



Cubellis
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Exceptional Service, Distinctive Design

**South Shore Country Club
Town of Hingham
274 South Street
Hingham, Massachusetts 02043**

ENGINEERING FACILITY STUDY

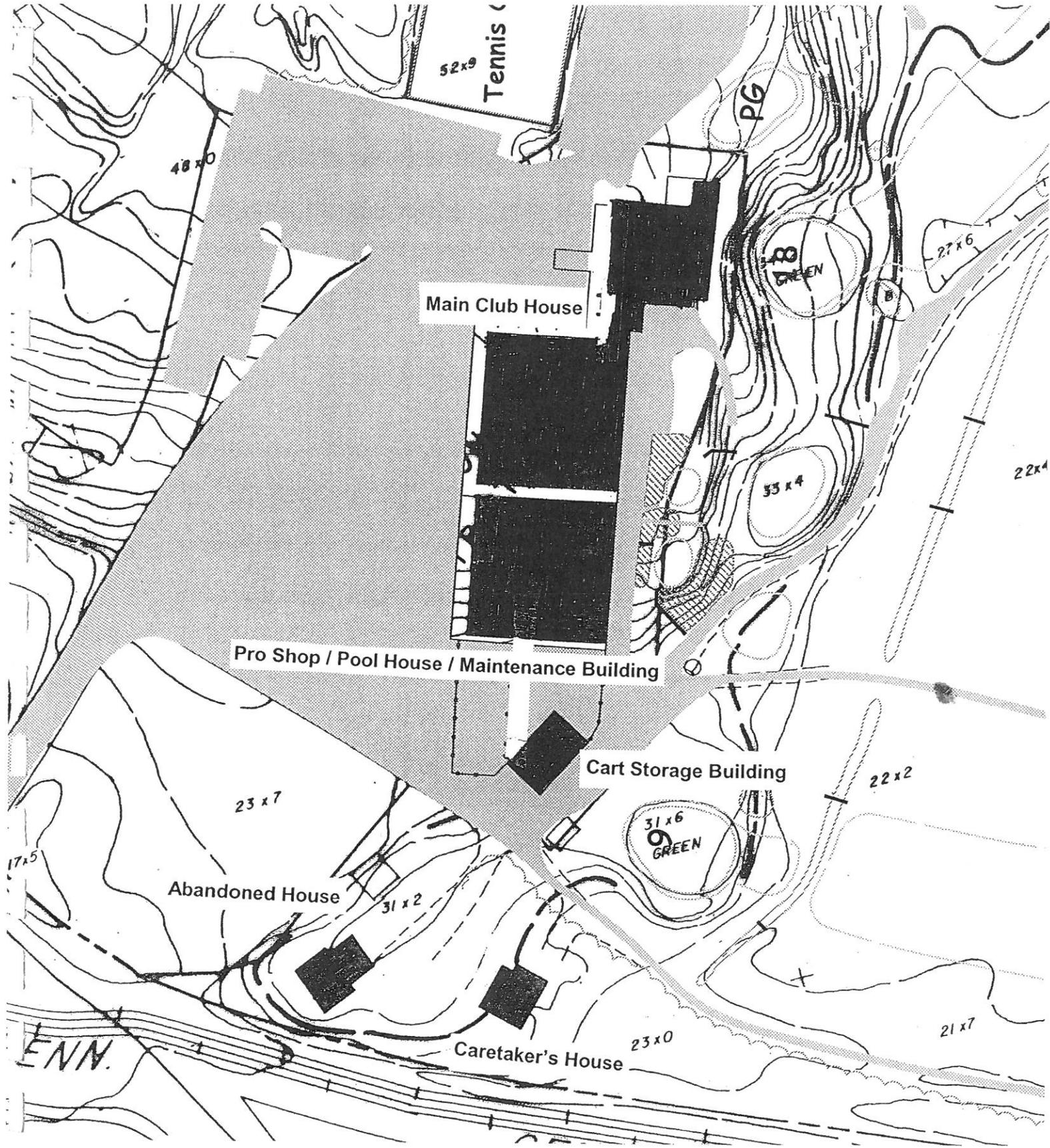
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SITE MAP
South Shore Country Club
Town of Hingham
274 South Street
Hingham, Massachusetts 02043

OVERVIEW

The South Shore Country Club and the Town of Hingham, Massachusetts selected Cubellis Associates to perform an engineering study on the existing facilities at the South Shore Country Club. The purpose of the study is to assess the present conditions of the architectural, structural, mechanical and electrical systems currently in place at the existing buildings at the club, as well as parking areas adjacent to these facilities, to document public safety hazards, violations of the State Building Code, deficiencies and required maintenance and to present these findings in a report. A review of the handicap accessibility of the existing facilities is also included as part of this report.

The South Shore Country Club is a town owned facility and is comprised of several buildings, an outdoor swimming pool, and an eighteen-hole golf course. This study is limited to the buildings, pool and parking areas. The golf course and its irrigation system are outside the scope of this report. The Main Club House includes Administrative Offices, the 19th Hole Restaurant and Lounge, two function rooms known as the Hingham Room and the Hearthsides Room, two kitchens, one on each floor, Locker Rooms, and a Bowling Alley. There are several separate buildings, including a Pro Shop; a Pool House with changing areas, toilets, storage and staff areas; a Maintenance Building, located beneath the pool; a Cart Storage Building; a Caretaker's House; and an Abandoned House.

Areas requiring maintenance or upgrade, safety concerns and areas of building code noncompliance shall also be identified. Recommended repairs and future capital improvements shall be prioritized and a program for upgrade of the facilities and the associated costs shall be developed. First priority repairs shall include safety concerns and building code compliance issues. Second priority repairs shall include maintenance of the existing facilities and the ability to operate these facilities. Third priority repairs shall include projected future maintenance and major capital improvements

Review Criteria

Cubellis Associates shall assess each building structure as it may pertain to Chapter 34 of the Massachusetts State Building Code, "Repair, Alteration, Addition, and Change of Use of Existing Buildings." This section of the code applies to any building renovations or use changes. Chapter 34 includes requirements for items such as egress, lighting, ventilation, and energy and fire protection in existing buildings. However, the most significant changes are with respect to the structural systems of the building. The structural requirements are intended to maintain or increase the structural capacities of existing buildings, with an emphasis on the building's ability to resist lateral loadings caused by wind and earthquakes. Chapter 34 classifies buildings according to three Seismic Hazard Categories; SHC-1, SHC-2 or SHC-3 (most stringent). All buildings discussed in this report would be classified as SHC 1. Based upon several factors, the actual extent of additional construction

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Part One – Overview and Summary

work to each building, in addition to any future renovation work, is based on the extent of work proposed and the building's Seismic Hazard Category. The Seismic Hazard Category is a function of the following:

- Use Group and changes to Use Group
- Construction cost as a percentage of the assessed value of the building
- Change in Occupancy
- Essential facilities (i.e. police, fire, power stations) (MBC Table 1612.2.5 and table 3408.1)

Chapter 34 of the MSBC (780 CMR) will be applicable to any proposed renovation work on these buildings and will affect both the design and construction of each building's proposed renovations.

Summary

The buildings evaluated, the Main Club House, the Cart Barn, the Caretaker's House and even the Abandoned House appear to be in good structural condition for their ages, with the exception of the documented deficiencies. These deficiencies do not appear to be of major structural significance but ought to be properly addressed to further the life span of each building. The Pro Shop/Pool House/Maintenance Building requires significant maintenance and is antiquated. The replacement of this building should be planned for if the Club is to continue to provide this amenity. The structural elements of each building whose size and location could be determined via visual assessment have been evaluated and appear to be of adequate capacity to support the current loading conditions.

Costs for the first and second priority repairs and replacement/upgrade costs for each building are included in Appendix A. These costs follow the recommendations described in the report. The costs are preliminary in nature and should be reevaluated as the actual construction projects are developed.

PARKING AREAS AND WALKWAYS

Pavement and Drainage

The access drive and parking areas at the clubhouse are constructed of bituminous concrete pavement with bituminous curbing. The pavements have settled in several locations and are cracked throughout. Crack repair could temporarily extend the life of the paved surfaces but it would be extensive due to the amount and severity of the cracks. Repaving the bituminous surfaces should be planned for in the near future.

Drainage is accomplished by sheet drainage and the sloping site provides good drainage of the paved areas. There was one catch basin observed in the parking area. There does not appear to be any treatment of the runoff from the paved surfaces to control leaching of road salt and oily wastes into the watershed. Also, the runoff from the upper parking lot to the 18th Fairway is reported to cause problems during heavy rains.

Handicap Accessibility

Parking

There are a total of 256 striped parking spaces with 11 designated as reserved for handicapped parking. The total number of handicap parking spaces exceeds the minimum required for the total number of spaces. Parking lots with a total number of spaces between 201 and 300 require 7 designated handicap spaces. One is required to be van accessible.

