



YATES MEMORIAL HOSPITAL

KETCHIKAN ALASKA

HISTORIC BUILDING ASSESSMENT



Prepared by

HISTORIC KETCHIKAN, INC.

for the
Alaska Office of History & Archaeology
and the
Ketchikan Historic Commission
City of Ketchikan

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YATES MEMORIAL HOSPITAL

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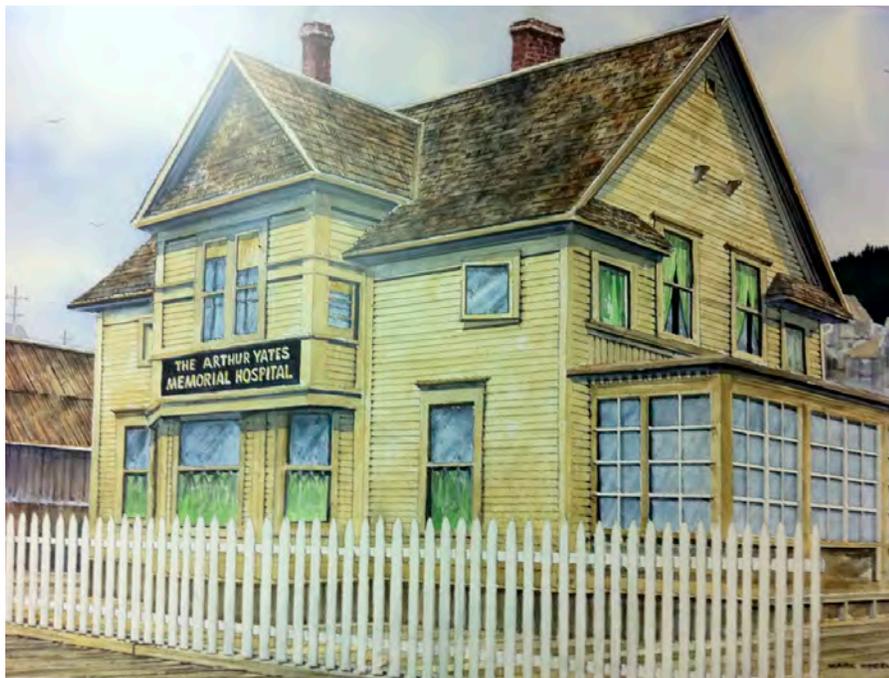
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with guidance and archival research support of
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City of Ketchikan Museum Department



Because artists are drawn to scenic and historic places, their skills and vision capture our community heritage in their art. Local watercolorist Mark Wheeler captures the Yates Memorial Hospital as it appeared in the early 1900s in this 1970s watercolor.



ACKNOWLEDGEMENTS

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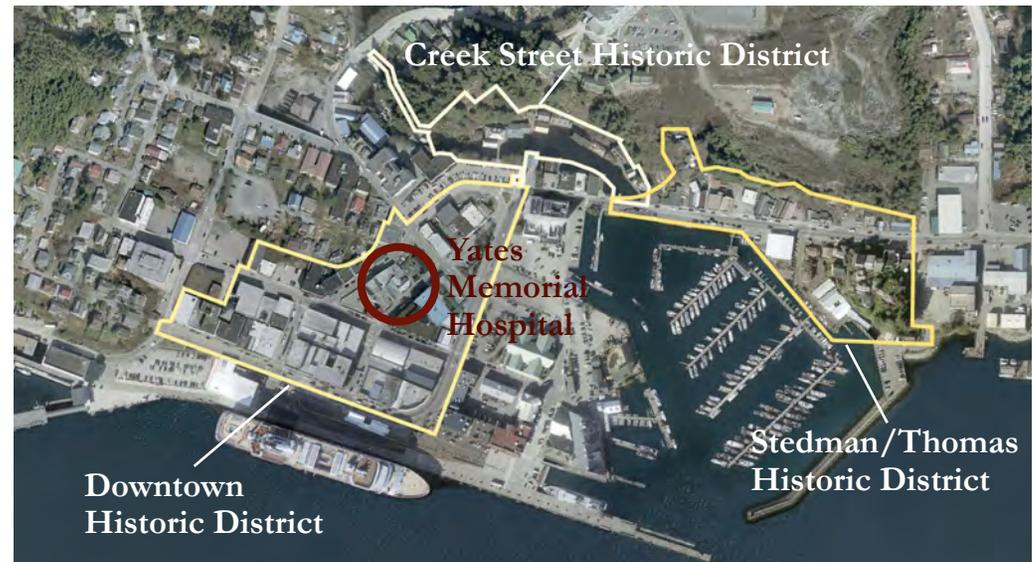
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The Yates Memorial Hospital is part of the Episcopal Mission group of buildings. It is located in the heart of Ketchikan’s Downtown Historic District and is one of the oldest buildings in Ketchikan’s three historic districts.

A Brief History of the Yates Memorial Hospital

Built in 1905 as the Clergy House for the Episcopal Mission, the building was “re-purposed” in 1909 to serve as a 12-bed hospital during the frenzied boom years of Ketchikan’s growth. The facility was named for a financial benefactor, Arthur G. Yates, and a wing was added to the back of the building. By 1925, the small hospital could not keep pace with the needs of Alaska’s largest city and was replaced by a larger hospital (recently demolished) on Bawden Street built by the St. Joseph’s Sisters of Peace. After the hospital closed, the Yates building stood essentially vacant, at least once narrowly escaping demolition. In 1941, Emery Tobin, founder of the famous *Alaska Sportsman* magazine (today *Alaska Magazine*) produced the magazine and later operated a curio shop in the building until 1966. Beginning in 1968, the Chamber of Commerce occupied the building for a decade. In the 1980s and 90s, the Episcopal Church operated a Seamen’s Center there to meet the needs of seafarers who visited the port of Ketchikan. With little income from this service, the building slowly fell into disrepair and lay vacant for more than a decade. Until recently, there appeared to be no alternative but demolition.



Ketchikan Band, at Arthur Yates Mem. Hospital.
Ketchikan, Alaska. July 4, 1922.

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PART ONE: BACKGROUND

Introduction to the Assessment

The Arthur Yates Memorial Hospital is part of the Episcopal Church group of buildings. It was built in 1905 and has served as an iconic Ketchikan landmark from the community's earliest days. It is a two-story, wood frame Colonial Revival-style residential building on piling foundations constructed over tidewater. The building footprint is approximately 1,850 sf. This is one of the Downtown historic district's oldest buildings.

The building is virtually unaltered on three elevations and in its interior. Modifications were made to its north (Dock Street) facade to accommodate construction of the adjacent Tobin Building in the 1940s. Plastic siding covers original cedar siding and most original exterior details remain under this "skin." Inside, the stairway to the second floor retains its original character with turned wood railings, baluster and moldings. The original doors, transom windows, baseboards and closets, and interior trim have remained untouched except by successive coats of paint. Viewed from within or from the exterior, the building looks very much like its early photographs.

The building has been unoccupied for many years and needs immediate attention to its foundation and roof. Unfortunately, the organization that owns the building--the Episcopal Church-- does not have the funds for desperately needed repairs. The Church Vestry had determined to demolish the building unless a viable option could be found. In an 11th-hour attempt to save this landmark from demolition, Historic Ketchikan, Inc. (HKI)--a local, non-profit 501c3 organization dedicated to historic preservation--has committed to lead a restoration effort. This is a critical step in preserving a building that tells such an important story about the roots of our community. The Yates Memorial Hospital is the Ketchikan Historic Commission's and the community's #1 historic preservation priority. The building has been recommended as eligible for the National Register of Historic Places by the State Historic Preservation Office, Alaska Historical Commission, and Ketchikan Historic Commission.

HKI entered into a memorandum of agreement with the Episcopal Diocese of Alaska to carry out restoration. The Church agreed to forestall demolition pending HKI progress to stabilize and secure the building. HKI will enter into a long-term ground lease for the building and control restoration and future tenancies subject to agreements with the Church. HKI and the Church are to insure that the building retains its authenticity and architectural character in perpetuity. The St. John's Church Vestry works closely with HKI to address day-to-day management decisions associated with restoration.

With a grant from the Alaska Office of History and Archaeology, HKI has conducted this Historic Building Assessment in compliance with Secretary of Interior standards. The City of Ketchikan has provided an equal matching grant.

Historic Ketchikan organized a team of local architects, engineers, code compliance specialists, historians and restoration specialists to provide this assessment in order to guide the development, restoration and use of the structure. Archival research was carried out to gather information on the building's history, original construction and later modifications, occupancies and uses over time. Historical photographs were gathered to develop a chronology of building changes and to determine the character and detailing of missing elements.

The team's work included walkthroughs of the building to examine its structural integrity, mechanical, electrical and security systems, and exterior and interior materials. The resulting contributions of the team's individual experts provide documentary, graphic and physical information about the Yates Memorial Hospital existing conditions.

The team assessment is designed to thoughtfully select the most appropriate approach to treatment and to outline a scope of recommended work. The document is intended to guide all changes to be made to the property: repair, rehabilitation and restoration. The scope of recommended work ranges from minor repairs to structural stabilization to extensive restoration of exterior and interior surfaces. The level of detail to which the work items are defined are limited in this document and its recommendations serve as the foundation for, rather than in place of, design and construction documents for the work.

This work has been carried out by the team in close coordination with the HKI Board of Directors, the Ketchikan Historic Commission, the City of Ketchikan Museum, the City of Ketchikan Building Department, and other local government offices. In addition, a number of key local interest groups including the Chamber of Commerce, Ketchikan Visitors Bureau and a number of service clubs have supported and participated in the development of this document.

BUILDING HISTORY

Episcopal Mission Beginnings, 1897-1903

Ketchikan's first structures were temporary shelters built by Tlingit Indians, who came to Ketchikan Creek every summer for tens of generations to harvest the stream's bountiful salmon. By the early 1890s, some 40 individuals lived in permanent dwellings along the shoreline west of the creek mouth.

In March of 1897, Bishop Peter Trimble Rowe and Dr. Campbell, an Episcopal priest, traveled from Douglas, Alaska to Ketchikan, which had by then grown into a village of about 200 with a wharf, salmon saltery, trading post and a number of houses. The store owners wanted Bishop Rowe and Dr. Campbell to work in their town and offered 4 acres of land if they would begin a mission and school for the Native children.

Dr. Campbell returned that autumn to start a mission and school as arranged. Bishop Rowe wrote in the *Spirit of Missions, 1898*: "The doctor bought a cabin for about \$200, which, when he had improved by an outlay of \$175 more, has given us a commodious, neat, and suitable building for school and services, which stands on a rock commanding a full view of the narrows." This cabin was established as St. Agnes Mission and was located at the end of what came to be Edmond Street.



St. Agnes Mission, in 1898, stands on pilings along the shoreline near the mouth of Ketchikan Creek.

Early in 1898, Miss Agnes Edmond arrived to help Dr. Campbell and teach at the Native school. Shortly after her arrival, Dr. Campbell left for Skagway. He, as well as his replacement, Reverend Gurr were only in Ketchikan for brief periods. Miss Edmond is thought to be the first white female to permanently reside in Ketchikan. She worked alone there for the better part of 4 years. In the absence of a priest, she held Sunday school and later added a Sunday evening song service. Miss Edmond was highly respected by both the white citizens and the Native families.



Agnes Edmond, pictured here, taught in the Native school and, among other accomplishments, assisted in reviving Native basketry and organized a program of selling baskets and other Native-made items to tourists. The funds assisted in the operation of the mission. Though she left Ketchikan in 1902, she continued to work in Alaska missions until August 31, 1904.

By 1900, Ketchikan had become a center for commerce amongst burgeoning mining camps and canneries. The population grew to over 700. With the growth of the town, "a larger work was inaugurated" and in August, 1902, Reverend Thomas Jenkins arrived. He immediately went to work repairing and expanding the mission building, securing the land against squatters, and raising funds to build a church.

