



Photo 43 Modern Window in Original Frame



Photo 44 Single Pane Windows



Photo 45 Damaged Spanish Tiles



Photo 46 Roof Mastic Repair



Photo 47 Rake Wall Flashing Buried Under Mastic



Photo 48 Mastic Over Valley Flashing



Photo 49 Shingle Roof



Photo 50 Upper Low Slope Roofs



Photo 51 Multiple Roof Patches



Photo 52 Scoured Roof Surface



Photo 53 Exposed Reinforcing Fabric



Photo 54 Alligating and Disbonded Roofing



Photo 55 Roof Penetrations



Photo 56 Damaged Flashing



Photo 57 Aluminized Topcoat



Photo 58 Poorly Flashed Parapet



Photo 59 Hole in Flashing



Photo 60 Improperly Installed Flashing



Photo 61 Improper Flashing



Photo 62 Third Floor Terrace with EPDM



Photo 63 Loose Membrane



Photo 64 Loose Membrane on Low parapet



Photo 65 Damaged Railing, unattached at Bottom



Photo 66 Ponding Water



Photo 67 Detailing is More Akin to a Temporary Roof



Photo 68 Hole in Membrane



Photo 69 Shoring at End of Demolition



Photo 70 Masonry Column Loosely Bound to Shoring



Photo 71 Roof Deck Repair



Photo 72 Roof Deck Repair with Staining



Photo 73 Typical Holes in Gutter



Photo 74 Wood Doors at Ballroom (North)



Photo 75 Wood Doors at Ballroom (South)



Photo 76 Boarded Up Doors at Entry Hall



Photo 77 Door from Ballroom



Photo 78 Hole in Pool Deck Below Northeast Terrace 2016



Photo 79 Hole in Pool Deck Below Northeast Terrace 2019



Photo 80 Deterioration Below Hatch



Photo 81 Hole Below Spalled Concrete



Photo 82 Badly Deteriorated Reinforcing Steel

4.0 ARCHITECTURAL INTERIOR SPACE ASSESSMENT

This following is an assessment of the existing interior spaces within the boathouse. The matrix attempts to classify each space so that order of magnitude pricing can be developed for the anticipated level of remediation required.

INTERIOR ASSESSMENT APPROACH

Interior areas are defined by the type of treatment that is recommended. The recommendations are based on assessments of Historic Character, Integrity, and the Condition of spaces.

PRESERVATION: Spaces that exhibit a high level of intact and well-preserved significant historic architectural character or examples of design from the site's period of significance, and/or have a high level of association with important aspects of Detroit Rowing activities. These areas are considered critical to communicating the story of Detroit Rowing and the Boathouse and should be preserved.

RESTORATION: Spaces that exhibit some surviving significant historic architectural character or examples of design from the site's period of significance, and/or have a high level of association with important aspects of the Detroit Rowing activities but have been altered in a manner that diminishes the historic character. These spaces are considered important to communicating the story of Detroit Rowing and the Boathouse and should be restored to their appearance during the site's period of significance.

REHABILITATION: Secondary spaces that possess limited historic architectural character or association with important aspects of Detroit Rowing and Boathouse activities. This zone may also include spaces that have been irreversibly altered to remove historic character-defining features. These spaces offer flexibility in reuse and can be readily adapted to new uses with minimal impact on significant architectural character or features. These spaces may be altered to suit current support needs while retaining their secondary historic character.

SERVICE: Secondary spaces that were primarily utilitarian in function and appearance. These spaces offer the most flexibility in permitting alteration to accommodate modern needs.

HISTORIC CHARACTER

Historic Character is a measure of the quality and significance of spaces. It considers the level of unique design, craftsmanship, or spatial character in spaces, as well as their association with significant Detroit Rowing and the Boathouse.

HIGH: Spaces that exhibit a high level of architectural design, spatial character, decoration, materials, features or craftsmanship, or are associated with significant Boathouse activities.

MEDIUM: Spaces that contain some examples of architectural design, spatial character, decoration, materials, features or craftsmanship, or are associated with significant Ford Family activities, but to a lesser extent than spaces with High historic character.

LOW: Spaces that possess little or no significant examples of architectural design, spatial character, decoration, materials, features or craftsmanship, or are not associated with significant Detroit Rowing and Boathouse activities

HISTORIC INTEGRITY

Historic integrity is a measure of the amount and condition of historic fabric from the period of significance that remains in spaces. Integrity does not consider the significance of spaces or quality/uniqueness of architectural character.

HIGH: Spaces where historic fabric from the period of significance is present, intact and in good repair.

MEDIUM: Spaces historic fabric from the period of significance are present, but have been altered, or have deteriorated, in a manner that is readily reversible.

LOW: Spaces where historic fabric from the period of significance has been altered, is deteriorated, or has been removed in a manner that is not readily reversible.

CONDITION

Condition measures the state of repair of a space, regardless of its level of historic significance or character, or level of alteration.

