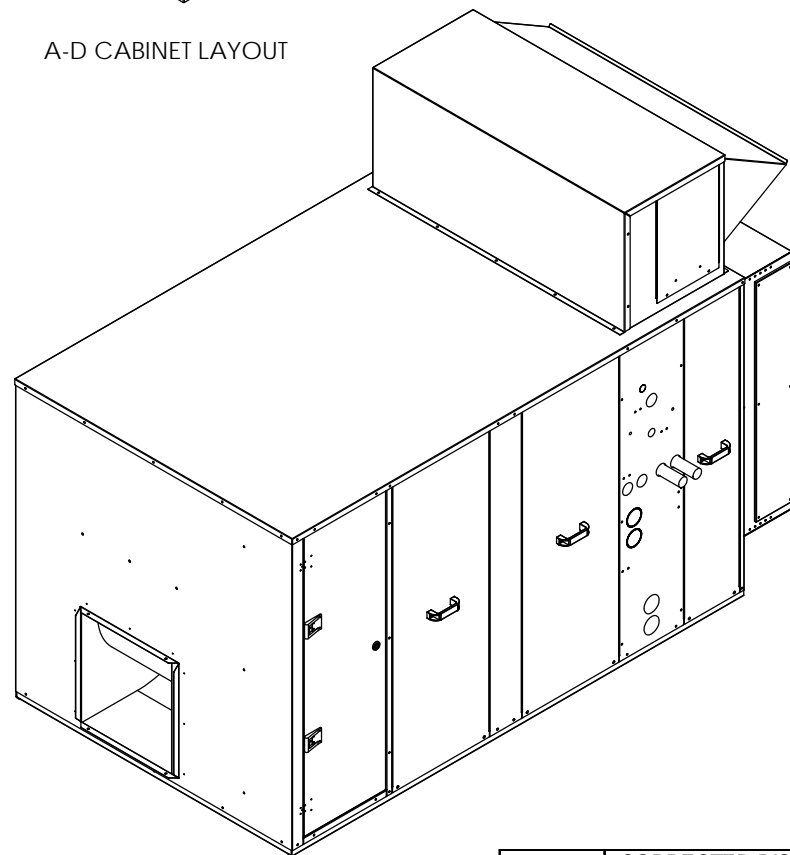
Unit MCA	37	Amps
Unit MOPD	60	Amps

Electric Heater (for separate power circuit)

kW	N/A
FLA	N/A
MCA	N/A



A-D CABINET LAYOUT



E CABINET LAYOUT

CABINET / COMPONENT CONFIGURATION MATRIX									
	STANDARD (NO HEAT OR WC OPTIONS)	ELECTRIC HEATER (INTEGRAL)	HOT WATER COIL	1 EACH H ₂ O COOLED CONDENSER (CO-AXIAL)	2 EACH H ₂ O COOLED CONDENSER (CO-AXIAL)	ELECTRIC HEAT w/ 1 EA. H ₂ O COOLED CONDENSER (CO-AXIAL)	HOT WATER COIL w/ 1 EA. H ₂ O COOLED CONDENSER (CO-AXIAL)	ELECTRIC HEAT w/ 2 EA. H ₂ O COOLED CONDENSERS (CO-AXIAL)	HOT WATER COIL w/ 2 EA. H ₂ O COOLED CONDENSERS (CO-AXIAL)
LC01	A			B					
LC02	A			B					
LC03	A			B					
LC04 3 PHASE	B	B	B	C					
LC04 1 PHASE		C							
LC05 3 PHASE		B							
LC05 1 PHASE		C							
LC06	C			D					
LC08 3 PHASE	C								
LC08 1 PHASE	C								
LC10	D			E					
LC12	D								
LC15	D								

THIS MATRIX WILL PROVIDE THE CABINET SIZE WHEN SELECTING OPTIONS FOR YOUR UNIT.

EXPERT AIRE FILTER INFORMATION				
LC CABINET	R/A		DESERT AIRE PART NUMBER	
	FILTER SIZE	QTY	4" FILTER	DEACTIVATOR, 1"
A	20x25	1	870-079	872-002
B	20x20	2	870-112	872-003
C	16x20	4	870-080	872-005
D	20x25	4	870-079	872-002
E				

OUTSIDE AIR BOX FILTERS				
LC CABINET	FILTER SIZE	QTY	INDOOR 1" FILTER (PAPER)	OUTDOOR 1" FILTER (ALUMINUM)
A	16x16x1	2	870-001	870-055
B				
C				
D	16x16x1	3	870-001	870-055
E				

LEGEND

----- INDICATES OPTIONAL COMPONENTS

Rev #	Description	Date	Initials	ECN #
14	CORRECTED DISCHARGE LOCATIONS, SHT 3	10/28/2015	RW	2566
13	UPDATED CONNECTION SIZES & LOC, SHT 2	6/2/2014	ASV	2346
12	RESTORED REFERENCE DIMENSIONS FOR SHT 2 DIMS A, B, H, J, & K AND SHT 4 DIMS C4 & D4.	3/7/2012	RW	1809
11	UPDATE UNIT WEIGHTS & CONNECTION LINE SIZES, SHT 2	1/11/2012	RW	1776
10	ADD LV04 TO ALL TABLES	4/22/2010	RP	1624
9	UPDATED PG1 MATRIX, ADD LC06 D CAB CONFIG INFO	3/27/2008	RW	1399
8	SHT 1, FILTER PART NO.; SHT 2, FILTER RACK DIMS	8/31/2007	DAH	1316
7	UPDATED PG1 & PG 2 MATRICES	6/21/2007	DAH	1287
6	UPDATED CAB DIMS FOR BASE PAN MODS, SHTS 2&3	4/24/2007	DAH	1265
5	UPDATED CONNECTION SIZES, SHT 2	4/24/2007	DAH	1264

This drawing and information contained herein are the exclusive property of the Desert Aire Corporation. Any use detrimental to the interests of Desert Aire is prohibited.

All Dimensions in Inches
All Angles 90°
All outside corners 0.125" fillet
Unless Otherwise Specified

Tolerance Unless Otherwise Specified
X.X ±.125
X.XX ±.060
X.XXX ±.030
Angles ±1°



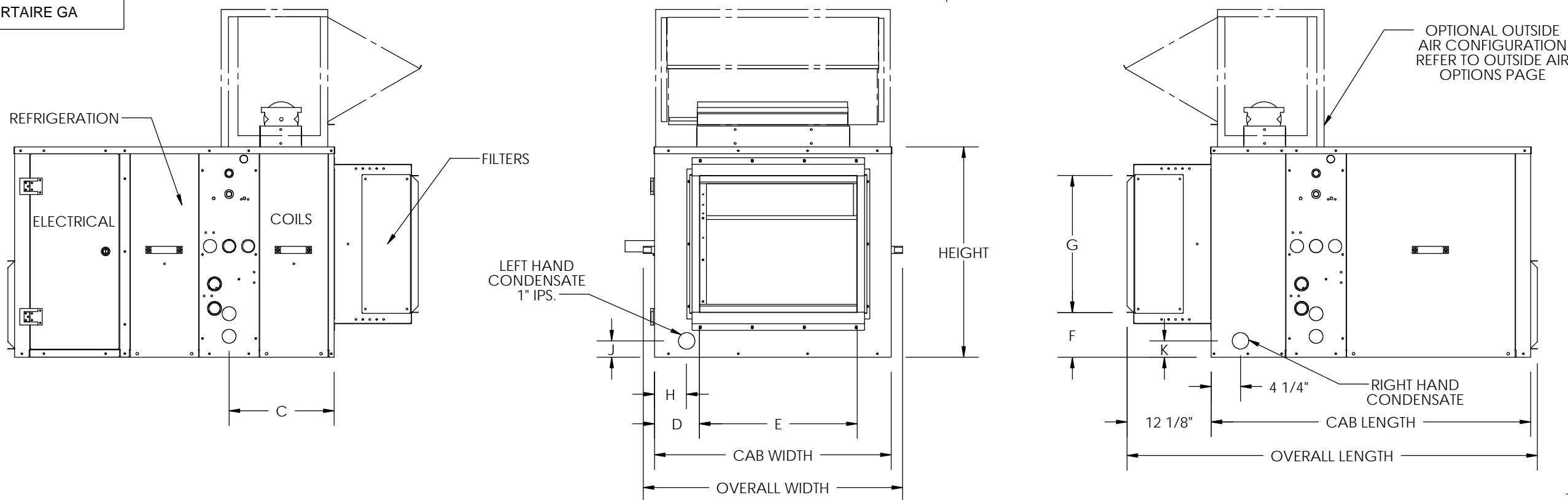
N120 W18485 Freistadt RD.
Germantown, WI 53022
Ph: (262) 946-7400
Fax: (262) 946-7401

Third Angle Projection

ALL DIMENSIONS ARE IN INCHES
TOLERANCE ± 1/8"

Part weight
N/A

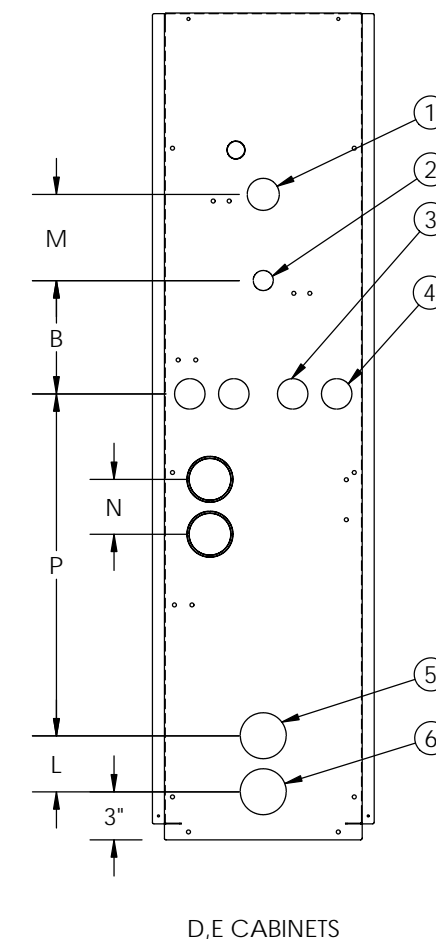
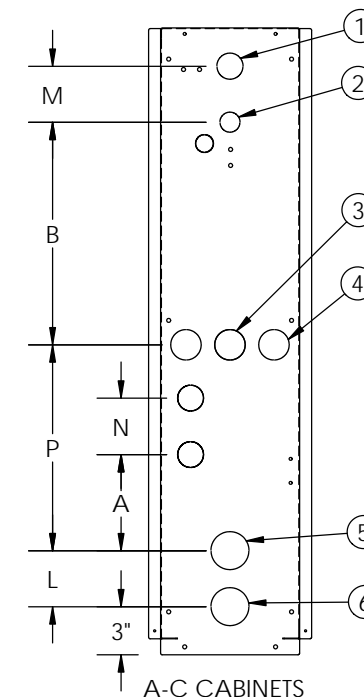
Drawn CLB	Date Released 11/20/2006	Description EXPERTAIRE CABINET MATRIX
Sheet 1/4	Page Title EXPERTAIRE G.A. PAGE (1)	
Scale NTS	Rev. 14	Drawing Number EXPERTAIRE GA



OPTIONAL OUTSIDE AIR CONFIGURATION REFER TO OUTSIDE AIR OPTIONS PAGE

① WEIGHTS SHOWN REFLECT FULLY OPTIONED ESTIMATED UNIT WEIGHT

	OVERALL WIDTH	OVERALL LENGTH	CABINET HEIGHT	CABINET WIDTH	CABINET LENGTH	A	B	C	D	E	F	G	H	J	K	L	M	N	P	
CAB A: LC01	37 1/4			34 3/8		3/4	10 1/2	15 1/8	6 1/2	22 3/4			4 5/8			3 1/4	3	3 1/2	6 3/4	
CAB A: LC02				7 1/2			9 3/4													
CAB A: LC03				7 1/2			9 3/4													
CAB B: LC01	48 1/4	59 1/4	30 3/8	45 3/8	46 1/4	3/4	10 1/2	6	37 1/8	6 1/2	19 3/4			2 3/8	2 3/8	3 1/4	3	3 1/2	6 3/4	
CAB B: LC02							7 1/2												9 3/4	
CAB B: LC03							7 1/2												9 3/4	
CAB B: LC04							-												4 1/8	10 1/2
CAB B: LC05							-												4 1/8	10 1/2
CAB C: LC04	50 1/4	72 1/4	39 7/8	47 3/8	59 1/4	6	13 7/8	15 7/8	6	47 1/8	9 1/2	39 1/2	3 7/8	4 7/8	4 3/8	3 1/2	4	-	12 7/8	
CAB C: LC05							10 1/2												15 1/8	
CAB C: LC06							10 1/2												15 1/8	
CAB C: LC08							-												4 1/8	10 1/2
CAB D: LC06	56 1/8	77 1/8	52 7/8	53 1/4	64 1/8	6 1/2	6	17 3/4	3 1/8	47 1/8	9 1/2	39 1/2	5 3/8	4 7/8		3 1/2	4	3 1/2	15 1/8	
CAB D: LC08							10 1/2												17 7/8	
CAB D: LC10							8 3/4												10 1/2	
CAB D: LC12							8 3/4												10 1/2	
CAB E: LC15							12 5/8												7 1/8	86 3/4



#	DESCRIPTION OF LABELED AREAS	LC01	LC02	LC03	LC04	LC05	LC06	LC08	LC10	LC12	LC15
1	REFRIGERATION HOT GAS (TUBE)	3/8	1/2	5/8	3/4			7/8		1 1/8	
2	REFRIGERATION LIQUID (TUBE)		3/8	1/2			5/8				
3	HOT WATER INLET (Cu TUBE O.D.)	1 5/8									
4	HOT WATER OUTLET (Cu TUBE O.D.)	1 5/8									
5	POOL SPA OUTLET SCH 80 CPVC PIPE (IPS)	1/2	3/4	1	1 1/4			1 1/2			
6	POOL SPA INLET SCH 80 CPVC PIPE (IPS)										

NOMINAL TONNAGE	WEIGHT (LBS) ①
LC01	590
LC02	630
LC03	800
LC04	950
LC05	1000
LC06	1230
LC08	1300
LC10	1600
LC12	1600
LC15	2050

This drawing and information contained herein are the exclusive property of the Desert Aire Corporation. Any use detrimental to the interests of Desert Aire is prohibited.

ALL DIMENSIONS ARE IN INCHES
TOLERANCE ± 1/8"

All Dimensions in Inches
All Angles 90°
All outside corners 0.125" fillet
Unless Otherwise Specified

Third Angle Projection

Part weight
N/A

Tolerance Unless Otherwise Specified
X.X ±.125
X.XX ±.060
X.XXX ±.030
Angles ±1°

Drawn
CLB

Date Released
11/20/2006

Sheet
2/4

Scale
NTS

Rev.
14

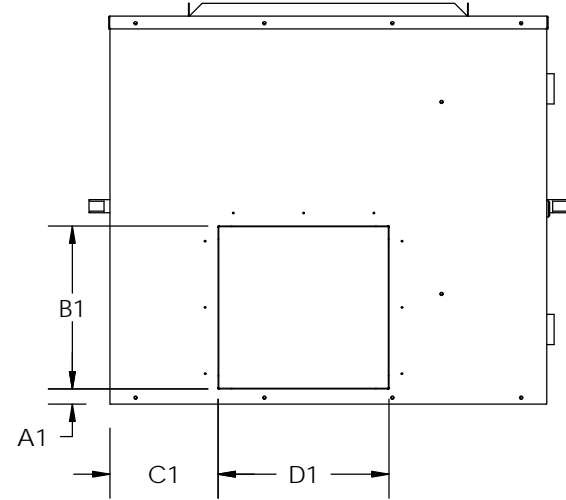
N120 W18485 Freistadt RD.
Germantown, WI 53022
Ph: (262) 946-7400
Fax: (262) 946-7401

Description
EXPERTAIRE LAYOUT

Page Title
EXPERTAIRE G.A. PAGE (2)

Drawing Number
EXPERTAIRE GA

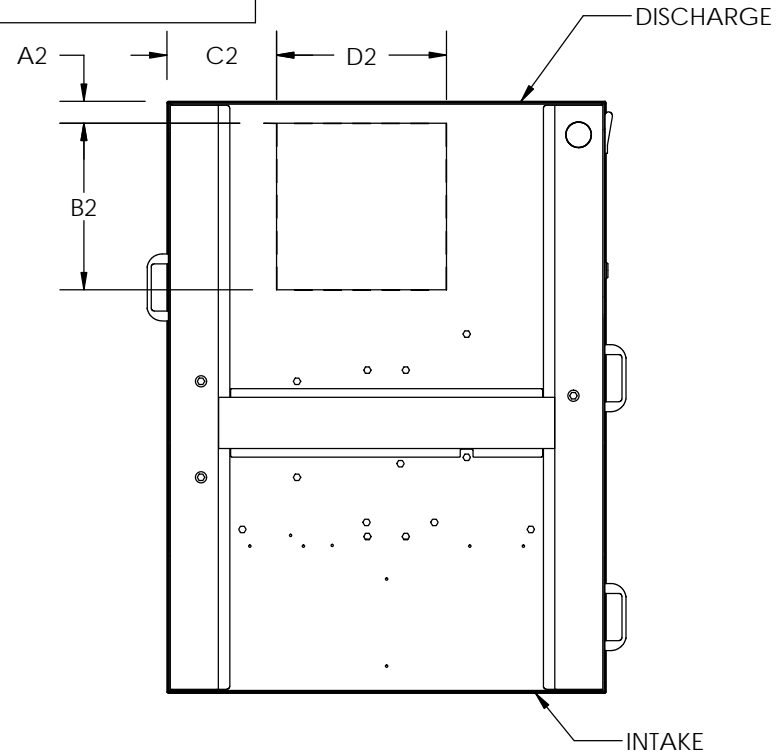
HORIZONTAL DISCHARGE



DIMENSIONS TO OUTSIDE OF FLANGE

HORIZONTAL DISCHARGE				
UNIT SIZE	A1	B1	C1	D1
CAB A: LC01	1 1/4	12 3/4	8 1/2	13 3/8
CAB A: LC02				
CAB A: LC03				
CAB B: LC01		13 3/4	14	15 7/8
CAB B: LC02				
CAB B: LC03				
CAB B: LC04		16 1/8	12 1/2	16 3/8
CAB B: LC05				
CAB C: LC04				
CAB C: LC05		19 1/8	18 7/8	
CAB C: LC06				
CAB C: LC08				
CAB D: LC06		19 1/8	18 7/8	
CAB D: LC08				
CAB D: LC10				
CAB D: LC12	19 1/8	18 7/8		
CAB E: LC15				

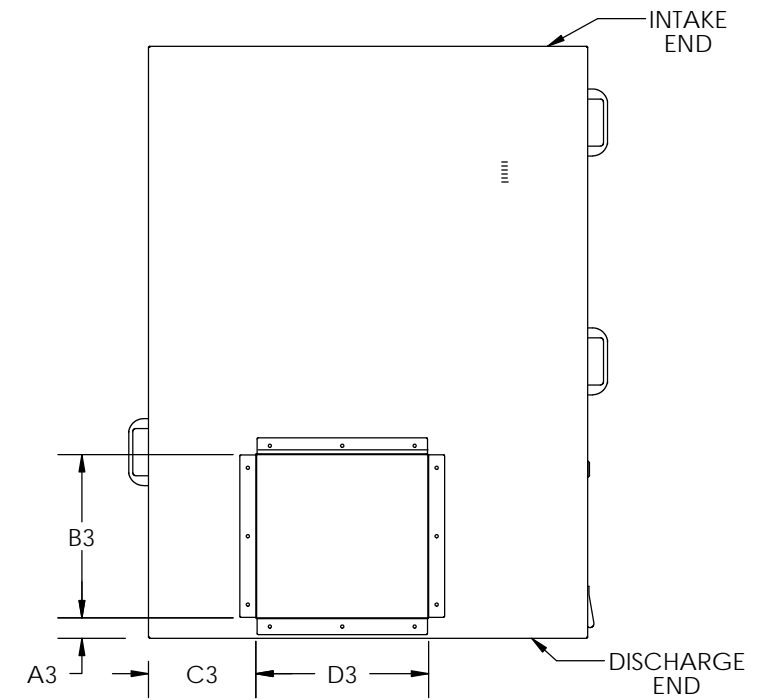
BOTTOM DISCHARGE



DIMENSIONS TO OUTSIDE OF FLANGE

BOTTOM DISCHARGE					
UNIT SIZE	A2	B2	C2	D2	
CAB A: LC01	1 5/8	13	8 1/2	6 7/8	
CAB A: LC02				9 7/8	
CAB A: LC03				13 1/4	
CAB B: LC01		14 1/8	14 1/8	6 7/8	
CAB B: LC02				9 7/8	
CAB B: LC03				13 1/4	
CAB B: LC04		15 3/4	12 1/2	13 1/8	
CAB B: LC05					16 1/4
CAB C: LC04					13 1/8
CAB C: LC05		16 1/4	12 1/2	16 1/4	
CAB C: LC06				13 1/8	
CAB C: LC08				16 1/4	
CAB D: LC06		19 1/4	17 1/2		
CAB D: LC08					
CAB D: LC10					
CAB D: LC12	19 1/4	17 1/2			
CAB E: LC15					

TOP DISCHARGE



DIMENSIONS TO OUTSIDE OF FLANGE

TOP DISCHARGE				
UNIT SIZE	A3	B3	C3	D3
CAB A: LC01	1 5/8	12 7/8	8 1/2	13 1/2
CAB A: LC02				
CAB A: LC03				
CAB B: LC01		13 7/8	14	16
CAB B: LC02				
CAB B: LC03				
CAB B: LC04		16 1/4	12 1/2	19
CAB B: LC05				
CAB C: LC04				
CAB C: LC05		16 1/4	12 1/2	17 3/4
CAB C: LC06				
CAB C: LC08				
CAB D: LC06		19 1/4	17 3/4	
CAB D: LC08				
CAB D: LC10				
CAB D: LC12	19 1/4	17 3/4		
CAB E: LC15				

NOTES:

FILTER RACK HAS BEEN REMOVED FOR CLARITY

This drawing and information contained herein are the exclusive property of the Desert Aire Corporation. Any use detrimental to the interests of Desert Aire is prohibited.

ALL DIMENSIONS ARE IN INCHES
TOLERANCE ± 1/8"

All Dimensions in Inches
All Angles 90°
All outside corners 0.125" fillet
Unless Otherwise Specified

Third Angle Projection

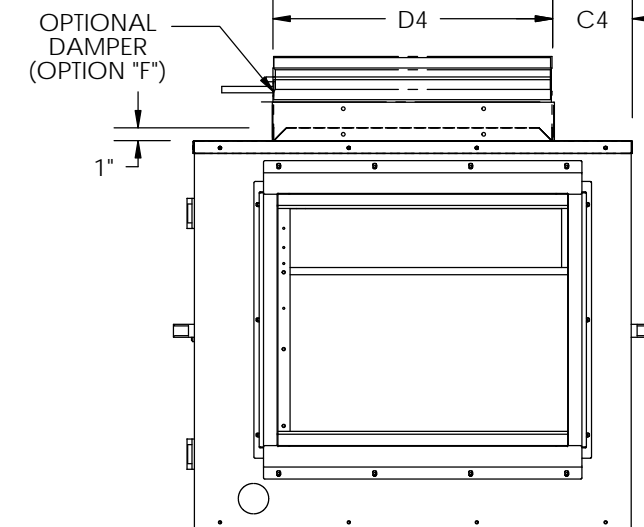
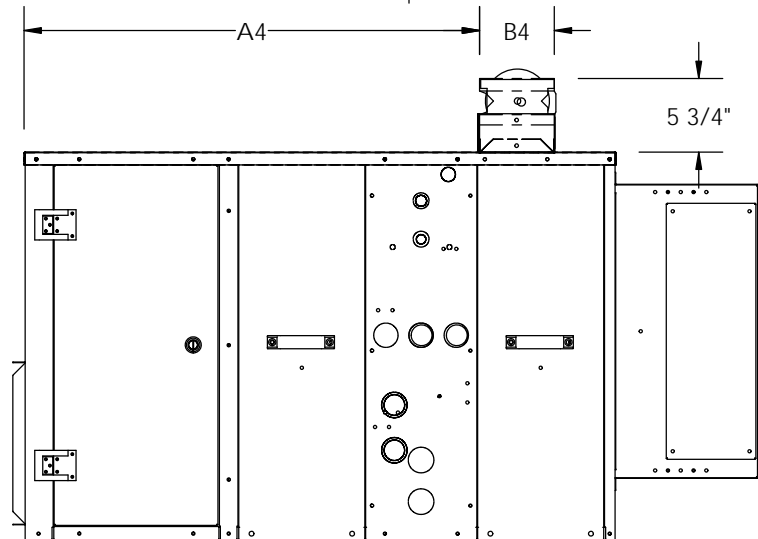
Part weight
N/A

Tolerance Unless Otherwise Specified
X.X ±.125
X.XX ±.060
X.XXX ±.030
Angles ±1°

Drawn CLB	Date Released 11/20/2006	Description DISCHARGE OPTIONS
Sheet 3/4	Page Title EXPERTAIRE G.A. PAGE (3)	
Scale NTS	Rev. 14	Drawing Number EXPERTAIRE GA

DESERT AIRE
N120 W18485 Freistadt RD.
Germentown, WI 53022
Ph: (262) 946-7400
Fax: (262) 946-7401

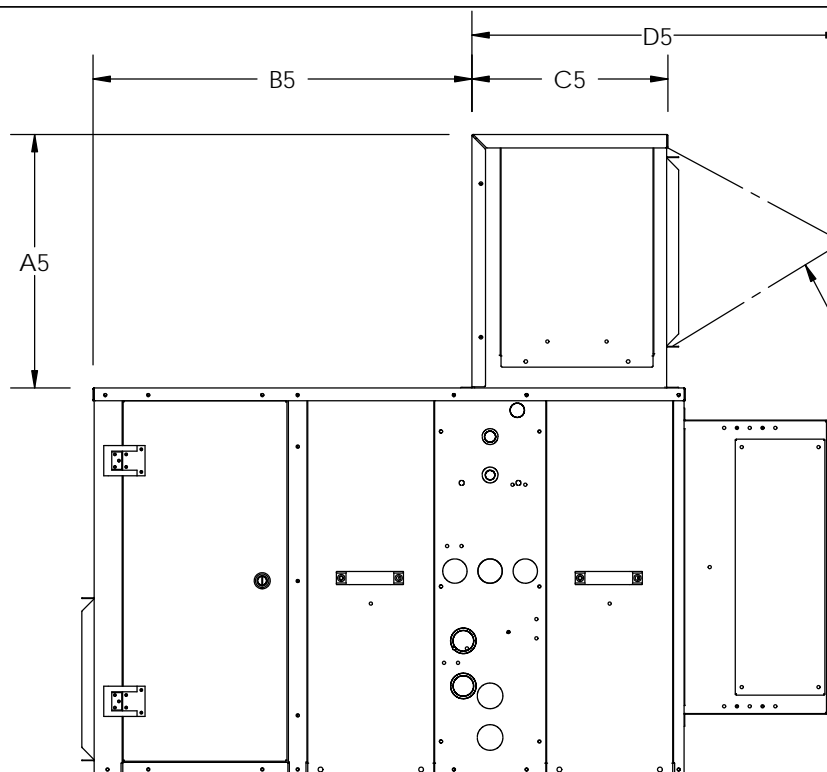
VIEWS SHOWN DEPICT
OUTSIDE AIR
OPTIONS "D" & "F"



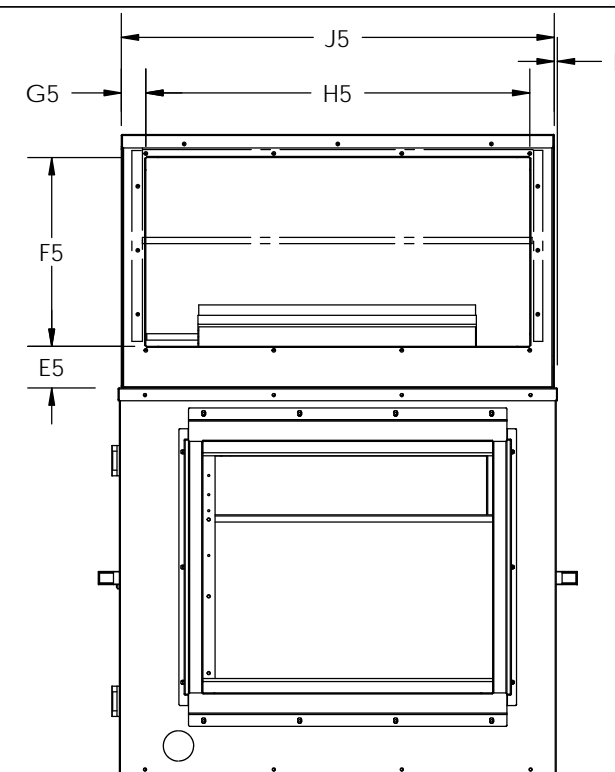
NOTE:

OUTSIDE AIR OPTION "N"
(NOT SHOWN)
IS FOR NO OUTSIDE AIR

VIEWS SHOWN DEPICT
OUTSIDE AIR
OPTIONS "T" & "U"



HOODS ARE PROVIDED
FOR OUTDOOR INSTALLATION
(OPTION "U")



OUTSIDE AIR OPENING DIMENSIONS

CAB	A4	B4	C4	D4
CAB A: LC01	35 7/8	5 7/8	6 1/4	21 7/8
CAB A: LC02				
CAB A: LC03				
CAB B: LC01	48 7/8	5 7/8	11 3/4	21 7/8
CAB B: LC02				
CAB B: LC03				
CAB B: LC04				
CAB B: LC05				
CAB C: LC04	51 3/4	7 7/8	4 5/8	43 7/8
CAB C: LC05				
CAB C: LC06				
CAB C: LC08	74 3/8			
CAB D: LC06				
CAB D: LC08				
CAB D: LC10				
CAB D: LC12				
CAB E: LC15				

OUTSIDE AIR BOX DIMENSIONS

UNIT SIZE	A5	B5	C5	D5	E5	F5	G5	H5	I5	J5	
CAB A: LC01	19 7/8	29 7/8	15 3/8	28 5/8	3 1/4	14 7/8	1 7/8	30 1/8	3/8	33 7/8	
CAB A: LC02											
CAB A: LC03											
CAB B: LC01		42 7/8	5 3/4								
CAB B: LC02											
CAB B: LC03											
CAB B: LC04											
CAB B: LC05											
CAB C: LC04		43 3/4	19 3/8	32 5/8							
CAB C: LC05											
CAB C: LC06											
CAB C: LC08		66 3/8									
CAB D: LC06											
CAB D: LC08											
CAB D: LC10											
CAB D: LC12											
CAB E: LC15											

This drawing and information contained herein are the exclusive property of the Desert Aire Corporation. Any use detrimental to the interests of Desert Aire is prohibited.

All Dimensions in Inches
All Angles 90°
All outside corners 0.125" fillet
Unless Otherwise Specified

Tolerance Unless
Otherwise Specified
X.X ±.125
X.XX ±.060
X.XXX ±.030
Angles ±1°



N120 W18485 Freistadt RD.
Germantown, WI 53022
Ph: (262) 946-7400
Fax: (262) 946-7401

Third Angle Projection

ALL DIMENSIONS ARE IN INCHES
TOLERANCE ± 1/8"

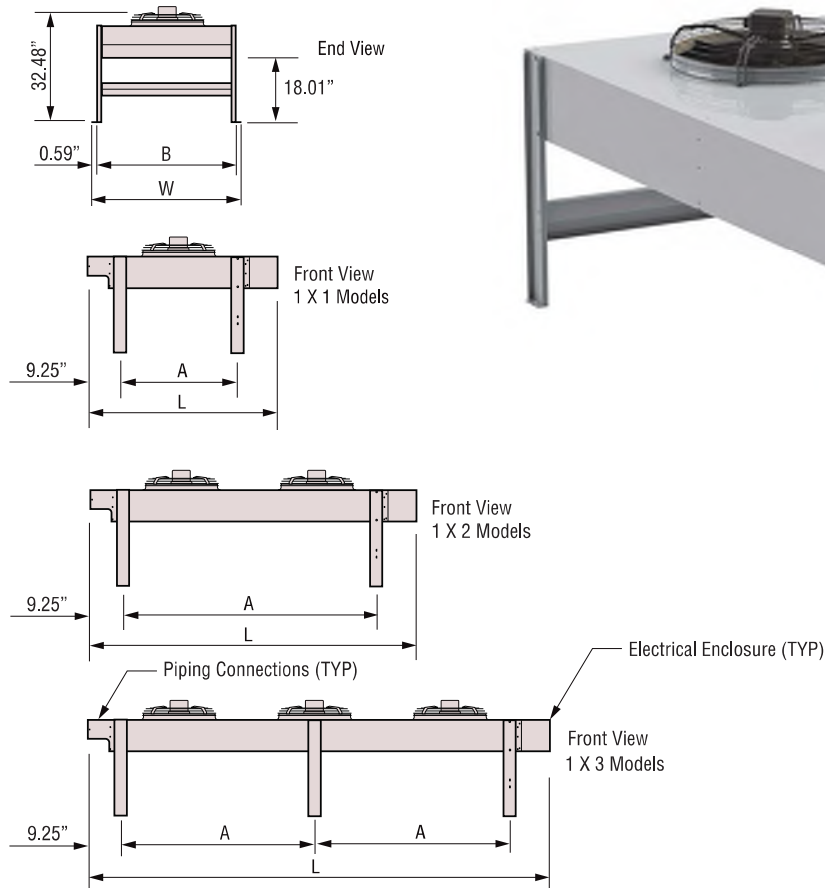
Part weight
N/A

Drawn CLB	Date Released 11/20/2006	Description OUTSIDE AIR OPTIONS
Sheet 4/4	Page Title EXPERTAIRE G.A. PAGE (4)	
Scale NTS	Rev. 14	Drawing Number EXPERTAIRE GA

Pool Unit Condenser - Under Tenant Finish

DIMENSIONAL DATA RC5 SERIES

Model	Fan Layout	Overall Length (L) (inches)	Overall Width (W) (inches)	Mounting Dimensions (in)	
				A	B
RC5					
RC5S008	1 x 1	50.4	30.5	31.8	29.3
RC5S013	1 x 1	50.4	30.5	31.8	29.3
RC5S018	1 x 1	50.4	30.5	31.8	29.3
RC5S024	1 x 1	50.4	39.5	31.8	38.3
RC5S032	1 x 1	50.4	39.5	31.8	38.3
RC5S039	1 x 1	50.4	39.5	31.8	38.3
RC5S051	1 x 2	86.4	30.5	67.8	29.3
RC5S063	1 x 2	86.4	30.5	67.8	29.3
RC5S067	1 x 2	90.4	39.5	71.8	38.3
RC5S079	1 x 2	90.4	39.5	71.8	38.3
RC5S099	1 x 3	122.4	39.5	51.9	38.3
RC5S113	1 x 3	122.4	39.5	51.9	38.3



OPTIMIZING SOLUTIONS THROUGH SUPERIOR DEHUMIDIFICATION TECHNOLOGY

N120 W18485 Friestadt Road, Germantown, WI 53022 sales@desert-aire.com

Ph: (262) 946-7400 - www.desert-aire.com



WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov

226 2021/11



COOK

Rooftop Exhaust Fan
- Under Tenant Finish

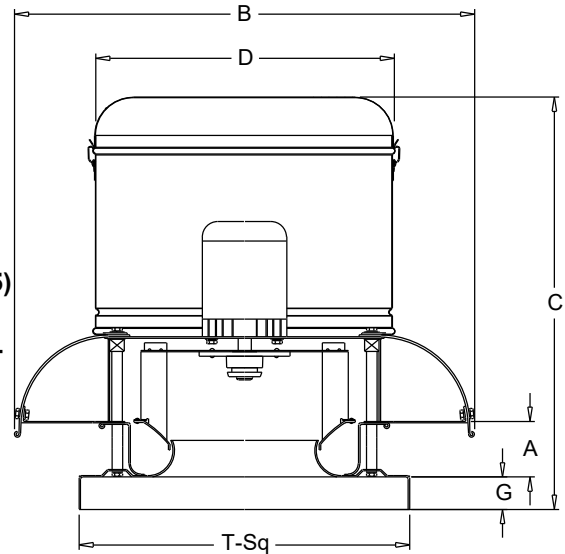


MARK: EF-1
PROJECT: MAURICE FANS
DATE: 4/11/2022

ACED-EC

Downblast Centrifugal
Exhaust Ventilator
Roof Mounted/Direct Drive
Electronically Commutated Vari-Flow® Motor

STANDARD CONSTRUCTION FEATURES:
 All aluminum housing - Backward inclined all aluminum wheel - Two piece top cap with stainless steel quick release latches (sizes 101 - 135)
 - Welded curb cap corners - Birdscreen - Permanently lubricated ball bearing electronically commutated motor - Power rated in Input Watts - Corrosion resistant fasteners - Transit tested packaging.



Performance

Qty	Catalog Number	Flow (CFM)	SP (inwc)	Fan RPM	Input Watts	FEG	Speed Control
1	101C17DEC	500	.375	1279	56	n/a(<1HP)	EC

Altitude (ft): 1000 Temperature (F): 70

Motor Information

HP	RPM	Volts/Ph/Hz	Enclosure
1/4	1725	115/1/60	OPEN -EC



Sound Data Inlet Sound Power by Octave Band

1	2	3	4	5	6	7	8	LwA	dBA	Sones
63	65	71	61	56	52	47	44	65	53	6.7

Accessories:

- FAN MOUNTED SPEED CONTROL
- ROOF CURB RCG 16-18H

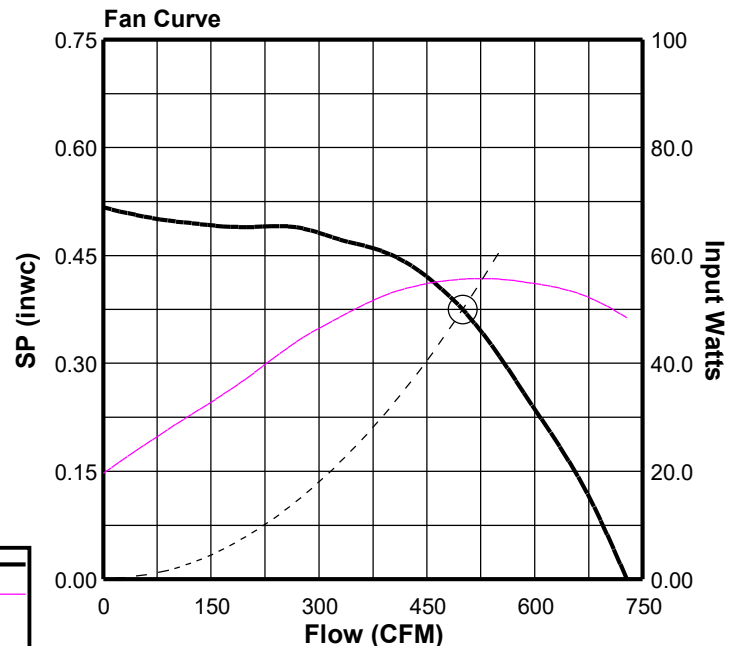
Dimensions (inches)

A	2-3/8
B O.D.	23-9/16
C	21-1/8
D O.D.	16-3/4
G	2
T Sq.	18
Roof Open. Sq.*	13-1/2

NOTE: Accessories may affect dimensions shown.

Weight(lbs)***	Shipping	64	Unit	56
----------------	----------	----	------	----

* Roof opening size for curbs supplied by Cook only.
 ***Includes fan, motor & accessories.





COOK

PROJECT: MAURICE FANS

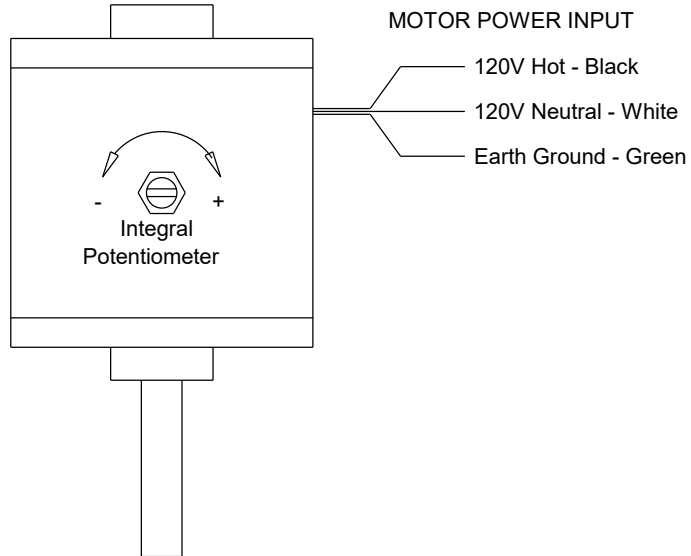
DATE: 4/11/2022

Speed Control

Internal Speed Control
Electronically Commutated (EC) Motor
Type M

STANDARD CONSTRUCTION FEATURES:

Integral potentiometer with slotted screw for speed adjustment.



Dimensions (inches)

Mark	Qty	Description
EF-1	1	OPEN -1/4HP - 115V/1



RCG

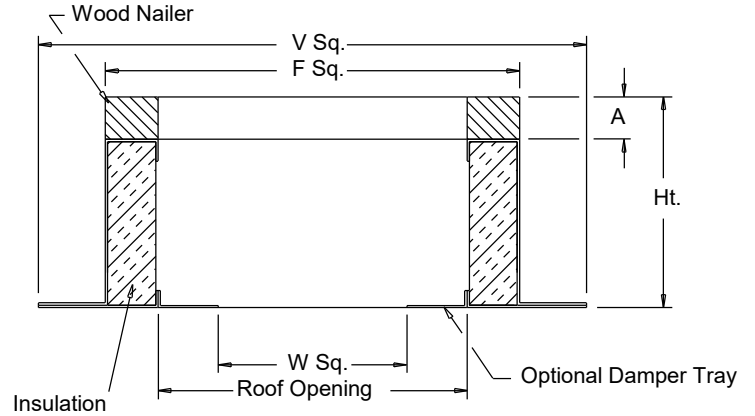
Galvanized Steel Roof Curb

STANDARD CONSTRUCTION FEATURES:

18 gauge galvanized steel - 1-1/2",
 3 lbs. density thermal and acoustical insulation - Continuously welded corners - Wood nailer.

Options:(As noted below*)

- 1) No wood nailer (deduct 1-1/2" for actual height).
- 2) Damper tray.



Dimensions (inches)

Mark	Qty	Description	Ht	Options*	A	F Sq.	V Sq.	W Sq.	Roof Opening
EF-1	1	RCG 16	18	-	1-1/2	16-1/2	20-1/2	9-3/4	13-1/2



Commercial Gas Water Heaters

CYCLONE® Mxi MODULATING

MODULATING BURNER ADVANCES THE CYCLONE TO HIGHER LEVELS OF EFFICIENCY

The full line of A. O. Smith Cyclone Mxi condensing water heaters has been designed to provide years of dependable service and feature industry leading technology. Models are available from 120,000 to 500,000 Btu/h and all deliver thermal efficiencies of 95% and higher. The unique helical coil heat exchanger limits weld joints for optimal service life while maximizing heat transfer.

Cyclone is the industry leader in high efficiency commercial water heating. The current Mxi modulating models adjust firing rate to the specific demand further increasing efficiency and money savings.

INTELLIGENT CONTROL SYSTEM WITH TOUCH SCREEN DISPLAY AND ICOMM CONNECTIVITY ONBOARD*

- Exclusive A. O. Smith designed touch display control system
- Provides detailed water heater status information
- Precise temperature control adjustable from 90 to 180 degrees
- Built-in diagnostics
- Run history information
- *Cyclone Mxi models manufactured March 1, 2018 to present come standard with iCOMM Wi-Fi connectivity onboard. Remotely monitor and adjust the water heater via the A. O. Smith app. No charge connectivity using Wi-Fi or Ethernet connection.

SUBMERGED COMBUSTION CHAMBER, WITH HELICAL HEAT EXCHANGER COIL

- Positioned in center of tank, surrounded by water to virtually eliminate radiant heat loss from chamber
- Direct spark ignition
- Spiral heat exchanger keeps hot burner gases swirling, uses centrifugal force to maximize efficiency of heat transfer to water in tank
- Spiral heat exchanger reduces lime scale from forming on water-side surfaces, which maintains energy efficiency over time

POWERED ANODES STANDARD ON ALL MODELS

- Provides long-lasting tank protection in varying water conditions
- Powered anodes are non-sacrificial
- Automatically adjusts output needed to properly protect the tank

PERMAGLAS® ULTRA COAT™ GLASS LINING

- Glass coating is applied using a liquid slush coating technique to ensure uniform coating
- Heat exchanger coil is glassed both externally and internally for optimum protection

MECHANICAL VENTING VERSATILITY

- Conventional power venting or direct venting
- Vents vertically or through a sidewall
- Front located exhaust and condensate connections allow for easy install and access
- Vents with low cost PVC Schedule 40 intake and exhaust pipe. Approved for optional CPVC Schedule 40, Polypropylene and AL29-4C stainless steel vent materials
- Direct-vent intake and exhaust pipe can terminate separately outside building or through single opening, using concentric vent assembly
- Canadian installations require ULC S636 PVC/CPVC, ULC S636 Polypropylene and AL29-4C stainless steel pipe for intake and exhaust

HIGH EFFICIENCY MODULATING PRE-MIX POWERED BURNER

- Down-fired pre-mix burner provides optimum efficiency and quiet operation
- Top-mounted burner position prevents condensation from affecting burner operation

3-YEAR LIMITED TANK / 1-YEAR LIMITED PARTS WARRANTY

- For complete warranty information, consult written warranty or go to hotwater.com.



BTH-120(A) THROUGH BTH-500(A)
MODEL SHOWN:
BTH-199(A) SERIES 300/301





Commercial Gas Water Heaters

OTHER FEATURES:

SPACE-SAVING DESIGN FOR INSTALLATION FLEXIBILITY

- Easy-to-remove top cover for convenient access to serviceable parts
- 0" installation clearances on sides and rear, 1-1/2" installation clearance on top
- Handhole cleanout allows easy access to tank interior for cleaning
- 0" clearance to combustibles, approved for installation on combustible floors

CODES AND STANDARDS

- CSA certified and ASME rated T&P relief valve
- Maximum hydrostatic working pressure: 160 psi
- All models are design certified by Underwriters Laboratories (UL), Inc., to ANSI Z21.10.3 - CSA 4.3 Standards
- Meets the thermal efficiency and standby loss requirements of the U.S. Department of Energy and current edition ASHRAE/IES 90.1
- Design Certified by Underwriters Laboratories to NSF standard 5 for 180°F (62°C) water
- Complies with SCAQMD Rule 1146.2 and other Air Quality Management Districts with similar requirements for ultra low-NOx emissions
- ASME tank construction optional on 120-500 model sizes

VENT REQUIREMENTS FOR BTH 120(A) - 250(A)

Number of 90° Elbows Installed	3 Inch Pipe	4 Inch Pipe
	Maximum Feet (Meters)	Maximum Feet (Meters)
One (1)	45 feet (13.7 meters)	115 feet (35 meters)
Two (2)	40 feet (12.2 meters)	110 feet (33.5 meters)
Three (3)	35 feet (10.7 meters)	105 feet (32 meters)
Four (4)	30 feet (9.1 meters)	100 feet (30.5 meters)
Five (5)	N/A	95 feet (29 meters)
Six (6)	N/A	90 feet (27.4 meters)

VENT REQUIREMENTS FOR BTH 300(A) - 500(A)

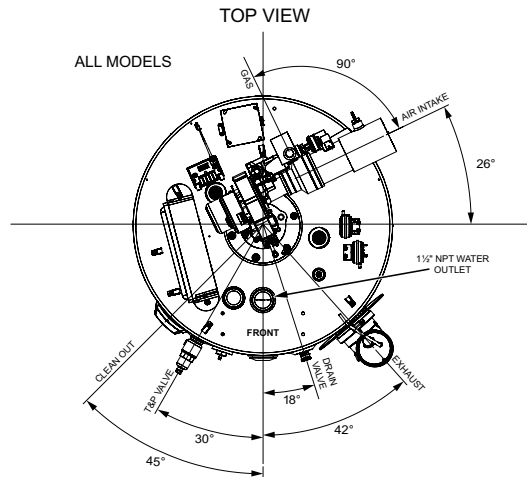
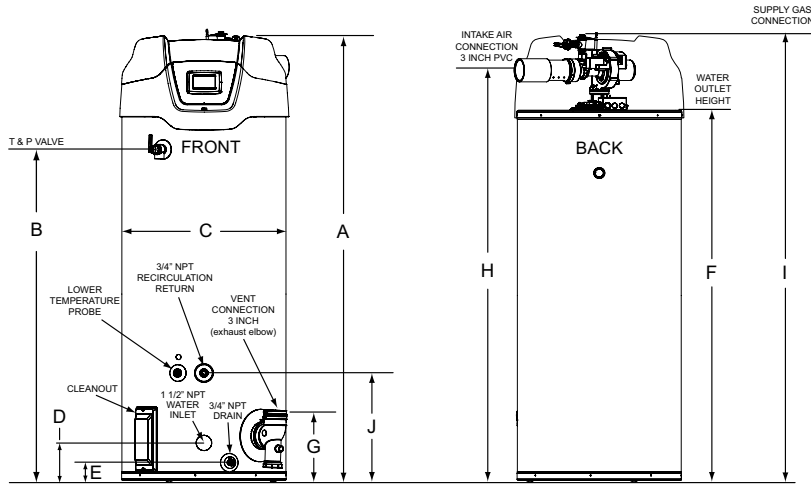
Number of 90° Elbows Installed	4 Inch Pipe	6 Inch Pipe
	Maximum Feet (Meters)	Maximum Feet (Meters)
One (1)	65 feet (19.8 meters)	115 feet (35 meters)
Two (2)	60 feet (18.2 meters)	110 feet (33.5 meters)
Three (3)	55 feet (16.8 meters)	105 feet (32 meters)
Four (4)	50 feet (15.2 meters)	100 feet (30.5 meters)
Five (5)	45 feet (13.7 meters)	95 feet (29 meters)
Six (6)	40 feet (12.2 meters)	90 feet (27.4 meters)

GAS PRESSURE REQUIREMENTS

Model Number	Manifold Pressure		Minimum Supply Pressure		Maximum Supply Pressure	
	Natural Gas	Propane Gas	Natural Gas	Propane Gas	Natural Gas	Propane Gas
BTH-120(A)	0"W.C. (0 kPa)	0"W.C. (0 kPa)	3.5"W.C. (1.10 kPa)	8.5"W.C. (2.12 kPa)	14"W.C. (3.49 kPa)	14"W.C. (3.49 kPa)
BTH-150(A)	0"W.C. (0 kPa)	0"W.C. (0 kPa)	3.5"W.C. (1.10 kPa)	8.5"W.C. (2.12 kPa)	14"W.C. (3.49 kPa)	14"W.C. (3.49 kPa)
BTH-199(A)	0"W.C. (0 kPa)	0"W.C. (0 kPa)	3.5"W.C. (1.10 kPa)	8.5"W.C. (2.12 kPa)	14"W.C. (3.49 kPa)	14"W.C. (3.49 kPa)
BTH-250(A)	0"W.C. (0 kPa)	0"W.C. (0 kPa)	3.5"W.C. (1.10 kPa)	8.5"W.C. (2.12 kPa)	14"W.C. (3.49 kPa)	14"W.C. (3.49 kPa)
BTH-300(A)	0"W.C. (0 kPa)	0"W.C. (0 kPa)	4.8"W.C. (1.19 kPa)	8.5"W.C. (2.12 kPa)	14"W.C. (3.49 kPa)	14"W.C. (3.49 kPa)
BTH-400(A)	0"W.C. (0 kPa)	0"W.C. (0 kPa)	4.8"W.C. (1.19 kPa)	8.5"W.C. (2.12 kPa)	14"W.C. (3.49 kPa)	14"W.C. (3.49 kPa)
BTH-500(A)	0"W.C. (0 kPa)	0"W.C. (0 kPa)	4.8"W.C. (1.19 kPa)	8.5"W.C. (2.12 kPa)	14"W.C. (3.49 kPa)	14"W.C. (3.49 kPa)

Depending on the installed equivalent length, and/or the number of appliances connected, the supply gas line size may need to be increased beyond the minimum required size.

BTH 120-250



* Center line of water outlet on top of the water heaters is approximately 7 inches from the front edge of the water heater

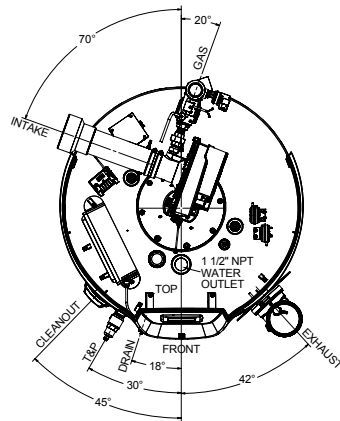
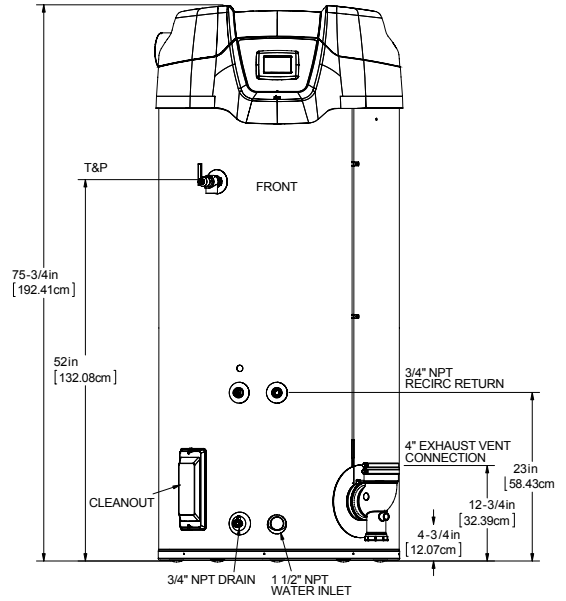
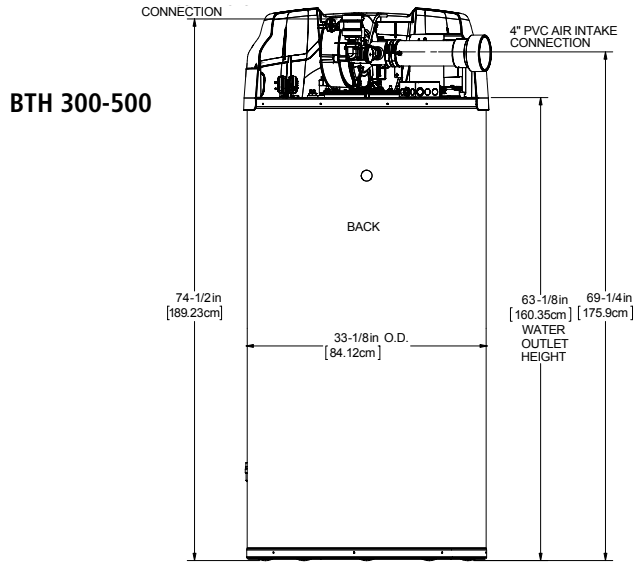
Model Number	Approx. Capacity		Dimensions										lb/kg	Approx. Shipping Weight Std	Approx. Shipping Weight ASME
			A	B	C	D	E	F	G	H	I	J			
BTH-120(A)	Gallons	60	55 1/2	35	27 3/4	6 5/16	3	42 1/4	11 1/4	48 1/2	53 1/2	18 1/4	lb	460	490
	Liters	227	141	88.9	70.5	16	7.62	107.32	28.6	123.2	135.9	46.36	kg	208	220
BTH-150(A)	Gallons	100	76 1/2	56 3/8	27 3/4	6 5/16	3	64	11 1/4	70	75 1/2	18 1/4	lb	523	553
	Liters	379	194.9	143.2	70.5	16	7.62	162.6	28.6	177.8	191.8	46.36	kg	237	251
BTH-199(A)	Gallons	100	76 1/2	56 3/8	27 3/4	6 5/16	3	64	11 1/4	70	75 1/2	18 1/4	lb	523	553
	Liters	379	194.9	143.2	70.5	16	7.62	162.6	28.6	177.8	191.8	46.36	kg	237	251
BTH-250(A)	Gallons	100	76 1/2	56 3/8	27 3/4	6 5/16	3	64	11 1/4	70	75 1/2	18 1/4	lb	523	553
	Liters	379	194.9	143.2	70.5	16	7.62	162.6	28.6	177.8	191.8	46.36	kg	237	251

Electrical characteristics-120V-60Hz A.C., 5.0 A

"A" in model represents ASME construction

Propane gas models available

Dimensions and specifications subject to change without notice in accordance with our policy of continuous product improvement.



Model Number	Approx. Capacity		Dimensions										lb/kg	Approx. Shipping Weight Std	Approx. Shipping Weight ASME
			A	B	C	D	E	F	G	H	I	J			
BTH-300(A)	Gallons	119	75 3/4	52	33 1/8	4 3/4	4 3/4	63 1/8	12 3/4	69 1/4	74 1/2	23	lb	855	855
	Liters	450.96	192.41	132.08	84.12	12.07	12.07	160.35	32.39	175.9	189.23	58.43	kg	387	387
BTH-400(A)	Gallons	119	75 3/4	52	33 1/8	4 3/4	4 3/4	63 1/8	12 3/4	69 1/4	74 1/2	23	lb	855	855
	Liters	450.96	192.41	132.08	84.12	12.07	12.07	160.35	32.39	175.9	189.23	58.43	kg	387	387
BTH-500(A)	Gallons	119	75 3/4	52	33 1/8	4 3/4	4 3/4	63 1/8	12 3/4	69 1/4	74 1/2	23	lb	855	855
	Liters	450.96	192.41	132.08	84.12	12.07	12.07	160.35	32.39	175.9	189.23	58.43	kg	387	387

Electrical characteristics-120V-60Hz A.C., 5.0 A

"A" in model represents ASME construction

Propane gas models available

Dimensions and specifications subject to change without notice in accordance with our policy of continuous product improvement.



Commercial Gas Water Heaters

RECOVERY CAPACITY

Model Number	Type of Gas	Input		Thermal Efficiency
		BTU/HR	kW	
BTH-120(A)	Natural/Propane	120,000	35	95%
BTH-150(A)	Natural/Propane	150,000	44	98%
BTH-199(A)	Natural/Propane	199,900	58	97%
BTH-250(A)	Natural/Propane	250,000	73	96%
BTH-300(A)	Natural/Propane	300,000	88	96%
BTH-400(A)	Natural/Propane	399,900	117	95%
BTH-500(A)	Natural/Propane	499,900	146	95%

Model Number	U.S. GALLONS/HR AND LITRES/HR AT TEMPERATURE RISE INDICATED													
	Approx. Capacity	°F	30°F	40°F	50°F	60°F	70°F	80°F	90°F	100°F	110°F	120°F	130°F	140°F
		°C	17°C	22°C	28°C	33°C	39°C	44°C	50°C	56°C	61°C	67°C	72°C	78°C
BTH-120(A)	60 U.S. Gals.	GPH	461	345	276	230	197	173	154	138	126	115	106	99
	227 Litres	LPH	1743	1308	1046	872	747	654	581	523	475	436	402	374
BTH-150(A)	100 U.S. Gals.	GPH	594	445	356	297	255	223	198	178	162	148	137	127
	379 Litres	LPH	2248	1686	1349	1124	963	843	749	674	613	562	519	482
BTH-199(A)	100 U.S. Gals.	GPH	783	588	470	392	336	294	261	235	214	196	181	168
	379 Litres	LPH	2965	2224	1779	1483	1271	1112	988	890	809	741	684	635
BTH-250(A)	100 U.S. Gals.	GPH	970	727	582	485	416	364	323	291	264	242	224	208
	379 Litres	LPH	3670	2753	2202	1835	1573	1376	1223	1101	1001	918	847	786
BTH-300(A)	119 U.S. Gals.	GPH	1164	873	698	582	499	436	388	349	317	291	269	249
	450.96 Litres	LPH	4405	3304	2643	2202	1888	1652	1468	1321	1201	1101	1017	944
BTH-400(A)	119 U.S. Gals.	GPH	1535	1151	921	767	658	576	512	460	419	384	354	329
	450.96 Litres	LPH	5810	4358	3486	2905	2490	2179	1937	1743	1585	1453	1341	1245
BTH-500(A)	119 U.S. Gals.	GPH	1919	1439	1151	959	822	720	640	576	523	480	443	411
	450.96 Litres	LPH	7263	5448	4358	3632	3113	2724	2421	2179	1981	1816	1676	1556

Recovery capacities are based on AHRI rated thermal efficiencies.
For ASME Construction add an "A" to the end of the model number ex: BTH-120A.

STORAGE CAPACITY

Model Number	U.S. Gallons	Liters
BTH 120	60	227
BTH 150	100	379
BTH 199	100	379
BTH 250	100	379
BTH 300	119	450.96
BTH 400	119	450.96
BTH 500	119	450.96

GAS LINE CONNECTION SIZE

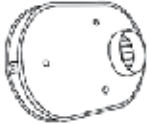
Model	Series	Natural Gas	Propane Gas
BTH 120	300/301	3/4" NPT	3/4" NPT
BTH 150	300/301	3/4" NPT	3/4" NPT
BTH 199	300/301	3/4" NPT	3/4" NPT
BTH 250	300/301	3/4" NPT	3/4" NPT
BTH 300	300/301	1-1/2" NPT	1-1/2" NPT
BTH 400	300/301	1-1/2" NPT	1-1/2" NPT
BTH 500	300/301	1-1/2" NPT	1-1/2" NPT

OPTIONAL KITS



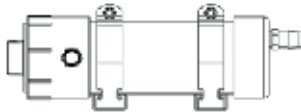
OPTIONAL CONCENTRIC VENT KITS

- BTH-120 - 250 vent kit p/n 100111100
- BTH-300 - 500 vent kit p/n 100113124



OPTIONAL LOW PROFILE TERMINATION VENT KITS

- 3" Flush Mount Vent Kit p/n 100187887
- 4" Flush Mount Vent Kit p/n 100187888
- 6" Flush Mount Vent Kit p/n 100187889



OPTIONAL CONDENSATE NEUTRALIZATION KITS

- BTH-120-199 kit p/n 100112380
- BTH-250-500 kit p/n 100112381

SPECIFICATION

(Natural or Propane) gas water heater(s) shall be A. O. Smith Cyclone Mxi model # _____ or equal, minimum 95% thermal efficiency, a storage capacity of _____ gallons, an input rating of _____ BTUs per hour, a recovery rating of _____ gallons per hour (gph) at 100°F rise and a maximum hydrostatic working pressure of 160 psi. Water heater(s) shall: 1. Modulating gas burner that automatically adjusts the input based on demand. 2. Powered anodes that are non sacrificial and maintenance free. 3. Have seamless glass-lined steel tank construction, with glass lining applied to all water-side surfaces after the tank has been assembled and welded; 4. Meets the thermal efficiency and/or standby loss requirements of the U. S. Department of Energy and current edition of ASHRAE/IES 90.1; 5. Have foam insulation and a CSA Certified and ASME rated T&P relief valve; 6. Have a down-fired power burner designed for precise mixing of air and gas for optimum efficiency, requiring no special calibration on start-up; 7. Be approved for 0" clearance to combustibles.

The control shall be an integrated solid-state temperature and ignition control device with integral diagnostics, graphic user interface, fault history display, and shall have digital temperature readout. No charge connectivity shall be provided allowing for remote viewing and fault notification via app. 1. All models are design certified by Underwriters Laboratories (UL), Inc., according to ANSI Z21.10.3 - CSA 4.3 standards governing storage type water heaters; 2. Meet the thermal efficiency and standby loss requirements of the U. S. Department of Energy and current edition ASHRAE/IES 90.1. Complies with SCAQMD Rule 1146.2 and other air quality management districts with similar requirements for low NOx emissions.

120K-250K BTU Input: For Standard Power Venting: Water heater(s) shall be suitable for power venting using a (3" or 4") _____ diameter PVC pipe for a total distance of (50 ft or 120 ft.) _____ equivalent feet of vent piping. For Power Direct Venting: Water heater(s) shall be suitable for power direct venting using a (3" or 4") _____ diameter PVC pipe for a total distance of (50 ft or 120 ft.) _____ equivalent feet of vent piping and (50 ft. or 120 ft.) _____ equivalent feet of intake air piping.

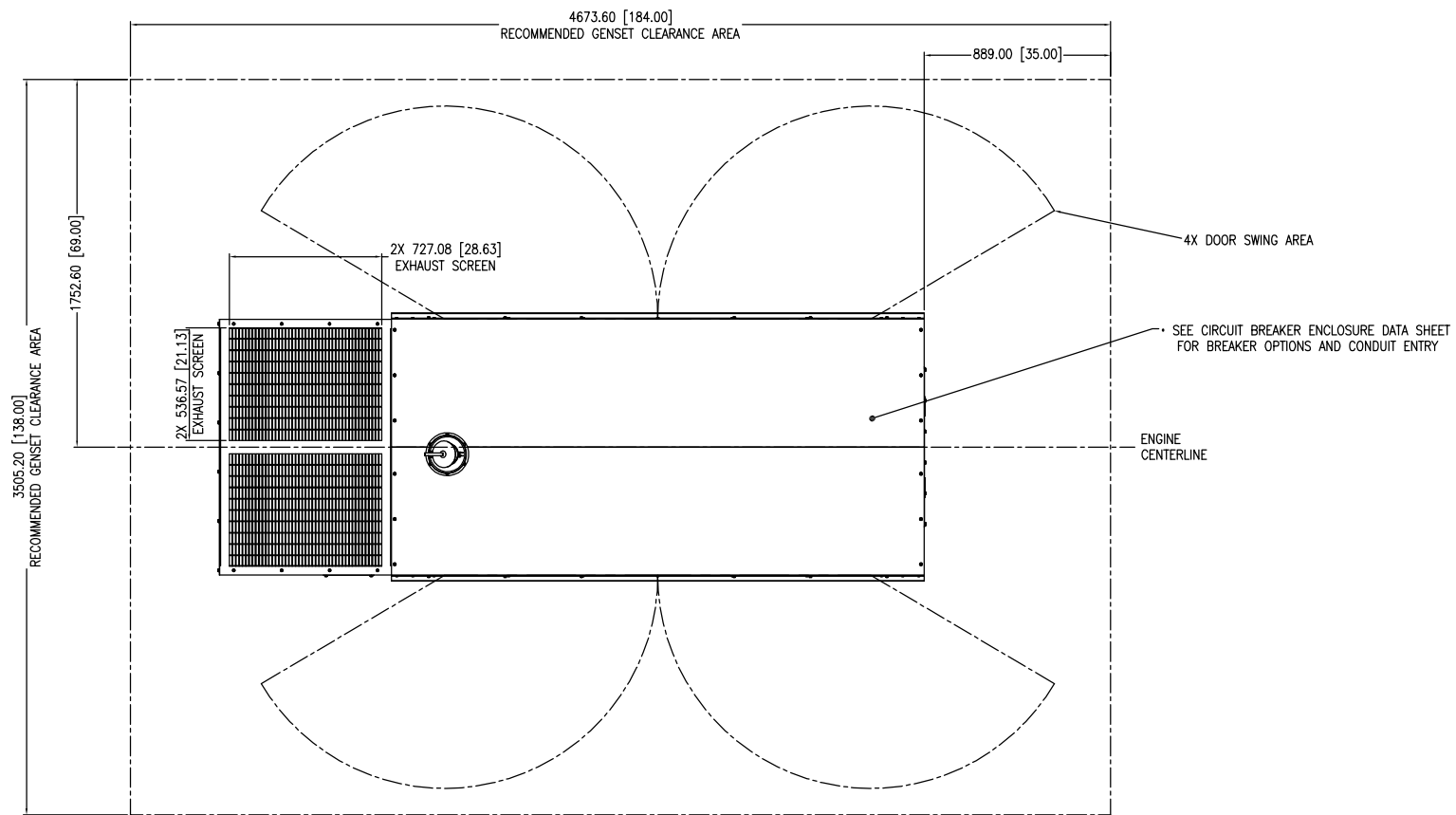
300K - 500K BTU Input: For Standard Power Venting: Water heater(s) shall be suitable for standard power venting using a (4" or 6") _____ diameter PVC pipe for a total distance of (70 ft. or 120 ft.) _____ equivalent feet of vent piping. For Power Direct Venting: Water heater(s) shall be suitable for power direct venting using a (4" or 6") _____ diameter PVC pipe for a total distance of (70 ft or 120 ft.) _____ equivalent feet of vent piping and (70 ft. or 120 ft.) _____ equivalent feet of intake air piping.

Operation of the water heater(s) in a closed system where thermal expansion has not been compensated for (with a properly sized thermal expansion tank) will void the warranty.

COMMON VENTING KITS FOR UP TO 3 WATER HEATERS (ONE KIT PER WATER HEATER REQUIRED)

Kit	Description
100227396	PVC Common Vent Kit, 120 – 250 Models
100223775	PVC Common Vent Kit, 300 – 500 Models
100227395	Polypropylene Common Vent Kit, 120 -250 Models
100223774	Polypropylene Common Vent Kit, 300 - 500 Models

Installations must comply with all national, state and local codes. See kit instructions and corresponding water heater manual for detailed installation instructions and additional information. 50 Feet maximum equivalent length of straight pipe common vent and elbows
NOTE: Order 1 kit for each water heater.
See the Common Vent Kit manual or spec sheet for detailed information.