During the following winter, \$1,850 was collected locally for the construction of a new church. With volunteer labor from Ketchikan's early carpenters and contractors and funds sent in support of the mission, the present church was built. By August of 1903, one year after Jenkins's first sermon, St. John's Church was ready for use. It is Ketchikan's oldest church, still in its original location.



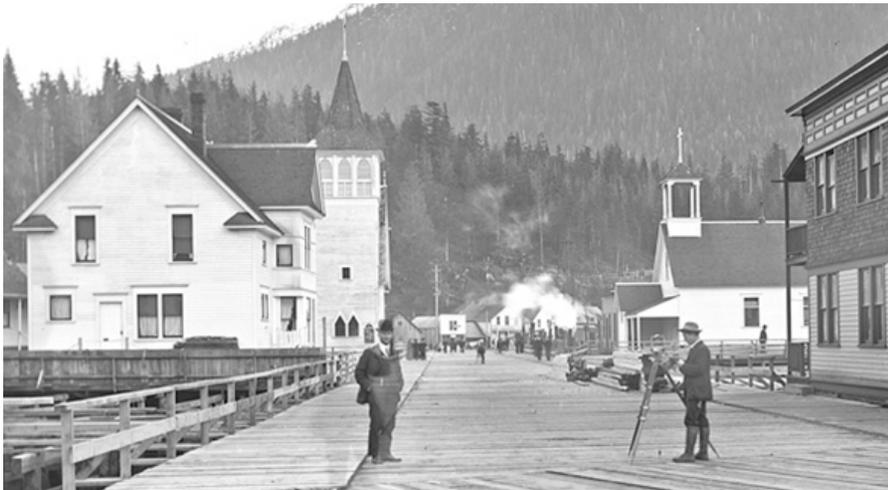
Bishop Rowe wrote, "Ketchikan, St. John's--what a quaint place this! It is partly built on piles over the water, and partly on the cliffs. Standing at the head of Tongass Narrows, it is the first object of civilization seen by the passenger after leaving Seattle and Vancouver Island."

Early Ketchikan Development & First Hospital, 1904-1910

Ketchikan was buzzing with activity. With the addition of more mines, sawmills, canneries and a cold storage facility, came a spurt in building and carpentry work. Local doctors did their best, however, the need for a hospital was growing as quickly as the town. In addition to local needs, Rev. Jenkins stated that Ketchikan “was becoming the port of entrance and clearance for all north and south bound coast steamers.” He continued, “the need of a hospital was pressing. For a thousand miles from Seattle there was not a hospital of any kind.”

In 1904, Jenkins requested \$250 in donations to convert the St. Agnes Mission house to hospital use and an additional \$250 to equip the hospital for service. He felt so strongly for the need that he started the project “in faith” before donations were made. Archbishop Hudson Stuck reported “Jenkins moved his family into a rented cabin and the work of caring for the sick, that in so many places fell into our hands because there were no others, began.”

Funds were soon raised to build a home for the missionaries. “In 1905 property was bought and the present clergy house was built and thus a good home was provided for the priest’s family and the teacher.” The home was built on church property, southeast of the mission house and the church.



This 1906 image shows the expansion of the mission in the midst of the booming frontier town. The mission built a new school (right, with cupola) and clergy house (left). A local mill, which became the Ketchikan Spruce Mills, provided a ready source of locally milled lumber for new buildings, as well as decking for streets.

However, it wasn't long before the hospital in the St. Agnes Mission house became too small and the upper level of the new clergy house was used to care for patients. The hospital struggled to keep pace with the town's rapid growth and soon the missionaries were crowded out of the downstairs as well.

The Bishop reported on the urgency and depth of the situation, in the December 1908 issue of *Spirit of Missions*: “Our steamer made this place at the unearthly hour of 4 A.M. I found Miss Huntoon, at the hospital, up. In fact Mr. Jenkins says she has been up all night for the past three weeks. The hospital is filled with patients, several typhoid cases, three more could not be taken in. To care for all these sick and do the housework as well, falls severely on Miss Huntoon, assisted by a native girl.”

The May 1909 issue of *Spirit of Missions* stated: “There is great need for a better hospital and more convenient rectory at Ketchikan. The situation can be met by certain readjustments costing \$4,000, and the bishop was authorized to proceed with the changes and to appeal for special funds to meet the cost.” A devout Episcopalian, Mrs. Levi Ward, from Rochester, New York donated the requested \$4,000 in memory of her father, Arthur Yates, who died in February 1909.



The expansion was completed in 1910 with the help of volunteer carpenters, both Native and white.

The following year, the clergy house was repurposed to serve as a 12 bed hospital. The memorial donation funded the necessary equipment, the ‘fitting up’ of the hospital, and enclosure of the front porch. It also enabled a back wing to be added and a new rectory to be built.



This view of the church property was taken from upper Edmond Street. From left to right are the new rectory with barn style roof, the church proper, the mission house, and the Arthur Yates Memorial Hospital with added wing and wrap-around porch.



The Arthur Yates Memorial Hospital on Mission Street, circa 1910. The Strong Stove Store is visible further down the street and the entry to St. John's Church is visible on the right.



The September 1912 edition of Spirit of Missions featured an article about the mission in Ketchikan and provides the only known images of the hospital's interior. The "men's ward" (left) and "sitting room and private room for women" (center and right) remain intact and appear today much as they did nearly 110 years ago.

Pioneer Hospital, 1909-1925

Running a hospital in Alaska was no small feat, but the missionary nurses in Ketchikan were dedicated and determined. They conquered the difficulties of obtaining supplies and securing funds, and with strength and tenacity they worked long hours caring for the sick, preparing the meals, completing the housework and helping prepare for church services.

In *Spirit of Missions*, Reverend R.E. Roe expressed his awe for nurses' efforts and abilities, "How these two nurses stand the long hours and exacting work, and put into it the patience and sacrifice they do, passes my comprehension." He also recognized the importance of their matronly manner. The men of early Ketchikan were extremely self-reliant, living in harsh conditions where merely surviving was a daily challenge. Far from their mothers and sweethearts, they rarely, if ever, had the blessing of a gentle soul to care for them. However, if the tragedy of injury or illness came upon them, they found exactly that at the hospital. The nurses gave what was described as "a wealth of womanly sympathy along with the best professional care." Reverend Roe described this importance when he wrote, "The kindly care makes this the nearest to home many a man has known for a long time. Some of the men actually seem sorry to get well and have to leave and they all come back punctiliously to visit."



In 1922, Reverend H.P. Corser reported "The hospital, aside from the salaries of the nurses supplied by the Board of Missions, is self-supporting. Miss Agnes Huntoon, the senior nurse has been able to accomplish this in spite of the fact that the problem of maintaining a church hospital in Alaska is no easy one. A private hospital can force a collection where a Church hospital can not. It must rely in the fairness of its patrons for support."

The hospital was viewed as an important asset by the community and was often

Nurses Katharine Bridge and Lillian Ames, circa 1922

the recipient of donations and fundraising efforts. In 1918, the *Pathfinder* reported "Forty-one Japanese residents of Ketchikan recently presented a check for \$150 to the Arthur Yates Memorial Hospital. In all the years that the hospital has been in operation only one Japanese has asked for treatment as a charity patient. And that one later gave the hospital a donation representing about half of what his bill would have been had he been a pay patient."

By 1920 talk had begun of the need for an expansion or replacement of the hospital. An article in the *Ketchikan Chronicle* reported "Extensive repairs to both the church and the hospital will soon be necessary and following suggestions made by the local surgeons the addition of another wing to the hospital was recommended."



Mission Street, circa 1909. The Yates Memorial Hospital can be seen just to the left of St. John's Episcopal Church.

For many decades, the building and its adjacent courtyard were the venue for many community events and served as a cultural center of town. However, by 1923, the small hospital could not keep pace with the needs of Alaska's largest city and a larger hospital (recently demolished) on Bawden Street was built by the St. Joseph's Sisters of Peace. The Yates Hospital closed in April of 1925.

After the hospital closed, the building stood essentially vacant, several times narrowly escaping demolition.

The Alaska Sportsman and Alaska Specialties, 1941-1966

The *Alaska Sportsman* magazine ‘grew up’, so to speak, in the Yates Memorial Hospital. Now *Alaska Magazine*, with a current distribution of 100,000, the magazine was first published in Ketchikan in 1935. After a fire burned down their original “old ramshackle building,” the office moved into the former Arthur Yates Memorial Hospital in 1941.

Starting a magazine in Ketchikan during the depression years of the 1930s, when there was no money and not many people, and keeping it going through the restricted shipping years of WWII, required a driving force. That was something for which owner/editor Emery Tobin was well-known.

The *Alaska Sportsman* featured stories about hunting and fishing, the harsh and beautiful land, and the people who called it home. The first person experiences of life on the last frontier were read faithfully by travelers, those that dream of visiting, and residents across the state. “No Alaskan barbershop, bar room, steamship office or library in the territory would be without a few issues for their customers.”



The building, pictured in 1952, was serving as the home for the Alaska Sportsman magazine. The building’s Colonial style architectural features--bay window, glazed entry porch, double-hung windows, turned eaves, wide corner boards and fascia trim--had at this time been virtually unaltered since its earliest days. With the exception of the entry porch modifications and plastic siding installed over the original siding, the building remains today much as in this photo of 61 years ago.

The magazine operation was supported financially by a retail shop and mail-order sales advertised in the magazine. Mrs. Clara Tobin operated the business which started with the sale of northern books, stationery and postcards. Alaska Specialties became a thriving souvenir business offering a wide range of Alaska-themed merchandise.



A book signing event held by Alaska Specialties shows Clara (far right) and Emery Tobin (center) and their guests in what was formerly the men’s ward of the hospital. (Note the fireplace behind them is also visible in the 1912 image on page 3.)

Former assistant editor, Ethel Dassow, describes the building as big and drafty. “The *Sportsman* took up residence then in a big, rangy, blue-gray house on Mission Street, which must have been as old as the city itself. It was a drafty old place. Winter wind whipped through it as if through a picket fence. We girls wore fleece-lined boots and ski trousers to work on cold days, our space heaters kept blowing fuses, and the cost of feeding the floor furnace surely would have fueled a B-29 on a bombing mission! Emery had the building fully insulated after the war, and that made all the difference.”

Tobin set up the front porch like a museum. He displayed items such as specimens of ore, stuffed birds and animals, Indian artifacts, and the skull of the notorious grizzly from the Unuk River known as Old Groaner. It was the only museum in town and the tourists, especially, found it interesting. Part of the office was later remodeled for Mrs. Tobin’s office.

The front rooms on the main floor housed the editorial and bookkeeping operations and retail sales. The hall, closet and basement were used for storage and wrapping. The Tobins lived in three rooms at the back. All shared a big, old-fashioned bathroom with a shower.

Upstairs were five or six rooms rented to a series of single women, who shared the kitchen and upstairs bath. Countless teachers, nurses, secretaries and clerks, newly come to jobs in town, occupied these rooms. These rooms are still intact.

In 1946, the Tobins expanded, attaching a plain commercial building on the back of the hospital structure. Today known as the Tobin Building, it housed a new printing press, which allowed the company to print the magazine in-house. For the next 12 years, the production of the magazine took place within the expanded building from start to finish. The addition also freed up space in the front of the building for an increase in retail sales. Prior to the addition of the Tobin Building, the magazine was printed and stitched together in the basement of the Bon Marche building across the street. Old copies of the *Sportsman* were stored in the basement of the Yates building. Both places were susceptible to water from high tides, which reportedly made Mr. Tobin rather nervous.



The plain commercial architecture of the Tobin building is a striking contrast to the handsome Colonial-style Yates building. A portion of the hospital's covered porch and stately columns was removed to make way for the addition.