The parking spaces are located in three separate but adjacent parking areas and each have enough handicap parking to meet the requirements for the parking areas if they were to be considered separately. As such, the handicap parking is well distributed throughout the parking facilities and provides accessible parking near each of the main attractions, the Clubhouse, the Pool and the Function Rooms.

Although the number of handicap parking spaces meets the requirements of both ADA and MAAB, many of the spaces do not conform to the dimensional requirement. One of the spaces near the main entrance to the clubhouse does not have the required access aisle and the spaces along the front of the building are on sloped pavement and both ADA and MAAB allow them to have a maximum slope of 1:50 which is virtually level. Signage generally conforms to the requirements however a van accessible space should be designated, preferably at each parking area.

The parking area pavement is starting to crack and heave and could present a tripping hazard in the future. The handicap access from the upper parking lot to the Hearthside Room entrance is bituminous pavement and the heaving and settlement of this pavement has created an uneven surface which is a tripping hazard. This walkway should be replaced with a concrete walkway, which is a more stable walking surface. When the parking lot is repaved and re-striped, new handicap parking should be designated with the proper access aisles and maximum slopes. Some regrading will be necessary to meet all the current requirements. Replacing the signage at this time would also be recommended.

Access to the Buildings

Access to the Main Clubhouse is by a concrete walkway which slopes up to a set of double aluminum doors. This walkway has a gentle slope that is less than 1:20 so it is not considered a ramp and does not require handrails. A level landing is required on both sides of doors to allow the wheelchair user to maneuver to open the door without rolling. Alternately an automatic door operator can be utilized so that the wheelchair user does not have to stop to open the door. Presently the walkway slopes all the way to the door threshold. This does not meet the accessibility code requirements. The door pulls and threshold of the aluminum door meet the accessibility requirements. In order to make this entrance fully accessible, either the walkway should be rebuilt with the required level landing or an automatic door operator should be added to the door.

There is a circular driveway up to the main entrance to the Hingham Room. The main entrance door is up a set of stairs and there is an older handicap ramp that has been constructed to allow access to the door. The door hardware on this door has been retrofitted with a lever handle for accessibility. The ramp allows access to handicap individuals who have been dropped off, but the driveway is too steep to allow access to people from the handicap parking spaces. As a result a handicap person who has driven to the site cannot access the ramp and enter the main door of the function room. It is still possible to enter the room through the lounge, however, accessibility regulations require that the path of travel for the handicap follow the same path of travel as able bodied persons to the maximum extent possible. It would be desirable to construct handicap parking and an accessible path to the front entrance of the Hearthside Room.

The upper level parking area primarily serves the first and second floor function rooms. The entry to the Hearthside Room on the lower level is down an exterior stair from the parking area. Space for a ramp is limited in this area and a handicap lift has been installed to allow access to the main entrance. The lift was reported to be functional but appears to be older and may require replacement soon to assure continued operation. When the parking area is repaved, consideration should be made to redesigning this entrance to allow for a ramp or sloped pathway from the handicap parking down to the entrance so the lift would not be required.

There is access from the handicap parking to the pool deck. The Pool is mainly accessed from the parking area; however, there is also an entrance through a long walkway between the Main Clubhouse building and the Pool Bathhouse building. The main entrance to the Pool Bathhouse includes interior stairs and is therefore not accessible. It is possible to enter the bath house from the pool side, but this does not correspond with the path of travel utilized by the general public.

The entrance to the Pro Shop is on the golf course side of the facility. The main entrance can be reached from either a sloped walkway from the Main Club House or via the narrow passage between the Pool Bathhouse and the Main Club House. The sloped path is too steep to meet accessibility requirements and the narrow path has older railings at the sloping or ramped portion of the walkway but does not have the

required level landing where the ramp changes direction and at the top and bottom of the ramped portion. Since neither path of travel to the Pro Shop is accessible, the Pro Shop is not accessible. Since goods and services are offered to the public at the Pro Shop, it is required by ADA to be accessible.

Plumbing

Domestic Water

The local water system is administered by Aquarion Water Company. According to their field engineer, there are two cast iron water mains that run up the access drive to serve the buildings and a hydrant on the site. The right hand line is an 8" line that serves the Main Club House, Kitchens, lockers and sprinkler system. The second system is a 6" line that serves the Pool, Maintenance Building and the Caretaker's House. There is a second hydrant at the beginning of the entrance drive on South Street. There have been no reported problems with the water service from either the Utility or the Club Management.

Sanitary

According to records at the Town of Hingham Board of Health, there is a 6" sewer connection to a 15" sewer main in South Street. The Application for Sewer Connection is dated 1970. There are two notices, one dated September 22, 2000 and the other June 19, 2003, that the sewer line was blocked by grease creating overflowing manholes and other problems. The importance of maintaining the grease recovery systems at the club was stressed in the letters from the Office of the Sewer Commission. These documents are included in Appendix A. There are no official records of any septic systems on the property; however there are reported to be several active septic tanks on the property serving the Bathhouse, the function rooms and the Caretaker's House. The Committee is presently reviewing the costs to connect these to the Town sewer. A dye test of the existing system may help determine if all systems are currently connected to the town sewer.

Storm Drainage

There is one drainage catch basin located in the parking area. There is no record of where this catch basin connects or drains. The majority of the parking areas sheet drains to the adjacent landscaped areas.

Gas Piping

The building is served by natural gas which is supplied by Keyspan. We contacted Keyspan and their records indicate that the service to the building is a 5/8" gas line which connects to a 1 1/2" gas main located in South Street and runs to the boiler room of the Main Club House. There are several meters on the property and the exact configuration of how the gas lines branch on the property is not on record. One meter serves the equipment in the Pool House/Maintenance Building and another serves the equipment in the Mechanical Room by the Kitchen.

Electrical

Incoming Service

The incoming electrical service is fed overhead via poles along the access drive from South Street to the building.

Power

The power sources for the parking lot and walkway lighting system are assumed to be back-fed from the Main Club House.

Lighting

The exterior lighting fixtures are comprised of a multitude of types, sizes and styles. Controls for the parking area lights appear to be comprised of fixture mounted photocells. Most of the HID flood lights are mounted to existing utility poles in and around the parking areas. The existing exterior lights appear aged and in need of an upgrade or complete replacement. In general, the parking area lighting does not appear adequate to meet IES parking lot luminance levels. Additionally, there are no dark sky friendly fixtures that would limit "light trespass" to residential dwellings abutting the parking lots.

HID "Wall Pack" style flood lights are mounted to exterior walls of the main club house and along the club house entrances. The fixtures appear to be beyond their expected service life.

Telephone/Data:

The incoming telephone line is also fed overhead to the building from South Street.

Parking Areas and Walkways Summary

The parking areas and walkways are showing signs of deterioration which will advance to the point of neglect if left unaddressed. A project to replace all bituminous pavements and correct deficiencies in handicap parking and building access should be planned for the near future.

Priority #1 - Immediate Repairs and Maintenance

- Clean grease traps and sewer lines to prevent grease clogs.
- Perform crack repair if re-pavement is deferred.
- Replace the bituminous path from the handicap parking to the Hearthside Room entrance.
- Create an accessible path from handicap parking to the Hingham Room entrance.

Priority #2 – Repairs and Improvements

- Re-grade handicap parking and provide signage and striping.
- Repave the entire parking area.
- Replace exterior lighting.

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Part Two – Parking Areas and Walkways

Priority #3 – Future Upgrades

- Provide site improvements in conjunction with major new construction initiatives.

MAIN CLUB HOUSE

General Description

The Main Club House includes the Administrative Offices, Locker Rooms and toilet facilities, the 19 Hole Restaurant and Lounge, the Bowling Alley and the Hearthside Room and the Hingham Room, both function rooms. The building was constructed in several phases and is primarily a single story structure with a small office area on a second level. The function room part of the building is two stories with a separate function room on both levels overlooking the golf course. There is a kitchen on both levels. The lower kitchen serves the restaurant and the Hearthside Room, the lower level function room. The upper level kitchen serves the upper and lower level function rooms.

The main entrance to the Hingham Room, the upper level function room, is the oldest part of the building and is a masonry bearing wall structure with a sloped roof. The two story function hall portion of the building to the rear of the original structure is a wood framed structure with a low sloped membrane roof. The 19th Hole Restaurant is a wood frame structure with a low slope membrane roof and dormers. The Locker Room, Offices and Bowling Alley are a comparatively newer masonry bearing wall structure with metal joist roof framing, metal roof deck and low sloped membrane roofing.