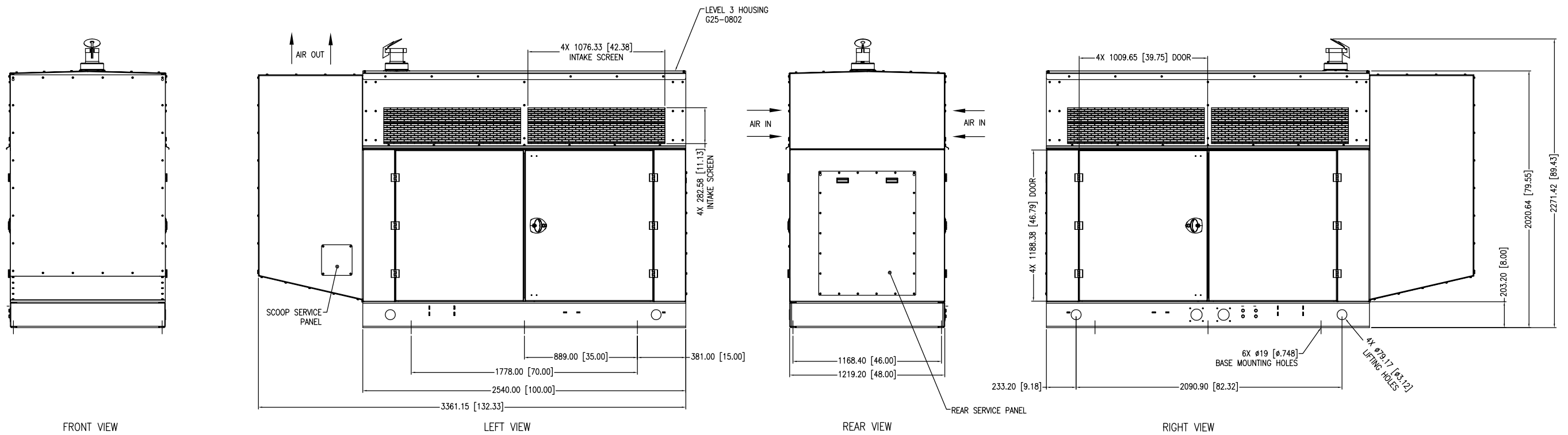


TOP VIEW

DRAWING OPTIONS 150kW PSI 8.8LT CAC			SELECTED OPTIONS
Group	Drawing Code	Description	
Housing Options, Exterior	G25-0801	Level 1 & 2 Housing	
	G25-0802	Level 3 Housing	✓
	G25-0803	Air Exhaust Gravity Louver	
Housing Options, Interior	G25-0901	Air Intake Motorized Louver	
	G25-0902	Interior Housing Lights	
	G25-0903	Space Heater	

Reference the Drawing Options table and within the Layer Properties turn on/off the Drawing Codes that may or may not apply to your configuration.

Note: Some options may not be referenced. Only options which visibly change the drawing are selectable




FRONT VIEW

LEFT VIEW

REAR VIEW

RIGHT VIEW

REVISION	DATE	DESCRIPTION



A Rolls-Royce solution

ALL INDUSTRIAL PROPERTY RIGHTS RESERVED. DISCLOSURE, REPRODUCTION OR USE FOR ANY OTHER PURPOSE IS PROHIBITED UNLESS OUR EXPRESS PERMISSION HAS BEEN GIVEN. ANY INFRINGEMENT RESULTS IN LIABILITY TO PAY DAMAGES.

APPLICABLE MODELS:
MTU 8V0110 GS150

THIRD ANGLE PROJECTION

DRAWN TO SCALE
DIMENSIONS: MM [INCH]

DATE CREATED:
2021-02-26

DIMENSIONAL LAYOUT		
DESCRIPTION: 150 kW Genset Housing		
ENGINE: PSI 8.8LT CAC	WEIGHT (MIN-MAX): 2040-2500 KG 4500-5500 LB	SHEET: 1 of 1
DRAWING NUMBER: XZG2500100035		

NPS Reference Manual 58 Structural Fire Management - Chapter 7 - Appendix A

1. Historic Property Assessment Matrix
2. Fire Safety Assessment

APPENDIX F - NPS FIRE
REFERENCE MANUAL 58,
STRUCTURAL FIRE MANAGEMENT,
CHAPTER 7

MAURICE BATTHOUSE - Assume Spa with Cafe

HISTORIC PROPERTY ASSESSMENT MATRIX		
<p>Not all NPS properties may require the same level of fire protection. Use this chart to help establish criteria for selecting different levels of protection appropriate to the significance and integrity of historic structures or collections. <u>This chart serves as a reference guide only</u>; it does not establish design criteria for historic structures or collection facilities. Note: Determining the proper fire protection for each specific application should be a collaboration between the resource manager and the Regional AHJ (process team). Depending on the complexity of the resource, the services of a fire protection engineer may be required by the process team. All final plans must be reviewed and approved by the Regional AHJ.</p>		
HOW TO USE THIS MATRIX		
<p>Rate each historic structure or other collections facility according to the 7 elements above, using a score of 1-5 (levels 1-5).</p>		
For a total score of:	Scoring Recommendations	
1 – 14	Fire alarm system should be considered; however, Fire Suppression System May Not Be Needed for this Structure (<i>variance request would be required if no system installed</i>).	
15 – 21	Fire alarm system required; Park may Want to Install a Fire Suppression System in this Structure (<i>variance request would be required if no system installed</i>).	
22 – 28	Fire alarm system required; Park should Install a Fire Suppression System in this Structure (<i>variance request would be required if no system installed</i>).	22
29 – 35	Fire alarm system required; Suppression System Required (<i>variance request would be required if no system installed</i>).	

MAURICE BATTHOUSE - Assume Spa with Cafe

HISTORIC PROPERTY ASSESSMENT MATRIX					
	LEVEL 5 (Five Points)	LEVEL 4 (Four Points)	LEVEL 3 (Three Points)	LEVEL 2 (Two Points)	LEVEL 1 (One Point)
1. Significance	National Register Eligible or part of park's enabling legislation	Nationally Significant	Regionally Significant and/or a primary park theme	Locally Significant	Common; little or no local significance, associative, design, construction, or information value.
2. Integrity	Good	Fair	Poor	Reconstruction	Little remaining historic fabric
3. Use	Exhibit Building open to the public: Self-guided tours only; may include assembly, overnight accommodation, cooking facility	Open to the public: Staff-guided tours only; controlled access; storage	Mixed Use: Public access and offices, retail, and/or storage	NPS or partner offices	Storage only
4. Location: Response	No brigade response available. No road access; developed utility service w/ topo. Access difficulties. High visitation; large crowds may impede responders.	Brigade response > 30 minutes. Rural road; reasonable topo. Access without developed utility services. Seasonal road access difficulties	Rural road access with developed utility services	Brigade response < 20 minutes. Urban access with minor vegetative or physical constraints rear property constraints	Brigade response <10 minute. Urban access, no vegetative or physical constraints
5. Location: Accessibility	High crime area: Perimeter easily accessible after-hours	High crime area: Perimeter not easily accessible after-hours	Low crime area: Perimeter easily accessible	Low crime area: not easily accessible	Low crime area: Secured Perimeter 24/7 or difficult to access
6. Construction Type (See <i>International Building Code (IBC)</i>, for additional information)	Type V: Wood Frame (Light Combustible Construction)	Type IV: Heavy Timber (Heavy Combustible Construction)	Type III: Masonry walls, wood floors (partial Combustible Construction)	Type II: Non-combustible (Non-combustible Construction)	Type I: Fire Resistive (Non-combustible Construction).
7. Fuel Load: Proximity	High: Adjacent, attached buildings not in owned by NPS; Forest/grasslands in fire-prone area	High: Adjacent, attached buildings owned by NPS; OR Forest/grasslands in fire-prone area	High: Adjacent, attached buildings not in owned by NPS, OR Forest/grasslands in fire-prone area	Adequate: Defensible space based on historic models	Not prone to fires
SCORE	10	0	9	2	1

PARK HOSP	FMSS ID#		NAME (structure) Maurice Bathhouse		Name (surveyor)		
FIRE SAFETY ASSESSMENT							
STRUCTURE DESCRIPTION	YES	NO	HIGH	MEDIUM	LOW	N/A	COMMENT
Visitor Access (Low = 0-50, Med = 51-299, High >300)	X			X			Approximate Daily Number:
Security							
Building Security	X						
Collection Security NA							
Occupancy Types							
Overnight Accommodations (Low = 0-50, Med = 51-200, High >200)		X					Daily Number:
Library Reading Area		X					
Library Archives (Low = 0-200sqft, Med = 201-350sqft, High = >350sqft)		X					Approximate SQ FT:
Museum Exhibit (Low = 0-625sqft, Med = 626-1000sqft, High = >1000sqft)		X					Approximate SQ FT:
Museum Curatorial Storage (Low = 0-150sqft, Med = 151-350sqft, High = >350sqft)		X					Approximate SQ FT:
Other Specialized Storage Requirements		X					
Assembly Occupancies							
Theaters & Auditoriums		X					
Residential		X					
Business, Office	X						
Educational, Institutional		X					
Vehicle Repair		X					
Kitchens, Restaurants	X						
Storage, Manufacturing		X					
Stages		X					
Repair Garages		X					
Machine Shop, Wood Shop		X					
Risks							
Ignition Sources and Risk (Low = general electrical, Med = use of extension/strip cords, High = electric/fuel space heaters, stoves, candles, etc.)					X		
Combustible Construction and Rating per NFPA (See evaluation worksheet 1, col. 6)	Type:						
Code Compliant Exiting from Structure (Low = 1 exit, Med = 2 exits, High = 3+ exits)			X				
Potential Impact of Installation Damage to Historic Fabric (Low = minor, Med = moderate, High = substantial)				X			
Fuel Load for Structure (Low = no exhibits, no storage; Med = exhibits, no storage; High = exhibits and storage)					X		

PARK	FMSS ID#		NAME (structure)	Name (surveyor)			
FIRE SAFETY ASSESSMENT							
STRUCTURE DESCRIPTION	YES	NO	HIGH	MEDIUM	LOW	N/A	COMMENT
Potential for Resource Loss and Risks (arson, wildland fire, lighting, etc.) (Low = Risk is not likely, Med = Risk is limited, High = Risk is very possible)					X		
Life Safety Risks (Low = single grade level, 2 or more exits; Med = multiple story, less than two exits; High = multiple story above or below grade with single exit)				X			
Existing Fire Protection Devices							
Emergency Lights (yes/no) <i>Will be included</i>	X						
Fire Resistive Separations						X	
Available Monitor Station <i>Will be included</i>	X						Age:
Existing Fire Detection and Alarm System <i>Will be included</i>	X						Age & Manufacture:
Existing Fire Suppression System <i>Will be included</i>	X						Type:
Lightning Protection		X					<i>Unless deemed as a need by NPS</i>
Existing Fire Protection Systems/Devices are Installed Building-wide							
Site Fire Protection Resources							
Available Water (Low = well, Med = reservoir/pumps, High = commercial supply)			X				Type: <i>6" City Water roughed-into building.</i>
City Water	X						Capacity and Pressure: <i>1404 GPM @ 65 PSI</i>
Individual Well		X					Capacity and Pressure: <i>Residual, 100 PSI Static</i>
Other (Describe)							Capacity and Pressure:
Available Electricity* (Low = single phase power; Med = sufficient 3 phase power; however, unreliable; High =reliable commercial supply)			X				
Single Phase Power							Reliability:
Three Phase Power*	X						Reliability:
Site or Backup Power*	X						Yes ___ No ___ Age _____
Local Available/Reliable Fire Department Response (Low = >15 min; Med = >7 min <15 min; High = >4 min <7 min)					X		<i>Verify with City</i>
Site Access Constraints*	X						<i>Busy Highway; Street Trees; Steep Hillside at Back</i>
Mutual Aid in Place with Local FD (MOU, MA, or Cooperative Agreement) – Yes/No answer only							<i>Verify Park</i>
FD Familiarity with Building	X						
This initial Fire Safety Assessment: This assessment is intended to provide useful information for the evaluation of each structure to define any major issues that could affect the project. It does not replace an actual code evaluation of the building.							
* Building and/or Collection Security –What is the vulnerability of the building or collection from arson or vandalism? Arson is perhaps the single largest risk to cultural properties. It is a security issue more than a fire protection issue.							

PARK	FMSS ID#						NAME (structure)	Name (surveyor)
FIRE SAFETY ASSESSMENT								
STRUCTURE DESCRIPTION	YES	NO	HIGH	MEDIUM	LOW	N/A	COMMENT	
* Available Electricity – In rural settings, overhead power lines can often be knocked down during storms, causing power outages.								
* Single Phase versus Three Phase – Has been an issue at some NPS remote sites. Can be an expensive issue for most fire pumps.								
* Site or Backup Power: This issue speaks to power reliability or availability in many rural situations. Many NPS sites do not have a primary power system and rely either on a site-managed power generator, or on backup generators that are provided due to unreliable commercial power.								
* Site Access Constraints: As part of the site analysis, are there any obstacles which can restrict access by a fire department? Such as a bridge that is vulnerable to flooding; a lane of trees along the site driveway, which could blow down in a storm and restrict access; a rural road subject to washout.								

APPENDIX G - EXISTING CONDITIONS TABLES

EXISTING CONDITIONS TABLES - SITE AND ARCHITECTURAL EXTERIOR

Deficiency Ratings (Critical, Serious, Minor)

Condition Ratings (Good, Fair, Poor)

Maurice Bathhouse Assessment Checklist – Exterior						
Deficiency Rating	Condition Rating	Component – Exterior or Interior	Existing Condition	Reference	Qty	Unit
Site						
Minor	Poor	North	Runnel: joint between building and areaway open	XAE.12		
Minor	Poor	North	Runnel: slope and drainage, potential for debris to impede flow	XAE.12		
Minor	Good	North	Ramp: minor cracking at concrete; slopes below 2% throughout			
Serious	Poor	North	Missing stair at east door	XAE.14		
Minor	Good	West	All pipe railing elements are in place and in good condition			
Minor	Fair	West	Porch: concrete ramp, stairs, and sidewalk good to poor. North and south front entrance ramps displacement, remnants of paint; cracking at stair; retaining wall in good condition; porch walls paint bubbling; porch concrete cracking	XAE.10		
Minor	Fair	South	Ramp: Concrete surface cracking throughout, drain covered by debris, 5 ¾” step to get to ramp; displaced and cracked retaining wall; railing is in good condition	XAE.11		
Minor	Poor	South	Retaining wall: Crack with displacement, cracks at east end; significant plant growth in the retaining wall; open joints and cracking in capstones and wall	XAE.13		
Minor	Poor	South	Gutter and concrete in poor condition			
Minor	Fair	North, East, South	Concrete runnel parallel to base of wall: concrete damaged, open joints adjacent to wall may allow water down wall	XAE.12 XAE.15 XAE.16		
Minor	Fair	Drainage	Drainage from the Display Spring (east of building) runs through the NE side of the site below grade. The discharge for this drainage is unknown, but is likely into the Stone Arch west of the Maurice.	XAE.17 XAE.18		
Exterior – North Elevation						
Minor	Poor	Wall	Northwest corner settlement: displacement at cornice and stringcourse – displacement appears stable, evidence of previous repairs, broken and missing tiles, racked window frames, diagonal cracking			
Minor	Poor	Wall	Vertical crack where one story section meets three story section of building			

Minor	Fair	Wall	Cracks throughout west side, many extending from the window heads and sills	XAE.6		
Minor	Fair	Windows	Refer to Schedule; multiple windows replaced with louvers	XAE.9		
Serious	Poor	Windows	Historic stained glass windows are covered with yellowed plexiglass and are not properly vented.	XAE.19		
Minor	Good	Eaves	Paint and wood in good condition			
Exterior – West Elevation						
Minor	Fair	Sun Porch	Cracked windowsills at sun porch			
Minor	Fair	Wall	Northwest corner settlement: displacement at cornice and stringcourse – displacement appears stable, evidence of previous repairs, racked window frames, diagonal cracking			
Minor	Fair	Wall	Southwest corner: displacement at cornice and cracks in wall. Displacement appears stable.			
Minor	Fair	Wall	Vertical cracking next to north door			
Minor	Fair	Cornice	Displacement but appears stable/previous repair, insect nests			
Minor	Fair	Bronze Plaques	Bronze plaques failure of lacquer coating and chalking of black paint			
Serious	Fair	Windows	Glass missing from Roycroft Room windows. See schedule for full description.			
Minor	Good	Eaves	Paint and wood in good condition			
Exterior – South Elevation						
Minor	Fair	Wall	Southwest corner: diagonal cracking at second story – repaired well and in good condition (maybe open now)			
Minor	Fair	Wall	Southwest corner: horizontal crack aligned with third floor window lintels			
Minor	Poor	Wall	Southwest corner: stucco displacement and cracked tiles			
Minor	Fair	Wall	One-story East: horizontal cracks in stucco			
Minor	Good	Eaves	Paint coating intact and wood in good condition			
Minor	Fair	Windows	Basement window heads and first floor sills: hairline cracking throughout. See schedule.			
Minor	Fair	Tile	Open joints, possible displacement	XAE.8		
Serious		Cornice	Cracking throughout and at corner			
Exterior – East Elevation						
Serious	Poor	Wall	South and north wall sections: severe cracking with cracks developed 3” +/- from surface, missing stucco Center: horizontal cracking and evidence of previous crack repair			
Serious	Fair	Roof	One-story South: bare concrete, no roofing around skylight			
Minor	Fair	Skylight	South: ferrous staining on skylight curb from skylight flashing			
Minor	Poor	Skylight	South: galvanic coating on flashing no longer present, rust on exposed areas of flashing			
Minor	Fair	Skylight	North: ferrous staining on skylight curb			

Serious	Fair	Wall	Crack 30” down from top of all walls			
Minor	Fair	Wall	Cracking at southeast and northwest upper corners			
Serious	Fair	Wall	Radiating cracks at window heads, material loss at windows 215 and 216			
Minor	Good	Eaves				
Minor	Fair	Windows	Sills are stained throughout			
Serious	Poor	Cornice	Cracking throughout			
Minor	Poor	Wall	North half wall: Open joints			
Minor	Fair	Railing	Crack at pipe			
Roof						
Minor	Good	Roof 1a (NE)	Cracking in stucco at the retaining walls directly above reglet flashing			
Minor	Good	Roof 1a (NE)	A few of the clay tile caps at the retaining walls are cracked	XAE.24		
Minor	Fair	Roof 1a (NE)	The joint between the retaining wall and the southeast building wall is open			
Minor	Poor	Roof 1a (NE)	Membrane roofing with galvanized metal flashing. Debris collected on this roof, slope around skylight could be improved. Roofing is no longer attached to substrate in some areas, evidence is buckling and bubbling of membrane.			
Minor	Fair	Roof 1a (NE)	Skylight is dirty with staining from berries and panels yellowed, but overall good condition	XAE.25		
Minor	Fair	Roof 1b (SE)	Roofing is in good condition, surface corrosion is present on the flashing. Skylight yellowed.	XAE.20		
Minor	Fair	Roof 1c (center)	Membrane roofing with galvanized metal flashing. Debris collected on this roof, and previous repair efforts are evident. Roof slope is relatively flat near drains. Roof was viewed from building interior.			
Minor	Fair	Roof 1c (center)	Skylight is dirty and panels yellowed, but in overall good condition			
Minor	Fair	Roof 2a (sun porch)	Membrane roofing with copper coping cap in fair condition. Some seams in roofing appear open. Substrate is telegraphing through roofing membrane. Roof was viewed from building interior.			
Minor	Fair	Roof 2b (E)	Membrane roofing with galvanized metal flashing. Debris collected on roof and surface corrosion present on flashing. Corrosion is causing staining on stucco wall.			
Minor	Fair	Roof 2b (E)	Skylight is dirty and panels yellowed but in overall good condition.			
Minor	Fair	Roof 3a&b (hipped)	Green vitrified roof tiles, discoloration and loss of coating on some tiles, some cracked and/or broken tiles			
Minor	Poor	Roof 3a&b (hipped)	Corrosion evident on ridge flashing below clay tile ridge cap.			
Minor	Good	Roof 3a&b (hipped)	Overhanging eaves and rafter tails are painted and in good condition			
Minor	Good	Roof 3c (sloped)	Green vitrified roof tiles, discoloration and loss of coating on some tiles, some cracked and/or broken tiles			

Minor	Fair	Roof 3c (sloped)	Corrosion evident on ridge flashing below clay tile ridge cap			
Minor	Fair	Roof 4 (mansard)	The mansard roof at the perimeter of the main roof is clad with green vitrified flat roof tiles. The roof tiles are in good condition with few displaced, discolored, cracked, or broken tiles. Valley flashing is coated in surface corrosion and installed such that the roof tiles do not adequately overlap the flashing edge in some locations. The transition between the flat tile mansard face and the main roof parapet wall is capped with green vitrified coping tiles. The installation of the coping tiles resulted in misaligned tiles and tiles that do not overlap the nailers as intended. Some of the cap tiles are cracked. Further investigation is required to determine the mansard tile installation and whether or not flashing is present in the assembly at the cap or eave. This will require removal of some tiles.	XAE.21 XAE.22		
Minor	Fair	Roof 4 (main roof)	Membrane roofing on main roof and turned up interior face of parapet walls. Debris collected on roof and some areas of standing water (see drainage notes). Localized areas of the roofing are no longer adhered to the substrate and have buckled.			
Minor	Fair	Roof 4 (main roof)	4"x4" vents positioned about 2 ½" above the roof are located on the interior face of the parapet walls. These may be for venting of the mansard roof space. It is possible they provide overflow drainage, but no indication of where they drain to was evident. Additional investigation is required to determine the purpose of these vents.			
Minor	Poor	Roof 4 (main roof)	Roof drains consist of drains located in the corners of roof with additional drains around the fan house leading to internal conductors. The roof areas around the drains in the corners are relatively flat, creating a potential drainage issue. The roof around the new elevator penthouse is also relatively flat, and standing water was present during site investigation. There are no overflow drains located within the main roof.			
Minor	Good	Roof 4 (main roof)	Roof penetrations, including conduit and the roof hatch, are in good condition. Sealant at the roof hatch flashing is cracked and starting to deteriorate.			
Minor	Fair	Cornice	The cornice incorporates a built-in shallow gutter. The top of the cornice was observed through windows from the building interior. It appears that there is some slope to the cornice gutter and that the slope leads to narrow pipe outlets to the bottom of the cornice. Standing water was present during site investigation.			
Minor	Fair	South elevator penthouse	Flashing at penthouse roof is rusting and staining wall below (roof of penthouse was not observed). There is no gutter or downspout installed. The flashing where the main roof ties into the wall of the penthouse has failed sealant. The outline of a previous door opening			

			is evident on the south wall.			
Minor	Fair	Central penthouse	The central penthouse roof slopes east with gutter and downspout. Corrosion is present at the roof flashing has staining.			
Minor	Fair	Fan penthouse	Wall coating is peeling, horizontal cracking throughout, some failed sealant at roof and flashing			
Minor	Poor	North elevator penthouse	Flashing at penthouse roof is rusting and staining wall below (roof of penthouse was not observed). There is no gutter or downspout installed. The flashing where the main roof ties into the wall of the penthouse has failed sealant.			
Minor	Poor	Roof 4 Skylight	The large skylight over the Roycroft room was repaired approximately 20 years ago. The galvanic coating on the exterior metal elements including rib caps, flashing, and gutters has eroded in some locations, and surface corrosion is present on the exposed metal. Translucent glass with wire mesh reinforcing is in good condition with a few broken panels. The horizontal members between the skylight sections are bowed in locations, particularly evident on the north end.	XAE.23		

EXISTING CONDITIONS TABLES - ARCHITECTURAL

Deficiency Ratings (Critical, Serious, Minor)

Condition Ratings (Good, Fair, Poor)

Maurice Assessment Checklist – Architectural Basement and First Floor						
Deficiency Rating	Condition Rating	Component – Exterior or Interior	Existing Condition	Reference	Qty	Unit
General						
Critical	Poor	HazMat	Potential Lead Paint – To be tested during Schematic Design.		1	LS
Critical	Poor	HazMat	Potential Asbestos – To be tested during Schematic Design. Test Pyroblock USBGC and mortar, and terrazzo flooring. See flooring in 104 and 110C for mastic remnants.		1	LS
Critical	N/A	Pest Control	Park to provide information on termite infestation and treatment.			
Basement						
Minor	Poor	Floor and Structure	Exposed concrete throughout in fair condition. No remaining historic finishes, except for in the small toilet room in the south section of the floor. Floors are concrete and dirty. Standing water in the Boiler Room. Ductwork impedes access to many spaces. Headroom clearance in the basement is very low. 6-9 ¾" to the bottom of some beams.			
Critical	Poor	Cisterns	Cisterns: The hot spring in the east crawlspace flows continuously. Previous attempts to capture water have failed. The pipes in at least two of the cisterns have clogged, so water overflows the stair and through the door from the crawlspace into the old boiler room and eventually to the sump. The cisterns leak at the joint between the concrete cistern and the wall.		4	EA
Critical	Poor	Crawlspace	Crawlspace: The crawlspace was not fully accessible during the site visit. The space is very hot and humid. There is no air exchange. The underside of the concrete slab above is very wet. The vapor barrier in the crawlspace appears to be brittle. Water is atop the vapor barrier in many areas. There may not be any functioning lighting.			
Minor	Poor	Pool	Pool: The concrete pool has cracked concrete throughout. Stairs do not meet accessibility standards. Section of pool on the south side with stairs has wall between stairs and pool. This may have been a separate hot water therapy pool. Equipment through the west wall at the south side of the pool would need to be relocated if the pool was restored for use. The roof drains spill into the pool to drain. There is			

			no pool equipment remaining in the basement.			
Minor	Good	Elevator Equipment Rm	The elevator equipment room was installed when the new elevator was constructed. This room has a separate cooling unit. The floor drain may be clogged. The door doe not open all the way.			
Room 101 – Women’s Pack Room						
Minor	Fair	Floor	Terrazzo with cracking in center and NE corner. Holes through floor for piping and vents. Hole in NE corner floor with terrazzo missing. Floor drain in center of room.		361	SF
Minor	Poor	Wall – North	Painted plaster above. Plaster slightly coved towards historic wood window trim. Plaster is in poor condition, with top coat spalling off in several areas and a rough finish in other areas. Evidence of potential burlap painted wallcoverings. Green paint colors visible below white paint. Historic white glazed tile wainscot. Dirty with some chips. Missing cap pieces (10), missing field (6). Missing entire section of tiles near NE corner - large quantity. Plumbing chase in brick masonry wall opened near east corner— destroyed plaster and tile. (3) historic wood casement windows with historic stained glass with brass-plated steel hinges. Exposed conduit runs along wall.		+/-312	SF
Minor	Poor	Wall – East	Painted plaster above with some minor diagonal cracking and rough patches. Historic white glazed tile wainscot. Dirty with some chips. Missing (1) cap and (1) jamb tile.		+/-195	SF
Minor	Poor	Wall East – Doors	3/101 and 4/101 Missing all door frame components (jambs, head, door, etc.)		2	EA
Minor	Poor	Wall – South	This wall is a plumbing and ventilation chase wall to the second floor Painted plaster above with cracking and large holes for vents and ductwork. Old patches and overall rough plaster. Historic white glazed tile wainscot. Dirty and chipped. Missing large quantities of white tiles. Door opening near east end was added later and then infilled recently. Finishes not completed, and cracks in plaster between historic and new finishes. Area needs to be tiles. Historic Door Opening 2/101 remains. Outlets and switches through wall.		+/-312	SF
Minor	Poor	Wall South – Door	Door 2/101: Historic wood-framed jambs and trim remain. Lots of paint build-up. Missing short section of interior trim at west side of door. Hinges and (2) doors missing. Had double-acting hinges like		2	EA

			other doors on the first floor.			
Minor	Poor	Wall – West	Painted plaster above. Plaster and masonry walls cracked. Large holes for ventilation and ducts through wall. Historic white glazed tile wainscot. Dirty with lots of cracks in tiles and holes through wall. Field tiles to replace (7); Missing (11) bullnose at north jamb to Door 1/105.		+/-195	SF
Minor	Poor	Wall West – Door	Door 1/101: Original door and frame removed. Larger, contemporary fire-rated steel door and frame installed.		1	EA
Minor	Good	Wall – Base	White tile base 6” square. Missing and damaged in NE corner. Missing at Door 2/105 east side.		78	LF
Minor	Poor	Ceiling	Painted plastered concrete ceiling and beams. Plaster finish on beams missing and cracked. Cracks in ceiling and holes through ceiling for conduit and lighting. Painted pipes installed between beams near Door 2/105. May be from period of significance and have been part of function of room.		361	SF
Minor	Poor	Ceiling – Lighting	Temporary			
		Materials Testing	Perform full exposures and paint analysis in this space (upper walls and ceiling and beams). Look at potential painted wallcoverings near window jambs in north wall. Sample trim at Door 2/101			
Minor	Fair	Equipment	Single radiator along north wall. Original photographs show painted steel radiator cabinets over the radiators. Radiator likely covered in lead paint.		1	EA
Room 102A – Women’s Hall						
Minor	Poor	Floor	Gray terrazzo with areas of deterioration due to recent construction projects. There is a border transition from the Women’s Hall 102B into Hall 102A. The border starts at the inside face of the west wall and runs the perimeter of the Hall. The border is approximately 7” in width and appears to utilize a slightly darker gray matrix with white aggregate that matches the field terrazzo. At the Janitor’s Closet 106, there is a non-original 1x mosaic tile threshold that extends into the terrazzo border. At the entrance to Shower 107 on the south side of the Hall, the flooring is exposed concrete. Construction dust prevents full observation of conditions, but there is ferrous metal staining present as well as two sections along the north side towards the east end of the hall at the wider section of the flooring where it appears two shaft enclosures or partitions were removed, and there is concrete slurry over the terrazzo.		275	SF
Minor	Fair to Poor	Wall-North	The north wall is split into thirds. At the western third (10’-4”), the wall still retains original 3x6 subway ceramic tile and ornamental ceramic tile cap. At the eastern two-thirds (28’-6”), the wall is non-		325	SF

			original drywall finish with an original door opening in the center to Women’s Pack Room 101. The western section with tile is in fair condition with smooth finished plaster above the tile wainscot. There is a vertical section of tile missing and damaged along the eastern edge prior to the wall joggng to the north (10” wide section, approximately 20 tiles). There is minor cracking present in the tile at this wall section. Drywall with a primed paint finish is continuous from this corner, extending back to the north and then to the east wall. There is a cut-out in the wall overhead in the western section of the north alcove that is approximately 30” wide x 24” high for contemporary ventilation. Within the jamb of this opening, drywall furring on metal stud framing is visible, with the original hollow clay tile block at the north side remaining. There is a large opening with a partial wood frame inset in the opening to support a pair of doors, all hardware and the doors are missing. The casing and wall finish around the opening is in poor condition with missing material. The drywall is in fair to good condition.			
Minor	Poor	Wall – North - Base	Section of base at the jambs where the Hall 102B transition to 102A are missing with bare non-original drywall left exposed. At the north wall, there is a terrazzo cove base along the western half prior to the step in the wall. The terrazzo base stops 6” prior to the step back to the north, and non-original drywall is exposed. Beyond this, at the section of the wall that sets back, there is no base with the drywall finish left exposed.		33	LF
Minor	Missing	Wall – North – Door	See Women’s Pack Room 101. Door trim and marble plinths missing from north side.			
Minor	Fair	Wall-East	The east wall appears to be original plaster above the door and potentially either plaster patching or drywall infill at part of the northern portion of this wall due to the conditions of the wall at the base.		117	SF
Minor	Missing	Wall – East - Base	There is no extant base at the east wall.		4.5	LF
Minor	Missing	Wall – East – Door	There are no extant doors at the east wall.			
Minor	Fair to Poor	Wall-South	The eastern two thirds of the wall consists of plaster with a smooth texture finish and painted above a tile wainscot featuring 3x6 white ceramic subway tiles and an ornamental ceramic tile cap in matching white color. Wainscot cap is missing at the east end of the wall (12 LF). At the eastern edge, there are approx. 32 damaged or missing field tiles. Tile wainscotting is stained throughout. There are two areas where fasteners were previously installed, and the tile is damaged. There is minor vertical cracking present in the tile. Towards the center of the		429 SF	

			wall, there is a rectangular section of missing and damaged tile (approx. 110 tiles), and the underlying plaster brown coat / setting mortar is exposed. Wainscot cap above this missing section of tile is missing approx. 18 tiles. Along the east edge of this section of wall, the tile and mortar setting bed stops and transitions to a section of wall with plaster patching. There are approx. 18 tiles are missing at this edge, which appears to have originally abutted a door frame casing. The western one-third section of the wall is a mix of original plaster and drywall infill with a finished skim coat over the surface to transition the materials. This area is only partially finished with raw edges exposed.			
Minor	Poor	Wall – South - Base	The base along the south elevation from the west wall to approximately 30” beyond the opening to Shower 107 is missing (11 LF). Beyond this point, there is a terrazzo cove base continuous to the east wall with minor cracking and chipping along the top edge.		25 LF	
Minor	Missing	Wall South - Trim	There is no extant trim at the east wall.			
Minor	Fair	Wall – South – Window	There are two overhead hopper windows, which tilt to the inside for ventilation. The frames appear to be original with two intermediate muntins and divided glass lites. The hardware could not be assessed from the floor level.			
Minor	N/A	Wall South - Door	There are two openings which lead into the Janitor’s Closet 106 and the Shower 107 spaces. Neither opening has a frame or door installed. The openings are not original.			
Minor	Fair	Wall - West	The west wall appears to be plaster finish with non-original patching and a finished skim coat over the surface. There is an open junction box centered above the door opening.			
Minor	Poor / Missing	Wall – West - Base	The base is missing from the south side of the opening at the west wall, and a small section of terrazzo remains at the north side of the opening.		4 LF	
Minor	N/A	Wall West - Door	There is one opening which leads into the Women’s Elevator Hall 102B. The opening does not have a frame or door installed.			
Minor	Good	Ceiling	The plastered concrete ceiling and beams are in good condition with no missing materials or cracking / damage evident. Finish appears to be primed and painted.		275 SF	
Room 102B – Women’s Hall Stair						
Minor	Fair	Floor	Terrazzo – cracks and patches throughout.			
Minor	Fair	Wall – North	Painted plaster wall above Wainscot – historic white glazed tile with cap – missing near door in east wall. Door infilled and patched with drywall near east side of wall. Junction box in center of room. Light switch in center of infilled door.			

Minor	Poor	Wall – East	Painted plaster wall above. Wainscot – historic white glazed tile going up stair with cap. Dirty or stained near base. Wainscot missing from pilaster. Junction box above door			
Minor	Fair	Wall – South	Painted plaster wall above. Wainscot – historic white glazed tile with cap.			
Minor	Fair	Wall – West	Painted plaster wall above. Wainscot - historic white glazed tile Tape residue on tile. Light switch in wall.			
Minor	Fair	Wall – Base	6” marble base – dirty throughout. Missing from door opening in east wall. No base at infilled door in north wall.			
Minor	Good	Ceiling	Painted plaster ceiling and beam.			
Minor	Poor	Lighting	Temporary lighting in ceiling			
Critical	Poor	Stairs	Wood 2x temporary treads and landing and painted steel stringers and risers. Treads and risers are visible below stairs. No railings.			
Critical	Poor	Elevator	Peeling paint on historic elevator cage. Likely all lead paint.			
Room 103 – Mechanical						
Minor	Poor	Floor	Terrazzo with cracking, staining, and patches throughout. Ventilation holes cut through floor for vents, ductwork, and conduit. Floor drain near center of room. Concrete pads poured over slab to support mechanical equipment.		406	SF
Minor	Poor	Wall – North	Painted plaster over brick with cracks and holes throughout for piping and conduit Historic white glazed tile missing pieces and cap pieces. Lots of conduit attached through tile walls		286	SF
Minor	Poor	Wall – East	Painted plaster over brick with cracks and large holes throughout for ductwork and piping. Diagonal cracking and plaster loss. Historic white glazed tile missing pieces and cap pieces		234	SF
Minor	Poor	Wall – South	Painted plaster over brick with cracks and diagonal cracking throughout. Door in center of wall missing and infilled with wood framing. Trim and jambs missing. Historic white glazed tile missing pieces. New HVAC equipment installed through tile.		286	SF
Minor	Poor	Wall – West	Painted plaster over brick with cracks and large duct and conduit holes throughout. Historic white glazed tile missing pieces		234	SF
Minor	Fair	Wall – Base	Terrazzo		72	LF
Minor	Fair	Ceiling	Plastered concrete ceiling and beams. Older light fixture locations visible.		406	SF
Minor	Good	Ceiling – Lighting	3 contemporary fluorescent lights		E	EA

Minor	N/A	Equipment	Old steam cabinet along south wall?		1	EA
Minor	N/A	Materials Testing	Perform full exposures and paint analysis in this space (upper walls, ceiling, and beams).		406	SF
Room 104 – Office						
Minor	Poor	Floor	<p>Flooring is exposed concrete with several patches of cementitious topping that is uneven. These patches appear to be some type of concrete thin topping with lots of adhesive on top. Remnants of adhesive may show outline of tile (perhaps abated asbestos tile) or carpeting that has been removed.</p> <p>Original floor finish in this space unknown but was likely quarry tile that was later removed, and the resultant area was infilled with concrete topping.</p> <p>Threshold at Door 1/104 is red quarry tile, matching that seen in other areas, which suggests this was the original flooring in this space.</p>		119	SF
Minor	Fair	Wall – North	<p>Walls are masonry with plaster finish. Plastered beam along top of wall. Diagonal crack on east end of wall. Plaster in good condition. Plaster wall has integral cove base at floor. The base is offset approximately 1/2" above the floor since the topping slab or floor finish has been removed.</p> <p>Contemporary grille installed through upper east wall is not tied to any ducts.</p> <p>Thermostats on wall near east side.</p>		156	SF
Minor		Wall North – Base	Integral cove base discussed above.		12'-3"	LF
Minor	Good	Wall – East	Plastered wall in good overall condition. Two new receptacle boxes installed. Door 1/104 in south portion of wall.		130	SF
Minor	Fair	Wall East – Door	<p>Door 1/104 veneered wood flush stained door, 19" wide (veneer species not readily apparent).</p> <p>Door does not shut properly</p> <p>Brass hinges, Brass Door handle and backplate – brass-plated steel mortise lock, Painted steel hinges, Brass keeper.</p> <p>Trim appears to be stained pine or similar (not oak)</p>		1	EA
Minor	Fair	Wall – South	<p>Wood Cabinetry/Check-in counter, swinging gate, and cased openings remain. Appears to be oak with original drawers. Handles are non-ferrous and painted metallic gold. Thumb turn latches are a combination of non-ferrous and steel and are painted metallic gold. Locks are non-ferrous metal painted metallic gold. Hinges with ball tips are steel painted metallic gold. Hardware appears to be original.</p> <p>Overall, the cabinetry is in good condition. Back of one cubby is</p>		85	SF

			missing and could easily be replaced. Cased openings framed with simple, flat-beveled 3 ½” oak trim			
Minor	Good	Wall – West	Painted plaster wall. An interior wood casement window is installed in the center of this wall that overlooks the sunporch. Age of window is unknown. Wood window is in-swing. South bottom latch is stuck and not operable. Hardware – brass ball-top hinges with steel pins; brass-coated steel center lever latch with brass handle; brass top and bottom latches in south casement.		130	SF
Minor	Good	Ceiling	Painted plaster ceiling		119	SF
Minor	Poor	Ceiling – Lighting	Temporary light			
Room 105 – Women’s Cool Room						
Critical	Poor	Floor	Terrazzo with cracks throughout. Tripping hazard at crack near Door 1/1/5. Cracks in flooring and base near center of north wall. Several vents and ducts cut through floor with many over-cut.		450	SF
Serious	Poor	Wall – North	Wall intersected by infill restroom. Significant diagonal cracking in multiple areas through plaster, brick, and tile. Painted plaster on upper portion of wall mostly missing exposing brick. Historic white glazed tile on lower portion of wall in overall poor condition with lots of loss of material. Chase in masonry wall near east end is opened with pipes exposed. Original plaster and tiled chase in NW corner of room demolished to expose roof drain. Terrazzo base remains to outline chase. Windows – (3) pairs of casement windows. Windows are racked with settlement of building, so operation is likely impeded. Restroom sink and toilet installed along north wall (meant to be temporary for park staff use). Radiator pipes through floor near center of wall.		286	SF
Serious	Fair	Wall – East	Painted plaster over masonry above historic white glazed tile. Plaster walls with diagonal cracks and some offset/loose sections Minor diagonal cracking in tile near north wall. Restroom modern wall intersects Door 2/105 jamb. Large modern vent through upper/south portion of wall Exposed conduit to run temporary electrical service along top of wall. Burlap type wall covering with pink paint visible at north jamb of Door 2/105. Potential decorative painted border approximately 14” below ceiling with contrasting paint above.		247	SF
Minor	Poor	Wall East – Door	Doors 2/105 - Veneered doors in poor overall condition. They do not operate fully due to floor settlement.		2	EA

			Interior trim with marble plinths in place but painted. Opposite side door missing trim. Original painted steel double-acting Triplex hinges remain. Painted white?			
Serious	Poor	Wall – South	Painted plaster over masonry above historic white glazed tile. Plaster walls in poor overall condition with diagonal cracks and plaster loss. Large duct hole through tile near west end for ductwork and for vent in upper center of wall. Holes and cracks throughout tile wainscotting. Tile loss near Door 1/105 – approximately 16 tiles and cap. Painted wood bench with mirror along south wall – covered. Bench settled with building and is no longer attached to the wall. Missing shoe molding and some wood rot at base of bench.		286	SF
Minor	Poor	Wall South – Door	Door 1/105 – (2) Doors missing. Interior trim missing. Stained jambs in good condition. Original painted steel double-acting Triplex hinges remain.		2	EA
Serious	Poor	Wall – West	Both chases (SW and NW corners) fully or partially demolished. Historic white glazed tile remains in part of SW chase and center area under window. Painted plaster all removed from the walls with exposed brick. Brick walls exhibit diagonal cracking and some open mortar joints. Structural infill in NW and SW chases with concrete topping. Vent in SW chase. Large arched window with pair of casements and historic glass. Window ball-tip hinges are brass with patina and uneven wear. Historic painted white cast iron sink installed along center wall under sink. Cast iron ventilation grille installed near base of SW chase.		247	SF
Minor	Poor	Wall – Base	Terrazzo 6 ½” high. Cracked throughout in several locations.		77	LF
Serious	Poor	Ceiling	Plastered ceiling. Multiple areas with delaminating plaster and missing plaster. Areas with previous concrete beam restoration visible.		450	SF
Minor	Poor	Lighting	Temporary Lighting		1	
Minor	N/A	Materials Testing	Perform full exposures and paint analysis in this space (upper walls and ceiling and beams). Look at potential painted wallcoverings near window jambs in north wall.			
Room 106 – Janitor’s Closet						
Minor	Good	Floor	The floors are non-original tile with a 1x mosaic tile at the threshold (4 tile deep) in a dark gray or black finish which coordinates closely with the terrazzo matrix. And in the space is a 2 x 2 field tile in a light		15	SF

			tan color. The visible areas of the tile and grout appear to be in good condition.			
Minor	Fair	Wall - North	The enclosure for this room is non-original drywall framing at all walls. The north wall has small side jambs (roughly 3" in width) and an opening centered on the wall. The drywall finish extends above the door opening, but not full height. Metal framing is exposed above at the interior side.		30	SF
Minor	N/A	Wall – North - Base	Non-extant		1	LF
Minor	N/A	Wall – North - Trim	Non-extant			
Minor	N/A	Wall – North - Door	Non-extant. There is an opening for a door, but no frame or door.			
Minor	Poor / Unfinished	Wall - East	The east wall has exposed metal stud framing with junction boxes and electrical conduit visible. Drywall is visible on the far side of the framing.		65	SF
Minor	N/A	Wall – East - Base	Non-extant		5	LF
Minor	N/A	Wall – East - Trim	Non-extant			
Minor	Poor	Wall - South	The south wall has exposed metal stud framing with electrical conduit visible. Drywall is visible on the far side of the framing. There is an opening in the drywall at the top of the partition allowing visibility into the adjacent space. Loose batt insulation placed between the metal framing.		39	SF
Minor	N/A	Wall – South - Base	Non-extant		3	LF
Minor	N/A	Wall – South - Trim	Non-extant			
Minor		Wall – West	The west wall has drywall furring to an 8'-0" height with metal hat channel mounted to brick load bearing walls. The drywall has been finished and painted.		65	SF
Minor	N/A	Wall – West - Base	Non-extant		5	LF
Minor	N/A	Wall – West - Trim	Non-extant			
Minor	N/A	Ceiling	There is no ceiling in this space. The overhead concrete structural deck and beams are visible, unfinished. Because the ceiling is unfinished, this indicates that the ceilings in this area were originally suspended metal lath and plaster at a lower elevation.		15	SF
Room 107 – Shower						
Minor	Poor	Floor	Exposed, unfinished concrete with the original topping material removed.		121 SF	SF
Minor		Wall - North	There is no north wall at the entry hall to the shower – it is an open passageway. Within the Shower room, looking north there is non-original unfinished framing with exposed insulation and drywall clad framing. The drywall is unfinished with exposed seams and edges.			SF
Minor	N/A	Wall – North - Base	Non-extant			
Minor	N/A	Wall – North - Trim	Non-extant			
Minor		Wall - East	This wall is split into the entry hallway and the Shower Room. The		247 SF	SF

			drywall framing is unfinished with metal studs visible above an 8'-0" height. Above the metal stud framing, the brick and concrete structure are exposed. There are insets visible in the brick where plumbing was previously routed. The brick in this area is loose with minor areas of missing mortar and four missing units. There appear to be sections with concrete infill and patching, it is unclear if this is original or a modification at some point in the past.			
Minor	N/A	Wall – East - Base	Non-extant		19 LF	LF
Minor	N/A	Wall – East - Trim	Non-extant			
Minor	Fair	Wall – East - Window	Adjacent to the concrete deck is a ventilation window with a hopper operation. The window is split by the framing between the entry hall and the shower room. There are three divided lites at the north side of the framing and two at the south side. At the south end of the east wall there is a second hopper ventilation window with 5 divided lites (4 muntins). The frames and sashes appear to be original. The hardware could not be assessed.		2	EA
Minor	N/A	Wall - South	The drywall framing is partially finished at the projecting south wall on the west side of the space and extends from the concrete floor to the exposed concrete structural deck. Metal studs are visible above an 8'-0" height at the far south wall and the drywall is unfinished. There is a metal stud channel at the floor dividing this space from Room 111 Toilet, but there is an opening in the drywall to allow direct passage.		65	SF
Minor	N/A	Wall – South - Base	Non-extant		5	LF
Minor	N/A	Wall – South - Trim	Non-extant			
Minor		Wall – West	This wall is split into the entry hallway and the Shower Room. The drywall framing is partially finished at the south end of the space and unfinished at the north end with metal studs visible above an 8'-0" height. Above the metal stud wall framing and at the far west alcove, the brick is exposed with open metal framing and copper plumbing pipes visible.		338	SF
Minor	N/A	Wall – West - Base	Non-extant		26 LF	
Minor	N/A	Wall – West - Trim	Non-extant			
Minor	Serious	Ceiling	The ceiling in the entry hall and shower space is exposed concrete structural deck. There are several areas where the concrete covering has spalled, and the underlying steel reinforcing is exposed with a high level of ferrous metal staining and corrosion.		121 SF	
Room 108 – Men’s Pack Room						
Minor	Fair	Floor	Terrazzo with cracking throughout. Holes cut through floor for ventilation.		768	SF

			Floor drain in center of room. Pipes through floor. Toilet or shower area in NE corner of room – partitions removed.			
Minor	Fair	Wall – North	Painted plaster walls above in good condition. Original white glazed wall tiles with bullnose. Some contemporary repair tiles infilled. Lots of original tiles chipped and dirty.		300	SF
Minor	Fair	Wall – East	Painted plaster walls above in good condition. Contemporary ventilation hole through center wall. Original white glazed wall tiles with bullnose. Some contemporary repair tiles infilled. Lots of original tiles chipped and discolored. Historic tile bullnose at outside corner missing. Jambes where Door 2/113 missing were patched with marble.		416	SF
Minor	Fair	Wall – South	Painted plaster walls above in good condition. Original white glazed wall tiles with bullnose. Some contemporary repair tiles infilled at hall Door 1/108 opening. Lots of original tiles chipped and dirty.		300	SF
Minor	Fair	Wall – West	Painted plaster walls above in good condition. Original white glazed wall tiles with bullnose. Some contemporary repair tiles infilled in center field of wall. Lots of original tiles chipped and dirty and discolored.		416	SF
Minor	Fair	Wall – Base	6" white sq. glazed tiles.		101	LF
Minor	Good	Ceiling	Painted plaster concrete and beams. Good condition.			SF
Minor	Good	Ceiling – Skylight	Skylight was replaced in 2002. Walls are painted plaster and are in relatively good condition. No sign of previous laylight attachment. Laylight missing. Skylight does not appear to be taking on water.			
Minor	Good	Ceiling – Lighting	Temporary		768	SF
Room 109 – Sun Porch						
Minor	Fair	Flooring – Tile (Field)	Historic rectangular clay tiles over concrete floor in herringbone pattern with 1/2" grout joints. in fair condition. Many are damaged and patched with colored mortar patches. Divots in the tile reveal white spalls. Size: 6"x9"x? thick. Overall, the floor slopes to the east (towards the building) due to settlement of the main building west wall. Uneven floor settlement has resulted in some cracks through the floor tiles. Portions of tile floor near the entrance into the Lobby are concealed with more contemporary square clay quarry tiles to create a ramp up into the Lobby. Size: 6"x6" with 1/2" grout joints Tiles may have been manufactured by Ludowici		528	SF
Minor	Good	Flooring – Mosaic	Border in floor at perimeter of room with square mosaic 3-color		121	SF

		Tile Border	ribbon in good condition, except for offset in floor near south wall and near north wall where the building has settled. This area is cracked and offset. Some holes through the floor remain where radiator pipes were removed. 25 red/white/green tiles total missing or damaged. Size: ¾" sq.		25	EA missing
Minor	Fair	Flooring – Tile Base	Square clay tile base at perimeter of room in fair condition. 1 tile on the east wall (north end) is missing and partially infilled with non-matching tile. 2 tiles at south wall (center) where the building has shifted are severely damaged or cracked. Base at front entrance door (south side) is chipped and is missing grout. Size 6.125"sq x 15/16" thick		101 3	LF EA damaged
N/A	Good	North and West, Walls	Walls are stuccoed and painted. (not including openings)		480	SF
N/A	Fair	South Wall	Walls are stuccoed and painted. South wall has vertical crack to east of window, due to settlement.		11	LF
N/A	Good	East Wall	Wall is stuccoed and painted. 2 decorative polychromed large terra cotta tiles are set into the wall – approx. 14" square. Colors are in the blue range and do not appear to match other colors in the building. Research if these were here prior to the Sunporch construction		2	EA
N/A	Good	Ceiling and Cornice	The existing ceiling components consist of a painted metal cornice (original) with a metal grid pattern (mostly original). The east/west grid are 'T' steel components with the north/south galvanized 'T' components laying atop the steel components. The rectangular openings are infilled with a plastic translucent lens material. Lighting above it by LED strip lights. The translucent lens material is not historic and is bowing in several places. The roof structure above the ceiling has been rebuilt with (2xs) and visible plywood sheathing.			
N/A	Good	Lighting	Chandeliers are installed on the ceiling at the juncture of the ceiling grid. Age of fixtures is unknown. There is a third bolt through the center of the ceiling that may be a third ceiling fixture location.		3	EA
Minor	Fair	Mechanical	Contemporary wall supply grilles are installed in the north and south walls to provide fresh air into the space. These are not in keeping with the style of the building. Explore if these could have been installed from within the original chases in the rooms behind these walls instead of through the floor and exposed in the adjacent rooms. Perhaps grilles could be taller and thinner with grilles with more of a historic aesthetic and painted to match walls?		2	EA

Room 110 – Lobby

Minor	Fair	Flooring	<p>Existing flooring is mosaic tiles. Field is hexagonal white with green accents. Border tiles are square with four colors (white, coral, light green, and dark green).</p> <p>Floor has settled several inches to the west. Floor has cracks throughout due to settlement.</p> <p>Some cracks have been infilled with new tiles. Some of these are offset and may present a tripping hazard.</p> <p>Several field tiles are missing (exact count unknown due to items stored in this space)</p> <p>White hexagonal tiles missing at the east threshold. 30 total</p> <p>Existing mosaic flooring appears to have been laid over the original clay quarry tile flooring, as seen at the east end of the room.</p> <p>The overall floor slopes several inches from the east to west sides. This slope is not new but is due to settlement of the west wall of the building over the last 100-plus years.</p>		456	SF
					25 +/-	EA missing
					30	EA missing
Minor	Fair	Wall – North	<p>The north wall is symmetrical with the south wall. The wall is highly decorative millwork with panels and fluted pilasters with decorative capitals.</p> <p>Millwork and decorative paint on the walls below the decorative cornice has been restored.</p> <p>Some paint is peeling. Some of the joints in the wood paneling have opened due to the humidity in the building.</p> <p>Wood counter and top of swinging gate are worn and need to be refinished. Counter is sloped.</p>		241	SF
Minor	Fair	Wall North - Base	<p>Marble – 5" high</p> <p>Some minor chips, scratches, and paint. Marble is dirty overall.</p> <p>Missing some grout throughout.</p>		10	LF
Minor	Fair	Wall North – Door	<p>Evidence that doors used to operate with floor-mounted and top jamb double-acting hardware. Top jamb is infilled. Brass-plated steel floor boxes remain.</p> <p>Unknown about copper kickplates (are these reproduction of original copper?). Seems like they would have been brass and not copper? Ask Park why they restored with copper?</p> <p>Double-acting hinges are painted steel. But have been primed with white paint and then finished with gold metallic paint. Gold paint is chipped, revealing white primer. These need to be refinished.</p> <p>North Doors – Doors function; West door rubs on top jamb; several finials missing on hinges; east center hinge is cracked through (may not affect operation); hinges installed with Phillips screws; west glass is broken in lower left corner; copper kickplates need repairs and reattachment; stained (opposite) side of doors need finish refreshed; brass push plates (4) need polishing and sealing.</p>		2	EA
Minor	Fair	Wall North –	<p>North Gate hardware is painted steel in good condition. Says</p>		1	EA

		Swinging Gates	'Chicago Triplex.' Painted metallic gold/brass color			
Minor	Fair	Wall – East	Has the same wood paneling as the north wall. Has the engraved wood sign above the east door opening to the lobby that says "The Maurice Baths" with names of prominent figures gilded. Some paneling is beginning to split and buckle.		312	SF
Minor	Fair	Wall East – Base	Marble – 5" high Some minor chips, scratches, and paint. Marble is dirty overall. Missing some grout throughout.		18 LF	
Minor	Poor	Wall – South	Has same wood paneling as the north wall. Some vertical cracking in the flutes on both pilasters due to shrinking and swelling. West panel is buckled from humidity. Several other panels are split and beginning to buckle. May be able to be carefully removed and restored to flat condition and reinstalled by wood conservator. Wood counter and top of swinging gate are worn and need to be refinished. Has rectangular painted metal grille in lower section of wall for contemporary return air that appears to be historic, although it has contemporary Phillips screws for attachments. Marble base under east pilaster appears to have been reinstalled upside down (top edge is unfinished and wear typical for a base is near the top).		241	SF
Minor	Fair	Wall South – Base	Marble – 5" high Some minor chips, scratches, and paint. Marble is dirty overall. Missing some grout throughout.		14	LF
Minor	Fair	Wall South – Door	South Doors – Doors function; doors do not close properly (doesn't seem to be enough room or hinges are loose); Several panels are splitting and opening at seams due to humidity; Several finials missing on hinges; hinges installed with Phillips screws; glass in good condition overall; copper kickplates need repairs and reattachment; Stained (opposite) side of doors need refreshed; brass push plates (4) need polishing and sealing and several new screws		2	EA
Minor	Fair	Wall South – Swinging Gates	Hinged counter hardware is new, shiny brass-plated steel replacement on the counter and gate piano hinges and installed with Phillips screws. Brass latch on interior of gate door and iron brackets supporting counter appear to be original. Three stainless screws with washers in east wall for attaching jamb? Unknown.		1	EA
Minor	Good	Wall – West	Note the operable arched transom sashes were removed from the west wall arches. The sashes are visible in postcards, and the brass catches at the top jamb remain. Jambs in arched openings appear to have been replaced but were cut square instead of matching the slope of the ramp, so older millwork that is deteriorated behind the replaced jambs is visible. Bottoms of older jambs exhibit some wood rot. (confirm not termites)		312 SF	
Minor	Fair	Wall West – Base	Marble – 5" high		9 LF	

			Some minor chips, scratches, and paint. Marble is dirty overall. Missing some grout throughout.			
Serious (this is Critical for Character-Defining Feature)	Poor	Walls – Decorative Painting	Verify if NPS has historic paint analysis? Why green on the paneling? Postcards show wood finishes in this space. Also, space has changed since built – original check-in desk in east wall removed. Configuration of north wall changed – different than in postcard. Postcard shows paneling in west section with grille below (similar to current south wall)			
Minor	Good	Walls – Pilaster capitals	Park staff have noted that the capitals at the top of the pilasters are plaster replacements of the originals. Originals may be in park archives.			
Serious (this is Critical for Character-Defining Feature)	Poor	Ceiling – Plaster Cornice	The multi-component decorative plaster cornice at the top of the room and the flat plaster ceiling have areas that are missing or damaged that require restoration. Two dropped beams in the center of the room run east/west and are plastered over structural reinforced concrete beams. All surfaces have remnants of decorative painting (wood graining, gilding, stenciling) that should be preserved, documented, and analyzed by a qualified AIC historic paint conservator.		Ceiling - 456	SF
		Ceiling – Lighting	Lighting is contemporary and appears to be installed in historic pendant light locations.		3	EA
Room 110A – Hall						
Minor	Good	Flooring	Mosaic tile flooring matching lobby with border. Some minor cracks through floor. A few damaged or chipped pieces. A few replacement pieces are evident (color and size do not match existing historic pieces). The border is installed correctly and square; however, the room is not square, so the border runs into the wall.		55	SF
Minor	Fair	Base	Marble – 6” high Some minor chips, scratches, and paint. Marble is dirty overall. Missing some grout throughout.		16	LF
Minor	Fair	Wainscot	Tile wainscotting – white glazed tiles with cap. North, East, and South walls – original glazed tile – slightly crazed. Tiles cracked and dirty with paint splatters, etc. Bits of glazing chipping. SW corner of West wall – original glazed tile – slightly crazed. Missing corner caps tiles at south wall (left and right of door) Most of West wall is contemporary reproduction white glazed tiles with a seam down the middle. 2 7/8” x 5 7/8” – top is a bullnose. Does not exactly match historic tiles, so joints are wider than the historic wall sections. Cap does not		130	SF

			match historic profiles cap.			
Minor	Good	Upper Wall	Painted plaster walls and coffered plaster pilasters		100	SF
Minor	Good	Ceiling	Coffered painted plaster ceiling- two stepped coffers with decorative plaster cornice separated by dropped and coffered plaster beam.		55	SF
N/A	Good	Lighting	Contemporary light fixture			
Room 110B – Hall						
Minor	Good	Floor	Mosaic tile flooring matching lobby with border. Some minor cracks through floor. A few damaged or chipped pieces. A few replacement pieces are evident (color and size do not match existing historic pieces). Hole in floor near west wall.		55	SF
Minor	Fair	Wall – Base	Marble – 6” high. Some minor chips, scratches, and paint. Marble is dirty overall. Missing some grout throughout.		16	LF
Minor	Fair	Wall – Wainscot	Tile wainscotting – white glazed tiles with cap. North, East, South, and West walls – original glazed tile – slightly crazed. Some tiles cracked and dirty. Bits of glazing chipping. Portions of wainscotting at north jamb to elevator Hall 112B is replacement white glazed tiles 2- 7/8” x 5-7/8” laid into field with historic cap tiles. Do not exactly match historic tiles, so joints are wider than the historic wall sections.		130	SF
Minor	Good	Wall – Upper Wall	Painted plaster walls and coffered plaster pilasters		100	SF
Minor	Good	Ceiling	Coffered painted plaster ceiling - two stepped coffers with decorative plaster cornice separated by dropped and coffered plaster beam.		55	SF
N/A	Good	Ceiling – Lighting	Contemporary light fixture			
Hall 110C – Elevator Lobby						
Minor	Poor	Floor	May have originally been terrazzo that was later removed, as the base is terrazzo on most of the space. May have a thin topping slab that has asbestos or linoleum tiles that have since been removed. Evidence of black mastic remaining. (Confirm this is not asbestos? Was this room part of the asbestos removal project?) Pipe protruding from floor in NW corner.		83	SF
Minor	Poor	Wall – North	Painted plaster over brick. Crazed		50	SF
Minor	Poor	Wall North – Door Opening	Trim and jambs missing at south side of opening. Wood blocking in brick jambs mostly missing. Brick jambs need spot repointing. No visible lintel. Opening cut through concrete. Terrazzo flooring through opening.			
Minor	Poor	Wall – East	Painted plaster over brick. Some missing and other section loose and cracked. Painted drywall at elevator.		50	SF
Minor	Poor	Wall – South	Painted plaster wall. Recessed hole in wall where something was removed. Hole appears		50	SF

			to have been enlarged with elevator control conduit. Plaster walls are crazed and some sections are missing.			
Minor	Poor	Wall South – Door Opening	Trim and jambs missing at south side of opening. Wood blocking in brick jambs mostly missing. Brick jambs need spot repointing. No visible lintel. Opening cut through concrete. Terrazzo flooring through opening.		1	EA
Minor	Poor	Wall – West	Painted plaster wall over brick. Plaster is cracked and missing in some locations. Trim and plinths at south and north sides of cased opening missing. Holes in wall at receptacles. Wires through wall. Modern door bumpers installed in wall at either side of door.		50	SF
Minor	Poor	Wall – Base	Terrazzo base 6”+/- on North, part of East, South, and West walls. Base has paint and adhesive on it. No base where new elevator shaft was constructed.		18	LF
Minor	Poor	Ceiling	Flat plaster ceiling with composite plaster crown molding. Cracking throughout and delamination of finished plaster layer. Damage at cornice near elevator opening.		83	SF
N/A	Poor	Ceiling – Lighting	Temporary fixture at ceiling.			
Minor	Poor	Elevator	Elevator doors and controls are satin brass. No threshold to elevator.			
Room 111 - Toilet						
Minor	Poor	Floor	Exposed, unfinished concrete with the original topping material removed. Original plumbing cutouts are extant at the floor. There is a floor duct cutout adjacent to the south wall between the door and the west wall construction.		93 SF	
Minor	Poor	Wall - North	The non-original drywall framing is partially finished at the projecting wall on the west side of the space and extends from the concrete floor to the exposed concrete structural deck. Unfinished framing with exposed metal studs is visible at the north wall with an opening to Room 107 Shower present. There is a metal stud channel at the floor dividing this space from Room 107 Shower.		46.8 SF	
Minor	N/A	Wall – North - Base	Non extant		3'-6" LF	
Minor	N/A	Wall – North - Trim	Non extant			
Minor	Poor	Wall - East	The drywall framing is partially finished with metal studs visible above an 8'-0" height. Above the metal stud framing, the brick is exposed with a large section of concrete parging present below the south window. Centered in the wall at approximately 6'-8" in height is a 4x open junction box with concealed conduit feeds. There is no device or cover plate installed.		176.8 SF	
Minor	N/A	Wall – East - Base	Non extant		13'-7" LF	
Minor	N/A	Wall – East - Trim	Non extant			

Minor	Poor	Wall - South	The drywall framing is partially finished with metal studs visible above an 8'-0" height. The metal stud framing extends to the concrete structure above. Centered in the wall adjacent to the west side of the door is an open 2x junction box with no device or cover plate installed. It is assumed this is for a light switch. Adjacent to the west and slightly lower, there is an additional 2x junction box installed with no device or cover plate. It is assumed this is meant for an electrical outlet. At the east side of the door, a non-original paper towel holder is temporarily installed at the jamb of the door opening.		65 SF	
Minor	N/A	Wall – South - Base	Non extant		4 LF	
Minor	N/A	Wall – South - Trim	Non extant			
Minor	Missing	Wall – South - Door	Non extant, the jamb is installed, but the door and frame are missing			
Minor	N/A	Wall – West	The drywall framing is partially finished with metal studs visible above an 8'-0" height. The metal stud framing extends to the concrete structure above with exposed PVC and copper plumbing pipes exposed in the cavity. Rough-ins for plumbing project from the wall in several locations. At the north side of the west wall, the wall steps out and is enclosed in drywall which extends the full height of the wall.		182 SF	
Minor	N/A	Wall – West - Base	Non extant		14 LF	
Minor	N/A	Wall – West - Trim	Non extant			
Minor	Poor	Ceiling	The ceiling in the space is exposed concrete structural deck. There is a large section of the ceiling which appears to have received previous concrete repairs. There are plumbing vent and drain line penetrations extant in the ceiling.		93 SF	
Room 112A - Hall						
Minor	Fair to Poor	Floor	The Hall floor is gray terrazzo with areas of deterioration due to recent construction projects. There is a border transition from the Men's Hall 112B into Hall 112A, with a similar detail transitioning from Men's Cool Room 115 and Men's Pack Room 108. The border starts at the inside face of the west wall and runs the perimeter of the Hall. The border is approximately 7" in width and appears to utilize a slightly darker gray matrix than the field color and has a white aggregate that matches the field terrazzo. At the Men's Pack Room 108 and Men's Cool Room 115, the terrazzo border extends to the interior face of the wall opposite the Hall and then is mirrored into the adjacent rooms. Construction dust prevents full observation of conditions, but there is a fair amount of deterioration present and at the east end there are sections of concrete slurry over the terrazzo. Between the opening into Toilet 111 and Door 1/108 on the north side of the Hall, there are penetrations in the floor where a radiator		184	SF

			was removed.			
Minor	Fair to Poor	Wall - North	The north wall has had modifications with repairs to the original plaster at the western 4'-0" of the wall. Where patched, the original ceramic tile wainscot has been removed. There are new electrical device junction boxes installed in this location with no devices or cover plates installed. The drywall patch in this area is unfinished at both sides of the door opening into Toilet Room 111, and along the east side of the door, cementitious patching approximately 4-6" in width has been installed between the opening and the extant ceramic tile wainscot. The remainder of the wall consists of smooth plaster above a ceramic tile wainscot with a bullnosed tile cap. The plaster is in good condition and appears to have a new skim coat applied over the surface. The tile is in fair to poor condition with one section 2'-0" from the east wall having wider grout joints due to settlement. The tile has several areas of vertical cracking and surface crazing of the glazed tile finish. Additionally, there appears to be concrete slurry splatter on the tile in several areas.		416	SF
Minor	Fair to Poor	Wall – North - Base	Base is missing at west end of wall. Original terrazzo cove remains at the rest of the wall and has small areas of damage (approximately 1 SF) which have been infilled with a non-compatible cementitious patch.		23	LF
Minor	Missing / N/A	Wall – North - Door	The opening into Toilet 111 is unfinished with no door installed. There are no doors present at opening 1/108, and no evidence of hinges or hardware at the existing casing.			
Minor	Fair	Wall – North - Trim	There is no trim installed at the door opening / casing into Toilet Room 111. At Door 1/108, there is wood trim present which appears to be original. The wood appears to have been re-stained with a non-original finish with a faux grained dark stain finish.			
Minor	Fair	Wall – North - Window	Adjacent to the painted concrete second floor deck are two windows with hopper operation for ventilation. Each window has three divided lites. The frames and sashes appear to be original. The hardware could not be assessed.		2	EA
Minor	Fair	Wall - East	The east wall consists of smooth plaster which appears to have a new surface skim coat. Centered above the door, there is a new electrical device junction box with no device or cover plate installed.		36	SF
Minor	Poor	Wall – East - Base	The base at the east wall has been altered and patched with a non-original cementitious material.		1	LF
Minor	Missing / N/A	Wall – East - Door	There are no doors present at the opening into Men’s Bath Hall 113 and no evidence of hinges or hardware at the existing casing.			
Minor	Fair	Wall – East - Trim	At Door opening 1/113, there is wood trim present which appears to be original. The wood appears to have been re-stained with a non-			

			original finish and a faux grained pattern and dark stain. The east face of the opening in Men’s Bath Hall 113 is missing the facing trim with the jamb trim edge exposed and raw wood with no finish. There are gouges and scratches in the wood trim.			
Minor	Fair to Poor	Wall - South	Smooth plaster wall above an original ceramic tile wainscotting with a bullnosed tile cap. The plaster is in good condition and appears to have a new skim coat applied over the surface. Tile is in fair to poor condition with areas of cracked and damaged tile that appear to have been reset in two locations. The tile has several areas of vertical cracking and surface crazing of the glazed finish. Concrete slurry is splattered and a green coating stain on the tile in several areas.		416	SF
Minor	Fair to Poor	Wall – South - Base	Terrazzo base with matching matrix and aggregate colors. The original terrazzo cove is extant at the full length of the wall and has small areas of damage a non-compatible cementitious patch and concrete slurry cover the base material.		20	LF
Minor	Fair	Wall – South - Trim	At Door openings 1/115, 2/115, and 3/115, there is wood trim present which appears to be original. The wood is stained with a dark mahogany finish and a faux grained pattern. It is unclear if this is the original finish or if it has been re-stained. Remnants where the original door hinges and latching hardware were located are present on the south side of the opening. There are gouges and scratches in the wood trim.			
Minor	Missing	Wall – South - Door	There are no doors present at the extant openings into Men’s Cool Room 115.		36	SF
Minor	Good	Wall – West	Smooth plaster wall which appears to have a new surface skim coat. Centered above the door, there is a new electrical device junction box with no device or cover plate installed.		1	LF
N/A	N/A	Wall – West - Base	There is no base at the west wall, the opening trim extends to the corners.			
Minor	Fair	Wall – West - Trim	There are no doors present at the opening into Men’s Hall 112B and no evidence of hinges or hardware at the existing casing.			
Minor	N/A	Wall – West - Door	At Door opening 1/112A, there is wood trim present which appears to be original. The wood is stained with a dark mahogany finish and a faux grained pattern. It is unclear if this is the original finish or if it has been re-stained. There are no remnants where original door hardware was located at the opening. There are gouges and scratches in the wood trim.			
Minor	Good	Ceiling	The existing ceiling appears to have a new skim coating installed over the surface and a new paint finish. The original beams are still expressed and appear to have a new skim coating as well. There is		184	SF

			one non-original hanging work light tied to a new junction box installed in the ceiling at the mid-point of the Hall.			
Room 112B – Men’s Stair Hall						
Minor	Fair	Floor	Terrazzo flooring with light gray matrix and white aggregate. The terrazzo is in fair condition overall with minor hairline cracking. Along the west side of the room, the terrazzo topcoat is muddy and needs buffed.		109	SF
Minor	Fair	Wall – North	3x6 ceramic tile wainscotting runs parallel to and follows the pitch of the basement stair (long side of the tile). The wainscotting is roughly 4-feet off finish floor. Ornamental bullnose cap at the top of the wainscot. 1 cap piece is missing at the west end. Significant ferrous staining on the east side of the wainscotting. The 3x6 ceramic tile wainscot is in fair condition. Approx. 18 damaged tiles and several missing tiles at the west end of the wall. Above the wainscot is a smooth plaster finish on the wall. The plaster is in good condition with an abandoned electrical fixture box centered on the wall. The handrail leading to the basement is 1-1/4-inch cast iron piping that does not meet code. The concrete steps are not consistent in depth with the top step 16-inch deep vs. 10-inches on other steps.		13	LF
Minor	Fair	Wall – East	3x6 ceramic tile wainscotting runs parallel to and follows the pitch of the stair (long side of the tile). Ornamental bullnose cap at the top of the wainscot. The ceramic tile is in good. Above the wainscot is a smooth finish wall. The finish wall above the wainscotting is in good condition. The paint finish is in good condition. On the southside of the wall is stained wood framed door opening 3/112B. There is an abandoned electrical fixture device box just above framed door opening 3/112B.		16 LF	
Minor	Good	Wall East – Base	The base at the landing is a gray marble that matches the marble plinths at the base of the door frame. Approximately 6” in height.		2 LF	
Minor	Good	Wall East – Trim	The stained wood door trim at 3/112B is in good condition.			
Minor	Poor	Wall – South	The south wall is smooth finished wall above a 3 x 6 ceramic tile wainscot and bullnose cap. The finished wall and tiled wainscotting are in good condition. There is an abandoned electrical fixture device box centered on the wall. On the west side of the wall is door opening 2/112B with no trim and exposed masonry side walls.		13 LF	
Minor	Good	Wall South – Base	The base at the landing is a gray marble that matches the marble plinths at the base of the door frame. Approximately 6” in height.		10 LF	
Minor	Fair	Wall – West	The south wall is smooth finished wall above a 3 x 6 ceramic tile wainscotting and bullnose cap. Tile is in fair condition, requiring		16 FT	

			cleaning and there are (approx. 18 damaged tiles). The finished plaster wall is in good condition. On the south side of the wall is door opening 1/112B. To the north of door 1/112B is an abandoned light switch electrical box that is missing the switch and cover.			
Minor	Fair	Wall West – Base	The base at the landing is a gray marble that matches the marble plinths at the base of the door frame. Approximately 6” in height. The base needs buffing.		13 FT	
Minor	Good	Ceiling	The ceiling on the south side of the room is plaster and appears in good condition. The north side of the room is the underside of the metal stairs and marble treads. The metal stairs have patches of corrosion throughout.		90 SF	
Room 113 – Men’s Bath Hall						
		Additional Info	There are two types of white glazed tiles....original tiles that are flat with squared edges and tight grout joints...and later white tiles that date to the remodeling of this space. These tiles have slightly eased edges, are slightly smaller, and have larger grout joints.			
Serious	Poor	Floor	Terrazzo, colored concrete, patches, some porcelain mosaic, and raw concrete. In overall poor condition due to removed partitions and equipment. Surface is uneven with tripping hazards. Floor drains throughout.		1517	SF
Minor	Poor	Wall – North	White glazed tiles (original) over Pyrobar block. Some large sections missing; Additional areas delaminating and about to fall; two large modern holes through wall for ventilation. Lots of anchors through tiles for partitions and equipment.			
Minor	Poor	Wall – East	Same as north wall. Lots of dirt, cracks, and tile discoloration. Lots of holes from anchors for partitions. Lots of cracking, tile discoloration, and tile loss.			
Minor	Poor	Wall – South	Same as north wall. Combination of tile types. Most of the wall is the newer white tile, but some older is visible lower in the wall that was likely covered later with equipment. Lots of cracking, tile discoloration, and tile loss.			
Minor	Poor	Wall – West	Same as north wall. Combination of tile types. Most of the west wall is the older, original white tiles. A section of the west wall near the south end is the newer white tile. Lots of cracking, tile discoloration, and tile loss. Large holes through wall in several locations for contemporary ventilation. Lots of missing tiles. Some patched tiles recently at Door 2/113.			
Minor	Poor	Wall – Base	6” sq. white glazed tiles. Mostly missing.			
Minor	Poor	Ceiling	Ceilings are two layers. An original painted plaster ceiling is visible above the suspended lath and tile ceilings.			