Emery Tobin was an avid booster of tourism and is said to have loved practical jokes. His famous "Liquid Sunshine Gauge" beside the building shows his playful, cheeky sense of humor. It stood 17' tall and was one of the most photographed things in town. Today's version of the rain gauge is positioned outside the Ketchikan Visitor's Center. Though the graphics are not as lively, it is still one of the most photographed objects in town.

The Tobins sold the magazine to the partnership of fur trader Robert Henning and journalist Robert DeArmond in 1958, but kept the successful curio shop open for another eight years. The couple retired in 1966 and moved south.

Ketchikan's original rain gauge was built by Tobin after the record breaking rainfall received in 1949. It remained on premise until 1966.



Chamber of Commerce, 1967- 1978

In the late 1960s, Ketchikan's Chamber of Commerce was growing rapidly. The number of committees was nearing twenty and it was decided that a business manager should be hired. The group organized as a 501(c)6 and rented office space in the Yates Memorial Hospital building. In an effort to modernize the building, the Chamber updated the interior with new carpet, light fixtures, a drop ceiling in two rooms, and a fresh coat of paint, but kept most of the layout of the building the same. Extensive remodeling was done to the porch, however, covering the charm of the French windows that had enclosed the porch for most of the building's history. The Chamber remained in the facility until 1978, leaving the building vacant for approximately 6 years.



Before After

Before and After photographs were highlighted in the Ketchikan Daily News in September of 1967 as the Chamber of Commerce prepared for an open house.

Seamen's Center, 1984 - 2003

A collection of churches and civic organizations founded a Seamen's Center in the facility in 1984, which operated there for nearly two decades. The center was designed to meet the needs of seafarers who visited the port of Ketchikan, helping to make their time in port rewarding. The center provided a clean, dry place for simple activities such as watching television, playing cards, and having coffee. It was a place for fishermen and boat hands to escape the tiny, isolated confines of their boats rather than joining up at a bar. In 1993, the facility caretakers saw a greater need for the community and began to remodel the building for expanded use. They patched plaster, tore out wood paneling, painted walls, put in new carpet and built kitchen cabinets from scrap lumber. They began serving meals and provided showers to not only seafarers, but also the town's homeless and deprived. Over time, the center became a 'hang-out' for them and the peaceful gathering spot for the seamen faded out of sight. The center closed in 2003. With little income from this service, the building had fallen into disrepair and lay vacant for a decade. Until recently, there appeared to be no alternative but demolition.



PART TWO: EXISTING CONDITIONS SURVEY

Approach to the Survey

The Yates Memorial Hospital assessment team performed individual and group walkthroughs of the building to document physical spaces and elements and to assess the current condition of building materials and systems. Along with the historical research documented in the preceding section, the walkthroughs and surveys helped determine the historic integrity of the structure. The team addressed all the following elements:

- site issues;
- building envelope and structural system;
- foundation system;
- windows and doors;
- interior features and finishes;
- accessibility;
- fire and life safety;
- potential existence of hazardous materials;
- building and zoning codes; and
- electrical and mechanical systems.

Information gathered during the walkthroughs and surveys were documented in field notes, photographs, field sketches and measurements. The most pertinent of this information is provided in this document and all support information has been filed for future use. Digital drawings were prepared for the building providing a documentary record and a baseline model for future design development.

Some materials samples were removed for laboratory studies to determine the potential existence of hazardous materials, including lead and asbestos. Further study, especially insofar as hazardous materials, will be required including field testing, further sample removal, laboratory testing and analysis of materials.

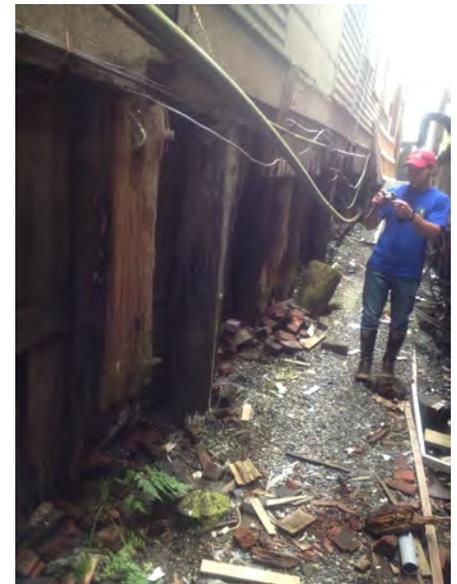
A multidisciplinary survey team analyzed the existing conditions of the building. They included:

Amanda Welsh, Architecture
Tim Whiteley, Architecture
Dennis Kuklok, Landscape Architecture
Renee McLaughlin, Historical Research, Photography
Keith Nelson, Electrical Engineering
Brett Serlin, Structural Engineering
Marvin Hill, Foundation Construction
Stephen Reeve, Architecture, Planning (Coordinator)

These individuals were selected by Historic Ketchikan for their knowledge specific to the key issues to be addressed in this project and for their long-term experience with Ketchikan building conditions. Each of these individuals conducted walkthroughs of the building and documented conditions of the structure that were available for observation. In each case, in-depth measurements, samplings or evaluations were considered to be outside the scope of work.

The Existing Conditions Survey will be of value in many ways. It provides:

- background for the recommended restoration work;
- documentation of significant dates and periods of construction;
- a guide for budget and schedule planning for the restoration work;
- a compilation of the existing condition of key elements of the building;
- documentation of physical and functional problems that require priority attention;
- a readily accessible reference document for Historic Ketchikan, staff, subsequent professional consultants, building officials, construction teams and others;
- a resource for further work and investigation; and
- a record of completed work.



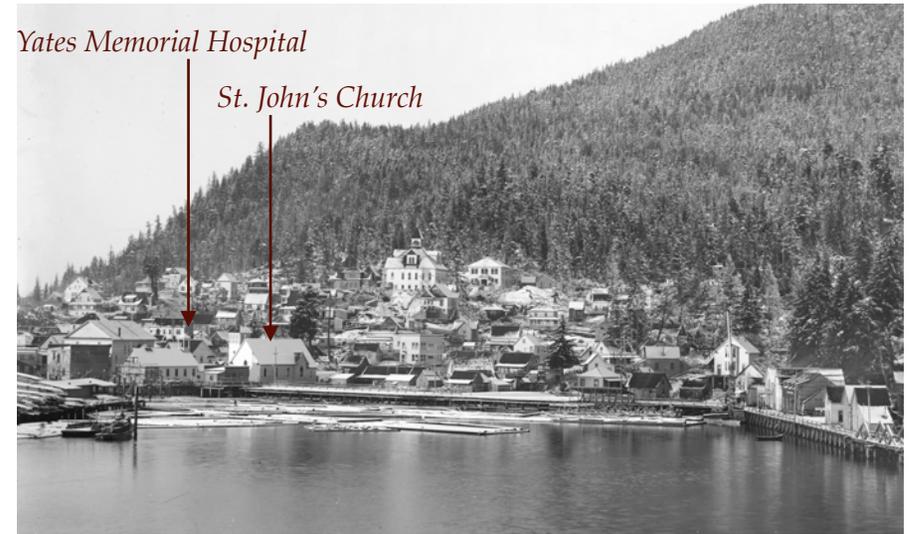
Brett Serlin of Tongass Engineering conducting a walkthrough and preliminary evaluation of piling conditions along the west wall of Yates Memorial Hospital.

SITE FEATURES

The 1914 Sanborn map shown below helps tell the story of how Downtown Ketchikan changed during the time of its most rapid development (1900 to 1914) and how the setting of the Yates Memorial Hospital changed. This period established the commercial pattern of land use that survives to this day. Most notable is how Downtown expanded, not up the slopes on solid ground, but out over the tide flats on wood pilings. The abundance of local timber, especially rot-resistant cedar, made this possible.

The Yates Memorial Hospital (#5 in the map below) was, at its inception, a waterfront property built on pilings over tidewater. The original shoreline at the time of construction of the building is shown by the dotted line. The 16 historic buildings and objects numbered on the map still stand today (2013).

The town rapidly grew over the water and soon the Yates Memorial Hospital was no longer on the waterfront but instead centered near the heart of the community. By 1906, a broad, planked Mission Street extended on pilings from Main Street, past the building, the St. Agnes Mission and St. John's Church, to Stedman Street.



In this 1906 photo, the Clergy House (soon to be Yates Memorial Hospital) was still on the waterfront and the wood-planked Mission Street had just been built from Main to Stedman Streets.



1914 SANBORN FIRE INSURANCE MAP

BUILDINGS

1. US Custom House (1900)
2. Fo'e'sle Bar (1900)
3. St. John's Episcopal Church (1903)
4. Agnes Edmonds House (1904)
5. Arthur Yates Memorial Hospital (1905)
6. Stedman Hotel (1905, modified extensively)
7. 316-320 Mission Street (Scanlon Gallery), (1906)
8. 301-305 Bawden Street (1908)
9. First National Bank (1911)
10. JR Heckman Bldg 1 (1912)
11. Bon Marche (1912)
12. 116 Front Street (Rainbird Bar), (1912)
13. Tongass Trading Co. (1913)
14. JR Heckman Bldg 3 (1913)

OBJECTS

15. Chief Kyan Pole (1898)
16. Chief Johnson Pole (1907)

In the 1940s, much of Mission Street was filled and the wood-planked deck was replaced by pavement. Fill was placed under much of the Yates Memorial Hospital building surrounding the cedar piling that extended to the solid beach below. Many of these piles remain today.

In 1946, an addition was placed on the site where the hospital stood and this new addition (the Tobin Building) served as the printing press location and offices of the *Alaska Sportsman* magazine, then housed in the hospital building. While most of the hospital building remained intact, an entry porch was removed and the north elevation was substantially altered. The Tobin Building now houses church offices on the ground floor and an apartment and unoccupied space on the second floor. The Yates and Tobin buildings are connected by a stairway from the ground floor of a common entry. This historic building assessment focusses on the Yates Memorial Hospital and addresses the Tobin Building insofar as its connectedness is concerned in terms of building code and architectural solutions.

The Episcopal Mission complex includes the Yates and Tobin buildings, the St. John's Church, parking areas at both the Mission Street and Dock Street levels and two garden areas--one along Mission Street and one at the base of a slope separating the two parking areas.

The Yates Memorial Hospital fronts on Mission Street which today is a busy pedestrian corridor from the cruise ship docks to the Creek Street Historic District, the Stedman Thomas Historic District, the Thomas Basin area and other destinations. The building is prominent along this route and is among a cluster of historic buildings including the St. John's Church (built in 1903 and Ketchikan's oldest church on its original site); the Bon Marche building (1913); the 411 Mission building (1920); the Coliseum Theatre (1923 and rebuilt in 1957 after a fire); the 603 Mission Street building (1919); the New Deal building (1930); the 435 Dock Street building (circa 1920); the Knickerbocker Hotel (circa 1920; the Agnes Edmond House (1904 and the former residence of the early Episcopal missionary); the *Ketchikan Daily News* building (1925); 301 Bawden Street building (1908); and other historic properties that contribute to the Downtown Historic District's period of significance.

The vision for site development of the Episcopal properties is to create a central focus for a renovation that features new arts and humanities facilities, pedestrian amenities, enhancement of the historic gardens, year-round retail activities and preservation of important historic properties, including both the Yates Memorial Hospital and the historic St. John's Church. This vision-- called "Mission Square"-- would include a boardwalk connecting Dock Street to Mission Street running immediately adjacent to both the Yates and Tobin buildings.

While the future of the Tobin Building is presently uncertain, the sketch below illustrates one alternative for repurposing and redeveloping the Tobin Building in an historically appropriate fashion. The proposed boardwalk would run alongside a restored Yates Memorial Hospital and, in this example, a renovated Tobin Building.



Site planning will be a key element in the design development phase of Yates Memorial Hospital restoration in terms of access, landscape amenities and architectural treatment of the adjoining Tobin Building. It is expected that Historic Ketchikan will work closely with the Episcopal Diocese (owner of the Tobin Building) to assist its determination of the future of that building.