Exterior Envelope

Walls

A
The exterior masonry of the Main Club House portion of the building is generally in good condition with only minor re-pointing required in isolated locations. There is a foundation crack which continues up into the masonry at the golf course side of the building which appears to be caused by building settlement. This crack should be sealed to prevent moisture from entering the building and causing more damage.

not done
The masonry at the older original building at is in greater need of repairs due to its older age and is showing some holes and open joints. Spot re-pointing should be adequate to address the immediate concern; however, it is often difficult to match the color of the existing mortar and achieve an acceptable finished appearance. If the project budget will allow, the original masonry structure should be entirely re-pointed.

The condition of the wood portions of the exterior walls varies. The wood trim and clapboards at the lounge have recently been painted and are in good condition. The wood clapboards, dormers and trim at the Main Club House near the Locker Rooms and Bowling Alley is deteriorated with missing trim and peeling paint. The wood trim at the rear of the function hall portion of the building has discoloration due to mildew and peeling paint. The deteriorated trim should be replaced and the woodwork, with the exception of the lounge area, should be painted. This work is recommended to be scheduled for next spring as the area has a poor appearance and is highly visible to the public visiting the facility.

*Cracks
in
Sealer
in
basement*

Doors and Windows

There are a variety of window types at the building due to the many phases of expansion and construction. The original masonry building at the function area has some single glazed wood windows, some replacement stained glass decorative windows and some aluminum framed entrance systems. The wood windows are in need of painting and some repair of the glazing compound. Although these windows are not energy efficient in general, they are limited in number, small in size, in reasonably good condition, and have a historical appearance. Replacement would be recommended only if they were experiencing operational difficulties or if drafts from the windows were affecting the comfort of the interior spaces. Since these conditions are not known to exist, repair of these windows is recommended.

The rear wall of the function room has large wood framed window forming the entire wall on both levels. The system has insulating glazing and the frames appear to be in satisfactory condition but in need of painting on the exterior. The windows provide an exceptional and expansive view of the golf course. The view is one of the highlights of the function rooms. The window system is functional and energy efficient but simply constructed. If these rooms are to undergo a major renovation, replacement of this wall system should be considered in order to capture the full potential of the view and bring the facility up to a high quality modern appearance.

Dave
There is a series of aluminum frame windows along the golf course side of the building at the Bowling Alley and in the corridor outside of the Office and Locker Rooms. The seals on the insulating glazing have failed and many of these windows have fogged over. This creates a run down appearance in this highly visible and otherwise well maintained public hallway and from the building exterior. Due to the age of these windows and their present condition, replacement is recommended as soon as possible.

There are various types of doors at the Main clubhouse including aluminum entrance doors at the main entrance and Hearthside Room entrance and wood doors at the Bowling Alley exit, the Hingham Room entrance and the course side entrance to the 19th Hole Restaurant. The doors are in satisfactory operating condition. The exterior trim on the wood exit door from the Bowling Alley is deteriorated and should be replaced.

Roof

The roof of the Main Club House was recently replaced and is new and under warranty. The low sloped roof portions of the building have a PVC membrane roof system. These roofs have superior longevity and can be expected to last upwards of thirty years. The steep sloped areas of the roof have new shingle roofing which also should last approximately thirty years.

Interior Finishes

Main Corridor, Office and Conference Room

The Main Corridor, Office and Conference Room have been well maintained and the interior finishes are in good condition. The Corridor finishes consist of new carpet, wall covering and painted plaster ceilings. All are in good condition. As mentioned above, the aluminum frame windows have broken seals in their insulating glass and as a result, have a poor appearance from both inside and outside of the building. The Office and the Conference Room feature carpet, painted walls and suspended acoustic tile ceilings. The finishes in these rooms are in good condition however, there is a stained tile in the Office which appears to be associated with some above ceiling equipment. The door from the Main Corridor to the Corridor outside the Locker Rooms is a fire door but also has a kick down door stop. The building code prohibits hold open devices on fire doors. This device should be removed.

The Men's and Women's Locker Rooms and Handicap Toilets

The Men's and Women's Locker Rooms have recently been refurbished and the finishes in the locker area and the associated toilet and shower areas are in good condition. Finishes consist of carpet, painted walls and suspended acoustic tile ceilings in the locker and changing area and ceramic tile floors and walls in the toilet and shower areas. The lockers are metal and are also new and in excellent condition. Having been recently updated, the finishes in these rooms are up to date and do not need major renovations at this time. The fold down shower seat at the men's accessible shower is broken and should be repaired or replaced. There are also some damage ceiling tiles in the Men's Toilet in the Men's Locker Room.

The Bowling Alley

The Bowling Alley space has not been updated for some time and the finishes, which consist of carpet, painted walls and a concealed spline ceiling, are all older and outdated. The seating for the bowling alley is also older but in good condition. The exit door hardware does not conform to present requirements and should be replaced. The bowling lanes and bowling equipment are also older but appear to be satisfactory for the present use. The concession fee is fairly small compared to the costs of upgrading the bowling equipment and an upgrade would not be expected to be justified in terms of payback in increased revenue.

19th Hole Restaurant and Lounge

The interior finishes in the 19th Hole Restaurant and lounge consists of carpet, painted walls and suspended acoustic tile ceilings. The finishes have been recently updated and are in good to excellent condition. The room is equipped with new furnishings and overall presents an inviting interior environment. There is a water stain in the ceiling over the bar which should be addressed. The main entrance double doors bind and should be serviced. Solar glare and heat build up are reported to be a problem and some sort of sun shading should be considered.

The Hearthside Room

The Hearthside Room is the function room on the first floor of the facility. The room features a stone hearth cooking area as a focal point. The hearth itself and the surrounding finishes are in good condition. There is an excellent view of the golf

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Part Three – Main Club House

course along the back wall which features full height windows. The carpet, painted walls and suspended ceiling are also in good condition. The ceiling diffusers are dirty and there is a recessed light fixture loose and hanging down. The diffusers should be cleaned and reinstalled.

There is a Men's and Women's Toilet and a Unisex Handicap Accessible Toilet to serve the Hearthside Room. The interior finishes in these rooms are updated and are in good condition. The door knobs to the Men's and Women's Toilet rooms are loose and should be replaced with lever handle design. There is a water stained ceiling tile in the Men's Toilet and the source of this leak should be investigated prior to repairing the ceiling. The door to the Accessible Toilet is difficult to open. The door closer should be replaced to allow this door to operate more easily.

Access to the Hearthside Room from the exterior is through a lobby which features a handicap lift to accommodate the changes in levels. The finishes of the lobby are in good condition but the lift is older and its continued reliability is questionable. Plans should be made to update the lift or reconfigure the entrance.

The Hingham Room

Located on the upper level, The Hingham Room function area also has well maintained interior finishes consisting of carpet, painted walls and both painted plaster and suspended acoustic tile ceilings. This function hall is entered through the main entrance of the original historic brick building which features a circular drive and monumental entrance. The room is on two levels with the entrance from the building exterior, the bridal room, and the lounge on the lower level and the majority of the seating area on the upper level. The view of the golf course from the upper level is outstanding. A ramp connects the two floor levels and has the required handrails. The room also features a large fireplace from the original building which is no longer active. A portion of the lower level appears to have been constructed above an original roof as the floor in this area slopes. This un-level floor surface is a hazard, particularly in a public space such as this. There are a number of interior columns in the space, which combined with the two different floor levels, clutter and divide the space and make it difficult to set up properly for functions.

Miscellaneous Spaces

There is a sizable unused portion of the building near the Locker Rooms which is presently used as storage. This area is unfinished and consists of exposed concrete masonry walls and exposed roof structure. This area has potential to be developed into a new usable space. There is also a small mezzanine accessed from the 19th Hole Restaurant which features two small accounting offices. The ceiling and walls of these offices are painted plaster and in good condition. The carpet, which also runs on the stair leading up to the offices, is older and in need of replacement. These offices are fairly small and probably most suited for an ancillary office function to the 19th Hole Restaurant, which is how they are presently used.

There are a number of electrical closets and mechanical spaces that do not have fire rated enclosures. Some of the closets also do not have the required clearances.

Other closets or equipment spaces have unsealed penetrations. These areas should be reviewed on a case by case basis in conjunction with any renovation or expansion plans and their fire separation characteristics improved accordingly. As a first improvement, penetrations should be sealed with a fire rated sealant.

Spatial Efficiency

The different areas of the Main Club House can be easily accessed from the Main Corridor, with the exception of the two function rooms. The Locker Rooms could benefit from direct access to the golf course to avoid having golfers track dirt into the corridor. The two function rooms do not connect well to the balance of the club house and do not connect to the golf course at all. If this was provided, the flow of people from the course to the function rooms would be improved during golf events. Private outdoor space associated with the function rooms that could be used during events would be an added enhancement.