			The lower tiled ceilings are clad with the “newer” (likely 1915) white tiles, including the barrel vaults in the center section. Holes in ceiling were for vents and/or lighting. All steel suspension framing and metal lath appears to be rusted and deteriorated, where visible.			
Minor	Poor	Ceiling – Skylight	2 skylights - Skylight walls were previously re-framed and are not insulated. There are no ties to keep south skylight walls from spreading. Skylight was replaced in 2002. South Skylight does not appear to match historic pitch as witnessed in plaster along north wall. South Skylight – Walls unfinished. Do not appear to take on water. North Skylight - Walls are painted plaster and show signs of water infiltration and peeling. Original louvers seen in historic photographs were removed as part of the skylight wall reconstruction. These would have provided ventilation. Laylights missing.		2	EA
		Ceiling – Light	Temporary			
Room 114 – Women’s Bath Hall						
Critical	Poor	Additional Info	This room takes on a lot of steam from the spring below with lots of condensation on the ceiling and surfaces (mostly in the south bay). Steam appears to be gaining access through drains and holes through the floor.			
Serious	Poor	Floor	Terrazzo and square mosaic tile. Portions are raw concrete. Flooring transitions between material types and low basins where previous equipment and tubs were located create serious tripping hazards. Floor drains are scattered throughout and provide conduit for steam from crawlspace below into the space. Holes through the floor are dangerous.		750	SF
Minor	Poor	Wall – North	White glazed tiles in overall poor condition. Lots of staining, cracking, chips, and missing tiles. Water infiltration into this area has created issues with the bonding of tiles. Holes through wall for plumbing equipment.			SF
Minor	Poor	Wall – East	Similar to north wall.			SF
Minor	Poor	Wall – South	Similar to north wall. Large contemporary ventilation/duct holes through wall to men’s bath hall. Sections of missing tiles throughout. Ventilation chase in SW corner of room with old duct and missing and cracked tiles.			SF
Minor	Poor	Wall – West	Similar to north wall. Door opening 1/114 may have been altered/enlarged. All finishes			SF

			and doors missing at jambs.			
Minor	Poor	Wall West – Door	Contemporary exit door previously installed where there was a smaller window opening. Currently covered, so not able to evaluate door condition from interior.		1	EA
Minor	Poor	Wall – Base	White glazed tile – large sections are missing where demolition of stalls has occurred.			LF
Serious	Poor	Ceiling	Painted plastered concrete ceiling and beams. Overall peeling paint and plaster. Cracks in concrete and beams throughout.			SF
Minor	Poor	Ceiling – Lighting	Rusted light fixtures.			
Minor	Poor	Ceiling – Skylight	Skylight walls were previously re-framed and are not insulated. 2 wood braces prevent walls from spreading outward. Skylight was replaced in 2002. Does appear to take on water. Skylight does not appear to match historic pitch as witnessed in plaster along south wall. Original louvers seen in historic photographs were removed as part of the skylight wall reconstruction. These would have provided ventilation. Laylight missing.		1	EA
Minor	Fair	Equipment	Some piping and valves installed along north wall are original.			
Room 115 – Men’s Cool Room						
Minor	Fair	Floor	Terrazzo – two colors of gray (darker border). Cracked throughout. Patched hole in floor in SE corner near plumbing stack. Vent holes cut through floor throughout. Radiator pipes through floor.			SF
Minor	Fair	Wall – North	(West side) Painted plaster on masonry above tile. Cracks throughout and hole in wall to show pipe chase. Original sink centered in wall. Historic white glazed tile. (5) field missing. Cracks and anchors throughout. Light switch. May have some decorative painting above tile? (2) original door openings 3/115 and 4/115. Thermostat frame near Door 4/115. (East side) Painted plaster walls from floor to ceiling. Brass screw receptacle for bulb? Near base of wall by Door 2/115. Steam cabinet? Along north wall west of Door 2/115.			SF
Minor	Fair	Wall North – Door	Door 1/115: New trim and jambs. No marble plinths. No door. Door 2/115: Original door, trim, frame. Marble plinths painted to match walls. Door and hinges missing. Door 3/115: Side stops, interior trim, and marble plinths original. Appears that jambs and outer (hall) trim were previously replaced. Door and hinges are missing. Door 4/115: Frame, trim, marble plinths, and door are missing entirely.		4	EA

Minor	Fair	Wall – East	(West side) Painted plaster over masonry above historic white glazed tiles. Minor cracks and some plaster loss. (East side) Painted plaster over masonry entire wall. Hole through wall for ventilation duct.			
Minor	Good-east Poor-west	Wall – South	(West side) Painted plaster over masonry above. Cracked throughout and some plaster loss above center window. White glazed tiles – some cracked, dirty, (3) wood casement windows and trim. Plumbing and ventilation chase in SE corner of west side is mostly demolished with missing tile and plaster. Plumbing and ventilation chase in SW corner of west side has large hole in upper portion to expose chase and large opening where there was a cast iron vent grille that is now missing.			
Minor	Poor-west Good-east	Wall – West	(West side) Painted plaster over masonry above. Cracked throughout, rough texture, and some plaster loss. Evidence of multiple colors of paint. White glazed tiles. Very dirty but appear to be fairly intact. (East side) painted plaster over masonry from base to ceiling.			
Minor	Fair	Wall West – Door	Door 3/115: Original opening (marble plinths, and wood trim and jambs) – doors and hinges missing. Has original paint.			
Minor	Good-east Fair-west	Wall – Center Dividing Wall	Mostly removed previously circa 1915 to make this one space. Floor patched.			
Minor	Good	Wall – Base	(West side) Terrazzo – integral (East side) Terrazzo? (painted to match walls)			
Minor	Good-east Poor-west	Ceiling	(West side) Painted plastered concrete ceiling and beams. Plaster is delaminated in several places. Reinforcing is visible. Structural steel with plate installed along south wall to infill chase between floors with concrete. (East Side) Painted plastered concrete ceiling and beams.			
Minor	Poor	Ceiling – Lighting	Temporary			
Minor	N/A	Equipment	Sink on north wall, (2) radiators on south wall, tiled steam cabinet with metal (chrome?) lid.			
Room 116 – Massage						
Minor	Fair	Floor	Terrazzo (with darker border). Cracking throughout (some patched). Large hole in NW corner where duct coming through			
Serious	Poor	Wall – North	Painted plaster walls over fire brick above with diagonal cracking and plaster loss. White glazed tile wainscotting. Missing 36 field and 12 caps. Pipes through tile wall with valves. Large duct through wall near west side. (will need tiles to patch)			SF

			Outline and frame of previous thermostat on wall east of Door 1/116. Receptacle and light switches in wall.			
Minor	Poor	Wall North – Door	Door 1/116: Original door opening (jambs remaining) trim at west side missing. Doors and hinges missing. Marble plinth on west side missing.			SF
Minor	Fair	Wall – East	Painted plaster wall over masonry with some cracking, some loss, and rough areas and patches. Decorative paint exposed with stencil. Board attached to wall above wainscot. Can be removed. Historic white glazed tile wainscot with holes/anchors through it. Wainscot is dirty, with paint and residue.			SF
Minor	Poor	Wall – South	Painted plaster wall above. Historic white glazed tile with cap. Missing approx. 80 field tiles and 8 caps. Several are cracked due to settlement. Dirty, staining throughout. (3) historic casement wood windows with obscured glass in amber and clear. Plumbing chase in wall near east side of room exposed old pipes. Wall and tile wainscotting destroyed. SW chase demolished with roof drain visible.			SF
Minor	Poor	Wall – West	Painted plaster over wire mesh is cracked and in poor overall condition. White glazed tiles remain only on center and north sections of the wall. (3) cap pieces missing. Exposed brick is painted and shows patches at diagonal cracks and some open mortar joints. Arched wood window with casement windows below. Arch is amber glass, and windows are clear obscured glass.			SF
Minor	Fair	Wall – Base	Terrazzo (integral with border). Section missing in south wall at pipe chase. Section missing at west side of Door 1/116.			LF
Minor	Poor	Ceiling	Painted plastered concrete ceiling and beams. Plaster peeling and cracked in several locations. Beams cracked and delaminating in several locations. Structural steel supporting concrete infill at first bay along west wall in old chase, installed in 2002.			SF
Minor	Poor	Ceiling – Lighting	Temporary in center of ceiling.			
Minor	N/A	Equipment	Radiator centered on west wall. Likely with lead paint.		1	EA
Room 117 – Cloakroom						
N/A	N/A	Floor	Exposed concrete floor. Topping or original flooring has been previously removed.			

		Wall – North	<p>Painted plaster wall</p> <p>Build-in wood counter with hinged counter and gate below. Wood paneled. Oak cabinetry and oak trim at cased opening. Finish could be refreshed.</p> <p>Gate discussed with Lobby 109 above.</p> <p>Marble plinth block fell off wall at west side of counter cased opening.</p> <p>Marble base screwed to back side of oak paneling with Phillips screws does not seem original.</p> <p>Furred duct at west side of wall to serve Lobby – painted plaster.</p>			
Minor	Good	Wall North – Base	Integral concrete base with cove. Set approximately 1/2" above finish floor.			
Minor	Good	Wall – East	<p>Painted plaster wall. Security alarm panel installed.</p> <p>Receptacle and one blank plate. Door with partial-height sidelights.</p>			
Minor	Good	Wall East – Base	Integral concrete base with cove. Set approximately 1/2" above finish floor.			
Minor	Good	Wall East – Door	<p>Door with partial-height obscured glass sidelights:</p> <p>Replacement veneered wood flush stained door, 22-3/4" wide (veneer species not readily apparent – maybe pine).</p> <p>Door does not shut properly.</p> <p>Steel ball-tip hinges painted metallic gold. Brass door handle and backplate on both sides of the door. No lockset.</p> <p>Trim appears to be stained pine or similar (not oak) and older vintage. Has painted marble plinth blocks.</p> <p>Sidelights are obscured glass (appears to be contemporary and with new wood stops).</p>			
		Wall – South	Painted plaster wall and beam. Diagonal crack – approx. 8'		8	LF
Minor	Good	Wall South – Base	Integral concrete base with cove. Set approximately 1/2" above finish floor.			
Critical	Poor	Wall – West	<p>Painted plaster wall.</p> <p>An interior wood casement window is installed in the center of this wall that overlooks the sunporch. Age of window is unknown.</p> <p>Wood window is in-swing.</p> <p>South top latch is stuck and not operable.</p> <p>Hardware – brass plated ball-top hinges; brass-coated steel center lever latch with brass handle; brass top and bottom latches in south casement.</p> <p>Wires in non-rated junction box in wall covered with duct tape.</p>			
Minor	Good	Wall West – Base	Integral concrete base with cove. Set approximately 1/2" above finish floor.		1	EA

Minor	Good	Ceiling	Painted plaster and beam			
		Ceiling – Lighting	Temporary light in ceiling.			

Deficiency Ratings (Critical, Serious, Minor)

Condition Ratings (Good, Fair, Poor)

Maurice Assessment Checklist – Architectural Second Floor

Deficiency Rating	Condition Rating	Component – Exterior or Interior	Existing Condition	Reference	Qty	Unit
Room 200A – Hall						
Minor	Fair	Floor	The floor is a two-color terrazzo flooring. The border and cove base are a slightly darker gray matrix than the field terrazzo matrix. The aggregate is white. Two large cracks run north to south, and there are several patches of ferrous staining.		152	SF
Minor	Poor	Wall – North	Most of the north wall ceramic tile, plaster, and clay tile have been removed (19 LF of a partial wall).		19	LF
Minor	Fair	Wall North – Base	6" terrazzo cove base. Although most of the wall is missing, the terrazzo base remains. Wood framing is clamped into place to support the remaining framing and plaster.		21	LF
Minor	Fair	Wall North – Door	Door 2/202 is missing. The wood casing trim is in fair to poor condition. The wood trim has been painted, and the paint has deteriorated throughout. The plinth blocks are marble, and the west plinth block is missing.		1	EA
Minor	Fair	Wall – East	3"x6" ceramic tile wainscot extends roughly 5 feet off the finish floor. Ornamental bullnose cap at the top of the wainscot. Tile wainscot and cap are in fair condition with a few missing pieces on the north side of the wall (2 ornamental cap pieces and 2 - 3"x6" ceramic tiles). Above the wainscot, the wall is a smooth plaster finish. The plaster is in fair condition with hairline cracks and scratches. The ceiling has been removed, exposing the top portion of the clay tile wall.		50	SF
Minor	Fair	Wall East – Base	6" terrazzo cove base.		12	LF
Minor	Poor	Wall East – Door	Addressed under Room 202 – Massage		1	EA
Minor	Fair	Wall – South	The south wall has a 3"x6" ceramic tile wainscot that extends roughly 5 feet off the finish floor. There is an ornamental bullnose cap at the top of the wainscot. The tile wainscot and cap are in fair condition with a few missing and/or damaged pieces (4 ornamental cap pieces, 9 3"x6" ceramic tile). Above the wainscot, the wall is a smooth plaster finish. The plaster is in fair to poor condition, with hairline cracks and patches of missing plaster at the top of the wall and around the windows. The ceiling has been removed, exposing the top portion of the clay tile wall.			
Minor	Fair	Wall South – Base	6" terrazzo cove base.		15	LF

Minor	Fair	Wall South – Window	Window 215 – The apron, sill, and trim are in place. There are visible screws in the sill. The west trim was cut to accommodate the ornamental bullnose cap. Window 216 – The apron, sill, and trim are in place. There are visible screws in the sill.		2	EA
Minor	Fair	Wall – West	The west wall has a 3"x6" ceramic tile wainscot that extends roughly 5 feet off the finish floor. There is an ornamental bullnose cap at the top of the wainscot. The tile wainscot and cap are in fair condition with a few missing and/or damaged tiles (3 ornamental cap pieces and 3 3"x6" ceramic tiles). Above the wainscot is a smooth plaster finish on the wall. The plaster is in fair condition hairline cracks and scratches. The ceiling has been removed, exposing the top clay tile portion of the wall.			
Minor	Fair	Wall West – Base	The base is a 6" terrazzo cove base.		2	LF
Minor	Missing	Ceiling	The plaster ceiling has been removed, exposing the concrete deck.		152	SF
Room 200B– Hall						
Minor	Fair	Floor	The floor is 2-color terrazzo flooring. The border and cove base are a slightly darker gray matrix than the field terrazzo matrix. The aggregate is white. There are several minor cracks in the terrazzo.		102	SF
Minor	Fair to Poor	Wall – North	The north wall has a 3"x6" ceramic tile wainscot that extends roughly 5 feet off the finish floor. There is an ornamental bullnose cap at the top of the wainscot. The tile wainscot and cap are in fair condition with several areas of adhesive coating the tiles. Above the wainscot is a smooth plaster finish on the wall. The plaster is in fair to poor condition with hairline cracks. There is a section of missing plaster on the west side exposing a plumbing chase within the masonry wall. The ceiling has been removed, exposing the exterior masonry at the top of the wall.			
Minor	Fair to Poor	Wall North – Base	The base is a 6" terrazzo cove base and in fair to poor condition with green paint splattered.		11	LF
Minor	Fair	Wall – East	The north wall has a 3"x6" ceramic tile wainscot that extends roughly 5 feet off the finish floor. There is an ornamental bullnose cap at the top of the wainscot. The tile wainscot and cap are in fair condition. Above the wainscot is a smooth plaster finish on the wall. The plaster is in fair condition. The ceiling has been removed, exposing the clay block at the top of the wall.			
Minor	Fair	Wall East – Base	The base is a 6" terrazzo cove base in fair condition.		2	LF
Minor	Fair	Wall East – Door	Door is reviewed under Room 208.		1	EA
Minor	Fair	Wall – South	The north wall has a 3"x6" ceramic tile wainscot that extends roughly 5 feet off the finish floor. There is an ornamental bullnose cap at the top of the wainscot. The tile wainscot and cap are in fair condition.			

			Above the wainscot is a smooth plaster finish on the wall. The plaster is in fair condition. The ceiling has been removed, exposing the clay block at the top of the wall.			
Minor	Fair	Wall South – Base	The base is a 6" terrazzo cove base in fair condition.		12	LF
Minor	Fair	Wall South – Door	Door 1/209 is discussed under Room 209. Door 1/210 is missing. The wood casing trim is original and is in fair to poor condition with deterioration/rot at the base of the jambs.		2	EA
Minor	Fair to Poor	Wall – West	The east wall has a gypsum surround where modern door 1/217 has been installed. On either side of the door is a wall with a smooth plaster over a 3"x6" ceramic tile wainscot and bullnose cap. The plaster is in fair to poor condition around the door, with patches of material missing at the top and south side of the door (roughly 2 SF). There is a large quantity of damaged tiles around the door opening (+/-115 damaged and/or missing ceramic tiles).			
Minor	Fair	Wall West – Base	The base is a 6" terrazzo cove base in fair condition. At the gypsum infill wall, there is no base.		3	LF
Minor	Missing	Ceiling	The plaster ceiling has been removed, exposing the concrete deck.		102	SF
Room 201 – Massage						
Minor	Poor	Floor	The floor is gray terrazzo with several areas of deterioration exhibiting diagonal cracking and settlement in the northeast corner, another diagonal crack midway on the north wall, and a large crack extending across the room in the north-south direction that is located approximately 18" east of Door 1/201. The crack in the northeast corner is approximately ¼" in width with displacement from one side to the other. The crack extends along both the north and the east walls in alignment with the border. The border runs around the full perimeter at approximately 7" in width. It utilizes a slightly darker gray matrix than the field color and has a white aggregate that matches the field terrazzo. There is a floor penetration at the north wall where the non-original electrical conduit extends through the floor. At the northeast corner, a PVC drainpipe is recessed in a channel in the brick wall and penetrates the floor. The penetration in the terrazzo flooring extends beyond the wall and into the floor border.		190	SF
Minor	Poor	Wall - North	The north wall is comprised of smooth plaster and a wainscot of cementitious parge coating with a simulated 3"x6" tile pattern and bullnose cap. The plaster has several areas of hairline cracking. On the east side, a section of the plaster has been removed and the PVC drainpipe exposed (approximately 12-15" wide the full height of the wall). There are new electrical device junction boxes and a disconnect switch installed on the west side of the wall in		14.5	LF

			coordination with the mechanical equipment installed within the opening at Window 201. Shadow lines of where the original partitions were anchored at the top of the wainscot are present in two locations. The finish on the plaster is in poor to failed condition.			
Minor	Fair to Poor	Wall North - Base	The terrazzo floor extends up into a terrazzo cove base with matching matrix and aggregate colors as the border. At the east end of the room, where the plaster and wainscot have been removed, there is a 12" section of the base missing and damaged.			
Minor	Fair to Poor	Wall North - Window	Window 200 – The eastern window 200 appears to be original and is in fair condition. Both windows still retain the sill and apron trim. There is minor damage at the interior frame on the east side of window 200, 4" in length just below the upper hinge. Window 201 - There are two window openings at the north wall. The western most window (201) sash has been removed and mechanical equipment installed within the opening. The windows still retain the sill and apron trim.		2	EA
Minor	Poor	Wall - East	The east wall is comprised of smooth plaster and a wainscot of cementitious parge coating with a simulated 3"x6" tile pattern and bullnose cap. The plaster has several areas of hairline cracking. The wainscot cap is in poor condition with delamination at the north side of window 253. The cap between windows 253 and 252 is in poor condition and appears to have been replaced/repared previously with the detail not replicated to match the existing in profile. To the south of window 252, the wainscot cap is missing. Significant cracking extends from the ceiling down into the plaster on the wall. There are fastener holes and small damaged areas of the wainscot where it is assumed a mirror was installed above the sink at the east wall, south side. There is a small area of original paint finish extant under the pedestal sink, beyond this, the paint finish has failed and is missing.		13	LF
Minor	Fair to Poor	Wall East - Base	The terrazzo floor extends up into a terrazzo cove base with matching matrix and aggregate colors as the border.		13	LF
Minor	Fair	Wall East - Plumbing	There is an original pedestal sink located at the south side of the east wall. The faucets and exposed plumbing appear to be original.			
Minor	Fair	Wall East - Window	There are two window openings in the east wall. The windows at both openings appear original and are in fair condition. Both windows still retain the sill and apron trim. The windows exhibit minor wood decay at the lower sections of the frame. The paint finish appears to be a single coat with brush marks visible and the underlying primer visible.		2	EA
Minor	Poor	Wall - South	The south wall is comprised of smooth plaster at the upper wall and		14.5	LF

			a wainscot of cementitious parge coating with simulated 3"x6" tile pattern and bullnose cap at the lower wall. The plaster and wainscot have several areas of hairline cracking and deterioration. The wainscot cap is in fair condition with two areas of missing sections to the east and west of door 1/201 (2 linear feet). Significant cracking extends from the east side of the smooth plaster at the top of the wainscot and across the full wall in a diagonal pattern running below the ceiling beams and then extending up to the ceiling across the last bay on the west. Shadows of where the original partitions were anchored at the top of the wainscot are present in two locations. The finish on the plaster is in poor to fair condition. There are three sections of the wainscot where the material has been patched with a non-original cementitious patch. At the west upper wall, there is a cutout in the wall for ductwork which is no longer extant. The opening is approximately 15" wide x 12" high.			
Minor	Fair	Wall South - Base	The terrazzo floor extends up into a terrazzo cove base with matching matrix and aggregate colors as the border. The base is in fair condition. At the door frame, there are marble plinths at the base of the wood frame. The west side plinth is missing.		11.5	LF
Minor	Fair	Wall South - Trim	The wood frame at Door 1/102 is in fair condition with minor remnants of paint finish present. The paint appears to have matched the plaster wall finish in color. Similar conditions are present on the Hall side of the door, with the marble plinth missing on the west side. The hinges and latch cover plate are still extant.			
Minor	N/A	Wall South - Door	The door 1/201 has been removed.		1	EA
Minor	Fair	Wall - West	The west wall is comprised of smooth plaster at the upper wall and a wainscot of cementitious parge coating with simulated 3"x6" tile pattern and bullnose cap at the lower wall. The plaster and wainscot have several areas of hairline cracking and deterioration. There are several areas of the wainscot cap that are missing, roughly 50% of the linear footage of the wall. Significant cracking extends from the south side of the smooth plaster at the top of the wall and down across the wall in a diagonal pattern to the south side of the door frame. The wall has remnants of the paint finish in a highly deteriorated or missing state.		13	LF
Minor	Fair	Wall West - Base	The terrazzo floor extends up into a terrazzo cove base with matching matrix and aggregate colors as the border. The base is in fair condition. At the door frame, there are marble plinths at the base of the wood frame.		10	LF
Minor	Fair	Wall West - Trim	The wood frame at Door 2/102 is in fair condition with minor remnants of paint finish present. The paint appears to have matched			

			the plaster wall finish in color. Similar conditions are present on the Women’s Dressing Room 203 side of the door, with the wood frame with deteriorated finish and marble plinths. At the top of the frame on the Room 203 side, there is damage where a partition was previously attached and a 2 ½” diameter cut out of the frame on the south side.			
Minor	Fair	Ceiling	The ceiling is a smooth plaster finish with patches and failed paint finish. There are several areas where the ceiling has a skim coat and rough texture from previous plaster patching. Cracking is extant in a diagonal pattern at the northeast corner with non-original plaster patching surrounding the crack on both sides. At the west ceiling beam, there is a surface mounted electrical conduit running north-south across the room. There is a recessed junction box in the center of the room which appears to be original, no wiring or cover plate are present. It is assumed this housed the power feed for a light fixture.		190	SF
Room 202 – Massage						
Minor	Fair	Floor	2-color terrazzo flooring. The border and cove base are a slightly darker gray matrix than the field terrazzo matrix. The aggregate is white. There are several minor cracks in the southeast corner. Portions of the floor could not be observed due to historic plumbing fixtures being stored within the space.		107	SF
Minor	Poor	Wall – North	The wall is primarily smooth plaster at the upper wall over a roughly 6-foot-tall wainscot of cementitious parge coating with a simulated 3”x6” tile pattern and a bullnosed cap. The transition between the wall plaster and the ceiling is rounded. Both the upper plaster and lower wainscot are in poor condition with significant cracking and missing material. At the top of the wall, there is a large horizontal/diagonal crack (roughly 1/4-inch gap). Within the wainscot, there are 9 abandoned anchors.		104.5	SF
Minor	Poor	Wall North – Base	The base is a 6” terrazzo cove base and in poor condition coated in a black adhesive.		9.5	LF
Minor	Poor	Wall – East	The east wall is primarily smooth plaster at the upper wall over a roughly 6-foot-tall wainscot of cementitious parge coating with a simulated 3”x6” tile pattern and a bullnosed cap. The transition between the wall plaster and the ceiling is rounded. Both the upper plaster and lower wainscot are in poor condition with large patches of missing plaster on the north and south side of the wall. The majority of the bullnosed cap is missing.		126.5	SF
Minor	Poor	Wall East – Base	The base is a 6” terrazzo cove base and in poor condition with splatters of green paint and adhesive throughout.		11.5	LF

Minor	Fair	Wall East – Window	Window 212 – The apron, sill, and trim are in place and are in fair condition. Window 213 – The sill and trim are in place and in fair condition. The apron is missing.		2	EA
Minor	Poor	Wall – South	The south wall is primarily smooth plaster at the upper wall over a roughly 6-foot-tall wainscot of cementitious parge coating with a simulated 3"x6" tile pattern and a bullnosed cap. The transition between the wall plaster and the ceiling is rounded. Both the upper plaster and lower wainscot are in poor condition with large patches of missing paster and wainscoting on the east side of the wall exposing a plumbing chase and exterior masonry. The majority of the bullnosed cap is missing. Installed along the south wall are a radiator on the west and a large hole on the east that leads to an interstitial space.		104.5	SF
Minor	Poor	Wall South – Base	The base is a 6" terrazzo cove base in poor condition with splatters of green paint and adhesive throughout.		9.5	LF
Minor	Fair	Wall South – Window	Window 214 – The sill, apron, and trim are in place and are in fair condition. The west trim has several large gouges.		1	EA
Minor	Poor	Wall – West	The west wall is primarily smooth plaster at the upper wall over a roughly 6-foot-tall wainscot of cementitious parge coating with a simulated 3"x6" tile pattern and a bullnosed cap. The transition between the wall plaster and the ceiling is rounded. Both the upper plaster and lower wainscot are in poor condition with significant cracking and missing material. Within the wainscot there are 7 abandoned anchors, 1 abandoned light switch (missing the device), and 1 abandoned outlet (missing the device). There are two large duct openings cut into the wall (one at the top and one at the bottom) that are roughly 12-inches by 16"es.		93.5	SF
Minor	Poor	Wall West – Base	The base is a 6" terrazzo cove base and in poor condition coated in a black adhesive.		8.5	LF
Minor	Fair to Poor	Wall West – Door	Door 1/202 is missing. The wood casing trim is in fair to poor condition. The wood trim has been painted and the paint is deteriorated throughout. The plinth blocks are marble, and the south (hall) plinth block is missing.		1	EA
Minor	Poor	Ceiling	The ceiling is plaster directly applied to the underside of the concrete deck. The plaster is in fair to poor condition with several large cracks throughout the ceiling.		107	SF
Room 203 – Women's Dressing Room						
Minor	Fair to Poor	Floor	The floor is terrazzo in keeping with Massage Room 201, with a gray matrix and white aggregate for the field and a darker gray matrix for the border approximately 7" in width. There are three major cracks across the floor and a diagonal one in the northwest corner. Overall,		578	SF

			the floor is in fair condition with areas of minor ferrous staining and shadows where partition bases were previously located.			
Minor	Poor	Wall - North	The wall is primarily smooth plaster at the upper wall over a wainscot of cementitious parge coating with a simulated 3"x6" tile pattern and a bullnosed cap. There are shadows on the wainscot where previous partitions were anchored (Qty 14 locations – 7 at the top of the wainscot and 7 at the bottom). The pattern is roughly 4" x 4". There are shadows along the wall where it is assumed mirrors were previously located (Qty 7 locations). Rough 1" diameter wood blocking is recessed in the wall where the mirrors were anchored. At the fourth location from the west, there are wood frame remnants. There was a chase removed in the northwest corner with exposed brick with areas of structural cracking repairs visible. There are approximately 6 linear feet of missing wainscot bullnose cap. There is a plumbing chase located between windows 202 and 203, approximately 1'-0" east of window 203. The chase is approximately 1'-6" wide by 10'-0" high. Also, between windows 202 and 203 is a wall-mounted radiator located above the wainscot. There is a crack in the plaster east of window 202 at the upper right-hand corner of the room.		346	SF
Minor	Fair	Wall North - Base	The terrazzo floor extends up into a terrazzo cove base with matching matrix and aggregate colors as the border. The base is in fair condition. At the door frame, there are marble plinths at the base of the wood frame.		31.5	LF
Minor	Fair to Poor	Wall North - Windows	<p>Window 202 – The apron/nosing is missing. The sill has a section of damaged wood. Minor wood damage is present at the lower 3" on the west jamb. The sash only has a single topcoat of paint.</p> <p>Window 203 – This wood sill has significant damage. There is no apron or nosing. There is minor damage at the interior wood frame stop/trim. There is paint damage at the frame, west side. The sash only has a single topcoat of paint. The window sash has a sag of approximately 1/2" at the west side.</p> <p>Window 204 – The sill, apron and nosing are missing. Where the materials were removed, a cementitious patched was used to infill the gap. The sash is misaligned with sagging at the west side. The lower 14" on the west side of the vertical frame has deterioration and wood decay with paint finish damage.</p> <p>Window 205 – There is paint finish damage at all four corners of the sash. There is wood rot and potential termite damage at the west</p>		4	EA

			lower sash and frame – 2” in height has visible damage. There is paint finish on the glazing.			
Minor	Poor	Wall North - Plumbing	The wall-hung radiator is in poor condition with an elevated level of corrosion and paint finish deterioration.			
Minor	Poor	Wall - East	Smooth plaster upper wall with a simulated wainscot of cementitious parge coating with 3”x6” tile pattern and bullnose cap. (2 feet of cap is missing). There is significant diagonal cracking present from the upper corners of the door frame at the north and vertical cracking with displacement at the south frame on the left (north) side. There is a shadow of a partition anchor at the center of the wall. The south edge of the plaster finish at the wall is missing due to the removal of a wall chase.		170.5	SF
Minor	Fair	Wall East - Base	The terrazzo floor extends up into a terrazzo cove base with matching matrix and aggregate colors as the border. The base is in fair condition with deteriorated painted finish.		15.5	LF
Minor	Fair to Poor	Wall East - Trim	<p>2/201 - The wood door frame is in fair to poor condition with minor warping and cupping at the north facing trim and splitting wood material at the south facing trim at the upper 15” of the trim. There is a circular cutout at the south facing trim 2 ½” diameter, approximately 1’-0” down from the head of the door. A large majority of the paint trim has deteriorated. The base of the door trim is marble plinths on both sides – 3 ¾” x 6” x 1” thick gray veined stone. The paint finish is failed and missing in most areas.</p> <p>3/203 – The wood trim at this door on the south side of the east wall is in poor condition. The trim on the northside of the frame is delaminated with loose plaster debris behind. There is a 2 ½” diameter circular cutout in the vertical facing trim on the right side approximately 1’-0” down from the head of the door. The south facing which previously abutted a chase wall (non-extant) is in fair condition. There is evidence of water damage and staining at the base of the door frame. At the base of the facing trim there, are gray marble plinths, and the plinth on the north side is missing. On the Hall 200A side, both gray marble plinths are missing and the wood facing trim on the northside is displaced from the wall with plaster debris behind. Door hardware remnants are extant with hinges. The paint finish failed with bare wood exposed on most of the frame and trim.</p>			
Minor	Poor	Wall East - Doors	2/201 - The door is a flush wood door with the outer veneer delaminating. There is no knob extant. The historic latch and hinges are present. The paint finish on the door has failed and the bare		2	EA

			wood is exposed. 3/203 – This door is non-extant.			
Minor	Poor	Wall - South	Approximately 17'-0" of the south wall has been removed where a plumbing / mechanical chase was partially removed. The remainder of the extant wall is smooth plaster at the upper wall with a wainscot of cementitious parge coating having a simulated 3"x6" tile pattern and painted finish with bullnose cap. The paint finish has failed at a majority of the wall. Approximately 50% of the wainscot cap of the extant wall finishes is missing (roughly 5 feet). Adjacent to the door leading into Women's Elevator Hall 216, on the east side of the opening, are two recessed electrical junction boxes with significant deterioration and corrosion. One is placed high and is assumed to have been for a light switch and the second is aligned directly under the upper device and assumed to be an outlet. No devices or cover plates are extant.		346	SF
Minor	Fair	Wall South - Base	The terrazzo floor extends up into a terrazzo cove base with matching matrix and aggregate colors as the border. The base is in fair to poor condition. The base is continuous the full length of the wall, even where the plaster and framing were removed at the chase. Minor vertical cracking is present across the base length.		31.5	LF
Minor	Fair to Poor	Wall South - Trim	Trim at door 1/203 is present and in fair condition. The painted finish has failed, and the bare wood is exposed. This is a deep framed opening leading to Women's Elevator Hall 216. At the base of the facing trim, there are gray marble plinths. The plinth is extant at the west side and missing at the east. The trim at the head of the door is detached.			
Minor	Poor	Wall South - Door	The door 1/203 is in poor condition with veneer failure and paint finish failure. The hardware on the door is still extant. There is a spring hinge mounted on the hall side which functions as self-closing hardware for the door. The knob handle and escutcheon are present on both sides of the door.		1	EA
Minor	Fair to Poor	Wall – West	The wall is comprised of an upper smooth plaster wall that transitions with a curved cove to an overhead soffit at the ceiling plaster. The soffit has been removed with unfinished, rough edges remaining. There is approximately 6 SF of missing plaster on the north side of the wall. The lower section of the wall is covered with a wainscot of cementitious coating that simulates a 3"x6" tile with bullnosed cap. The wainscot is in fair to poor condition with failed paint finish. Roughly 50% (6 LF) of the bullnose cap is missing.		170.5	SF

			<p>A plumbing chase was previously removed from the northwest corner of the room (approximately 1'-0" in width). The underlying brick wall framing remains exposed. The opening at 2/203 leading into Cool Room 204 is an arched opening with a plaster casing. At the surround of the opening, the plaster has been patched with a non-original material, using plaster in lieu of the cementitious parge coating. Adjacent to the north side of the opening is an extant floor-mounted radiator with pipe penetrations through the wall into the Cool Room 204. Non-original plaster patching is present at the pipe penetrations. There is a small missing section of plaster above the pipe penetrations at a roughly 42" height (1/2 SF). There is a shadow in the finishes at the north side of the wall where it is assumed a mirror was previously located. Adjacent to the south side of the mirror location, there is a 4x4" shadow where a partition anchor was previously located.</p>			
Minor	Fair	Wall West - Base	<p>The terrazzo floor extends up into a terrazzo cove base with matching matrix and aggregate colors as the border. The base is in fair condition. The base is continuous the full length of the wall. Minor damage is present at either side of the arched opening and has been patched with a non-original epoxy.</p>		15.5	LF
Minor	Poor	Ceiling	<p>The ceiling is a mixture of smooth plaster and exposed concrete framing at the structural deck above where there have been soffits removed. Overall, the plaster is in poor condition with many areas of cracking and non-original patching and skim coating. There are areas with improper and incompatible patching. A soffit at the west end of the ceiling is approximately 30" in width x 24" in height. The adjacent plaster ceiling at the east edge of this area is damaged with missing sections. Where the concrete is exposed and there are pipe penetrations, there are minor spalls at the concrete. There is a large (wide) soffit at the center of the room with areas of missing plaster where pipes were removed or altered, and sections of improper patching (30" wide x 10'-0" in length). In the ceiling bay, aligned between windows 202 and 203, there is a crack that runs the full length of the ceiling. In this bay there are two recessed electrical junction boxes where lighting fixtures were assumed to have been installed originally. No wiring, devices, or cover plates are extant at these locations. In the next bay to the west, there is a large crack running down the center of the bay. Two bays west, there are two additional electrical recessed junction boxes with no wiring, devices, or cover plates are extant at these locations. In this bay where a pipe penetrates the plaster, there is 1 SF of plaster damaged.</p>		578	SF

Room 204 – Cool Room					
Minor	Fair to Poor	Floor	Terrazzo flooring with light gray matrix and white aggregate. The terrazzo is in fair condition overall. In the western half of the room, there are adhesive and concrete slurry drippings on the floor. Minor ferrous metal staining is present. There is diagonal cracking at both the northwest and northeast corners of the room. At the southern edge of the space where the room would have previously been divided from Men's Dressing Room 205, there are 1" diameter divots in the floor at roughly 15" on center and ferrous metal staining along this line. There is a shadow present of approximately 2" in width along the line as well. There is a radiator present below Window 206 with floor pipe penetrations and a pipe that extends to and through the east wall.		418 SF
Minor	Poor	Wall - North	50% of the plaster along this wall is missing or damaged. The wall is comprised of smooth plaster at the upper wall and a wainscot of cementitious parge coating simulating a 3"x6" tile with a bullnose cap. The wainscot is 79 3/4" high above finished floor. Diagonal cracking is present in the smooth plaster with several deteriorated areas that have incompatible patching. The cap is missing for the full length of the wall. At the west end of the wall, a plumbing / mechanical chase has been removed and the underlying brick left exposed. Areas of structural settlement cracking have been repaired and patched. Partial areas of the parge coating with simulated tile pattern remain at the lower section of the wall. At the center window, there are surface mounted electrical conduit that extend to the east side of the room and a surface mounted shut-off switch window opening 207. Plaster is missing from the west side and below Window 206. The brick is exposed, and structural crack repairs have been completed.		242 SF
Minor	Fair	Wall North - Base	The terrazzo floor extends up into a terrazzo cove base with matching matrix and aggregate colors as the border. The base is in fair condition. The base is continuous the full length of the wall. Minor damage is present at the west side of the room where the chase has been removed and vertical cracking is present across the base.		22 LF
Minor	Poor	Wall North - Windows	Window 208 - The window located to the western side of the room is sagging at the west side of the sill. Due to this movement, the window sash cannot be closed fully. Moisture damage and decay are present at the wood trim with the sill pulling away from the frame on the west side. The frame along the west side is warped and bowed with minor deterioration. The apron and nosing are in fair condition		3 EA

			<p>Window 207 - The center window has had the sash and frame removed and mechanical equipment installed. The opening size has been altered with blocking installed at the lower 8-10".</p> <p>Window 206 - The eastern window has damage to the painted wood apron at the west side (4" in length). The sill is bowed down at the center of the window. The interior frame stop at the head of the window is missing.</p> <p>The paint finish at all windows is in poor condition.</p>			
Minor	Fair to Poor	Wall - East	<p>Smooth plaster is present at the upper wall above a wainscot of cementitious parge coating with a simulated tile pattern of 3"x6" and a bullnose cap at the top of the wainscot. The wainscot cap is missing. At the northern section of the upper wall, there is significant diagonal cracking present at the northern 4'-0". Hairline cracking is prevalent across the remainder of the wall. At the wainscot, there are 4 x 4" shadows where previous partitions were anchored at both the top and bottom of the wall. Additionally at the north section, there is blue staining present. There are areas of hairline cracking and minor surface spall. The paint finish at the plaster and wainscot parge coat is significantly deteriorated and in failed condition. At the north side of the arched opening into Women's Dressing 203, there is a non-original patch approximately 2'-0" in width. This patching is also present at the south side of the opening approximately 4" in width. Wall thickness is approximately 15" in depth. To the south side of the arched opening, there is significant hairline cracking present. At the south demarcation line of where Room 204 transitions to Room 205, there is a section of plaster missing where the divider for the spaces was previously located. The section of missing plaster is approximately 2'-0" wide for a height of 6'-0". The under lying brick structure is exposed.</p>		627	SF
Minor	Fair	Wall East - Base	<p>The terrazzo floor extends up into a terrazzo cove base with matching matrix and aggregate colors as the border. The base is in fair condition. The base is continuous the full length of the wall. Minor damage is present at either side of the arched opening. Vertical cracking is present across the base.</p>		16 LF	
Minor	Poor	Wall - South	<p>There is no true wall along the south edge of the room. At the western side, there is a small extension bumped into the building approximately 4'-0" in width and an additional 1'-0" where a plumbing / mechanical chase was removed. A grill or screen appears to have originally divided the rest of the space from Room 205. The upper section of the west perimeter portion of wall is exposed brick where a</p>			

			soffit was removed at the ceiling, smooth plaster at the upper section of the wall and a wainscot with cementitious parge coating simulated to look like tile. Both the smooth plaster and wainscot have significant cracking, deterioration, areas of delamination, and improper patching. The wainscot cap is missing.			
Minor	Fair	Wall South - Base	The terrazzo floor extends up into a terrazzo cove base with matching matrix and aggregate colors as the border. The base is in fair condition. Minor vertical cracking is present across the base.			
Minor	Poor	Wall - West	The west wall is primarily exposed brick at the perimeter masonry bearing wall. There are several areas with structural settlement cracking that appear to have been patched. In front of this wall to the east, the plumbing chase plaster wall has been removed in its entirety with only the base extant. Cast iron vertical 1 ½ - inch diameter piping is visible between windows 210 and 211. At the north corner, 6" diameter PVC drain piping is exposed at the northwest corner.		209	SQ
Minor	Fair	Wall West - Base	The terrazzo floor extends up into a terrazzo cove base in alignment with where the original plumbing chase was located. The base matrix and aggregate colors match the border at the floor. The base has damage at the south 24" of the wall and is missing at the northern 36" of the north end. Minor vertical cracking is present across the base.		19	LF
Minor	Fair to Poor	Wall West - Windows	Window 209 – The sill, apron/nosing is missing. Wood deterioration from termite damage is present. The interior wood frame trim / stops are missing. The frame is in fair to poor condition due to moisture and termite damage. The paint finish is in poor condition. Window 210 – The sill, apron/nosing is missing. Wood deterioration from termite damage is present. The interior wood frame trim/stops are missing. The frame is in fair to poor condition due to moisture and termite damage. The paint finish is in poor condition. Window 211 – The sill, apron/nosing is missing. Wood deterioration from termite damage is present. The interior wood frame trim/stops are missing. The frame is in fair to poor condition due to moisture and termite damage. The paint finish is in poor condition.		3	EA
Minor	Fair to Poor	Ceiling	The ceiling is smooth plaster with significant hairline and diagonal cracking. There are two recessed junction boxes in the ceiling that have no wiring, devices, or cover plates. It is assumed light fixtures were originally installed in these locations. At the western side of the room, the concrete structural decking is exposed where the plumbing		418	SF

			chase was removed. At the southern end of the room where the grill partition was removed, the plaster soffit is missing leaving the structural concrete deck exposed. Where there are beams exposed at the ceiling, the plaster finish has gouges and cracking along the beams. There is a duct penetration at the southeast corner of the space and a pipe chase penetration through the ceiling at the northwest corner.			
Room 205 – Men’s Dressing Room						
Minor	Fair to Poor	Floor	Terrazzo flooring with light gray matrix and white aggregate. The terrazzo is in fair condition overall. There is ferrous metal and other staining, areas with concrete slurry drippings and green paint splatter on the floor, and shadows of 4x4 patterns with fastener holes located where partitions were previously placed (Qty 26 locations with 13 having fastener holes at the 4 corners). There are two locations where radiators were originally present and have been removed, with only the floor pipe penetrations still extant. There are several sections where the floor is cracked. Diagonal cracking is present at the southeast corner. One location has a triangular area and a crack extending north approximately 1” in width located just west of the door to the Men’s Elevator Hall 217. This section of the floor has been infilled with a non-original matrix and aggregate more in keeping with the colors of the border terrazzo.		1395	SF
Minor	Poor	Wall - North	Note, there is no wall at the northern edge of this space where it transitions to Room 204. There is a section at the south end of the room where the perimeter west wall steps into the space. At this location, typical wall conditions are present matching the remainder of the Second Floor with smooth plaster at the upper wall and a wainscot of cementitious parging with a simulated tile pattern and bullnose cap. The bullnose cap has areas of deterioration and 16” are missing. There are areas of significant cracking, deterioration, and incompatible patching. Minor surface deterioration is present at the plaster. Other than a few minor remnants, the paint finish is missing.			
Minor	Fair	Wall North - Base	The terrazzo floor extends up into a terrazzo cove base with matching matrix and aggregate colors as the border. The base is in fair condition. Minor vertical cracking is present across the base.			
Minor	Poor	Wall - East	North Section - The east elevation has smooth plaster at the upper wall and a wainscot of cementitious parging with a simulated tile pattern and bullnose cap. There is significant hairline cracking in the plaster above the wainscot. Remnants of surface-mounted anchors where partitions were originally located are present with a 4-inch by		902	SF

			<p>4-inch pattern at the top and bottom of the wainscot (Qty 10 locations north of the elevator alcove). At the corner where the wall insets the center alcove, the partitions were anchored at the corner and there is damage to the plaster in these locations. There is 30-inches of missing wainscot cap and 1 SF of deteriorated and missing material at the wainscot.</p> <p>Center Alcove Section – Comprised of a smooth plaster upper wall and cementitious wainscot with simulated tile pattern and bullnose cap. The plaster has significant areas of cracking and deterioration. The wainscot cap is missing in a few sections (Total 2 feet missing). There are shadows where the original partition anchors are in a 4-inch by 4-inch pattern at the top and bottom of the wainscot (Qty 8 locations at the north and south walls of the alcove). Where the new elevator was installed, there is non-original drywall infill that is unfinished and has areas exhibiting water damage. To the north of this infill, there is a 6"es section of plaster and wainscot that is missing (10 SF). On the north side of the alcove, there is one SF of missing and delaminated plaster in the upper smooth plaster portion of the wall adjacent to the ceiling. At the south wall of the alcove, there are 8 locations with exposed anchors/fasteners. At the south wall of the alcove, there is missing and damaged plaster (2 SF). There are remnants of the paint finish present, but most of the finish is missing.</p> <p>South Section – The wall has smooth plaster at the upper wall and a wainscot of cementitious parging with a simulated tile pattern and bullnose cap. The bullnose cap has missing sections (6 feet). There is significant diagonal cracking at the south end of the wall adjacent to the ceiling at the smooth plaster upper wall. There are shadows where the original partition anchors are in a 4-inch by 4-inch pattern at the top and bottom of the wainscot (Qty 20 locations upper and lower wainscot). There is missing plaster at the soffit build-out that is adjacent to the door into Men’s Elevator Hall 217. There is spalled plaster at the north side of the second beam from the south (3 SF). South of door 2/217, there is a 4-inch by 4-inch recessed junction box at 42" above the finished floor and a 2-inch by 4-inch recessed junction box, both with an elevated level of corrosion present and no devices or cover plates.</p>			
Minor	Fair	Wall East - Base	The terrazzo floor extends up into a terrazzo cove base. The base matrix and aggregate colors match the border at the floor. The base has minor damage and a small area of missing material at the		82	LF

			elevator alcove where the base is covered with drywall infill. Minor vertical cracking is present across the base.			
Minor	Poor	Wall East - Trim	There is existing wood frame and trim in the opening at door 2/217. The wood facing trim is in poor condition with sections of the trim missing at the north side of the opening. The frame rests on gray marble plinths, still extant. The paint finish is in extremely poor and failing condition with significant delamination occurring. The hinges have been removed, but the fasteners are still extant.			
Minor	Missing	Wall East - Door	Missing		1	EA
Minor	Poor	Wall South	The wall has smooth plaster at the upper wall and a wainscot of cementitious parging with a simulated tile pattern and bullnose cap. There are sections of the bullnose cap missing (8 feet). There is significant vertical cracking at the wainscot, specifically under the window openings. At the east side of the wall, there is a large area of plaster missing and exposed piping / brick masonry visible (10 SF). There are two locations with shadows of 4-inch by 4-inch anchor points from previous partitions. At the west side of the wall there is a large section of plaster missing where the brick was exposed for completing structural settlement crack repairs. At the west side, there was a plumbing mechanical chase removed, assumed to assist with structural repairs. There is horizontal cracking in the smooth plaster at the head of the windows that run across most of the south wall. The paint finishes are significantly deteriorated and missing.		242	SF
Minor		Wall South - Base	The terrazzo floor extends up into a terrazzo cove base. The base matrix and aggregate colors match the border at the floor. The base has minor damage and a small area of missing material at the west side where the chase wall was removed. Minor vertical cracking is present across the base.		22	LF
Minor	Fair to Poor	Wall South - Windows	Window 225 – The sill, apron/nosing is missing. Wood deterioration is present from potential termite damage. The interior wood frame trim / stops are in fair condition with minor deterioration at the west side of the opening. The paint finish is in fair condition. Window 226 – The sill, apron/nosing is extant at this opening, but the remainder of the sash and frame was removed. The opening has been infilled with mechanical louver. Window 227 – The sill, apron/nosing is missing. Wood deterioration is present from potential termite damage. The bottom rail of the sash is in poor condition. The interior wood frame trim/stops are missing. The frame is in fair to poor condition due to moisture and termite		3	EA

			damage. The paint finish is in fair condition.			
Minor	Poor	Wall - West	<p>South Section – The wall has smooth plaster at the upper wall and a wainscot of cementitious parging with a simulated tile pattern and bullnose cap. The wainscot in this space is 77 ¾” high above finished floor. There are sections of the bullnose cap missing (3 feet). 50-60% of this wall section has had the plaster demolished where a chase was removed. Where the plaster has been removed, the brick bearing wall is exposed and has several structural cracks visible which have been repaired. The remaining plaster is significantly deteriorated with both vertical and horizontal cracking. At the center of this wall section, there is a secondary layer of plaster finish coat installed over the cementitious parge coating in a simulated tile pattern. The plaster surface has significant deterioration with pitting and missing material. There are six locations with shadows of 4-inch by 4-inch anchor points from previous partitions. Partial plaster surrounds are present at windows 223 and 224.</p> <p>Center Alcove Section – The wall has smooth plaster at the upper wall and a wainscot of cementitious parging with a simulated tile pattern and bullnose cap. There are several sections of the bullnose cap that are damaged or missing, specifically between the window openings and where the plaster was removed for repairs. Roughly 30% of the plaster at the upper wall between windows and on either side is cracked, damaged, or missing. At the southern end of this section of wall, there is a pipe chase that has been exposed and the plaster removed (30” wide x 10’ tall) and symmetrical to this at the northern section of this wall is an additional pipe chase with the plaster removed to expose the underlying pipe chase (30” wide x 10’ tall). Pipes extend out of the wall and are exposed as they run over the heads of windows and feed up to the Third Floor.</p> <p>North Section – The north section of the west wall is captured in Cool Room 204.</p>		759	SF
Minor		Wall West - Base	The terrazzo floor extends up into a terrazzo cove base. The base matrix and aggregate colors match the border at the floor. The base has minor damage and an area of missing material at the south side where the chase wall was removed (3 feet). Minor vertical cracking is present across the base. At the far north end of the space, also		69	LF

			where a chase was removed, there are roughly 2 feet of damaged terrazzo base.			
Minor		Wall West - Windows	<p>Window 224 – The frames and sashes are in poor condition. There is no sill, apron / nosing present at this location. There are no interior stops/trim present at the interior of the frame. Wood deterioration is present from potential termite damage. The sashes are open and sagging from the hinges. The paint finish is in fair condition.</p> <p>Window 223 – The frames and sashes are in poor condition. There is no sill, apron / nosing present at this location. There are no interior stops/trim present at the interior of the frame. Wood deterioration is present from potential termite damage. The sashes are open and sagging from the hinges. The paint finish is in fair condition.</p> <p>Window 222 – The frames and sashes are in poor condition. There is no sill, apron / nosing present at this location. There are no interior stops/trim present at the interior of the frame. Wood deterioration is present from potential termite damage. The sashes are open and sagging from the hinges. The paint finish is in fair condition. There is 4” of missing and damage material at the upper right-hand side of the frame.</p> <p>Window 221 – The sill, apron, and nosing are in fair condition. The frame is in fair condition with minor damage at the lower 6” of the vertical interior frame trim on the south side of the opening.</p> <p>Window 220 – Between window 221 and 220, the plaster finish is missing. The apron, sill, and nosing have damage due to termites along the southern vertical and horizontal 8-inches of the opening. The interior sop/trim at the south side and head of the window opening are missing.</p> <p>Window 219 – The window sash is bowed at the center, The sill, apron, and nosing are bowed down at the center approximately 1-inch. The frame appears to be in fair condition with gouges present at the lower southern edge. The paint is deteriorated at the lower sash.</p> <p>Window 218 – Wall plaster is missing between windows 219 and 218. At the lower 4-inch of the southern vertical frame, there is gouging and paint deterioration. At the sash top rail, there is painted deterioration.</p>		13	LF

			<p>Window 217 - At the head of the opening, the top interior trim/stop is missing. The wood sash is in poor condition with two distinct colors of paint. There is a 1-inch long gouge in the south frame.</p> <p>Window 216 – There is significant deterioration and missing plaster at the head of the window. The sash is in poor condition with a sag of ½-inch at the south edge. There is a gouge 1 ½-inch long at the lower frame on the south side. The sill is unlevel and sagging on the south edge.</p> <p>Window 215 – The sash is in poor condition with only a single finish coat of paint. The lower rail on the sash is deteriorated (potentially termite damage). There is gouging in the frame on the southern edge for a height of 4-inches. The wall plaster is deteriorated at the south edge of the sill and the wainscot cap is missing in this location.</p> <p>Window 214 – The sill is cupping at the southern edge. There are gouges in the frame along the lower 6” on the south side. The sash is sagging, leaving a 1/2-inch gap at the top south side of the opening.</p> <p>Window 213 – The sill is unlevel and slopes down to the north side. There is a ¼-inch gap present between the sill and the apron. There is a 1” gouge in the frame at the lower south side. There is a ¾-inch gap at the sash visible at the top of the frame on the south edge of the opening.</p> <p>Window 212 – The sill, apron, and nosing trim are in fair to good condition. The interior stop/trim of the frame at both the north and south edges of the opening are missing. The sash is in poor condition with only a single finish coat of paint present. There are gouges present in the frame along the lower 4-inches of the south edge.</p>			
Minor		Ceiling	<p>The ceiling is smooth plaster with significant hairline and diagonal cracking, missing material from deterioration and spalling, and sections where plaster is missing where soffits and chase walls have been removed. It appears that the ceiling finishes have been scraped to remove either a texture or previous paint finishes. At the alcove where the new elevator is installed, there is significant material loss with the brown coat of the plaster exposed and areas of the concrete structure visible. Roughly 30% of the plaster in this area</p>		1395	SF

			is missing. There are recessed junction boxes in the ceiling, one at the elevator alcove, and eight in the remainder of the ceiling with two every other bay. Adjacent to window 222 (north side) there is a section of concrete deck that has significant deterioration with wood form work exposed and left in place where a repair was completed.			
Room 208– Employee Lounge						
Minor	Fair	Floor	<p>The room is divided north to south by finishes. The floor to the north is ½-inches by ½-inches white marble mosaic tile set in an ashlar pattern. The tile is in fair condition.</p> <p>The floor to the south is a two-color terrazzo flooring. The border and cove base are a slightly darker gray matrix than the field terrazzo matrix. The aggregate is white. The terrazzo is in fair condition with some hairline cracks and staining. There is a small lip between the north tile floor and the south terrazzo floor.</p> <p>A radiator is mounted to the floor on the south and there is a plumbing pipe extending out of the floor in the southwest corner.</p>		150 (Tile), 200 (Terra.)	SF
Minor	Fair to Poor	Wall – North	<p>The north wall has a 3"x6" ceramic tile wainscot that extends roughly 6 feet off the finish floor. There is a rounded cap at the top of the wainscot. The tile wainscot and cap are in fair condition with 7 abandoned anchors and 15+ damaged tiles.</p> <p>Above the wainscot is a smooth plaster finish on the wall. The plaster is in fair to poor condition with a large area of missing plaster along the east to expose a plumbing chase.</p>		154	SF
Minor	Fair	Wall North – Base	The base is a 6" by 6" ceramic tile that is in fair condition.		14	LF
Minor	Poor	Wall – East	<p>The east wall is divided north to south by finishes and a small wing wall centered on the wall. The north portion of the wall has a 3"x6" ceramic tile wainscot that extends roughly 6 feet off the finish floor. There is a rounded cap at the top of the wainscot. The tile wainscot and cap are in fair condition with 30+ damaged tiles. Above the wainscot is a smooth plaster finish on the wall. The plaster is in fair to poor condition with significant damage to the plaster in the north corner (roughly 5 SF).</p> <p>The south portion of the wall is a smooth plaster at the upper wall over a roughly 6-foot-tall wainscot of cementitious parge coating with a simulated 3"x6" tile pattern and a bullnosed cap. Both the upper plaster and lower wainscot are in poor condition with significant cracking and large patches of missing material. The bullnosed cap has been removed the full length of the wall. A utility chase in the south corner of the wall has been completely removed, exposing the</p>		121 (Tile), 142 (Simulated)	SF

			exterior masonry wall.			
Minor	Fair	Wall East – Base	The north side of the wall has a 6” by 6” ceramic tile base that is in fair condition. The south side of the wall has a 6” terrazzo cove base that is in fair condition.		13	LF
Minor	Fair to Poor	Wall – South	The south wall is a smooth plaster at the upper wall over a roughly 6-foot-tall wainscot of cementitious parge coating with a simulated 3”x6” tile pattern and a bullnosed cap. Both the upper plaster and lower wainscot are in poor condition with significant cracking and large patches of missing material. The bullnosed cap has been removed the full length of the wall. A portion of plaster is missing around window 230. A utility chase in the east corner of the wall has been completely removed, exposing exterior masonry. The masonry needs to be repointed and multiple abandoned anchors need to be removed.		154	SF
Minor	Fair	Wall South – Base	The base is a 6” terrazzo cove base that is in fair condition. The terrazzo base at the utility chase has been removed.		14	LF
Minor		Wall – West	<p>The west wall is divided north to south by finishes and a small wing wall centered on the wall. The north portion of the wall has a 3”x6” ceramic tile wainscot that extends roughly 6 feet off the finish floor. There is a rounded cap at the top of the wainscot. The tile wainscot and cap are in fair condition with 15+ damaged tiles. A metal grill 1-foot by 1-foot sets at the base of the wall. Above the wainscot is a smooth plaster finish on the wall. The plaster is in fair to poor condition with 3 abandoned anchors.</p> <p>The south portion of the wall is a smooth plaster at the upper wall over a roughly 6-foot-tall wainscot of cementitious parge coating with a simulated 3”x6” tile pattern and a bullnosed cap. Both the upper plaster and lower wainscot are in fair to poor condition with significant cracking and large patches of missing material. The bullnosed cap has been removed the full length of the wall. A wall-mounted sink is installed on the north side of the wainscoting and just below the sink is a metal grill 1-foot by 1.5-foot. Just north of door 2/208 is an abandoned light switch and outlet, both are missing the device and cover plate.</p>		121 (Tile), 142 (Simulated)	SF
Minor		Wall West – Base	The north side of the wall has a 6” by 6” ceramic tile base that is in fair condition. The south side of the wall has a 6” terrazzo cove base that is in fair condition.		18 (Tile), 10 (Terra.)	LF
Minor		Wall West – Door	<p>Door 1/208 is missing. The wood casing trim is in fair condition with deteriorating on the south side of the jamb.</p> <p>Door 2/208 is a flat-paneled door that is in poor condition. The wood casing trim is in fair condition with deteriorating at the base. Portions of the door and trim have deteriorated patches of paint.</p>		2	EA
Minor		Ceiling	The ceiling is plaster directly applied to the underside of the concrete deck. The plaster is in fair condition with hairline cracks		350	SF

			throughout the ceiling. There are two abandoned light fixtures and one conduit installed at the ceiling.			
Minor	Fair	Equipment	Radiator on south wall			
Room 209 – Male Staff						
Minor	Fair	Floor	The floor is a two-color terrazzo flooring. The border and cove base are a slightly darker gray matrix than the field terrazzo matrix. The aggregate is white. The terrazzo is in fair condition with some hairline cracks and staining.		193	SF
Minor	Fair	Wall – North	The north wall is a smooth plaster at the upper wall over a roughly 6-foot tall wainscot of cementitious parge coating with a simulated 3"x6" tile pattern and a bullnosed cap. Both the upper plaster and lower wainscot are in fair condition with minor hairline cracking. Portions of the bullnosed cap have been removed (roughly 2 feet). Just west of door 1/209 is an abandoned light switch and outlet, both are missing the device and cover plate. Above the light switch is what is believed to be parts of an old thermostat.		110	SF
Minor	Fair	Wall North – Base	The base is a 6" terrazzo cove base. The base has green paint spatters throughout.		7	LF
Minor	Poor	Wall North – Door	Door 1/209 has been replaced with a flat panel wood veneer door. The wood casing trim is original and is in fair to poor condition with deteriorating/rot at the base of the west jamb.		1	EA
Minor	Fair to Poor	Wall – East	The east wall is a smooth plaster at the upper wall over a roughly 6-foot-tall wainscot of cementitious parge coating with a simulated 3"x6" tile pattern and a bullnosed cap. Both the upper plaster and lower wainscot are in fair to poor condition with minor hairline cracking and several areas of missing material. Portions of the bullnosed cap have been removed and/or damaged (roughly 4 feet). There are 3 abandoned anchors in the wainscoting and 4 abandoned anchors in the smooth plaster. A pipe is extending out from the base of the wall, roughly centered.		209	SF
Minor	Fair	Wall East – Base	The base is a 6" terrazzo cove base. The base has green paint spatters throughout.		16	LF
N/A	N/A	Wall East – Door	Door is discussed under Room 208.		1	EA
Minor	Fair to Poor	Wall – South	The south wall is a smooth plaster at the upper wall over a roughly 6-foot tall wainscot of cementitious parge coating with a simulated 3"x6" tile pattern and a bullnosed cap. Both the upper plaster and lower wainscot are in fair condition with minor hairline cracking. The bullnosed cap has been removed the full length of the wall. A portion of plaster is missing around window 230. A utility chase in the east corner of the wall has been completely removed, exposing exterior masonry. The masonry needs to be repointed and multiple abandoned anchors need to be removed.		110	LF

Minor	Fair	Wall South – Base	The base is a 6” terrazzo cove base. The base has green paint spatters throughout.		8.5	LF
Minor	Fair to Poor	Wall – West	The west wall is a smooth plaster at the upper wall over a roughly 6-foot-tall wainscot of cementitious parge coating with a simulated 3”x6” tile pattern and a bullnosed cap. Both the upper plaster and lower wainscot are in fair to poor condition with minor hairline cracking and several areas of missing material.		209	SF
Minor	Fair	Wall West – Base	The base is a 6” terrazzo cove base. The base has green paint spatters throughout.		19	LF
Minor	Missing	Ceiling	The plaster ceiling has been removed exposing the underside of the concrete deck. Black iron remains indicate the historic height of the ceiling, which was a little over 8 feet.		193	SF
		Equipment	Radiator on south wall			
Room 210 – Billiard Room						
Minor		Floor	The floor is terrazzo with a light gray field matrix and white aggregate with a slightly darker gray matrix border. There is a large north to south crack that has between 1/8 to 1/4-inch offset.		394	SF
Minor		Wall – North	The north wall has a 3”x6” ceramic tile wainscot that is roughly 6 feet off finish floor. There is an ornamental bullnose cap at the top of the wainscot. The wainscoting is in fair condition with +/-11 damaged tiles. Above the wainscot is a smooth plaster finish on the wall. The plaster is in fair to poor condition with hairline cracks and scratches throughout. There are two major areas of missing plaster. One in the northwest corner (3’ by 4’) and another on the east side (8”x2’). There is an abandoned light switch and outlet just to the east of door 2/210. Both are missing the device and cover plate.		236.5	SF
Minor		Wall North – Base	6” terrazzo cove base with green paint spatters throughout.		15.5	LF
Minor		Wall North – Door	Door 2/210 is a new hollow metal door and frame within a gypsum framed wall. The HM door and frame are primed without a finish coat. Door 1/210 has historic wood jambs with an interior tile border. The wood door is missing.		2	EA
Minor		Wall – East	The east wall historical had a 3”x6” ceramic tile wainscot that is roughly 6 feet off finish floor. There is an ornamental bullnose cap at the top of the wainscot. All the historic wainscoting tile is missing, and half of the ornamental bull nose cap is also missing. Above the remaining wainscot cap is a smooth plaster finish on the wall. The plaster is in fair condition with hairline cracks and scratches throughout. There are large piece of plaster missing just south of center. A plaster soffit runs the full length of the wall. The plaster soffit is in poor condition with two large areas of plaster missing, roughly 8 SF.		192.5	SF