BUILDING ENVELOPE

The Yates Memorial Hospital building is a two-story, wood frame Colonial Revival-style residential building on piling foundations constructed over tidewater. The building footprint is approximately 1,970 sf. It has a steep roof (12:12 pitch) with an unfinished attic. It was built originally on cedar and spruce piles and remains on a piling foundation buried in place by subsequent fill.

The Mission Street and east facades feature a bay window, a front sun porch (now covered), turned eaves, cedar lap siding, wide corner boards and fascia trim. While vinyl siding now (since the 1970s) covers the original lap siding and much of the historic trim, the underlying siding and trim remain in restorable condition. The vinyl cladding has served to protect the original cedar siding from the elements on these two “weather” sides of the building.

The most significant change to these facades has been the enclosure of the entry sun porch which had been a dramatic element of the building appearance. The remaining porch envelope and structure have not been altered thus enabling ease of replacement of the porch fenestration. The primary change to the building envelope occurred with the 1946 construction of the Tobin Building impacting the north facade. Only the upper gable of that facade remains intact. The west building facade has not been altered and retains all detailing that was in place from the building’s 1909 expansion into its hospital function.



On the west facade, the original cedar siding was not clad in vinyl but received a treatment of sprayed-on plastic material. All of the original fenestration detailing remains. This elevation is protected from the elements and shows little deterioration.



As shown in this August, 2013 photo, the east and south (Mission Street) elevations have a vinyl siding cover added in the 1970s. As part of the historic building assessment, a portion of the vinyl siding was removed to expose the original cedar siding and determine its condition for restoration. The original siding is still in excellent condition and needs only minor repairs.

Tobin Building



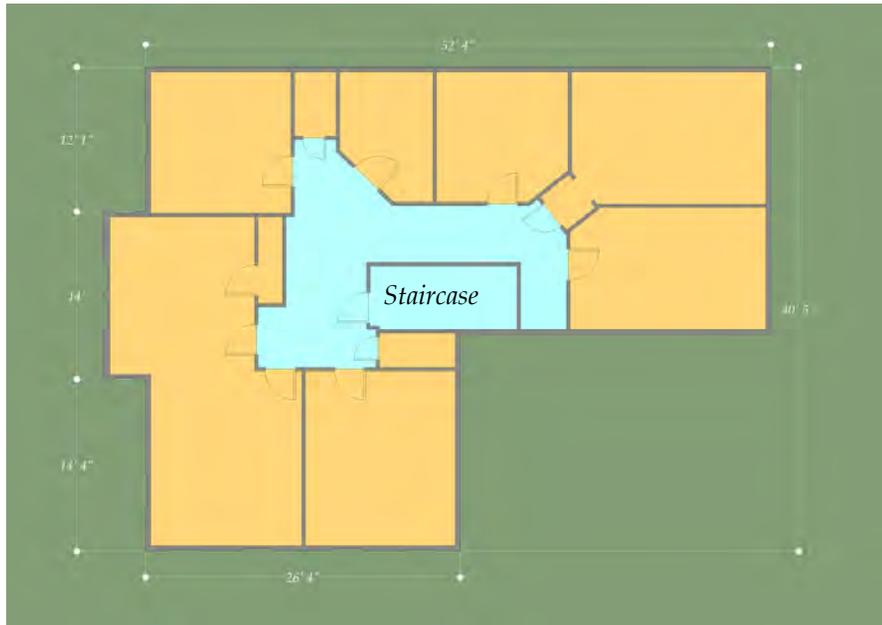
The only visible remaining portion of the Yates Memorial Hospital’s north elevation is the gable and a portion of the 2nd floor elevation as shown in aerial view. The Tobin Building immediately abuts the Yates structure and conceals the remaining elements of the north facade. The original interior space was not compromised by the addition of the Tobin Building.

The floor structure is 2 x 12 joists on 2’ centers resting on heavy timber 8 x 10 caps. The caps rest on wood piles throughout (as described in the following section). The exterior walls are full cut 2 x 4 studs sheathed in diagonal 1 x 8 material for shear strength. They are clad in cedar, 5” exposed lap siding and, as noted above, the south and east facades have been clad in vinyl siding and the north facade abuts the Tobin Building.

The first floor is approximately 1,970 sf including an added room on the northeast corner built at the time of construction of the Tobin Building. The second floor is approximately 1,570 sf. All interior walls are 2 x 4 studs. The wall and ceiling surfaces are lath and plaster except in limited areas where sheetrock was used for interior modifications.



The first and second floors total approximately 3,600 sf. A central staircase serves the second floor. There are two entries: one on the Mission Street elevation and one on the east elevation. The light blue in the first floor plan indicates the entry porch area; the red-orange indicates a room added to the building in 1946.

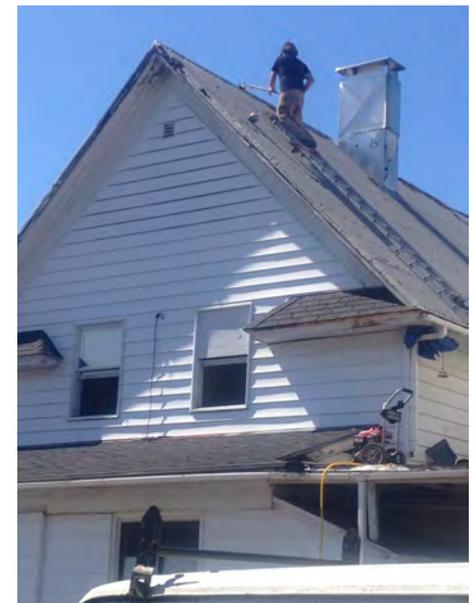


The second floor is accessed by a central staircase. The floor joists that carry the second floor are 2 x 12s on 2' centers. The floors are fir throughout. The walls are 2 x 4 studs.

The large attic is unfinished and has been used as storage. It is accessed through a ceiling hatch in the main hallway of the second floor. The highest point in the attic measures 8 feet. The floor joists that carry the attic floor are 2 x 8s.

The roof is a 12:12 pitch with aluminum roofing over most of the historic building. The roof rafter braces are 2 x 6 on 2' centers. The gable ends have been built with diagonal sheathing. The primary roof structural assembly appears sound and dry. Its outermost layer began as cedar shingle and, according to research of photos, had at least three iterations of cedar shingle roofs. While three brick chimneys penetrated the roof in the building's earliest days, only one remains and it has recently been enclosed in a stainless steel chase and cap. The present roof has recently been repaired and re-secured by Historic Ketchikan to extend its life several years. It drains to a gutter downspout system that is also being repaired to assure that the interior remains dry and rainwater is discharged away from the building.

There are two secondary roofs. The sun porch entry off Mission Street is 4:12 pitch with composition shingles in good condition. The roof over the east entry is only slightly pitched with hot mop and rolled roofing in poor condition.



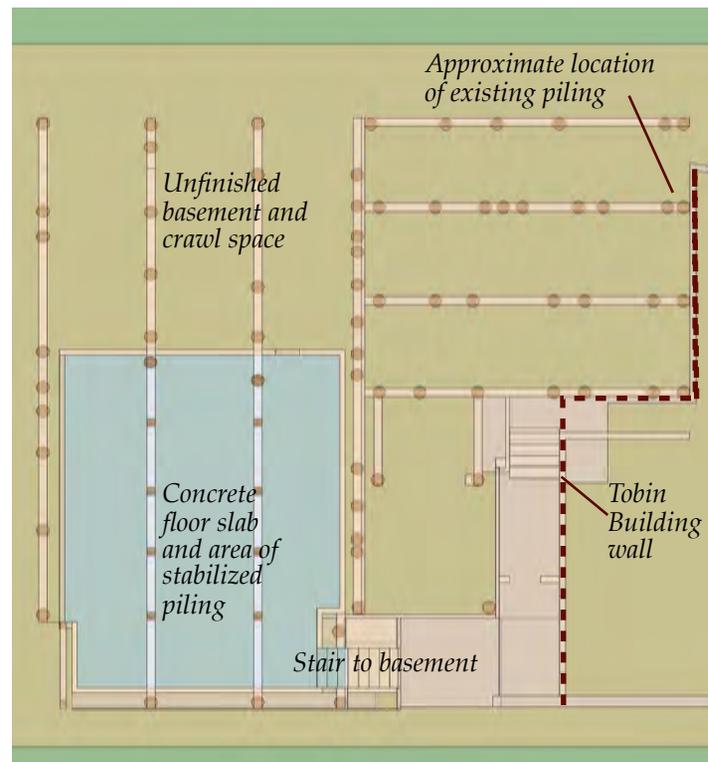
Historic Ketchikan recently re-fastened the aluminum roof to extend its life. There are several bends and creases in the roof skin, however none that allow entry of rainwater. The chimney flashing has been resealed and the gutter/downspout system is being repaired.

BUILDING FOUNDATION

The Yates Memorial Hospital building was constructed on piling over tidewater. Over the course of removing the wood-planked Mission Street and installing rock fill in its place, much of the building foundation was altered. The original cedar piling were partially buried in place and, as needed over time, were individually replaced. In six locations, temporary screw jacks had been installed to provide some stability (these appear to have been in place for at least ten years, if not longer).

The foundation of the building is in poor condition and has been for many years. This is evidenced by the drop in floor elevation beginning at the hallway adjacent to the interior stairway and increasing toward the west edge of the building. The drop in floor level totals approximately 6". In the south portion of the building facing Mission Street, the response over the past several decades to this inclination in the building has been to build a temporary floor level rather than address the problem. The remaining floor inclinations on the first and second floors have not been altered.

A partial basement exists at the southeast one third of the structure and, in this area (approximately 380 sf), there is a concrete floor slab. Concrete foundation walls 3 feet in height surround this space. Plywood shear walls have recently been installed over a portion of these concrete walls for stabilization purposes. In addition, eight new piles have been installed in this area for further building stabilization pending a comprehensive foundation repair. The remainder of the space under the building is unfinished. The basement and unfinished areas extend above grade (the first floor level averages 42" above grade).



The above foundation plan illustrates the basement/crawl space conditions. The round piling symbol shows the extent of remaining piling--virtually all of which must be replaced. The adjacent Tobin Building is built on a concrete slab.

In the remaining unfinished area (approximately 1,400 sf), there are 54 piles in fair to extremely deteriorated condition. Many of these piles need to be replaced immediately (see piling existing conditions on facing graphic). Most of this unfinished area has adequate work space to allow workers and material to be accommodated. The ceiling height is approximately 5-6' in most areas. Access is available from the space between the building and the adjacent building to the west. In addition, concrete would be easily available for delivery to footing forms from Mission Street (see options for piling installation on the following page). In addition, the perimeter wall of the sun porch requires replacement of piling and strengthened connections to the caps supporting the porch floor level.

The structural system resting on the piling is in very good condition. 8 x 10 heavy timber caps span the piling and there are very few signs of deterioration of these members. The caps have not been mechanically connected to the pilings and this would be addressed as new pilings were installed.



Historic Ketchikan recently completed a temporary stabilization project in the partial basement area. A shear wall was installed on the existing concrete stub walls and 8 new piling were installed with steel angles connecting the piling to the piling caps.

Years of exposure with little maintenance has severely degraded the piling. Significant upgrades are of highest priority before more serious problems arise. While catastrophic failure may not be likely in the immediate future, continued degradation of the foundation vertical support members will result in continuous settling and cracking throughout the interior drywall, exterior sheathing and siding, and, potentially, structural members. Furthermore, the ability of the foundation to absorb and disperse the energy from ground movement, such as a seismic event, is of concern.

The first step in correcting the foundation deficiencies is to stabilize the building through the use of temporary jack supports. The next step is to install adjustable jacks and slowly and deliberately reset the building back to level, or as close as possible without damaging the structure.