Recommendations

The current program of interior finish maintenance and replacement is effective in providing an image of a well maintained and stately building. The Hingham Fire Prevention Office requested that the interior draperies be reviewed for flame spread characteristics to confirm they meet the requirements which are acceptable in a public building.

Handicap Accessibility

Access to the Building

The building is accessed through a main entrance which serves the Offices, Bowling Alley, Locker Rooms and 19th Hole Restaurant and Lounge. The two function halls each have their own separate entrance. The main entrance has a double aluminum entrance door with door pulls. The door width, hardware and threshold all meet accessibility requirements. The walkway to the door slopes up to the threshold. A level area is required outside on both sides of the door, so this requirement is not met on the exterior of the door. The upper level function hall is accessed through an entrance which was once the main entrance to the older portion of the building. This entrance features a circular driveway and drop off area, the original stairs up to the entrance and a handicap ramp up to the landing. The ramp is of an older design but meets most of the current requirements for accessible ramps; however, the bituminous pavement at the bottom of the ramp does not provide the level landing required at the top and bottom of all ramps. Another consideration regarding this entrance, which is discussed under the site portion of the report is that the circular drive is too steep to allow access from the designated handicap parking spaces. The accessible path is required to connect the parking to the entrance. The walkways and/or the parking areas should be reconfigured to allow access from the accessible parking to the building entrance.

The lower level function hall is accessed through a separate side lobby which includes several stairs down to the function room level. This lobby is equipped with an older platform lift. The approach is the bituminous walkway previously noted as settled and uneven which does not meet the requirements for access. The exterior door meets the accessibility requirements and the lift allows access to the lower

level, provided it is functional. The bituminous walkway should be replaced with a more stable concrete walkway. The lift should be properly maintained to continue to provide access and due to its age, replacement can be anticipated in the future.

Access Throughout the Building

Once inside the building, most of the areas are on the same level. Access through the building is provided and the interior corridor doors are wide enough and meet the various requirements for accessibility. The small Office Mezzanine is not accessible; however, no goods or services are offered to the public in this location. The Massachusetts Architectural Access Board regulations require this space to be made accessible if the renovation costs exceed 30% of the full and fair cash value of the building. Due to the small area on the mezzanine, it would most likely be more economical to relocate these functions to the main floor level and use the rooms for storage purposes. Alternately a variance could be requested to allow the continued use of the mezzanine.

The second level function room has two levels which are connected by an interior ramp. The ramp meets the width, slope, handrail and landing requirements and provides suitable access between the two levels.

Access to Toilet Facilities

There are several accessible toilets located throughout the facility. The locker renovations included two fully accessible single occupant toilet rooms off of the corridor as well as accessible toilet stalls, lavatories, urinals, and showers in the Locker Room toilet/shower areas. These have been constructed in accordance with current codes and meet accessibility requirements; however, the fold down seat and hand held shower spray nozzle in the Men's shower area are broken and need to be repaired.

Each of the function rooms includes a unisex accessible toilet room. These rooms also meet the current requirements; however, the door on the lower level accessible toilet room is difficult to open and needs to have the closer either adjusted or replaced.

Access to Goods and Services

Goods and services offered at the club are generally accessible. There were no tables in the lounge which could accommodate a wheelchair user. There is access to one of the lanes of the Bowling Alley which allows a wheelchair user to use the bowling lanes. Accessible seating should be added to the restaurant.

Structural

Original Structure

The Main Club House building complex is a two-story, multi-level structure built in several phases beginning with the original structure in the 1920's. The original building was built on a sloping site with the main floor having its main entrance on the north side. A two story addition was added to the south side with a commanding view of the golf course and another addition to the west was added to the original building in the 1960's, according to Town records.

Two Story Addition (Hearthside and Hingham Rooms)

The two story addition has a first floor level that matches the original building's lower floor level. The addition's second floor is approximately fourteen inches above the main floor level. The second story extends approximately eight feet beyond the first floor exterior wall on the south side of the building.

Locker Room/Bowling Alley Building

The addition to the west is a single story masonry and wood framed building currently used for locker rooms, offices and a ten lane bowling alley. The addition is connected to the original building via a covered walkway.

Foundations

Original Structure

The original building has a concrete foundation wall system which supports the exterior walls. Interior spread footings are assumed to support the steel columns and the main floor structure. Due to the interior slab, the foundation wall thickness or reinforcement could not be verified without excavation or explorative pits. There were no drawings, reports, or additional information on the foundations available. The visible above grade foundation walls had no cracking or spalling. Existing ceilings and wall coatings exhibited no surface cracking that would be indicative of foundation problems.

Two Story Addition (Hearthside and Hingham Rooms)

The addition's foundations and footings could not be verified due to their inaccessibility. However, concrete piers, approximately ten feet on center and eight feet offset from the lower floor's exterior wall, support timber posts that carry a portion of the second floor and roof loads. All posts have appropriate post bases as required by the Massachusetts Building Code.

Locker Room/Bowling Alley Building

The Locker Room/Bowling Alley Building has a concrete foundation wall system. The walls are approximately twelve inches thick and project several inches above grade. The footing sizes and depths are not exposed and could not be determined. The foundation walls are in good condition. Some small vertical cracks were observed at the foundation walls. Cracks should be filled with a Sika, or equivalent, joint sealant or surface retarder to prevent water from penetrating through the foundation wall system.

Wall Construction:

Original Structure

The original building has masonry exterior bearing walls. Brick and mortar joints appeared to be in good condition and with only minor re-pointing required.

Two Story Addition (Hearthside and Hingham Rooms)

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Part Three – Main Club House

Exterior walls appear to be timber construction, 2 x stud framing, with large openings for full height windows. The interior wall covering is drywall. The exterior wall covering is painted clapboards.

Locker Room/Bowling Alley Building

The Locker Room/Bowling Alley Building has CMU exterior walls with an exterior brick facing. Interior walls are 2 x wood stud construction with lath and plaster covering. The walls are solid and in good condition structurally.

Framing

Two Story Addition (Hearthside and Hingham Rooms)

The main and second floors of the addition are framed with either 2 x 12 or 2 x 8 sawn timber joists spaced at 16" on center. The main floor joists are actual width, 2 inches, while the second floor joists are nominal width, 1-5/8". Joists bear on exterior walls or wide flange steel beams. Suspended ceiling panels within the interior first floor spans and below the floor framing were removed and assessments regarding the structural floor framing completed. At the main floor, steel angles are welded to the wide flange webs to provide the joists a seated/bearing connection. Joist spans vary, with the maximum joist span being approximately fourteen feet. The sloping dining room floor is attributable to a design that included sloping floor joists supported on seat angles set at varied elevations creating the slope. We surmise that this floor structure was an exterior balcony prior to being renovated. This sloping floor is a safety hazard and a building code violation.

Wide flange beams vary in size dependant upon beam lengths and include ten-inch W10 sections, fourteen-inch W14 sections and sixteen-inch W16 sections. Steel columns support the floor steel above at various spacing throughout the lower level. The second floor south exterior wall is supported by post and beam construction. Timber posts are spaced ten feet apart and are offset eight feet from the first floor exterior wall. The wood joists and steel beams assessed were in good condition.

Seismic

Although these buildings have lateral load capabilities, the use of masonry construction without proper steel reinforcement and proper connections to vertical and horizontal diaphragms does not meet current building code standards. Current building code regulations require that both horizontal and vertical steel be used in masonry wall construction. The additional steel reinforcement provides increased strength and safety for masonry bearing wall construction. Examples of potential structural modifications to meet the criteria of Chapter 34 of the MSBC may include the following:

- Connecting roof and floor diaphragms to masonry bearing walls with steel straps or ties.
- Providing steel reinforcement, typically flat steel plates on the interior masonry wall to assist in cross bending in masonry wall sections attributable to lateral loading.
- Providing steel brace or moment frames to distribute lateral loads

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- Providing steel reinforcement, steel bands, for masonry chimneys, structural hazards, as classified by MBC, Chapter 34.
- Under pinning of existing foundations at proposed additions or seismic structural framing.

The full extent of required structural modifications for alteration or addition to these buildings cannot be fully determined until a complete review of the proposed alterations/renovations is completed and a full and detailed seismic assessment completed.

Roof Framing:

Original Structure

The original building has a hip roof structure. No access above the finished ceiling was available to identify the framing sizes and spans in this area. However, based upon industry standards and means of construction during that era, it is likely that timber trusses were used to frame the roof structure. Wood sheathing and asphalt shingle roof cover probably make up the remainder of the roof assembly.

Two Story Addition (Hearthside and Hingham Rooms)

The addition has a flat shed roof structure with wood rafters supporting a drywall ceiling and roof covering. Access within the ceiling/roof assembly was not provided to visually identify the framing members used. We assume that 2 x rafters are spaced approximately 16" on center and are supported by the boxed in beams visible in the ceiling. The rafters span approximately ten feet from the exterior wall to an interior column line. The maximum beam spacing appears to be fifteen feet on center.