Minor		Wall East – Base	The base is a 6” terrazzo cove base. The base has green paint spatters throughout.		18	LF
		Wall – South	<p>The south wall has a 3”x6” ceramic tile wainscot that is roughly 6 feet off finish floor. There is an ornamental bullnose cap at the top of the wainscot. The wainscoting is in fair condition with +/-14 damaged tiles.</p> <p>Above the wainscot is a smooth plaster finish on the wall. The plaster is in fair to poor condition with hairline cracks and scratches throughout. There are patches of plaster missing around the windows (roughly 3 SF).</p> <p>In the east and west corners of the wall is utility chases. The eastern chase walls are completely missing, exposing bare masonry. The western chase has a large hole cut into the top of the wall and the majority of the 3”x6” ceramic tile wainscoting is missing.</p>		236.5	SF
Minor		Wall South – Base	The base is a 6” terrazzo cove base. The base has green paint spatters throughout.		21.5	LF
Minor		Wall – West	<p>The south wall has a 3”x6” ceramic tile wainscot that is roughly 6 feet off the finish floor. There is an ornamental bullnose cap at the top of the wainscot. The wainscoting is in fair condition with +/-25 damaged tiles with 5+ abandoned anchors remaining in the wall.</p> <p>Above the wainscot is a smooth plaster finish on the wall. The plaster is in fair to poor condition with large portions of the plaster missing (roughly 48 SF).</p>		192.5	SF
Minor		Wall West – Base	The base is a 6” terrazzo cove base. The base has green paint spatters throughout.		18	LF
Minor		Ceiling	The original ceiling finish was plaster applied direct to the concrete structure above. Several areas of the plaster finish are missing with the underlying concrete deck exposed (roughly 52 SF). There is an abandoned fixture with exposed wiring and several abandoned anchors/rebar.		394	SF
		Equipment	Two radiators on south wall		2	EA
Room 211 – Hall						
Minor	Fair to Poor	Floor	<p>The room is a mixture of materials with patches of ½-inches by ½-inches white marble mosaic tile set in an ashlar pattern and terrazzo. The tile is in fair condition.</p> <p>The terrazzo floor is a two-color terrazzo flooring. The border and cove base are a slightly darker gray matrix than the field terrazzo matrix. The aggregate is white. The terrazzo is in fair to poor condition with some hairline cracks and staining.</p> <p>Several wall curbs remain from where partitional walls were</p>		263	SF

			removed. There are also several abandoned plumbing holes remaining in the floor.			
Minor	N/A	Wall – North	There is no true wall along the north edge of the room. The north wall has been addressed under Room 200A – Hallway.			
Minor	N/A	Wall North – Base	The north base has been addressed under Room 200A – Hallway.			
Minor	Fair to Poor	Wall – East	<p>The east wall is a mixture of ceramic tiles, simulated 3"x6" tile, and plaster. The height of the plaster and tile varies throughout the wall. The tile is a 3"x6" ceramic tile that is fair to poor condition. Throughout the tile, there are abandoned plumbing fixtures and anchors and multiple damaged tiles (40+ damaged tiles).</p> <p>The smooth plaster is in fair to poor condition with hairline cracks and scratches throughout.</p> <p>On the south end of the wall is a wainscot of cementitious parge coating with simulated 3"x6" tile pattern. The simulated tiles are in poor condition and large sections are missing, exposing the masonry wall.</p> <p>There are several locations where interior partition walls have been removed, leaving swaths of exposed masonry at the north end of the wall.</p>		341	SF
Minor	Fair to Poor	Wall East – Base	The base is a mixture of 6" by 6" ceramic tile and a 6" terrazzo cove base. Both bases are in fair to poor condition.		31	LF
Minor	N/A	Wall – South	There is no true wall along the south edge of the room. The north wall has been addressed under Room 200B – Hallway.			
Minor	N/A	Wall South – Base	The south base has been addressed under Room 200B – Hallway.			
Minor	Fair to Poor	Wall – West	<p>The west wall is a mixture of ceramic tiles, simulated 3"x6" tile, smooth plaster, and newer gypsum. The height of the plaster and tile varies throughout the wall. The tile is a 3"x6" ceramic tile that is fair to poor condition. Throughout the tile, there is abandoned plumbing fixtures and anchors and multiple damaged tiles (20+ damaged tiles).</p> <p>The new gypsum is found at the elevator and goes from floor to ceiling. The gypsum is in fair to good condition.</p>		352	SF
Minor		Wall West – Base	<p>The base is a mixture of 6" by 6" ceramic tile and a 6" terrazzo cove base. Both bases are in fair to poor condition.</p> <p>The gypsum wall has no base.</p>		32	LF
Minor		Ceiling	The plaster ceiling has been removed exposing the underside of the concrete deck. Black iron remains indicate the historic height of the ceiling, which was a little over 8 feet.		263	SF
Room 216 – Women's Elevator Hall						
Minor	Fair to	Floor	The floor landing at the stair hall is a light gray terrazzo field matrix		77	SF

	Poor		with white aggregate and there appears to be an extension of the darker gray matrix border into this space, however, there is a lot of grime on the floor. At the transition to the stair down, there is a white marble tread on the level with the terrazzo landing and then the stair treads are currently raw wood blocking on painted steel framing. There is minor chipping on the eastern edge of the marble nosing. Wood blocking is used at the treads ascending to the Third Floor which bears on a painted steel structure. The terrazzo is damaged adjacent to the riser going up to the Third Floor in the northeast corner. The lower intermediate landings as well as the upper intermediate landings are a wood blocking, unfinished. The steel framing appears to be non-original with an elevated level of corrosion present.			
Minor	Poor	Wall - North	The north wall is smooth plaster over a 3"x6" ceramic tile wainscot and bullnose cap. The plaster is in poor condition with a large section of the material missing where an electrical conduit was installed. The plaster was not repaired. It appears that a plaster ceiling was originally installed in this location and is now non-extant. Above the ceiling datum line, the brick-bearing wall framing is exposed. Above the door, there is a section of concrete that exists which appears to have originally had a duct opening penetration in the wall but has since been infilled with concrete and plaster. There is minor staining and deteriorated grout joints at the tile wainscot. The description of the trim and door is captured under the information in Women's Dressing Room 203.		110	SF
Minor	Fair	Wall - North - Base	The base at the landing is a gray marble that matches the marble plinths at the base of the door frame. Approximately 6"es in height. The base transitions to ceramic tile where the metal stringers of the stairs and intermediate landings are exposed. The marble base is in fair to good condition. The ceramic tile is in fair condition.		10	LF
Minor	Fair to Poor	Wall - East	At the landing, there is an opening in the east wall leading to the adjacent hall. The plaster opening has been infilled with non-original drywall and a hollow metal door and frame. The drywall is unfinished with exposed fasteners. The hollow metal door and frame are unfinished, primed metal. The plaster surrounding the opening is in fair to poor condition. The tile wainscot and tile cap on either side of the opening have been damaged or are missing. The ceramic wainscot at the north and south sides of the opening is missing from the base to the cap at the opening inset, as well as several tiles missing from the adjacent sloped wainscot to the south (approximately 55 – 60 tiles). The tile wainscot extending up to the intermediate landing is sloped to follow the pitch of the steel stringer.		192	SF

			The tile surface has concrete slurry spatter across most of the tile located south of the door opening.			
Minor	Fair	Wall - East - Base	To the north and south of the non-original opening infill, the base is a 6" high gray marble in fair condition. At the drywall infill, there is no base present. To the south, where the steel stair framing is exposed, the base is a 3"x6" ceramic tile that matches the wainscot tile.		13	LF
Minor	Fair	Wall - South	The south wall is split between the upper and lower intermediate landings. The tile wainscot leading up to the Third Floor is in fair condition with a lot of surface staining and grime. The tile wainscot leading to the First Floor is in poor condition with a large section of missing tile from the west intermediate landing and to the east approximately 6 feet in total width (approximately 100 tiles). There is an elevated level of ferrous metal staining present at the surface of the tile wainscot along the full length of the south wall at the lower intermediate landings. The plaster above the tile wainscot at the lower intermediate landing is in fair to good condition with two recessed junction boxes installed (assumed for lighting). There is a large portion of the smooth plaster finish missing from the upper intermediate landing above the tile wainscot.		195	SF
Minor	Fair to Poor	Wall - South - Base	The south wall, where the steel stair framing is exposed, the base is a 3"x6" ceramic tile which matches the wainscot tile.		13	LF
Minor	Fair to Poor	Wall - West	The west wall has a smooth plaster finish above a 3"x6" ceramic tile wainscot with a ceramic bullnose cap. The plaster is in fair condition on most of the wall except for the area above the landing on the Second Floor. The west wall plaster at the landing is significantly damaged with a large portion of missing materials and improper patches. Above the ceiling datum line, the brick bearing wall is exposed. The ceramic tile wainscot is in fair condition but has a high level of surface staining including ferrous metal and concrete slurry.		192	SF
Minor	Fair	Wall - West - Base	To the north at the Second Floor landing, the base is a 6" high gray marble in fair condition. To the south, where the steel stair framing is exposed, the base is a 3"x6" ceramic tile that matches the wainscot tile.		13	LF
Minor	Poor	Elevator enclosure	At the center of the Women's Elevator Hall, the lift is open to view. There is a 2x tube steel frame with wire mesh infill surrounding the opening to an approximately 8-10'-0" height. The metal is in poor condition with an elevated level of corrosion.			
Minor	Poor	Ceiling	The original plaster ceiling at the Second Floor Landing has been removed. Remnants of the metal framing the plaster were mounted to are still extant and exhibit an elevated level of corrosion. Where the plaster ceiling is removed, the concrete structural deck is		200	SF

			exposed. For the remainder of the space, there is either a plaster finish mounted to the underside of the steel stair framing, or the steel structure and underside of the wood treads is visible to view.			
Room 217 – Men’s Elevator Hall						
Minor		Floor	The floor landing at the stair hall is a light gray terrazzo field matrix with white aggregate and there appears to be an extension of the darker gray matrix border into this space, however, there is a lot of grime on the floor. At the transition to the stair down, there is a white marble tread on the level with the terrazzo landing. The lower intermediate landings as well as the upper intermediate landings are marble.		82 SF	SF
Minor		Wall – North	The north wall has a 3"x6" ceramic tile wainscot that runs parallel to and follows the pitch of the stair (long side of the tile). There is an ornamental bullnose cap at the top of the wainscot. Above the wainscot is a smooth plaster finish on the wall. The plaster has significant staining, hairline cracks, and scratches throughout. The paint finish has significantly deteriorated. The 3"x6" ceramic tile wainscot is in fair condition, there are a few damaged tiles. There are (+/- 7 damaged tiles)		48 (Tile) 42 (Plaster)	SF
Minor	Fair to Poor	Wall – East	The east wall has a gypsum surround where modern door 1/217 has been installed. On either side of the door is a wall with a smooth plaster finish above a 3"x6" ceramic tile wainscot and bullnose cap. The plaster is in poor condition around the door, with a large section of the material missing at the top and north side of the door (roughly 7 SF). The existing plaster has significant staining and hairline cracks throughout. There is a large quantity of damaged tiles around the door opening (+/-50 damaged and/or missing ceramic tiles).		9 (Damaged Plaster)	SF
Minor	Missing	Wall East – Base	There is no base at the gypsum portion of the wall. At the tiled section of wall, there is a 6" high base gray marble base.		5'-0" (no base)	LF
Minor	Fair to Good	Wall – East - Door	Door 1/217 is a new hollow metal door and frame within a gypsum framed wall. The HM door and frame are primed without a finish coat.		1	EA
Minor	Poor	Wall – South	The south wall is smooth plaster over a 3"x6" ceramic tile wainscot and bullnose cap. The plaster is in fair condition with a section of the material missing above door 2/210 and just to the east where a large conduit is coming through the wall. The plaster and ceramic wainscot are missing at the side walls to door 2/210. The existing plaster has significant staining and hairline cracks throughout. The ceramic tile is in fair condition with +/- 12 damaged tiles.		5 (damaged Plaster)	SF

Minor	Fair	Wall South – Base	The base at the landing is a gray marble that matches the marble plinths at the base of the door frame. Approximately 6”es in height. There is no base at the side walls to door 2/210		13	LF
Minor	Poor	Wall – West	The wall has a 3”x6” ceramic tile wainscot that runs parallel to and follows the pitch of the stair (long side of the tile). There is an ornamental bullnose cap at the top of the wainscot. Above the wainscot is a smooth plaster finish on the wall. The plaster is in poor condition above door 2/217. The paint finish is significantly deteriorated and missing. The ceramic tile is in fair condition with +/- 11 damaged tiles. There is an outlet device just north of door 2/217. The switch and cover are missing.		3 (damaged Plaster)	SF
Minor	Poor	Wall West – Base	At the second floor landing, there is gray marble base at a height of 6”es.			
Minor	Fair	Wall - West - Door	Door 2/217 is an original opening and wood trim frame. There is minor damage to the frame and paint along the base.			
Serious	Poor	Elevator enclosure	At the center of the Men’s Elevator Hall, the lift is open to view. There is a 2x tube steel frame with wire mesh infill surrounding the opening to an approximately 10 feet height. The metal is in poor condition with an elevated level of corrosion.		26	LF
Minor	Poor	Ceiling	The original plaster ceiling at the second floor landing has been removed. Remnants of the metal framing the plaster were mounted to are still extant and exhibit an elevated level of corrosion. Where the plaster ceiling is removed, the concrete structural deck is exposed. In the southeast corner of the missing plaster ceiling is a small remnant of plaster, which indicates that there was a curved joint between the wall and ceiling. There is an abandoned fixture in the ceiling. At the remainder of the space, the metal framing and underside of the marble treads are exposed. The steel stair framing has areas of corrosion throughout. .		72 (missing plaster)	SF

Deficiency Ratings (Critical, Serious, Minor)

Condition Ratings (Good, Fair, Poor)

Maurice Assessment Checklist – Third Floor						
Deficiency Rating	Condition Rating	Component – Exterior or Interior	Existing Condition	Reference	Qty	Unit
Room 300 – Roycroft Room						
Serious	Poor	Floor	<p>The original quarry tile herringbone floor was removed by NPS staff after serious buckling had occurred, causing tripping hazards. Current floor is exposed rough concrete that is a tripping hazard. Cracks in the floor can be seen in the east/west direction.</p> <p>Flooring in the nook is 6” square x 1” thick quarry tile set over a mud bed. In total, the thickness of the mud bed and tile is approx. 3.”</p>		901	SF
Minor	Fair to Poor	Wall – North	<p>Plaster wall over brick. The plaster is missing. The brick appears to have been recently repointed. No cracks are visible. The rick behind the paneling is not visible.</p> <p>The wood paneling below is in poor condition, especially near the base. A hole through the center of the wall was where there was a sink once installed Plumbing remains through the wall. The base of the stud wall behind the wood paneling appears to have deteriorated with termite damage.</p>		45 (Plaster)	SF
Minor	Poor	Wall North – Base	<p>The base is 6” x 7/8” thick marble and is mostly missing. Plinths at doors are 6” high by 2-1/4” thick and are all present.</p>		18	LF
Minor	Poor	Wall – East	<p>Plaster wall over brick. The plaster is missing. The brick appears to have been recently repointed. No cracks are visible. The brick behind the paneling is not visible.</p> <p>Wood paneling is in poor condition, especially near the base. The wall paneling has pulled away from the wall by nearly a foot. Debris is piled between the paneling and the wall in several locations. Paneling has termite damage, staining, and shadows of equipment. A wood backboard held a long piece of equipment near the north side of the wall, maybe a thermostat? Another piece of that equipment that is similar without a wood block is on the south side of the wall. These are not perfectly symmetrical. Doors into the room are missing, but the jambs and trim remain on this side of the room. Some of the jamb material is termite damaged. A new steel door and frame are installed in the north opening.</p>		100 (Plaster)	SF

			Hinges were steel ball tip. A new steel door and frame are installed in the south opening. Hinges were brass ball tip.			
Minor	Poor	Wall East – Base	Base is 6" x 7/8" thick marble and is mostly missing. Plinths at doors are 6"-high by 2-1/4" thick and are all present.		57	LF
Minor	Poor	Wall – South	Similar to East Wall		45 (Plaster)	SF
Minor	Poor	Wall South – Base	Base is 6" x 7/8" thick marble and is mostly missing. Plinths at doors are 6" high by 2-1/4" thick and are all present.		15	LF
Minor	Poor	Wall – West	Similar to East Wall		132 (Plaster)	SF
Minor	Poor	Wall West – Base	Base is 6" x 7/8" thick marble and is mostly missing. Plinths at doors are 6" high by 2-1/4" thick and are all present.		44	LF
Serious	Poor	Ceiling	Ceiling beams in poor condition		901	SF
Room 301 – Women's Elevator Hallway						
Minor	Fair to Poor	Floor	The floor at the third floor landing is terrazzo with a light gray field matrix and white aggregate with a slightly darker gray matrix border. There is a lot of grime covering the floor making it difficult to fully assess. The floor appears to be in fair condition with minor surface etching and ferrous metal staining from the surround at the elevator at the center of the room. Moving down from the third floor, the material changes to non-original wood planks at the stair treads and landings, unfinished. The painted steel structure supporting the stair appears to be in fair to good condition with areas of ferrous metal staining. No cracking or displacement of the terrazzo was noted.		77 (Not including Stairs)	SF
Minor	Poor	Wall – North	Most of the north wall is ceramic tile wainscot. There is an ornamental bullnose cap tile. The 3"x6" white ceramic tile is in fair to good condition with minor deterioration at the grout joints. At the lower 15" of the tile wainscot, there is heavier staining present on the tile. Above the wainscot is a plaster wall finish. The plaster is in poor condition with horizontal cracking and displacement, heavy surface staining (soot), and a rough textured finish. On the east side of the wall, there is an 8" wide strip of surface applied adhesive that covers both the plaster and ceramic tile.		104	SF
Minor	Fair	Wall North – Base	The base at the north wall is a 6" high gray marble that is slightly proud of the ceramic tile (1/4" to 3/8" offset from tile). The marble is in fair condition with minor surface staining. At the Door 2/301 to the north, the wood door trim terminates above a 6" high gray marble plinth (extant at both sides).		13	LF
Minor	Fair to Poor	Wall North – Trim	Stained wood trim is present at the Door 2/301 opening. The trim consists of vertical casing and frames as well as head trim above the doors. The wood is in fair condition with some areas of minor staining. The finish is poor.			
Serious	Missing	Wall North – Door	Door 2/301 is missing.		1	EA

Minor	Fair to Poor	Wall – East	The east wall is primarily a smooth plaster finish with no ceramic tile (plaster appears to be the original finish). There is a non-original hollow metal door and wood trim frame at the north side of the wall. At the south edge of the third floor landing, there is a metal screen separating the landing from the stair at the east side of the elevator shaft. The plaster finish extends to the south wall. The plaster has heavy staining with a coating that appears to be soot. There is a rough texture finish to the plaster.		192	SF
Minor	Missing	Wall East – Base	Missing. Based on the remnants at the wall, it appears that there was originally a 6” high base in keeping with the north wall gray marble.		5’-3”	LF
Minor	Fair	Wall East – Trim	Trim at Door 3/301 appears to be non-original or salvaged, stripped, and repurposed at the opening. The fasteners are exposed, and the wood is unfinished. The trim is in fair condition.			
Minor	Fair to Good	Wall East – Door	Door 3/301 is a new door in an original opening. There is a new hollow metal frame and hollow metal door inset within the original opening and wood trim frame. The HM door and frame are primed without a finish coat.		1	EA
Minor	Poor	Wall – South	The south wall has a 3”x6” ceramic tile wainscot which runs parallel to and follows the pitch of the stair (long side of the tile). There is an ornamental bullnose cap at the top of the wainscot. Above the wainscot is a smooth plaster finish on the wall. Roughly 75% of the plaster finish is missing from the wall with the underlying brick masonry exposed. The plaster that is extant has a heavy soot coating and areas of patching. The paint finish has significantly deteriorated. The 3”x6” ceramic tile wainscot is in fair condition, however, there is heavy surface staining with concrete slurry spatter covering several of the tiles along with darker staining at the lower three courses of tile and soot staining.		195	SF
Minor	Poor	Wall – West	The wall has a 3”x6” ceramic tile wainscot which runs parallel to and follows the pitch of the stair (long side of the tile). There is an ornamental bullnose cap at the top of the wainscot. Above the wainscot is a smooth plaster finish on the wall. Roughly 75% of the ceramic tile at the wainscot is missing. There is a small section of missing plaster in the south upper corner of the wall. The plaster has a heavy soot coating and areas of rough texture. The paint finish has significantly deteriorated.		192	SF
Minor	Poor	Wall West – Base	Ceramic tile at the stair – with several tiles missing. At the third floor landing, there is gray marble base at a 6” height. The extant tile and marble are in fair condition with heavy surface staining. The marble to the south of Door 1/301 is displaced/detached from the wall. At the north side of Door 1/301, the original gray marble plinth at the frame is extant but missing from the south side of the frame.		9’-8”	LF
Minor	Fair to Poor	Wall West – Trim	The original framed opening has been modified. The wood trim at the south edge and the head of the door are missing. The wood is in fair condition, but the finish has highly deteriorated.			

Minor	Fair	Wall West – Door	The original wood door has been removed and a new hollow metal frame and hollow metal door has been installed in the wood framed opening. The door is in fair condition. The finish is a primed gray without a final finish coat of paint.		1	EA
Serious	Poor	Elevator enclosure	At the center of the Women’s Elevator Hall, the lift is open to view. There is a 2x tube steel frame with wire mesh infill surrounding the opening to an approximately 10-foot height. The metal is in poor condition with an elevated level of corrosion. It appears at the third floor landing there is a gap or damage to the wire mesh enclosure at the base of the opening/landing.		26	LF
Minor	Poor	Ceiling	The original ceiling finish was plaster applied direct to the concrete structure above. Several areas of the plaster finish are missing with the underlying concrete deck exposed. There are several areas where the reinforcing steel of the concrete deck are exposed with the loose of concrete clear cover and an elevated level of corrosion and ferrous staining. There is also a lot of staining with a soot coating and rough texture to the extant plaster.		203	SF
Room 302 –Hallway						
Minor	Fair to Poor	Floor	The flooring is terrazzo with a 7 ¼” border. The border and cove base are a slightly darker gray matrix than the field terrazzo matrix. The aggregate is white. There are wall-mounted radiators along the east wall of the space. At the door openings, the base transitions to a gray marble. There are several cracks that extend across the width of the hall in the east-west direction (focused on the south end of the Hall). There are several small areas of damage and deteriorated terrazzo. With a lot of grime and debris on the floor, assessment of the true conditions is difficult.		386	SF
Minor	Poor	Wall – North	The north end of the primary space of the hall terminates adjacent to Door 3/301 which leads into the Women’s Elevator Hall 301. The hall extends slightly to the north of this opening, but all original walls have been demolished. The extant section of the wall enclosed the south side of Janitor’s Closet 304C. The wall is comprised of smooth plaster at the upper wall and a wainscot of cementitious parging with a simulated tile pattern and bullnose cap. The full length of the bullnose cap is extant. There is significant vertical and diagonal cracking at both the upper wall section and the wainscot. At the upper wall, there is diagonal cracking in the upper left corner and cracking which extends from the west edge at the top of the wainscot and in a diagonal 45-degree slope up to the center of the wall. The western edge of the plaster has deteriorated with missing material at the frame of Door 3/301. At the center of the upper wall, there are four circular holes where anchors or fasteners were previously installed. The two upper holes have plaster finish coat material loss. The plaster finish coat appears to have been scraped to remove the finishes leaving a rough surface texture. At the wainscot, there is a hole in the wall approximately 1-foot in diameter to the east of the wall center with edges of hollow clay tile framing		48	SF

			exposed. Adjacent to the east of this opening, there is a 12" x 15" cast iron grill installed in the wall that penetrates the Janitor's Closet. The finish on the grill has highly deteriorated with some corrosion of the metal visible. The paint finishes are significantly deteriorated and missing.			
Minor	Fair to Poor	Wall North – Base	The base at this section of the wall is a 6" high cove base of gray terrazzo matrix with white aggregate. The west edge of the terrazzo base adjacent to the frame of Door 3/301 is damaged with a 1" width of material missing. There are vertical cracks and some surface deterioration across the length of the base. At the east corner, there is a crack separating the base from the wainscot materials.		5'-6"	LF
Minor	Poor	Wall – East	<p>As noted above on the north wall, the walls at the northern end of the Hall have been removed in their entirety with only the concrete ceiling structure and terrazzo base remaining. The plaster finish at the overhead beam on the east wall has 20% material loss with the underlying concrete exposed. At the offset of the wall adjacent to window 319, 90% of the smooth plaster finish at the upper wall is missing with the concrete and brick structure exposed and a pipe chase visible.</p> <p>The lower wainscot for the entirety of this wall is cementitious parging with a simulated tile pattern and bullnose cap. The wainscot is in fair to poor condition with significant hairline cracking across the surface and material loss at the bullnose cap (16-feet). There is a section of missing material at the south side of Window 322 (1 SF). The wainscot transition at the center of Window 323 appears to be a different base mixture of materials but maintains the same detailing.</p> <p>Between windows 322 and 323, there is a horizontal crack that extends from sill to sill. The center section of the east wall is comprised of smooth plaster at the upper wall and a wainscot of cementitious parging with a simulated tile pattern and bullnose cap which is interrupted by five window openings. The two end window openings are smaller than the center three openings. The upper smooth plaster on the wall is in fair to poor condition with diagonal cracking and surface deterioration from the finishes being removed. At the north end of this section of wall, there is a large diagonal crack that extends from the north wall offset to Window 319. Above Window 319, there is a section of plaster missing at the center of the window head (1 SF). The upper wall plaster has a lot of soot staining covering the surface at the south end of the wall where it abuts Room 310. There is a vertical section of missing plaster where the brick masonry wall transitions to hollow clay tile framing, approximately 1-foot in width. At the entrance to Room 310, the plaster stops short of the ceiling to allow for a metal screened ventilation opening. There is a continuous wood head trim that extends from the northside of Room 310 to the south side of the</p>		344	SF

			Toilet 308, Door 1/308. The smooth plaster conditions are in-keeping with the deterioration observed at the north end with vertical and diagonal cracking present and minor areas of missing plaster materials. The paint finishes are significantly deteriorated and missing in most areas. The base of the center wall section is concealed by a wall-mounted radiator which extends from just south of Window 319 to Window 323.			
Minor	Fair to Poor	Wall East – Base	The base at this wall is a 6” high cove base of gray terrazzo matrix with white aggregate. Where visible, vertical cracks and some surface deterioration across the length of the base was observed. The south half of the center wall section is concealed by a wall mounted base radiator. At the south end, The base transitions to gray marble plinths at the door frames.		43	LF
Serious	Fair to Poor	Wall East – Windows	<p>Window 319 – The single casement window is in fair to poor condition. All frame, sill, apron, and nosing trim are in place. There is a non-original wood blocking at the base of the window, it is assumed to lock the window in place. The hinges appear to be in fair to good condition. The casement pull is missing. The paint finish is in fair condition.</p> <p>Window 320 – The window is a double casement window with a central dividing mullion and is in fair to poor condition. All frame, sill, apron, and nosing trim are in place. There is minor deterioration at the sill and nosing trim. There is non-original wood blocking at the base of the casement windows, it is assumed to lock the window in place. The hinges appear to be in fair to good condition. No casement pulls were present. The paint finish is in fair condition with some damage at the sill.</p> <p>Window 321 – The window is a double casement window with a central dividing mullion and is in fair to poor condition. All frame, sill, apron, and nosing trim are in place. There is minor deterioration at the sill and nosing trim at the south half and both north/south ends. There is non-original wood blocking at the base of the casement windows, it is assumed to lock the window in place. The hinges appear to be in fair to good condition. No casement pulls were present. The paint finish is in fair condition with some damage at the sill.</p> <p>Window 322 – The window is a double casement window with a central dividing mullion and is in fair to poor condition. The frame and sashes along with the center mullion and facing remain. The sill, apron and nosing trim are missing with the bottom of the window</p>		5	EA

			<p>framing exposed. The trim at the south side (vertical and head trim) has some damage where the plaster finish has failed. There is non-original wood blocking anchored diagonally between the mullion and window base frame, it is assumed to lock the window in place. The hinges appear to be in fair to good condition. No casement pulls were present. The paint finish is in fair to poor condition.</p> <p>Window 323 – The single casement window is in fair condition. All frame, sill, apron, and nosing trim are in place. The hinges appear to be in fair to good condition. The casement pull is missing. The paint finish is in fair condition with some damage at the north vertical trim and the sill/nosing trim.</p>			
Minor	Poor	Wall East – Door	<p>The Door 1/310 is missing. Door 1/302 to the Toilet is extant and in poor condition. The stile and rail door has matching dimensions at the vertical and head rails (approximately 5”) and a tall bottom rail (12”-14” in height). The veneers on the door have failed and are delaminating in several areas, specifically at the south bottom corner. The door appears to be warped out of plumb. There is a lot of deterioration at the stained wood finish with areas of bare wood exposed. Original hinges, knobs, escutcheons, and latch are extant.</p>		1	EA
Minor	Poor	Wall East – Trim	<p>The trim at the east wall extends from the north side of Room 310 to allow for a vertical wall termination and an open ventilation screen above. The head trim extends over both Door 1/310 and Door 1/308 and stops at the vertical door facing trim on the south side of Door 1/308. The vertical trim at both doors is in fair condition with minor warping and checking. The trim rests on top of gray marble plinths in alignment with the terrazzo base. The head trim is in poor condition with splitting at the ends. The dark stained finish is highly deteriorated.</p>			
Minor	N/A	Wall – South	<p>The south end of the Hall is open with the adjacent room enclosure being demolished except for the terrazzo base.</p>		24	SF
Minor	Poor	Wall South – Base	<p>The base at the south end of the Hall is a 6” high cove base of gray terrazzo matrix with white aggregate. The base is the only extant part of the wall and is in poor condition.</p>		3	LF
Minor	Poor	Wall – West	<p>South Section - The wall is original construction. The wall is comprised of an open ventilation area screened with open metal mesh and a 1” metal perimeter frame. The metal mesh rests on top of a dark stained wood head trim that aligns with the top of the doors on the opposite east wall. Below the wood trim is a smooth plaster upper wall and a wainscot of cementitious parging with a simulated tile pattern and bullnose cap. The wainscot is in poor condition with multiple areas of hairline cracking across the surface and a 1-foot diameter hole at the lower section on the north prior to the wall stepping back to the west. The underlying hollow clay tile behind the plaster is damaged. The bullnose cap is fully extant but in poor</p>		440	SF

		<p>condition and appear to have been patched previously. The smooth plaster is in fair condition, but the surface appears to have been scraped to remove the finish. The south edge of the wall is deteriorated and uneven due to the removal of the adjacent wall. The bullnose cap has minor deterioration in this location. The smooth plaster finish is missing at the south edge. At the north side of this section of wall, there is a vertical crack that extends up through the wainscot and into the smooth plaster to the corner of the ventilation opening above. Additionally, there is horizontal cracking extending north from the ventilation opening to the corner of the wall. The wood head trim is in poor condition, with splitting at the ends and missing material at the south edge. The finish on the wood trim is highly deteriorated. The metal ventilation screen is in poor condition with corrosion and ferrous metal staining. Non-original surface mounted conduit runs exposed along the east face of the metal screen.</p> <p>Center Section – Where the walls transition and the hallway widens, the south face plaster (south of Door 1/303) and wainscot are in poor condition with a 1-foot diameter hole in the smooth plaster finish above and diagonal cracking present at the upper west corner as well as across the middle of this upper wall. A small section of plaster finish coat is missing at the corner to the east of this opening, with the hollow clay tile exposed. Within the wainscot material, there is a historic junction box that has no device or cover plate installed. A surface mounted electrical conduit is present at the intersection of the ceiling and continues at this wall. There is a 12" x 15" cast iron ventilation grill in the wall at the east side sitting above the base. The paint finish on the cover of the grill is in poor condition. The paint finish on the wainscot surface is in failed condition, with more than 50% missing.</p> <p>The wall from Women’s Elevator Hall 301 to Men’s Elevator Hall 303 is in poor condition, with several areas altered from the original construction. The typical composition of upper smooth plaster walls over a wainscot of cementitious parging with a simulated tile pattern and bullnose cap is present at most of the wall. The upper wall plaster is significantly deteriorated with a network of horizontal and vertical cracking. At Door 1/303 to the Men’s Elevator Hall, the door has been altered, and a new non-original dry-wall infill has been installed within the opening with a hollow metal door and frame inserted in the drywall. The drywall is unfinished, with gaps present at the north and south sides of the infill. Minimal taping and mudding</p>			
--	--	---	--	--	--

		<p>have been completed at the drywall. Above Door 1/303 at the concrete structure, and along the northern edge of the opening, there is plaster missing with brick masonry and concrete exposed (6 square feet). A metal junction box is in the wainscot approximately 1-foot from the corner north of door 1/303. The box is corroded and has no device or cover plate installed. North 3-feet from the corner, there is a historic electrical fuse box/electrical panel that is mounted 6" into the wainscot and 18" into the smooth upper wall. The box is highly corroded. Above the panel, the wiring/conduit chase is exposed with sections of missing plaster which exposed the brick framing (2 Square Feet), and another 1-foot square foot section of missing plaster is open 1-foot north of the panel. There is a large vertical crack extending from the panel to the base and a high level of ferrous metal staining on the surface of the wainscot. There is a metal cap located 3-feet from the south edge of the elevator and a few anchors below the cap. The plaster is damaged around the cap and anchors. There is cuprous staining at the cap. There is an exposed conduit running along the top of the wall, approximately 2/3 the width of the wall stopping 4-feet short of the elevator enclosure. Along the south edge of the elevator, the historic wall edge has been cut and is deteriorated (2 SF). The elevator enclosure is all new finished drywall with a bronze metal elevator door and frame. The drywall has signs of water infiltration or moisture in the lower 18" of the wall at the north facing side of the enclosure. To the north of the elevator, the typical wall conditions of a smooth plaster upper wall and parged coat wainscot with simulated tile pattern is present.</p> <p>North Section - The alcove directly north of the enclosure has the main electrical panel installed, which is all new construction with a large 4" diameter conduit feed that runs across the wall adjacent to the ceiling and to the north. 50% of the wainscot is highly damaged or missing, and 75% of the upper wall plaster is missing with exposed brick. 50% of the wainscot bullnose cap from the elevator to the north wall is missing (10 LF). At the center of this section of wall, there is a large area of missing plaster and damaged wainscot where new electrical lines were installed, and historic plumbing drain lines were removed (40 SF). Incomplete electrical wiring is present with multiple 1" diameter conduit running across the face of this wall. There is significant vertical and horizontal cracking present across the wall, and the paint finish is highly deteriorated and missing in most areas. At the northern edge of the wall, Door 3/301 appears to be a new wood frame installed within the existing opening. The wood has not been stained or finished, and the fastener holes are exposed. A new hollow metal door and frame are installed within the</p>			
--	--	--	--	--	--

			wood frame. At the northern edge, where the frame abuts the adjacent wall, the plaster is deteriorated with a 1" – 1 ½" gap in the materials.			
Minor	Fair	Wall West – Base	<p>The base at the south end of the Hall is a 6" high cove base of gray terrazzo matrix with white aggregate. There is minor vertical cracking along the length of the base. At the center section – there is approximately 1 ½ linear feet of missing terrazzo base at the north side of Door 1/303. Along the center section up to the elevator drywall enclosure, there is minor vertical cracking and surface deterioration. There is a diagonal crack at the base with deterioration adjacent to the elevator enclosure (6").</p> <p>There is no base at the elevator drywall enclosure. North of the elevator enclosure, there is a small 2" width of the terrazzo base that is damaged. The base beyond this is in fair condition with minor surface deterioration and vertical cracking.</p>		55	LF
Minor	Poor	Ceiling	<p>The ceiling is smooth plaster installed directly to the concrete structural deck and exposed beams. At the northern end of the Hall, there are sections of plaster missing and an area with a metal plate covering. Where sections of concrete are exposed, there are small areas of concrete cover spall with corroded reinforcing steel visible.</p> <p>At the center of the hall adjacent to the windows, there are anchors visible where they have been installed in the roof/ceiling to provide supplemental support at the parapet above. Around these anchors, the plaster and concrete have spalled (approximately 6 square inches in diameter at each anchor).</p> <p>A new smoke detector has been installed on the north side of the elevator enclosure with a surface-mounted device and conduit. There are 4 recessed junction boxes across the width of the center hall where it is assumed surface-mounted light fixtures were historically installed. At the elevator enclosure, there are two steel plates exposed with anchor bolts projecting from the surface. Overall, roughly 15% of the plaster finish is missing. The plaster finish is rough with uneven layers of finish and areas of deteriorated plaster where it appears to have been scrapped. At the southern end of the hall is the greatest amount of plaster loss. The surface in this area is also coated with a heavy layer of soot.</p>		386	SF
Room 303 – Men's Elevator Hallway						
Minor	Fair	Floor	<p>The floor landing at the stair hall is a light gray terrazzo field matrix with white aggregate, and there appears to be an extension of the darker gray matrix border into this space; however, there is a lot of grime on the floor. At the transition to the stair down, there is a white marble tread on the level with the terrazzo landing.</p> <p>The lower intermediate landings, as well as the upper intermediate</p>		82 (Not including Stairs)	SF

			landings, are marble.			
Minor	Fair to Poor	Wall – North	<p>The north wall has a 3"x6" ceramic tile wainscot, which runs parallel to and follows the pitch of the stair (long side of the tile). There is an ornamental bullnose cap at the top of the wainscot. Above the wainscot is a smooth plaster finish on the wall. The plaster has significant staining, hairline cracks, and scratches throughout.</p> <p>The paint finish has significantly deteriorated. The 3"x6" ceramic tile wainscot is in fair condition; however, there is heavy ferrous surface staining with paint spatter covering several of the tiles. There are (+/- 5 damaged tiles)</p>		48 (Tile) 42 (Plaster)	SF
Minor	Fair to Poor	Wall – East	<p>The east wall has a gypsum surround where modern door 1/303 has been installed. On either side of the door is a wall with a smooth plaster over a 3"x6" ceramic tile wainscot and bullnose cap. The plaster is in fair condition, with a large section of the material missing at the top of the wall (roughly 9 SF). The existing plaster has significant staining and hairline cracks throughout. There are 4 damaged ceramic tiles.</p>		9 (Damaged Plaster)	SF
Minor	Missing	Wall East – Base	<p>There is no base at the gypsum portion of the wall. At the tiled section of the wall, there is a 6" high gray marble base.</p>		5'-0" (no base)	LF
Minor	Fair to Good	Wall East – Door	<p>Door 1/303 is a new hollow metal door and frame within a gypsum framed wall. The HM door and frame are primed without a finish coat.</p>		1	EA
Minor	Poor	Wall – South	<p>The south wall is smooth plaster over a 3"x6" ceramic tile wainscot and bullnose cap. The plaster is in fair condition, with a large section of the material missing where the roof access is in the southwest corner. The existing plaster has significant staining and hairline cracks throughout. The ceramic tile is in fair condition with +/- 6 damaged tiles.</p>		39 (Plaster)	SF
Minor	Fair	Wall South – Base	<p>The base at the landing is a gray marble that matches the marble plinths at the base of the door frame—approximately 6" in height.</p>			13
Minor	Poor	Wall – West	<p>The wall has a 3"x6" ceramic tile wainscot, which runs parallel to and follows the pitch of the stair (long side of the tile). There is an ornamental bullnose cap at the top of the wainscot. Above the wainscot is a smooth plaster finish on the wall. The plaster is in poor condition with several patches of missing plaster. The paint finish is significantly deteriorated and missing.</p> <p>A metal attic access ladder is attached to the southwest corner. There is an outlet device just north of Door 2/303. The switch and cover are missing.</p>		192	SF
Minor	Poor	Wall West – Base	<p>At the third floor landing, there is a gray marble base at a 6" height. The extant tile and marble are in fair condition with heavy surface staining. The marble to the south of Door 2/303 is displaced/detached from the wall. On the north side of Door 2/303, the original gray marble plinth at the frame is destroyed.</p>		9'-8"	LF

Minor	Fair	Wall West – Door	Door 2/303 is a new door in an original opening. A new hollow metal frame and hollow metal door are inset within the original opening and wood trim frame. The HM door and frame are primed without a finish coat. The historic wood trim is damaged.		1	EA
Serious	Poor	Elevator enclosure	At the center of the Men’s Elevator Hall, the lift is open to view. There is a 2x tube steel frame with wire mesh infill surrounding the opening to an approximately 10-foot height. The metal is in poor condition with an elevated level of corrosion.		26	LF
Minor	Poor	Ceiling	The original ceiling finish was plaster applied direct to the concrete structure above. Several areas of the plaster finish are missing, with the underlying concrete deck exposed.		203	SF
Room 304 – Women’s Lounge						
Minor	Fair	Floor	The flooring is terrazzo with a 7 ¼” border at the hall side and extending into the door threshold between the partitions. The border and cove base appears to be slightly darker than the field terrazzo in some areas. There are two locations with floor penetrations for radiators. There is a radiator still extant in one location. At the east end of the space, there are three walls on the north side where the cove base has been removed in its entirety and ground down to the terrazzo floor level with a concrete patch installed. In the remaining locations, there are remnants of the original 2” gypsum block infill wrapped with 6” high terrazzo cove bases on the hall/public sides and plaster cove bases on the interior / private sides. Above the base, remnants of a 7/8” thick plaster finish at the walls are present, and sections of the white marble plinth from the original wood door frames are present. Electrical conduit and junction boxes extend up to a midpoint on the wall build-outs and have been cut off in most locations. Minor cracking is present at the terrazzo (see plan mark-ups). At the center of the hall, there is staining from an unknown substance that extends from the mid-point of the hall (aligned with window 304) and runs to the west. Small drops of green paint are present on the hall floor as well.		700	SF
Minor	Fair to Poor	Wall – North	At the west corner, the shaft enclosure has been partially removed. Remnants of the plaster, steel angle frame, and expanded metal mesh are present in a significantly deteriorated condition. The paint finish on most of this wall is missing. In the first room (A) – the plaster has been removed from the wall, with remnants of the plaster brown coat present at the corner. In Room B, the plaster at the wall is in a highly deteriorated condition with significant cracking aligned with the window sill and head, missing and delaminated plaster finish coat. In Room C, the plaster has highly deteriorated with missing sections and significant cracking. From the window sill down, a high percentage of the plaster finish coat is missing. There is a section under the window that is roughly 1SF with full plaster material loss. In Room D, the plaster is in better condition, but cracking is still present at the window sill, and there is missing plaster above the window. In Room E, the plaster is in fair condition		296	SF

			<p>with material loss above and below the window (3 SF). And horizontal cracking is present at the window sill and head. In Room F through H, the plaster is in fair condition with cracking present but minor material loss.</p> <p>The far east end of room H has a section of missing plaster finish coat (8 SF) which has been patched. The patch materials are heavily sanded and project beyond the original plaster face by 1/8" minimally. In each section where the original walls were removed, there are remnants of the plaster and gypsum block framing still extant. From Room D to Room H, there is a surface-mounted conduit that runs across the top of the base to the mechanical units. In Room E, there is an empty junction box with a surface-mounted conduit that extends from 24" high to the floor and penetrates the floor. Between Rooms G and H, there is an open electrical junction box embedded in the wall with exposed wiring. There is no escutcheon or cover plate.</p>			
Minor	Fair to Poor	Wall North – Base	<p>Concrete cove base 6" in height applied over the plaster finish. Roughly 1/2" in depth beyond the plaster face. The material is painted deep red. There are intermittent vertical cracks across the wall but no displacement of the material. At the far west end, where the shaft wall was partially removed, there is a section of damaged base (30" in length).</p>		37	LF
Serious	Fair	Wall North – Window	<p>The windows all appear to be original casement windows with original frames. It is unclear if the hinges are original, but there are several that exhibit areas of corrosion. The apron below the sill is 2" in height and has a nosing trim under the sill that is 3/4" in height (accounted for in the 2" apron height).</p> <p>Window 303 (Room D), the sills are in good condition. In Room D, the west edge of the sill at Window 303 was trimmed to accommodate an original partition wall (non-extant).</p> <p>At window 301, the interior stop has deteriorated along the west side, and the trim at the head is warped significantly.</p> <p>At window 303, the trim is hidden by mechanical equipment.</p> <p>At window 305, the interior stop is missing from the west side of the opening.</p>		6	EA
Minor	Fair	Wall – East	<p>The northern section of the wall has been removed. The center hall section of the wall is comprised of smooth texture plaster with a cementitious parge coat over plaster below with a pattern imprinted that simulates 3"x6" tile wainscoting. The parge coat extends to a height of roughly 5-feet, with the top 1-1/2" of this featuring a bullnose trim detail of the same cementitious material. The Hall leads into the Janitor's closet 304B, and to the north of the door trim, the wainscot cap (6") is missing. At the east face (Toilet 304A), the smooth</p>		104	SF

			plaster wall with wainscot detailing is the same. There is a vertical hairline crack in the plaster above the wainscot. The wainscot cap is missing (12"). The east wall (Room N) is exposed to the space with the removal of the original perimeter partitions in this space. The plaster is a smooth texture with minor delamination at the lower north side adjacent to the base (2 SF) and a diagonal crack at the upper southside below the wood trim crown molding. There are two circular junction boxes with no cover plates or fixtures – one is at a 47" height (to centerline), and the other is at a 6-foot height. It is assumed that the lower box next to the door was for a switch, and the upper was for a light fixture. Above the wood trim crown, the plaster has a higher level of delamination, cracking, and deterioration (10 SF).			
Minor	Fair	Wall East – Base	On the Hall side, the base is a light gray terrazzo with white aggregate 6" in height. At the wood door frame, there is a light gray/white marble plinth. Within Room N, the materials at the base change to a concrete cove base with a red painted finish. The paint finish is in poor condition.		13	LF
Minor	Fair	Wall East – Door	The wood door to the Janitor's Closet 304B is missing. There is a continuous wood trim running across the top of the doors and around to the north side wall, extending into Room N. At the location where the partition was removed, there is a missing 4" section of trim. The finish is a dark stain.		1	EA
Minor	Fair to Poor	Wall – South	Starting from the east (Room 304A Hall side), the plaster below the continuous wood trim at the head of the door is in fair condition east of the door. West of the door, the smooth plaster above the wainscot is cracked and delaminated (2 SF). The cementitious parge of simulated tile wainscot is in fair condition, with the wainscot cap at the west of the door missing (4" length). The plaster above the wood trim at the head of the door is in fair to poor condition, with a large diagonal crack at the east side. At the far south wall (Room N) to the Hall, the plaster is in fair condition with minor missing materials on the upper east side adjacent to a ceiling panel and down the wall approximately 24"x 24." At the base of this wall, there is horizontal cracking present and minor delamination to an approximate height of 12" above the base. There is plaster material loss at the intersection with the ceiling along the west side of this space. Where the original partition was removed, there are mortar remnants and missing plaster up to the adjacent door frame to the west (3 SF). The section of missing materials in this location is the parge coat wainscot. A section of the simulated wainscot is present on the west side of the door along with the cap and approximately 1 SF of material. There is an electrical junction box in this location with an elevated level of corrosion. Within Room M, the vertical shaft wall has been removed with only remnants of the base remaining. The far south wall of this space is in fair condition, with hairline cracking		272	SF

			at the top 18” of the wall. The far south wall plaster in rooms L through J has more than 50% plaster material loss with the underlying gypsum blocks and concrete framing exposed. At the plaster remaining, there is a high level of delamination and cracking present. In Room I, the plaster is almost fully missing, with exposed brick and concrete present. A small section of the overhead concrete and brick have been patched with a cementitious patching material.			
Minor	Fair	Wall South – Base	The terrazzo floor is present on the hall side (entry to Room 304A) with light gray marble plinths at the base of the door frame. At the far south wall, there is a concrete cove base 6” in height with a painted finish. Where the hall passes to Women’s Elevator Hall 301, there is a terrazzo base and marble plinths at the door casing. In Room M, the concrete cove base appears to have been painted black over the red finish. This concrete cove base is consistent along with the remainder of the south wall, broken by remnants of the original partitions that were removed. The concrete base is in good to fair condition with minor vertical cracking in Room K and more significant cracking present in Rooms I and J in the west corners of each space.		34	LF
Minor	Fair to Poor	Wall South – Trim	Stained wood trim is present at the entrance to Room 304A and Women’s Elevator Hall 301. The trim consists of vertical casing and frames as well as head trim above the doors. At 304A, the trim is continuous for the extent of the wall.			
Minor	Poor	Wall – West	This elevation is comprised of three bays – south, hall (center), and north. The south (Room I) has a small percentage of plaster remaining which is in a very poor condition. The underlying material of brick and concrete is exposed with concrete beam structure at the head, wood blocking, and brick infill bearing on another concrete beam at the base. Except for the wood, the underlying materials appear to be in good condition. The wood exhibits a high level of deterioration from suspect termite damage. The center hall section has smooth plaster over a cementitious parge coating at the simulated wainscot with a cap. The plaster is in poor condition with a high level of delamination and cracking along with sections of missing materials. In the north section (Room A), the smooth plaster wall has 40% material loss and a high level of cracking and delamination. The corner shaft partition has been removed. There is a recessed junction box adjacent to the door opening and a higher junction box adjacent to the north side of the window frame. Both are open boxes with no wiring, devices, or cover plates. The wood blocking/nailers have a significant amount of termite damage in this location.		152	SF
Minor	Fair to Poor	Wall West – Base	The base is divided into three sections – south, north, and center hall. The base at the north and south sections is a ½” thick concrete base 6” in height with a painted finish. There is a high loss of paint finish at the base with minimal indication of color present. The base		19	LF

			at the far south is cracked and damaged at the corner – 8” length. The base at the shaft buildout in the north corner is damaged with 50% missing material (2 LF). The center Hall is a gray terrazzo base with white aggregate. The terrazzo appears to be in fair condition.			
Serious	Fair to Poor	Wall West – Windows	<p>The windows all appear to be original casement windows with original frames (Qty 3 – 352, 352, 350)). It is unclear if the hinges are original, but there are several that exhibit areas of corrosion. The existing sills are 2'-10" long with a 2" offset from the wall and extend approximately 1-1/8" beyond the edge of window frame at each side. The apron below the sill is 2" in height and has a nosing trim under the sill that is 3/4" in height (accounted for in the 2" apron height).</p> <p>Window 353: The sills, apron, and trim appear to be in good condition.</p> <p>Window 352: The sills, apron, and trim appear to be in good condition.</p> <p>Window 350: The south window (350) sill and apron are missing. At window 350, the interior stop is missing from the north side of the opening.</p>		3	EA
Minor	Poor	Ceiling	<p>The ceiling is a smooth plaster finish with areas of missing material where the wire mesh ventilation grills were originally located and where partitions have been removed.</p> <p>In Room A, the plaster has been patched with a heavy sanded, textured brown coat. A section of the concrete deck has been left exposed. Surface-mounted conduit runs across the ceiling in room E. along the full length of the north wall, there are anchors that have been installed through the concrete deck and plaster, it is assumed this was a structural repair completed at the exterior roof or parapet. At the intersection of the two halls, there is a recessed junction box that is open with no device or cover plate. There are three locations along the south where a 2-feet by 3-feet opening was previously located and the area surrounding these has a lot of plaster loss. There is a section of missing plaster at the hall leading into Hall 301.</p>		700	SF
Room 304A – Toilet						
Minor	Fair to Poor	Floor	<p>The floor is an original 1/2" x 1/2" white marble mosaic tile. There are several areas where the tile has settlement / movement cracking with improper patching and mortar installed. There is a lot of grime over the surface concealing some conditions. There is an area west of the sink pedestal where excess mortar or concrete slurry is mounded on the floor. Behind the door (northwest corner of the room) there is a floor penetration from an extant radiator. There is minor ferrous metal staining from anchors installed in the floor and</p>		39	SF

			the radiator. The grout joints are in poor condition.			
Minor	Poor	Wall – North	The wall has a ceramic tile wainscot with bullnose cap (3"x6" size tile run in a horizontal running bond pattern). Given the level of grime on the wall the glaze of the tile was undetermined. It appears that it has a fired glazed finish. The upper wall is a smooth plaster finish with an area that has failed and delaminated adjacent to the ceiling (4" x 36"). There is a concrete ceiling beam at the west side of the room that is expressed. The plaster has horizontal and vertical cracking across the surface. The paint finish at the smooth plaster is highly deteriorated and / or missing across most of the surface. And a door / frame fills a large portion of the wall. The tile wainscot is in poor condition with a number of broken tiles present. At the east side, the plumbing water lines are surface mounted and penetrate the tile at the north wall. This condition appears to be a modification that was installed later than the original construction. The tile in this area has slight displacement and open grout joints at the corner.		48	SF
Minor	Fair	Wall North – Base	The base is a 6"x6" white ceramic tile (straight, with a slight cove) which sits proud of the wall tile by 1/4" to 3/8" and has a rounded top edge.		4	LF
Minor	Fair to Poor	Wall North – Trim	The existing wood trim surround and frame at the door appear to be original detailing. The finish has either been stripped or has failed due to unconditioned space for an extended amount of time. The wood trim on the east side provides a termination for the ceramic tile and is offset an additional 3" at the top above the wainscot. There is a head trim with a wood cap at the top of the door. The wood is in fair to poor condition and the finish is highly deteriorated.			
Minor	Poor	Wall North – Door	The door appears to be an original stile and rail door with wood veneer over a solid core. There is one large panel with consistent side and top rails and a larger bottom rail. The door is in poor to failing condition with delamination of the veneers in multiple locations and minor warping of the door. The hinges, door knobs, escutcheons and latch all appear to be original hardware. The finish on the door hardware is deteriorated.		1	EA
Minor	Fair to Poor	Wall – East	The east wall has a ceramic tile wainscot with 3"x6" tiles in a running bond pattern, a 6x6 ceramic cove base with rounded top edge and a bullnose tile at the cap of the wainscot. Above this, the wall is coated with a smooth plaster finish. The paint finish has failed at the upper wall and there appears to have been an attempt to mechanically remove the finish due to the uneven surface and scratching present.		80	SF

			There is rust staining at the upper wall, potentially from the brick structure or ferrous metal anchors behind the wall. There is a 6" diameter section of missing plaster located above the pedestal sink with brick exposed. Settlement cracking is evident at the north side of the wainscot with damaged tile present at the modified plumbing lines as well as vertical and diagonal cracking present across the visible area north of the pedestal since. There is a gray concrete slurry splatter across the tile surface and areas of rust colored staining (suspect from ferrous metal from anchors). There are three cracked tiles at the cove base below the pedestal sink.			
Minor	Poor	Wall East – Base	The base is a 6" x 6" white ceramic tile (straight, with a slight cove) which sits proud of the wall tile by ¼" to 3/8" and has a rounded top edge.		10	LF
Minor	Poor	Wall East – Plumbing	An original (or historic) pedestal sink is mounted at the south edge of the east wall prior to the water closet alcove. The pedestal sink has areas of concrete or mortar slurry over the west and north edges and in the basin. The handles on the faucet are still extant, but the spout has been removed. The plumbing below the sink is exposed and does not appear to be original. There is a minor amount of rust colored staining present in the sink.			
Minor	Fair to Poor	Wall – South	The south wall of the main toilet room is ceramic tile wainscot in keeping with the north and east walls for 20"-24" in width from the east wall and then transitions to a gray marble toilet partition and door. The upper wall is smooth plaster above the tile wainscot and is open above the marble partition with a 6"-8" overlap at the corner. The marble partition is flush with the face of the tile wainscot and slightly proud of the plaster wall with a ¼" to ½" offset. The tile and plaster are in fair condition with deterioration at the painted finish on the plaster. The marble is in good condition with two small anchors installed in the surface. The marble partition consists of an 18" wide panel at the east, the door opening and a vertical marble rail at the west side (4" in width) as well as a horizontal rail (4" wide) over the door opening. The partition door is missing. The latch is still present at the opening, but the hinges have been removed at the west side. It is assumed that the door was wood. There is minor deterioration at the joint between the marble and the smooth plaster upper wall.		72	SF
Minor	Fair	Wall South – Base	The base below the ceramic tile wainscot is a 6" x 6" white ceramic tile (straight, with a slight cove) which sits proud of the wall tile by ¼" to 3/8" and has a rounded top edge. There is no base transition at		9	LF

			the marble partition which carries to the tiled floor.			
Minor	Fair to Poor	Wall South – Toilet alcove	The alcove that the water closet is placed in has gray marble paneled walls for the full surround with 12"-15" of exposed smooth plaster at the top of the wall. The marble is in good condition with minor scratching and grime coating the surface. There are minor fastener holes in the marble, 1/4" in diameter typically. The upper wall plaster is in fair condition with the paint finish in a highly deteriorated condition. The water closet appears to be original and is in fair to poor condition.			
Minor	Fair	Wall – West	The west wall, north of the toilet alcove, has a ceramic tile wainscot with 3" x 6" tiles in a running bond pattern, a 6" x 6" ceramic cove base with rounded top edge and a bullnose tile at the cap of the wainscot. Above this, the wall is coated with a smooth plaster finish. The paint finish has failed at the upper wall and there appears to have been an attempt to mechanically remove the finish due to the uneven surface and scratching present. There is an original recessed junction box mounted in the plaster above the wainscot that is highly corroded. There are no devices or cover plates present. It is assumed that this was utilized for a wall sconce historically. The tile wainscot is in good condition with very minor cracking (1 tile at the cap was cracked and repaired).		84	SF
Minor	Fair	Wall West – Base	The base below the ceramic tile wainscot is a 6" x 6" white ceramic tile (straight, with a slight cove) which sits proud of the wall tile by 1/4" to 3/8" and has a rounded top edge. A few tiles are obscured by the floor mounted radiator.		7'-8"	LF
Minor	Poor	Ceiling	The ceiling is smooth plaster finish directly applied to the concrete structural deck. 50% of the plaster at the ceiling is missing. There appears to have been a large concrete patch installed at the north end of the ceiling. It is unknown if this was from previous deterioration or if there was a roof access door previously located in this room.		700	SF
Room 304B – Janitor's Closet						
Minor	Fair to Poor	Floor	The floor is an original 1/2" x 1/2" white marble mosaic tile. There is no obvious signs of deterioration, patching, or settlement cracking. There is a lot of grime over the surface concealing some conditions. The grout joints are in poor condition.		6	SF
Minor	Fair	Wall – North	The wall has a ceramic tile wainscot with bullnose cap (3" x 6" size tile run in a horizontal running bond pattern). There are three damaged tiles where surface-mounted plumbing lines were		16	SF

			removed. The upper wall is a smooth plaster finish. The plaster is in overall fair condition with minor hairline cracking present. The paint finish on the smooth plaster has highly deteriorated.			
Minor	Fair to Poor	Wall North – Base	The base below the ceramic tile wainscot is a 6” x 6” white ceramic tile (straight, with a slight cove) which sits proud of the wall tile by 1/4” to 3/8” and has a rounded top edge. One tile at the east corner is damaged where plumbing lines were removed.		2	LF
Minor	Fair to Poor	Wall – East	The wall has a ceramic tile wainscot with bullnose cap (3” x 6” size tile run in a horizontal running bond pattern). There were three tiles with damage under the edge of the janitor’s sink. The upper wall is a smooth plaster finish. The plaster is in poor condition with a high level of cracking present, specifically at the upper north corner. The paint finish on the smooth plaster has highly deteriorated.		28	SF
Minor	Fair	Wall East – Base	The base below the ceramic tile wainscot is a 6” x 6” white ceramic tile (straight, with a slight cove) which sits proud of the wall tile by 1/4” to 3/8” and has a rounded top edge. There was no evidence of tile damage visible.		3.5	LF
Minor	Fair to Poor	Wall – South	The wall has a ceramic tile wainscot with a bullnose cap (3”x6” size tile run in a horizontal running bond pattern). A majority of the wainscot is covered by the janitor’s sink, which appears to be original and is in fair condition with minor ferrous metal staining. There were a few cracked tiles observed (1 at the bullnose cap in the east corner). The upper wall is a smooth plaster finish. The plaster is in fair condition with a minor cracking present at the eastern corner. The paint finish on the smooth plaster has highly deteriorated.		16	SF
Minor	Fair	Wall South – Base	The base below the ceramic tile wainscot is a 6” x 6” white ceramic tile (straight, with a slight cove) which sits proud of the wall tile by 1/4” to 3/8” and has a rounded top edge. There was no evidence of tile damage visible.		2	LF
Minor	Fair	Wall – West	Most of this wall is filled with a wood door, frame, and trim. The wall has a ceramic tile wainscot with a bullnose cap (3”x6” size tile run in a horizontal running bond pattern) at the north side of the door. There is a minor displacement of the wood frame creating a gap between the wainscot tile and the frame. The upper wall is a smooth plaster finish. The plaster is in fair condition with a minor cracking present across the surface. The paint finish on the smooth plaster has highly deteriorated.		10	SF
Minor	Fair	Wall West – Base	The base below the ceramic tile wainscot is a partial 6” x 6” white ceramic tile and a gray marble plinth at the bottom of the wood door		1	LF

			facing trim.			
Minor	Missing	Wall West – Door	The door is missing.		1	EA
Minor	Fair	Ceiling	The ceiling is a smooth plaster finish directly applied to the concrete structural deck. Overall, the plaster is in fair condition with cracking visible at a majority of the perimeter. There is a recessed junction box which appears to be original and in a highly corroded condition. There is no device or cover plate installed. It is assumed that this provided an electrical feed to a light fixture.		6	SF
Room 304C – Janitor's Closet						
Minor	Fair	Floor	The floor is an original ½" x ½" white marble mosaic tile. There is no obvious signs of deterioration, patching, or settlement cracking. There is a high level of grime over the surface concealing some conditions. The grout joints are in poor condition.		6	SF
Minor	Fair to Poor	Wall – North	The wall has a ceramic tile wainscot with a bullnose cap (3" x 6" size tile run in a horizontal running bond pattern). There is minor surface crazing present in the tile glazed finish. The upper wall is a smooth plaster finish. The plaster is in overall fair condition with cracking present at the east edge of the wall adjacent to the door frame. The paint finish on the smooth plaster has highly deteriorated.		20	SF
Minor	Fair	Wall North – Base	The base below the ceramic tile wainscot is a 6" x 6" white ceramic tile (straight, with a slight cove) which sits proud of the wall tile by 1/4" to 3/8" and has a rounded top edge. There was no evidence of tile damage visible.		2.5	LF
Minor	Fair to Poor	Wall – East	Most of this wall is filled with a wood door, frame, and trim. The upper wall is a smooth plaster finish. The plaster is in fair condition with minor cracking present across the surface. The paint finish at the smooth plaster has highly deteriorated.		10	SF
Minor	Fair	Wall – South	The wall has a ceramic tile wainscot with a bullnose cap (3" x 6" size tile run in a horizontal running bond pattern). There is minor surface crazing present in the tile glazed finish and there is a splatter coating of a dark stain across the surface. The upper wall is a smooth plaster finish. The plaster is in overall fair condition with minor hairline cracking present. The paint finish on the smooth plaster has highly deteriorated. Above the base, in the wainscot tile, there is a metal (bronze) ventilation grill mounted in the wall.		20	SF
Minor	Fair	Wall South – Base	The base below the ceramic tile wainscot is a 6" x 6" white ceramic tile (straight, with a slight cove) which sits proud of the wall tile by 1/4" to 3/8" and has a rounded top edge. There was no evidence of tile damage visible.		2.5	LF

Minor	Fair	Wall – West	The wall has a ceramic tile wainscot with a bullnose cap (3" x 6" size tile run in a horizontal running bond pattern). There is minor surface crazing present in the tile glazed finish. A large portion of the wainscot is obscured by the janitor's sink which appears to be original with original plumbing fittings and in fair condition. The upper wall is a smooth plaster finish. The plaster is in overall fair condition with minor hairline cracking present. The paint finish on the smooth plaster has highly deteriorated.		24	SF
Minor	Fair	Wall West – Base	The base below the ceramic tile wainscot is a 6" x 6" white ceramic tile (straight, with a slight cove) which sits proud of the wall tile by 1/4" to 3/8" and has a rounded top edge. There was no evidence of tile damage visible.		3	LF
Minor	Fair	Ceiling	The ceiling is a smooth plaster finish. The plaster is in overall fair condition with minor hairline cracking present. There were three mud dauber nests present. The paint finish on the smooth plaster has highly deteriorated.		6	SF
Room 305 – Women's Lounge						
Minor	Fair to Poor	Floor	The flooring is terrazzo with a 7 ¼" border at the hall side and extending into the door threshold between the partitions (no longer extant with only the terrazzo bases remaining). The border and cove base appears to be slightly darker than the field terrazzo in some areas. There are two locations with floor penetrations for radiators. There is a radiator still extant in one location. In most locations where the partitions were removed, there are remnants of the original 2" gypsum block infill wrapped with 6" high terrazzo cove bases on the hall/public sides and plaster cove bases on the interior/private sides. Above the base, remnants of 7/8" thick plaster finish at the walls are present and sections of the white marble plinth from the original wood door frames are present. There are two locations where the cove bases have been fully removed and the opening at the floor infilled with incompatible concrete patches. Fairly significant cracking is present at the terrazzo in both the northeast corner of the space as well as at the southeast corner. Diagonal cracking and displacement have occurred at both corners. Minor cracking is present at the halls and south side of the space. There is an area of staining and surface deterioration at the center of the south floor area. The terrazzo appears to have been etched with the aggregate more exposed in this area. At the center of the room,		690	SF

			there is a mechanical chase that has been removed leaving only the base and remnants of mechanical ductwork remaining at the floor penetration. There are areas with minor paint splatter and ferrous metal staining present across this floor area.			
Minor	Poor	Wall – North	The wall is smooth plaster installed directly to brick exterior bearing walls. Roughly 50% of this façade has missing or highly deteriorated plaster. Where partitions were removed, below windows, and at the east side where the internal roof drawings were repaired, the brick is exposed. The paint finish at the plaster is highly deteriorated and missing in most locations.		216	SF
Minor	Fair to Poor	Wall North – Base	The base is a 6” gray terrazzo cove base that has been painted red. The paint finish has deteriorated. There is vertical cracking present across most of the wall surface.		27	LF
Minor	Fair to Poor	Wall North – Windows	<p>Window 308 – The window has been removed in its entirety and a mechanical ventilation unit installed. Additionally, shut-off switches and surface-mounted electrical conduit connected to the unit have been installed.</p> <p>Window 309 – The window is a pair of casement windows in fair to poor condition. The sill, apron, nosing below the sill, and interior frame stop are extant except for at the head of the window. The paint finish is in poor condition with areas indicating moisture/water infiltration to the interior. The sash on the east side has new hinges with non-removable pins, while the original hinges on the west side have ball tip hinges. The west side hinges are highly corroded. Daylight is visible around the sashes.</p> <p>Window 310 – The pair of casement windows is in fair condition. All trim, sill, apron, and nosing trim are extant. There is a slight bow at the center of the sill ½” down from flush. The hinges on the west side casement have been replaced with new ball tip hinges. The east side retains the original ball tip hinges which are in a highly corroded condition. The plaster surrounding the window frame has deteriorated.</p> <p>Window 311 – The window is in fair to poor condition. The sill, apron, and nosing trim are missing with the window framing below exposed. There is minor damage to the interior frame stop at the east side, 4”-6” in height from the sill. The paint finish is in fair to poor condition.</p>		4	EA

Minor	Fair to Poor	Wall – East	The wall is smooth plaster installed directly to brick exterior bearing walls. Roughly 15-20% of this façade has missing or highly deteriorated plaster. Where partitions were removed, at window surrounds, and on the north side where the internal roof drawings were repaired, the brick is exposed. There are areas of incompatible patching that have been completed. The paint finish on the plaster is highly deteriorated and missing in most locations.		200	SF
Minor	Fair to Poor	Wall East – Base	The base is a 6” gray terrazzo cove base that has been painted red. The paint finish has highly deteriorated. There is vertical cracking present across most of the wall surface.		25	LF
Minor	Fair to Poor	Wall East – Windows	<p>Window 312 – The window is a pair of casement windows in fair to poor condition. The sill, apron, nosing below the sill, and interior frame stop are extant. The paint finish is in poor condition with areas indicating water infiltration to the interior at the north side of the sill. The sash on the north side has new hinges with non-removable pins, while the sash on the south side has ball tip hinges that appear to be replacements. Daylight is visible around the sashes.</p> <p>Window 313 – The window is a casement window in fair to poor condition. The sill, apron, nosing below the sill, and interior frame stop are extant. The paint finish is in poor condition with areas indicating water infiltration to the interior visible at the sill. The sashes at the north and south sides have new ball tip hinges. Daylight is visible around the sashes. There is non-original wood blocking (assumed to be temporary) installed to fix the casement windows in a closed position.</p> <p>Window 314 – The window is a casement window in fair to poor condition. The sill, apron, nosing below the sill, and interior frame stop are all extant. The paint finish is in poor condition with areas indicating water infiltration to the interior visible at the sill. The sashes at the north and south sides have new ball tip hinges. Daylight is visible around the sashes.</p> <p>Window 315 – The window is a pair of casement windows in fair to poor condition. The sill, apron, nosing below the sill, and interior frame stop are extant except for at the head of the window. The paint finish is in poor condition with areas indicating water infiltration to the interior primarily at the sill. The sashes at the north and south sides</p>		4	EA

			have new ball tip hinges. Daylight is visible around the sashes.			
Minor	Fair to Poor	Wall – South	The wall is smooth plaster installed directly to brick exterior bearing walls. Roughly 15% of this façade has missing or highly deteriorated plaster. Where partitions were removed, at window surrounds, and at the east side where structural settlement cracking has occurred, the plaster was repaired. There are areas of incompatible patching that have been completed at the east corner. The paint finish on the plaster is highly deteriorated and missing in most locations.		200	SF
Minor	Fair to Poor	Wall South – Base	The base is a 6” gray terrazzo cove base that has been painted red. The paint finish has highly deteriorated. There is vertical cracking present across most of the wall surface.		25	LF
Minor	Fair	Wall South – Windows	<p>Window 316 – The window is a pair of casement windows in fair to poor condition. The sill, apron, nosing below the sill, and interior frame stop are extant. There appears to be some evidence of termite damage at the sill across its width and visible on the top side. The paint finish is in poor condition with areas indicating water infiltration to the interior at the north side of the sill. The sash on the east side has new hinges with non-removable pins, while the sash on the west side has ball tip hinges that appear to be original in a highly corroded condition. Daylight is visible around the sashes.</p> <p>Window 317 – The window is a casement window in fair to poor condition. The sill, apron, nosing below the sill, and interior frame stop are extant. The paint finish is in poor condition with areas indicating water infiltration to the interior visible at the sill. The sash on the east side has new hinges with non-removable pins, while the sash on the west side has ball tip hinges that appear to be original in a highly corroded condition. Daylight is visible around the sashes. There is non-original wood blocking (assumed to be temporary) installed to fix the east casement sash in a closed position.</p> <p>Window 318 – The window is a casement window in fair to poor condition. The sill, apron, nosing below the sill, and interior frame stop are all extant. The paint finish is in poor condition with areas indicating water infiltration to the interior visible at the sill. The sashes at the east and west sides have new ball tip hinges. Daylight is visible around the sashes.</p>		3	EA
Minor	Fair to Poor	Wall – West	A large majority of the west wall has been removed. On the south side, there is a 4-foot section still extant which has a smooth plaster		104	SF