Once the building has been restored to near level position, permanent structural support with new, sound vertical support members must be installed. The pile replacement should occur according to an engineered plan showing the location, type, size and method for securing the new vertical support members to carry the calculated design load.

The new vertical support members must be set on a firm, unyielding base to prevent settlement. This means either installing new vertical members an unknown depth to bedrock or over-excavating the existing ground material and slowly compacting non-frost susceptible material to provide support for a new cast-in-place concrete pad. Wood, steel, or concrete vertical supports can then be sized for the loading requirements and set on the new concrete pads. Given the site constraints at the interior of the building, excavating and casting individual concrete pads may be the more practical approach for moving materials and equipment.

Another feasible option to replace piling may be installing steel helical piers. The helical piers can be installed using a portable machine and are driven to a predetermined design torque or to refusal, such as bedrock. The helical piers conveniently come in short sections easily handled by one person. Extension pieces are connected with steel couplings as the pier is installed. Further investigation would be necessary to determine the required installation depth.

Whichever option is used for replacing the existing piling, the tops of every new vertical support member should be mechanically attached to the floor beams above after verifying the structural integrity of each beam, as several areas of deterioration were observed. If setting the new vertical supports directly on concrete pads, mechanical attachments should occur at the bases, too; this is not necessary for piles driven into the ground.

As the basement area is currently being used for storage and shop space, the space can be conditioned by installing a new continuous perimeter wall set on a concrete footing around all or a portion of the building. The new perimeter wall can either be a concrete stem wall or a treated wood stud wall.



The log posts supporting much of the building are significantly deteriorated. In many cases, they have been augmented by screw jacks, as shown here. The 8x10 heavy timber piling caps are in generally excellent condition.



Piling conditions at the west elevation. In this case (and it is typical), a new creosote pile was placed between two adjacent deteriorated piles to carry the building load. There is no attachment between the piles and the cap.

WINDOWS & DOORS

The major contributors to the Yates Memorial Hospital's visual character include its setting on Mission Street, the roof features, the soffit and corner trim, the original exterior siding, and, in particular, the fenestration. It is the unique bay window on the ground level, the projecting bay window on the second floor reflecting the lower bay window, the two sets of double-hung windows along Mission Street on either side of the bay window projection, and the small, low windows on the second floor that contribute to the building's character.

In addition, the now missing sun porch entry and its French windows and entry door are other important character defining features. With the exception of the sun porch fenestration, most of the original historic windows are still in place. Some have been covered over by the vinyl siding and some have had their decorative details removed. Almost all the windows retain their original glass, frame and sash, and exterior side and head trim. On the prominent east facade, the two original double-hung windows were removed and replaced non-matching windows of dimensions differing from the originals. In these two cases, all of the side and head trim and decorative detail has been removed.



The south and east facade fenestration in 1952



The south and east facade fenestration in 2012

In spite of nearly 110 years of exposure to Ketchikan's predominant southeast winds and rains, most of the windows on the south facade are in repairable condition. Each one of the window units was evaluated as part of this existing conditions survey. In most cases, some form of window decay has occurred resulting from lack of regular maintenance and resulting entry of moisture. In some cases, water has entered around the edge of the frame and the glazing putty has been cracked or partially missing allowing water to saturate the wood.

In the case of all twelve windows on the south facade, the sills need repair or replacement. While they have been properly designed with sufficient slope downward away from the building and with a dripline along the underside of the sill, the ravages of time and no maintenance has ultimately taken its toll. Several sills need complete replacement; others can be restored.

The paint condition on many of the frames and sashes have begun to fail allowing water penetration. Upon inspection of the wood of each of the windows, sound conditions prevail--with exceptions. The corners of the bottom rails are points where water has collected and without good paint condition, deterioration has, in a number of instances, set in. Upon inspection with an ice pick, in a few cases, penetration was possible deep into decayed wood.



As one of Historic Ketchikan's first stabilization steps, the bay window on the first floor required immediate repair. The glass in the lower sash of the large double-hung, bay window (on the right) had been broken for a significant period and only partially covered with plywood allowing moisture to enter the building. In this case, the sash had to be removed and repaired. The bottom rail was significantly deteriorated and this required splicing new wood into the existing member and then sealing, priming and painting the sash and replacing the glass.

On the extended bay window overhang on the second floor, most window details and framing remain intact and in good condition.



On the west facade, protected from the weather and remodelers, all historic windows remain in the various configurations occurring on the other facades, and all detailing is intact. These windows can serve as the model for replacing any of the period details on the south and east facade windows.



In this 1910 photo, the primary Mission Street entry and the sun porch fenestration was in place. These features lasted more than 60 years and the four columns separating the window sets and the entry door are still in place.

In all cases, the original and remaining windows were single glazed. While energy efficiency is an important consideration for replacements, it should not dominate the design and retention discussion. A historic wooden window with a high quality storm window added for cold months can thermally outperform a new double-glazed metal window. In addition, careful design of new wood windows with double glazing can result in historically appropriate proportions and profiles if careful attention is paid to the existing window details.

None of the primary entry doors remain except the double doors off the interior of the porch entering into the main rooms facing Mission Street. These doors appear to be in their original location. The entries at both ends of the porch were removed at varying points in the building's history. The framing and separating columns are still in place for these entries.

There is sufficient photo documentation to reconstruct both entries and the porch windows if that course of restoration is determined. The patterns of openings and sizes can be determined from the remaining framing, the proportions of the frame and sash, configuration of window panes, profiles of muntins, and design of decorative elements can be identified from photos collected as part of the historic documentation for this report.

INTERIOR FEATURES & FINISHES

The interior of the Yates Memorial Hospital building is very much as it was in the early 1900s. The staircase to the second floor retains its original character with turned wood railings, baluster and moldings. It is flanked by the original interior doors, transom windows, base boards and closets, all untouched except by successive coats of paint. Upstairs the original atmosphere of the hospital bedrooms is expressed in low window sills and the original fir floor.

In the downstairs, the original fireplace remains much as in the earliest photos. The window and door detailing and much of the hardware has not changed. Even the concrete tile concave base in the men's surgery room remains. Of the three chimneys serving to heat the hospital, all remain although only the one serving the fireplace penetrates the roof.



The same fireplace prominent in the 1912 "Spirit of Missions" photo remains today in the first room just inside the entry from Mission Street. It still functions but will require masonry work on the hearth and firebox.

The original lath and plaster finishes on the ceilings and walls remain intact with the exception of areas receiving modification, including:

- the interior wall of the second floor east facade where all windows were covered or replaced (see comments under windows and doors);
- the room added to the building in 1946, as well as the adjacent room to the immediate south; and
- the porch entry area.

In some of the original lath and plaster areas, later application of texturized materials was added and forms the surface of the plaster today. The date



The staircase is one of the special interior architectural elements. It had been treated as an art form: handsome embellished newel posts, turned balusters, strong handrail, and coats of many colors. All staircase elements remain in excellent condition.

when this material was applied is unknown. Various paint schemes have been applied over the years as evident in the few historic interior photos we have found and in field investigations. There has been water damage to the plaster in some areas from rain intrusion and from broken water pipes. In general, however, the interior finishings are in good condition.

In the 1946 one-room addition to the building, and the adjacent room in the original building footprint, the interior features are inconsistent with the rest of the building. Over time, a dropped ceiling was added in both rooms, a window inconsistent with others in the building was added, and finish materials inconsistent with the remainder of the building were applied.

The interior window detailing has been retained with very little modification--with two exceptions: 1) the burying of two small windows on the east facade under sheetrock and the replacement of the two double-hung windows on that same facade and resultant loss of all original interior trim on those windows; and 2) the detailing of the windows of the added room to the original building (1946) was not consistent with the earlier windows. All other door, hallway and stairway trim is likely original. Many of the floor surfaces remain in fir except in rooms that have been carpeted and in kitchen and bathroom areas where linoleum has been applied over the fir flooring.

There are two bathrooms on the first floor, both in poor condition. Historic Ketchikan has made them operational but virtually all surfaces and fixtures need to be replaced.

ACCESSIBILITY

Historic properties are not exempt from the ADA Accessibility Guidelines. Barrier removal is required if the removal is readily achievable. The ADA takes into account, however, the national interest in preserving historic properties and barrier removal would not be considered “readily achievable” if it would threaten the historical significance of a building such as the Yates Memorial Hospital that is eligible for listing on the National Register of Historic Places or is designated as historic under Alaska or local law.

In identifying accessibility modifications, the assessment team used a three-step approach to determining solutions. In the first step, the character-defining features of the building that might be affected by accessibility modifications (all character defining features are described later in this report). The second was to examine the existing access and the specifics of improvements needed. And the third was to evaluate the options within a preservation context.

In assessing the character-defining features that might be affected, the options for improved access focused on the existing entry and the side entry on the east elevation. The key features are the historic garden along Mission Street adjacent to the principal entry, the historic entry stairs off Mission Street and the historic glass-enclosed entry serving both the Mission Street stairs and a potential entry at the north end of the porch (the porch historic fenestration has been removed but a restoration priority is to reconstruct it).



Key character-defining features affecting ramp accessibility:

- historic entry porch*
- historic entry doors*
- historic entry stairs*
- Mission Street garden*



In considering the existing and required level of accessibility, it is clear that there is not an accessible entry available (the first floor level is approximately 42” above grade and sidewalk level). A ramp will be required that will need to be approximately 42’ in length to meet ADA slope requirements. This will be a difficult accessibility requirement to meet given existing configurations of entry doors, interior corridors, public restrooms, and other barriers.



This model illustrates a likely option for ADA access entering the building from the boardwalk on a ramp configuration that could enter the building at the north end of the restored entry porch.

There is insufficient area near the Mission Street entry to accommodate the ramp without destroying the garden and historic stair features. The structure would also become a major distracting element to the remaining character defining features of the important Mission Street facade.

Only two solutions provide opportunities for accessibility without threatening or destroying the defining features that help make this property significant. One is to bring the ramp from a point adjacent to the Mission Street entry stairs along the porch elevation turning at the north corner of the porch and using a ramp configuration that would enable entry on to the north end of the porch. A second alternative would be to use a double ramp configuration in the area now occupied by a room added after the building’s period of significance (see sketch above).

Both of these solutions would enable access through the primary public entrance without permanent damage to character-defining features. Neither solution is easy and in the design development stage, Historic Ketchikan will further evaluate these alternatives for impacts to the historic integrity of the building.

Other priorities for accessibility improvements are to provide access to the programs and activities in the building and to the restrooms. Our analysis indicates that these priorities can be met without damage to interior features.

FIRE & LIFE SAFETY

The Ketchikan Municipal Building Code recognizes the validity of alternative methodologies for addressing the needs of qualified historic resources. This does not exempt a project from compliance with the local building code, but rather allows for more flexible and creative solutions to increase safety while maintaining historical significance and character-defining features. Any construction project must meet a defined minimum level of life/safety requirements to protect human life and the building itself. The City now operates under the 2009 International Building Code and is expecting to soon adopt the 2012 International Building and Fire Codes.

A. Possible Occupancy Types

In analyzing the code requirements for the building restoration, the future categories of use (as per Chapter 3 of the present code) were considered:

- B (Business - includes offices, beauty shops, post offices, outpatient clinics)
- M (Mercantile – retail space, markets, sales rooms, drug stores)
- R-1 (Short-term lodging - hotels and boarding houses)
- A-2 (Assembly – restaurants and bars)

B. Required Fire Separations between Occupancy Types

The required fire separations between occupancy types (from Chapter 5, Table 508.4) are as follows:

Between B and M uses: No fire separation required.

Between A* or R and B/M, and between A and R:

- 1 hour separation required in sprinkled building.
- 2 hour separation required in non-sprinkled building.

*Note: If the occupant load of the A use is less than 50, or the floor area of the A use is less than 750 s.f., it is considered a B occupancy.