Locker Room/Bowling Alley Building

The Locker Room/Bowling Alley Building has a double gabled roof structure with heavy timber trusses supported by exterior masonry walls and interior structural steel beams and columns. Existing trusses are spaced at approximately twelve feet on center and span approximately sixty-five feet. Timber 2 x purlins at twenty-four inches span between the trusses and bear on the top chord. The purlins support the wood sheathing and asphalt roof covering. There did not appear to be any signs of roof leaking or roof framing deterioration.

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Plumbing

Domestic Water

The domestic water supply enters the Main Club House at the front of the building in the Kitchen. A 2 ½" service and meter is located in a closet at the front building wall. In addition, two water meters are located above the ceiling in the Storage Room adjacent to the Conference Room. The size of these meters is 1 ½" and a 2".

Sanitary

Sanitary waste appears to exit the front of the building and ties into the Town Sewer.

Storm Drainage

The storm drainage for the main building is a combination of gutters, and downspouts. Most of the downspouts drain onto grade. Several areas of concern were observed:

- The PVC downspout located on the left side of the clubhouse building adjacent to the Lobby entrance to the dining hall was observed separated at a joint, allowing storm-water to drain down against the building foundation.
- Four cast iron downspouts located in the alleyway between the Pro-Shop and the Bowling Alley are cracked and need replacement. In addition, these downspouts appear to be clogged with debris and need to be cleaned out.
- The cast iron downspout located adjacent to the kitchen loading area is draining against the building foundation. This condition should be corrected by extending the downspout out to the asphalt pavement, approximately 6-8' away.
- Miscellaneous gutters were observed holding water and leaking at the seams. These should be cleaned and repaired.

Gas Service

The facility is serviced with natural gas and there are several gas utility meters located around the premises:

- The gas service enters the building at the corner of the kitchen, adjacent to the loading area. The 1 ½" main is piped into a manifold that feeds four meters and then is distributed to the different buildings as follows:
 - (1) M# - 400A – 400 CFH @ ½" W.C.
 - (2) M# - AL-1400 – 1400 CFH @ ½" Diff. (each)
 - (1) M# - AL – 800 CFH @ ½" Diff.

Plumbing Fixtures

The plumbing fixtures throughout the Main Club House appear to be in good condition. The kitchen and bar areas are equipped with stainless steel preparation sinks and hand sinks. The required sanitizing agents were observed installed at all three-compartment sinks. The restrooms throughout the main building have all recently had the toilets and urinals upgraded and appeared to be in good working order. We recommend the following:

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- Caulk all fixtures to the wall or floor.
- Properly secure three-compartment sinks to the wall and caulk.
- Provide anti-scalding mixing valves at lavatories located in the locker rooms and handicapped accessible restrooms.

The building has several water heaters in various locations. All appear to be in good working order and not more than 5-7 years old.

Bowling Alley Restrooms

A ten-gallon electric water heater is mounted on a shelf above the counter in the Women's Room and serves both restrooms. The unit was not readily accessible but appeared to be in good condition and was reportedly installed in 2005.

Fire Protection

The main sprinkler service enters the building at the front wall in the Kitchen and is located in a closet.

The system is a 6" main that then breaks into distribution throughout the building. A portion of the system is "Dry". The air compressor is located in a room behind the bar in the lounge.

There were no back-flow preventers or double-detector check valves evident on the system. These are required on all fire service connections by NFPA 13. The inspection ticket found on the main suggests that the last inspection was performed on 12/12/03. The system has been inspected fairly recently and should provide adequate coverage if it is operating properly. An up-to-date back flow and check valve assembly should be installed as the first priority improvement to the system. Improving the present distribution of coverage and extending coverage to any areas not served by the existing system would be the next recommended improvements. Alternately, if the building is to undergo a significant modernization, then a new system could be installed.

HVAC

The heating and cooling for the building is supplied by several types of systems. The primary system for heat is a water boiler and baseboard radiant heat. Air conditioning is provided through several small air-handlers located throughout the building. There is a boiler in the Mechanical Room adjacent to the Kitchen. This boiler provides hot water to several zones in the building with multiple circulating pumps. The circulating pumps are manufactured by Taco and Bell & Gossett. The control wiring and power wiring for this unit is in poor condition, as is the Boiler itself, with panels missing, and in general disrepair. The flue appeared to be newer.

The ventilation for the Mechanical Room appeared to be adequate, with both intake, and exhaust systems ducted into the space.

Air Handler and Heating system in Bowling Alley portion of building

This area of the building has a central heating system with ducted air distribution throughout the Bowling Alley space. The main air-handler and heating system is located in the attic above the mechanical backroom of the Bowling Alley.

The air conditioning is two zones with condensing units located on the roof. The unit appeared to be in fair condition. In addition, there are four window air conditioning units mounted through the wall above the exit doors near the counter.

We recommend the following:

- Replacing or providing for a major upgrade of the heating and cooling system now serving the Bowling Alley space. The air handler and heating system are out-dated, and provide for no night setback or multi-stage control of the heat. The system is not energy efficient. The air conditioning appears to be undersized for the space as well.
- Replacing the Main Club House main heating boiler or provide for a major renovation or up-grade of the existing boiler and related systems, including pumps, valves, zone valves, and controls.
- Cleaning-up the Main Club House Mechanical Room and removing any non-related, non-functioning equipment, debris and stored material from the room.
- Identify the source of water puddling on the floor throughout the Main Club House Mechanical Room and provide corrective measures to alleviate the problem. A sump pump is installed and should be confirmed as operational.
- Clear the brush from within 4' of the A/C condensing units located outside the Mechanical Room and pressure wash the condensers.
- Repair and replace thermostat and power wiring lying on the roof and install in a neat and orderly fashion. Re-route new wiring and install properly inside the building or protect appropriately.
- Replace Armaflex pipe insulation on A/C units – see mechanical equipment inventory in the appendix for locations.
- Consider adding supplemental heat and cooling to the Vestibule/Lobby of The Main Dining Hall and small restroom adjacent to the Lobby. These spaces are not currently conditioned.

Exhaust Hoods, Fans, and Makeup Air

There are several Exhaust Hoods located in the Food Preparation areas of the facility as well as miscellaneous exhaust fans and fresh air make-up fans for the kitchen area and restrooms. There is a Men's Restroom located adjacent to the Main Dining Hall, in the hallway to the stair to the second floor. The exhaust fan ductwork for this restroom passes through the storage room next door, and has separated at a seam and needs repair. The routing of this ductwork should be revisited as well. The Men's Locker Room exhaust ventilation appeared to not be functioning at the time of the survey. The fan should be checked for proper operation. We also recommend the following:

- Hoods and associated ductwork should be professionally cleaned several times a year, depending on the level of use, to avoid fire and/or roof damage. An abundance of grease was observed at the exhaust fans on the roof indicating they need to be cleaned.

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- Repair miscellaneous wiring and conduit damage on the roof top units (RTU's) and exhaust fans.
- All restroom exhaust fans should be checked to assure they are in operating condition and repaired or replaced.

Energy Conservation

There was no Energy Management System or Building Management System observed during the survey. However, there were several programmable thermostats found throughout the building controlling the various heating and cooling units. In conjunction with any other HVAC improvements that may be undertaken, it is strongly recommended that an electronic building management system be considered. The cost of the equipment and installation will be offset by the savings in energy. Cubellis Associates can provide a payback schedule and calculations to assist in the process, if requested.

Electrical

Incoming Service

The incoming electrical service is fed overhead to a 400A main switch located in the Boiler Room. The boiler room is split between HVAC equipment and electrical distribution equipment and also serves as the main electric room. No partitions or barriers exist to separate the two sets of equipment. The line voltage for the building is 120/240V.

Power

In the main electric room, there are three disconnect switches mounted on plywood. The space is confined with limited one way access. More importantly, there are pools of water on the floor below these three switches. These conditions create a dangerous situation for the operation of the switches. There is also a violation of the National Electric Code (NEC) regarding the working space. The code requires a clearance of 36 inches in front of all operable switches and panels. This is not provided. These switches should be relocated to a dry area with the code required clearances.

The main service disconnect switch is blocked by a large tank. Additionally, the storage of miscellaneous items in the main electric room prohibits the safe operation of switches, which violates the NEC and limits timely access to panels and disconnects. Either the tank should be removed or the main service disconnect switch relocated to correct this violation.

The main electric room does not have the NEC required signage. This is an NEC safety violation.

The second level (main entrance lobby) of the main club house function hall has an electrical closet adjacent to the main fire alarm panel and storage area. The closet has three power panels located inside. The storage of miscellaneous items in this closet prohibits the safe operation of circuit breakers, violates the NEC and limits timely access to the panels. The installation also violates NEC working space clearances, and creates a confined space for the operation and maintenance of

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panels, and breakers. Additionally, there is HVAC piping passing directly over two panels, creating a potential hazard and violating NEC foreign system installation rules. The three panels should be relocated or the closet should be reconfigured.