			<p>finish that exhibits an elevated level of deterioration and structural settlement cracking at the upper south corner that extends up to the concrete structural beam. There is a recessed original electrical junction box at the top of this wall that has no device or cover plate installed. Beyond this section of the wall, there are small remnants of a partition wall on the north side, and a concrete beam that runs overhead along the south side of this space separating this area from Hall 302.</p> <p>The west wall of the Hall, now exposed to this area is comprised of a smooth plaster finish at the upper wall and a wainscot of cementitious parge coating that simulates a 3"x6" tile pattern (running bond) and has a bullnose cap. Both the plaster and wainscot have significant cracking present, with a loss of more than 50% of the bullnose cap. At the south side of Door 3/304, there are two electrical junction boxes – one mounted high and one low near the base. Neither have devices or cover plates installed and they are highly corroded.</p>			
Minor	Fair to Poor	Wall West – Base	<p>The base at the south section of wall is a 6" gray terrazzo cove base that has been painted red. The paint finish is highly deteriorated. There is vertical cracking present across most of the wall surface. At the far west wall (Hall 302), the base is a gray terrazzo 6" high material with no painted finish. At the door opening to Closet 304C, the wood door facing trim rests on top of gray marble plinths.</p>		13	LF
Minor	Fair to Poor	Ceiling	<p>The ceiling is a smooth plaster finish with areas of missing material where the wire mesh ventilation grills at the partitions (non-extant) were originally located. Overall, there is only 10% of the plaster missing or deteriorated with most of the missing materials located where the roof drain was repaired and where the central mechanical chase was removed. In this location, there has been a section of temporary plywood installed to infill the opening. There are sections of plaster missing at the expressed concrete structural beams as well. The paint finish is in poor to failing condition with areas that have a rough texture from scraping, assumed for removal of deteriorated finishes.</p>		690	SF
Room 306 – Men's Lounge						
Minor	Fair to Poor	Floor	<p>The flooring is terrazzo with a 7 ¼" border at the hall side and extending into the door threshold between the partitions (no longer extant with only the terrazzo bases remaining). The border and cove base appears to be slightly darker than the field terrazzo in some</p>		844	SF

			<p>areas. The terrazzo floor has minor cracking throughout and two larger cracks running north to south (roughly 8 feet long).</p> <p>Within the “corridor” between the private lounge rooms, there is an integral cove Terrazzo base 5 ½”. On the interior of the private lounge room is a concrete cove base 5-3/4” that have remnants of dark red paint.</p> <p>There are roughly 12 pipes/conduit holes that require patching within the terrazzo flooring. In the southwest corner of the room is a large hole in the floor to accommodate the roof drain. On the north side of the room are two boxed openings on the floor, which would have accommodated a light well.</p> <p>The lower section of the private lounge walls and curbs remain in place (roughly 14” in height).</p>			
Minor	Fair to Poor	Wall – North	<p>The wall is a smooth plaster in fair to poor condition with major horizontal and diagonal cracks on the east and west ends of the wall. Within the “corridor” space, the walls contain a terrazzo base that is flush with the concrete wainscoting. The wainscot consists of cementitious parge coating with a simulated 3”x6” tile pattern and a bullnose cap. The wainscoting sets 5-1/2” above f.f. and is 4’ in height. Above the wainscoting is plaster. On the portions of the wall within the private lounge rooms, the wall is a smooth plaster wall. The concrete base sets proud of the pilaster wall.</p> <p>The corners of the north wall are in poor condition due to the removal of the private lounge walls and large sections of missing plaster. Two of the corners will require structural reconstruction.</p> <p>The north wall contains the remains of two lightwells that would have provided natural light to the interior private lounge. The lightwell walls have been demoed, but the wall curbs remain, as well as the ghosting on the north wall where the walls once stood.</p> <p>The plaster has a light cream paint coating that is in fair to poor condition with staining and flaking throughout.</p> <p>One radiator is installed on the eastern side of the north wall.</p>		608	SF
Minor	Fair to Poor	Wall North – Base	<p>The wall base varies. Within the “corridor” between the private lounge rooms, there is an integral cove Terrazzo base 5-1/2”. On the interior of the private lounge room is a concrete cove base 5-3/4” with remnants of dark red paint.</p>		70	LF

Minor	Fair to Poor	Wall North – Trim and Special Features	<p>There is historic trim at the doors 1/312, 2/311, and 1/208A. The trim is addressed under the door section. There is a continuous wood trim that spans between doors 1/312 and 2/311. This trim creates the header trim for both doors and is in fair condition.</p> <p>Just above door 1/312 and spanning to the western edge of door 2/311 is an original open painted wire mesh grill (steel). The mesh is in fair condition with corrosion throughout.</p>			
Minor	Poor	Wall North – Door	<p>1/308 is a wood stile and rail door with a single panel frame that is original and in poor condition. The door's wood veneer is peeling away from the door frame and the interior framing is warping. The historic hardware remains in place and is in fair condition. The door is not worth salvaging. The wood casing trim is in fair to poor condition with weathering to the wood from sun exposure, as well as warping. The plinth blocks are marble.</p> <p>1/311 is original to the building and is a wood stile and rail door with a single defused glass panel with internal chicken wiring. The door is in poor condition. The door's wood veneer is peeling away from the door frame and the interior framing is warping. The historic hardware remains in place and is in fair condition. The door is not worth salvaging, but the glazing and hardware are worth salvaging. The wood casing trim is in fair to poor condition with weathering to the wood from sun exposure, as well as warping. The plinth blocks are marble.</p>		2	EA
Minor	N/A	Wall – East	The east side of Room 306 is open to Room 307.			
Minor	Fair to Poor	Wall – South	<p>The wall is a smooth plaster wall with a concrete base that sets proud from the pilaster wall roughly ½.” The plaster is in fair to poor condition with major horizontal and diagonal cracking throughout the wall. A consistent horizontal crack runs most of the wall roughly at the same level as the windowsills. Plaster is missing throughout the wall including a large 10-foot wide section on the western end and where all the private lounge divider walls once stood.</p> <p>The plaster has a light cream paint coating with a seafoam green color beneath. The paint is in fair to poor condition with staining, cracking, and flaking throughout.</p> <p>At the west corner, the shaft enclosure has been removed. Remnants of the plaster, steel angle frame, and expanded metal mesh are present in a significantly deteriorated condition.</p>		480	SF

			A roof drainpipe is anchored in the western corner. An electrical conduit runs along the top of the wall, feeding power to the three exhaust vents.			
Minor	Fair to Poor	Wall South – Base	The base is a concrete cove base 5 3/4" with remnants of dark red paint. The base projects 1/2" out from the plaster wall.		12	LF
N/A	N/A	Wall South – Trim	There is no trim on the south wall. Window trim is addressed under the window section.			
Serious	Fair	Wall South – Window	<p>The windows all appear to be original casement windows with original frames. The existing sills are 2'-10" long with a 2" offset from the wall and extend approximately 1-1/8" beyond the edge of the window frame at each side. The apron below the sill is 2" in height and has a nosing trim under the sill that is 3/4" in height (accounted for in the 2" apron height). Details concerning the interior window frame/stop and sills are noted below per window.</p> <p>Window 332: The window frame stop is in good condition. The apron and sill are in good condition. The window sash has rot/deterioration at the base.</p> <p>Window 333: The window frame/stops are in good condition on the sides of the window. The header frame and stop are warped. The apron and sill are in good condition.</p> <p>Window 334: The window frame/stops are in good condition on the side of the window. The header frame and stop are warped. The apron is in good condition. The sill is in poor condition with wood rot.</p> <p>Window 335: The window frame/stops are in good condition on the side of the window. The header is missing the interior stop. The apron and sill are in good condition.</p> <p>Window 336: The casement window has been removed and replaced with an exhaust vent.</p> <p>Window 337: The window frame stops are in good condition. The apron and sill are in good condition.</p> <p>Window 338: The window frame/stops are in good condition on the east side and at the header. The west side of the window is missing the upper 3" of the interior stop. The apron and sill are in good condition.</p>		10	EA

			<p>Window 339: The window frame/stops are in good condition on the east side and at the header. The west side of the window is missing the upper 3” of the interior stop. The apron is in good condition. The sill is in good condition but has been cut on the west side.</p> <p>Window 340: The casement window has been removed and replaced with an exhaust vent.</p> <p>Window 341: The window header frame/stops are in good condition. The west side of the frame has the interior stop installed at a different location, due to the private lounge room wall that was once installed adjacent to the window. The west side of the window is missing the interior stop. The apron and sill are in good condition, but the west side of both the apron and sill were installed short, due to the private lounge room wall that was once installed against the window.</p>			
Minor	Poor	Wall – West	<p>The plaster is in poor condition with large portions of plaster missing on the south side of the wall. Behind the missing plaster is a mix of bricks and board-formed concrete. The masonry grout is deteriorated.</p> <p>The north side of the wall within the “corridor” space and contains a terrazzo base that is flush with a concrete wainscoting. The wainscot consists of cementitious parge coating with a simulated 3”x6” tile pattern and a bullnose cap. The wainscoting sets 5-1/2” above f.f. and is 4’ in height. The wainscoting is in poor condition with cracking throughout. Above the wainscoting is smooth plaster.</p> <p>Within the private lounge room, the wall is a smooth plaster wall a concrete base. The concrete base sets proud from the pilaster.</p> <p>There are two abandoned piping straps anchored to the wall and a metal plate.</p>		96	SF
Minor	Fair to Poor	Wall West – Base	<p>The wall base varies. Within the “corridor,” there is an integral terrazzo cove base roughly 5-1/2”. The terrazzo base is in good condition. On the interior of the private lounge rooms is a concrete cove base 5 3/4” with remnants of dark red paint. The concrete base is in fair to poor condition.</p>		12	LF
N/A	N/A	Wall West – Trim	<p>There is no trim on the south wall. Window trim is addressed under the window section.</p>			
Minor	Fair	Wall West – Window	<p>The windows all appear to be original casement windows with original frames. The existing sills are 2’-10” long with a 2” offset from</p>		2	EA

			<p>the wall and extend approximately 1-1/8” beyond the edge of the window frame at each side. The apron below the sill is 2” in height and has a nosing trim under the sill that is 3/4” in height (accounted for in the 2” apron height). Details concerning the interior window frame/stop and sills are noted below per window.</p> <p>Window 342: The window frame/stops are in good condition. The header stop is missing. The apron and sill are in good condition.</p> <p>Window 343: The window frame/stops are in good condition. The apron and sill are in good condition.</p>			
Minor	Fair to Poor	Ceiling	<p>The plaster is in fair to poor condition with finish (paint) flaking/missing across most of the ceiling. The ceiling plaster that is in place is in fair condition, but large sections of plaster are missing, exposing the board formed concrete deck. This includes locates where the interior walls were removed and where the plaster has delaminated from the ceiling.</p>		844	SF
Room 307- Men's Lounge						
Minor	Fair	Floor	<p>The flooring is terrazzo with a 7 ¼” border at the hall side and extending into the door threshold between the partitions (no longer extant with only the terrazzo bases remaining). The border and cove base appears to be slightly darker than the field terrazzo in some areas. The floor is a terrazzo flooring and is fair condition. There are several concrete patches installed where interior partition walls have been removed.</p>		258	SF
Minor	Fair to Poor	Wall-North	<p>The north wall is divided east to west by finishes. The west side of the wall is a smooth plaster at the upper wall over a wainscot of cementitious parge coating with a simulated 3”x6” tile pattern and a bullnose cap. The east side of the wall is a smooth plaster wall a concrete base. The concrete base sets proud from the pilaster.</p>		112	SF
N.A	N.A	Wall North – Door	<p>Doors are addressed in Room 309 and Room 310</p>		2	EA
Minor	Fair to Poor	Wall - East	<p>The wall is a full plaster wall without wainscoting. The concrete base sets proud from the pilaster roughly 1/2.” The plaster is in fair to poor condition with hairline cracking throughout the wall. A portion of the plaster has been patched and an interior wall has been removed.</p>		144	SF
Minor	Fair to Poor	Wall East – Base	<p>The base is a concrete cove base 5 ¾” with remnants of dark red paint. The concrete base is in fair to poor condition.</p>		18	LF
Minor	Fair t	Wall East – Windows	<p>Window 328: The window frame/stops are in good condition. The apron and sill are in good condition.</p> <p>Window 329: The window frame/stops are in good condition. The</p>		3	EA

			apron and sill are in good condition. Window 330: The window frame/stops are in good condition. The apron and sill are in good condition.			
Minor	Fair to Poor	Wal – South	The wall is a smooth plaster wall a concrete base. The concrete base sets proud from the pilaster. The concrete base projects out from the pilaster roughly ½.” The plaster is in fair to poor condition with hairline cracking throughout the wall.		112	SF
Minor	Fair to Poor	Wall South – Base	The base is a concrete cove base 5 ¾” with remnants of dark red paint. The concrete base is in fair to poor condition.		14	LF
Minor	Fair	Wall South – Window	The windows all appear to be original casement windows with original frames. The existing sills are 2’-10” long with a 2” offset from the wall and extend approximately 1-1/8” beyond the edge of the window frame at each side. The apron below the sill is 2” in height and has a nosing trim under the sill that is 3/4” in height (accounted for in the 2” apron height). Details concerning the interior window frame/stop and sills are noted below per window. Window 331: The window has been replaced with an air vent. It is unclear if the wood frame/stops are still in place. The apron and sill are in good condition. Window 332: The window frame/stops are in good condition. The apron and sill are in good condition.		2	EA
Minor	Fair to Poor	Ceiling	The plaster is in fair to poor condition with finish (paint) flaking/missing across most of the ceiling. The ceiling plaster that is in place is in fair condition, but large sections of plaster are missing, exposing the board-formed concrete deck. This includes locations where the interior walls were removed and where the plaster has delaminated from the ceiling.		258	SF
Room 308 – Toilet						
Minor	Fair	Floor	The ½” x ½” white marble mosaic tile floor set in an ashlar pattern is in fair condition with areas of grout deterioration and significant cleaning required. Multiple plumbing fixtures mounted to the floor including (2) floor-mounted toilets, a radiator, floor-mounted urinal, and a sink pedestal.		71	SF
Minor	Fair to Poor	Wall – North	The upper wall is a smooth plaster and is in fair to poor condition with a horizontal crack running along the top of the wall and a 6”		88	SF

			<p>diameter hole in the northwest corner. The plaster has a light cream paint coating that is in fair to poor condition with missing and flaking paint throughout.</p> <p>Below the plaster is a 65" high (above f.f.) wainscoting made up of 3"x6" white subway tiles. There is a bullnose tile that caps the wainscoting. The base of the wainscoting is 6" x 6" cove base tile that sets out from the wainscoting roughly 1/4". The wainscoting is in fair condition with multiple abandoned anchors remaining in the wall and several cracked tiles.</p>			
Minor	Fair to Poor	Wall – East	<p>Most of the east wall is clad in marble that is acting as the side walls to the toilet partitions. The marble is in fair condition with several areas of staining and multiple abandoned anchors.</p> <p>The top 2-feet of the wall is plaster that is in poor condition with cracking throughout. The plaster has a light cream paint coating that is in fair to poor condition with missing and flaking paint throughout.</p> <p>There are (2) historic floor-mounted tank toilets along the east walls. The toilets are original to the building and in fair to poor condition.</p>		60	SF
Minor	Fair to Poor	Wall – South	<p>The upper wall is a smooth plaster and is in fair to poor condition. The plaster has a light cream paint coating that is in fair to poor condition with missing and flaking throughout.</p> <p>Below the plaster is a 65" high (above f.f.) wainscoting made up of 3"x6" white subway tiles. There is a bullnose tile that caps the wainscoting. The base of the wainscoting is 6" x 6" cove base tile that sets out from the wainscoting roughly 1/4". The wainscoting is in fair condition with multiple abandoned anchors remaining in the wall and several cracked tiles.</p>		88	SF
Minor	Poor	Wall – West	<p>The upper wall is a smooth plaster and is in fair to poor condition with hairline cracking throughout. The plaster has a light cream paint coating that is in fair to poor condition with missing and flaking throughout.</p> <p>Below the plaster is a 65" high (above f.f.) wainscoting made up of 3"x6" white subway tiles. There is a bullnose tile that caps the wainscoting. The base of the wainscoting is 6" x 6" cove base tile that sets out from the wainscoting roughly 1/4". The wainscoting is in fair condition.</p>		60	SF
Serious	Poor	Ceiling	<p>The plaster is in poor condition. Centered in the ceiling is a large metal panel that has been anchored into place. Large sections of plaster are missing around the metal panel</p>		71	SF

Room 308A– Janitorial Closet						
Minor	Fair	Floor	<p>½" x ½" white marble mosaic tile floor set in an ashlar pattern is in fair to good condition.</p> <p>Mounted to the floor, centered against the north wall, is a historic industrial sink. The sink is in fair condition with crazing throughout the porcelain finish.</p>		6	SF
Minor	Fair to Poor	Wall – North	<p>The upper wall is a smooth plaster and is in fair to poor condition with major horizontal and diagonal cracks throughout. The plaster has a light cream paint coating that is in fair to poor condition with staining and flaking throughout.</p> <p>Below the plaster is a 47" high wainscoting made up of 3"x6" white subway tiles. There is a bullnose tile that caps the wainscoting. The base of the wainscoting is 6" x 6" cove base tile. The wainscoting is in fair condition with (3) cracked tiles.</p>		20	SF
Minor	Fair	Wall – East	The plaster and tile wainscoting are in fair condition. The plaster has a light cream paint coating that is in fair to poor condition with staining and flaking throughout.		24	SF
Minor	Fair to Poor	Wall – South	Most of the south wall is taken up by door 1/308A. The plaster that is visible above the door is in fair to poor condition.		5	SF
Minor	Poor	Wall South – Door	1/308A is a wood stile and rail door with a single panel frame is in poor condition. The door's wood veneer is peeling away from the door frame and the interior framing is warping. The historic hardware remains in place and is in fair condition. The door is not worth salvaging. The wood casing trim is in fair to poor condition. The plinth blocks are marble.		1	EA
Minor	Fair to Poor	Wall-West	<p>The wall is a smooth plaster and is in fair to poor condition with major horizontal and diagonal cracks throughout. The plaster has a light cream paint coating that is in fair to poor condition with staining and flaking throughout.</p> <p>Below the plaster is a 47"-high wainscoting made up of 3"x6" white subway tiles. There is a bullnose tile that caps the wainscoting. The base of the wainscoting is 6" x 6" cove base tile. The wainscoting is in fair condition with (3) cracked tiles (total for the wainscoting).</p>		24	SF
Minor	Fair to Poor	Ceiling	The plaster ceiling is in fair to good condition with areas of paint finish deterioration over a portion of the space. There is one abandoned fixture with exposed wiring.		6	SF
Room 309 –						
Minor	Fair	Floor	Terrazzo floor is in fair condition with minor hairline cracking.		34	SF

Minor	Poor	Wall – North	<p>The plaster wall is in poor condition with hairline cracking and gouges throughout the wall. A large section of plaster has been removed on the top and east sides of the wall exposing a utility chase recessed within the exterior masonry wall. There are several abandoned anchors in the exposed brick masonry. The plaster has a smooth texture and a faded red/yellow paint finish. The plaster paint finish is in poor condition.</p> <p>A set of wood doors is stacked on the west side of the door, obscuring view of a large portion of the north wall.</p>		44	SF
Minor	Fair to Poor	Wall North – Base	<p>The wall base is a concrete cove base 5 ¾" with remnants of dark red paint. The base is in fair to poor condition with several vertical cracks and chipping paint throughout.</p>		5.5	LF
Minor	Poor	Wall – East	<p>The plaster wall is in poor condition with hairline cracking and gouges throughout the wall. A large section of plaster has been removed on the top and east sides of the wall exposing a utility chase recessed within the exterior masonry wall. There are several abandoned anchors in the exposed brick masonry. The plaster has a smooth texture and a faded red/yellow paint finish. The plaster paint finish is in poor condition.</p>		56	SF
Minor	Fair to Poor	Wall East – Base	<p>The wall base is a concrete cove base 5 ¾" with remnants of dark red paint. The base is in fair to poor condition with severe gouging and a large vertical crack on the north end.</p>		7	LF
Serious	Poor	Wall East – Window	<p>The windows all appear to be original casement windows with original frames. The existing sills are 2'-10" long with a 2" offset from the wall and extend approximately 1-1/8" beyond the edge of the window frame at each side. The apron below the sill is 2" in height and has a nosing trim under the sill that is 3/4" in height (accounted for in the 2" apron height). Details concerning the interior window frame/stop and sills are noted below per window.</p> <p>Window 324: The window frame, stops, apron, and sill are in fair to good condition.</p>		1	EA
Minor	Fair	Wall – South	<p>The wall is comprised of an open ventilation area screened with open metal mesh and a 1" metal perimeter frame. The metal mesh rests on top of a dark stained wood head trim that aligns with the top of the door 1/309. There is corrosion throughout the screen.</p> <p>Below the wood trim is a smooth plaster wall is in fair condition with gouges and hairline cracking throughout. A larger vertical crack is in the east corner. The west side of the wall is on an angle. This is where door 1/309 is installed. The plaster has a smooth texture and a faded red/yellow paint finish. The plaster paint finish is in poor</p>		56	SF

			condition with missing and flaking throughout.			
Minor	Fair	Wall South – Base	The wall base is a concrete cove base 5 ¾" with remnants of dark red paint. The base is in fair condition with gouges throughout.		4	LF
Minor	Fair	Wall South – Trim	There is a continuous wood trim that spans along the full length of the south wall, over door 1/309, and along the full length of the west wall. This trim creates the header trim for the door and is in fair condition.			
Minor	Poor	Wall South – Door	Door 1/309 is a wood stile and rail door with a single panel frame that is original and in poor condition. The door's wood veneer is cracked in several places and is peeling away from the door subframe. The top of the door subframe is completely exposed and falling apart. The historic hardware remains in place and is in fair condition. The door is not worth salvaging. The wood casing trim is in fair condition. The plinth blocks are marble.		1	EA
Minor	Fair	Wall – West	The plaster wall is in fair condition with gouges and hairline cracking throughout. The plaster has a smooth texture and a faded red/yellow paint finish. There are two (2) 3" diameter holes cut into the plaster. One is just to the north of door 1/209 and the other is center just below the continuous wood trim. The plaster paint finish is in poor condition with missing and flaking paint throughout.		32	SF
Minor	Fair	Wall West – Base	The wall base is a concrete cove base 5 ¾" with the remnants of dark red paint. The base is in fair condition with gouges throughout.		4	LF
Minor	Fair	Wall West – Trim	There is a continuous wood trim that spans along the full length of the west wall. Above the trim is roughly 2-feet of plaster. This trim creates the header trim for the door on the south wall and is in fair condition.			
Minor	Poor	Ceiling	The plaster is in poor condition with large patches of missing plaster at the northeast corner of the ceiling. The plaster has a smooth texture and a cream paint finish. The plaster paint finish is in poor condition with cracking and flaking throughout. Where the top coat of paint is missing, a light cream/yellow paint is visible.		34	SF
Room 310 – Corridor						
Minor	Fair	Floor	The terrazzo floor is in fair condition with minor hairline cracking and two concrete swaths running north to south where a partition wall once was installed. There is ferrous staining on the north side of the room, most likely where lockers were once being stored.		117	SF
Minor	Fair to Poor	Wall – North	The plaster wall is in fair to poor condition with hairline cracking and gouges throughout the wall. A large section of plaster has been removed on the west end of the wall to expose utility pipes. Around all three windows, there is large areas of missing and delaminating plaster. The plaster has a smooth texture and a cream paint finish		152	SF

			with hints of light seafoam green and faded red paint behind the cream. The plaster paint finish is in poor condition with missing and flaking throughout.			
Minor	Fair	Wall North – Base	The wall base is a concrete cove base that measures 5-3/4" in height and has the remnants of dark red paint. The base is in fair condition with several vertical cracks and chipping paint throughout. There is no base where the two ghosted partition walls were once installed.		19	LF
Serious	Fair to Poor	Wall North – Window	The windows all appear to be original casement windows with original frames. The existing sills are 2'-10" long with a 2" offset from the wall and extend approximately 1-1/8" beyond the edge of the window frame at each side. The apron below the sill is 2" in height and has a nosing trim under the sill that is 3/4" in height (accounted for in the 2" apron height). Details concerning the interior window frame/stop and sills are noted below per window. Window 324: The window frame/stops are in fair to poor condition. The apron and sill are missing. Window 325: The window frame/stops are in fair to poor condition. The top 2" of the east side of the window jamb stop is missing. The apron and sill are missing. Window 326: The window frame/stops are in good condition.		3	EA
Minor	Fair	Wall – East	The plaster wall is in fair condition with hairline cracking and gouges throughout the wall. There are two 3" diameter holes, one at the top of the wall and one just east of door 2/310. The plaster has a smooth texture and a cream paint finish with hints of light seafoam green paint behind the cream. The plaster paint finish is in poor condition with missing and flaking throughout.		56	
Minor	Fair	Wall East – Base	The wall base is a concrete cove base that measures 5 3/4" in height and has large amounts of dark red paint. The base is in fair condition with several gouges throughout.		7	LF
Minor	Fair to Poor	Wall – South	The plaster wall is in fair to poor condition with hairline cracking and gouges throughout the wall. There is a larger vertical crack just east of door opening 3/310 and several patches of missing and delaminated plaster to the west of door opening 3/310. Plaster has been removed on the west side of the wall to reveal utility pipes. The plaster has a smooth texture and a cream paint finish with hints of light seafoam green and faded red paint behind the cream. The plaster paint finish is in poor condition with missing and flaking paint throughout. A large set of metal lockers is being stored in the west corner,		136	SF

			blocking the lower side of the south wall.			
Minor	Fair	Wall South – Base	The wall base is a concrete cove base that measures 5 ¾" in height and has remnants of dark red paint. The base is in fair condition with several vertical cracks and chipping paint throughout. There is no base where the two ghost outlines of partition walls remain.		17	LF
Minor	Fair	Wall South – Trim	There is a continuous wood trim that spans between doors 2/310 and 3/310. This trim creates the header trim for both doors and is in fair condition. There is a second continuous wood trim that spans between the no longer extant partition walls. This continuous wood trim sets higher than the door trim.			
Minor	Poor	Wall South – Door	Door 2/310 is a wood stile and rail door with a single panel frame that is original and in poor condition. The door's wood veneer is cracked in several places and is peeling away from the door subframe. Part of the historic hardware remains in place and is in fair condition. The door is not worth salvaging. The wood casing trim is in fair to poor condition with weathering to the wood from sun exposure, as well as warping. The plinth blocks are marble. Door 3/310 is a wood-framed door opening with the wood door missing. The door hinges are still installed on the west side of the door opening. The wood casing trim is in fair to poor condition with weathering to the wood from sun exposure, as well as warping. The plinth blocks are marble. The plinth block on the east side of the door opening is missing.		2	EA
Minor	Fair to Poor	Wall – West	The wall is comprised of an open ventilation area screened with open metal mesh and a 1" metal perimeter frame. The metal mesh rests on top of a dark stained wood head trim that aligns with the top of door 1/310. The screen has corrosion throughout. Below the wood trim is a smooth plaster wall that is in fair to poor condition with hairline cracking and gouges throughout the wall. There is plaster missing along the north side of the wall. The plaster has a smooth texture and a cream paint finish with hints of light seafoam green paint behind the cream. The plaster paint finish is in poor condition with missing and flaking paint throughout.		48	SF
Minor	Fair	Wall West – Base	The wall base is a concrete cove base that measures 5 ¾" in height and has remnants of dark red paint. The base is in fair condition with several vertical cracks and chipping paint throughout.		3	LF
Minor	Poor	Wall West – Door	Door 1/310 is a wood stile and rail door with a single panel frame that is original and in poor condition. The door's wood veneer is missing at the base of the door and is peeling away from the door		1	EA

			subframe in several other locations. The historic hardware remains in place and is in fair condition. The door is not worth salvaging. The wood casing trim is in fair to poor condition with weathering to the wood from sun exposure, as well as warping. The plinth blocks are marble.			
Minor	Fair to Poor	Ceiling	<p>The plaster is in fair to poor condition with hairline cracking throughout and patches of missing plaster along the north side of the ceiling. The plaster has a smooth texture and a cream paint finish. The plaster paint finish is in poor condition with cracking and flaking throughout. Where the top coat of paint is missing, a light seafoam green paint is visible.</p> <p>Two plastered concrete beams are running north to south across the ceiling. On either side of the eastern beam is the original open painted wire mesh grill (steel) installed running north to south. Ghosting on the walls indicates partition walls have been removed directly below the mesh grill.</p>		117	SF
Room 311 – Office						
Minor	Fair	Floor	Concrete topping slab floor with remnants of a red painted finish. The floor appears to be in fair condition with minor hairline cracking and pitting.		78	SF
Minor	Fair to Poor	Wall – North	<p>The wall is a full plaster wall with a coved concrete base that projects out from the wall. The plaster is in poor condition with major horizontal, vertical, and diagonal cracking. Two large holes (roughly 1' x 3' and 6" x 2') have been cut into the wall to provide access to utilities within the wall. In the top western corner is a 3" diameter hole.</p> <p>The plaster has a light cream paint coating with patches of a seafoam green beneath. The paint is in poor condition with cracking and flaking throughout.</p>		84	SF
Minor	Fair to Poor	Wall North – Base	The wall base is a concrete cove base that measures 5 ¾" in height and has remnants of a dark red paint. The base is in fair to poor condition with several vertical cracks.		7.5	LF
Minor	Fair to Poor	Wall North – Trim and Special Features	The trim is addressed under the door section.			
Minor	Poor	Wall North – Door	Door 1/311 is an original wood stile and rail door with a single clear glass panel. The door has been removed from the wood frame and is leaning against the wall. The historic hinges remain in place and are in fair condition. The door lock/handle/push plate is missing. The wood veneer is starting to cup at the base of the door, but in general,		1	EA

			<p>the door is in fair condition.</p> <p>The wood casing trim is a simple 3 ½” wood board that is in fair condition with deterioration to the finish. The west casement board has pulled away from the wall. The plinth blocks are marble.</p>			
Minor		Wall – East	The plaster wall is in fair to poor condition with hairline cracking and gouges throughout the wall. The plaster has a smooth texture and a cream paint finish with hints of light seafoam green paint behind the cream. The plaster paint finish is in poor condition with missing and flaking paint throughout.		60	SF
Minor	Fair	Wall East – Base	The wall base is a concrete cove base that measures 5 ¾” in height and has remnants of a dark red paint. The base is in fair to poor condition with hairline cracking throughout.		7.5	LF
Minor	Fair to Poor	Wall – South	<p>The plaster wall is in fair to poor condition with hairline cracking and gouges throughout the wall. There is a larger diagonal crack on the east side of the wall. The plaster has a smooth texture and a cream paint finish with hints of light seafoam green paint behind the cream. The plaster paint finish is in poor condition with missing and flaking throughout.</p> <p>A floor-mounted radiator is installed in the east corner, blocking the lower north side of the wall.</p>		84	SF
Minor	Fair to Poor	Wall South – Base	The base is a concrete cove base 5 ¾” with remnants of dark red paint. The base projects ½” out from the plaster wall.		7.5	LF
Minor	Fair	Wall South – Door	Door 1/311 is original to the building and is a wood stile and rail door with a single defused glass panel with internal metal wiring. The door is in poor condition. The door's wood veneer is peeling away from the door frame and the interior framing is warping. The historic hardware remains in place and is in fair condition. The door is not worth salvaging, but the glazing and hardware are worth salvaging. The wood casing trim is in fair to poor condition with weathering to the wood from sun exposure, as well as warping. The plinth blocks are marble and on the interior of the room, the east plinth block has been pulled away from the wall.		1	EA
Minor	Poor	Wall – West	The plaster wall is in fair to poor condition with hairline cracking and gouges throughout the wall. There is a larger vertical and horizontal crack at the south corner and top of the wall. The plaster has a smooth texture and a cream paint finish with hints of light seafoam green paint behind the cream. The plaster paint finish is in poor condition with missing and flaking throughout.		60	SQ
Minor	Fair to Poor	Wall West – Base	The wall base is a concrete cove base that measures 5 ¾” in height and has remnants of dark red paint. The concrete base is in fair		7.5	LF

			condition with scuffs throughout and a crack in the southwest corner.			
Minor	Fair to Poor	Ceiling	<p>The plaster is in fair to poor condition with hairline cracking throughout and missing plaster on the wood access panel. The plaster has a smooth texture and a cream paint finish. The plaster paint finish is in poor condition with cracking and flaking throughout. Where the top coat of paint is missing, a light seafoam green paint is visible.</p> <p>On the east side of the room is a plastered concrete beam running north to south. Centered on the ceiling is a wood access panel (3-foot by 5-foot).</p>		78	SF
Room 312 – Room						
Minor	Fair	Floor	<p>The terrazzo floor is in fair condition with minor cracking throughout.</p> <p>There is a radiator installed in the northeast corner that has not been removed. This radiator piping remains and is extending out of the terrazzo floor.</p>		41	SF
Minor	Poor	Wall – North	<p>The plaster wall is in poor condition with 98% of the plaster missing and a small portion of the plaster remaining in the bottom west corner. Behind the missing plaster is brick infill and concrete at the base. The exposed masonry is in fair to poor condition with dusting mortar and missing mortar throughout. The exposed concrete has a significant vertical crack. The concrete base is not flush with the plaster that remains.</p>		44	SF
Minor	Fair	Wall North – Base	<p>The wall base is a concrete cove base that measures 5 ¾" in height and has remnants of dark red paint. The concrete base is in fair condition with scuffs throughout and a crack in the southwest corner.</p>		5.5	LF
Minor	Fair to Poor	Wall – East	<p>The plaster wall is in fair poor condition with hairline cracking and gouges throughout the wall. The plaster has a smooth texture and a cream paint finish with hints of faded red paint behind the cream. The plaster paint finish is in poor condition with missing and flaking throughout.</p> <p>A floor-mounted radiator is installed in the north corner, blocking the lower north side of the wall.</p>		60	SF
Minor	Fair	Wall East – Base	<p>The wall base is a concrete cove base that measures 5 ¾" in height and has remnants of dark red paint. The concrete base is in fair condition with scuffs throughout.</p>		7.5	LF
Minor		Wall – South	<p>The wall is comprised of an open ventilation area screened with open metal mesh and a 1" metal perimeter frame. The metal mesh rests on top of a dark stained wood head trim that aligns with the top of the door 1/312. There is corrosion throughout the screen.</p> <p>Below the wood trim is a smooth plaster wall that is in fair to poor</p>		44	SF

			condition with hairline cracking and gouges throughout the wall. A larger vertical crack is visible at the west corner. The plaster has a smooth texture and a cream paint finish with hints of faded red paint behind the cream. The plaster paint finish is in poor condition with missing and flaking throughout.			
Minor	Fair	Wall South – Base	The wall base is a concrete cove base that measures 5 ¾" in height and has remnants of dark red paint. The concrete base is in fair condition with scuffs throughout and a crack in the southwest corner.		2.5	LF
Minor	Poor	Wall South – Door	Door 1/312 is a wood-trimmed opening. The door is missing from the opening. The wood casing trim is in fair to poor condition with weathering to the wood from sun exposure, as well as warping. The bottom 6" of the east stop is missing. The plinth blocks are marble and have shifted away from their original position on the north side of the wall (interior of Room 312).		1	EA
Minor		Wall – West	The plaster wall is in fair to poor condition with hairline cracking and gouges throughout the wall. There are several areas of delaminated and missing plaster along the base of the wall. A larger vertical crack is visible at the south corner and two 4" diameter holes on both the west and east sides of the wall. The plaster has a smooth texture and a cream paint finish with hints of faded red paint behind the cream. The plaster paint finish is in poor condition with missing and flaking throughout		60	SF
Minor		Wall West – Base	The wall base is a concrete cove base that measures 5 ¾" in height and has remnants of dark red paint. The concrete base is in fair condition with scuffs throughout and a crack in the southwest corner.		7.5	LF
Serious		Wall West – Window	The windows all appear to be original casement windows with original frames. The existing sills are 2'-10" long with a 2" offset from the wall and extend approximately 1-1/8" beyond the edge of the window frame at each side. The apron below the sill is 2" in height and has a nosing trim under the sill that is ¾" in height (accounted for in the 2" apron height). Details concerning the interior window frame/stop and sills are noted below per window. Window 344: The window frame/stops are in good condition. The header interior stop is missing. The apron and sill are in good condition.		1	EA
Minor		Ceiling	The plaster is in poor condition with a large section of plaster missing on the north side of the ceiling, exposing the concrete deck and deteriorated reinforcing. The plaster has a smooth texture and a cream paint finish. The plaster paint finish is in poor condition with cracking and flaking throughout.		41	SF

EXISTING CONDITIONS TABLES - STRUCTURAL

Deficiency Ratings (Critical, Serious, Minor)

Condition Ratings (Good, Fair, Poor)

Maurice Assessment Checklist – Structural						
Deficiency Rating	Condition Rating	Component – Exterior or Interior	Existing Condition	Reference	Qty	Unit
Structural						
Serious	Poor	Concrete Floor Framing	Overhead concrete beam deterioration		180	LF
Serious	Poor	Concrete Floor Framing	Overhead concrete slab deterioration – partial depth		675	SF
Serious	Poor	Concrete Floor Framing	Overhead concrete slab deterioration – full depth		100	SF
Serious	Poor	Concrete Floor Framing	Concrete cracking		1100	LF
Critical	Poor	Concrete Floor Framing	Large slab penetration above the basement pool in Room B010.		1	LS
Serious	Poor	Concrete Floor Framing	Concrete cracking at one location on north elevation indicates possible structural differential movement or settlement.		1	LS
Serious	Poor	Overhead framing in Roycroft Room	Portions of overhead framing are deteriorated and it is unclear if the steel rods are performing as intended.		1	LS
Serious	Poor	Skylight framing above first level.	Short wood framed walls in skylights are rotating outward.		2	EA
Serious	Poor	Attic framing – east side.	Short wood framed walls in attic are rotating outward.		1	LS

EXISTING CONDITIONS TABLES - MECHANICAL AND PLUMBING

Deficiency Ratings (Critical, Serious, Minor)

Condition Ratings (Good, Fair, Poor)

Maurice Bathhouse Assessment Checklist – Mechanical and Plumbing						
Deficiency Rating	Condition Rating	Component – Exterior or Interior	Existing Condition	Reference	Qty	Unit
Plumbing						
Minor	Fair	Domestic Water Service	Existing 2" water service is likely too small to serve future uses. Current location will interfere with future space use.	P1, XP.1	1	EA.
Minor	Fair	Water Service Backflow Preventer	1-1/2" RPZ backflow preventer is missing air gap fitting and drain piping. Current location will interfere with future space use.	P1, XP.2	1	EA
Minor	Fair	Gas Service	Existing gas service was installed around 2002 and appears to be in good condition. However, the current capacity will be too small to serve the entire building future use and the new generator.	P1, XP.3	1	EA
Minor	Fair	Gas Piping - Int	The gas piping is in good condition. However, the size will be too small for the future building use, and the location will interfere with the space use of the basement.	XP.4	1	LS
Minor	Fair	Roof Drains	Main building roof drains are in pretty good shape, except many of the plastic domes are not connected securely to the drain bodies	P5, XP.5	7	EA
Serious	Poor	Entry Roof Drains	Roof drains are relatively new, but there are no emergency drains or overflow scuppers.	XP.6		
Serious	Fair	Roof Drainage	Storm water piping is not connected to storm sewer but dumps into the abandoned pool.	P1, XP.7	4	EA
Serious	Poor	Waste & Vent Piping	Above slab, on grade waste, and vent piping (except that is currently in use) are well past their life expectancies. Much of the existing piping is disconnected	XP.8	1	LS
Serious	Poor	Waste Piping	Under-slab waste piping is likely original to the building and is past its useful lifespan.			
Serious	Poor	Plumbing Fixtures	Remaining plumbing fixtures, except those in the temporary restroom, are well past their life span, and many are damaged.	XP.9	1	LS
Serious	Poor	Basement	Thermal water spring(s) are leaking into the east crawlspace. The current containment basins are silting up and backing up into the crawlspace. The backed-up water is spilling out of the access door to the crawlspace and is flooding part of the basement.	P1, XP.10, XP.11	1	LS
Serious	Poor	Elevator Sump	We could not determine if the elevator sump pump was installed in	P1	1	EA

		Pump	2009 as we could not find the discharge piping shown on the 2009 design drawings.			
Minor	Fair	Basement Sump Pumps	Existing sump pumps seemed to be keeping up with the thermal spring leaks. However, they are more than 20 years old.	P1, XP.10	2	EA
Minor	Fair	Irrigation System	The irrigation system located in the NW corner of the basement appears to be in fair condition. However, its current location will interfere with the future use of that space.	P1, XP.12	1	LS
Critical	Poor	North Drainage Runnel	Existing area drain in the runnel on the north side of the building silts up, and water backs up in the runnel and can overflow.	P1, XP.13	1	EA
Mechanical						
Minor	Fair	Building Cooling	AHU-1 condensing unit appears to be in fair condition. However, the unit was not operating. It is almost 20 years old and is approaching its lifespan. Current location is not screened from view	M2, XM.1	1	EA
Minor	Fair	Hale Condensing Unit	The Hale building condensing unit is located on the Maurice site and will likely interfere with new outdoor equipment for the future building use.	M2, XM.1	1	EA
Minor	Fair	Air Conditioning	AHU-1 serves the first floor and looks to be in decent condition. As noted above this equipment is approaching its typical lifespan.	XM.2	1	EA
Serious	Poor	Air Conditioning	The remaining areas of the building are not cooled or dehumidified		1	LS
Minor	Poor	Supply Ductwork	The ductwork is galvanized steel in a very wet environment, but we did not notice any serious rusting. However, the sheet metal does not appear to be of the correct gauge or adequate reinforcement and is sagging.	XM.3	1	LS
Minor	Poor	Building Heating	The existing boiler appears to be in fair condition. It is not as efficient as newer boilers and is almost 20 years old. The boiler only serves AHU-1, and it does not have enough capacity to serve the entire future building use. The remainder of the building is not heated	XM.4	1	LS
Critical	Fair	Crawlspace Exhaust Fan	Fan was not operating automatically. We were able to start the fan manually.	XM.5	1	EA
Minor	Fair	Temporary Exhaust/Intake Systems	Propeller fans have been installed in several old window locations in the basement and on the 2 nd and 3 rd floors with intake louvers and dampers in old window locations on the opposite exterior wall. They all appeared to be in fair condition but due to the mild to cool weather they were not operating. This equipment will interfere with the future building uses.	XM.6	6	EA
Minor	Fair	Elevator Equipment Room Cooling	The elevator equipment room is cooled by a mini-split DX system with an indoor wall mounted unit and a remote condensing unit located on the north side of the building. The equipment still has some useful life left, but the elevator equipment room is planned to be relocated. And the condensing unit for the elevator equipment room will interfere with the north equipment yard for the future	XM.7	1	EA

			building use.			
Minor	Poor	Steam Radiators and Piping	A few steam radiators and some existing steam piping remains and appears to be original or very old. Most of the piping is disconnected, and there is no steam source. Therefore, the system is not operational.	XM.8, XM.9	1	LS
Minor	Poor	Old Ductwork	Very little ductwork remains other than that served by AHU-1 and is mostly behind chases and appears to be original to the building.	XM.10	1	LS

EXISTING CONDITIONS TABLES - ELECTRICAL AND FIRE PROTECTION

Deficiency Ratings (Critical, Serious, Minor)

Condition Ratings (Good, Fair, Poor)

Maurice Assessment Checklist – Electrical and Fire Prevention						
Deficiency Rating	Condition Rating	Component – Exterior or Interior	Existing Condition	Reference	Qty	Unit
Electrical						
Minor	Fair	Basement Wireway	Open wireway in basement. Cover should be installed.	XE.2	1	LS
Minor	Fair	Interior Panelboard	Remove old panelboard.	XE.3		LS
Minor	Fair	Exterior Roof	Adjust roof hatch location so same opens fully.	XE.4	1	
Serious	Poor	Conduit	Install waterproof wire nuts in below grade exterior applications.	XE.5	1	LS
Minor	Fair	Interior wiring	Disconnect and remove all old and nonfunctioning wiring.	XE.6	1	LS
Minor	Fair	Temporary Lighting and wiring	Remove all temporary lighting and temporary wiring.	XE.7, XE.8, XE.9	1	LS
Critical	NA	Emergency Lights	Building did not have any obvious emergency light fixtures or exit signs.		1	LS
Minor	Fair	Security System	Security system is not functioning. Battery appears not to be functional.	XE.11	1	LS
Critical	Poor	Open wiring	Open wiring was observed in several locations throughout the building. Open wiring represents a safety hazard for anyone entering building.	XE.12	1	LS
Minor	Fair	Light Fixtures	Light fixtures are missing in various locations throughout the building.	XE.14	1	LS
Minor	Fair	Junction Boxes	There are open knock outs in various junction boxes.		1	LS
Minor	Fair	Junction Box Cover Plates	There are junction boxes with missing cover plates.	XE.15, XE.16, XE.17, XE.18, XE.20	1	LS
Minor	Good	Fluorescent Fixtures	Fluorescent fixtures were observed and not functioning.	XE.28	1	LS
Serious	Fair	Conduit System	Conduit System was damaged in several locations throughout the building.	XE.10	1	LS
Serious	Fair	Light Fixtures	Properly support all light fixtures.	XE.22	1	LS
Serious	Fair	Penetrations	Properly seal all penetrations.	XE.23, XE30	1	LS
Minor	Good	Temporary Equipment and wiring	All temporary equipment should be removed or installed in a more protected manner. Temporary wiring should only be installed for 90 days or less to comply with the NEC unless construction is occurring.	XE.9, XE.13	1	LS

Serious	Poor	Incomplete wiring	Equipment was observed with wiring incomplete or partially demolished.		1	LS
Minor	Fair	Open conduit system	Open conduit system. Complete system or remove conduit not required to remain.	XE.19, XE.39, XE.40	1	LS
Serious	NA	Arc Flash Labels	Equipment was observed with no arc flash labels.		1	LS
Serious	Poor	Grounding Electrode System	Could not identify if the building has a code compliant grounding electrode system. Provide proper grounding electrode terminations.	XE.21		LS
Serious	Fair	Exits	All exterior exits do not have lighting at them.	XE.24	1	LS
Serious	Fair	Elevator Equip Room	Adjust door location so that same can swing open to a full 90 degrees.	XE.25, XE.26	1	1
Minor	Good	IT Service Entrance	IT service entrance is presently located in the basement at the south end of the pool. Equipment is not in a protected area.	XE.27	1	1
Serious	Fair	Panelboards	Equipment has the appearance of rust. Molded case circuit breakers should be replaced if any water exposure has occurred. Circuit breakers may not function properly if water has been present.	XE.28, XE.41	2	Panelboards
Serious	Fair	Panelboards	Panelboards were observed with openings in dead fronts. Shock hazard and greater arc flash hazard exists with dead fronts removed or compromised.	XE.29	2	Panelboards
Serious	Fair	Conduit System	Remove all rusted conduit and conduit abandoned in locations throughout the building.	XE.31, XE.32	1	LS
Serious	Fair	Wiring	Support all wiring.	XE.33, XE.35	1	LS
Minor	Fair	Junction Box Cover Plates	There are junction boxes with missing cover plates.	XE.34	1	
Minor	Fair	Wiring	Complete all wiring. Provide cover plates for all junction boxes.	XE.36	1	LS
Serious	Poor	Non continuous conduit system	Conduit system was observed to be broken in several locations. In these cases, grounding system is not functioning properly.	XE.37	1	LS
Minor	Fair	Façade Lighting	Façade lighting does not appear to be functional.	XE.38	2	Fixtures
Fire Protection						
Critical	Good	Fire Alarm System	System is not functioning. The circuit breaker serving the fire alarm system is in the off position. Fire alarm panel location could not be identified in building.	XE.1	1	LS

APPENDIX H - TREATMENT TABLES

TREATMENT TABLES - SITE

Deficiency Ratings (Critical, Serious, Minor)

Condition Ratings (Good, Fair, Poor)

Maurice Bathhouse Treatment Checklist – Site									
Uni-format WBC Code	Deficiency Rating	Condition Rating	Component – Exterior or Interior	Treatment	Reference	Qty	Unit	Total Cost	
Site									
	Serious	Fair	North runnel	Replace concrete runnel.	XAE.12	100	SF		
	Minor	Fair	North runnel	Replace runnel side wall with concrete	XAE.12	74	LF		
	Critical	N/A	North mech screen	Provide 6'-0" tall pre-finished aluminum louvered screen wall around mechanical equipment north side of building	XAE.6	55	LF		
	Minor	Good	North ramp to entry	Replace handrails and expand to meet DSC accessibility requirements or ramps. <i>*Note: although not currently expected, the ramp may require repair if disturbed by MEP site work</i>		110	LF		
	Critical	N/A	North egress stair	Provide painted steel egress landing, stair, guardrail, and handrail at northeast egress door. Stair requires (3) risers.	XAE.14	1	EA		
	Critical	N/A	North egress stair	Provide concrete landing and sidewalk to connect new egress stair to existing paved walk	XAE.14	45	SF		
	Minor	Good	North paved walk	Remove and replace concrete sidewalk disturbed for mechanical unit relocation	XAE.3	125	SF		
	Critical	Fair	North landscape	Restore lawn and holly hedge disturbed by installation of mechanical equipment	XAE.3	1000	SF		
	Serious	Fair	West	Replace west entry landing, stair, and ramps including cheek walls, intermediate walls, and railings. Landing, (1) stair, (2) ramps, cheek walls, and intermediate walls to be concrete. (850 SF) Pre-finished aluminum railings similar to existing. (120 LF)	XAE.2	850	SF		
AE.4					120	LF			
	Serious	Good	West	Restore lawn and holly hedge disturbed by entry construction and utility work	AE.4	2200	SF		
	Critical	Fair	South	Replace concrete ramp to basement level with expanded ramp and lower landing. New ramp dimensions approximately 7'-6" wide x 37'-0" long. Expanded lower landing approximately 100 SF.	XAE.13 AE.4	380	SF		
	Critical	Fair	South	Provide area drain at ramp lower landing, connect to		1	EA		

				existing underground				
	Critical	Fair	South	Construct concrete retaining wall as part of new basement level ramp construction (wall height slopes with ramp from 1'-0" to 12'-0")	XAE.13 AE.4	50	LF	
	Critical	Fair	South	Painted steel pipe guardrail at ramp retaining wall, paint	XAE.13	42	LF	
	Critical	Poor	South runnel	Remove debris and plant growth from runnel. Replace deteriorated concrete at runnel.	XAE.15	40	SF	
	Critical	Poor	Southeast areaway	Replace deteriorated concrete cap over areaway, slope to drain	XAE.15	100	SF	
	Critical	Fair	East	Remove debris and plant growth from runnel. Replace deteriorated concrete at runnel.		225	SF	
	Minor	Fair	South site wall	Remove biological growth from stone wall	XAE.15	400	SF	
	Minor	Fair	South site wall	Repoint open mortar joints in stone wall	XAE.15	60	LF	
	Minor	Good	South site wall	Patch deteriorated stone cap: remove unsound material, replace with new stone (dutchman repair), one location	XAE.15	3	SF	

TREATMENT TABLES - ARCHITECTURAL EXTERIOR

Deficiency Ratings (Critical, Serious, Minor)

Condition Ratings (Good, Fair, Poor)

Maurice Bathhouse Treatment Checklist – Architectural Exterior								
Uni-format WBC Code	Deficiency Rating	Condition Rating	Component – Exterior or Interior	Treatment	Reference	Qty	Unit	Total Cost
Exterior								
	Critical	Fair	Wall - stucco	Repair cracks in stucco	XAE.1 – 5, 8	260	LF	
	Critical	Fair	Wall - stucco	Remove loose stucco and replace with new stucco		300	SF	
	Minor	Fair	Wall - stucco	Remove biological growth from stucco		150	SF	
	Critical	Fair	Wall – paint	Paint exterior walls <i>Note: could be reduced to only areas impacted by repair work with further investigation in future phases</i>		2050	SF	
	Serious	Fair	Wall – tile	Replace damaged tiles, custom color, and shape to match existing	XAE.8	50	EA	
	Serious	Fair	Wall – tile	Repair areas of cracked tile grout, remove and salvage tile, reset and grout	XAE.8	20	SF	
	Minor	Fair	Bronze Plaques	Repair bronze plaques from failure of lacquer coating and chalking of black paint		1	EA	
Windows								
	Critical	Fair	Windows	Repair and refurbish existing wood windows: Repair wood by consolidating, patching, or replacing deteriorated section Install weatherstripping Replace missing hardware (casement hinges and latches) Paint *Refer to window schedule for details			See Sched	
	Serious	Fair	Windows	Provide custom exterior storm windows, coordination with in-swing casement window operation, color to match window color. Include Low-E film. Provide some options for venting in specific locations as a hopper operation. Provide laminated protective glass in areas with decorative stained glass. Storm windows shall be properly vented. *Refer to window schedule for locations and opening			See Sched	

				dimensions				
	Serious	Fair	Windows - demo	Remove mechanical louvers from openings (where they are not scheduled to remain for mechanical equipment) *Refer to window schedule			See Sched	
	Serious	Fair	Windows	Provide custom wood windows and trim matching existing adjacent windows at former mechanical louver locations *Refer to window schedule for details	XAE.19		See Sched	
	Serious	Fair	Windows - demo	Remove aluminum windows at Sun Porch, including center opening with door	XAE.10	7	EA	
	Serious	Fair	Windows	Provide custom steel windows at Sun Porch: match configuration and profiles of original windows, insulating glass, and paint *Refer to window schedule	XAE.10	6	EA	
	Serious	Fair	Windows + Door	Provide custom steel entry door, sidelites, and transom at central opening at Sun Porch, match configuration and profiles of original insulating glass, and paint power operator for door to meet accessibility requirements *Refer to window schedule	XAE.10	1	EA	
Roof								
	Minor	Fair	Skylights – demo	Remove (4) metal-framed translucent panel skylights and associated flashing, wood structure to remain 240SF@1A, 240SF@1B, 200SF@1C, 200SF@2B	XAE.20, 25	880	SF	
	Minor	Fair	Skylights – new	Provide (4) metal-framed skylights on existing wood structure and metal flashing at roof: Insulating sloped clear glazing Extruded aluminum framing system and caps with high-performance organic finish 240SF@1A, 240SF@1B, 200SF@1C, 200SF@2B	XAE.20, 25	880	SF	
	Critical	Poor	Skylight – demo	Remove sloped skylight over Roycroft Room and associated gutters and flashing, structure to remain	XAE.23	1000	SF	
	Critical	Poor	Skylight – new	Provide metal-framed skylight on existing structure, provide metal flashing and skylight gutter and downspouts: 2-level sloped skylight, overall 6'-0" tall Insulating sloped clear glazing Extruded aluminum framing system and caps with high-performance organic finish Custom profiles at built-in gutter edge to match historic profiles		1000	SF	
	Minor	Fair	Membrane roofing – demo	Remove membrane roofing and associated flashing at low-slope roofs (surrounding translucent panel skylights, over sun porch, and at main roof)		5505	SF	

				325SF@1A, 430SF@1B, 375SF@1C, 765SF@2A, 110SF@2B, 3500SF@4				
	Minor	Fair	Membrane roofing – new	Provide membrane roofing and associated flashing at low-slope roofs (surrounding translucent panel skylights, over sun porch, and at main roof): 325SF@1A, 430SF@1B, 375SF@1C, 765SF@2A, 110SF@2B, 3500SF@4 <i>Note: flashing at sun porch to be copper to match metal of existing parapet cap</i>		5505	SF	
	Minor	Fair	Roof drainage	Modify slope with addition of tapered insulation at low-slope roofing to improve drainage 140SF@1A, 140SF@1B, 120SF@1C, 1600SF@4		2000	SF	
	Minor	Fair	Roof drainage	Replace drain strainer domes at roof drains (1)@1A, (2)@1C, (2)@2A, (4)@4 <i>Note: no overflow drains at low-slope roofs; study in future design phases</i>		10	EA	
	Minor	Fair	Terra cotta parapet caps	Replace (3) cracked terra cotta parapet cap tiles (3)@1A,		3	EA	
	Minor	Fair	Copper parapet caps	Replace deteriorated sealant at copper parapet cap flashing 25LF@2A		25	LF	
	Minor	Fair	Vitrified clay roof tiles	Replace damaged and/or loose green glazed vitrified clay roof tiles (ribbed profile) 160SF@3ABC	XAE.21	160	SF	
	Minor	Good	Vitrified clay roof tiles	Replace damaged and/or loose green glazed vitrified clay roof tiles (flat profile) 100SF@4	XAE.21, 22	100	SF	
	Serious	Fair	Vitrified clay roof tiles	Replace damaged green glazed vitrified clay roof tile wall caps (flat profile) 65EA@4	XAE.21, 22	65	EA	
	Serious	Fair	Roof flashing	Remove and salvage clay ridge cap tiles, remove corroded metal flashing, replace with new metal flashing, reinstall salvaged ridge cap tiles 135LF@3ABC	XAE.21,	135	LF	
	Serious	Fair	Roof flashing	Remove and salvage clay roofing tiles at valleys, remove corroded metal valley flashing, replace with new metal flashing, reinstall salvaged roofing tiles 60LF flashing and 60SF tiles@3ABC 12LF flashing and 36SF tiles@4mansard	XAE.21, 22	72 96	LF SF	

	Serious	Fair	Cornice	Modify slope at top of cornice to ensure positive drainage and minimize standing water		400	SF	
	Minor	N/A	Skylights	Consider installing skylights in the two stair shafts and in the Maurice office to match the historic condition and provide interior natural lighting.		2 large 1 small	EA EA	
Site								
	Serious	Fair	North runnel	Replace concrete runnel.	XAE.12	100	SF	
	Minor	Fair	North runnel	Replace runnel side wall with concrete	XAE.12	74	LF	
	Critical	N/A	North mech screen	Provide 6'-0" tall pre-finished aluminum louvered screen wall around mechanical equipment north side of building	XAE.6	55	LF	
	Minor	Good	North ramp to entry	No work <i>*Note: although not currently expected, the ramp may require repair if disturbed by MEP site work</i>		--	--	
	Critical	N/A	North egress stair	Provide painted steel egress landing, stair, guardrail, and handrail at northeast egress door. Stair requires (3) risers.	XAE.14	1	EA	
	Critical	N/A	North egress stair	Provide concrete landing and sidewalk to connect new egress stair to existing paved walk	XAE.14	45	SF	
	Minor	Good	North paved walk	Remove and replace concrete sidewalk disturbed for mechanical unit relocation	XAE.3	125	SF	
	Critical	Fair	North landscape	Restore lawn and holly hedge disturbed by installation of mechanical equipment	XAE.3	1000	SF	
	Serious	Fair	West	Replace west entry landing, stair, and ramps, including cheek walls, intermediate walls, and railings. Landing, (1) stair, (2) ramps, cheek walls, and intermediate walls to be concrete. (850 SF) Pre-finished aluminum railings similar to existing. (120 LF)	XAE.2	850 120	SF LF	
	Serious	Good	West	Restore lawn and holly hedge disturbed by entry construction and utility work	XAE.1, 4	2200	SF	
	Critical	Fair	South	Replace concrete ramp to basement level with expanded ramp and lower landing. New ramp dimensions approximately 7'-6" wide x 37'-0" long. Expanded lower landing approximately 100 SF.	XAE.13	380	SF	
	Critical	Fair	South	Provide area drain at ramp lower landing, connect to existing underground	XAE.13	1	EA	
	Critical	Fair	South	Construct concrete retaining wall as part of new basement level ramp construction (wall height slopes with ramp from 1'-0" to 12'-0")	XAE.13	50	LF	
	Critical	Fair	South	Painted steel pipe guardrail at ramp retaining wall, paint	XAE.13	42	LF	
	Critical	Poor	South runnel	Remove debris and plant growth from runnel. Replace deteriorated concrete at runnel.	XAE.15	40	SF	

HOSP – Treatment Checklist – Maurice Bathhouse

3/3022

	Critical	Poor	Southeast areaway	Replace deteriorated concrete cap over areaway, slope to drain	XAE.13	100	SF	
	Critical	Fair	East	Remove debris and plant growth from runnel. Replace deteriorated concrete at runnel.		225	SF	
	Minor	Fair	South site wall	Remove biological growth from stone wall	XAE.15	400	SF	
	Minor	Fair	South site wall	Repoint open mortar joints in stone wall	XAE.15	60	LF	
	Minor	Good	South site wall	Patch deteriorated stone cap: remove unsound material, replace with new stone (dutchman repair), one location	XAE.15	3	SF	

TREATMENT TABLES - ARCHITECTURAL INTERIOR

Deficiency Ratings (Critical, Serious, Minor)

Condition Ratings (Good, Fair, Poor)

Maurice Bathhouse Treatment Checklist – Architectural – Basement, First Floor & Stair and Elevator Circulation								
Uni-format WBC Code	Deficiency Rating	Condition Rating	Component – Exterior or Interior	Treatment	Reference	Qty	Unit	Total Cost
General								
	Critical	Poor	HazMat	Provide updated comprehensive hazardous materials survey (lead, asbestos, etc.)		1	LS	
	Critical	Poor	HazMat	Abate lead paint throughout building (allowance)		1	LS	
	N/A	N/A	Materials Testing	Take multiple paint samples of all historic finishes before lead paint abatement — one sample for analysis and matching and the other for archival record storage by NPS.		1	LS	\$5,500
	Critical	Poor	Pest Management	Provide termite inspection and monitoring				
	Minor	N/A	Cleaning	Deep Clean of Building interior and windows		1	LS	
	Minor	N/A	Skylights	Consider installing skylights over both elevator shafts and Maurice’s Office on 3 rd Floor.		3	EA	
	Minor	N/A	Cleaning	Sort through architectural salvage in storage in Women’s Bath Hall 114 and Men’s Bath Hall 113 to determine what will be reused				
	N/A	N/A	HazMat – Radon			1	LS	
Basement General								
C30	Minor	Fair	Flooring	Concrete – Clean and seal concrete floors in mechanical rooms. Clean all other floors.		5,200	SF	
	Critical	Poor	Hot Spring	Repair leaks in existing cisterns and update piping and drainage		4	EA	
A20	Critical	Poor	Hot Springs	Install new vapor barrier throughout the crawl space		2,300	SF	
C10	N/A	N/A	Electrical Room	Demo walls and construct new electrical room in Basement B01 (northeast room)		145	SF	
C10	N/A	N/A	Elevator Room	Construct new elevator machine room in Basement B07, close to the elevator. Install new condensing unit.		90	SF	
General First Floor Notes								
	Minor	Poor	Flooring- Terrazzo	Terrazzo flooring cleaning and buffing		4209	SF	

101 Women's Pack Room									
			Materials Testing	Perform full exposures and paint analysis in this space (upper walls, ceiling, and beams). Look at potential painted wallcoverings near window jambs in north wall. Sample trim at Door 2/101. Refer to historic postcard of room.					
	Minor	Poor	Demolition	Demolish pipes through floor		2		EA	
	Minor	Poor	Flooring	Repair terrazzo flooring cracks. (refinishing and buffing are included in overall number)		30		LF	
	Minor	Poor	Flooring	Infill holes in floor cut for grilles, pipes, or ducts with reinforced concrete and topped with terrazzo floor patch.		5		SF	
	Minor	Poor	Base	Tile base. Repair cracks throughout. Grout, as required		65		LF	
	Minor	Poor	Base	Replace missing tile base		18			
	Minor	Poor	Walls	Repair deteriorated plaster above tile wainscotting		596		SF	
	Minor	Poor	Walls	Restore tile wainscotting and replace field tiles		280		EA	
	Minor	Poor	Walls	Restore tile wainscotting and replace cap tiles and bullnose		70		EA	
	Minor	Poor	Walls	Clean and re-grout wainscotting, as required		323		SF	
	Minor	Poor	Walls	Infill old ventilation holes through walls with masonry and plaster		24		SF	
	Minor	Poor	Walls	Install brick masonry infill at plumbing chase in north wall		26		SF	
	Minor	Poor	Walls	Paint Walls		596		SF	
	Minor	Poor	Ceiling	Repair Plaster Ceiling and Beams after structural repairs		361		SF	
	Minor	Poor	Ceiling	Paint Ceiling		361		SF	
	Minor	Poor	Trim	Replace missing Door Trim		3		LF	
	Minor	Poor	Doors	Doors 1/101 - Furnish and install 1 replica wood paneled fire-rated door and trim with closer and hardware		1		EA	
	Minor	Poor	Lighting	Install three light fixtures		3		EA	
	Minor	Poor	Grille	Replace missing grille in south wall		1		EA	
102A Women's Hall									
	Minor	Poor	Flooring	Repair terrazzo flooring cracks. (refinishing and buffing are included in overall number)		30		LF	
	Minor	Poor	Flooring	Infill holes in floor cut for grilles, pipes, or ducts with reinforced concrete and topped with terrazzo floor patch.		8		SF	
	Minor	Poor	Base	Terrazzo 6 1/2" high base. Repair cracks throughout		4		LF	
	Minor	N/A	Base	Install new tile base along north and east walls and portions of the south wall where wall was reconstructed		30		LF	
	Minor	Poor	Walls	Minor repairs to deteriorated plaster above tile wainscotting (north and south walls)		508		SF	
	Minor	Poor	Walls	Clean and restore tile wainscotting at east, south, and north walls.		160		SF	

	Minor	Poor	Walls	Replace missing field and cap tiles with salvaged tiles		300		EA	
	Minor	Poor	Walls	Clean and re-grout wainscoting, as required		1		LS	
	Minor	Poor	Walls	Infill old ventilation holes through walls with masonry		6		SF	
	Minor	Poor	Walls	Paint Walls		838		SF	
	Minor	Poor	Ceiling	Repair Plaster Ceiling and Beams after structural repairs		275		SF	
	Minor	Poor	Ceiling	Paint Ceiling		275		SF	
	Minor	Poor	Trim	Replace missing Door Trim		22		LF	
	Minor	Poor	Lighting	Install three light fixtures		3		EA	
103 Mechanical									
				Perform full exposures and paint analysis in this space (upper walls, ceiling, and beams).					
	Minor	N/A	Demolish	Demolish existing concrete pads under equipment.		175		SF	
	Minor	Poor	Demolish	Demolish existing pipes through the floors and walls.					
	Minor	Poor	Flooring	Infill holes in floor cut for grilles, pipes, or ducts with reinforced concrete and topped with epoxy floor patch. (Allowance)		24		SF	
	Minor	Poor	Walls	Remove only loose tile. Wainscoting is not to be restored. Tile in this room may be salvaged for restoration in other locations.					
	Minor	Poor	Walls	Repair holes through masonry and plaster walls with new brick or CMU infill.		24		SF	
	Minor	Poor	Walls	Patch plaster walls (Allowance)		40		SF	
	Minor	Fair	Walls	Paint walls		628		SF	
	Minor	Fair	Ceiling	Minor repairs to patch plaster ceiling and beams		406		SF	
	Minor	Fair	Ceiling	Paint ceiling		406		SF	
	Minor	Poor	Trim	Replace missing trim at Door 2/105		14		LF	
	Minor	N/A	Lighting	Install lighting throughout		6		EA	
104 Office									
	Minor	Poor	Flooring	Install replica quarry tile in Office		116		SF	
	Minor	Good	Walls	Repair diagonal crack in plaster on north wall		8		LF	
	Minor	Fair	Grilles	Remove existing grille in north wall and infill opening		1		EA	
	Minor	Fair	Walls	Paint all walls		475		SF	
	Minor	Fair	Ceiling	Paint Ceiling		119		SF	
	Minor	Fair	Window	Paint window sashes		2		EA	
	Minor	Fair	Window	Repair window hardware to working condition		1		LS	
	Minor	Poor	Door	Repair door to close properly and repair finish on door		1		LS	Allowance \$900
	Minor	Fair	Casework	Refinish built-in desk and make repairs (replace missing back in cubby). Ensure all drawers and door work properly		1		EA	Allowance \$2,800

	Minor	Fair	Trim	Refresh finish on all millwork		1	LS	Allowance \$800
	Minor	Fair	Lighting	Install new Ceiling Fixture		1	EA	
105 Women's Cool Room and Modern Restroom								
	Minor	N/A	Demolition	Demolish existing restroom in the NE corner of Room 105. Remove all walls, door, fixtures, piping, etc.		1	LS	
	Minor	N/A	Demolition	Remove sink installed at west wall and pipes through floor. Salvage sink for Park collections		1	EA	
	Minor	Poor	Demolition	Remove duct through floor and wall in SW corner of room		1	EA	
	Minor	Poor	Demolition	Remove and salvage tile wainscotting from west and north walls. Salvage tiles for reinstallation in other locations.		143	SF	
	Minor	Poor	Demolition	Demolish pipes through floor		2	EA	
				Exposures and Paint Analysis throughout space (upper walls and ceiling near beams). Look at potential painted wallcoverings near window jambs at north wall and east wall. Burlap type wall covering with pink paint visible at north jamb of Door 2/105. Potential decorative painted border approximately 14" below ceiling with contrasting paint above.				
	Minor	Poor	Flooring	Repair terrazzo flooring cracks. (refinishing and buffing are included in overall number)		30	LF	
	Minor	Poor	Flooring	Infill holes in floor cut for grilles, pipes, or ducts with reinforced concrete and topped with terrazzo floor patch.		16	SF	
	Minor	Poor	Base	Terrazzo 6 1/2" high base. Repair cracks throughout		20	LF	
	Minor	Poor	Walls	Spot repoint existing exposed masonry walls (allowance)		280	SF	
	Minor	Poor	Walls	Install metal studs at old chases in NW and SW corners and finish with gypsum drywall		223	SF	
	Minor	Poor	Walls	Repair plaster over masonry		352	SF	
	Minor	Poor	Walls	Repair deteriorated plaster above tile wainscotting (south and east walls)		334	SF	
	Minor	Poor	Walls	Restore tile wainscotting at east and south walls.		24	EA	
	Minor	Poor	Walls	Clean and re-grout wainscotting, as required		1	LS	
	Minor	Poor	Walls	Infill old ventilation holes through walls with masonry		9	SF	
	Minor	Poor	Walls	Install brick masonry infill at plumbing chase in north wall		26	SF	
	Minor	Poor	Walls	Paint Walls		906	SF	
	Minor	Poor	Ceiling	Repair Plaster Ceiling and Beams after structural repairs		425	SF	
	Minor	Poor	Ceiling	Paint Ceiling		425	SF	
	Minor	Fair	Casework	Historic Bench and Mirror to be restored by qualified carpenter and refinisher. Carefully remove bench for restoration and reinstall in original location. Set bench and mirror to be plumb with wall and floor.		1	LS	Allowance \$3,200