GOOD: Spaces that are well maintained, with components that are sound and in satisfactory visual condition. Only minimal repairs such as cleaning and painting are necessary.

FAIR: Spaces that are largely intact, but where components, surfaces or finishes are damaged, deteriorated, insensitively repaired or replaced, or partially missing. Some repairs such as selective replacement, patching, reinforcement, or other selective treatments are necessary.

POOR: Spaces where there is significant damage, deterioration or losses of material. Spaces in poor condition may exhibit structural deterioration or damage. These spaces require extensive repairs, replacement, reinforcement or other remedial work.

			HISTORICAL ASSESSMENT				HISTORICAL CHARACTER			HISTORICAL INTEGRITY			CONDITION		
			PRESERVATION	RESTORATION	REHABILITATION	SERVICE	HIGH	MEDIUM	LOW	HIGH	MEDIUM	LOW	GOOD	FAIR	POOR
FIRST FLOOR			NSF												
101	Vestibule	56		●				●			●			●	
102	Closet	25				●			●			●			●
103	Corridor	132				●			●			●			●
104	Electrical Closet	52				●			●			●			●
105	Boat Work Shop	696				●			●			●			●
106	Storage	50				●			●			●			●
107	Storage	33				●			●			●			●
108	Corridor	522		●				●				●			●
109	Boat Storage	2,802				●			●			●			●
110	Women's Locker Rm.	905				●			●			●			●
111	Women's Shower	115				●			●			●			●
112	Women's Lavatory	92				●			●			●			●
113	Women's Toilet	119				●			●			●			●
114	First Aid	185				●			●			●			●
115	Outside Storage	359				●			●			●			●
116	Outside Storage	95				●			●			●			●
117	Pump Room	72				●			●			●			●
118	Vestibule	135				●			●			●			●
119	Closet	18				●			●			●			●
120	Vestibule	35				●			●			●			●
121	Vestibule	38				●			●			●			●
122	Men's Lavatory	161				●			●			●			●
123	Men's Toilet	210				●			●			●			●
124	Men's Locker Rm	861				●			●			●			●
125	Drying Area	288				●			●			●			●
126	Men's Shower	197				●			●			●			●
127	Exercise Room	1,103				●			●			●			●
128	Concession Stand	84				●			●			●			●
129	Corridor	65				●			●			●			●
130	First Aid/Life Guard	62				●			●			●			●
131	Pool Equipment	417				●			●			●			●
132	Pool Storage	28				●			●			●			●
133	Storage	174				●			●			●			●
134	Boiler/Mechanical Rm	311				●			●			●			●
135	Vestibule	93				●			●			●			●
136	Office	155				●			●			●			●
137	Conference Room	437				●			●			●			●
138	Workout Room	706				●			●			●			●
139	Delivery	172				●			●			●			●
140	Cooridor	388				●			●			●			●
141	Pantry	114				●			●			●			●
142	Electrical Closet	27				●			●			●			●
143	Meat Storage	48				●			●			●			●
144	Dairy Storage	58				●			●			●			●
145	Vegatable Storage	42				●			●			●			●
146	Kitchen	305				●			●			●			●
147	Unknown	273				●			●			●			●
148	Cooler	51				●			●			●			●
149	Cooler	115				●			●			●			●
150	Storage	53				●			●			●			●
	Net SF	13,534													
	First Floor GSF	15,584													

			HISTORICAL ASSESSMENT				HISTORICAL CHARACTER			HISTORICAL INTEGRITY			CONDITION		
			PRESERVATION	RESTORATION	REHABILITATION	SERVICE	HIGH	MEDIUM	LOW	HIGH	MEDIUM	LOW	GOOD	FAIR	POOR
SECOND FLOOR															
207	Foyer	615	●				●			●			●		
208	Atrium	754	●				●			●			●		
209	Ball Room	2,291	●				●			●					●
210	Lounge	308	●				●			●			●		
211	Lounge	285			●				●			●			●
212	Office	118			●				●			●			●
213	Bar	224			●				●		●			●	
214	Lounge	254		●				●			●			●	
215	Corridor	69		●				●			●			●	
216	Dining Room	1,330	●				●			●					●
218	Formal Dining	1,106	●				●			●				●	
219	Corridor	134		●				●			●			●	
220	Closet	9				●			●			●		●	
221	Kitchen	1,260				●			●			●		●	●
222	Pantry	109				●			●			●		●	
223	Mechanical Room	126				●			●			●		●	
224	Corridor	266	●				●			●			●		
225	Men's Toilet	114			●				●			●		●	
226	Gift Shop	83			●			●				●		●	
227	Corridor	102	●				●			●			●		
228	Coat Room	128		●				●			●			●	
229	Closet	165				●			●			●			●
230	Women's Lounge	233			●				●			●		●	
231	Women's Powder Rm.	120			●				●			●		●	
232	Women's Toilet.	147			●				●			●		●	
233	Kitchen Support	245				●			●			●		●	
	Total NSF	10,595													
SECOND FLOOR OUTDOOR SPACES															
201	Terrace	390		●				●				●			●
202	Terrace	239		●				●				●			●
203	Unknown	196		●				●				●			●
204	Unknown	113		●				●				●			●
205	Terrace	818		●				●				●			●
206	Terrace	769		●				●				●			●
217	Terrace	549													
	Total Outdoor NSF	3,074													
	TOTAL GSF	14,728													

Belle Isle Boathouse Building and Site Assessment



5.0 MECHANICAL SYSTEMS ASSESSMENT

Overall the condition of the Belle Isle Boat Club's mechanical system is **Poor**.