The upper kitchen power panel is blocked by kitchen equipment. This creates a hazard and a NEC violation by prohibiting the timely disconnect of power for routine maintenance, power washing/cleaning or during an emergency. Additionally, the panel does not appear to be wet location rated, or equipped with GFI breakers, devices and there are no GFI receptacles located at wet/ sink locations. In the upstairs office space, there are two junction boxes without cover plates.

The main electric panel in the Bowling Alley is blocked by a defunct heat pipe and all the exit signs located in the bowling alley are inoperable.

Lighting

The exterior lighting is comprised of HID wall packs and incandescent surface mounted fixtures at the entrances. Our site inspection could not locate a time clock or manual switching for these lights. The main club house interior lighting is comprised of a multitude of incandescent lights with manual switching. Lighting appears inadequate in the Bride's Room on the main level. Additionally, there does appear an "Instant Full On" function that turns on all of the house lights as required by NFPA for emergencies. The upstairs office area does not have adequate stairway lighting, creating a potential hazard for maintenance and emergency personnel accessing the space after normal business hours. The Bowling Alley lighting is achieved by fluorescent T12 lamp fixtures, many of which are plugged in via cords to ceiling receptacles.

The upstairs office stairway lighting should be upgraded as a first priority repair. The other lighting upgrades should be performed as a second priority.

Telephone/Data

The telephone system main panel punch-down blocks are located in the Bride's Room's Closet. There is no emergency light or smoke detector located in the space as required per code. This should be corrected as a future upgrade of those systems.

Life Safety

Fire Alarm

There is an existing hard wired multi-zone fire alarm system which appears to be coupled with a Firelite dialer equipped with add-on devices. The building is mostly sprinklered. For buildings with sprinklers, smoke detectors are required in the main paths of egress, electric rooms/closets, telephone rooms/closets, and unsprinklered spaces. However, most spaces within the club house have what appear to be heat detectors. Smoke detectors should be installed in all required spaces.

There is a mix of fire alarm audio/visual devices (A/V) and pull stations at entrances and exits to the club houses' various spaces. Notification coverage appears

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inadequate to meet NFPA requirements. It was noted that some of the required A/V devices and pull stations are missing from required exit/entrance locations such as the Men's Room, Women's Room, Kitchen, walk in freezer areas and bar areas, and the Hearthside Room. There are no smoke detectors present in the main electric room. There are no A/V devices in the main electric room. In the upper kitchen, there are an inadequate number of A/V devices . Additional A/V devices should be installed to augment the existing system.

The fire alarm system in the bowling alley is inadequate. There are an insufficient number of A/V devices installed throughout the space. The high ambient noise levels in the space make this particularly troublesome. Moreover, there are no smoke detectors in the egress paths.

The HVAC penthouse has fire alarm wiring (low energy cable) routed throughout the space. Some of this wiring is unsupported and/or supported by means not acceptable to standard practice. This can lead to system malfunctions and increase the likelihood of increased maintenance over the life of the system. There is only one A/V device present in the penthouse, which is a notification hazard. Additionally, the HVAC duct smoke detector test stations could not be located.

The fire alarm panel does not have code required smoke detector and lacks any emergency lighting for Hingham Fire Department or maintenance personnel. Due to the diversity of spaces within the club house and the age of the existing system, a new addressable system should be considered.

Emergency Lighting

Emergency lighting battery pack units are present throughout the Main Club House and most are operational. However, coverage appears inadequate to meet NFPA requirement of 1.0 foot-candle of horizontal light in all egress pathways, and in areas of assembly throughout the various spaces, such as the upstairs office space. Additionally, the upper and lower kitchen area emergency lighting is particularly poor. There are no emergency lighting units located in the main electric room. There are no battery pack emergency lights at the exits or throughout the Bowling Alley and the Bowling Alley equipment space. Emergency lighting is required on the outside of buildings at exit locations and also at all toilet room locations. The facility requires additional emergency lighting, and existing systems should be replaced as required.

Exit Signs

Exit lights are present at most exits from the facility, however most are not illuminated or operational. The existing units are comprised of a variety of styles and types and appear beyond their expected service life. The facility requires a complete replacement of all exit lights. New LED exit light installations should be considered for all areas, especially in areas missing required signage such as in the bar and kitchen areas.

Fire Extinguishers

The quantity of Fire Extinguishers does not meet the current NFPA requirements. A review of extinguisher locations through the facility should be conducted with the

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local fire department and a qualified engineer to determine locations new and/or updated equipment.

Electrical Summary

Most of the facility's electrical distribution equipment, lighting fixtures, fire alarm system and devices, and emergency lighting fixtures appear beyond their expected service life. There are no battery pack emergency lights at exits or throughout the bowling alley. Many of the above mentioned systems have been added to, modified or extended over the life of the facility. Additionally, many of the above mentioned systems have not been tested or periodically serviced. This situation has resulted in the generation of code violations and systems needing entire replacement. This facility requires a complete fire alarm system augmentation, along with emergency egress lighting, and the maintenance of working space clearance around electrical distribution equipment.

Building Summary

The building finishes and most of the exterior envelop are generally well maintained and present an agreeable environment for the public. Certain aspects of the building, such as the Bowling Alley, have not been renovated for some time and are antiquated. There are shortcomings in the design and construction of the various building additions which are limiting the Club's potential. The views from the site are magnificent, however, the Main Club House, architecturally, does not rise to the same level of excellence. Phased renovations are recommended to develop a building complex that provides an improved, enhanced and modern experience to the public and to more fully capture the potential of the property.

Priority #1 - Immediate Repairs and Maintenance

The following items should be addressed as soon as practical and include general maintenance and safety items:

- Determine source of water leak in Main Club House.
- Repair foundation crack and miscellaneous minor masonry re-pointing and repair.
- Repair deteriorated wood trim.
- Paint wood siding and trim.
- Service doors to 19th Hole Restaurant.
- Replace exit hardware on Bowling Alley door to the exterior.
- Remove kick stop from corridor door near Locker Rooms.
- Replace damaged ceiling tiles.
- Adjust doors and upgrade hardware at Handicap toilets in the Hearthside and Hingham Rooms.
- Replace broken handicap seat and hand held shower spray in men's handicap shower.
- Provide accessible seating at the 19th Hole Restaurant and the outdoor patio.
- Repair and clean the storm drainage, gutters and downspouts.
- Properly secure all sinks to wall as noted, and caulk.
- Seal penetrations in mechanical and electrical equipment closets with fire rated sealant and repair leak at electrical panel.

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- Repair or replace damaged valves, fittings and thermometer on the hot water system in clubhouse mechanical room.
- Clean diffusers and ductwork.
- Clean up Mechanical Room of debris.
- Replace Armaflex pipe insulation on suction line piping of noted RTU's.
- Repair RTU # 3 condensate drain.
- Replace missing electrical plate cover on small RTU.
- Clear out under brush around A/C units located outside Mechanical Room adjacent to the entry vestibule.
- Kitchen exhaust hoods, exhaust ductwork and grease filters should be professionally cleaned.
- Clean the electrical closets of non-related materials.
- Replace exit signs throughout.
- Add supplemental emergency lighting.
- Install GFI receptacles in wet locations.
- Install cover plates on junction boxes in upstairs offices.
- Provide emergency lighting and smoke detectors in telephone equipment closet.
- Modify the Bowling Alley for handicap access.
- Install the required sprinkler system backflow preventors and double detector check valves. Have the system inspected by the Hingham Fire Department.
- Fire Prevention – Install all missing smoke detectors and assure system is working properly in the Caretakers House.
- Replace Fire Alarm system.

Priority #2 – Corrective Work and Improvements

The following items should be considered work to meet code compliance:

- Replace the aluminum windows at the course side of the Main Club House.
- Repair/maintain the wood windows in the original building at the Hingham Room.
- Replace the Hearthside Room handicap lift.
- Install a power operator on the main entrance door.
- Address the floor level change in the Hingham Room.
- Arrange for miscellaneous wiring on the roof to be corrected and re-routed properly.
- Redesign rain leaders and downspouts and install new where needed.
- Install required anti-scalding mixing valves on noted sinks.
- Repair or replace non-functioning restroom exhaust fans.
- Upgrade fire extinguishers throughout.
- Rebuild the entrance ramp at the Hingham Room.
- Relocate the main electrical equipment or reconfigure the enclosures.

Priority #3 – Replacements and Upgrades

The following list of items should be considered for budgeting purposes, and long-term corrective action:

- Replace the boiler, related valves, circulating pumps, and controls in the Clubhouse heating system located in the Mechanical Room adjacent to the Kitchen.