	Minor	Poor	Trim	Replace missing Door Trim		20	LF	
	Minor	Poor	Base	Door 1/105 - Restore 2 missing marble plinths		2	EA	
	Minor	Fair	Base	Door 2/105 – Strip paint from 2 marble plinths		2	EA	
	Minor	Poor	Doors	Doors 1/105 and 2/105 - Furnish and install 2 replica wood paneled doors		4	EA	
	Minor	Poor	Doors – Hardware	Doors 1/105 and 2/105 - Furnish and install replica push/pull plates and kick plates		16	EA	
	Minor	Fair	Doors – Hardware	Doors 1/105 and 2/105 - Restore 4 pair of steel hinges		8	EA	
	Minor	Poor	Lighting	Install three light fixtures		3	EA	
			Equipment	Determine use for old steam cabinet along south wall?				
106 Closet								
	Minor	N/A	Demolish	Demolish existing closet in its entirety (walls) and finishes and tile flooring		1	LS	
107 & 111 Restroom Infill								
	Minor	N/A	Demolish	Demolish existing framing, drywall, and piping		1	LS	
	Minor	Poor	Floor	Patch holes in concrete floor		4	SF	
			Floor	Patch areas of exposed concrete floor that are rough and require topping (Allowance)		40	SF	
	Minor	Poor	Walls	Spot repoint masonry walls		755	SF	
				No additional finishes to be installed as part of this project.				
108 Men's Pack Room								
	Minor	Poor	Demolition	Demolish pipes through floor		3	EA	
				Exposures and Paint Analysis throughout space (upper walls and ceiling near beams).				
	Minor	Poor	Flooring	Repair terrazzo flooring cracks and voids. (refinishing and buffing are included in overall number)		30	LF	
	Minor	Poor	Flooring	Infill holes in floor cut for grilles, pipes, or ducts with reinforced concrete and topped with terrazzo floor patch.		16	SF	
	Minor	Poor	Base	Tile – Regrout, as needed		1	LS	
	Minor	Poor	Walls – Wainscot	Restore tile wainscotting. Deep Clean. Remove severely discolored or cracked tiles and replace with salvaged tiles. Regrout, as necessary		550	SF	
	Minor	Poor	Walls – Wainscot	Replace missing field and cap tiles		80	EA	
	Minor	Poor	Walls	Infill old ventilation holes through walls with masonry		3	SF	
	Minor	Poor	Walls	Paint Walls		848	SF	
	Minor	Poor	Ceiling	Paint Ceiling and laylight walls		1000	SF	
	Minor	Poor	Lighting	Install three light fixtures		3	EA	
				Consider installing replica laylight, as recommended in 2004 Construction Drawings (Allowance)		1	EA	Allowance

				Install back-lighting in laylight area for evenings.		1	EA	
109 Sunporch								
	Minor	Fair	Flooring (Field)	Spot repair (infill divots with colored patches) and re-grout spot locations		657	SF	
	Minor	Poor	Flooring (Border)	Replace missing border tiles (3 colors) ¾" sq.	AI.1	25	EA	
	Minor	Poor	Flooring (Base)	Replace damaged base tiles 6.125" sq x 15/16" thick	AI.1	3	EA	
	Minor	Poor	Flooring – Misc.	Infill holes in floor where old pipes were previously removed		5	EA	
	N/A	N/A	Flooring - Ramp	Demolish existing non-historic ramp and rebuild ramp to meet ADA and be continuous, per HSR, with replica quarry tile		134	SF	
	N/A	N/A	Flooring – Ramp	Install railings on north and south sides of new ramp, at a minimum – (approximately 6' each)		2	EA	
						12	LF	
	Minor	Poor	Walls	Repair crack in south plaster wall		11	LF	
	Minor	Fair	Walls	Paint all Walls		480	SF	
	Minor	Fair	Walls	Remove two through-wall grilles in north and south walls		2	EA	
	Minor	Poor	Walls	Infill removed duct and grilles in north and south walls – install new stucco patch		6	SF	
	Minor	Good	Ceiling	New Ceiling Treatment – Install new frosted glass and LED Lighting The historic condition included a skylight and laylight in this space. The skylight was removed during a previous construction project, and the roof was re-framed. It was likely very hot and difficult to control temperature in this space. It is recommended to not restore the skylight and rather to install a more permanent glass glazing in the laylight areas with LED back-lighting to simulate daylight.		657	SF	
	Minor	Good	Ceiling	New Decorative Lighting (historical replica). Research historic lighting.		3	EA	
	Minor	Good	Ceiling	Paint Existing metal ceiling grid		1	EA	
			Testing	Paint Analysis on metal ceiling grid and walls				
	Minor	Good	Equipment	Explore options for historic radiators to remain in some locations				No Cost
110 Lobby								
	Minor	Serious	Flooring	Mosaic flooring – re-set tiles that have settled and create tripping hazards		24	LF	
	Minor	Poor	Flooring	Replace missing field hexagonal tiles (white) – Allowance		50	EA	
	Minor	Poor	Flooring	Replace missing white hexagonal tiles at east threshold		30	EA	
	Minor	Poor	Flooring	Install new tile threshold between Lobby and Elevator Room		1	EA	
	Minor	Fair	Base	Marble Base – Clean marble base and remove paint.		49	LF	
	Minor	Poor	Base	Marble Base – Install new grout in base		49	LF	
	Minor	Fair	Base	Marble Base – Re-set base on south wall pilaster (it is		1	EA	

				currently installed upside down)				
	Minor	Poor	Walls	Wood Paneling – Restore or replace buckled wall panels (allowance)		1	LS	
	Minor	Poor	Walls	Wood Paneling – Restore historic paint finishes based on historic paint analysis report (allowance)		1	LS	
	Minor	Poor	Casework	North Wall -Restore finish on wood counter and gate (allowance)		1	LS	
	Minor	Poor	Casework	South Wall – Restore finish on wood counter and gate (allowance)		1	LS	
	Minor	Fair	Casework	Strip and paint hinges on gates. Replace Phillips screws.		4	EA	
	Minor	Good	Grille	Repaint grille based on historic paint analysis. Install standard screws.		1	EA	
	Minor	Poor	Trim	Confirm no active termite activity in door jambs in west wall				
	Minor	Fair	Trim	Repair bases of door trim in west wall		6	EA	
	N/A		Door Transoms	Consider replacing missing wood transoms in tops of three door openings in west wall, as shown in historic postcards		3	EA	
			Plaster Cornice and Ceiling	Perform historic paint analysis throughout ceiling, beams, and cornice.				Allowance: \$12,000
	Serious	Poor	Plaster Cornice and Ceiling	Restore historic plaster and decorative painted ceiling, beams, and cornice to match paint analysis report.				Allowance: \$95,000
	Minor	Good	Doors	Restore finishes on 2 pairs of double-acting doors to match paint analysis report.		4	EA	
			Doors	Adjust doors and hinges for proper operation.		4	EA	
	Minor	Good	Doors – Kickplates	Replace existing kickplates with brass kickplates		4	EA	
	Minor	Fair	Doors – Hinges	Test paint on hinges to determine original color				
	Minor	Fair	Doors – Hinges	Strip layers of old paint from hinges and repaint to match color in historic paint analysis. Use tinted primer before final coat. Reinstall with standard screws (no Phillips screws). Replace missing finials		8	EA	
	Minor	Fair	Doors – Push Plates	Refinish existing brass push plates		8	EA	
	Minor	Poor	Doors - Glass	Replace broken wire glass in north door		1	EA	
	Minor	N/A	Lighting	Replace existing contemporary lighting with more period-appropriate lighting or something less conspicuous		3	EA	
110A Women's Hall								
	Minor	Fair	Flooring	Replace a few damaged pieces of hexagonal flooring tile		5	EA	
	Minor	Fair	Base	Marble Base – Clean marble base and remove paint.		20.75	LF	
	Minor	Poor	Base	Marble Base – Install new grout in base		20.75	LF	
	Minor	Poor	Tile Wainscot	Wall Tile – Replace missing tiles - Caps		2	EA	
	Minor	Good	Walls	Paint Walls with color per historic paint analysis		107	SF	
	Minor	Good	Ceiling	Paint Ceiling and Beams		64	SF	

	Minor	Good	Lighting	Replace Ceiling Fixture to Match Lobby		1	EA	
112A Men's Hall								
	Minor	Poor	Flooring	Repair and fill divots and cracks in terrazzo topping		10	EA	
	Minor	Poor	Flooring	Infill holes in floor cut for grilles, pipes, or ducts with reinforced concrete and topped with terrazzo floor patch.		5	SF	
	Minor	N/A	Base	Replace base on east wall		1	LF	
	Minor	Poor	Walls - Tile Wainscot	Wall Tile – Replace missing tiles - Caps		2	EA	
	Minor	Poor	Walls - Tile Wainscot	Wall Tile – Clean and re-grout missing areas		233	SF	
	Minor	N/A	Walls – Plaster	Chip and channel walls for new conduit for electrical		28	SF	
	Minor	Good	Walls – Plaster	Make minor repairs in plaster walls		710	SF	
	Minor	Good	Walls – Plaster	Paint Plaster Walls		710	SF	
	Minor	Good	Ceiling	Paint Ceiling		184	SF	
	Minor	Fair	Trim	Touch-up finish on millwork at door openings		5	EA	
	Minor	Poor	Lighting	Install three light fixtures		3	EA	
113 Men's Bath Hall								
	Minor	N/A	Demolition	Demolish all existing layers of tile flooring and cement topping to the original concrete slab		1	LS	
	Minor	N/A	Demolition	Remove all pipes through the floor		1	EA	
	Critical	N/A	Demolition	Install new door opening between 113 and 114. Salvage historic tiles at new opening for reuse. Opening required for new exit.		1	EA	
				Test cleaning methods for while glazed tiles in this space				
				Exposures and Paint Analysis throughout space (upper walls and ceiling near beams).				
	Minor	Poor	Flooring	Infill holes in floor cut for grilles, pipes, or ducts with reinforced concrete and topped with terrazzo floor patch.		24	SF	
	Minor	N/A	Flooring	Install new terrazzo topping throughout		1517	SF	
	Minor	Poor	Base	New White Tile Base		176	LF	
	Minor	Poor	Walls – Tile	Remove loose and damaged tiles		600	SF	
	Minor	Poor	Walls – Tile	Replace missing or broken tiles		800	SF	
	Minor	Poor	Walls – Tile	Deep clean and re-grout existing tile to remain			EA	
	Minor	Poor	Walls	Infill old ventilation holes through walls with masonry		30	SF	
	Minor	Poor	Walls	Install brick masonry infill at plumbing chase in north wall			SF	
	Minor	Poor	Walls	Paint Walls			SF	

			Ceiling	Repair Remove tile ceilings (barrel vaulted areas to remain)		568		
	Minor	N/A	Ceiling	Patch repair tile in barrel vaulted areas and provide new transition		300	EA	
	Minor	Poor	Ceiling	Repair Plaster and Drywall Ceiling and Beams after structural repairs		500	SF	
	Minor	Poor	Ceiling	Patch and repair drywall and plaster walls and areas in skylights		700	SF	
	Minor	Poor	Ceiling	Patch/repair ceilings where tile was removed. Install plaster patches		568	SF	
	Minor	Poor	Ceiling	Paint Ceiling		1200	SF	
	Minor	Poor	Doors – Hardware	Install new replica wood-paneled door and hardware in north wall			EA	
	Minor	Poor	Lighting	Install 10 light fixtures		10	EA	
				Consider replicating stained glass laylights		2	EA	Allowance
				Provide back-lighting for laylights				Allowance
114 Women's Bath Hall								
	Minor	N/A	Demolition	Demolish all existing layers of tile flooring and cement topping to the original concrete slab		752	SF	
	Minor	N/A	Demolition	Remove all pipes through the floor		1	LS	
	Minor	Poor	Demolition	Remove and salvage all white wall tiles		1021	SF	
	Minor	Poor	Demolition	Remove and salvage some plumbing fixtures and equipment for park archives		1	LS	\$800
				Exposures and Paint Analysis throughout space (ceiling and beams).				
	Minor	Poor	Flooring	Infill holes in floor cut for grilles, pipes, or ducts with reinforced concrete and topped with terrazzo floor patch.		16	SF	
	Minor	N/A	Flooring	Install new terrazzo topping throughout		752	SF	
	Minor	Poor	Walls	Install brick masonry infill at plumbing chase in south wall and repair plaster finish		24	SF	
	Minor	Poor	Walls	Patch holes in walls. Furr walls and install metal channels and green board (due to partially below grade (resistant to water) on walls. Skim coat finish		1021	SF	
	Minor	N/A	Walls	Paint Walls		1021	SF	
	Minor	Poor	Ceiling	Repair Plaster and Drywall Ceiling and Beams after structural repairs. Include repair to plaster walls in skylights		750	SF	
	Minor	Poor	Ceiling	Paint Ceiling		750	SF	
	Minor	Minor	Doors – Hardware	Door 2/114 - Install new hardware on exit door and paint.		1	EA	
	Minor	Minor	Doors – Hardware	Door 2/114 - Install new hardware on exit door and paint.		1	EA	
	Minor	Minor	Doors – Hardware	Door 2/114 - Install new interior and exterior trim		18	LF	

	Minor	Poor	Lighting	Install 8 light fixtures		8	EA	
				Consider replicating stained glass laylights		1	EA	Allowance
				Provide back-lighting for laylights				Allowance
115 Men's Cool Room								
				Perform exposures and paint analysis on areas above the wainscot, ceiling, beams, door trim, and grilles.				
	Minor	Poor	Flooring	Repair terrazzo flooring cracks. (refinishing and buffing are included in overall number)		30	LF	
	Minor	Poor	Flooring	Infill holes in floor cut for grilles, pipes, or ducts with reinforced concrete and topped with terrazzo floor patch.		16	SF	
	Minor	Poor	Base	Terrazzo 6 ½" high base. Repair cracks throughout		20	LF	
	Minor	Poor	Base	Strip paint from terrazzo base		73	LF	
	Minor	Poor	Walls	Patch hole in east wall		2	SF	
	Minor	Poor	Walls	Repair plaster walls		574	SF	
	Minor	Poor	Walls	Reconstruct chase in SE corner of west side of room. Utilize metal studs with blueboard. Reinstall historic salvaged tile and skim coat above wainscot.		71	SF	
	Minor	Poor	Walls	Paint Walls to match paint analysis		1,222	SF	
	Minor	Poor	Walls – Tile	Clean and repair tile wainscotting on walls in west part of room.		285	SF	
	Minor	Poor	Walls – Tile	Replace missing or damaged tiles		36	SF	
	Minor	Poor	Ceiling	Repair plaster ceiling and beams after structural repairs		852	SF	
	Minor	Poor	Ceiling	Paint ceiling and beams		852	SF	
	Minor	Poor	Trim	Door 4/115 Replace missing Door trim and jambs and finish to match others		20	LF	
	Minor	Poor	Trim	Door 5/115 – Strip paint from trim and jambs and refinish		20	LF	
	Minor	Missing	Base	Door 4/115 – Replace missing marble plinths		4	EA	
	Minor	Fair	Base	Door 5/115 – Strip paint from 2 marble plinths and reset		2	EA	
	Minor	Fair	Door	Door 3/115 – Refinish trim and jambs		1	EA	
	Minor	Poor	Lighting	Install six light fixtures		6	EA	
			Equipment	Replace missing grille in south wall from park collection		1	EA	\$400
			Equipment	Refinish 2 existing radiators		2	EA	\$1600
116 Men's Massage Room								
	Minor	Fair	Equipment	Remove 1 radiator		1	EA	
				Perform exposures and paint analysis on areas above the wainscot, ceiling, beams, door trim, and grilles. Expose more of the stenciling to see the extent within the room.				
	Minor	Poor	Flooring	Repair terrazzo flooring cracks. (refinishing and buffing are included in overall number)		30	LF	

	Minor	Poor	Flooring	Infill holes in floor cut for grilles, pipes, or ducts with reinforced concrete and topped with terrazzo floor patch.		12	SF	
	Minor	Poor	Base	Terrazzo 6 ½” high base. Repair cracks throughout		20	LF	
	Minor	Poor	Walls	Patch hole in north masonry wall		4	SF	
	Minor	Poor	Walls	Repair plaster walls		606	SF	
	Minor	Poor	Walls	Reconstruct chase in SW corner of west side of room. Utilize metal studs with blueboard. Reinstall historic salvaged tile and skim coat above wainscot.		112	SF	
	Minor	Poor	Walls	Paint Walls to match paint analysis		606	SF	
	Minor	Poor	Walls	Paint Walls to match paint analysis – stenciling (allowance)		85	LF	Allowance \$32,000
	Minor	Poor	Walls –	Restore masonry in south wall chase and restore plaster		16	SF	
	Minor	Poor	Walls –	Demo pipes through tile walls.		426	SF	
	Minor	Poor	Walls – Tile	Replace 480 field tiles and 44 cap tiles		529	EA	
	Minor	Poor	Walls – Tile	Clean and repair tile wainscotting walls. Remove anchors and patch tile.		426	SF	
	Minor	Poor	Ceiling	Repair plaster ceiling and beams after structural repairs		428	SF	
	Minor	Poor	Ceiling	Paint ceiling and beams		428	SF	
	Minor	Poor	Trim	Door 5/115 – Strip paint from trim and jambs and refinish		20	LF	
	Minor	Fair	Base	Door 5/115 – Strip paint from 2 marble plinths and reset		2	EA	
	Minor	Fair	Door	Door 1/116 – Replace missing trim		8	LF	
	Minor	Fair	Door	Door 1/116 – Refinish trim and jambs		1	EA	
	Minor	Poor	Lighting	Install 3 light fixtures		3	EA	
			Equipment	Restore finish on existing grille in NW chase		1	EA	
			Equipment	Install salvaged grille in reconstructed SW chase to match one in the NW chase		1	EA	
117 Cloakroom								
	Minor	Poor	Flooring	Install new quarry tile flooring		121	SF	
	Minor	Poor	Base	Reinstall marble plinth base; strip paint from marble plinths		6	EA	
	Minor	Poor	Ducts	Remove existing built-in duct in NW corner of room and infill floor and patch surrounding walls and grille		1	LS	Allowance \$1800
	Minor	Good	Walls	Repair diagonal crack in plaster on south wall		8	LF	
			Walls	Patch walls where alarm panels removed, and other receptacles removed or infilled		3	EA	
	Minor	Fair	Walls	Paint all walls		427	SF	
	Minor	Fair	Ceiling	Paint Ceiling		121	SF	
	Minor	Fair	Grilles	Install trim around grille to remain		16	LF	
	Minor	Fair	Window	Paint window sashes		2	EA	

	Minor	Fair	Window	Repair window hardware to working condition		1	LS	
	Minor	Poor	Door	Refresh finish on door and sidelight		1	LS	Allowance \$900
	Minor	Fair	Casework	Refresh finish on counter and gate		1	EA	Allowance \$900
	Minor	Fair	Trim	Refresh finish on all millwork		1	LS	Allowance \$800
	Minor	Fair	Lighting	Install new Ceiling Fixture		1	EA	
Hall 110B								
	Minor	Fair	Flooring	Replace a few damaged pieces of hexagonal flooring tile		10	EA	
	Minor	Fair	Flooring	Repair/infill hole in floor along west wall		1	EA	
	Minor	Fair	Base	Marble Base – Clean marble base and remove paint.		20	LF	
	Minor	Poor	Base	Marble Base – Install new grout in base		20	LF	
	Minor	Poor	Tile Wainscot	Wall Tile – Replace missing tiles - Caps		2	EA	
	Minor	Good	Walls	Paint Walls with color per historic paint analysis		108	SF	
	Minor	Good	Ceiling	Paint Ceiling and Beams		68	SF	
	Minor	Good	Lighting	Replace Ceiling Fixture to Match Lobby		1	EA	
Elevator Lobby 110C								
	Minor	Poor	Pipe	Demolish pipe from floor NW corner. Patch floor		1	EA	
	Minor	Poor	Flooring	Install quarry tile		83	SF	
	Critical	Poor	Flooring	Install threshold at elevator		1	EA	
	Critical	Serious	Testing	Provide asbestos testing for black mastic				
	Base	Poor	Base	Install new 6" quarry tile base at perimeter		22	LF	
	Minor	Poor	Walls	Remove deteriorated plaster and wall coverings. Repair plaster walls and skim coat. Intensive plaster repairs and replacement.		240	SF	
			Walls	Infill recess in south masonry wall		10	SF	
			Walls/Jambs	Spot repoint door openings and jambs at north and south walls		2	EA	
	Minor	Poor	Ceiling	Repair plaster ceiling and skim coat		82	SF	
	Minor	Poor	Plaster Cornice	Repair decorative plaster cornice		38	LF	
	Minor	Poor	Trim	Replicate and replace missing door trim		55	LF	
	Minor	N/A	Doors - Frames	Replicate two wood very deep wood frames		2	EA	
	Minor	N/A	Doors	Replicate two wood paneled doors with hardware		2	EA	
	Minor	Poor	Lighting	Install new light fixture at ceiling		1	EA	
			Structural	Confirm lintel over south and north doors				
Stair -1 Stacked Basement through Third Floor								
Basement Hall B02 (North Stair-1)								
			Flooring	Concrete – Clean concrete floors (included in overall				

				basement costs)				
	Minor	Fair	Walls – Painted Concrete	Clean Walls and Repaint		180	SF	
	Minor	Poor	Walls – Stair – Plaster	Patch and repair plaster walls at lower flight of stairs		248	SF	
	Minor	Fair	Walls – Plaster	Patch and repair plaster walls (minor repairs)		450	SF	
	Minor	Fair	Walls – Paint	Paint plaster walls above tile wainscotting		450	SF	
	Minor	Fair	Ceiling	Patch and repair plaster ceilings		80	SF	
	Minor	Fair	Ceiling	Paint ceilings		80	SF	
	Minor	Poor	Stairs	Clean and patch concrete stairs		15	EA	
	Minor	Poor	Stairs	Clean and patch concrete stairs		15	EA	
	Minor	Poor	Stairs	Paint stair stringers and risers		1	LS	
	Critical	Poor	Stairs - Railing	Install new ABAAS compliant handrail		56	LF	
	Minor	Poor	Elevator Cage	Strip and repaint existing historic elevator cage to remain. Paint with color from historic paint analysis. (All levels – basement through 3 rd floor). Make repairs to elevator cage for safety.		1	LS	Allowance \$ 18,000
	Serious	Poor	Lighting	Install new lighting at landings and in stair		4	EA	
Women's Hall 102B (North Stair-1)								
			Flooring	Buff and repair terrazzo flooring (included in overall first floor costs)				
	Minor	Poor	Flooring	Remove pipe through terrazzo floor and patch floor		1	EA	
	Minor	Poor	Base	Clean marble base and re-grout.		21	LF	
	Minor	Poor	Base	Replace section of missing marble base from opening in East Wall		7	LF	
	Minor	Poor	Walls – Tile Wainscot	Replace missing wainscot tiles (north wall)		20	SF	
	Minor	Poor	Walls – Tile Wainscot	Deep clean tile wainscotting		248	SF	
	Minor	Fair	Walls – Plaster	Patch and repair plaster walls (minor repairs)		450	SF	
	Minor	Fair	Walls – Paint	Paint plaster walls above tile wainscotting		450	SF	
	Minor	Fair	Ceiling	Patch and repair plaster ceilings		80	SF	
	Minor	Fair	Ceiling	Paint ceilings		80	SF	
	Minor	Poor	Stairs	Replace treads with new cut marble treads		21	EA	
	Minor	Poor	Stairs	Paint stair stringers and risers		1	LS	
	Critical	Poor	Stairs - Railing	Install new ABAAS compliant handrail		56	LF	
	Minor	Poor	Elevator Cage	In Basement Stair-1 Costs		1	LS	
	Serious	Poor	Lighting	Install new lighting at landings and in stair		4	EA	
Women's Elev. Hall 216 (North Stair-1)								

			Flooring	Buff and repair terrazzo flooring (included in overall second floor costs)				
			Demolition	Remove unused black iron from old, suspended ceiling/soffit		1	LS	
Minor	Poor		Base	Clean marble base and re-grout.		13	LF	
Minor	Poor		Walls – Brick	Infill sections of brick wall where brick is missing (west side)		6	SF	
Minor	Poor		Walls – Concrete	Infill sections of concrete wall where missing; (north and east sides)		12	SF	
Minor	Poor		Walls – Tile Wainscot	Replace missing wainscot tiles (east wall)		80	EA	
Minor	Poor		Walls – Tile Wainscot	Deep clean tile wainscotting		300	SF	
Minor	Fair		Walls – Plaster	Patch and repair plaster walls (minor repairs) and on stairs		515	SF	
Minor	Fair		Walls – Paint	Paint plaster walls above tile wainscotting		515	SF	
Minor	Fair		Ceiling	Patch and repair plaster ceilings		80	SF	
Minor	Fair		Ceiling	Paint ceilings		80	SF	
Minor	Poor		Doors	Doors 1/203 and 1/216 Replace existing fire-rated doors with new replica historic paneled fire rated doors and frames, closers, and hardware		2	EA	
Minor	Poor		Stairs	Replace treads with new cut marble treads		22	EA	
Minor	Poor		Stairs	Paint stair stringers and risers		1	LS	
Critical	Poor		Stairs - Railing	Install new ABAAS compliant handrail		56	LF	
Minor	Poor		Elevator Cage	In Basement Stair-1 Costs		1	LS	
Serious	Poor		Lighting	Install new lighting at landings and in stair		4	EA	
Women's Elev. Hall 301 (North Stair-1)								
			Flooring	Buff and repair terrazzo flooring (included in overall third floor costs)				
Minor	Poor		Base	Clean marble base and re-grout.		19	LF	
Minor	Poor		Walls – Tile Wainscot	Deep clean tile wainscotting		83	SF	
Minor	Fair		Walls – Plaster	Patch and repair plaster walls (minor repairs) and on stairs		430	SF	
Minor	Fair		Walls – Paint	Paint plaster walls above tile wainscotting and on stairs		430	SF	
Minor	Fair		Ceiling	Patch and repair plaster ceilings		203	SF	
Minor	Fair		Ceiling	Paint ceilings		203	SF	
Minor	Poor		Doors	Doors 2/301 and 3/301 Replace existing fire-rated doors with new replica historic paneled fire rated doors and frames, closers, and hardware. Door 1/301 is addressed with Room 300		2	EA	
Minor	Poor		Stairs	Replace treads with new cut marble treads		20	EA	
Minor	Poor		Stairs	Paint stair stringers and risers		1	LS	

	Critical	Poor	Stairs - Railing	Install new ABAAS compliant handrail		56	LF	
	Minor	Poor	Elevator Cage	In Basement Stair-1 Costs		1	LS	
	Minor	Poor	Elevator Cage	Install new guardrail at east side of elevator		1	LS	\$2,500
	Serious	Poor	Lighting	Install new lighting at landings and in stair		4	EA	
Stair -2 Stacked Basement through Third Floor								
Basement Hall B17 (South Stair-2)								
			Flooring	Concrete – Clean concrete floors (included in overall basement costs)				
	Minor	Fair	Walls – Painted Concrete	Clean Walls and Repaint		180	SF	
	Minor	Poor	Walls – Stair – Plaster	Patch and repair plaster walls at lower flight of stairs		248	SF	
	Minor	Fair	Walls – Plaster	Patch and repair plaster walls (minor repairs)		450	SF	
	Minor	Fair	Walls – Paint	Paint plaster walls above tile wainscotting		450	SF	
	Minor	Fair	Ceiling	Patch and repair plaster ceilings		80	SF	
	Minor	Fair	Ceiling	Paint ceilings		80	SF	
	Minor	Poor	Stairs	Clean and patch concrete stairs		15	EA	
	Minor	Poor	Stairs	Clean and patch concrete stairs		15	EA	
	Critical	Poor	Stairs - Railing	Install new ABAAS compliant handrail		56	LF	
	Minor	Poor	Elevator Cage	Strip and repaint existing historic elevator cage to remain. Paint with color from historic paint analysis. (All levels – basement through 3 rd floor). Make repairs to elevator cage for safety.		1	LS	Allowance \$ 18,000
	Serious	Poor	Lighting	Install new lighting at landings and in stair		4	EA	
Men's Hall 112B (South Stair-2)								
			Flooring	Buff and repair terrazzo flooring (included in overall first floor costs)				
	Minor	Poor	Base	Clean marble base and re-grout.		21	LF	
	Minor	Poor	Walls – Tile Wainscot	Replace missing wainscot tiles (north wall)		20	EA	
	Minor	Poor	Walls – Tile Wainscot	Deep clean tile wainscotting		248	SF	
	Minor	Fair	Walls – Plaster	Patch and repair plaster walls (minor repairs)		450	SF	
	Minor	Fair	Walls – Paint	Paint plaster walls above tile wainscotting		450	SF	
	Minor	Fair	Ceiling	Patch and repair plaster ceilings		80	SF	
	Minor	Fair	Ceiling	Paint ceilings		80	SF	
	Minor	Fair	Doors	Door 4/115 - Replace 2 marble plinths		2	EA	
	Minor	Poor	Stairs	Clean existing marble treads		21	EA	
	Minor	Poor	Stairs	Paint stair stringers and risers		1	LS	

	Critical	Poor	Stairs - Railing	Install new ABAAS compliant handrail		56	LF	
	Minor	Poor	Elevator Cage	In Basement Stair-1 Costs		1	LS	
	Serious	Poor	Lighting	Install new lighting at landings and in stair		4	EA	
Men's Elev. Hall 217 (South Stair-2)								
			Flooring	Buff and repair terrazzo flooring (included in overall second floor costs)				
			Demolition	Remove unused black iron and remnants of plaster from old, suspended ceiling/soffit		1	LS	
	Minor	Poor	Base	Clean marble base and re-grout.		13	LF	
	Minor	Poor	Walls – Brick	Infill sections of brick wall where brick is missing (west side)		6	SF	
	Minor	Poor	Walls – Concrete	Infill sections of concrete wall where missing; (south and east sides)		12	SF	
	Minor	Poor	Walls – Tile Wainscot	Replace missing wainscot tiles		60	EA	
	Minor	Poor	Walls – Tile Wainscot	Deep clean tile wainscotting		300	SF	
	Minor	Fair	Walls – Plaster	Patch and repair plaster walls and on stairs		515	SF	
	Minor	Fair	Walls – Paint	Paint plaster walls above tile wainscotting		515	SF	
	Minor	Fair	Ceiling	Patch and repair plaster ceilings		80	SF	
	Minor	Fair	Ceiling	Paint ceilings		80	SF	
	Minor	Poor	Doors	Doors 1/217, 2/217, and 2/210 Replace existing fire-rated doors with new replica historic paneled fire rated doors and frames, closers, and hardware.		3	EA	
	Minor	Poor	Stairs	Replace treads with new cut marble treads		22	EA	
	Minor	Poor	Stairs	Paint stair stringers and risers		1	LS	
	Critical	Poor	Stairs - Railing	Install new ABAAS compliant handrail		56	LF	
	Minor	Poor	Elevator Cage	In Basement Stair-1 Costs		1	LS	
	Serious	Poor	Lighting	Install new lighting at landings and in stair		4	EA	
Men's Hall 303 (South Stair-2)								
			Flooring	Buff and repair terrazzo flooring (included in overall third floor costs)				
	Minor	Poor	Base	Clean marble base and re-grout.		19	LF	
	Minor	Poor	Walls – Tile Wainscot	Deep clean tile wainscotting		83	SF	
	Minor	Fair	Walls – Plaster	Patch and repair plaster walls and on stairs		430	SF	
	Minor	Fair	Walls – Paint	Paint plaster walls above tile wainscotting and on stairs		430	SF	
	Minor	Fair	Ceiling	Patch and repair plaster ceilings		203	SF	
	Minor	Fair	Ceiling	Paint ceilings		203	SF	
	Minor	Poor	Doors	Door 1/303 Replace existing fire-rated door with new replica		2	EA	

				historic paneled fire rated door and frames, closer, and hardware. Door 2/303 opening is addressed with Room 300.				
	Minor	Poor	Stairs	Replace treads with new cut marble treads		20	EA	
	Minor	Poor	Stairs	Paint stair stringers and risers		1	LS	
	Critical	Poor	Stairs - Railing	Install new ABAAS compliant handrail		56	LF	
	Minor	Poor	Elevator Cage	In Basement Stair-1 Costs		1	LS	
	Minor	Poor	Elevator Cage	Install new guardrail at east side of elevator		1	LS	\$2,500
	Serious	Poor	Lighting	Install new lighting at landings and in stair		4	EA	
				Address roof hatch and access		1	LS	

Deficiency Ratings (Critical, Serious, Minor)

Condition Ratings (Good, Fair, Poor)

Maurice Bathhouse Treatment Checklist – Architectural Second and Third Floors								
Uni-format WBC Code	Deficiency Rating	Condition Rating	Component – Exterior or Interior	Treatment	Reference	Qty	Unit	Total Cost
Second Floor – Demolition								
	Minor	Poor	Selective Demolition - Flooring	Demo Tile Flooring (1 layers). Roof 211 – Hallway.		200	SF	
	Minor	Poor	Selective Demolition - Walls	Interior Walls (Clay Tile with Plaster)		126	LF	
	Minor	Poor	Selective Demolition – Plaster	Demo severally deteriorated plaster at exterior wall. Room 205 – Men’s Dressing Room		1350	SF	
	Minor	Poor	Selective Demolition – Wall Tile	Demo ceramic wall tile off existing walls to remain. Room 208 – Employee Lounge		162	SF	
	Minor	Poor	Selective Demolition – Wall Cap	Demo 2-inch concrete cap off plaster wainscoting (throughout the second floor)		800	LF	
	Minor	Poor	Selective Demolition – Interior Doors	Remove existing interior door frames and doors (including elevator hall door replacement)		11	EA	
Second Floor – General Information								
	Minor	N/A	Floor – Existing Terrazzo	Make minor repairs to existing terrazzo floor. Clean and buff terrazzo floors.		4,904	SF	
	Minor	N/A	Floor – Terrazzo Infill	Infill with complimentary terrazzo where existing interior walls are removed. Terrazzo to include metal accent stripping to indicate the locations of historic walls.		1,208	SF	
	Minor	Fair	Wall – Base	Repair existing terrazzo base.		15	LF	
	Minor	N/A	Wall – Plaster	Skim coat existing exterior plaster walls.		2,030	SF	
	Minor	Minor	Wall – Door	Install 1-hr fire rated doors and hollow metal frames.		4	EA	
	Minor	Minor	Wall – Chases	Construct new utility chases (floor to ceiling) with metal studs and 5/8” gypsum.		9	EA	
	Minor	N/A	Paint	Prep, prime, and paint walls and ceiling.		8,184	SF	
	Minor	N/A	Ceiling	Skim coat plaster ceiling and make minor repairs.		4,904	SF	
	Serious	N/A	Signage	Provide room signage, exiting signage, and navigational				Allowance

				signage				
Electrical Room - New								
	Minor	N/A	Wall – New Wall	Install 6” metal framing, 5/8” impact resistant gypsum board, and acoustic insulation. Wall to extend from slab to underside of deck.		26	LF	
	Minor	N/A	Wall – Door	Install hollow metal frame and metal door.		1	EA	
Mechanical Room - New								
	Minor	N/A	Wall – New Wall	Install 6” metal framing, 5/8” impact resistant gypsum board, and acoustic insulation. Wall to extend from slab to underside of deck.		35	LF	
	Minor	N/A	Wall - Door	Install hollow metal frame and metal door.		1	EA	
Room 205 – Men’s Dressing Room								
	Minor	Poor	Wall – Plaster	Install three coat plaster at exterior wall. Room 205		250	SF	
	Minor	N/A	Wall – Plaster	Skim coat plaster ceiling and make minor repairs.		480	SF	
Room 210 – Billiard Room								
				Perform paint analysis on walls above tile wainscotting. Decorative paint may be visible on south wall and north wall. Test walls, ceiling, beams, windows, and grille.				
	Minor	Fair	Door - Demo	Remove existing Door 2/210 (HM frame and door)		19	LF	
	Minor	Poor	Demolition	Demolish existing chase in SW corner of room. Salvage historic tile and metal grille for reuse. Demolish all existing ducts and piping from chase		1	LS	
	Minor	Poor	Demolition	Demolish existing soffit along east wall in its entirety. Remove all piping and ducts. Remove vertical framing remaining in chase in SE corner.		1	LS	
	Serious	Poor	Flooring	Repair crack and offset in terrazzo floor in n/s direction		19	LF	
	Minor	Poor	Walls	Construct new soffits along east and west walls to match historic soffits. Utilize metal framing and blue board with skim coating to replicate plaster.		213	SF	
	Minor	Poor	Walls	Construct new chases in SW and SE corner to replicate historic chases. Utilize metal framing and blue board covering with skim coating to replicate plaster above tile wainscotting		175	SF	
	Minor	Poor	Walls	Restore plaster above tile wainscotting.		200	SF	
	Minor	Poor	Walls	Paint soffits and walls		413	SF	
	Minor	Poor	Walls – Tile	Restore missing tile wainscotting (field and border)		170	SF	
	Minor	Poor	Walls – Tile	Clean and re-grout existing tiles and patch holes, as required		274	SF	
	Minor	Poor	Ceiling	Restore plaster on ceiling and beams		264	SF	
	Minor	Poor	Ceiling	Paint ceiling and beams per historic paint analysis		264	SF	
	Minor	Poor	Equipment	Paint and restore existing metal grille		1	LS	\$400

	Minor	Missing	Equipment	Locate historic grille for SE chase in park archives and install. Paint to match paint analysis		1	LS	\$400
	Minor	Poor	Equipment	Paint and restore existing radiator		1	LS	\$800
	Minor	Poor	Lighting	Install Lighting		1	LS	\$2000
	Missing		Walls	Restore stenciling and decorative painting throughout, as found during paint analysis		1	LS	Allowance \$ 47,000
Room 211 - Hallway								
	Minor	Poor	Wall – Gypsum	Install ½” gypsum board over existing plaster walls.		726	SF	
	Minor	N/A	Wall – New Wall	Install 6” metal framing, 5/8” impact resistant gypsum board, and acoustic insulation. Wall to extend from slab to underside of deck.		29	LF	
Third Floor – Demolition								
	Minor	Poor	Selective Demolition - Flooring	Demo Tile Flooring (1 layers). Roof 211 – Hallway.		125	SF	
			Selective Demolition - Flooring	Saw cut all remaining terrazzo and clay block curbing remain from previously removed partition walls.		464	LF	
	Minor	Poor	Selective Demolition - Walls	Demo Interior Walls (Clay Tile with Plaster). Historic metal mesh to be salvaged.		123	LF	
	Minor	Poor	Selective Demolition – Wall Cap	Demo 2-inch concrete cap off plaster wainscoting (throughout the second floor)		800	LF	
	Minor	Poor	Selective Demolition – Interior Doors	Remove existing interior door frames and doors (including elevator hall door replacement). All hardware from doors and marble plinths from door frame to be salvaged.		15	EA	
Third Floor – General Information								
	Minor	N/A	Floor – Existing Terrazzo	Make minor repairs to existing terrazzo floor. Clean and buff terrazzo floors.		3,877	SF	
	Minor	N/A	Floor – Terrazzo Infill	Infill with complimentary terrazzo where existing interior walls are removed and tile flooring. Terrazzo to include metal accent stripping to indicate the locations of historic walls.		1,856	SF	
	Minor	Fair	Wall – Base	Repair existing concrete base.		35	LF	
	Minor	Poor	Wall – Masonry	Spot repoint masonry wall where exposed.		800	SF	
	Minor	Poor	Wall – Plaster	Assess existing plaster, remove deteriorated plaster, replaster and repair as needed.		1378	SF	
	Minor	N/A	Wall – Plaster	Skim coat existing exterior plaster walls.		2,756	SF	
	Minor	Minor	Wall – Door	Doors in Stair/Elevator Hall costs		2	EA	
	Minor	Minor	Wall – Chases	Construct new utility chases (floor to ceiling) with metal studs and 5/8” gypsum.		9	EA	
	Minor	N/A	Paint	Prep, prime, and paint walls and ceiling.		8,184	SF	

	Minor	N/A	Ceiling – Plaster	Skim coat plaster ceiling.		3,877	SF	
	Minor	N/A	Ceiling – Plaster	Assess existing plaster, remove deteriorated plaster, replaster and repair as needed.		775	SF	
	Serious	N/A	Signage	Provide room signage, exiting signage, and navigational signage				Allowance
300 Roycroft / Dutch Room								
			Demolition	Remove remnants of gypsum board ceiling and wood framing from nook.		77	SF	
			Flooring	Repair cracks in concrete deck (refer to structural)				
			Flooring	Install new concrete topping slab to prepare for new tile floor		823	SF	
			Flooring	Install new replica rectangular 6"x9" red quarry clay tile throughout		823	SF	
			Flooring	Restore tile flooring in Nook. Re-grout, as required		77	SF	
			Base	Clean and restore marble base		61	LF	
			Base	Replace missing sections of marble base		57	LF	
			Walls	Carefully document and salvage all wood paneling, pilasters, benches, inglenook dividing wall, and all wood laylight framing from room to be restored either on or off site. Replace deteriorated and termite-damaged portions of wood paneling and details, including turned wood columns. Reinstall and restore finish in place.		1	LS	Allowance \$200,000
				Repair and stabilize masonry walls, per structural.				
	Minor	Poor	Walls - Plaster	Restore and install new plaster finishes over masonry on areas above paneling.		378	SF	
	Minor	N/A	Walls – Paint	Paint plaster areas above paneling		378	SF	
				Perform decorative paint analysis on plaster grotesques in Park curatorial storage. Paint analysis on ceiling in nook and on radiator.				
	Minor	N/A	Walls – Plaster Grotesques under brackets	Re-create plaster bracket grotesques with decorative painting to match historic paint analysis study		8	EA	Allowance \$8,000
	Minor	Fair	Fireplace	Clean masonry on fireplace		1	LS	\$1,000
	Minor	Fair	Fireplace	Restore iron lintel at fireplace opening		1	EA	\$300
	Minor	Poor	Ceiling – Nook	Install new metal ceiling framing in nook with gypsum board ceiling		77	SF	
	Minor	N/A	Ceiling – Nook	Paint ceiling in nook		77	SF	
	Minor	Fair	Doors	Doors 1/301 and 3/303 - Remove existing fire-rated steel doors and install new replica wood-paneled fire rated doors, closers, and all hardware and kick plates.		2	EA	\$7,000

	Minor	Poor	Door	Doors 1/301 and 3/303 - Repair termite-damaged jambs		4	EA	
	Minor	Poor	Door	Door 1/311 – Restore historic double-acting door. Install new replica or antique lockset; add tempered glass; restore steel hinges		1	EA	\$2,500
	Minor	N/A	Lighting	Install recessed lighting in inglenook		5	EA	
	Minor	N/A	Lighting	Install reproduction decorative four fixtures (Allowance)		3	EA	Allowance \$16,000
	Minor	N/A	Lighting	Consider installing overall concealed lighting to supplement chandelier fixtures. (Allowance)		1	LS	Allowance \$8,000
	Minor	N/A	Equipment	Restore finish on existing radiators to remain		1	LS	Allowance \$1,200
	Minor	N/A	Equipment	Consider installing salvaged thermostats as seen in historic postcards		2	EA	\$400
	Minor	N/A	Ceiling	Reconstruct missing stained glass laylight panels		14	EA	
				Install backlighting in laylight		1	LS	
				Consider re-creating murals above paneling				
311 Maurice Office								
				Perform historic paint analysis on floor, base, walls, ceiling, and radiator.				
	Minor	Poor	Flooring and Base	Fill cracks in concrete floor and base. Paint floor and base to match historic paint analysis		102	SF	
	Minor	Fair	Base	Clean 4 marble plinths		4	EA	
	Minor	Poor	Walls -Plaster	Remove damaged or unattached plaster from walls. Remove loose paint. Spot repoint exposed masonry as required. Repair cracks. Install new plaster where missing and skim coat the remainder of the room.		252	SF	
	Minor	Poor	Walls - Masonry	Infill section of missing masonry at north wall		16	SF	
	Minor	Poor	Walls	Paint all interior walls		252	SF	
	Minor	Poor	Ceiling	Restore plaster ceiling. Remove loose paint. Fill cracks and skim coat.		78		
			Door	Door 1/311 work is with Roycroft Room				
	Minor	Poor	Door	Door 2/311 to be replicated with new door. Salvage and reuse historic glass and hardware. Restore hardware. Carefully clean glass, remove paint splatters; protect gold lettering.		1	EA	Allowance \$1,800
	Minor	N/A	Ceiling	Consider installing replica skylight in office as seen in earlier drawings.		1	LS	Allowance \$4,000
	Minor	Poor	Trim	Restore finishes on trim at both doors		1	LS	\$800
	Minor	NA	Lighting	Install new lighting		1	LS	
	Minor	Poor	Equipment	Restore radiator finishes		1	LS	\$800

312 Day Room								
				Perform historic paint analysis on floor, base, walls, ceiling, wire mesh at top of wall, and radiator.				
	Minor	Poor	Flooring	Terrazzo flooring work in overall costs for third floor				
	Minor	Poor	Flooring	Patch holes through concrete and terrazzo floor		2	EA	
	Minor	Fair	Base	Clean 4 marble plinths and reinstall		4	EA	
	Minor	Poor	Base	Restore paint finish on integral concrete base, per paint analysis		26	LF	
	Minor	Poor	Walls -Plaster	Remove damaged or unattached plaster from walls. Remove loose paint. Spot repoint exposed masonry as required. Repair cracks. Install new plaster where missing and skim coat the remainder of the room.		170	SF	
	Minor	Poor	Walls	Paint all interior walls		170	SF	
	Minor	Fair	Walls – Wire Mesh	Restore finish on wire mesh, as determined by paint analysis		1	LS	\$900
	Minor	Poor	Ceiling	Restore plaster ceiling. Remove loose paint. Fill cracks and skim coat.		41	SF	
			Door	Door 1/312 install salvaged door from park storage. Restore door and hardware prior to installation		1	LS	Allowance \$1,200
	Minor	Poor	Trim	Restore finishes on trim at door		1	LS	\$800
	Minor	NA	Lighting	Install replica or salvaged lighting on ceiling and wall from Park archives		2	EA	\$800
	Minor	Poor	Equipment	Restore radiator finishes		1	LS	\$800

TREATMENT TABLES - STRUCTURAL

Deficiency Ratings (Critical, Serious, Minor)

Condition Ratings (Good, Fair, Poor)

Maurice Treatment Checklist – Structural								
Uni-format WBC Code	Deficiency Rating	Condition Rating	Component – Exterior or Interior	Treatment	Reference	Qty	Unit	Total Cost
Structural								
	Serious	Poor	Concrete Floor Framing	Overhead beam repairs. Contractor to chip away deteriorated, sound and unsound concrete along the bottom of overhead concrete beams. Chipping concrete around existing reinforcing without damaging steel reinforcing. Repair preparation includes shotblasting clean existing reinforcing and application of rust inhibiting products. Concrete repairs may be shotcrete or hand troweled patching. Quantity based on linear quantity with the anticipation of 4” concrete removal from the bottom of a 12” wide concrete beam. Consider scaffolding costs for high ceilings.		180	LF	
	Serious	Poor	Concrete Floor Framing	Overhead partial depth slab repairs. Contractor will need to sound all overhead surfaces and perform repairs as described for overhead beam repairs, chipping away concrete and replacing for slab areas. Quantity based on square footage of an overhead repair 4” deep. Consider scaffolding costs for high ceilings.		675	SF	
	Serious	Poor	Concrete Floor Framing	Full depth slab repairs. Concrete repairs that require full depth removal and replacement. Repairs may be formed from underside and poured from above. Quantity based on square footage of a 6” thick slab. Individual repairs range in size from 1 to 60 square feet. Consider scaffolding costs for high ceilings.		100	SF	
	Serious	Poor	Concrete Floor Framing	Overhead epoxy injection for concrete slab cracks.		250	LF	
	Serious	Poor	Concrete Floor Framing	Top of slab epoxy injection for concrete slab cracks.		850	LF	
	Critical	Poor	Concrete Floor Framing	Provide an allowance for repairs to the concrete structure within the basement crawlspace.		1	LS	
	Critical	Poor	Supplemental	Above the basement pool in Room B010, a large slab		1	LS	

			Steel Framing	penetration has been made for HVAC ductwork. Recommend installation of (2) steel beams to support the concrete slab around the opening. Approximate size for pricing would be W10 or W12, approximately 12'-6" in length, with connections to existing concrete walls.				
	Serious	Poor	Geotechnical Investigation	Perform soil sampling and testing on north side of bathhouse. Results of testing will determine type of underpinning system to be used.		1	LS	
	Serious	Poor	Underpinning of foundation	Recommend excavating in the basement below the existing slab, Excavation must be made by hand to the bottom of the existing footing below grade. Install two underpinning piers. Replace excavated soil and basement slab. Size of excavation anticipated at 5' by 5', depth unknown.		1	LS	
	Critical	Poor	Overhead framing in Roycroft Room	Remove and replace overhead framing, consisting of wood beams and steel tension rods. Replacement to include contingency for shoring required of existing masonry pilasters on the west side of the room.		1	LS	
	N/A	N/A	Early SD additional services	Confined entry chipping in crawlspace. Perform selective demolition for underside of slab and beam in crawlspace. Demolition will determine size spacing and location of existing reinforcing. Areas will be patched following chipping.		1	LS	\$2,500
	N/A	N/A	Early SD additional services	Provide GPR scanning of existing masonry walls to determine approximate volume of voids for future grout injection repairs.		1	LS	\$1,500

TREATMENT TABLES - MEPF

Deficiency Ratings (Critical, Serious, Minor)

Condition Ratings (Good, Fair, Poor)

Maurice Bathhouse Treatment Checklist – Mechanical, Plumbing, Electrical, and Fire Protection								
Uni-format WBC Code	Deficiency Rating	Condition Rating	Component – Exterior or Interior	Treatment	Reference	Qty	Unit	Total Cost
Mechanical								
	Minor	Fair	Building Cooling	Demo existing AHU-1 condensing unit and associated refrigerant piping.		1	EA	
	Minor	NA	Building Cooling	Provide new 90 ton air cooled chiller		1	EA	\$79,000 (equipment only)
	Minor	NA	Building Cooling	Provide 2 - 100% capacity each, variable primary, vertical in-line, floor mounted chilled water pumps.		2	EA	
	Minor	NA	Building Cooling	Provide chilled water accessories including air/dirt separator and quick and auto fill system		1	LS	
	Minor	NA	Building Cooling	Connect Schedule 40 black steel chilled water piping to chiller, chilled water pumps, air/dirt separator, air handling units and fan coil units		1	LS	
	Minor	Fair	Hale Condensing Unit	Relocate Hale condensing unit to the Hale building site and reconnect refrigerant piping		1	LS	
	Minor	Fair	Air Conditioning	Demo existing AHU-1 and associated ductwork, piping and controls		1	LS	
		NA	Air Conditioning	Provide new air handling unit system, relief fan and associated ductwork and VAV boxes with hot water reheat to serve First Floor.		1	13,000 CFM	
		NA	Air Conditioning	Provide new air handling unit system, relief fan and associated ductwork and VAV boxes with hot water reheat to serve Second Floor.		1	7,000 CFM	
		NA	Air Conditioning	Provide new air handling unit system and associated ductwork to serve the Roycroft Room.		1	3,000 CFM	
		NA	Air Conditioning	Provide wall mounted fan coil units under the windows on Third Floor		23	EA	
		NA	Air Conditioning	Provide packaged roof mounted DOAS with energy recovery wheel and associated ductwork to provide ventilation to the		1	LS	\$60,000 (DOAS unit)

				spaces on Third Floor				only)
		NA	Air Conditioning	Provide mini-split indoor units between laylight and skylight in the Roycroft Room and associated remote condensing units mounted on the roof.		2	EA	
	Minor	Fair	Air Conditioning	Demo the existing elevator equipment room indoor unit and remote condensing unit		1	LS	
		NA	Air Conditioning	Provide new mini-split DX indoor unit for the new elevator equipment room and associated remote condensing unit and refrigerant piping		1	LS	
	Minor	Poor	Existing Ductwork	Disconnect and remove all existing ductwork		1	LS	
	Minor	Poor	Building Heating	Disconnect and remove existing boiler and associated flue, combustion air ductwork, heating water pump, heating water accessories and piping.		1	LS	
	Serious	Poor	Building Heating	Disconnect and remove all remaining steam piping and radiators.		1	LS	
		NA	Building Heating	Install 2 - 50% capacity each gas fired condensing boilers		2	EA	
		NA	Building Heating	Provide 2 - 50% capacity each, variable primary, vertical in-line, floor mounted heating water pumps.		2	EA	
		NA	Building Heating	Provide heating water accessories including air/dirt separator and quick and auto fill system		1	LS	
		NA	Building Heating	Provide shell and tube heat exchanger to provide preheat of boiler return water utilizing thermal water.		1	EA	
		NA	Building Heating	Provide vertical in-line heat exchanger pump		1	EA	
		NA	Building Heating	Connect Schedule 40 black steel or Type L copper heating water piping to boilers, heating water pumps, air/dirt separator, air handling units, VAV boxes, fan coil units & unit heaters		1	LS	
	Critical	NA	Basement	Provide new self-contained dehumidifiers and associated ductwork to dehumidify the basement and east crawlspace.		2	\$30,000 (Equipment Only)	
	Critical	NA	Crawlspace Exhaust Fan	Put exhaust fan in automatic working condition to be controlled by humidistat		1	EA	
	Minor	Fair	Temporary Exhaust/Intake Systems	Demo existing propeller exhaust fans and associated intake dampers. Existing louvers are to remain unless noted otherwise		6	EA	
Plumbing								
	Minor	Fair	Domestic Water Service	Provide new 3" water service to north basement		100	LF	
	Minor	Fair	Water Service Backflow Preventer	Provide new 3" RPZ backflow preventer with air gap fitting and drain piping.		1	LS	

	Minor	Fair	Water Service Backflow Preventer	Provide 4" floor drain in pit and associated waste and vent piping at backflow preventer location		1	LS	
	Minor	NA	Gas Service	Verify current gas service piping capacity with gas provider to serve the new boilers, water heater(s) and emergency engine generator and to provide new gas meter. Size incoming line to as required and connect to generator and new 3" piping into the building.		1	LS	
	Minor	Fair	Gas Piping	Demo existing gas piping inside building and install new 3" main extended to boilers, DOAS unit on roof and potential water heater location		1	LS	
	Minor	Fair	Roof Drains	Replace roof drain domes with ductile iron domes bolted securely to roof drain bodies		7	EA	
	Serious	Poor	Entry Roof Drains	Provide emergency roof drains and associated downspout piping or provide overflow scuppers		2	EA	
	Serious	Poor	Roof Drainage	Connect new storm water piping to each of the existing downspout risers and route outside, combine and connect to city sanitary sewer system. Piping shall be schedule 40 PVC.		1	LS	
	Serious	Poor	Waste & Vent Piping	Demo existing above slab-on grade waste and vent piping and extend new waste and vent piping to floor drains and rough-in for future restroom & locker room locations and future café and kitchen locations.		1	LS	
	Serious	Poor	Waste Piping	Scope existing below slab waste piping to determine the location, elevation and condition of the existing piping. Determination of feasibility of using below slab waste piping can be made after completion of those tasks.		1	LS	
	Serious	Poor	Plumbing Fixtures	Demo all plumbing fixtures and associate waste, vent and water connections		1	LS	
	Serious	Poor	Basement	Seal existing thermal spring water collection basins, provide new outlet connections and open trench drainage system connected to existing sump		1	LS	
	Serious	Poor	Elevator Sump Pump	Install new elevator sump pump in existing sump and connect to sanitary waste system		1	EA	
	Minor	Fair	Basement Sump Pumps	Replace existing groundwater/spring sump pumps and associated discharge piping		2	EA	
	Minor	Fair	Irrigation System	Relocate irrigation system backflow preventer, PRV and manifold system to new Pool Mechanical and Equipment room and repipe to existing piping exiting the building in the NW corner of the basement.		1	LS	
	Critical	Poor	North Drainage	Replace existing area drain with new drain with a beehive		1	EA	

			Runnel	strainer. Runnel needs ongoing maintenance to keep silt away from the drain.				
Electrical								
	Serious	Fair	Existing Conduit	Remove all unused and damaged conduit in building.		26,000	SF	
	Minor	Good	Existing Electrical Service	Remove Existing Electrical Service.		1	1	
	Serious	Poor	Grounding electrode system	Furnish and install new grounding electrode system.		1	SF	
		NA	New electrical service	Furnish and install new electrical service exterior disconnect circuit breaker and all new electrical panels throughout the building. Refer to one-line diagrams, schedules, and plans.		1	SF	
		NA	Generator	Furnish and install new natural gas generator. Generator to power the emergency lighting and the elevator. Refer to one-line diagrams, schedules, and plans.		1	SF	
		NA	Transfer Switches	Furnish and install two new emergency transfer switches.		2	EA	
		NA	Emergency Panel	Furnish and install new panelboard to serve new emergency lighting loads and other emergency loads in the building.		1	EA	
	Minor	Fair	Temporary Panel	Disconnect and remove existing temporary panelboard and all associated temporary wiring.		1	LS	
		NA	Existing connections	Disconnect all existing mechanical equipment and other equipment in the building not required to remain.		1	LS	
	Serious	Fair	Remove existing panelboards	Remove all existing panelboards in building.		1	LS	
	Serious	Poor	In Grade Electrical Connections	Install new waterproof connection to all in grade electrical connections		25	EA	
	Serious	Fair	Interior wiring	Remove all damaged and unused wiring.		26,000	SF	
	Minor	Fair	Temporary Wiring	Disconnect and remove all temporary wiring.		26,000	SF	
		NA	Exit Signs	Furnish and install all new exit signs.		1	LS	
		NA	Emergency Lighting	Furnish and install all new interior emergency egress lighting.		1	SF	
		NA	Exterior Egress Lighting	Furnish and install new emergency egress lighting at all exterior entrances.		1	SF	
		NA	Normal Lighting	Furnish and install all new lighting throughout building.		1	SF	
		NA	Convenience receptacles	Furnish and install convenience power throughout the building.		1	SF	
		NA	Security System	Furnish and install a new security system.		1	SF	
		NA	Mechanical connections	Furnish and install connections to all new mechanical equipment.		1	SF	
		NA	Penetration seals	Furnish and install all appropriate penetration seals throughout building as required.		1	SF	
	Minor	Fair	Existing AHU	Disconnect, remove, relocate, and reconnect existing AHU		1	SF	

				presently serving Hale Bath House.				
	Minor	Fair	Elevator connection.	Furnish and install new connections to existing elevator equipment that is relocated.		1	SF	
	Minor	Good	IT Service	Disconnect, remove, relocate, and reconnect existing IT service. Existing service is to be relocated from south end of existing pool room. Coordinate service relocation with owner and other affected buildings. Service provides connection to the pump house and visitors center.		1	LS	
		NA	IT Service	Furnish and install IT connections throughout the building.		1	LS	
	Serious	Fair	Arc Flash Label	Furnish and install arc flash labels for all electrical equipment.		1	LS	
		NA	Boilers	Furnish and install emergency shutdown system for the boilers and associated equipment.		1	LS	
Fire Protection								
	Critical	NA	Fire Alarm System	Furnish and install new fire alarm system. Install all new devices throughout the building. Provide system with expansion capability to meet future tenant needs.		26,000	SF	
	Critical	NA	Fire Suppression	Install new wet sprinkler system for entire building		26,000	SF	
	Critical	NA	Fire Water Service	Install new 6" fire water service to north basement		100	LF	
	Critical	NA	Fire Water Service	Provide 6" double check backflow preventer in north basement		1	EA	

APPENDIX I - COST ESTIMATE

United States Department of the Interior
National Park Service
Class B Construction Cost Estimate

BASIS OF ESTIMATE

PROJECT INFORMATION

Project: Condition Assessment and Treatment Plan for the Maurice Bathhouse
Park: Hot Springs National Park
Park Alpha: HOSP
PMIS: 318915B
Estimate Date: 5/12/2022
Prepared By: Michael Orel, CPE
Company: CMR
Address: 11006 Parallel Parkway, Suite 200
City, State Zip: Kansas City, KS 66109
Phone: 913-262-6715

BACKGROUND SUPPORTING MATERIAL (Scope of Work):

Condition assessment and treatment plan for the Maurice Bathhouse. The NPS will make necessary facility improvements to prepare the structures for leasing by toothers. This will include repairs to architectural components and finishes; structural, mechanical, electrical, plumbing, and fire suppression systems upgrades; building code and life safety review; identification of remaining hazmat deficiencies, and accessibility upgrades per ABAAS.

SOURCE OF COST DATA:

Document all sources of cost information used in the estimate. (Attach additional information if necessary)

ESTIMATE ASSUMPTIONS:

Estimate assumes that all improvements will be constructed as a single project.

MAJOR CHANGES FROM PREVIOUS ESTIMATE:

N/A

United States Department of the Interior
National Park Service
Class B Construction Cost Estimate

BASIS OF ESTIMATE

PROJECT INFORMATION

Project: Condition Assessment and Treatment Plan for the Maurice Bathhouse
Park: Hot Springs National Park
Park Alpha: HOSP
PMIS: 318915B
Estimate Date: 5/12/2022

DESCRIPTION OF MARK-UP & ADD-ONS:

Location Factor:	<u>0.00%</u>	Utilized local prices
Remoteness Factor:	<u>1.00%</u>	Site is 50 miles from published commercial center.
Wage Rate Factor:	<u>0.00%</u>	Local prevailing wage rates were considered when preparing this estimate so no adjustments are needed
State & Local Taxes:	<u>9.50%</u>	Sales tax rate for Hot Springs Ark
Design Contingency:	<u>18.00%</u>	This is a pre-design level estimate
Standard. General Conditions:	<u>8.00%</u>	This type of project will require higher than normal general conditions.
Government General Conditions:	<u>6.50%</u>	This type of project will require higher than normal government general conditions.
Historic Preservation Factor:	<u>3.00%</u>	This project is historic in nature and will require a special attention to the historic fabric in the building
Contractor Overhead:	<u>8.50%</u>	Reasonable for this type of project
Contractor Profit:	<u>10.00%</u>	profit reasonable for a project of this size
Bonds and Permits:	<u>3.00%</u>	Reasonable for this type of project
Contracting Method Adjustment:	<u>15.00%</u>	Contracting method unknown and specialty contractors are required
Annual Inflation Escalation Factor:	<u>7.00%</u>	Projected annual inflation rate.
Time Until Project Midpoint (Months)	<u>20</u>	Number of months from estimate (or data) date until the projects midpoint of construction.

OTHER COMMENTS:

This estimate is based on the building being vacant and 100% available to the contractor with no phasing involved.

**United States Department of the Interior
National Park Service
Class B Construction Cost Estimate
PROJECT COST SUMMARY**

Project: Condition Assessment and Treatment Plan for the Maurice Bathhouse
Park: Hot Springs National Park
Park Alpha: HOSP
PMIS Number: 318915B

Estimate By: Michael Orel, CPE
Date: 05/12/22

Reviewed By: AG
Date: 05/12/22

Asset / Project Element	Size/Count	Units
Asset / Project Element Name	26,000	SF

Item No.	WBS	Description	Material Cost/Unit	Total Material Cost	Installation Cost/Unit	Total Install Cost	Direct Cost/Unit	Total Direct Costs	NET Cost/Unit	Total NET Costs
1	A10	Foundations	\$ 0.86	\$ 22,469	\$ 1.37	\$ 35,500.00	\$ 2.23	\$ 57,969	\$ 5.02	\$ 130,618
2	A20	Basement Construction	\$ 0.28	\$ 7,300	\$ 1.02	\$ 26,500.00	\$ 1.30	\$ 33,800	\$ 2.93	\$ 76,160
3	B10	Superstructure	\$ 4.45	\$ 115,760	\$ 7.09	\$ 184,320.00	\$ 11.54	\$ 300,080	\$ 26.01	\$ 676,153
4	B20	Exterior Enclosure	\$ 8.37	\$ 217,735	\$ 12.40	\$ 322,465.00	\$ 20.78	\$ 540,200	\$ 46.82	\$ 1,217,202
5	B30	Roofing	\$ 12.75	\$ 331,550	\$ 14.02	\$ 364,645.00	\$ 26.78	\$ 696,195	\$ 60.33	\$ 1,568,697
6	C10	Interior Construction	\$ 7.34	\$ 190,802	\$ 3.69	\$ 96,058.00	\$ 11.03	\$ 286,860	\$ 24.86	\$ 646,365
7	C20	Stairs	\$ 5.14	\$ 133,575	\$ 1.56	\$ 40,475.00	\$ 6.69	\$ 174,050	\$ 15.08	\$ 392,177
8	C30	Interior Finishes	\$ 20.09	\$ 522,265	\$ 99.72	\$ 2,592,709.50	\$ 119.81	\$ 3,114,974	\$ 269.95	\$ 7,018,794
9	D10	Conveying Systems	\$ 1.22	\$ 31,750	\$ 1.41	\$ 36,750.00	\$ 2.63	\$ 68,500	\$ 5.94	\$ 154,347
10	D20	Plumbing Systems	\$ 1.55	\$ 40,300	\$ 2.57	\$ 66,900.00	\$ 4.28	\$ 111,200	\$ 9.64	\$ 250,561
11	D30	HVAC	\$ 28.37	\$ 737,600	\$ 12.01	\$ 312,340.00	\$ 40.38	\$ 1,049,940	\$ 90.99	\$ 2,365,770
12	D40	Fire Protection	\$ 2.00	\$ 52,000	\$ 3.00	\$ 78,000.00	\$ 5.00	\$ 130,000	\$ 11.27	\$ 292,922
13	D50	Electrical	\$ 13.76	\$ 357,700	\$ 11.17	\$ 290,350.00	\$ 24.93	\$ 648,050	\$ 56.16	\$ 1,460,214
14	E10	Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
15	E20	Furnishings	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
16	F10	Special Construction	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
17	F20	Selective Building Demolition	\$ 0.06	\$ 1,500	\$ 14.62	\$ 380,038.00	\$ 14.67	\$ 381,538	\$ 33.07	\$ 859,698
18	G10	Site Preparation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
19	G20	Site Improvements	\$ 3.07	\$ 79,735	\$ 4.40	\$ 114,500.00	\$ 7.47	\$ 194,235	\$ 16.83	\$ 437,659
20	G30	Site Mechanical Utilities	\$ 0.18	\$ 4,750	\$ 0.37	\$ 9,550.00	\$ 0.55	\$ 14,300	\$ 1.24	\$ 32,221
21	G40	Site Electrical Utilities	\$ 3.48	\$ 90,500	\$ 1.59	\$ 41,370.00	\$ 5.07	\$ 131,870	\$ 11.43	\$ 297,135
22	G50	Other Site Construction	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23	XX	Special Use - 1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
24	XX	Special Use - 2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
25	XX	Special Use - 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Subtotal Direct Construction Costs			\$ 112.97	\$ 2,937,291	\$ 192.02	\$ 4,992,470.50	\$ 305.14	\$ 7,933,761	\$ 687.57	\$ 17,876,694
Total Value of Government Furnished Property (GFP) Included in Direct Costs			\$ 0.00	\$ -	\$ -	\$ -	\$ -	\$ -	In most cases GFP is normally zero - see footnote-	
Direct Cost Subtotal without GFP			\$ 2,937,291	\$ -	\$ -	\$ 4,992,470.50	\$ -	\$ 7,933,761		
Published Location Factor			0.00%					\$ 0	Notes & Comments:	
Remoteness Factor			1.00%					\$ 79,338		
Federal Wage Rate Factor			0.00%		Generally applied against Labor Costs only.			\$ 0		
State & Local Taxes			9.50%		Generally applied against Material Costs only. Please Note if application differs.			\$ 279,043		
Design Contingency			18.00%					\$ 1,428,077		
Total Direct Construction Costs								\$ 9,720,218		
Standard General Conditions			8.00%		Applied to Total Direct Construction Cost less GFP			\$ 777,617		
Government General Conditions			6.50%		Applied to Total Direct Construction Cost less GFP			\$ 631,814		
Historic Preservation Factor			3.00%		Applied to Total Direct Construction Cost less GFP			\$ 291,607		
Subtotal NET Construction Cost								\$ 11,421,256		
Overhead			8.50%					\$ 970,807		
Profit			10.00%					\$ 1,142,126		
Estimated NET Construction Cost								\$ 13,534,189		
Bonds & Permits			3.00%					\$ 406,026		
Contracting Method Adjustment			15.00%					\$ 2,030,128		
Inflation Escalation			20	Months	Annual Rate =	7.00%	Inc. Bonds & CMA	\$ 1,906,351		
Total Estimated NET Cost of Construction								\$ 17,876,694		

GFP costs are only used when the Government pre-purchases items, or provides other materials out of Government inventory, to be installed by contractor. Adjustments and Markup on GFP only include Inflation Escalation; No other adjustment factors or O&P markup have been applied.