C. Allowed Building Floor Area and Height

In considering the allowed building floor area and height (Chapter 5, Table 503), the approximate existing floor areas of both the Yates Memorial Hospital and the adjoining Tobin Building are estimated as follows:

| | Yates | Tobin | Total |
|----------------------------|-------|-------|----------|
| First Floor | 1,970 | 1,935 | 3,905 |
| Second Floor | 1,570 | 1,935 | 3,505 |
| Subtotal | 3,540 | 3,870 | |
| Total Building Floor Area: | | | 7,410 sf |

The existing building height is approximately 27 feet, 2 stories

The allowed building height and floor area for V-B construction, non-sprinkled and sprinkled* (Table 503 and Section 502.4) is calculated as:

| Use | NS Height | NS Floor Area | Sprinkled Height | Sprinkled Floor Area |
|-----|-----------|--------------------|------------------|----------------------|
| B | 1 story | 9,000 sf | 2 stories | 27,000 sf |
| M | 2 stories | 9,000 sf per floor | 3 stories | 27,000 sf per floor |
| R-1 | 2 stories | 7,000 sf per floor | 3 stories | 21,000 sf per floor |
| A-2 | 1 story | 6,000 sf per floor | 2 stories | 18,000 sf per floor |

*Note: since an as-built site plan is not yet available, the potential allowable floor area increase based on distances to property lines has not been analyzed.

D. Building Type of Construction and Fire Resistance Ratings

1. Existing Building Construction Type: V-B, constructed of any material permitted by code (602.5) and with no fire resistance rating required at structural and non-structural elements (Table 601).
2. Existing Distances to Property Lines:

| | |
|---|---------|
| Yates South (facing Mission Street) | 25 feet |
| Yates West (adjacent to Neighboring Building) | 5 feet |
| Tobin West (adjacent to Neighboring Building) | 0 feet |
| Tobin North (facing Dock Street) | 15 feet |
| Tobin East (facing Church) | 40 feet |
| Yates East (facing Church) | 40 feet |
3. Fire resistance at exterior walls based on distance to property lines are as follows (Table 602):

| Distance to Property Line | M Occupancy | A, B, and R Occupancies |
|-----------------------------|-------------------------|-------------------------|
| Less than 5 feet: | 2 hours | 1 hour |
| 5 feet to less than 10 feet | 1 hour | 1 hour |
| 10 feet and greater: | No fire rating required | No fire rating required |

4. Allowed Window Openings at Exterior Walls (Table 705.8):

UP=unprotected, NS=non-sprinkled, S=sprinkled, P=protected (fire rated).

Percentages indicate amount of window area vs. the area of the surrounding wall surface.

| Distance to Property Line | UP/NS Openings | UP/S Openings | P Openings |
|------------------------------|----------------|---------------|------------|
| 0 to less than 3 feet | None | None | None |
| 3 feet to less than 5 feet | None | 15% | 15% |
| 5 feet to less than 10 feet | 10% | 25% | 25% |
| 10 feet to less than 15 feet | 15% | 45% | 45% |
| 15 feet to less than 20 feet | 25% | 75% | 75% |
| 20 feet to less than 25 feet | 45% | No limit | No limit |
| 25 feet to less than 30 feet | 70% | No limit | No limit |
| 30 feet and greater | No Limit | No limit | No limit |

- Parapets are generally required wherever exterior walls are required to be fire resistant construction based on distance to property lines (705.11), with the following exception for 1-hour fire rated walls:

1-hour fire rated walls are allowed to terminate at the underside of the roof sheathing if roof/ceiling framing elements, and structure supporting those elements, are of 1-hour fire resistive construction. Where ceiling joists are parallel to the fire wall, the 1-hour rating can terminate 4' from the interior wall surface. Where perpendicular to the fire wall, the 1-hour rating must extend the entire span of the ceiling joists.

If no parapet is provided, the roofing may not be less than a Class B fire rating. If wood shingles are used, achieving this rating would require treatment with a fire-retardant coating.

Openings in the roof may not be located within 10' of fire resistance rated exterior walls (5' is allowed in R occupancies).

- Projections: Roof overhangs, cornices, and other façade projections may not overhang more than 12" into the distance where openings are prohibited (e.g., a wall 5' from the property line may have 12" projections, but a wall 4' from the property line is not allowed any projections). Where a combination of protected and unprotected overhangs are permitted, projections may not encroach more than 1/3 the distance to the property line (e.g., a wall 10 feet from the property line may have 3'-4" deep projections).

E. Sprinklers

- City of Ketchikan Title 18, Chapter 18.38 is more restrictive than the IBC in most cases. Title 18 specifies that new buildings with more than 4,000 s.f. of first floor area or 8,000 sf of aggregate area on all floors, and R-1 occupancies with 12 or more dwelling units, must be sprinkled. For existing buildings, if remodel areas are in excess of the total floor areas listed, the sprinkler ordinance is enforced. If the use category is changed to a more hazardous category and the building exceeds the floor areas listed above, the ordinance can also be enforced.
- B Occupancies: IBC 2009 does not specify a sprinkler requirement for most Group B occupancies. If ambulatory care providers are a potential tenant type, see 903.2.2 for sprinkler requirements.
- M Occupancies: Sprinklers are required where the fire area exceeds 12,000 sf, is more than 3 stories above grade, or the mercantile area is used for display and sale of upholstered furniture.
- R-1 Occupancies: All Group R-1 categories are required to be fully sprinkled.
- A-2 Occupancies: Sprinklers are required where the fire area exceeds 5,000 sf, the occupant load exceeds 100 people, or the A-2 area is on a level other than the exit discharge.

F. Fire Alarms and Smoke Detection

- B Occupancies: IBC 2009 does not specify a fire alarm requirement for most Group B occupancies. If ambulatory care providers are a potential tenant type, see 903.2.2 for fire alarm requirements.
- M Occupancies: A fire alarm system is required where the occupant load of all M areas on all floors exceeds 500 people or the occupant load above or below the level of exit discharge exceeds 100 people.
- R-1 Occupancies: A manual fire alarm system is required (see 907.2.8.1 for specific information). Automatic smoke detection is required throughout interior corridors serving sleeping units.
- A-2 Occupancies: Per State of Alaska code amendments, a manual fire alarm system is required where the occupant load exceeds 100 people.

G. Occupant Loads and Exit Distances:

- Applicable Occupant Load Factors (square footage divided by the OLF = occupant load):

| | |
|---|-----------|
| B: | 100 gross |
| M: Basement and Grade: | 30 gross |
| M: Other floors: | 60 gross |
| R-1: | 200 gross |
| A-2 (Unconcentrated/Tables and Chairs): | 15 net |
- Spaces with 1 Exit (Table 1015.1):
 - A,B, M: If the occupant load exceeds 49 people, more than one exit must be provided, exit doors must swing out, and lighted exit signs are required.
 - R: If the occupant load exceeds 10 people, more than one exit must be provided.
- Stories with One Exit (Table 1021.2):

| | | |
|---------------|----------|---|
| First Floor: | A,B, M: | 49 Occupants and 75 feet travel distance. |
| | R: | 10 Occupants and 75 feet travel distance. |
| Second Floor: | A, B, M: | 29 Occupants and 75 feet travel distance. |
| | R: | Not allowed. |
- Corridor Fire Resistance Rating (1018.1):
 - A, B, M: If the occupant load of people using the corridor exceeds 30 people the corridor must be 1-hour fire resistive construction. No rating is required if the building is sprinkled.
 - R: If the occupant load of people using the corridor exceeds 10, the corridor must be ½ hour fire resistive construction (sprinklers are required for group R occupancies).

H. Occupant Load Calculation:

In order to address the exit requirements of the combined Yates and Tobin buildings, the following calculation and finding was prepared.

| | | |
|---------------|--------|---|
| 1st Floor - M | Yates: | 1,970/30 OLF = 66 People (2 Exits Required) |
| | Tobin: | 1,935/30 OLF = 65 People (2 Exits Required) |
| 2nd Floor - B | Yates: | 1,570/100 OLF= 16 People (1 Exit Required if Exit Distance is within maximum) |
| | Tobin: | 1,935/100 OLF= 19 People (1 Exit Required if Exit Distance is within maximum) |

From this initial calculation of assumed uses in both buildings, occupancy loads are such that one exit would not be sufficient to serve both the Yates and Tobin second floor areas.



A digital model of the Yates Memorial Hospital was prepared for this historic building assessment to aid in analyzing code-required modifications to the building; depicting reconstruction of piling, entry porch and other modifications; portraying current conditions; and serving as baseline drawings for proposed work.

Fire and Life Safety Conclusions and Recommendations

The preceding analysis of fire and life safety code requirements is intended to provide a framework for restoration and occupancy decisions. Code requirements are essential to understand at this stage of the building assessment so as to accommodate them in a manner that does not jeopardize the building's materials and historic character. While the Yates Memorial Hospital is the subject of this assessment, this code analysis has included the abutting Tobin Building due to the present integrated configuration of the two buildings. At this stage of restoration planning, a decision has not been made as to the modifications to be made to the Tobin Building to accommodate restoration of the Yates Memorial Hospital.

This analysis has resulted in a number of conclusions that are important in determining:

- appropriate occupancies that will minimize impacts on the building's historic character;
- selection and rationale for the most appropriate approach to treatment; and
- development of specific work recommendations.

There are a number of team recommendations that have grown out of this code analysis that may affect occupancy considerations, design decisions and materials selection:

- consider limiting the size of any possible restaurant and/or coffee shop tenants, to avoid having to install fire separations within the building (which would be detrimental to the historic character of interior spaces such as the existing open stair);
- consider excluding hotel and boarding house uses from the building due to more stringent exiting and fire protection requirements that would have a detrimental effect on the historic character of the interior and exterior spaces;
- if uses are limited to B and M uses, there is no need to fire-separate the Yates and Tobin sections of the building, or to separate the first and second floors of the building;
- exact distances to property lines on the west side of the building should be determined by a professional land surveyor;
- fire resistance rating and opening restrictions will be required at the west wall adjacent to the neighboring property. Removal of wall and roof projections may also be required depending on the exact location of the property lines. It may be possible to avoid constructing a parapet wall on that side of the building, if fire resistive roofing and ceiling construction is utilized; and
- a parapet wall, restricted openings, and removal of wall and roof projections, may be required at the west wall adjacent to the neighboring property, depending on the distance to the property line.

HAZARDOUS MATERIALS

Asbestos, Lead and Mold

Because lead and asbestos was commonly present in buildings built at the time of the construction of the Yates Memorial Hospital and they are found in a wide range of building materials, it is wise to assume that these two materials may be present in the building. Hazardous-material abatement can raise restoration costs considerably, so it will be critical to undertake a complete evaluation of any such materials. As part of the design development phase of the restoration, Historic Ketchikan will contract with certified contractors for analysis, abatement and management of hazardous materials handling and disposal

Insulation, wallboard, plaster, tile, window glazing, siding surface treatments and sheet vinyl flooring are likely sources for asbestos. In addition, in the course of the electrical system review, cloth insulation was noted on several of the older electrical feeder and branch circuits. This type of insulation may contain asbestos. A certified asbestos abatement contractor will take samples of these and other materials. If asbestos is found, it will need to be removed using methods described in an approved abatement plan.

Similarly in buildings of this age, lead base paint may be encountered during the demolition and construction phase of the project. Surface finishes should be tested for lead based paint and if any is found, it will be removed using methods described in an approved abatement plan.

In addition to these two substances, the possible presence of mold in the building is of concern. With the building previously unheated in a wet environment like Ketchikan, mold or mildew could be expected. One of the initial steps taken by Historic Ketchikan was to take all necessary steps to prevent water or moisture intrusion.

While there are not visible signs of mold or mildew in the building, moisture/mold assessments will be conducted to identify any root cause of mold development and determine a repair or corrective action to mitigate the root cause. If mold is evident, Historic Ketchikan will then work with a mold remediation contractor to remediate the growth.