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- Design and install a Building Management System to monitor and control all HVAC systems, lighting, hot water, etc.
- Replace existing HVAC system (heating, cooling, and air handler) serving the Bowling Alley.
- Design modifications to HVAC system to add heating and cooling to the Entrance Vestibule to the main dining hall and adjacent restroom.
- Several of the existing A/C RTU's should be budgeted for replacement in the next 3-5 years.
- Budget for a new HVAC system to serve the Pro Shop with heating and cooling provided by simple ductwork distribution.
- Develop unused storage space.

PRO SHOP / POOL HOUSE / MAINTENANCE BUILDING

General

The Pro Shop, Pool House and Maintenance Building are in the same building separated from the Main Club House by a narrow alley and connected to the cast in place concrete pool and pool deck. The Pro Shop and Pool House are on the upper pool level and the Maintenance Building is on a lower level below the pool deck. The Pro Shop faces the golf course and is a small one room space with a small backroom. The Pool House features Men's and Women's toilets, showers and changing areas as well as a guard area and storage facilities.

Exterior Envelope

Walls

The walls of the Pro Shop/Pool House are load bearing composite masonry. The masonry is in good condition with some open joints that should be re-pointed. The masonry walls along the pool side are more deteriorated with efflorescence and washed out mortar on the walls outside the showers. Presently the showers are mounted to the interior face of the wall and the water continually runs down and gets splashed on the inner face of the masonry. These areas should be cleaned and re-pointed and a water barrier such as ceramic tile should be installed on the inside of the wall at the showers.

The exterior walls of the Maintenance Building are cast in place concrete and are cracked, spalled and deteriorated in several locations. If the building is to remain in service, the spalled and cracked concrete needs to be repaired. As an aesthetic improvement, the exterior walls could be covered with a stucco system or some other cladding.

Doors and Windows

There are several windows along the alley between the two buildings. The windows are single glazed steel sash windows and the window frames and the lintel angels are rusting. If the building is going to remain in service, the windows should be replaced and the lintel angles should be scraped and painted. There are newer vinyl clad windows on the golf course side of the building which are in good condition. The door to the Pro Shop is an aluminum entrance door which is in good condition. The door to the Pool House is a hollow metal door which is older and slightly rusting.

The window openings at the Maintenance Building have been replaced with Kalwall translucent wall panels and they are in good condition and provide good thermal insulating qualities. The overhead doors are older and have a poor appearance but are still operable.

Roof

The roof of the Pool House and Pro Shop portion of the building is exposed concrete deck. This type of system does not provide reliable waterproofing. If the building complex is to remain in service, then this roof system should be replaced.

The pool and surrounding deck are located on the roof of the Maintenance Building. The concrete pool deck is cracking which has a poor visual appearance and is a tripping hazard and a safety concern. Water from the pool leaks into the Maintenance Building when the pool is full. If this building is to remain in continued service, then the water infiltration needs to be stopped and the pool deck repaired.

Interior Finishes

The Pool House

The Pool House has very low level of finishes consisting of bare concrete floors and painted concrete masonry walls and painted exposed ceiling structure. The finishes are somewhat deteriorated with the paint peeling, particularly at the shower areas and the concrete floor cracked throughout. This building is very utilitarian in appearance and will remain so without an extensive building renovation.

The Pro Shop

The Pro Shop finishes include carpet, painted walls, and acoustic tile ceilings. Most of the wall space is covered by merchandise displays. The carpet and the ceiling are in fair condition. Generally the finishes are acceptable but overall the building and finishes do not provide a high quality building interior.

The Maintenance Building

The Maintenance Building is unfinished on the interior and consists of exposed concrete floors walls and ceiling structure. The walls and ceiling have been painting and the paint is deteriorated at locations of water infiltration. The structure has been reinforced with exposed steel beams placed below the concrete beams. Overall the interior is very industrial with old supplies, tools and equipment located throughout.

Spatial Efficiency

The Pro Shop has reasonable proximity to the golf course, however; the first hole is down a rather steep path from the level of the Pro Shop. The Pool Facility has good access from the parking area, but is cut off from the rest of the facility. The Maintenance Building is unfinished on the interior and consists of exposed concrete floors walls and ceiling structure. The walls and ceiling have been painting and the paint is deteriorated at locations of water infiltration. The structure has been reinforced with exposed steel beams placed below the concrete beams. Overall the interior is very industrial with old supplies, tools and equipment located throughout.

The Maintenance Building appears undersized for the maintenance which occurs in the space; however, the space is very cluttered with stored materials. A re-organization within the existing space could be possible particularly by segregating the storage areas from the work areas. Ideally, more dedicated storage or work space would be beneficial.

Handicap Accessibility

The Maintenance Building does not provide goods or services to the public and does not require access under ADA unless there is a handicap employee. If the building

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is to be rebuilt, then the new facility would be required to be accessible. Presently, the building is all on one level and once inside it could be considered accessible if not for the stored materials which block the pathway. The paved area outside of the building is deteriorated and does not meet the requirements for an accessible walking surface. Also, there is no access to the service area and the front of the building from the handicap parking areas.

The Pool House and the Pro Shop both offer goods or services to the public and are required to be accessible by the Americans with Disabilities Act. Neither the Pool House nor the Pro Shop is fully accessible. The entrance to the Pool House from the walkway between the two buildings has several steps down to the pool deck and changing room level. The path that leads from the parking area to the Pro Shop features a steeply sloping ramp portion that features a handrail but it does not have level landings at the top, bottom and change of direction. The ramp also would require high and low handrails on both sides. Additionally, the exterior path from the Pro Shop to the Main Club House slopes too steeply, prohibiting access from one building to the other. The Pool House is accessible from the Pool Deck; however, once inside, there are numerous areas of non compliance.

Access Throughout the Building

Inside the Pool House there are changes in levels which cannot be traversed by wheelchair users. Once inside the Pro Shop all goods and services are on one level and are accessible.

Access to Toilet Facilities

The toilet and shower facilities in the Pool House are not designed for accessibility. There are no toilet facilities in the Pro Shop.

Access to Goods and Services

The services provided by the Pool House are not accessible. The service counter in the Pro Shop is not at the accessible height and should be modified to include a service counter at 33" above the floor.

Structural

The Pro Shop, Pool House, the Maintenance Building and the Pool and Pool Deck were all built as one structure, with the Pool, Pool Deck, Pool House and Pro Shop on the upper level and the Maintenance Building on the lower level. The pool is located between the Pro Shop/Pool House building and the Maintenance Building with a concrete pool deck spanning between each structure. The Pool Deck is also the roof structure for the Maintenance Building.

The Pro Shop and Pool House portion of the building is a one story building, approximately 3,600 square feet in area, with concrete foundations, slab-on-grade, beams and monolithic roof slab. Exterior walls are concrete masonry unit (CMU) bearing walls. Interior partitions are non-bearing CMU walls. The Pool House has locker rooms, showers and restrooms for the pool occupants. An interior staircase accesses the roof from within the Pool House area. The roof was intended to be

used as a balcony that overlooks the pool deck below. A guardrail encloses the roof deck on all four sides.

The Maintenance Building is a one story building concrete building approximately 100' x 30' and is adjacent to the pool. The finished floor elevation of the Maintenance Building is ten feet lower than the Pool Deck elevation. The Maintenance Building's rear wall is assumed to be a common wall with the in-ground pool. The Maintenance Building's roof is the pool patio area.

Foundations

Concrete foundation walls for the Pro Shop and Pool House are approximately 12" thick. The top of the foundation wall extends above grade for several inches and our observations are limited to that area. The building has an interior slab on grade, but its thickness or reinforcement could not be determined for this study. The foundation walls appeared to be in good conditions with no identifiable deficiencies.

The Pro Shop floor slab was covered with carpet and could not be assessed as to its structural condition. The Pool House floor slab was exposed and has a paint applied finish. There were several areas, specifically within the restrooms, where the slab surface has spalled. The Pool House floor slab should be cleaned and existing paint removed from the slab surface and a bonding agent and patching sealant applied. After curing, one coat of primer and two coats of slip resistant finished paint should be applied.

The Maintenance Building's existing foundation walls are cast-in-place concrete. Wall thickness is approximately twelve-inches thick. The existing footing sizes and depths could not be determined because they are below grade; however, a number of interior footings, five feet square in plan, were added as part of the building renovation. The top elevation of these footings is the same as top of slab. The depth of the footings was not established.