United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Mauri
 Park: Hot Springs National Park
 Park Alpha: HOSP
 PMIS Number: 318915B

Estimate By: Michael Orel, CPE
 Date: 05/12/22
 Reviewed By: AG
 Date: 05/12/22

Summary Item **A10 Foundations**

Total Cost: \$57,969

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
A1010	STANDARD FOUNDATIONS								
	Perform soil sampling and testing on north side of bathhouse	1	LS	\$ -	\$0	\$ 7,500.00	\$7,500	\$ 7,500.00	\$7,500
SUBTOTAL	STANDARD FOUNDATIONS	26000	SF	\$ -	\$0	\$ 0.29	\$7,500	\$ 0.29	\$7,500

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
A1020	SPECIAL FOUNDATIONS								
	Recommend excavating one location in the basement below the existing slab, Excavation must be made by hand to the bottom of the existing footing below grade. Install two underpinning piers. Replace excavated soil and basement slab. Size of excavation anticipated at 5' by 5', depth unknown.	1	EA	\$ 3,500.00	\$3,500	\$ 6,500.00	\$6,500	\$ 10,000.00	\$10,000
SUBTOTAL	SPECIAL FOUNDATIONS	26000	SF	\$ 0.13	\$3,500	\$ 0.25	\$6,500	\$ 0.38	\$10,000

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
A1030	SLAB ON GRADE								
	Demo and Patch Slab for Plumbing Rough-Ins ALLOW	1	LS	\$ 5,000.00	\$5,000	\$ 10,000.00	\$10,000	\$ 15,000.00	\$15,000
	Install new concrete topping slab to prepare for new tile floor. Room 300	823	SF	\$ 3.00	\$2,469	\$ -	\$0	\$ 3.00	\$2,469
	Remove and install new vapor barrier in crawl space	2300	SF	\$ 5.00	\$11,500	\$ 5.00	\$11,500	\$ 10.00	\$23,000
SUBTOTAL	SLAB ON GRADE	26000	SF	\$ 0.73	\$18,969	\$ 0.83	\$21,500	\$ 1.56	\$40,469

Summary Item **A10 Foundations**

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
A10	Foundations	26000	SF	\$ 0.86	\$22,469	\$ 1.37	\$35,500	\$ 2.23	\$57,969

United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Maur
 Park: Hot Springs National Park
 Park Alpha: HOSP
 PMIS Number: 318915B

Estimate By: Michael Orel, CPE
 Date: 05/12/22
 Reviewed By: AG
 Date: 05/12/22

Summary Item **A20 Basement Construction**

Total Cost: \$33,800

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
A2020	BASEMENT WALLS								
	Confined entry chipping in crawlspace.	1	LS	\$ -	\$0	\$ 2,500.00	\$2,500	\$ 2,500.00	\$2,500
	Overhead beam repairs Allowance	30	LF	\$ 60.00	\$1,800	\$ 200.00	\$6,000	\$ 260.00	\$7,800
	Overhead partial depth slab repairs Allowance	80	SF	\$ 60.00	\$4,800	\$ 200.00	\$16,000	\$ 260.00	\$20,800
	Full depth slab repairs Allowance	10	SF	\$ 70.00	\$700	\$ 200.00	\$2,000	\$ 270.00	\$2,700
SUBTOTAL	BASEMENT WALLS	26000	SF	\$ 0.28	\$7,300	\$ 1.02	\$26,500	\$ 1.30	\$33,800

Summary Item **A20 Basement Construction**

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
A20	Basement Construction	26000	SF	\$ 0.28	\$7,300	\$ 1.02	\$26,500	\$ 1.30	\$33,800

United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Maur
 Park: Hot Springs National Park
 Park Alpha: HOSP
 PMIS Number: 318915B

Estimate By: Michael Orel, CPE
 Date: 05/12/22
 Reviewed By: AG
 Date: 05/12/22

Summary Item **B10 Superstructure**

Total Cost: \$300,080

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
B1010	FLOOR CONSTRUCTION								
	Overhead beam repairs	180	LF	\$ 60.00	\$10,800	\$ 100.00	\$18,000	\$ 160.00	\$28,800
	Overhead partial depth slab repairs	675	SF	\$ 60.00	\$40,500	\$ 100.00	\$67,500	\$ 160.00	\$108,000
	Full depth slab repairs	100	SF	\$ 70.00	\$7,000	\$ 100.00	\$10,000	\$ 170.00	\$17,000
	Overhead epoxy injection for concrete slab cracks.	250	LF	\$ 15.00	\$3,750	\$ 50.00	\$12,500	\$ 65.00	\$16,250
	Top of slab epoxy injection for concrete slab cracks.	850	LF	\$ 15.00	\$12,750	\$ 50.00	\$42,500	\$ 65.00	\$55,250
SUBTOTAL	FLOOR CONSTRUCTION	1000	SF	\$ 74.80	\$74,800	\$ 150.50	\$150,500	\$ 225.30	\$225,300

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
B1020	ROOF CONSTRUCTION								
	installation of (2) steel beams to support the concrete slab around the opening	2	EA	\$ 150.00	\$300	\$ 500.00	\$1,000	\$ 650.00	\$1,300
	Remove and replace overhead framing, consisting of wood beams and steel tension rods. Replacement to include contingency for shoring required of existing masonry pilasters on the west side of the room.	1.96	TN	\$ 8,500.00	\$16,660	\$ 4,500.00	\$8,820	\$ 13,000.00	\$25,480
	CINTEC ANCHORS	8	EA	\$ 3,000.00	\$24,000	\$ 3,000.00	\$24,000	\$ 6,000.00	\$48,000
SUBTOTAL	ROOF CONSTRUCTION	26000	SF	\$ 1.58	\$40,960	\$ 1.30	\$33,820	\$ 2.88	\$74,780

Summary Item **B10 Superstructure**

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
B10	Superstructure	26000	SF	\$ 4.45	\$115,760	\$ 7.09	\$184,320	\$ 11.54	\$300,080

**United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)**

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Mauri
Park: Hot Springs National Park
Park Alpha: HOSP
PMIS Number: 318915B

Estimate By: Michael Orei, CPE
Date: 05/12/22
Reviewed By: AG
Date: 05/12/22

Summary Item B20 Exterior Enclosure

Total Cost: \$540,200

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
B2010	EXTERIOR WALLS								
	Provide GPR scanning of existing masonry walls to determine approximate volume of voids for future grout injection repairs	1	Unit	\$ -	\$0	\$ 1,500.00	\$1,500	\$ 1,500.00	\$1,500
	Confirm existing wall construction and GPR findings, provide selective demolition in two (2) locations to remove brick and observe voids in masonry.	1	LS	\$ -	\$0	\$4,500.00	\$4,500	\$4,500.00	\$4,500
	Repair cracks in stucco	260	LF	\$ 0.50	\$130	\$ 10.00	\$2,600	\$ 10.50	\$2,730
	Remove loose stucco and replace with new stucco	300	SF	\$ 25.00	\$7,500	\$ 125.00	\$37,500	\$ 150.00	\$45,000
	Remove biological growth from stucco	150	SF	\$ -	\$0	\$ 15.00	\$2,250	\$ 15.00	\$2,250
	Paint exterior walls	2050	SF	\$ 5.00	\$10,250	\$ 10.00	\$20,500	\$ 15.00	\$30,750
	Note: could be reduced to only areas impacted by repair work with further investigation in future phases	50	EA	\$ 150.00	\$7,500	\$ 50.00	\$2,500	\$ 200.00	\$10,000
	Replace damaged tiles, custom color and shape to match existing	1	LS	\$ 1,000.00	\$1,000	\$ 2,000.00	\$2,000	\$ 3,000.00	\$3,000
	Repair areas of cracked tile grout, remove and salvage tile, reset and grout	1	EA	\$ 100.00	\$100	\$ 7,000.00	\$7,000	\$ 7,100.00	\$7,100
	Repair bronze plaques from failure of lacquer coating and chalking of black paint	1	Unit	\$ 75.00	\$75	\$ 225.00	\$225	\$ 300.00	\$300
	Remove biological growth from stone wall	400	SF	\$ -	\$0	\$ 4.50	\$1,800	\$ 4.50	\$1,800
	Repoint open mortar joints in stone wall	60	LF	\$ 0.50	\$30	\$ 20.00	\$1,200	\$ 20.50	\$1,230
	Patch deteriorated stone cap: remove unsound material, replace with new stone (dutchman repair), one location	3	SF	\$ 125.00	\$375	\$ 650.00	\$1,950	\$ 775.00	\$2,325
	Eave Repair/Paint allowance	1	LS	\$ 10,000.00	\$10,000	\$ 10,000.00	\$10,000	\$ 20,000.00	\$20,000
SUBTOTAL	EXTERIOR WALLS	26000	SF	\$ 1.42	\$36,960	\$ 3.67	\$95,525	\$ 5.10	\$132,485

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
B2020	EXTERIOR WINDOWS								
	Existing mechanical louver to remain	4	EA	\$ -	\$0	\$ -	\$0	\$ -	\$0
	Existing stained glass: paint, new weather stripping, replace hardware 3'6"x5'6"	2	EA	\$ 1,500.00	\$3,000	\$ 1,040.00	\$2,080	\$ 2,540.00	\$5,080
	Existing stained glass: repair bottom, paint, new weather stripping, replace hardware 3'6"x5'6"	1	EA	\$ 1,525.00	\$1,525	\$ 1,040.00	\$1,040	\$ 2,565.00	\$2,565

**United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)**

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Mauri
Park: Hot Springs National Park
Park Alpha: HOSP
PMIS Number: 318915B

Estimate By: Michael Orei, CPE
Date: 05/12/22
Reviewed By: AG
Date: 05/12/22

Summary Item	B20	Exterior Enclosure							Total Cost:	\$540,200
		Interior window - paint	2	EA	\$ 50.00	\$100	\$ 520.00	\$1,040	\$ 570.00	\$1,140
		Paint, new weather stripping, replace hardware 2'3"x1'7"	69	EA	\$ 325.00	\$22,425	\$ 1,040.00	\$71,760	\$ 1,365.00	\$94,185
		Paint, new weather stripping, replace hardware, broken pane	2	EA	\$ 450.00	\$900	\$ 1,040.00	\$2,080	\$ 1,490.00	\$2,980
		Paint, new weather stripping, replace hardware, cracked pane	2	EA	\$ 450.00	\$900	\$ 1,560.00	\$3,120	\$ 2,010.00	\$4,020
		Paint, new weather stripping, replace hardware, cracked pane, repair bottom	1	EA	\$ 475.00	\$475	\$ 2,080.00	\$2,080	\$ 2,555.00	\$2,555
		Paint, new weather stripping, replace hardware, repair bottom	5	EA	\$ 450.00	\$2,250	\$ 1,040.00	\$5,200	\$ 1,490.00	\$7,450
		Paint, new weather stripping, replace hardware, repair bottom, repair stool	1	EA	\$ 525.00	\$525	\$ 2,080.00	\$2,080	\$ 2,605.00	\$2,605
		Paint, new weather stripping, replace hardware, replace missing stool and apron	2	EA	\$ 650.00	\$1,300	\$ 2,600.00	\$5,200	\$ 3,250.00	\$6,500
		Paint, repair trim and frame, paint, new weather stripping, replace hardware	1	EA	\$ 625.00	\$625	\$ 2,080.00	\$2,080	\$ 2,705.00	\$2,705
		Remove mechanical louver, provide new wood window and trim matching existing adjacent, paint	13	EA	\$ 1,350.00	\$17,550	\$ 2,080.00	\$27,040	\$ 3,430.00	\$44,590
		Repair bottom, paint, new weather stripping, replace hardware	5	EA	\$ 650.00	\$3,250	\$ 1,040.00	\$5,200	\$ 1,690.00	\$8,450
		Repair bottom, repair displacement, paint, new weather stripping, replace hardware	2	EA	\$ 650.00	\$1,300	\$ 1,040.00	\$2,080	\$ 1,690.00	\$3,380
		Repair frame, paint, new weather stripping, rehab existing hardware	3	EA	\$ 650.00	\$1,950	\$ 1,040.00	\$3,120	\$ 1,690.00	\$5,070
		Repair frame, paint, new weather stripping, replace hardware	1	EA	\$ 650.00	\$650	\$ 1,040.00	\$1,040	\$ 1,690.00	\$1,690
		Repair racked frame, paint, new weather stripping, replace hardware	8	EA	\$ 650.00	\$5,200	\$ 1,040.00	\$8,320	\$ 1,690.00	\$13,520
		Repair racked frame, repair bottom, paint, new weather stripping, replace hardware	11	EA	\$ 650.00	\$7,150	\$ 1,040.00	\$11,440	\$ 1,690.00	\$18,590
		Repair racked frame, repair bottom, replace trim, paint, new weather stripping, replace hardware	4	EA	\$ 650.00	\$2,600	\$ 1,040.00	\$4,160	\$ 1,690.00	\$6,760
		Repair racked frame, repair corners, paint, new weather stripping, replace hardware	3	EA	\$ 650.00	\$1,950	\$ 1,040.00	\$3,120	\$ 1,690.00	\$5,070
		Repair racked frame, repair stool and apron, paint, new weather stripping, replace hardware	1	EA	\$ 750.00	\$750	\$ 1,040.00	\$1,040	\$ 1,790.00	\$1,790
		Repair racked frame, repair top, paint, new weather stripping, replace hardware	2	EA	\$ 650.00	\$1,300	\$ 1,040.00	\$2,080	\$ 1,690.00	\$3,380
		Repair right side, paint, new weather stripping, replace hardware	1	EA	\$ 500.00	\$500	\$ 1,040.00	\$1,040	\$ 1,540.00	\$1,540
		Repair sill, paint new weather stripping, replace missing hardware	1	EA	\$ 650.00	\$650	\$ 1,040.00	\$1,040	\$ 1,690.00	\$1,690

**United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)**

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Mauri
Park: Hot Springs National Park
Park Alpha: HOSP
PMIS Number: 318915B

Estimate By: Michael Orei, CPE
Date: 05/12/22
Reviewed By: AG
Date: 05/12/22

Summary Item	B20 Exterior Enclosure	Total Cost: \$540,200							
	Repair stool and apron, paint, new weather stripping, replace hardware	2	EA	\$ 650.00	\$1,300	\$ 1,040.00	\$2,080	\$ 1,690.00	\$3,380
	Repair trim, paint, new weather stripping, replace hardware	2	EA	\$ 650.00	\$1,300	\$ 1,040.00	\$2,080	\$ 1,690.00	\$3,380
	Repair trim, paint, new weather stripping, replace hardware, cracked pane	1	EA	\$ 650.00	\$650	\$ 1,040.00	\$1,040	\$ 1,690.00	\$1,690
	Repair wood damage, paint, new weather stripping, replace hardware	1	EA	\$ 750.00	\$750	\$ 1,040.00	\$1,040	\$ 1,790.00	\$1,790
	Repair, paint, new weather stripping, replace hardware	1	EA	\$ 650.00	\$650	\$ 1,040.00	\$1,040	\$ 1,690.00	\$1,690
	Replace aluminum double door, sidelite, and transom with custom steel door, sidelites, and transom, custom profiles to mimic original, true divided light muntins at sidelites and transom, paint	1	EA	\$ 6,500.00	\$6,500	\$ 3,120.00	\$3,120	\$ 9,620.00	\$9,620
	Replace aluminum window with custom steel fixed window (4 units mulled together) custom profiles to mimic original, true divided light muntins, paint 7'6x11'5	6	EA	\$ 5,500.00	\$33,000	\$ 3,120.00	\$18,720	\$ 8,620.00	\$51,720
	Replace apron, paint, new weather stripping, replace hardware	1	EA	\$ 650.00	\$650	\$ 1,040.00	\$1,040	\$ 1,690.00	\$1,690
	Replace missing pieces, paint, new weather stripping, replace hardware, replace missing stool and apron	2	EA	\$ 650.00	\$1,300	\$ 1,040.00	\$2,080	\$ 1,690.00	\$3,380
	Replace stool and apron, paint, new weather stripping, replace hardware	2	EA	\$ 650.00	\$1,300	\$ 1,040.00	\$2,080	\$ 1,690.00	\$3,380
	Replace top trim, paint, new weather stripping, replace hardware	1	EA	\$ 650.00	\$650	\$ 1,040.00	\$1,040	\$ 1,690.00	\$1,690
	Custom Exterior Storm Windows	154	EA	\$ 350.00	\$53,900	\$ 150.00	\$23,100	\$ 500.00	\$77,000
SUBTOTAL	EXTERIOR WINDOWS	26000	SF	\$ 6.95	\$180,775	\$ 8.73	\$226,940	\$ 15.68	\$407,715

Summary Item B20 Exterior Enclosure

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
B20	Exterior Enclosure	26000	SF	\$ 8.37	\$217,735	\$ 12.40	\$322,465	\$ 20.78	\$540,200

United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Maur
 Park: Hot Springs National Park
 Park Alpha: HOSP
 PMIS Number: 318915B

Estimate By: Michael Orel, CPE
 Date: 05/12/22
 Reviewed By: AG
 Date: 05/12/22

Summary Item **B30 Roofing**

Total Cost: \$696,195

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
B3010	ROOF COVERINGS								
	Provide membrane roofing and associated flashing at low-slope roofs	5505	SF	\$ 8.00	\$44,040	\$ 5.00	\$27,525	\$ 13.00	\$71,565
	Modify slope with addition of tapered insulation at low-slope roofing to improve drainage	2000	SF	\$ 2.00	\$4,000	\$ 1.00	\$2,000	\$ 3.00	\$6,000
	Replace drain strainer domes at roof drains	10	EA	\$ 350.00	\$3,500	\$ 500.00	\$5,000	\$ 850.00	\$8,500
	Replace (3) cracked terra cotta parapet cap tiles	3	EA	\$ 150.00	\$450	\$ 150.00	\$450	\$ 300.00	\$900
	Replace deteriorated sealant at copper parapet cap flashing	25	LF	\$ 1.00	\$25	\$ 5.00	\$125	\$ 6.00	\$150
	Replace damaged and/or loose green glazed vitrified clay roof tiles (ribbed profile)	160	SF	\$ 5.00	\$800	\$ 10.00	\$1,600	\$ 15.00	\$2,400
	Replace damaged and/or loose green glazed vitrified clay roof tiles (flat profile)	100	SF	\$ 4.00	\$400	\$ 10.00	\$1,000	\$ 14.00	\$1,400
	Replace damaged green glazed vitrified clay roof tile wall caps (flat profile)	65	EA	\$ 150.00	\$9,750	\$ 150.00	\$9,750	\$ 300.00	\$19,500
	Remove and salvage clay ridge cap tiles, remove corroded metal flashing, replace with new metal flashing, reinstall salvaged ridge cap tiles	135	LF	\$ 15.00	\$2,025	\$ 5.00	\$675	\$ 20.00	\$2,700
	Remove corroded metal flashing, replace with new metal flashing	72	LF	\$ 15.00	\$1,080	\$ 5.00	\$360	\$ 20.00	\$1,440
	Remove and salvage clay ridge cap tiles, reinstall salvaged ridge cap tiles	96	SF	\$ 5.00	\$480	\$ 10.00	\$960	\$ 15.00	\$1,440
	Modify slope at top of cornice to ensure positive drainage and minimize standing water	400	SF	\$ 5.00	\$2,000	\$ 5.00	\$2,000	\$ 10.00	\$4,000
SUBTOTAL	ROOF COVERINGS	26000	SF	\$ 2.64	\$68,550	\$ 1.98	\$51,445	\$ 4.62	\$119,995

United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Maur
 Park: Hot Springs National Park
 Park Alpha: HOSP
 PMIS Number: 318915B

Estimate By: Michael Orel, CPE
 Date: 05/12/22
 Reviewed By: AG
 Date: 05/12/22

Summary Item **B30 Roofing**

Total Cost: \$696,195

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
B3020	ROOF OPENINGS								
	Provide (4) metal-framed skylights on existing wood structure and metal flashing at roof:	3520	SF	\$ 25.00	\$88,000	\$ 35.00	\$123,200	\$ 60.00	\$211,200
	Provide metal-framed skylight on existing structure, provide metal flashing and skylight gutter and downspouts:	1000	SF	\$ 175.00	\$175,000	\$ 175.00	\$175,000	\$ 350.00	\$350,000
	Street Closure and Scaffolding	1	LS	\$ -	\$0	\$ 15,000.00	\$15,000	\$ 15,000.00	\$15,000
SUBTOTAL	ROOF OPENINGS	26000	SF	\$ 10.12	\$263,000	\$ 12.05	\$313,200	\$ 22.16	\$576,200

Summary Item **B30 Roofing**

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
B30	Roofing	26000	SF	\$ 12.75	\$331,550	\$ 14.02	\$364,645	\$ 26.78	\$696,195

United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Ma
Park: Hot Springs National Park
Park Alpha: HOSP
PMIS Number: 318915B

Estimate By: Michael Orel, CPE
Date: 05/12/22
Reviewed By: AG
Date: 05/12/22

Summary Item **C10 Interior Construction**

Total Cost: \$286,860

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
C1010	INTERIOR PARTITIONS								
	Construct new utility chases (floor to ceiling) with metal studs and 5/8" gypsum.	9	EA	\$ 1,500.00	\$13,500	\$ 600.00	\$5,400	\$ 2,100.00	\$18,900
	Install 6" metal framing, 5/8" impact resistant gypsum board, and acoustic insulation. Wall to extend from slab to underside of deck. Electrical Room	26	LF	\$ 84.00	\$2,184	\$ 126.00	\$3,276	\$ 210.00	\$5,460
	Install 6" metal framing, 5/8" impact resistant gypsum board, and acoustic insulation. Wall to extend from slab to underside of deck. Mechanical Room	35	LF	\$ 84.00	\$2,940	\$ 126.00	\$4,410	\$ 210.00	\$7,350
	Construct new soffits along east and west walls to match historic soffits. Utilize metal framing and blue board with skim coating to replicate plaster. Room 210	213	SF	\$ 15.00	\$3,195	\$ 20.00	\$4,260	\$ 35.00	\$7,455
	Install 1/2" gypsum board over existing plaster walls. Room 210	726	SF	\$ -	\$0	\$ -	\$0	\$ -	\$0
	Install 6" metal framing, 5/8" impact resistant gypsum board, and acoustic insulation. Wall to extend from slab to underside of deck. Room 210	29	LF	\$ 84.00	\$2,436	\$ 126.00	\$3,654	\$ 210.00	\$6,090
	Construct new chases in SW and SE corner to replicate historic chases. Utilize metal framing and blue board covering with skim coating to replicate plaster above tile wainscotting Room 210	175	SF	\$ 20.00	\$3,500	\$ 15.00	\$2,625	\$ 35.00	\$6,125
	Construct walls for electrical room in basement	164	SF	\$ 6.00	\$984	\$ 9.00	\$1,476	\$ 15.00	\$2,460
	Construct walls for elevator room room in basement	148	SF	\$ 6.00	\$888	\$ 9.00	\$1,332	\$ 15.00	\$2,220
SUBTOTAL	INTERIOR PARTITIONS	26000	SF	\$ 1.14	\$29,627	\$ 1.02	\$26,433	\$ 2.16	\$56,060

**United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)**

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Ma
Park: Hot Springs National Park
Park Alpha: HOSP
PMIS Number: 318915B

Estimate By: Michael Orel, CPE
Date: 05/12/22
Reviewed By: AG
Date: 05/12/22

Summary Item C10 Interior Construction

Total Cost: \$286,860

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
C1020	INTERIOR DOORS								
	Install 1-hr fire rated doors and hollow metal frames.	5	EA	\$ 2,500.00	\$12,500	\$ 650.00	\$3,250	\$ 3,150.00	\$15,750
	Install hollow metal frame and metal door. Electrical Rooms	2	EA	\$ 2,500.00	\$5,000	\$ 650.00	\$1,300	\$ 3,150.00	\$6,300
	Install hollow metal frame and metal door. Mechanical Room	1	EA	\$ 2,500.00	\$2,500	\$ 650.00	\$650	\$ 3,150.00	\$3,150
	Doors 1/301 and 3/303 - Remove existing fire-rated steel doors and install new replica wood-paneled fire rated doors, closers, and all hardware and kick plates. . Room 300	2	EA	1750	\$3,500	1750	\$3,500	\$ 3,500.00	\$7,000
	Doors 1/301 and 3/303 - Repair termi-damaged jambs . Room 300	4	EA	\$ 300.00	\$1,200	\$ 300.00	\$1,200	\$ 600.00	\$2,400
	Door 1/311 – Restore historic double-acting door. Install new replica or antique lockset; add tempered glass; restore steel hinges. Room 300	1	EA	1250	\$1,250	1250	\$1,250	\$ 2,500.00	\$2,500
	Door 1/311 work is with Roycroft Room. Room 311	1	EA	\$ 500.00	\$500	\$ 500.00	\$500	\$ 1,000.00	\$1,000
	Door 2/311 to be replicated with new door. Salvage and reuse historic glass and hardware. Restore hardware. Carefully clean glass, remove paint splatters; protect gold lettering. . Room 311	1	EA	\$ 900.00	\$900	\$ 900.00	\$900	\$ 1,800.00	\$1,800
	Restore finishes on trim at both doors. Room 311	1	LS	\$ 400.00	\$400	\$ 400.00	\$400	\$ 800.00	\$800
	Door 1/312 install salvaged door from park storage. Restore door and hardware prior to installation Room 312	1	LS	\$ 600.00	\$600	\$ 600.00	\$600	\$ 1,200.00	\$1,200
	Restore finishes on trim at door Room 312	1	LS	\$ 400.00	\$400	\$ 400.00	\$400	\$ 800.00	\$800
	Replace missing Door Trim Room 101	3	LF	\$ 250.00	\$750	\$ 150.00	\$450	\$ 400.00	\$1,200
	Doors 1/101 - Furnish and install 1 replica wood paneled fire-rated door and trim with closer and hardware Room 101	1	EA	\$ 3,500.00	\$3,500	\$ 650.00	\$650	\$ 4,150.00	\$4,150
	Replace missing Door Trim Room 102A	22	LF	\$ 250.00	\$5,500	\$ 50.00	\$1,100	\$ 300.00	\$6,600
	Replace missing trim at Door 2/105 Room 103	14	LF	\$ 250.00	\$3,500	\$ 50.00	\$700	\$ 300.00	\$4,200

**United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)**

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Ma
Park: Hot Springs National Park
Park Alpha: HOSP
PMIS Number: 318915B

Estimate By: Michael Orel, CPE
Date: 05/12/22
Reviewed By: AG
Date: 05/12/22

Summary Item	C10	Interior Construction						Total Cost:	\$286,860	
		door Room 104	1	LS	\$ 450.00	\$450	\$ 450.00	\$450	\$ 900.00	\$900
		Replace missing Door Trim Room 105	20	LF	\$ 250.00	\$5,000	\$ 50.00	\$1,000	\$ 300.00	\$6,000
		Door 1/105 - Restore 2 missing marble plinths Room 105	2	EA	\$ 750.00	\$1,500	\$ 250.00	\$500	\$ 1,000.00	\$2,000
		Door 2/105 - Strip paint from 2 marble plinths Room 105	2	EA	\$ 750.00	\$1,500	\$ 250.00	\$500	\$ 1,000.00	\$2,000
		Doors 1/105 and 2/105 - Furnish and install 2 replica wood paneled doors Room 105	4	EA	\$ 4,500.00	\$18,000	\$ 1,200.00	\$4,800	\$ 5,700.00	\$22,800
		Doors 1/105 and 2/105 - Furnish and install replica push/pull plates and kick plates Room 105	16	EA	\$ 350.00	\$5,600	\$ 150.00	\$2,400	\$ 500.00	\$8,000
		Doors 1/105 and 2/105 - Restore 4 pair of steel hinges Room 105	8	EA	\$ 150.00	\$1,200	\$ 100.00	\$800	\$ 250.00	\$2,000
		Repair bases of door trim in west wall Room 110	6	EA	\$ 100.00	\$600	\$ 100.00	\$600	\$ 200.00	\$1,200
		Consider replacing missing wood transoms in tops of three door openings in west wall, as shown in historic postcards Room 110	3	EA	\$ 650.00	\$1,950	\$ 250.00	\$750	\$ 900.00	\$2,700
		Restore finishes on 2 pairs of double-acting doors to match paint analysis report. Room 110	4	EA	\$ 200.00	\$800	\$ 500.00	\$2,000	\$ 700.00	\$2,800
		Adjust doors and hinges for proper operation. Room 110	4	EA	\$ -	\$0	\$ 100.00	\$400	\$ 100.00	\$400
		Replace existing kickplates with brass kickplates Room 110	4	EA	\$ 250.00	\$1,000	\$ 100.00	\$400	\$ 350.00	\$1,400
		Test paint on hinges to determine original color Room 110	1	LS	\$ -	\$0	\$ 1,500.00	\$1,500	\$ 1,500.00	\$1,500
		Strip layers of old paint from hinges and repaint to match color in historic paint analysis. Use tinted primer before final coat. Reinstall with standard screws (no Phillips screws). Replace missing finials Room 110	8	EA	\$ 50.00	\$400	\$ 500.00	\$4,000	\$ 550.00	\$4,400
		Refinish existing brass push plates Room 110	8	EA	\$ -	\$0	\$ 350.00	\$2,800	\$ 350.00	\$2,800
		Replace broken wire glass in north door Room 110	1	EA	\$ 200.00	\$200	\$ 150.00	\$150	\$ 350.00	\$350
		Touch-up finish on millwork at door openings Room 112A	5	EA	\$ -	\$0	\$ 20.00	\$100	\$ 20.00	\$100
		Door 2/114 - Install new hardware on exit door and paint. Room 114	1	EA	\$ 850.00	\$850	\$ 500.00	\$500	\$ 1,350.00	\$1,350

**United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)**

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Ma
Park: Hot Springs National Park
Park Alpha: HOSP
PMIS Number: 318915B

Estimate By: Michael Orel, CPE
Date: 05/12/22
Reviewed By: AG
Date: 05/12/22

Summary Item	C10 Interior Construction							Total Cost:	\$286,860
	Door 2/114 - Install new interior and exterior trim Room 114	18	LF	\$ 350.00	\$6,300	\$ 250.00	\$4,500	\$ 600.00	\$10,800
	Door 4/115 Replace missing Door trim and jambs and finish to match others Room 115	20	LF	\$ 1,250.00	\$25,000	\$ 350.00	\$7,000	\$ 1,600.00	\$32,000
	Door 5/115 - Strip paint from trim and jambs and refinish Room 115	20	LF	\$ 75.00	\$1,500	\$ 150.00	\$3,000	\$ 225.00	\$4,500
	Door 4/115 - Replace missing marble plinths Room 115	4	EA	\$ 750.00	\$3,000	\$ 250.00	\$1,000	\$ 1,000.00	\$4,000
	Door 5/115 - Strip paint from 2 marble plinths and reset Room 115	2	EA	\$ 750.00	\$1,500	\$ 250.00	\$500	\$ 1,000.00	\$2,000
	Door 3/115 - Refinish trim and jambs Room 115	1	EA	\$ 750.00	\$750	\$ 250.00	\$250	\$ 1,000.00	\$1,000
	Door 5/115 - Strip paint from trim and jambs and refinish Room 116	20	LF	\$ 25.00	\$500	\$ 15.00	\$300	\$ 40.00	\$800
	Door 5/115 - Strip paint from 2 marble plinths and reset Room 116	2	EA	\$ 750.00	\$1,500	\$ 250.00	\$500	\$ 1,000.00	\$2,000
	Door 1/116 - Replace missing trim Room 116	8	LF	\$ 500.00	\$4,000	\$ 200.00	\$1,600	\$ 700.00	\$5,600
	Door 1/116 - Refinish trim and jambs Room 116	1	EA	\$ 50.00	\$50	\$ 300.00	\$300	\$ 350.00	\$350
	Refresh finish on door and sidelight Room 116	1	LS	\$ 450.00	\$450	\$ 450.00	\$450	\$ 900.00	\$900
	Replicate and replace missing door trim Room 110C	55	LF	\$ 65.00	\$3,575	\$ 25.00	\$1,375	\$ 90.00	\$4,950
	Replicate two wood very deep wood frames Room 110C	2	EA	\$ 2,500.00	\$5,000	\$ 500.00	\$1,000	\$ 3,000.00	\$6,000
	Replicate two wood paneled doors with hardware Room 110C	2	EA	\$ 1,500.00	\$3,000	\$ 500.00	\$1,000	\$ 2,000.00	\$4,000
	Doors 1/203 and 1/216 Replace existing fire-rated doors with new replica historic paneled fire rated doors and frames, closers, and hardware Room 216	2	EA	\$ 2,500.00	\$5,000	\$ 650.00	\$1,300	\$ 3,150.00	\$6,300
	Doors 2/301 and 3/301 Replace existing fire-rated doors with new replica historic paneled fire rated doors and frames, closers, and hardware. Door 1/301 is addressed with Room 300 Room 301	2	EA	\$ 2,500.00	\$5,000	\$ 650.00	\$1,300	\$ 3,150.00	\$6,300
	Door 4/115 - Replace 2 marble plinths Room 112B	2	EA	\$ 750.00	\$1,500	\$ 250.00	\$500	\$ 1,000.00	\$2,000

United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Ma
Park: Hot Springs National Park
Park Alpha: HOSP
PMIS Number: 318915B

Estimate By: Michael Orel, CPE
Date: 05/12/22
Reviewed By: AG
Date: 05/12/22

Summary Item	C10 Interior Construction	Total Cost: \$286,860							
	Doors 1/217, 2/217, and 2/210 Replace existing fire-rated doors with new replica historic paneled fire rated doors and frames, closers, and hardware. Room 217	3	EA	\$ 2,500.00	\$7,500	\$ 650.00	\$1,950	\$ 3,150.00	\$9,450
	Door 1/303 Replace existing fire-rated door with new replica historic paneled fire rated door and frames, closer, and hardware. Door 2/303 opening is addressed with Room 300. Room 303	2	EA	\$ 2,500.00	\$5,000	\$ 650.00	\$1,300	\$ 3,150.00	\$6,300
SUBTOTAL	INTERIOR DOORS	26000	SF	\$ 6.20	\$161,175	\$ 2.68	\$69,625	\$ 8.88	\$230,800

Summary Item C10 Interior Construction

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
C10	Interior Construction	26000	SF	\$ 7.34	\$190,802	\$ 3.69	\$96,058	\$ 11.03	\$286,860

**United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)**

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Maur
Park: Hot Springs National Park
Park Alpha: HOSP
PMIS Number: 318915B

Estimate By: Michael Orel, CPE
Date: 05/12/22
Reviewed By: AG
Date: 05/12/22

Summary Item **C20 Stairs**

Total Cost: \$174,050

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
C2020	STAIR FINISHES								
	Clean and patch concrete stairs Room BO2	15	EA	\$ 75.00	\$1,125	\$ 75.00	\$1,125	\$ 150.00	\$2,250
	Paint stair stringers and risers Room BO2	1	LS	\$ 500.00	\$500	\$ 1,500.00	\$1,500	\$ 2,000.00	\$2,000
	Install new ABAAS compliant handrail Room BO2	56	LF	\$ 250.00	\$14,000	\$ 50.00	\$2,800	\$ 300.00	\$16,800
	Replace treads with new cut marble treads Room 102B	21	EA	\$ 125.00	\$2,625	\$ 25.00	\$525	\$ 150.00	\$3,150
	Paint stair stringers and risers Room 102B	1	LS	\$ 500.00	\$500	\$ 1,500.00	\$1,500	\$ 2,000.00	\$2,000
	Install new ABAAS compliant handrail Room 102B	56	LF	\$ 250.00	\$14,000	\$ 50.00	\$2,800	\$ 300.00	\$16,800
	Replace treads with new cut marble treads Room 216	22	EA	\$ 125.00	\$2,750	\$ 25.00	\$550	\$ 150.00	\$3,300
	Paint stair stringers and risers Room 216	1	LS	\$ 500.00	\$500	\$ 1,500.00	\$1,500	\$ 2,000.00	\$2,000
	Install new ABAAS compliant handrail Room 216	56	LF	\$ 250.00	\$14,000	\$ 50.00	\$2,800	\$ 300.00	\$16,800
	Replace treads with new cut marble treads Room 301	20	EA	\$ 125.00	\$2,500	\$ 25.00	\$500	\$ 150.00	\$3,000
	Paint stair stringers and risers Room 301	1	LS	\$ 500.00	\$500	\$ 1,500.00	\$1,500	\$ 2,000.00	\$2,000
	Install new ABAAS compliant handrail Room 301	56	LF	\$ 250.00	\$14,000	\$ 50.00	\$2,800	\$ 300.00	\$16,800
	Clean and patch concrete stairs Room B17	15	EA	\$ 75.00	\$1,125	\$ 75.00	\$1,125	\$ 150.00	\$2,250
	Clean and patch concrete stairs Room B17	15	EA	\$ 75.00	\$1,125	\$ 75.00	\$1,125	\$ 150.00	\$2,250
	Install new ABAAS compliant handrail Room B17	56	LF	\$ 250.00	\$14,000	\$ 50.00	\$2,800	\$ 300.00	\$16,800
	Clean existing marble treads Room 112B	21	EA	\$ 75.00	\$1,575	\$ 75.00	\$1,575	\$ 150.00	\$3,150
	Paint stair stringers and risers Room 112B	1	LS	\$ 500.00	\$500	\$ 1,500.00	\$1,500	\$ 2,000.00	\$2,000
	Install new ABAAS compliant handrail Room 112B	56	LF	\$ 250.00	\$14,000	\$ 50.00	\$2,800	\$ 300.00	\$16,800
	Replace treads with new cut marble treads Room 217	22	EA	\$ 125.00	\$2,750	\$ 25.00	\$550	\$ 150.00	\$3,300
	Paint stair stringers and risers Room 217	1	LS	\$ 500.00	\$500	\$ 1,500.00	\$1,500	\$ 2,000.00	\$2,000
	Install new ABAAS compliant handrail Room 217	56	LF	\$ 250.00	\$14,000	\$ 50.00	\$2,800	\$ 300.00	\$16,800
	Replace treads with new cut marble treads Room 303	20	EA	\$ 125.00	\$2,500	\$ 25.00	\$500	\$ 150.00	\$3,000
	Paint stair stringers and risers Room 303	1	LS	\$ 500.00	\$500	\$ 1,500.00	\$1,500	\$ 2,000.00	\$2,000
	Install new ABAAS compliant handrail Room 303	56	LF	\$ 250.00	\$14,000	\$ 50.00	\$2,800	\$ 300.00	\$16,800
SUBTOTAL	STAIR FINISHES	26000	SF	\$ 5.14	\$133,575	\$ 1.56	\$40,475	\$ 6.69	\$174,050

United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Maur
 Park: Hot Springs National Park
 Park Alpha: HOSP
 PMIS Number: 318915B

Estimate By: Michael Orel, CPE
 Date: 05/12/22
 Reviewed By: AG
 Date: 05/12/22

Summary Item C20 Stairs

Total Cost: \$174,050

Summary Item C20 Stairs

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
C20	Stairs	26000	SF	\$ 5.14	\$133,575	\$ 1.56	\$40,475	\$ 6.69	\$174,050

United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Maur
Park: Hot Springs National Park
Park Alpha: HOSP
PMIS Number: 318915B

Estimate By: Michael Orel, CPE
Date: 05/12/22
Reviewed By: AG
Date: 05/12/22

Summary Item C30 Interior Finishes

Total Cost: \$3,114,974

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
C3010	WALL FINISHES								
	Repair existing terrazzo base. 2nd floor	15	LF	\$ 15.00	\$225	\$ 25.00	\$375	\$ 40.00	\$600
	Skim coat existing exterior plaster walls. 2nd floor	2,030	SF	\$ 1.00	\$2,030	\$ 2.00	\$4,060	\$ 3.00	\$6,090
	Prep, prime, and paint walls and ceiling. 2nd floor	8,184	SF	\$ 0.50	\$4,092	\$ 1.00	\$8,184	\$ 1.50	\$12,276
	Install three coat plaster at exterior wall. Room 205	250	SF	\$ 15.00	\$3,750	\$ 10.00	\$2,500	\$ 25.00	\$6,250
	Skim coat plaster ceiling and make minor repairs. Room 205	480	SF	\$ 1.00	\$480	\$ 2.00	\$960	\$ 3.00	\$1,440
	Perform paint analysis on walls above tile wainscotting. Decorative paint may be visible on south wall and north wall. Test walls, ceiling, beams, windows, and grille. Room 210	1	LS	\$ -	\$0	\$ 2,500.00	\$2,500	\$ 2,500.00	\$2,500
	Restore plaster above tile wainscotting. Room 210	200	SF	\$ 1.00	\$200	\$ 2.00	\$400	\$ 3.00	\$600
	Paint soffits and walls Room 210 Room 210	413	SF	\$ 0.50	\$207	\$ 1.00	\$413	\$ 1.50	\$620
	Restore missing tile wainscotting (field and border)	170	SF	\$ 15.00	\$2,550	\$ 15.00	\$2,550	\$ 30.00	\$5,100
	Clean and re-grout existing tiles and patch holes, as required Room 210	274	SF	\$ 0.25	\$69	\$ 5.00	\$1,370	\$ 5.25	\$1,439
	Restore stenciling and decorative painting throughout, as found during paint analysis Room 210	1	LS	\$ 23,500.00	\$23,500	\$ 23,500.00	\$23,500	\$ 47,000.00	\$47,000
	Repair existing concrete base. 3rd Floor	35	LF	\$ 5.00	\$175	\$ 25.00	\$875	\$ 30.00	\$1,050
	Spot repoint masonry wall where exposed. 3rd Floor	800	SF	\$ 5.00	\$4,000	\$ 15.00	\$12,000	\$ 20.00	\$16,000
	Assess existing plaster, remove deteriorated plaster, replaster and repair as needed. 3rd Floor	1378	SF	\$ 1.00	\$1,378	\$ 2.00	\$2,756	\$ 3.00	\$4,134
	Skim coat existing exterior plaster walls. 3rd Floor	2,756	SF	\$ 1.00	\$2,756	\$ 2.00	\$5,512	\$ 3.00	\$8,268
	Doors in Stair/Elevator Hall costs 3rd Floor	2	EA	\$ 150.00	\$300	\$ 150.00	\$300	\$ 300.00	\$600
	Construct new utility chases (floor to ceiling) with metal studs and 5/8" gypsum. 3rd Floor	9	EA	\$ 1,500.00	\$13,500	\$ 500.00	\$4,500	\$ 2,000.00	\$18,000
	Prep, prime, and paint walls and ceiling. 3rd Floor	8,184	SF	\$ 0.50	\$4,092	\$ 1.00	\$8,184	\$ 1.50	\$12,276
	Clean and restore marble base. Room 300	61	LF	\$ 3.00	\$183	\$ 25.00	\$1,525	\$ 28.00	\$1,708
	Replace missing sections of marble base. Room 300	57	LF	\$ 35.00	\$1,995	\$ 15.00	\$855	\$ 50.00	\$2,850

**United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)**

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Maur
Park: Hot Springs National Park
Park Alpha: HOSP
PMIS Number: 318915B

Estimate By: Michael Orel, CPE
Date: 05/12/22
Reviewed By: AG
Date: 05/12/22

Summary Item	C30 Interior Finishes								Total Cost:
	Carefully document and salvage all wood paneling, pilasters, benches, inglenook dividing wall, and all wood laylight framing from room to be restored either on or off site. Replace deteriorated and termite-damaged portions of wood paneling and details, including turned wood columns. Reinstall and restore finish in place. . Room 300	1	LS	\$ 10,000.00	\$10,000	\$ 10,000.00	\$10,000	\$ 20,000.00	\$20,000
	Restore and install new plaster finishes over masonry on areas above paneling. . Room 300	378	SF	\$ 3.00	\$1,134	\$ 5.00	\$1,890	\$ 8.00	\$3,024
	Paint plaster areas above paneling. Room 300	378	SF	\$ 1.00	\$378	\$ 1.00	\$378	\$ 2.00	\$756
	Perform decorative paint analysis on plaster grotesques in Park curatorial storage. Paint analysis on ceiling in nook and on radiator. . Room 300	1	LS	\$ 500.00	\$500	\$ 3,500.00	\$3,500	\$ 4,000.00	\$4,000
	Re-create plaster bracket grotesques with decorative painting to match historic paint analysis study. Room 300	8	EA	\$ 500.00	\$4,000	\$ 250.00	\$2,000	\$ 750.00	\$6,000
	Clean masonry on fireplace. Room 300	1	LS	\$ 500.00	\$500	\$ 500.00	\$500	\$ 1,000.00	\$1,000
	Restore iron lintel at fireplace opening. Room 300	1	EA	\$ 150.00	\$150	\$ 150.00	\$150	\$ 300.00	\$300
	Restore finish on existing radiators to remain. Room 300	1	LS	\$ 600.00	\$600	\$ 600.00	\$600	\$ 1,200.00	\$1,200
	Consider installing salvaged thermostats as seen in historic postcards. Room 300	2	EA	\$ 100.00	\$200	\$ 100.00	\$200	\$ 200.00	\$400
	Perform historic paint analysis on floor, base, walls, ceiling, and radiator. . Room 311	1	LS	\$ -	\$0	\$ 400.00	\$400	\$ 400.00	\$400
	Remove damaged or unattached plaster from walls. Remove loose paint. Spot repoint exposed masonry as required. Repair cracks. Install new plaster where missing and skim coat the remainder of the room. . Room 311	252	SF	\$ 1.00	\$252	\$ 2.00	\$504	\$ 3.00	\$756
	Infill section of missing masonry at north wall. Room 311	16	SF	\$ 25.00	\$400	\$ 25.00	\$400	\$ 50.00	\$800
	Paint all interior walls. Room 311	252	SF	\$ 1.00	\$252	\$ 1.00	\$252	\$ 2.00	\$504
	Restore radiator finishes. Room 311	1	LS	\$ 400.00	\$400	\$ 400.00	\$400	\$ 800.00	\$800
	Perform historic paint analysis on floor, base, walls, ceiling, wire mesh at top of wall, and radiator. . Room 312	1	LS	\$ -	\$0	\$ 500.00	\$500	\$ 500.00	\$500
	Clean 4 marble plinths and reinstall Room 312	4	EA	\$ 150.00	\$600	\$ 150.00	\$600	\$ 300.00	\$1,200
	Restore paint finish on integral concrete base, per paint analysis Room 312	26	LF	\$ 5.00	\$130	\$ 15.00	\$390	\$ 20.00	\$520

**United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)**

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Maur
Park: Hot Springs National Park
Park Alpha: HOSP
PMIS Number: 318915B

Estimate By: Michael Orel, CPE
Date: 05/12/22
Reviewed By: AG
Date: 05/12/22

Summary Item	C30 Interior Finishes									Total Cost:	\$3,114,974
	Remove damaged or unattached plaster from walls. Remove loose paint. Spot repoint exposed masonry as required. Repair cracks. Install new plaster where missing and skim coat the remainder of the room. Room 312	170	SF	\$ 1.00	\$170	\$ 2.00	\$340	\$ 3.00	\$510		
	Paint all interior walls Room 312	170	SF	\$ 1.00	\$170	\$ 1.00	\$170	\$ 2.00	\$340		
	Restore finish on wire mesh, as determined by paint analysis Room 312	1	LS	\$ 500.00	\$500	\$ 250.00	\$250	\$ 750.00	\$750		
	Tile base. Repair cracks throughout. Grout, as required Room 101	65	LF	\$ 25.00	\$1,625	\$ 15.00	\$975	\$ 40.00	\$2,600		
	Replace missing tile base Room 101	18	LF	\$ 25.00	\$450	\$ 15.00	\$270	\$ 40.00	\$720		
	Repair deteriorated plaster above tile wainscotting Room 101	596	SF	\$ 3.00	\$1,788	\$ 5.00	\$2,980	\$ 8.00	\$4,768		
	Restore tile wainscotting and replace field tiles Room 101	280	EA	\$ 15.00	\$4,200	\$ 5.00	\$1,400	\$ 20.00	\$5,600		
	Restore tile wainscotting and replace cap tiles and bullnose Room 101	70	EA	\$ 15.00	\$1,050	\$ 5.00	\$350	\$ 20.00	\$1,400		
	Clean and re-grout wainscotting, as required Room 101	323	SF	\$ 0.25	\$81	\$ 5.00	\$1,615	\$ 5.25	\$1,696		
	Infill old ventilation holes through walls with masonry and plaster Room 101	24	SF	\$ 25.00	\$600	\$ 25.00	\$600	\$ 50.00	\$1,200		
	Install brick masonry infill at plumbing chase in north wall Room 101	26	SF	\$ 25.00	\$650	\$ 35.00	\$910	\$ 60.00	\$1,560		
	Paint Walls Room 101	596	SF	\$ 1.00	\$596	\$ 1.00	\$596	\$ 2.00	\$1,192		
	Terrazzo 6 1/2" high base. Repair cracks throughout Room 102A	4	LF	\$ 45.00	\$180	\$ 25.00	\$100	\$ 70.00	\$280		
	Install new tile base along north and east walls and portions of the south wall where wall was reconstructed Room 102A	30	LF	\$ 45.00	\$1,350	\$ 25.00	\$750	\$ 70.00	\$2,100		
	Minor repairs to deteriorated plaster above tile wainscotting (north and south walls Room 102A	508	SF	\$ 3.00	\$1,524	\$ 3.00	\$1,524	\$ 6.00	\$3,048		
	Clean and restore tile wainscotting at east and south and north walls. Room 102A	160	SF	\$ 0.25	\$40	\$ 5.00	\$800	\$ 5.25	\$840		
	Replace missing field and cap tiles with salvaged tiles Room 102A	300	EA	\$ 5.00	\$1,500	\$ 15.00	\$4,500	\$ 20.00	\$6,000		
	Clean and re-grout wainscotting, as required Room 102A	1	LS	\$ 50.00	\$50	\$ 1,500.00	\$1,500	\$ 1,550.00	\$1,550		
	Infill old ventilation holes through walls with masonry Room 102A	6	SF	\$ 25.00	\$150	\$ 25.00	\$150	\$ 50.00	\$300		
	Paint Walls Room 102A	838	SF	\$ 1.00	\$838	\$ 1.00	\$838	\$ 2.00	\$1,676		
	Remove only loose tile. Wainscotting not to be restored. Tile in this room may be salvaged for restoration in other locations. Room 103	100	Unit	\$ 1.00	\$100	\$ 10.00	\$1,000	\$ 11.00	\$1,100		

**United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)**

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Maur
Park: Hot Springs National Park
Park Alpha: HOSP
PMIS Number: 318915B

Estimate By: Michael Orel, CPE
Date: 05/12/22
Reviewed By: AG
Date: 05/12/22

Summary Item	C30 Interior Finishes								Total Cost:	\$3,114,974
	Repair holes through masonry and plaster walls with new brick or CMU infill. Room 103	24	SF	\$ 25.00	\$600	\$ 25.00	\$600	\$ 50.00	\$1,200	
	Patch plaster walls (Allowance) Room 103	40	SF	\$ -	\$0	\$ -	\$0	\$ -	\$0	
	Paint walls Room 103	628	SF	\$ 1.00	\$628	\$ 1.00	\$628	\$ 2.00	\$1,256	
	Repair diagonal crack in plaster on north wall Room 104	8	LF	\$ -	\$0	\$ -	\$0	\$ -	\$0	
	Remove existing grille in north wall and infill opening Room 104	1	EA	\$ 250.00	\$250	\$ 150.00	\$150	\$ 400.00	\$400	
	Paint all walls Room 104	475	SF	\$ 1.00	\$475	\$ 1.00	\$475	\$ 2.00	\$950	
	Terrazzo 6 1/2" high base. Repair cracks throughout Room 105	20	LF	\$ 15.00	\$300	\$ 5.00	\$100	\$ 20.00	\$400	
	Spot repoint existing exposed masonry walls (allowance) Room 105	280	SF	\$ 5.00	\$1,400	\$ 5.00	\$1,400	\$ 10.00	\$2,800	
	Install metal studs at old chases in NW and SW corners and finish with gypsum drywall Room 105	223	SF	\$ 5.00	\$1,115	\$ 5.00	\$1,115	\$ 10.00	\$2,230	
	Repair plaster over masonry Room 105	352	SF	\$ 1.00	\$352	\$ 2.00	\$704	\$ 3.00	\$1,056	
	Repair deteriorated plaster above tile wainscotting (south and east walls) Room 105	334	SF	\$ 3.00	\$1,002	\$ 5.00	\$1,670	\$ 8.00	\$2,672	
	Restore tile wainscotting at east and south walls. Room 105	24	EA	\$ 5.00	\$120	\$ 5.00	\$120	\$ 10.00	\$240	
	Clean and re-grout wainscotting, as required Room 105	1	LS	\$ 50.00	\$50	\$ 1,500.00	\$1,500	\$ 1,550.00	\$1,550	
	Infill old ventilation holes through walls with masonry Room 105	9	SF	\$ 25.00	\$225	\$ 25.00	\$225	\$ 50.00	\$450	
	Install brick masonry infill at plumbing chase in north wall Room 105	26	SF	\$ 25.00	\$650	\$ 35.00	\$910	\$ 60.00	\$1,560	
	Paint Walls Room 105	906	SF	\$ 1.00	\$906	\$ 1.00	\$906	\$ 2.00	\$1,812	
	Spot repoint masonry walls Room 107 & 111	755	SF	\$ 5.00	\$3,775	\$ 5.00	\$3,775	\$ 10.00	\$7,550	
	Tile – Regrout, as needed Room 108	1	LS	\$ 500.00	\$500	\$ 500.00	\$500	\$ 1,000.00	\$1,000	
	Restore tile wainscotting. Deep Clean. Remove severely dis-colored or cracked tiles and replace with salvaged tiles. Re-grout, as necessary Room 108	550	SF	\$ 5.00	\$2,750	\$ 3.00	\$1,650	\$ 8.00	\$4,400	
	Replace missing field and cap tiles Room 108	80	EA	\$ 65.00	\$5,200	\$ 15.00	\$1,200	\$ 80.00	\$6,400	
	Infill old ventilation holes through walls with masonry Room 108	3	SF	\$ 25.00	\$75	\$ 25.00	\$75	\$ 50.00	\$150	
	Paint Walls Room 108	848	SF	\$ 1.00	\$848	\$ 1.00	\$848	\$ 2.00	\$1,696	
	Install replica laylights in 108	1	EA	\$ -	\$0	\$ 149,073.00	\$149,073	\$ 149,073.00	\$149,073	
	Repair crack in south plaster wall Room 109	11	LF	\$ -	\$0	\$ -	\$0	\$ -	\$0	
	Paint all Walls Room 109	480	SF	\$ 1.00	\$480	\$ 1.00	\$480	\$ 2.00	\$960	

**United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)**

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Maur
Park: Hot Springs National Park
Park Alpha: HOSP
PMIS Number: 318915B

Estimate By: Michael Orel, CPE
Date: 05/12/22
Reviewed By: AG
Date: 05/12/22

Summary Item	C30	Interior Finishes								Total Cost:	\$3,114,974
Remove two through-wall grilles in north and south walls Room 109	2	EA	\$ -	\$0	\$ 150.00	\$300	\$ 150.00	\$300			
Infill removed duct and grilles in north and south walls – install new stucco patch Room 109	6	SF	\$ 25.00	\$150	\$ 25.00	\$150	\$ 50.00	\$300			
Marble Base – Clean marble base and remove paint. Room 110	49	LF	\$ 35.00	\$1,715	\$ 15.00	\$735	\$ 50.00	\$2,450			
Marble Base – Install new grout in base Room 110	49	LF	\$ 35.00	\$1,715	\$ 15.00	\$735	\$ 50.00	\$2,450			
Marble Base – Re-set base on south wall pilaster (it's currently installed upside down) Room 110	1	EA	\$ 35.00	\$35	\$ 15.00	\$15	\$ 50.00	\$50			
Wood Paneling – Restore or replaced buckled wall panels (allowance) Room 110	1	LS	\$ 500.00	\$500	\$ 1,000.00	\$1,000	\$ 1,500.00	\$1,500			
Wood Paneling – Restore historic paint finishes based on historic paint analysis report (allowance) Room 110	1	LS	\$ 500.00	\$500	\$ 1,000.00	\$1,000	\$ 1,500.00	\$1,500			
Marble Base – Clean marble base and remove paint. Room 110A	20.75	LF	\$ 35.00	\$726	\$ 15.00	\$311	\$ 50.00	\$1,038			
Marble Base – Install new grout in base Room 110A	20.75	LF	\$ 35.00	\$726	\$ 15.00	\$311	\$ 50.00	\$1,038			
Wall Tile – Replace missing tiles - Caps Room 110A	2	EA	\$ 5.00	\$10	\$ 3.00	\$6	\$ 8.00	\$16			
Paint Walls with color per historic paint analysis Room 110A	107	SF	\$ 1.00	\$107	\$ 1.00	\$107	\$ 2.00	\$214			
Replace base on east wall Room 112A	1	LF	\$ 5.00	\$5	\$ 5.00	\$5	\$ 10.00	\$10			
Wall Tile – Replace missing tiles - Caps Room 112A	2	EA	\$ 5.00	\$10	\$ 3.00	\$6	\$ 8.00	\$16			
Wall Tile – Clean and re-grout missing areas Room 112A	233	SF	\$ 5.00	\$1,165	\$ 3.00	\$699	\$ 8.00	\$1,864			
Chip and channel walls for new conduit for electrical Room 112A	28	SF	\$ 5.00	\$140	\$ 25.00	\$700	\$ 30.00	\$840			
Make minor repairs in plaster walls Room 112A	710	SF	\$ 5.00	\$3,550	\$ 2.00	\$1,420	\$ 7.00	\$4,970			
Paint Plaster Walls Room 112A	710	SF	\$ 1.00	\$710	\$ 1.00	\$710	\$ 2.00	\$1,420			
New White Tile Base Room 113	176	LF	\$ 25.00	\$4,400	\$ 15.00	\$2,640	\$ 40.00	\$7,040			
Remove loose and damaged tiles Room 113	600	SF	\$ 3.00	\$1,800	\$ 5.00	\$3,000	\$ 8.00	\$4,800			
Replace missing or broken tiles Room 113	800	SF	\$ 3.00	\$2,400	\$ 5.00	\$4,000	\$ 8.00	\$6,400			
Deep clean and re-grout existing tile to remain Room 113	1	EA	\$ 50.00	\$50	\$ 1,500.00	\$1,500	\$ 1,550.00	\$1,550			
Install replica laylights in 113 and 114	1	EA	\$ -	\$0	\$ 332,112.00	\$332,112	\$ 332,112.00	\$332,112			
Infill old ventilation holes through walls with masonry Room 113	30	SF	\$ 25.00	\$750	\$ 25.00	\$750	\$ 50.00	\$1,500			
Install brick masonry infill at plumbing chase in north wall Room 113	25	SF	\$ 25.00	\$625	\$ 35.00	\$875	\$ 60.00	\$1,500			

**United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)**

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Maur
Park: Hot Springs National Park
Park Alpha: HOSP
PMIS Number: 318915B

Estimate By: Michael Orel, CPE
Date: 05/12/22
Reviewed By: AG
Date: 05/12/22

Summary Item	C30 Interior Finishes								Total Cost:	\$3,114,974
	Paint Walls Room 113	500	SF	\$ 1.00	\$500	\$ 1.00	\$500	\$ 2.00	\$1,000	
SUBTOTAL	WALL FINISHES	26000	SF	\$ 5.64	\$146,579	\$ 24.97	\$649,293	\$ 30.61	\$795,872	

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
C3020	FLOOR FINISHES								
	Make minor repairs to existing terrazzo floor. Clean and buff terrazzo floors. 2nd floor	4,904	SF	\$ 3.00	\$14,712	\$ 0.50	\$2,452	\$ 3.50	\$17,164
	Infill with complimentary terrazzo where existing interior walls are removed. Terrazzo to include metal accent stripping to indicate the locations of historic walls. 2nd floor	1,208	SF	\$ 10.00	\$12,080	\$ 5.00	\$6,040	\$ 15.00	\$18,120
	Repair crack and offset in terrazzo floor in n/s direction Room 210	19	LF	\$ 1.00	\$19	\$ 10.00	\$190	\$ 11.00	\$209
	Make minor repairs to existing terrazzo floor. Clean and buff terrazzo floors. 3rd Floor	3,877	SF	\$ 3.00	\$11,631	\$ 0.50	\$1,939	\$ 3.50	\$13,570
	Infill with complimentary terrazzo where existing interior walls are removed and tile flooring. Terrazzo to include metal accent stripping to indicate the locations of historic walls. 3rd Floor	1,856	SF	\$ 10.00	\$18,560	\$ 5.00	\$9,280	\$ 15.00	\$27,840
	Install new replica rectangular 6"x9" red quarry clay tile throughout. Room 300	823	SF	\$ 15.00	\$12,345	\$ 3.00	\$2,469	\$ 18.00	\$14,814
	Restore tile flooring in Nook. Re-grout, as required. Room 300	77	SF	\$ 15.00	\$1,155	\$ 3.00	\$231	\$ 18.00	\$1,386
	Fill cracks in concrete floor and base. Paint floor and base to match historic paint analysis. Room 311	102	SF	\$ 2.00	\$204	\$ 7.00	\$714	\$ 9.00	\$918
	Clean 4 marble plinths. Room 311	4	EA	\$ 150.00	\$600	\$ 150.00	\$600	\$ 300.00	\$1,200
	Patch holes through concrete and terrazzo floor Room 312	2	EA	\$ 15.00	\$30	\$ 75.00	\$150	\$ 90.00	\$180
	Terrazzo flooring cleaning and buffing 1st Floor	4209	SF	\$ 3.00	\$12,627	\$ 0.50	\$2,105	\$ 3.50	\$14,732
	Repair terrazzo flooring cracks. (refinishing and buffing is included in overall number) Room 101	30	LF	\$ 1.00	\$30	\$ 10.00	\$300	\$ 11.00	\$330
	Infill holes in floor cut for grilles, pipes, or ducts with reinforced concrete and topped with terrazzo floor patch. Room 101	5	SF	\$ 25.00	\$125	\$ 25.00	\$125	\$ 50.00	\$250
	Repair terrazzo flooring cracks. (refinishing and buffing is included in overall number) Room 102A	30	LF	\$ 1.00	\$30	\$ 10.00	\$300	\$ 11.00	\$330

**United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)**

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Maur
Park: Hot Springs National Park
Park Alpha: HOSP
PMIS Number: 318915B

Estimate By: Michael Orel, CPE
Date: 05/12/22
Reviewed By: AG
Date: 05/12/22

Summary Item	C30 Interior Finishes								Total Cost:	\$3,114,974
	Infill holes in floor cut for grilles, pipes, or ducts with reinforced concrete and topped with terrazzo floor patch. Room 102A	8	SF	\$ 25.00	\$200	\$ 25.00	\$200	\$ 50.00	\$400	
	Infill holes in floor cut for grilles, pipes, or ducts with reinforced concrete and topped with epoxy floor patch. (Allowance) Room 103	24	SF	\$ 25.00	\$600	\$ 25.00	\$600	\$ 50.00	\$1,200	
	Install replica quarry tile in Office Room 104	116	SF	\$ 25.00	\$2,900	\$ 15.00	\$1,740	\$ 40.00	\$4,640	
	Repair terrazzo flooring cracks. (refinishing and buffing is included in overall number) Room 105	30	LF	\$ 1.00	\$30	\$ 75.00	\$2,250	\$ 76.00	\$2,280	
	Infill holes in floor cut for grilles, pipes, or ducts with reinforced concrete and topped with terrazzo floor patch. Room 105	16	SF	\$ 25.00	\$400	\$ 25.00	\$400	\$ 50.00	\$800	
	Patch holes in concrete floor Room 107 & 111	4	SF	\$ 3.00	\$12	\$ 5.00	\$20	\$ 8.00	\$32	
	Patch areas of exposed concrete floor that are rough and require topping (Allowance) Room 107 & 111	40	SF	\$ 5.00	\$200	\$ 3.00	\$120	\$ 8.00	\$320	
	Repair terrazzo flooring cracks and voids. (refinishing and buffing is included in overall number) Room 108	30	LF	\$ 1.00	\$30	\$ 75.00	\$2,250	\$ 76.00	\$2,280	
	Infill holes in floor cut for grilles, pipes, or ducts with reinforced concrete and topped with terrazzo floor patch. Room 108	16	SF	\$ 25.00	\$400	\$ 25.00	\$400	\$ 50.00	\$800	
	Spot repair (infill divots with colored patches) and re-grout spot locations Room 109	657	SF	\$ 5.00	\$3,285	\$ 15.00	\$9,855	\$ 20.00	\$13,140	
	Replace missing border tiles (3 colors) ¾" sq. Room 109	25	EA	\$ 15.00	\$375	\$ 65.00	\$1,625	\$ 80.00	\$2,000	
	Replace damaged base tiles 6.125" sq x 15/16" thick Room 109	3	EA	\$ 15.00	\$45	\$ 65.00	\$195	\$ 80.00	\$240	
	Infill holes in floor where old pipes were previously removed Room 109	5	EA	\$ 25.00	\$125	\$ 25.00	\$125	\$ 50.00	\$250	
	Demolish existing non-historic ramp and rebuild ramp to meet ADA and be continuous, per HSR, with replica quarry tile Room 109	134	SF	\$ 65.00	\$8,710	\$ 65.00	\$8,710	\$ 130.00	\$17,420	
	Install railings on north and south sides of new ramp, at a minimum – (approximately 6' each) Room 109	12	LF	\$ 105.00	\$1,260	\$ 50.00	\$600	\$ 155.00	\$1,860	
	Mosaic flooring – re-set tiles that have settled and create tripping hazards Room 110	24	LF	\$ 15.00	\$360	\$ 25.00	\$600	\$ 40.00	\$960	
	Replace missing field hexagonal tiles (white) – Allowance Room 110	50	EA	\$ 15.00	\$750	\$ 25.00	\$1,250	\$ 40.00	\$2,000	
	Replace missing white hexagonal tiles at east threshold Room 110	30	EA	\$ 15.00	\$450	\$ 25.00	\$750	\$ 40.00	\$1,200	

**United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)**

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Maur
Park: Hot Springs National Park
Park Alpha: HOSP
PMIS Number: 318915B

Estimate By: Michael Orel, CPE
Date: 05/12/22
Reviewed By: AG
Date: 05/12/22

Summary Item	C30 Interior Finishes	Total Cost: \$3,114,974							
	Install new tile threshold between Lobby and Elevator Room Room 110	1	EA	\$ 125.00	\$125	\$ 150.00	\$150	\$ 275.00	\$275
	Replace a few damaged pieces of hexagonal flooring tile Room 110A	5	EA	\$ 15.00	\$75	\$ 25.00	\$125	\$ 40.00	\$200
	Repair and fill divots and cracks in terrazzo topping Room 112A	10	EA	\$ 15.00	\$150	\$ 3.00	\$30	\$ 18.00	\$180
	Infill holes in floor cut for grilles, pipes, or ducts with reinforced concrete and topped with terrazzo floor patch. Room 112A	5	SF	\$ 25.00	\$125	\$ 25.00	\$125	\$ 50.00	\$250
	Infill holes in floor cut for grilles, pipes, or ducts with reinforced concrete and topped with terrazzo floor patch. Room 113	24	SF	\$ 25.00	\$600	\$ 25.00	\$600	\$ 50.00	\$1,200
	Install new terrazzo topping throughout Room 113	1517	SF	\$ 5.00	\$7,585	\$ 12.00	\$18,204	\$ 17.00	\$25,789
	Infill holes in floor cut for grilles, pipes, or ducts with reinforced concrete and topped with terrazzo floor patch. Room 114	16	SF	\$ 25.00	\$400	\$ 25.00	\$400	\$ 50.00	\$800
	Install new terrazzo topping throughout Room 114	752	SF	\$ 5.00	\$3,760	\$ 12.00	\$9,024	\$ 17.00	\$12,784
	Repair terrazzo flooring cracks. (refinishing and buffing is included in overall number) Room 115	30	LF	\$ 1.00	\$30	\$ 75.00	\$2,250	\$ 76.00	\$2,280
	Infill holes in floor cut for grilles, pipes, or ducts with reinforced concrete and topped with terrazzo floor patch. Room 115	16	SF	\$ 25.00	\$400	\$ 25.00	\$400	\$ 50.00	\$800
	Repair terrazzo flooring cracks. (refinishing and buffing is included in overall number) Room 116	30	LF	\$ 1.00	\$30	\$ 75.00	\$2,250	\$ 76.00	\$2,280
	Infill holes in floor cut for grilles, pipes, or ducts with reinforced concrete and topped with terrazzo floor patch. Room 116	12	SF	\$ 25.00	\$300	\$ 25.00	\$300	\$ 50.00	\$600
	Install new quarry tile flooring Room 116	121	SF	\$ 15.00	\$1,815	\$ 3.00	\$363	\$ 18.00	\$2,178
	Replace a few damaged pieces of hexagonal flooring tile Room 110B	10	EA	\$ 15.00	\$150	\$ 25.00	\$250	\$ 40.00	\$400
	Repair/infill hole in floor along west wall Room 110B	1	EA	\$ 150.00	\$150	\$ 300.00	\$300	\$ 450.00	\$450
	Install quarry tile Room 110C	83	SF	\$ 15.00	\$1,245	\$ 3.00	\$249	\$ 18.00	\$1,494
	Install threshold at elevator Room 110C	1	EA	\$ 175.00	\$175	\$ 150.00	\$150	\$ 325.00	\$325
	Remove pipe through terrazzo floor and patch floor Room 102B	1	EA	\$ 15.00	\$15	\$ 75.00	\$75	\$ 90.00	\$90
	Install brick masonry infill at plumbing chase in south wall and repair plaster finish Room 114	24	SF	\$ 25.00	\$600	\$ 35.00	\$840	\$ 60.00	\$1,440

**United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)**

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Maur
Park: Hot Springs National Park
Park Alpha: HOSP
PMIS Number: 318915B