SmithGroup observed the general condition of the following components:

5.0.1 Component

Air distribution

System Description

The existing air distribution system, were installed, is either inoperable or in need of service.

The first floor has no air distribution or ventilation. There are unit heaters are installed in maintenance areas and appear to be in good working condition.

A portion of the second floor has a ducted air distribution from an existing AHU. This unit is located in a closet on the second floor. It serves the dining areas and other various rooms on the second floor. This unit does not have ventilation air and is not in operation.

The ball room on the second floor has two exhaust fans in working condition that are used for ventilation. However, due to the noise of the fans they are not used when the room is occupied. Recommend replacing the fans.

There are 3 sets of dual fan AHUs located in the attic space. These units serve various rooms on the third floor. These units do not have ventilation air and are not in operation.

It is recommended to remove all existing Air Handling systems and replace with new central Air Handling Units for all spaces. The new units would be variable volume, chilled water cooling and hot water heating. Zoning and quantity of units to be determined. These units would bring ventilation air into each space in accordance with code/occupancy requirements.

In addition, a Building Management System would be provided to control the space.

The men's and women's toilet rooms on the second floor of the facility are connected to a window mounted exhaust fan that is currently not in operation. Recommend the exhaust fan be replaced and all toilet rooms and locker rooms are to be exhausted in accordance with current code.

The existing kitchen is currently not in operation. This space does not have an operating kitchen hood exhaust or air distribution. Recommend a kitchen hood and makeup air system be installed based on the kitchen equipment in use.

Findings

- Air Handling Unit serving second floor [Photo 1].
- Air Handling Units in attic space [Photos 2,3].
- Exhaust Fans in Ballroom [Photo 4]

5.0.2 Component

Heating Hot Water

System Description

There is an existing gas fired steam boiler locating in the first-floor mechanical room. This unit is approximately 20 years old and various repairs have been made over recent years. This boiler is nearing its life expectancy and replacing the unit is recommended.

The boiler feeds finned tube around the perimeter of the building as well as any unit heaters and the AHU heating coils.

It is recommended to replace the boiler with a hot water boiler system. Complete with pumps and new perimeter finned tube.

Findings

- Gas fired steam boiler [Photo 5].

5.0.3 Component Chilled Water

System Description

There is currently no chilled water entering the building. It is recommended to have an air-cooled chiller and associated pumps installed to provide chilled water to air handling units for cooling needs.

5.0.4 Component Miscellaneous

Baseboard/Finned Tube Radiation

System Description

Finned tube radiators are located throughout the facility on the second and third floors. These appear to be in working condition. Units have been maintained and some thermostats have been replaced. It is recommended to replace the perimeter heat and size for perimeter heat loss.

Findings

- Perimeter heat in ball room [Photos 6]

5.0.5 Component Plumbing

System Description

Toilet rooms throughout the building appear to be in good working condition.

Some horizontal runs of sanitary lines have been replaced with PVC. The original/existing piping that has not been replaced appears in poor condition.

Kitchen plumbing in poor, non-working condition.

Recommend replacing plumbing and fixtures where required for ADA compliance.

There is a domestic water main entering the building on the first floor. Valves have been replaced recently. It is recommended to replace all associated piping.

Findings

- Water main into the building [Photos 7,8]

5.0.6 Component Fire Protection

System Description

The building has no fire protection. Recommend supplying Fire Protection to the entire building per NFPA 13 and NFPA codes. Hazard determined by occupancy and code requirements.

5.0.7 Conclusion

The mechanical system in the entire building is in poor condition and should be replaced to ensure a comfortable environment and code compliance.

5.0. Recommendations

The mechanical system in the entire building is in poor condition and should be replaced to ensure a comfortable environment and code compliance.

System Equipment required:

Air cooled chiller

- 75-ton air cooled chiller
- Two Chilled water pumps at 90 hp each

Hot water boilers

- Two at 975 MBH each

Air handling units

- 1@20,000 cfm
- 1@13,000 cfm
- 1@7,000 cfm

Chilled water cooling

Heating hot water heating

Duct distribution, VAV boxes with reheat coil

Fire protection for entire facility

Exhaust fans

- 2 @ 1000 cfm
- 1 @ 2000 cfm

5.1 MECHANICAL SYSTEMS PHOTOS

Photo 1



Photo 2