As noted earlier, Historic Ketchikan now occupies the Yates Memorial Hospital and since April, 2013, the building has been heated and ventilated. There is no longer water intrusion. In addition, initial steps have been taken by Historic Ketchikan to remove wet and rotted materials and this will continue as the building is readied for the restoration steps outlined in this historic building assessment report.

MECHANICAL SYSTEMS

In team reviews of the mechanical systems, a wide range of deficiencies were noted. These included:

- the boiler for the heating system of the Yates Memorial Hospital is located in the adjacent Tobin Building and has not been used for many years;
- the water piping is substandard throughout (it is exposed in many locations and is not properly supported and thus exposed to damage);
- the commercial range in the lower kitchen is not connected or vented to the exterior;
- the drain waste plumbing is also substandard (traps are unvented in some locations and nonexistent in others);
- plumbing fixtures (toilets, sinks, showers) are in generally poor condition and should be replaced;
- no range hood exists in the upstairs kitchen; and
- significant portions of the heating system piping are not insulated and these pipes run through a crawl space that is open to outside air.

The team concluded that all mechanical systems are in poor condition and should be replaced at the onset of restoration. All existing mechanical systems should be removed.

The team favors introduction of a sprinkler system for fire suppression. The team believes such a system can be installed with a minimum of visual or physical impact on the building's historic materials and architectural features. It appears possible to conceal piping to significant spaces such as lobbies, corridors, and public spaces by routing pipes through adjoining office space and by using the attic space for the second floor. In contiguous significant spaces where no alternative route for concealing piping exists, pipes should be installed in the space of lesser importance. In some cases, piping could be concealed in gypsum board enclosures of the minimum size needed to allow access for maintenance. In addition, sprinkler head installations should be designed for minimum visibility.

It is anticipated that a new electric boiler or baseboard heating system will be the preferred method of heating the restored Yates Memorial Hospital. The selected heating system will be relocated in the building rather than in the adjacent Tobin Building.

In the design development phase of the restoration, a mechanical engineer will design all mechanical systems to meet code, to satisfy energy conservation objectives, and to respect the historic and architectural features of the building.

ELECTRICAL SYSTEMS

Electrical Service

The Yates Memorial Hospital and Tobin Building are, together, served by a 225 amp, 120/240 volt, single phase, three wire service. The KPU service mast is located on the northwest corner of the Tobin Building. The KPU service lateral is run in conduit installed in a rack located under the Dock Street sidewalk. The building service equipment is located in the Tobin Building on a first floor stair landing; the equipment installation may not meet NEC requirements.

The service has two KPU kwh revenue meters which are located above the service equipment. The service conductors are installed in 2" conduit; there are 3#3/0 (or #4/0) and a smaller neutral conductor. These conductors enter a wireway located on the 1st landing of the Tobin Building and are spliced to feed the two KPU revenue meters. The meters feed Panel T-A and a 100 amp enclosed circuit breaker. A second 100 amp enclosed circuit breaker is fed from Panel T-A. There is no main disconnect to shut off all power to the building. None of the existing disconnects are labeled "Service Disconnect".

In the past, it appears the building may have had a three phase service, perhaps when the building housed a printing business. There are (3) phase conductors in the wireway. However, one of the conductors is cut off and taped in the wireway. In addition, some of the electrical equipment, such as "Tobin" 100 amp, enclosed circuit breaker located at the service entrance is three phase equipment. This breaker presently is connected with two phase conductors. The preliminary walk-thru did not locate a grounding electrode conductor or a grounding electrode system. In addition, a ground rod was not found outdoors near the service entrance. All of these items are required by the NEC.

Voltmeter readings at the service and panel boards indicate the system voltage is 120 volts to ground and 240 volts phase to phase. There were no ammeter readings above 3 amps on at any panel board or circuit breaker in the two buildings. The low amp readings are due in part to:

- the Yates building only had a few electrical load in use in the first floor office spaces. There were some small construction tools being used on the second floor remodeling work; and
- the Tobin Building had a few lights on in the main office. The extent of loads operating in the occupied apartment were unknown.

Telephone Service

The telephone service originates a telephone network interface cabinet (NIC) located in the alley on west side of the building. The service cable is run under the Dock Street sidewalk up to a box and splice closure mounted on the southwest corner of the Tobin Building. From this location the telephone service cable is run exposed along on the surface of the southside of the building to a NID. The cabling is not properly supported for its entire run.

The telephone inside wiring cables enter the building in the Crawl Space wall and are run exposed thru the Crawl Space to various phone outlets in the building. There are also numerous runs of inside wiring (IW) installed on the building exterior. Type IW wire is not rated to be installed outdoors. This cabling should be removed and any active pairs should be replaced with indoor runs or a cable suitable for outdoor installation. No indoor telephone terminal block was found during the preliminary walk-thru.

There also is a newer telephone network interface cabinet (NIC) located in front of the Yates building, adjacent to the main entry stairs. The service cable is run in the crawl space, and then surface mounted along the front of the building. The telephone inside wiring cables enter the building in the Crawl Space wall and are run exposed thru the Crawl Space to various phone outlets in the building. The entire telephone wiring system should be as-built to determine what can be reused. This work can be done by KPU Telecommunications or the design consultant.

Fire Alarms

The building does not have a fire alarm panel. A code review will be done to determine if one is required in the renovated building. State law does require smoke and carbon monoxide detectors in dwellings and guest rooms. The Yates building has a First Alert carbon monoxide detector which is plugged into a 120 volt receptacle located near the first floor main stairwell. The installation may meet the intent of the code. Smoke detectors are installed in the building; coverage may not meet NFPA 72 requirements.

Floor plans should be drafted to delineate the exit path, including the stairs, from the sleeping rooms to the first floor exit doors. The pathway will begin in the Tobin Building apartment and will likely will involve portions of the Yates building. The entire path should be protected by smoke detectors and emergency egress light fixtures. Depending upon occupancy, there may be ADA requirements for audible and visual signaling.

A code review of the IBC and IFC will need to be done to determine the building occupancies, separations, egress and exiting requirements especially addressing the apartment(s), kitchen hood and cooking areas. The results of this review will then be used in the electrical design to determine the code requirements for the carbon monoxide detection and fire alarm system.

Electrical Distribution Equipment

Over the years additional electrical panels, circuits and wiring have been added, so there is a wide array of wiring methods ranging from Romex, knob and tube, wiring with cloth insulation, and conduit and wire systems. There are many NEC code violations which need to be addressed when the building is renovated.

Lighting Systems - General

In general, most of the existing lighting system uses fixtures that are old and should be replaced with new. Some existing fixtures may be reused in the renovation work; this will be determined during the design phase; fixtures that are reused may require refurbishing and relamping. The lamp types--LED, CFL, linear fluorescent, etc.--installed in the renovation work will be determined during the design phase and will depend upon user requirements, the quality of light needed, and energy efficiency.

Energy Savings

Wherever possible, it is recommended that any renovation work on the electrical systems comply with the energy conservation measures outlined in ASHRAE, IEEE, IECC, LEED. Though some of these standards are not mandated by state or city, the concepts within them can generate benefits that allow the electrical system to operate more efficiently, help reduce greenhouse gas emissions, and reduce electric and fuel consumption which generates savings on utility billings.

Electrical System Design

There needs to be a clear, legal demarcation between the two buildings. A fire wall separating the two buildings could possibly serve the building code requirements. However, a variance may be needed to accommodate the NEC and KPU requirement that an electrical service cannot feed two properties. The details of these issues will be worked out during the design phase.

To accommodate a new electric heat system, new hot water heater and kitchen equipment (if any), plus additional new office equipment loads, a new service should be installed. It is assumed the Yates building will have its own electrical service and meter. The existing distribution system should be removed. There are some panels that can be reused, such as Yates Panel Y-A, but the determination as to what remains and what is removed will need to be analyzed during the design phase.

The existing service transformer is located in a KPU vault near Bawden Street. KPU will determine if the existing lateral--from the transformer to the building--can still safely handle the increased electrical load for the building. If the service lateral has to be changed, KPU will determine the cost.

Communications Systems Design

Wherever possible, the telephone and computer outlets will be installed together in a recessed mounted backbox complete with coverplate. Generally, at least one telephone and computer network outlet will be provided at each work space in the office areas. In high usage areas, the number of jacks will be increased accordingly.

The communications wiring will be run from the backbox down into the crawl space where the telephone wiring will be routed to a modular punchdown block near the NID. The computer wiring will be routed to a patch panel which will be located near the network server equipment. The telephone wiring system shall be at least Category 3 cabling, and the computer network wiring shall be Category 6. The owner will be responsible for installing and commissioning its phone system. The same conditions apply to the computer network equipment.

Power Distribution

A new electrical system will be installed in the building. The NEC allows Romex or Type MC cable to be used for branch circuit wiring. Feeders will be conduit and wire. New panel boards should be installed to distribute power throughout the building. As the electrical loads are determined during the design, the quantity and locations will be determined.

The existing distribution system--service, feeders and panel boards--should be removed. Wherever wiring is exposed or where renovation work exposes existing surfaces, the existing wiring should be removed. Concealed wiring in areas not being renovated will be removed whenever possible, all other cases will be abandoned in place.

Heating System

The existing boilers, fin tube cabinets and associated piping will be removed and electric heat is expected to be installed. Using KPU's current kwh rate, electric heat is slightly less expensive than using oil fired equipment. However, electric heat is more expensive when the current KPU diesel surcharge is included in the calculation.

During the design phase, analysis will be made of electric baseboard or an electric boiler versus oil fired boiler with radiant floor heat. If baseboard heat is used, then there will be a wall-mounted thermostat in each room to control the room temperature. The radiant system would divide the building into a few zones and each zone having its own thermostat.

The building envelope is not well insulated. There are single pane windows, and the weather has taken a toll on their wooden frames. It is highly recommended to improve the R-value of the building envelope wherever possible. Any improvements will save on energy costs.



PART THREE:

EVALUATION OF SIGNIFICANCE

Period of Significance: 1905-1925

The period of significance Yates Memorial Hospital began in 1905 when it was constructed as the Clergy House to assist the Episcopal Church in its pioneering contributions to Native education in the earliest days of Ketchikan. When it was re-purposed and opened as a 12-bed hospital in 1909, it became the only hospital serving a vast area between Seattle and Juneau that was undergoing rapid development in fisheries, timber and mining. It met the needs of the sick and injured during Ketchikan's "boom" years: the period that firmly established the community as the major gateway to Alaska and a key player in the region's population and economic growth. Its role in the community's early development continued through 1925, when it could not keep pace with the medical needs of Alaska's largest city and a larger hospital was built to replace it. The period of significance of the building (1905-1925) approximates the Downtown Historic District's period of significance during which the Yates Memorial Hospital played a vital community role.

Statement of Significance

Yates Memorial Hospital is significant in a local context for its contributions to the patterns of Ketchikan social history and community development, for its architecture, and for its historic integrity. It is a key contributing building to the Downtown Historic District and it planned to be nominated by the Ketchikan Historic Commission for individual listing in the National Register.

Built on the waterfront in the heart of the community and a few steps away from St. John's Church (1903), Yates Memorial Hospital is one of Ketchikan's oldest buildings and an important element of the historic Episcopal Mission group of properties. The building remains at the heart of Ketchikan's three historic districts and is an iconic landmark today.

Throughout its history as a hospital, women played an important role. While it was difficult to run a hospital in early Alaska, noble women worked long hours caring for the sick and injured, guided by patience and sacrifice. In a town of rugged men, the matronly care provided by the missionary nurses may have rivaled the importance of their professional skills.

As noted earlier, the original form and detailing of this handsome example of Colonial Revival-style architecture have survived. Distinctive materials (such as windows, siding and interior details) and spaces from the period of significance are essentially intact. The building's interior and exterior features convey an empathy and warmth seldom found in hospitals. It is Ketchikan's only historic building associated with its medical history.