Estimate By: Michael Orel, CPE
Date: 05/12/22
Reviewed By: AG
Date: 05/12/22

Summary Item	C30 Interior Finishes								Total Cost:	\$3,114,974
	Patch holes in walls. Furr walls and install metal channels and green board (due to partially below grade (resistant to water) on walls. Skim coat finish Room 114	1021	SF	\$ 1.00	\$1,021	\$ 2.00	\$2,042	\$ 3.00	\$3,063	
	Paint Walls Room 114	1021	SF	\$ 1.00	\$1,021	\$ 1.00	\$1,021	\$ 2.00	\$2,042	
	Terrazzo 6 1/2" high base. Repair cracks throughout Room 115	20	LF	\$ 1.00	\$20	\$ 10.00	\$200	\$ 11.00	\$220	
	Strip paint from terrazzo base Room 115	73	LF	\$ 1.00	\$73	\$ 10.00	\$730	\$ 11.00	\$803	
	Patch hole in east wall Room 115	2	SF	\$ 1.00	\$2	\$ 2.00	\$4	\$ 3.00	\$6	
	Repair plaster walls Room 115	574	SF	\$ 1.00	\$574	\$ 2.00	\$1,148	\$ 3.00	\$1,722	
	Reconstruct chase in SE corner of west side of room. Utilize metal studs with blueboard. Reinstall historic salvaged tile and skim coat above wainscot. Room 115	71	SF	\$ 35.00	\$2,485	\$ 15.00	\$1,065	\$ 50.00	\$3,550	
	Paint Walls to match paint analysis Room 115	1,222	SF	\$ 1.00	\$1,222	\$ 1.00	\$1,222	\$ 2.00	\$2,444	
	Clean and repair tile wainscotting on walls in west part of room. Room 115	285	SF	\$ 0.25	\$71	\$ 5.00	\$1,425	\$ 5.25	\$1,496	
	Replace missing or damaged tiles Room 115	36	SF	\$ 15.00	\$540	\$ 8.00	\$288	\$ 23.00	\$828	
	Terrazzo 6 1/2" high base. Repair cracks throughout Room 116	20	LF	\$ 1.00	\$20	\$ 10.00	\$200	\$ 11.00	\$220	
	Patch hole in north masonry wall Room 116	4	SF	\$ 15.00	\$60	\$ 65.00	\$260	\$ 80.00	\$320	
	Repair plaster walls Room 116	606	SF	\$ 1.00	\$606	\$ 2.00	\$1,212	\$ 3.00	\$1,818	
	Reconstruct chase in SW corner of west side of room. Utilize metal studs with blueboard. Reinstall historic salvaged tile and skim coat above wainscot. Room 116	112	SF	\$ 2.00	\$224	\$ 15.00	\$1,680	\$ 17.00	\$1,904	
	Paint Walls to match paint analysis Room 116	606	SF	\$ 1.00	\$606	\$ 1.00	\$606	\$ 2.00	\$1,212	
	Paint Walls to match paint analysis – stenciling (allowance) Room 116	85	LF	14	\$1,190	\$ 14.00	\$1,190	\$ 28.00	\$2,380	
	Restore masonry in south wall chase and restore plaster Room 116	16	SF	\$ 15.00	\$240	\$ 15.00	\$240	\$ 30.00	\$480	
	Demo pipes through tile walls. Room 116	426	SF		\$0	\$ 2.00	\$852	\$ 2.00	\$852	
	Replace 480 field tiles and 44 cap tiles Room 116	529	EA	\$ 15.00	\$7,935	\$ 5.00	\$2,645	\$ 20.00	\$10,580	
	Clean and repair tile wainscotting walls. Remove anchors and patch tile. Room 116	426	SF	\$ 0.25	\$107	\$ 5.00	\$2,130	\$ 5.25	\$2,237	
	Repair diagonal crack in plaster on south wall Room 116	8	LF	\$ 15.00	\$120	\$ 25.00	\$200	\$ 40.00	\$320	
	Patch walls where alarm panels removed and other receptacles removed or infilled Room 116	3	EA	\$ 1.00	\$3	\$ 2.00	\$6	\$ 3.00	\$9	
	Paint all walls Room 116	427	SF	\$ 1.00	\$427	\$ 1.00	\$427	\$ 2.00	\$854	

**United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)**

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Maur
Park: Hot Springs National Park
Park Alpha: HOSP
PMIS Number: 318915B

Estimate By: Michael Orel, CPE
Date: 05/12/22
Reviewed By: AG
Date: 05/12/22

Summary Item	C30 Interior Finishes								Total Cost:	\$3,114,974
	Remove existing built-in duct in NW corner of room and infill floor and patch surrounding walls and grille Room 116	1	LS	\$ 900.00	\$900	\$ 900.00	\$900	\$ 1,800.00	\$1,800	
	install marble plinth base; strip paint from marble plinths Room 116	6	EA	\$ 500.00	\$3,000	\$ 25.00	\$150	\$ 525.00	\$3,150	
	Marble Base – Clean marble base and remove paint. Room 110B	20	LF	\$ 35.00	\$700	\$ 15.00	\$300	\$ 50.00	\$1,000	
	Marble Base – Install new grout in base Room 110B	20	LF	\$ 35.00	\$700	\$ 15.00	\$300	\$ 50.00	\$1,000	
	Wall Tile – Replace missing tiles - Caps Room 110B	2	EA	\$ 25.00	\$50	\$ 25.00	\$50	\$ 50.00	\$100	
	Paint Walls with color per historic paint analysis Room 110B	108	SF	\$ 1.00	\$108	\$ 1.00	\$108	\$ 2.00	\$216	
	Install new 6" quarry tile base at perimeter Room 110C	22	LF	\$ 15.00	\$330	\$ 5.00	\$110	\$ 20.00	\$440	
	Remove deteriorated plaster and wall coverings. Repair plaster walls and skim coat. Intensive plaster repairs and replacement. Room 110C	240	SF	\$ 1.00	\$240	\$ 2.00	\$480	\$ 3.00	\$720	
	Infill recess in south masonry wall Room 110C	10	SF	\$ 25.00	\$250	\$ 25.00	\$250	\$ 50.00	\$500	
	Spot repoint door openings and jambs at north and south walls Room 110C	2	EA	\$ 15.00	\$30	\$ 5.00	\$10	\$ 20.00	\$40	
	Clean Walls and Repaint Room BO2	180	SF	\$ 1.00	\$180	\$ 1.00	\$180	\$ 2.00	\$360	
	Patch and repair plaster walls at lower flight of stairs Room BO2	248	SF	\$ 1.00	\$248	\$ 2.00	\$496	\$ 3.00	\$744	
	Patch and repair plaster walls (minor repairs) Room BO2	450	SF	\$ 1.00	\$450	\$ 2.00	\$900	\$ 3.00	\$1,350	
	Paint plaster walls above tile wainscotting Room BO2	450	SF	\$ 1.00	\$450	\$ 1.00	\$450	\$ 2.00	\$900	
	Clean marble base and regrout. Room 102B	21	LF	\$ 3.00	\$63	\$ 25.00	\$525	\$ 28.00	\$588	
	Replace section of missing marble base from opening in East Wall Room 102B	7	LF	\$ 15.00	\$105	\$ 25.00	\$175	\$ 40.00	\$280	
	Replace missing wainscot tiles (north wall) Room 102B	20	SF	\$ 3.00	\$60	\$ 5.00	\$100	\$ 8.00	\$160	
	Deep clean tile wainscotting Room 102B	248	SF	\$ 0.25	\$62	\$ 5.00	\$1,240	\$ 5.25	\$1,302	
	Patch and repair plaster walls (minor repairs) Room 102B	450	SF	\$ 1.00	\$450	\$ 2.00	\$900	\$ 3.00	\$1,350	
	Paint plaster walls above tile wainscotting Room 102B	450	SF	\$ 1.00	\$450	\$ 1.00	\$450	\$ 2.00	\$900	
	Clean marble base and regrout. Room 216	13	LF	\$ 3.00	\$39	\$ 25.00	\$325	\$ 28.00	\$364	
	Infill sections of brick wall where brick is missing (west side) Room 216	6	SF	\$ 25.00	\$150	\$ 25.00	\$150	\$ 50.00	\$300	
	Infill sections of concrete wall where missing; (north and east sides) Room 216	12	SF	\$ 25.00	\$300	\$ 25.00	\$300	\$ 50.00	\$600	

**United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)**

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Maur
Park: Hot Springs National Park
Park Alpha: HOSP
PMIS Number: 318915B

Estimate By: Michael Orel, CPE
Date: 05/12/22
Reviewed By: AG
Date: 05/12/22

Summary Item	C30	Interior Finishes								Total Cost:	\$3,114,974
		Replace missing wainscot tiles (east wall) Room 216	80	EA	\$ 25.00	\$2,000	\$ 15.00	\$ 1,200	\$ 40.00	\$3,200	
		Deep clean tile wainscotting Room 216	300	SF	\$ 0.25	\$75	\$ 5.00	\$1,500	\$ 5.25	\$1,575	
		Patch and repair plaster walls (minor repairs) and on stairs Room 216	515	SF	\$ 1.00	\$515	\$ 2.00	\$1,030	\$ 3.00	\$1,545	
		Paint plaster walls above tile wainscotting Room 216	515	SF	\$ 1.00	\$515	\$ 1.00	\$515	\$ 2.00	\$1,030	
		Clean marble base and regrout. Room 301	19	LF	\$ 3.00	\$57	\$ 25.00	\$475	\$ 28.00	\$532	
		Deep clean tile wainscotting Room 301	83	SF	\$ 0.25	\$21	\$ 5.00	\$415	\$ 5.25	\$436	
		Patch and repair plaster walls (minor repairs) and on stairs Room 301	430	SF	\$ 1.00	\$430	\$ 2.00	\$860	\$ 3.00	\$1,290	
		Paint plaster walls above tile wainscotting and on stairs Room 301	430	SF	\$ 1.00	\$430	\$ 1.00	\$430	\$ 2.00	\$860	
		Clean Walls and Repaint Room B17	180	SF	\$ 1.00	\$180	\$ 1.00	\$180	\$ 2.00	\$360	
		Patch and repair plaster walls at lower flight of stairs Room B17	248	SF	\$ 1.00	\$248	\$ 2.00	\$496	\$ 3.00	\$744	
		Patch and repair plaster walls (minor repairs) Room B17	450	SF	\$ 1.00	\$450	\$ 2.00	\$900	\$ 3.00	\$1,350	
		Paint plaster walls above tile wainscotting Room B17	450	SF	\$ 1.00	\$450	\$ 1.00	\$450	\$ 2.00	\$900	
		Clean marble base and regrout. Room 112B	21	LF	\$ 3.00	\$63	\$ 25.00	\$525	\$ 28.00	\$588	
		Replace missing wainscot tiles (north wall) Room 112B	20	EA	\$ 25.00	\$500	\$ 50.00	\$1,000	\$ 75.00	\$1,500	
		Deep clean tile wainscotting Room 112B	248	SF	\$ 0.25	\$62	\$ 5.00	\$1,240	\$ 5.25	\$1,302	
		Patch and repair plaster walls (minor repairs) Room 112B	450	SF	\$ 1.00	\$450	\$ 2.00	\$900	\$ 3.00	\$1,350	
		Paint plaster walls above tile wainscotting Room 112B	450	SF	\$ 1.00	\$450	\$ 1.00	\$450	\$ 2.00	\$900	
		Clean marble base and regrout. Room 217	13	LF	\$ 3.00	\$39	\$ 25.00	\$325	\$ 28.00	\$364	
		Infill sections of brick wall where brick is missing (west side) Room 217	6	SF	\$ 25.00	\$150	\$ 25.00	\$150	\$ 50.00	\$300	
		Infill sections of concrete wall where missing; (south and east sides) Room 217	12	SF	\$ 25.00	\$300	\$ 25.00	\$300	\$ 50.00	\$600	
		Replace missing wainscot tiles Room 217	60	EA	\$ 25.00	\$1,500	\$ 50.00	\$3,000	\$ 75.00	\$4,500	
		Deep clean tile wainscotting Room 217	300	SF	\$ 0.25	\$75	\$ 5.00	\$1,500	\$ 5.25	\$1,575	
		Patch and repair plaster walls and on stairs Room 217	515	SF	\$ 1.00	\$515	\$ 2.00	\$1,030	\$ 3.00	\$1,545	
		Paint plaster walls above tile wainscotting Room 217	515	SF	\$ 1.00	\$515	\$ 1.00	\$515	\$ 2.00	\$1,030	
		Clean marble base and regrout. Room 303	19	LF	\$ 3.00	\$57	\$ 25.00	\$475	\$ 28.00	\$532	
		Deep clean tile wainscotting Room 303	83	SF	\$ 0.25	\$21	\$ 5.00	\$415	\$ 5.25	\$436	

**United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)**

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Maur
Park: Hot Springs National Park
Park Alpha: HOSP
PMIS Number: 318915B

Estimate By: Michael Orel, CPE
Date: 05/12/22
Reviewed By: AG
Date: 05/12/22

Summary Item	C30 Interior Finishes									Total Cost:	\$3,114,974
	Patch and repair plaster walls and on stairs Room 303	430	SF	\$ 1.00	\$430	\$ 2.00	\$860	\$ 3.00	\$1,290		
	Paint plaster walls above tile wainscotting and on stairs Room 303	430	SF	\$ 1.00	\$430	\$ 1.00	\$430	\$ 2.00	\$860		
	Clean Concrete Floor in Basement	5200	SF	\$ -	\$0	\$ 1.00	\$5,200	\$ 1.00	\$5,200		
	Seal concrete floor in basement	2600	SF	\$ 0.10	\$260	\$ 3.00	\$7,800	\$ 3.10	\$8,060		
SUBTOTAL	FLOOR FINISHES	26000	SF	\$ 6.20	\$161,079	\$ 6.11	\$158,877	\$ 12.31	\$319,956		

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
C3030	CEILING FINISHES								
	Skim coat plaster ceiling and make minor repairs.	4904	SF	\$ 1.00	\$4,904	\$ 2.00	\$9,808	\$ 3.00	\$14,712
	Restore plaster on ceiling and beams Room 210	264	SF	\$ 1.00	\$264	\$ 2.00	\$528	\$ 3.00	\$792
	Paint ceiling and beams per historic paint analysis Room 210	264	SF	\$ 1.00	\$264	\$ 1.00	\$264	\$ 2.00	\$528
	Skim coat plaster ceiling. 3rd Floor	3,877	SF	\$ 1.00	\$3,877	\$ 2.00	\$7,754	\$ 3.00	\$11,631
	Assess existing plaster, remove deteriorated plaster, replaster and repair as needed. 3rd Floor	775	SF	\$ 1.00	\$775	\$ 2.00	\$1,550	\$ 3.00	\$2,325
	Install new metal ceiling framing in nook with gypsum board ceiling. Room 300	77	SF	\$ 15.00	\$1,155	\$ 12.00	\$924	\$ 27.00	\$2,079
	Paint ceiling in nook. Room 300	77	SF	\$ 1.00	\$77	\$ 1.00	\$77	\$ 2.00	\$154
	Reconstruct missing stained glass laylight panels. Room 300	1	EA	\$ -	\$0	\$ 1,627,704.00	\$1,627,704	\$ 1,627,704.00	\$1,627,704
	Restore plaster ceiling. Remove loose paint. Fill cracks and skim coat. . Room 311	78	SF	\$ 1.00	\$78	\$ 2.00	\$156	\$ 3.00	\$234
	Consider installing replica skylight in office as seen in earlier drawings. . Room 311	1	LS	\$ 2,000.00	\$2,000	\$ 2,000.00	\$2,000	\$ 4,000.00	\$4,000
	Restore plaster ceiling. Remove loose paint. Fill cracks and skim coat. Room 312	41	SF	\$ 1.00	\$41	\$ 2.00	\$82	\$ 3.00	\$123
	Repair Plaster Ceiling and Beams after structural repairs Room 101	361	SF	\$ 1.00	\$361	\$ 2.00	\$722	\$ 3.00	\$1,083
	Paint Ceiling Room 101	361	SF	\$ 1.00	\$361	\$ 1.00	\$361	\$ 2.00	\$722
	Repair Plaster Ceiling and Beams after structural repairs Room 102A	275	SF	\$ 1.00	\$275	\$ 2.00	\$550	\$ 3.00	\$825
	Paint Ceiling Room 102A	275	SF	\$ 1.00	\$275	\$ 1.00	\$275	\$ 2.00	\$550
	Minor repairs to patch plaster ceiling and beams Room 103	406	SF	\$ -	\$0	\$ -	\$0	\$ -	\$0
	Paint ceiling Room 103	406	SF	\$ 1.00	\$406	\$ 1.00	\$406	\$ 2.00	\$812
	Paint Ceiling Room 104	119	SF	\$ 1.00	\$119	\$ 1.00	\$119	\$ 2.00	\$238

**United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)**

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Maur
Park: Hot Springs National Park
Park Alpha: HOSP
PMIS Number: 318915B

Estimate By: Michael Orel, CPE
Date: 05/12/22
Reviewed By: AG
Date: 05/12/22

Summary Item	C30 Interior Finishes								Total Cost:	\$3,114,974
	Repair Plaster Ceiling and Beams after structural repairs Room 105	425	SF	\$ 1.00	\$425	\$ 2.00	\$850	\$ 3.00	\$1,275	
	Paint Ceiling Room 105	425	SF	\$ 1.00	\$425	\$ 1.00	\$425	\$ 2.00	\$850	
	Paint Ceiling and laylight walls Room 108	1000	SF	\$ 1.00	\$1,000	\$ 1.00	\$1,000	\$ 2.00	\$2,000	
	New Ceiling Treatment – Install new frosted glass and LED Lighting Room 109	657	SF	\$ 35.00	\$22,995	\$ 15.00	\$9,855	\$ 50.00	\$32,850	
	New Decorative Lighting (historical replica) Need research on lighting. Room 109	3	EA	\$ 1,500.00	\$4,500	\$ 150.00	\$450	\$ 1,650.00	\$4,950	
	Paint Existing metal ceiling grid Room 109	1	EA	\$ 25.00	\$25	\$ 125.00	\$125	\$ 150.00	\$150	
	Perform historic paint analysis throughout ceiling, beams, and cornice. Room 110	1	LS		\$0	\$ 7,500.00	\$7,500	\$ 7,500.00	\$7,500	
	Restore historic plaster and decorative painted ceiling, beams, and cornice to match paint analysis report. Room 110	1	LS	\$ 47,500.00	\$47,500	\$ 47,500.00	\$47,500	\$ 95,000.00	\$95,000	
	Paint Ceiling and Beams Room 110A	64	SF	\$ 1.00	\$64	\$ 1.00	\$64	\$ 2.00	\$128	
	Paint Ceiling Room 112A	184	SF	\$ 1.00	\$184	\$ 1.00	\$184	\$ 2.00	\$368	
	Repair Remove tile ceilings (barrel vaulted areas to remain) Room 113	568	SF	\$ 25.00	\$14,200	\$ 15.00	\$8,520	\$ 40.00	\$22,720	
	Patch repair tile in barrel vaulted areas and provide new transition Room 113	300	SF	\$ 25.00	\$7,500	\$ 15.00	\$4,500	\$ 40.00	\$12,000	
	Repair Plaster and Drywall Ceiling and Beams after structural repairs Room 113	500	SF	\$ 1.00	\$500	\$ 2.00	\$1,000	\$ 3.00	\$1,500	
	Patch and repair drywall and plaster walls and areas in skylights Room 113	700	SF	\$ 1.00	\$700	\$ 2.00	\$1,400	\$ 3.00	\$2,100	
	Patch/repair ceilings where tile was removed. Install plaster patches Room 113	568	SF	\$ 1.00	\$568	\$ 2.00	\$1,136	\$ 3.00	\$1,704	
	Paint Ceiling Room 113	1200	SF	\$ 1.00	\$1,200	\$ 1.00	\$1,200	\$ 2.00	\$2,400	
	Repair Plaster and Drywall Ceiling and Beams after structural repairs. Include repair to plaster walls in skylights Room 114	750	SF	\$ 1.00	\$750	\$ 2.00	\$1,500	\$ 3.00	\$2,250	
	Paint Ceiling Room 114	750	SF	\$ 1.00	\$750	\$ 1.00	\$750	\$ 2.00	\$1,500	
	Repair plaster ceiling and beams after structural repairs Room 115	852	SF	\$ 1.00	\$852	\$ 2.00	\$1,704	\$ 3.00	\$2,556	
	Paint ceiling and beams Room 115	852	SF	\$ 1.00	\$852	\$ 1.00	\$852	\$ 2.00	\$1,704	
	Repair plaster ceiling and beams after structural repairs Room 116	428	SF	\$ 1.00	\$428	\$ 2.00	\$856	\$ 3.00	\$1,284	
	Paint ceiling and beams Room 116	428	SF	\$ 1.00	\$428	\$ 1.00	\$428	\$ 2.00	\$856	
	Paint Ceiling Room 116	121	SF	\$ 1.00	\$121	\$ 1.00	\$121	\$ 2.00	\$242	
	Paint Ceiling and Beams Room 110B	68	SF	\$ 1.00	\$68	\$ 1.00	\$68	\$ 2.00	\$136	
	Repair plaster ceiling and skim coat Room 110C	82	SF	\$ 1.00	\$82	\$ 2.00	\$164	\$ 3.00	\$246	
	Repair decorative plaster cornice Room 110C	38	LF	\$ 15.00	\$570	\$ 25.00	\$950	\$ 40.00	\$1,520	
	Patch and repair plaster ceilings Room BO2	80	SF	\$ 1.00	\$80	\$ 2.00	\$160	\$ 3.00	\$240	

United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Maur
Park: Hot Springs National Park
Park Alpha: HOSP
PMIS Number: 318915B

Estimate By: Michael Orel, CPE
Date: 05/12/22
Reviewed By: AG
Date: 05/12/22

Summary Item	C30 Interior Finishes									Total Cost:	\$3,114,974
	Paint ceilings Room BO2	80	SF	\$ 1.00	\$80	\$ 1.00	\$80	\$ 2.00	\$160	\$240	
	Patch and repair plaster ceilings Room 102B	80	SF	\$ 1.00	\$80	\$ 2.00	\$160	\$ 3.00	\$240	\$240	
	Paint ceilings Room 102B	80	SF	\$ 1.00	\$80	\$ 1.00	\$80	\$ 2.00	\$160	\$160	
	Patch and repair plaster ceilings Room 216	80	SF	\$ 1.00	\$80	\$ 2.00	\$160	\$ 3.00	\$240	\$240	
	Paint ceilings Room 216	80	SF	\$ 1.00	\$80	\$ 1.00	\$80	\$ 2.00	\$160	\$160	
	Patch and repair plaster ceilings Room 301	203	SF	\$ 1.00	\$203	\$ 2.00	\$406	\$ 3.00	\$609	\$609	
	Paint ceilings Room 301	203	SF	\$ 1.00	\$203	\$ 1.00	\$203	\$ 2.00	\$406	\$406	
	Patch and repair plaster ceilings Room B17	80	SF	\$ 1.00	\$80	\$ 2.00	\$160	\$ 3.00	\$240	\$240	
	Paint ceilings Room B17	80	SF	\$ 1.00	\$80	\$ 1.00	\$80	\$ 2.00	\$160	\$160	
	Patch and repair plaster ceilings Room 112B	80	SF	\$ 1.00	\$80	\$ 2.00	\$160	\$ 3.00	\$240	\$240	
	Paint ceilings Room 112B	80	SF	\$ 1.00	\$80	\$ 1.00	\$80	\$ 2.00	\$160	\$160	
	Patch and repair plaster ceilings Room 217	80	SF	\$ 1.00	\$80	\$ 2.00	\$160	\$ 3.00	\$240	\$240	
	Paint ceilings Room 217	80	SF	\$ 1.00	\$80	\$ 1.00	\$80	\$ 2.00	\$160	\$160	
	Patch and repair plaster ceilings Room 303	203	SF	\$ 1.00	\$203	\$ 2.00	\$406	\$ 3.00	\$609	\$609	
	Paint ceilings Room 303	203	SF	\$ 1.00	\$203	\$ 1.00	\$203	\$ 2.00	\$406	\$406	
SUBTOTAL	CEILING FINISHES	26000	SF	\$ 4.76	\$123,691	\$ 67.27	\$1,749,040	\$ 72.03	\$1,872,731		

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
C3035	MISC INTERIOR								
	Door Signs	325	EA	\$ 250.00	\$81,250	\$ 75.00	\$24,375	\$ 325.00	\$105,625
	Paint and restore existing metal grille Room 210	1	LS	\$ 200.00	\$200	\$ 200.00	\$200	\$ 400.00	\$400
	Locate historic grille for SE chase in park archives and install. Paint to match paint analysis Room 210	1	LS	\$ 200.00	\$200	\$ 200.00	\$200	\$ 400.00	\$400
	Paint and restore existing radiator Room 210	1	LS	\$ 400.00	\$400	\$ 400.00	\$400	\$ 800.00	\$800
	Restore radiator finishes Room 312	1	LS	\$ 400.00	\$400	\$ 400.00	\$400	\$ 800.00	\$800
	Paint window sashes Room 104	2	EA	\$ 50.00	\$100	\$ 250.00	\$500	\$ 300.00	\$600
	Repair window hardware to working condition Room 104	1	LS	\$ 250.00	\$250	\$ 200.00	\$200	\$ 450.00	\$450
	Replace missing grille in south wall Room 101	1	EA	\$ 200.00	\$200	\$ 150.00	\$150	\$ 350.00	\$350
	Refinish built-in desk and make repairs (replace missing back in cubby). Ensure all drawers and door work properly Room 104	1	EA	\$ 1,400.00	\$1,400	\$ 1,400.00	\$1,400	\$ 2,800.00	\$2,800
	Refresh finish on all millwork Room 104	1	LS	\$ 400.00	\$400	\$ 400.00	\$400	\$ 800.00	\$800

**United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)**

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Maur
Park: Hot Springs National Park
Park Alpha: HOSP
PMIS Number: 318915B

Estimate By: Michael Orel, CPE
Date: 05/12/22
Reviewed By: AG
Date: 05/12/22

Summary Item	C30 Interior Finishes							Total Cost:	\$3,114,974
	Historic Bench and Mirror to be restored by qualified carpenter and refinisher. Carefully remove bench for restoration and reinstall in original location. Set bench and mirror to be plumb with wall and floor. Room 105	1	LS	\$ 1,600.00	\$1,600	\$ 1,600.00	\$1,600	\$ 3,200.00	\$3,200
	North Wall -Restore finish on wood counter and gate (allowance) Room 110	1	LS	\$ 500.00	\$500	\$ 500.00	\$500	\$ 1,000.00	\$1,000
	South Wall – Restore finish on wood counter and gate (allowance) Room 110	1	LS	\$ 500.00	\$500	\$ 500.00	\$500	\$ 1,000.00	\$1,000
	Strip and paint hinges on gates. Replace Phillips screws. Room 110	4	EA	\$ 25.00	\$100	\$ 165.00	\$660	\$ 190.00	\$760
	Repaint grille based on historic paint analysis. Install standard screws. Room 110	1	EA	\$ 25.00	\$25	\$ 150.00	\$150	\$ 175.00	\$175
	Replace missing grille in south wall from park collection Room 115	1	EA	\$ 225.00	\$225	\$ 75.00	\$75	\$ 300.00	\$300
	Refinish 2 existing radiators Room 115	2	EA	\$ 200.00	\$400	\$ 200.00	\$400	\$ 400.00	\$800
	Restore finish on existing grille in NW chase Room 116	1	EA	\$ 800.00	\$800	\$ 800.00	\$800	\$ 1,600.00	\$1,600
	Install salvaged grille in reconstructed SW chase to match one in the NW chase Room 116	1	EA	\$ 15.00	\$15	\$ 800.00	\$800	\$ 815.00	\$815
	Install trim around grille to remain Room 116	16	LF	\$ 45.00	\$720	\$ 15.00	\$240	\$ 60.00	\$960
	Paint window sashes Room 116	2	EA	\$ 15.00	\$30	\$ 250.00	\$500	\$ 265.00	\$530
	Repair window hardware to working condition Room 116	1	LS	\$ 350.00	\$350	\$ 200.00	\$200	\$ 550.00	\$550
	Refresh finish on counter and gate Room 116	1	LS	\$ 450.00	\$450	\$ 450.00	\$450	\$ 900.00	\$900
	Refresh finish on all millwork Room 116	1	LS	\$ 400.00	\$400	\$ 400.00	\$400	\$ 800.00	\$800
SUBTOTAL	MISC INTERIOR	26000	SF	\$ 3.50	\$90,915	\$ 1.37	\$35,500	\$ 4.86	\$126,415

Summary Item C30 Interior Finishes

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
C30	Interior Finishes	26000	SF	\$ 20.09	\$522,265	\$ 99.72	\$2,592,710	\$ 119.81	\$3,114,974

United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Mauri
 Park: Hot Springs National Park
 Park Alpha: HOSP
 PMIS Number: 318915B

Estimate By: Michael Orel, CPE
 Date: 05/12/22
 Reviewed By: AG
 Date: 05/12/22

Summary Item **D10 Conveying Systems**

Total Cost: \$68,500

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
D1010	ELEVATORS								
	Refurbish existing elevator including replace interior finishes, replace interior railings, replace door thresholds, inspect and repair controls and operating mechanisms	1	EA	\$ 12,500.00	\$12,500	\$ 17,500.00	\$17,500	\$ 30,000.00	\$30,000
	Strip and repaint existing historic elevator cage to remain. Paint with color from historic paint analysis. (All levels – basement through 3rd floor). Make repairs to elevator cage for safety. Room BO2	2	EA	\$ 9,000.00	\$18,000	\$ 9,000.00	\$18,000	\$ 18,000.00	\$36,000
	Install new guardrail at east side of elevator Room 303	1	LS	\$ 1,250.00	\$1,250	\$ 1,250.00	\$1,250	\$ 2,500.00	\$2,500
SUBTOTAL	ELEVATORS	26000	SF	\$ 1.22	\$31,750	\$ 1.41	\$36,750	\$ 2.63	\$68,500

Summary Item **D10 Conveying Systems**

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
D10	Conveying Systems	26000	SF	\$ 1.22	\$31,750	\$ 1.41	\$36,750	\$ 2.63	\$68,500

United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Mauri
Park: Hot Springs National Park
Park Alpha: HOSP
PMIS Number: 318915B

Estimate By: Michael Orel, CPE
Date: 05/12/22
Reviewed By: AG
Date: 05/12/22

Summary Item D20 Plumbing Systems

Total Cost: \$111,200

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
D2030	SANITARY WASTE								
	Provide 4" floor drain in pit and associated waste and vent piping at backflow preventer location	1	EA	\$ 1,250.00	\$1,250	\$ 1,300.00	\$1,300	\$ 2,550.00	\$2,550
	Demo existing above slab-on grade waste and vent piping and extend new waste and vent piping to floor drains and rough-in for future restroom & locker room locations and future café and kitchen locations.	10	EA	\$ 650.00	\$6,500	\$ 1,200.00	\$12,000	\$ 1,850.00	\$18,500
	Scope existing below slab waste piping to determine the location, elevation and condition of the existing piping. Determination of feasibility of using below slab waste piping can be made after completion of those tasks. Make repairs as needed	1	LS	\$ 5,000.00	\$5,000	\$ 10,000.00	\$10,000	\$ 15,000.00	\$15,000
	Relocate irrigation system backflow preventer, PRV and manifold system to new Pool Mechanical and Equipment room and repipe to existing piping exiting the building in the NW corner of the basement.	1	EA	\$ 1,500.00	\$1,500	\$ 2,500.00	\$2,500	\$ 4,000.00	\$4,000
	Install new elevator sump pump in existing sump and connect to sanitary waste system	1	EA	\$ 650.00	\$650	\$ 500.00	\$500	\$ 1,150.00	\$1,150
SUBTOTAL	SANITARY WASTE	26000	SF	\$ 0.57	\$14,900	\$ 1.01	\$26,300	\$ 1.58	\$41,200

United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Mauri
Park: Hot Springs National Park
Park Alpha: HOSP
PMIS Number: 318915B

Estimate By: Michael Orel, CPE
Date: 05/12/22
Reviewed By: AG
Date: 05/12/22

Summary Item D20 Plumbing Systems

Total Cost: \$111,200

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
D2040	RAIN WATER DRAINAGE								
	Replace roof drain domes with ductile iron domes bolted securely to roof drain bodies	7	EA	\$ 250.00	\$1,750	\$ 300.00	\$2,100	\$ 550.00	\$3,850
	Provide emergency roof drains and associated downspout piping or provide overflow scuppers	2	EA	\$ 1,500.00	\$3,000	\$ 500.00	\$1,000	\$ 2,000.00	\$4,000
	Connect new storm water piping to each of the existing downspout risers and route outside, combine and connect to city storm sewer system. Piping shall be schedule 40 PVC.	4	EA	\$ 3,500.00	\$14,000	\$ 4,500.00	\$18,000	\$ 8,000.00	\$32,000
	Seal existing thermal spring water collection basins, provide new outlet connections and open trench drainage system connected to existing sump	1	LS	\$ 1,500.00	\$1,500	\$ 8,500.00	\$4,500	\$ 10,000.00	\$10,000
	Replace existing groundwater/spring sump pumps and associated discharge piping	2	EA	\$ 1,200.00	\$2,400	\$ 1,500.00	\$3,000	\$ 2,700.00	\$5,400
	Replace existing area drain with new drain with a beehive strainer.	1	EA	\$ 500.00	\$500	\$ 750.00	\$750	\$ 1,250.00	\$1,250
SUBTOTAL	RAIN WATER DRAINAGE	17	EA	\$ 1,361.76	\$23,150	\$ 1,726.47	\$29,350	\$ 3,323.53	\$56,500

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
D2050	SPECIAL PLUMBING SYSTEMS								
	Gas Piping to Generator	75	LF	\$ 5.00	\$375	\$ 25.00	\$1,875	\$ 30.00	\$2,250
	Gas Piping to Boilers	150	LF	\$ 5.00	\$750	\$ 25.00	\$3,750	\$ 30.00	\$4,500
	Gas Piping to DOAS	225	LF	\$ 5.00	\$1,125	\$ 25.00	\$5,625	\$ 30.00	\$6,750
SUBTOTAL	SPECIAL PLUMBING SYSTEMS	450	LF	\$ 5.00	\$2,250	\$ 25.00	\$11,250	\$ 30.00	\$13,500

Summary Item D20 Plumbing Systems

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
D20	Plumbing Systems	26000	SF	\$ 1.55	\$40,300	\$ 2.57	\$66,900	\$ 4.28	\$111,200

United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Maur
 Park: Hot Springs National Park
 Park Alpha: HOSP
 PMIS Number: 318915B

Estimate By: Michael Orel, CPE
 Date: 05/12/22
 Reviewed By: AG
 Date: 05/12/22

Summary Item **D30 HVAC**

Total Cost: \$1,049,940

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
D3020	HEAT GENERATING SYSTEMS								
	Install 2 - 50% capacity each gas fired condensing boilers	2	EA	\$ 45,000.00	\$90,000	\$ 7,500.00	\$15,000	\$ 52,500.00	\$105,000
	Provide 2 - 50% capacity each, variable primary, vertical in-line, floor mounted heating water pumps.	2	EA	\$ 6,500.00	\$13,000	\$ 1,500.00	\$3,000	\$ 8,000.00	\$16,000
	Provide heating water accessories including air/dirt separator and quick and auto fill system	1	LS	\$ 3,500.00	\$3,500	\$ 1,200.00	\$1,200	\$ 4,700.00	\$4,700
	Provide shell and tube heat exchanger to provide preheat of boiler return water utilizing thermal water.	1	EA	\$ 15,000.00	\$15,000	\$ 1,500.00	\$1,500	\$ 16,500.00	\$16,500
	Provide vertical in-line heat exchanger pump	1	EA	\$ 6,500.00	\$6,500	\$ 1,500.00	\$1,500	\$ 8,000.00	\$8,000
	Connect Schedule 40 black steel or Type L copper heating water piping to boilers, heating water pumps, air/dirt separator, air handling units, VAV boxes, fan coil units & unit heaters	1	LS	\$ 5,000.00	\$5,000	\$ 5,200.00	\$5,200	\$ 10,200.00	\$10,200
	Fin Tube	340	LF	\$ 25.00	\$8,500	\$ 5.00	\$1,700	\$ 30.00	\$10,200
	Unit Heaters	27	EA	\$ 1,500.00	\$40,500	\$ 500.00	\$13,500	\$ 2,000.00	\$54,000
SUBTOTAL	HEAT GENERATING SYSTEMS	26000	SF	\$ 7.00	\$182,000	\$ 1.64	\$42,600	\$ 8.64	\$224,600

United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Maur
 Park: Hot Springs National Park
 Park Alpha: HOSP
 PMIS Number: 318915B

Estimate By: Michael Orel, CPE
 Date: 05/12/22
 Reviewed By: AG
 Date: 05/12/22

Summary Item **D30 HVAC** Total Cost: \$1,049,940

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
D3030	COOLING GENERATING SYSTEMS								
	Provide new 90 ton air cooled chiller	1	EA	\$ 79,000.00	\$79,000	\$ 8,500.00	\$8,500	\$ 87,500.00	\$87,500
	Provide 2 - 100% capacity each, variable primary, vertical in-line, floor mounted chilled water pumps.	2	EA	\$ 6,500.00	\$13,000	\$ 1,500.00	\$3,000	\$ 8,000.00	\$16,000
	Provide chilled water accessories including air/dirt separator and quick and auto fill system	1	LS	\$ 7,500.00	\$7,500	\$ 2,500.00	\$2,500	\$ 10,000.00	\$10,000
	Connect Schedule 40 black steel chilled water piping to chiller, chilled water pumps, air/dirt separator, air handling units and fan coil units	1	LS	\$ 10,000.00	\$10,000	\$ 5,000.00	\$5,000	\$ 15,000.00	\$15,000
	Relocate Hale condensing unit to the Hale building site and reconnect refrigerant piping	1	EA	\$ 7,500.00	\$7,500	\$ 3,500.00	\$3,500	\$ 11,000.00	\$11,000
	Provide new self-contained dehumidifiers and associated ductwork to dehumidify the basement and east crawlspace	2	EA	\$ 30,000.00	\$60,000	\$ 3,120.00	\$6,240	\$ 33,120.00	\$66,240
	VAV w/ Reheat Coil and associated piping and ductwork	23	EA	\$ 2,500.00	\$57,500	\$ 500.00	\$11,500	\$ 3,000.00	\$69,000
SUBTOTAL	COOLING GENERATING SYSTEMS	26000	SF	\$ 9.02	\$234,500	\$ 1.55	\$40,240	\$ 10.57	\$274,740

United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Maur
 Park: Hot Springs National Park
 Park Alpha: HOSP
 PMIS Number: 318915B

Estimate By: Michael Orel, CPE
 Date: 05/12/22
 Reviewed By: AG
 Date: 05/12/22

Summary Item **D30 HVAC** Total Cost: \$1,049,940

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
D3040	DISTRIBUTION SYSTEMS (HVAC)								
	Provide new air handling unit system, relief fan and associated ductwork and VAV boxes with hot water reheat to serve First Floor.	13500	CFM	\$ 5.19	\$70,100	\$ 3.00	\$40,500	\$ 8.19	\$110,600
	Provide new air handling unit system, relief fan and associated ductwork and VAV boxes with hot water reheat to serve Second Floor.	7000	CFM	\$ 7.24	\$50,700	\$ 3.00	\$21,000	\$ 10.24	\$71,700
	Provide new air handling unit system and associated ductwork to serve the Roycroft Room.	3000	CFM	\$ 8.10	\$24,300	\$ 3.00	\$9,000	\$ 11.10	\$33,300
	Provide wall mounted fan coil units under the windows on Third Floor	12	EA	\$ 1,500.00	\$18,000	\$ 500.00	\$6,000	\$ 2,000.00	\$24,000
	Provide packaged roof mounted DOAS with energy recovery wheel and associated ductwork to provide ventilation to the spaces on Third Floor	1	EA	\$ 45,700.00	\$45,700	\$ 7,500.00	\$7,500	\$ 53,200.00	\$53,200
	Provide mini-split indoor units between laylight and skylight in the Roycroft Room and associated remote condensing units mounted on the roof.	2	EA	\$ 6,500.00	\$13,000	\$ 2,500.00	\$5,000	\$ 9,000.00	\$18,000
	Provide new mini-split DX indoor unit for the new elevator equipment room and associated remote condensing unit and refrigerant piping	1	Unit	\$ 6,500.00	\$6,500	\$ 2,500.00	\$2,500	\$ 9,000.00	\$9,000
	Put exhaust fan in automatic working condition to be controlled by humidistat	1	LS	\$ -	\$0	\$ -	\$0	\$ -	\$0
	Ductwork/Grilles/Registers	26000	SF	\$ 1.50	\$39,000	\$ 1.50	\$39,000	\$ 3.00	\$78,000
	Repair existing crawspace exhaust fan	1	LS	\$ 500.00	\$500	\$ 1,500.00	\$1,500	\$ 2,000.00	\$2,000
SUBTOTAL	DISTRIBUTION SYSTEMS (HVAC)	26000	SF	\$ 10.30	\$267,800	\$ 5.08	\$132,000	\$ 15.38	\$399,800

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
G3060	CONTROLS & INSTRUMENTATION								
	CONTROLS & INSTRUMENTATION	26000	SF	\$ 2.00	\$52,000	\$ 3.00	\$78,000	\$ 5.00	\$130,000
SUBTOTAL	CONTROLS & INSTRUMENTATION	26000	SF	\$ 2.00	\$52,000	\$ 3.00	\$78,000	\$ 5.00	\$130,000

United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Maur
 Park: Hot Springs National Park
 Park Alpha: HOSP
 PMIS Number: 318915B

Estimate By: Michael Orel, CPE
 Date: 05/12/22
 Reviewed By: AG
 Date: 05/12/22

Summary Item **D30 HVAC** Total Cost: \$1,049,940

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
G3080	SYSTEM TESTING & BALANCING								
	Testing and Balancing	26000	SF	\$ 0.05	\$1,300	\$ 0.75	\$19,500	\$ 0.80	\$20,800
SUBTOTAL	SYSTEM TESTING & BALANCING	26000	SF	\$ 0.05	\$1,300	\$ 0.75	\$19,500	\$ 0.80	\$20,800

Summary Item **D30 HVAC**

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
D30	HVAC	26000	SF	\$ 28.37	\$737,600	\$ 12.01	\$312,340	\$ 40.38	\$1,049,940

United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Maur
 Park: Hot Springs National Park
 Park Alpha: HOSP
 PMIS Number: 318915B

Estimate By: Michael Orel, CPE
 Date: 05/12/22
 Reviewed By: AG
 Date: 05/12/22

Summary Item **D40 Fire Protection**

Total Cost: \$130,000

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
D4010	FIRE PROTECTION SPRINKLERS SYSTEMS								
	Install new wet sprinkler system for entire building	26000	SF	\$ 2.00	\$52,000	\$ 3.00	\$78,000	\$ 5.00	\$130,000
SUBTOTAL	FIRE PROTECTION SPRINKLERS SYSTEMS	26000	SF	\$ 2.00	\$52,000	\$ 3.00	\$78,000	\$ 5.00	\$130,000

Summary Item **D40 Fire Protection**

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
D40	Fire Protection	26000	SF	\$ 2.00	\$52,000	\$ 3.00	\$78,000	\$ 5.00	\$130,000

United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Maur
 Park: Hot Springs National Park
 Park Alpha: HOSP
 PMIS Number: 318915B

Estimate By: Michael Orel, CPE
 Date: 05/12/22
 Reviewed By: Reviewer Name
 Date: Review Date

Summary Item **D50 Electrical**

Total Cost: \$648,050

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
D5010	ELECTRICAL SERVICE & DISTRIBUTION								
	Main Switchboard 1000 Amp	1	EA	\$ 100,000.00	\$100,000	\$ 25,000.00	\$25,000	\$ 125,000.00	\$125,000
	600 Amp Panel	2	EA	\$ 3,500.00	\$7,000	\$ 1,500.00	\$3,000	\$ 5,000.00	\$10,000
	Feeders	450	LF	\$ 25.00	\$11,250	\$ 15.00	\$6,750	\$ 40.00	\$18,000
	Furnish and install new grounding electrode system	26000	SF	\$ 0.25	\$6,500	\$ 0.75	\$19,500	\$ 1.00	\$26,000
	Furnish and install convenience power throughout the building.	26000	SF	\$ 1.00	\$26,000	\$ 1.00	\$26,000	\$ 2.00	\$52,000
	Furnish and install connections to all new mechanical equipment	26000	SF	\$ 2.00	\$52,000	\$ 2.00	\$52,000	\$ 4.00	\$104,000
	Furnish and install arc flash labels for all electrical equipment	19000	SF	\$ 0.15	\$2,850	\$ 0.10	\$1,900	\$ 0.25	\$4,750
	Furnish and install emergency shutdown system for the boilers and associated equipment	1	LS	\$ 5,000.00	\$5,000	\$ 5,000.00	\$5,000	\$ 10,000.00	\$10,000
	Install new waterproof connection to all in grade electrical connections	25	EA	\$ 150.00	\$3,750	\$ 150.00	\$3,750	\$ 300.00	\$7,500
SUBTOTAL	ELECTRICAL SERVICE & DISTRIBUTION	26000	SF	\$ 8.24	\$214,350	\$ 5.50	\$142,900	\$ 13.74	\$357,250

**United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)**

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Maur
Park: Hot Springs National Park
Park Alpha: HOSP
PMIS Number: 318915B

Estimate By: Michael Orel, CPE
Date: 05/12/22
Reviewed By: Reviewer Name
Date: Review Date

Summary Item **D50 Electrical**

Total Cost: \$648,050

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
D5020	LIGHTING & BRANCH WIRING								
	Furnish and install all new exit signs	26000	SF	\$ 1.00	\$26,000	\$ 1.00	\$26,000	\$ 2.00	\$52,000
	Furnish and install all new lighting throughout building.	26000	SF	\$ 1.00	\$26,000	\$ 1.00	\$26,000	\$ 2.00	\$52,000
	Install Lighting Room 210	1	LS	\$ 1,000.00	\$1,000	\$ 1,000.00	\$1,000	\$ 2,000.00	\$2,000
	Install recessed lighting in inglenook. Room 300	5	EA	\$ -	\$0	\$ -	\$0	\$ -	\$0
	Install reproduction decorative four fixtures (Allowance) . Room 300	3	EA	\$ 266.67	\$800	\$ 266.67	\$800	\$ 533.33	\$1,600
	Consider installing overall concealed lighting to supplement chandelier fixtures. (Allowance) . Room 300	1	LS	\$ 4,000.00	\$4,000	\$ 4,000.00	\$4,000	\$ 8,000.00	\$8,000
	Install backlighting in laylight. Room 300	1	LS	\$ 1,500.00	\$1,500	\$ 1,500.00	\$1,500	\$ 3,000.00	\$3,000
	Install new lighting. Room 311	1	LS	\$ 750.00	\$750	\$ 750.00	\$750	\$ 1,500.00	\$1,500
	Install replica or salvaged lighting on ceiling and wall from Park archives Room 312	2	EA	\$ 400.00	\$800	\$ 400.00	\$800	\$ 800.00	\$1,600
	Install three light fixtures Room 101	3	EA	\$ 750.00	\$2,250	\$ 750.00	\$2,250	\$ 1,500.00	\$4,500
	Install three light fixtures Room 102A	3	EA	\$ 750.00	\$2,250	\$ 750.00	\$2,250	\$ 1,500.00	\$4,500
	Install lighting throughout Room 103	6	EA	\$ 750.00	\$4,500	\$ 750.00	\$4,500	\$ 1,500.00	\$9,000
	Install new Ceiling Fixture Room 104	1	EA	\$ 750.00	\$750	\$ 750.00	\$750	\$ 1,500.00	\$1,500
	Install three light fixtures Room 105	3	EA	\$ 750.00	\$2,250	\$ 750.00	\$2,250	\$ 1,500.00	\$4,500
	Install lighting in laylight area for backlighting laylight in evenings. Room 108	1	EA	\$ 750.00	\$750	\$ 750.00	\$750	\$ 1,500.00	\$1,500
	Replace existing contemporary lighting with more period-appropriate lighting or something less conspicuous Room 110	3	EA	\$ 1,250.00	\$3,750	\$ 750.00	\$2,250	\$ 2,000.00	\$6,000
	Replace Ceiling Fixture to Match Lobby Room 110A	1	EA	\$ 750.00	\$750	\$ 750.00	\$750	\$ 1,500.00	\$1,500
	Install three light fixtures Room 112A	3	EA	\$ 750.00	\$2,250	\$ 750.00	\$2,250	\$ 1,500.00	\$4,500
	Install 10 light fixtures Room 113	10	EA	\$ 750.00	\$7,500	\$ 750.00	\$7,500	\$ 1,500.00	\$15,000
	Install lighting in laylight area for backlighting laylight in evenings. Room 113	1	EA	\$ 750.00	\$750	\$ 750.00	\$750	\$ 1,500.00	\$1,500
	Install lighting in laylight area for backlighting laylight in evenings. Room 114	1	EA	\$ 750.00	\$750	\$ 750.00	\$750	\$ 1,500.00	\$1,500
	Provide back-lighting for laylights Room 114	1	EA	\$ 3,500.00	\$3,500	\$ 1,500.00	\$1,500	\$ 5,000.00	\$5,000
	Install six light fixtures Room 115	6	EA	\$ 750.00	\$4,500	\$ 750.00	\$4,500	\$ 1,500.00	\$9,000
	Install 3 light fixtures Room 116	3	EA	\$ 750.00	\$2,250	\$ 750.00	\$2,250	\$ 1,500.00	\$4,500

United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Maur
 Park: Hot Springs National Park
 Park Alpha: HOSP
 PMIS Number: 318915B

Estimate By: Michael Orel, CPE
 Date: 05/12/22
 Reviewed By: Reviewer Name
 Date: Review Date

Summary Item	D50 Electrical								Total Cost:	\$648,050
	Install new Ceiling Fixture Room 116	1	EA	\$ 750.00	\$750	\$ 750.00	\$750	\$ 1,500.00	\$1,500	
	Replace Ceiling Fixture to Match Lobby Room 110B	1	EA	\$ 750.00	\$750	\$ 750.00	\$750	\$ 1,500.00	\$1,500	
	Install new light fixture at ceiling Room 110C	1	EA	\$ 750.00	\$750	\$ 750.00	\$750	\$ 1,500.00	\$1,500	
	Install new lighting at landings and in stair Room BO2	4	EA	\$ 500.00	\$2,000	\$ 500.00	\$2,000	\$ 1,000.00	\$4,000	
	Install new lighting at landings and in stair Room 102B	4	EA	\$ 500.00	\$2,000	\$ 500.00	\$2,000	\$ 1,000.00	\$4,000	
	Install new lighting at landings and in stair Room 216	4	EA	\$ 500.00	\$2,000	\$ 500.00	\$2,000	\$ 1,000.00	\$4,000	
	Install new lighting at landings and in stair Room 301	4	EA	\$ 500.00	\$2,000	\$ 500.00	\$2,000	\$ 1,000.00	\$4,000	
	Install new lighting at landings and in stair Room B17	4	EA	\$ 500.00	\$2,000	\$ 500.00	\$2,000	\$ 1,000.00	\$4,000	
	Install new lighting at landings and in stair Room 112B	4	EA	\$ 500.00	\$2,000	\$ 500.00	\$2,000	\$ 1,000.00	\$4,000	
	Install new lighting at landings and in stair Room 303	4	EA	\$ 500.00	\$2,000	\$ 500.00	\$2,000	\$ 1,000.00	\$4,000	
SUBTOTAL	LIGHTING & BRANCH WIRING	26000	SF	\$ 3.46	\$89,850	\$ 3.32	\$86,350	\$ 6.78	\$176,200	

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
D5030	COMMUNICATIONS & SECURITY								
	Furnish and install new fire alarm system.	26000	SF	\$ 1.00	\$26,000	\$ 1.00	\$26,000	\$ 2.00	\$52,000
	Furnish and install a new security system.	26000	SF	\$ 0.75	\$19,500	\$ 1.00	\$26,000	\$ 1.75	\$45,500
	Furnish and install IT connections throughout the building.	26000	SF	\$ 0.25	\$6,500	\$ 0.25	\$6,500	\$ 0.50	\$13,000
	Disconnect, remove, relocate, and reconnect existing IT service.	1	LS	\$ 1,500.00	\$1,500	\$ 2,600.00	\$2,600	\$ 4,100.00	\$4,100
SUBTOTAL	COMMUNICATIONS & SECURITY	26000	SF	\$ 2.06	\$53,500	\$ 2.35	\$61,100	\$ 4.41	\$114,600

Summary Item D50 Electrical

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
D50	Electrical	26000	SF	\$ 13.76	\$357,700	\$ 11.17	\$290,350	\$ 24.93	\$648,050

United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Maur
 Park: Hot Springs National Park
 Park Alpha: HOSP
 PMIS Number: 318915B

Estimate By: Michael Orel, CPE
 Date: 05/12/22
 Reviewed By: Reviewer Name
 Date: Review Date

Summary Item **F20 Selective Building Demolition**

Total Cost: \$381,538

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
F2010	BUILDING ELEMENTS DEMOLITION								
	Demo all plumbing fixtures and associate waste, vent and water connections	25	EA	\$ -	\$0	\$ 500.00	\$12,500	\$ 500.00	\$12,500
	Demo existing AHU-1, condensing unit and associated refrigerant piping.	1	EA	\$ -	\$0	\$ 6,500.00	\$6,500	\$ 6,500.00	\$6,500
	Demo the existing elevator equipment room indoor unit and remote condensing unit	1	EA	\$ -	\$0	\$ 2,500.00	\$2,500	\$ 2,500.00	\$2,500
	Disconnect and remove all existing ductwork	26000	SF	\$ -	\$0	\$ 2.00	\$52,000	\$ 2.00	\$52,000
	Disconnect and remove existing boiler and associated flue, combustion air ductwork, heating water pump, heating water accessories and piping	1	LS	\$ -	\$0	\$ 6,500.00	\$6,500	\$ 6,500.00	\$6,500
	Disconnect and remove all remaining steam piping and radiators.	26000	SF	\$ -	\$0	\$ 0.50	\$13,000	\$ 0.50	\$13,000
	Demo existing propeller exhaust fans and associated intake dampers. Existing louvers are to remain unless noted otherwise	6	EA	\$ -	\$0	\$ 520.00	\$3,120	\$ 520.00	\$3,120
	Electrical Demolition	26000	SF	\$ -	\$0	\$ 3.00	\$78,000	\$ 3.00	\$78,000
	Remove (4) metal-framed translucent panel skylights and associated flashing, wood structure to remain	3520	SF	\$ -	\$0	\$ 5.00	\$17,600	\$ 5.00	\$17,600
	Remove sloped skylight over Roycroft Room and associated gutters and flashing, structure to remain	1000	SF	\$ -	\$0	\$ 25.00	\$25,000	\$ 25.00	\$25,000
	Remove membrane roofing and associated flashing at low-slope roofs	5505	SF	\$ -	\$0	\$ 2.00	\$11,010	\$ 2.00	\$11,010
	Second Floor – Demolition			\$ -	\$0	\$ -	\$0	\$ -	\$0
	Demo Tile Flooring (1 layers). Roof 211 – Hallway.	200	SF	\$ -	\$0	\$ 3.50	\$700	\$ 3.50	\$700
	Interior Walls (Clay Tile with Plaster)	126	LF		\$0	\$ 21.00	\$2,646	\$ 21.00	\$2,646
	Demo severely deteriorated plaster at exterior wall. Room 205 – Men’s Dressing Room	1350	SF	\$ -	\$0	\$ 3.00	\$4,050	\$ 3.00	\$4,050
	Demo ceramic wall tile off existing walls to remain. Room 208 – Employee Lounge	162	SF	\$ -	\$0	\$ 3.00	\$486	\$ 3.00	\$486
	Demo 2-inch concrete cap off plaster wainscoting (throughout the second floor)	800	LF	\$ -	\$0	\$ 2.00	\$1,600	\$ 2.00	\$1,600

**United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)**

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Maur
Park: Hot Springs National Park
Park Alpha: HOSP
PMIS Number: 318915B

Estimate By: Michael Orel, CPE
Date: 05/12/22
Reviewed By: Reviewer Name
Date: Review Date

Summary Item	F20	Selective Building Demolition	Total Cost: \$381,538						
		Remove existing interior door frames and doors (including elevator hall door replacement)	11	EA	\$ -	\$0 \$ 100.00	\$1,100	\$ 100.00	\$1,100
		Remove existing Door 2/210 (HM frame and door) Room 210	19	LF	\$ -	\$0 \$ 5.00	\$95	\$ 5.00	\$95
		Demolish existing chase in SW corner of room. Salvage historic tile and metal grille for reuse. Demolish all existing ducts and piping from chase Room 210	1	LS	\$ -	\$0 \$ 500.00	\$500	\$ 500.00	\$500
		Demolish existing soffit along east wall in its entirety. Remove all piping and ducts. Remove vertical framing remaining in chase in SE corner. Room 210	1	LS	\$ -	\$0 \$ 500.00	\$500	\$ 500.00	\$500
		Third Floor – Demolition			\$ -	\$0 \$ -	\$0	\$ -	\$0
		Demo Tile Flooring (1 layers). Roof 211 – Hallway.	125	SF	\$ -	\$0 \$ 3.00	\$375	\$ 3.00	\$375
		Saw cut all remaining terrazzo and clay block curbing remain from previously removed partition walls.	464	LF	\$ -	\$0 \$ 10.00	\$4,640	\$ 10.00	\$4,640
		Demo Interior Walls (Clay Tile with Plaster). Historic metal mesh to be salvaged.	123	LF	\$ -	\$0 \$ 21.00	\$2,583	\$ 21.00	\$2,583
		Demo 2-inch concrete cap off plaster wainscoting (throughout the second floor)	800	LF	\$ -	\$0 \$ 15.00	\$12,000	\$ 15.00	\$12,000
		Remove existing interior door frames and doors (including elevator hall door replacement). All hardware from doors and marble plinths from door frame to be salvaged.	15	EA	\$ -	\$0 \$ 100.00	\$1,500	\$ 100.00	\$1,500
		Remove remnants of gypsum board ceiling and wood framing from nook. Room 300	77	SF	\$ -	\$0 \$ 3.00	\$231	\$ 3.00	\$231
		Demolish pipes through floor Room 101	2	EA	\$ -	\$0 \$ 250.00	\$500	\$ 250.00	\$500
		Demolish existing concrete pads under equipment. Room 103	175	SF	\$ -	\$0 \$ 2.00	\$350	\$ 2.00	\$350
		Demolish existing pipes through the floors and walls. Room 103	1	LS	\$ -	\$0 \$ 450.00	\$450	\$ 450.00	\$450
		Demolish existing restroom in the NE corner of Room 105. Remove all walls, door, fixtures, piping, etc. Room 105	1	LS	\$ -	\$0 \$ 850.00	\$850	\$ 850.00	\$850
		Remove sink installed at west wall and pipes through floor. Salvage sink for Park collections Room 105	1	EA	\$ -	\$0 \$ 450.00	\$450	\$ 450.00	\$450
		Remove duct through floor and wall in SW corner of room Room 105	1	EA	\$ -	\$0 \$ 250.00	\$250	\$ 250.00	\$250

United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Maur
Park: Hot Springs National Park
Park Alpha: HOSP
PMIS Number: 318915B

Estimate By: Michael Orel, CPE
Date: 05/12/22
Reviewed By: Reviewer Name
Date: Review Date

Summary Item	F20	Selective Building Demolition								Total Cost:	\$381,538
		Remove and salvage tile wainscoting from west and north walls. Salvage tiles for reinstallation in other locations. Room 105	143	SF	\$ -	\$0	\$ 15.00	\$2,145	\$ 15.00	\$2,145	
		Demolish pipes through floor Room 105	2	EA	\$ -	\$0	\$ 250.00	\$500	\$ 250.00	\$500	
		Demolish existing closet in its entirety (walls) and finishes and tile flooring Room 106	1	LS	\$ -	\$0	\$ 650.00	\$650	\$ 650.00	\$650	
		Demolish existing framing, drywall, and piping Room 107 & 111	1	LS	\$ -	\$0	\$ 350.00	\$350	\$ 350.00	\$350	
		Demolish pipes through floor Room 108	3	EA	\$ -	\$0	\$ 250.00	\$750	\$ 250.00	\$750	
		Demolish all existing layers of tile flooring and cement topping to the original concrete slab Room 113	1	LS	\$ -	\$0	\$ 500.00	\$500	\$ 500.00	\$500	
		Remove all pipes through the floor Room 113	1	EA	\$ -	\$0	\$ 250.00	\$250	\$ 250.00	\$250	
		Install new door opening between 113 and 114. Salvage historic tiles at new opening for reuse. Opening required for new exit. Room 113	1	EA	\$ -	\$0	\$ 650.00	\$650	\$ 650.00	\$650	
		Demolish all existing layers of tile flooring and cement topping to the original concrete slab Room 114	752	SF	\$ -	\$0	\$ 1.00	\$752	\$ 1.00	\$752	
		Remove all pipes through the floor Room 114	1	LS	\$ -	\$0	\$ 250.00	\$250	\$ 250.00	\$250	
		Remove and salvage all white wall tiles Room 114	1021	SF	\$ -	\$0	\$ 5.00	\$5,105	\$ 5.00	\$5,105	
		Remove and salvage some plumbing fixtures and equipment for park archives Room 114	1	LS	\$ -	\$0	\$ 800.00	\$800	\$ 800.00	\$800	
		Demolish pipe from floor NW corner. Patch floor Room 110C	1	EA	\$ -	\$0	\$ 250.00	\$250	\$ 250.00	\$250	
		Remove unused black iron from old suspended ceiling/soffit Room 216	1	LS	\$ -	\$0	\$ 500.00	\$500	\$ 500.00	\$500	
		Remove unused black iron and remnants of plaster from old suspended ceiling/soffit Room 217	1	LS	\$ -	\$0	\$ 500.00	\$500	\$ 500.00	\$500	
SUBTOTAL BUILDING ELEMENTS DEMOLITION			26000	SF	\$ -	\$0	\$ 10.67	\$277,538	\$ 10.67	\$277,538	

United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Maur
 Park: Hot Springs National Park
 Park Alpha: HOSP
 PMIS Number: 318915B

Estimate By: Michael Orel, CPE
 Date: 05/12/22
 Reviewed By: Reviewer Name
 Date: Review Date

Summary Item **F20 Selective Building Demolition**

Total Cost: **\$381,538**

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
F2020	HAZARDOUS COMPONENTS ABATEMENT								
	Provide updated comprehensive hazardous materials survey (lead, asbestos, etc.)	1	LS	\$ -	\$0	\$ 7,500.00	\$7,500	\$ 7,500.00	\$7,500
	Abate lead paint throughout house (allowance) to lead paint abatement. One sample for analysis and	1	LS	\$ -	\$0	\$ 10,000.00	\$10,000	\$ 10,000.00	\$10,000
	Deep Clean of Building interior and windows	26000	SF	\$ -	\$0	\$ 3.00	\$78,000	\$ 3.00	\$78,000
	Radon Mitigation	1	LS	\$ 1,500.00	\$1,500	\$ 1,500.00	\$1,500	\$ 3,000.00	\$3,000
SUBTOTAL	HAZARDOUS COMPONENTS ABATEMENT	26000	SF	\$ 0.06	\$1,500	\$ 3.94	\$102,500	\$ 4.00	\$104,000

Summary Item **F20 Selective Building Demolition**

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
F20	Selective Building Demolition	26000	SF	\$ 0.06	\$1,500	\$ 14.62	\$380,038	\$ 14.67	\$381,538

United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Maur
 Park: Hot Springs National Park
 Park Alpha: HOSP
 PMIS Number: 318915B

Estimate By: Michael Orel, CPE
 Date: 05/12/22
 Reviewed By: Reviewer Name
 Date: Review Date

Summary Item **G20 Site Improvements**

Total Cost: \$194,235

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
G2030	PEDESTRIAN PAVING								
	Replace concrete runnel.	100	SF	\$ 4.00	\$400	\$ 12.00	\$1,200	\$ 16.00	\$1,600
	Replace runnel side wall with concrete	74	LF	\$ 75.00	\$5,550	\$ 175.00	\$12,950	\$ 250.00	\$18,500
	Provide concrete landing and sidewalk to connect new egress stair to existing paved walk	45	SF	\$ 4.00	\$180	\$ 6.00	\$270	\$ 10.00	\$450
	Remove and replace concrete sidewalk disturbed for mechanical unit relocation	125	SF	\$ 4.00	\$500	\$ 12.00	\$1,500	\$ 16.00	\$2,000
	Replace west entry landing, stair, and ramps including cheek walls, intermediate walls, and railings. Landing, (1) stair, (2) ramps, cheek walls, and intermediate walls to be concrete. (850 SF)	850	SF	\$ 6.00	\$5,100	\$ 18.00	\$15,300	\$ 24.00	\$20,400
	Pre-finished aluminum railings similar to existing.	120	LF	\$ 150.00	\$18,000	\$ 50.00	\$6,000	\$ 200.00	\$24,000
	Replace concrete ramp to basement level with expanded ramp and lower landing	380	SF	\$ 6.00	\$2,280	\$ 16.00	\$6,080	\$ 22.00	\$8,360
	Construct concrete retaining wall as part of new basement level ramp construction	300	SF	\$ 15.00	\$4,500	\$ 35.00	\$10,500	\$ 50.00	\$15,000
	Painted steel pipe guardrail at ramp retaining wall, paint	42	LF	\$ 150.00	\$6,300	\$ 50.00	\$2,100	\$ 200.00	\$8,400
	Remove debris and plant growth from runnel. Replace deteriorated concrete at runnel.	265	SF	\$ 5.00	\$1,325	\$ 10.00	\$2,650	\$ 15.00	\$3,975
	Replace deteriorated concrete cap over areaway, slope to drain	100	SF	\$ 10.00	\$1,000	\$ 15.00	\$1,500	\$ 25.00	\$2,500
SUBTOTAL	PEDESTRIAN PAVING	26000	SF	\$ 1.74	\$45,135	\$ 2.31	\$60,050	\$ 4.05	\$105,185

United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Maur
 Park: Hot Springs National Park
 Park Alpha: HOSP
 PMIS Number: 318915B

Estimate By: Michael Orel, CPE
 Date: 05/12/22
 Reviewed By: Reviewer Name
 Date: Review Date

Summary Item **G20 Site Improvements**

Total Cost: \$194,235

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
G2040	SITE DEVELOPMENT								
	Provide 6'-0" tall pre-finished aluminum louvered screen wall around mechanical equipment north side of building	55	LF	\$ 60.00	\$3,300	\$ 90.00	\$4,950	\$ 150.00	\$8,250
	Provide painted steel egress landing, stair, guardrail and handrail at northeast egress door. Stair requires (3) risers.	1	EA	\$ 2,500.00	\$2,500	\$ 1,500.00	\$1,500	\$ 4,000.00	\$4,000
SUBTOTAL	SITE DEVELOPMENT	26000	SF	\$ 0.22	\$5,800	\$ 0.25	\$6,450	\$ 0.47	\$12,250

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
G2050	LANDSCAPING								
	Restore lawn and holly hedge disturbed by installation of mechanical equipment	1000	SF	\$ 3.00	\$3,000	\$ 5.00	\$5,000	\$ 8.00	\$8,000
	Restore lawn and holly hedge disturbed by entry construction and utility work	2200	SF	\$ 3.00	\$6,600	\$ 5.00	\$11,000	\$ 8.00	\$17,600
SUBTOTAL	LANDSCAPING	26000	SF	\$ 0.37	\$9,600	\$ 0.62	\$16,000	\$ 0.98	\$25,600

Summary Item **G20 Site Improvements**

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
G20	Site Improvements	26000	SF	\$ 3.07	\$79,735	\$ 4.40	\$114,500	\$ 7.47	\$194,235

United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Maur
 Park: Hot Springs National Park
 Park Alpha: HOSP
 PMIS Number: 318915B

Estimate By: Michael Orel, CPE
 Date: 05/12/22
 Reviewed By: Reviewer Name
 Date: Review Date

Summary Item **G30 Site Mechanical Utilities**

Total Cost: \$14,300

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
G3010	WATER SUPPLY								
	Install new 6" fire water service to north basement	100	LF	\$ 15.00	\$1,500	\$ 25.00	\$2,500	\$ 40.00	\$4,000
	Provide 6" double check backflow preventer in north basement	1	EA	\$ 850.00	\$850	\$ 650.00	\$650	\$ 1,500.00	\$1,500
	Provide new 3" water service to north basement	100	LF	\$ 10.00	\$1,000	\$ 25.00	\$2,500	\$ 35.00	\$3,500
	Provide new 3" RPZ backflow preventer with air gap fitting and drain piping.	1	EA	\$ 650.00	\$650	\$ 650.00	\$650	\$ 1,300.00	\$1,300
SUBTOTAL	WATER SUPPLY	200	LF	\$ 20.00	\$4,000	\$ 31.50	\$6,300	\$ 51.50	\$10,300

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
G3030	STORM SEWER								
	Provide area drain at ramp lower landing, connect to existing underground	1	EA	\$ 500.00	\$500	\$ 2,500.00	\$2,500	\$ 3,000.00	\$3,000
SUBTOTAL	STORM SEWER	26000	SF	\$ 0.02	\$500	\$ 0.10	\$2,500	\$ 0.12	\$3,000

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
G3090	OTHER SITE MECHANICAL UTILITIES								
	3" Gas Line Into Building	50	LF	\$ 5.00	\$250	\$ 15.00	\$750	\$ 20.00	\$1,000
SUBTOTAL	OTHER SITE MECHANICAL UTILITIES	26000	SF	\$ 0.01	\$250	\$ 0.03	\$750	\$ 0.04	\$1,000

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
G30	Site Mechanical Utilities	26000	SF	\$ 0.18	\$4,750	\$ 0.37	\$9,550	\$ 0.55	\$14,300

United States Department of the Interior
National Park Service
Class B Construction Cost Estimate (expanded)

LINE ITEM COST SUMMARY

Project: Condition Assessment and Treatment Plan for the Maur
 Park: Hot Springs National Park
 Park Alpha: HOSP
 PMIS Number: 318915B

Estimate By: Michael Orel, CPE
 Date: 05/12/22
 Reviewed By: Reviewer Name
 Date: Review Date

Summary Item **G40 Site Electrical Utilities**

Total Cost: \$131,870

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
G4010	ELECTRICAL DISTRIBUTION								
	New Service	150	LF	\$ 20.00	\$3,000	\$ 25.00	\$3,750	\$ 45.00	\$6,750
	Feeder for ATS/Generator	300	LF	\$ 25.00	\$7,500	\$ 15.00	\$4,500	\$ 40.00	\$12,000
	ATS	2	EA	\$ 15,000.00	\$30,000	\$ 1,560.00	\$3,120	\$ 16,560.00	\$33,120
	Gas Generator	1	EA	\$45,000	\$45,000	\$ 10,000.00	\$10,000	\$ 55,000.00	\$55,000
SUBTOTAL	ELECTRICAL DISTRIBUTION	26000	SF	\$ 3.29	\$85,500	\$ 0.82	\$21,370	\$ 4.11	\$106,870

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
G4030	SITE COMMUNICATIONS & SECURITY								
	Relocate IT Service	1	LS	\$ 5,000.00	\$5,000	\$ 20,000.00	\$20,000	\$ 25,000.00	\$25,000
SUBTOTAL	SITE COMMUNICATIONS & SECURITY	26000	SF	\$ 0.19	\$5,000	\$ 0.77	\$20,000	\$ 0.96	\$25,000

Summary Item **G40 Site Electrical Utilities**

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		INSTALLATION		TOTALS	
				Material Cost/Unit	Total Material Cost	Install Cost/Unit	Total Install Cost	Total Cost/Unit	Total Cost
G40	Site Electrical Utilities	26000	SF	\$ 3.48	\$90,500	\$ 1.59	\$41,370	\$ 5.07	\$131,870