Wall Construction

Exterior walls of the Pro Shop and Pool House are eight inch thick concrete block masonry bearing walls with four inch brick veneer. Wall height is approximately ten feet from floor slab elevation to roof slab. Interior walls are eight inch thick CMU walls. Some vertical cracks in the exterior CMU walls were observed adjacent to the interior stairs and shower room of the Pool Building. The cracks are approximately several feet in length and approximately 1/8" wide. This type of wall cracking is typically attributable to masonry thermal expansion/contraction in conjunction with insufficient construction joints. Although aesthetically unappealing, the wall is structurally sound. We recommend that no action be taken at this time because the cracks pose no structural concern. A silicone sealant could be pressure injected into the crack, but with continual thermal expansion/contraction of the block as is typical with CMU block, over time the bonding between sealant and the block would fail and the crack will re-surface. Routine maintenance including scheduled painting is also advised.

The Maintenance Building has concrete walls approximately twelve inches thick. The wall height is approximately ten feet tall. Door openings exist only on the north

wall. The common wall between Maintenance Building and Pool wall was built with concrete buttress walls partitioning the interior Maintenance Building into several areas. All walls need some level of repair. Many cracks were observed inside and outside of the building. A determination could not be made as to whether cracking occurred prior to or subsequent to the additional supports being added. A monitoring program should be implemented to determine if the cracking is continuing to worsen. All existing cracks should be repaired. Cracks should be filled with a Sika, or equivalent, joint sealant or a surface retarder to prevent water from penetrating through the foundation wall system.

Roof Framing

The Pro Shop/Pool House roof structure is a cast-in-place one-way slab supported with concrete beams. The beams span approximately thirty feet (East to West) and are approximately ten feet on center. No drawings are available of the construction and the slab reinforcement and thickness could not be identified during our site visit. The slab is pitched to allow water to drain off the roof. The slab has cracked in several locations and at fairly uniform increments of approximately ten feet. Cracks appear to occur at the slab's center span. Crack lengths and widths vary and a sealant has been applied to the top slab surface to prevent water from penetrating into the building. Based on the reoccurrence and size of the identified slab cracks, it is our opinion that the one way slab was insufficient to support the intended loads. The entire concrete roof slab has been reinforced with steel wide flange beams. The steel is in good condition; however corrosion has begun to surface on several of the beams. No structural damage to the concrete beams was noted. A maintenance program should be implemented with semi annual inspections of the roof slab and water proofing. The slab integrity, sealant applications and bonding and water intrusion issues should be field documented and monitored. Exposed steel reinforcement should be cleaned, primed and painted with 2-coats of epoxy paint.

The roof of the Maintenance Building is a monolithic concrete slab with supporting concrete beams. Steel columns and beams were added beneath the slab for reinforcement. It appears that the original structure could not support the intended loads and began to crack. Both the roof slab and supporting concrete beams exhibited significant cracking. The concrete cover over the reinforcement is missing in some areas and the steel reinforcement is exposed. The slab must be repaired. This condition can be a result of damaged roof insulation around the pool area. The insulation should be investigated and repaired, if needed. If reinforcement is deteriorated beyond 20% of its original area, then it should be removed and replaced with new reinforcement. An applied grout should be used to seal the reinforcement and bond with the existing slab. Cracks should be filled with a Sika, or equivalent, joint sealant or surface retarder to prevent water infiltration.

Plumbing

Domestic Water

The domestic water supply to this building is supplied from the Main Club House building next door. The Men's Locker Room and the Ladies Locker Room in the Pool House had been winterized at the time of the site visits. All water is turned off, fixtures drained and anti-freeze added. The shower heads and all valve handles

have been removed. The fixtures in these rooms appear to be in good to fair condition. The pool was closed, and covered for the winter season. There are no restrooms in the Maintenance Building portion of the building, however there is water supplied for garden hoses, and a hand sink inside the space.

Sanitary

Sanitary waste appears to exit the front of the building. The facility is currently connected to the municipal sewer system.

Storm Drainage

The Pool House is located in the same building as the Pro Shop and this portion of the building has the same type of simple run-off and on-grade storm drainage. No underground storm system was observed.

Gas Piping

No gas piping was observed in the Pro Shop; however, there is a wall mounted heating unit that appeared to be gas fired. A natural gas service enters the front of the Pool House through a utility meter mounted at the front wall. Distribution is through the inside of the building to the various devices.

Plumbing Fixtures

As noted above, the water to this Pool House has been turned off for the winter season. The fixtures, consisting of toilets, sinks, urinals and showers, appear to be in good to fair condition.

Hot water for the Pool Locker Rooms is supplied via a water heater located in the storage room at the front of the building. As with the other fixtures, this unit has been turned off for the winter season.

- Manufacturer – RUUD
Model # - RF92 – 300
Serial # - RUN 1089401751
300,000 BTUH input
92 gal. Storage
Natural gas fired.

Unit appeared to be in good condition.

Fire Protection

There is no sprinkler system at this building.

HVAC

System Description

Heat is supplied to the Maintenance Building via a centrally located oil-fired furnace, with simple ductwork distribution throughout the space. There were no Manufacturer's tags or model # information on the unit. This unit was functioning at the time of the survey and is in good to fair condition. A 275 gallon oil storage tank

was observed in the space approximately 20 feet from the furnace. The tank also appeared to be in good condition.

A wall mounted self-contained heating unit supplies heat to the Pro Shop. The unit was functioning at the time of the survey and appeared to be in good to fair condition. There appears to be no heat for the back-room storage area. Air conditioning is supplied via a window type air conditioning unit that has been mounted through the wall. The unit appears to be in good to fair condition.

Misc.

An underground gasoline storage tank and pump was observed on the property adjacent to the golf cart storage shed. There was no visible certifications or inspection stickers present on this system. There were no monitoring wells around the perimeter of the tank location, and no evidence of leak detection devices in place.

Recommendations / Actions:

Determine the age of the gasoline storage tank, and the pump system. Determine the most recent inspection date. Coordinate the appropriate testing, and certification of this system, and add the necessary leak detection system, and monitoring wells if required. Cubellis Associates can coordinate this activity if requested.

Energy Conservation

There is no energy management or energy conservation system in place at this building.

Electrical

Incoming Service

The origination of the power source for the Pro Shop could not be determined by the field inspection team. The electric service for the Pool Building originates from overhead lines and a set of weather heads at the parking lot end of the facility. It is recommended that this arrangement be changed to an underground service due to the close proximity of the weather heads to the pool area. The pool deck is separated from the weather heads by wood fencing materials. Although arc flash potential at the weather heads is remote, we recommend a weatherproof plastic barrier be installed to the wood fencing materials to provide a safer barrier. The main electric service drop and associated metering for the Maintenance Building is blocked by the tree growth and landscaping equipment. This creates limited access for utility and emergency service personnel.

Power

The Pool Building appears to be fed underground from the Main Club House, possibly at the parking lot side where there are exposed conduits on the wall of the Main Club House.

There are no panel directories for power panels serving this Maintenance Building. Existing conduits throughout the garage require support, sealing, and covering to meet NEC requirements for safety. There is equipment connected via extension

cords in some portions of the garage due to an inadequate quantity or receptacles. There are no weatherproof exterior receptacles for cart recharging or maintenance work.

Lighting

Lighting in the Pro Shop is comprised of fluorescent T12 lamp, 4ft and 8ft units. Control for the lights is via manual switching. The Pool Building has older pendant fluorescent lighting with acrylic wrap around lenses. The interior lighting in the Maintenance Building is achieved via 8ft T12 lamp strip lights. The exterior lighting is provided by a single HID flood light and is inadequate for work and/or security of the area.

Telephone

The data and telephone cabling to the cable modem was found to be routed haphazardly. The Pool Building and the Pro Shop are connected to the central telephone system serving the Main Club House. The Maintenance Building has an existing telephone connection but it is not connected to the central system in the Main Club House, Pool Building and Pro Shop.

Life Safety

Fire Alarm

There is a single A/V device and pull station serving the Maintenance Building. There are no sprinklers, smoke detectors, or heat detectors in the space. This is inadequate fire alarm protection as the system should have more detection and notification devices. The Pro Shop does not have smoke detectors. There are heat detectors present, but these do not meet NFPA requirements. There is a single A/V device located at the main entrance. Notification appears inadequate in the rear shop areas.

Emergency Lighting

There are no emergency battery pack lights present in the Maintenance Building. Battery pack lighting in the Pro Shop is inoperable and coverage appears inadequate for code compliant emergency egress lighting

Exit Signs

The exit sign in the Pro Shop is inoperable. There are no exit signs in the Maintenance Building.

Building Summary

The Pro Shop/Pool Building/Maintenance Building is an antiquated structure which can no longer provide the services associated with these functions at a level the public has come to expect or the task requires. The building has significant repair needs and will become a safety hazard if allowed to deteriorate. The small footprint of the existing Pro Shop and Pool House building and its configuration and intrinsic connection to the antiquated pool deck and Maintenance Building make it difficult to suitably renovate this facility. Plans should be made to accommodate these