Character Defining Features

The Yates Memorial Hospital assessment team performed individual and group walkthroughs of the building to document physical spaces and elements and to assess the current condition of building materials and systems. Together with historical research, the walkthroughs and surveys helped determine the historic integrity of the structure, identify original building elements and details, and determine which spaces, elements and finishes are of architectural and historical importance. The summary of the team's findings regarding character-defining features can be found on the following two pages.

Selection of the Treatment Approach

It is the consensus of the Historic Ketchikan Board, in collaboration with the Ketchikan Historic Commission that of the four treatment approaches outlined by the National Park Service, the selected approach is restoration. This treatment will focus on the retention of materials from the most significant period in the property's history, while permitting removal of materials from other periods and reconstruction of missing features.

Our restoration efforts will protect and maintain those character-defining features described in the following pages as well as replace missing features (i.e., the porch, entry stairs, cedar shingle roof, and east facade windows) using traditional materials. Windows will be repaired rather than replaced; original window glass will be retained; the cedar siding will be restored rather than replaced; cedar shingles will replace the present metal roof; etc. In the case of the entry porch, sufficient historical, pictorial and physical information is available to accurately reproduce this feature using the same kinds of materials.

In considering whether the restoration treatment approach would complement intended uses of the building, it was agreed that the building could be re-purposed to a variety of uses that would respect the historic character and integrity of the building. These uses may include heritage tourism-related uses, retail, offices, church-related services, food and beverage, medical and others. There has not been a decision as to proposed uses at the time of this historic building assessment.

Finally, after reviewing code requirements including fire and life safety, ADA accessibility and hazardous materials management, the team determined that code required actions would not jeopardize the historic character of the building and thus a restoration treatment approach would be appropriate.

CHARACTER-DEFINING FEATURES: EXTERIOR

Shape

As one of two remaining residential-style buildings in the Downtown Historic District, the building's form and shape are distinctive. The roof is important to the visual character because its steepness and gables makes it highly visible and prominent. The projecting bay window and original entry porch are also important elements of the building's shape. The unifying wooden trim below the eaves and connecting window openings gives this building its own identity and special character.

Openings

The windows are a key character-defining feature of the Yates Memorial Hospital. They vary in size and design including:

- small, low-sill, 2nd floor windows admitting light to individual rooms;
- double-wide, double-hung windows at the bay projection and 1st floor south and west facades;
- single, tall double-hungs on the east facade; and
- three-part windows at the 1st floor bay window.

There is a rhythm to the arrangement of the diverse windows, unified by the horizontal trim board bands.

Setting

The setback from busy Mission Street has provided space for a small flower garden. Mature, flowering shrubs remain in spite of inattention for many years. This feature helps define the building's residential character.

Entry Stairs

The historic entry stair is another character-defining feature. The original massing (as shown in this rendered photo) does not compete with the shape and fenestration interest of the building. New fire and life safety guidelines will require code railings and landings and these must be carefully introduced to minimize impact on building form.

Roof Features

The roof shape and materials contribute to the building's character: the steep, 12:12 pitch; the generous overhang and trimmed soffit; the cedar shingles (historically); and the shingled gable returns on the east facade.

Trim and Decorative Features

The exterior trim around the windows, soffits, corners, projections, gable ends, and porch are all key features. The trim color, decoration and patterning all contribute to the building's character. Loss of any of the elements of this trim will impact the unity of the exterior facades.

Materials

The beveled cedar siding (now mostly enshrouded in vinyl siding) is a key character-defining feature. It is in relatively good shape and can be restored. The shingled roof, returns and gable (above the bay windows) and wood gutters are also key features.

The Porch

While the porch structure remains, the French doors and window wall (shown below) have long been removed. This feature is one of the most important character-defining elements of the building. Reconstruction of the window wall and doors (and the flower boxes) is a priority.



CHARACTER-DEFINING FEATURES: INTERIOR



Flooring

The original vertical grain fir flooring (2-1/4" face) used throughout the building remains in good condition and is exposed in most areas except bathrooms and kitchens and where carpet has been applied.



Windows, Trim and Hardware

In the hospital rooms on the 2nd floor, virtually all original detailing remains, including doors, door and window trim, transom windows (some painted over) and their operating hardware, and baseboard. More modifications occurred on the first floor but doors, windows and most trim remain from the earliest years.

Fireplace

The historic fireplace is a character-defining feature. It has remained unchanged from the earliest days of the building. The room in which it is located serves as the main point of entry for the building and the fireplace is an iconic reminder of the past.



Staircase

The original staircase retains its historic character with turned wood railings, stately box panel newel post, balusters and moldings. Daylight is provided by a high window over the stairway. The stairway is designed with a satisfactory rise/run ratio and will meet current codes.



PART FOUR: WORK RECOMMENDATIONS

Approach to the Work Recommendations

The work recommendations are a central feature of this report. The work plan was developed after the Yates Memorial Hospital's history, significance and physical conditions were evaluated and is consistent with the selected treatment approach of restoration.

Based on the team evaluation of existing conditions and the significance and character-defining features of the building, work recommendations were proposed for each of the elements evaluated:

- site issues;
- building envelope;
- foundation system;
- windows and doors;
- interior features and finishes;
- fire and life safety;
- hazardous materials; and
- mechanical and electrical systems.
- electrical systems.

For each element and feature, a brief description of the recommended treatment is provided in the following pages. The recommendations are supported with conceptual drawings and photos as needed to describe the intent. The recommendations are prioritized and the team has identified needed research and testing. All treatments recommended for the building are intended to comply with the *Secretary of Interior's Standards for the Treatment of Historic Properties*.

In addition, consideration was given to alternative uses for the building that would best serve restoration treatment objectives. A phasing plan for carrying out priority improvements is also outlined. Finally, the likely costs of key restoration improvements accompany the work recommendations and a financing strategy for addressing these costs is outlined.

A SketchUp model was prepared for this historic building report to assist in analyzing modifications to the building exterior and interior, color treatment, foundation support design, ADA access and other treatments.



1) SITE RECOMMENDATIONS

- **Resolve the treatment and modifications of the adjacent Tobin Building to accomplish restoration objectives of the Yates Memorial Hospital.**

This will require addressing the needs of the Episcopal Church for its use of the Tobin Building and surrounding property. The long range alternatives for the Tobin Building include: 1) rehabilitation and adaptation of the exterior treatment to complement the Yates Memorial Hospital restoration and the surrounding historic properties along Mission and Dock Streets; 2) modifications to the Tobin Building footprint and structure to accommodate complete restoration of the Yates Memorial Hospital; and 3) demolition of the Tobin Building as part of a long range master site plan to restore the historic Episcopal “campus” of buildings and gardens.

- **Work with the City and the Episcopal Church to develop a boardwalk through the site that connects Dock to Mission Street and addresses ADA access, and attractive, functional entries to both buildings.**

The boardwalk would facilitate access to retail and church-related services as well as ADA access.

- **Complete a master site plan with the Episcopal Church vestry for the Church properties that addresses improved parking, restoration of the historic gardens, and landscaped amenities along Mission Street.**

Parking would be reconfigured to enable easier maneuverability, pick up and drop off. Landscape features including gardens, outside decking and lighting.

- **engage a certified land surveyor to prepare an as-built site survey.**



This sketch depicts a redevelopment option for the neighboring Tobin Building and illustrates the Dock-Mission Street boardwalk and connecting stair. The boardwalk connection would improve the retail viability of the ground floor.



The remaining mature shrubs of the Mission Street garden will be enhanced with annuals and perennials. A pedestrian bench may be added as well as landscape lighting.

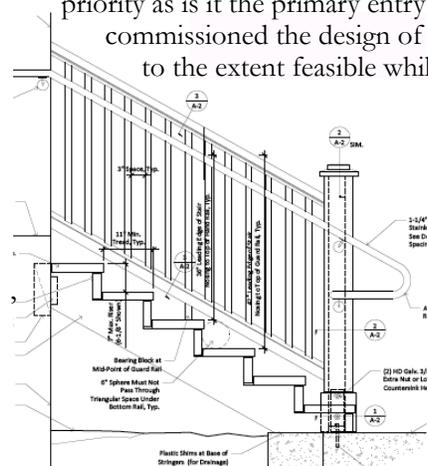
This aerial of the Episcopal “campus” shows existing parking, green areas and the three buildings’ footprints.



2) BUILDING ENVELOPE RECOMMENDATIONS

- **Retain and restore the historic features of the building's exterior envelope.**

Virtually all key historic features of the primary facades have been retained over the life of the building with two key exceptions: the Mission Street entry stair and the entry porch (restoration of the entry porch is addressed under the Windows & Doors Recommendations on p 35). The entry stair is an early priority as is the primary entry point to the building. Historic Ketchikan commissioned the design of the entry stair to match the historic stairs to the extent feasible while meeting current building codes.



This design was prepared by Historic Building Report team member Welsh/Whiteley Architects. It is designed to reflect the historic entry stair while also provide for code-required safety railings and present dimensional requirements for stair treads and risers, railing height, etc.

- **Develop and implement a program to restore and secure the historic bevelled cedar lap siding as described in the Existing Conditions report and the Character-Defining Features section (p 28).**

As part of the historic building assessment, Historic Ketchikan removed portions of the plastic siding that had earlier been installed over the historic lap siding. The original siding is in surprisingly excellent condition. As a result of the plastic siding and a sprayed-on coating (to be checked for asbestos), the siding has been protected from the elements over many decades. In some cases, the siding is cracked or damaged and this will be addressed by either repair with an epoxy wood fill/patching compound or by replacement with matching siding.



In this recent photo of the entry area, the historic siding (in light colors) was restored. In this area, most of the siding was in excellent condition. Proposed paint colors have been applied to the siding and corner trim.

- **Replace the existing aluminum roof with a (fire-treated) cedar shingle roof to match the historic roof noted in the Building History photos and in the Character-Defining Features section (p 28).**

All roof details from the period of significance are to be restored, including wood gutters, the remaining brick chimney, and the ornamental ridge cap. Historic Ketchikan re-secured the aluminum roof to prevent water intrusion and the roof restoration project, while a priority, can be carried out after immediate priorities are addressed.

- **Confirm (and refine as needed) the historic paint color selection scheme as developed as part of this historic building assessment.**

A building color scheme has been recommended by historic building color specialists and report team member: The Color People. This firm has worked closely with Historic Ketchikan over two decades to select color schemes for dozens of Ketchikan's historic buildings. The proposed colors are based on one of the many earlier color schemes applied to the building. The colors will be applied to key sections of the building as renovation to the building envelope advances and refinements in colors may grow from application.

- **Remove a 1946 addition to the building to accommodate ADA access and to restore the historic building envelope.**

This is one of the key design issues to be addressed in the restoration. The objective will be to restore the original windows and all exterior details while accommodating ADA access and providing a secondary entry to the building (refer to 7) Accessibility Recommendations).

- **Restore the shingled gable above the bay window on the Mission Street facade.**

This is one of the character-defining elements on the primary Mission Street facade. The existing shingles (under the plastic siding) may be able to be repaired and restored depending on their condition.



3) FOUNDATION SYSTEM RECOMMENDATIONS

- **Stabilize the building with temporary foundation supports.**

This is the priority restoration requirement. Historic Ketchikan has stabilized approximately 20% of the foundation support system. Stabilizing the remaining, deteriorated piling system represents an immediate need. This will require removal of rotted, crawl space wall materials and other debris; securing the perimeter with fencing; and installing temporary, braced pilings on spread footings in a manner that allows for removal of existing, deteriorated piles and installation of permanent footings and piling support system.

- **Inspect any areas of deterioration of piling caps and replace as necessary.**

Virtually all of the piling caps inspected are in excellent condition. In two cases, there has been deterioration and these two locations should be addressed as part of the design of foundation structural repairs.

- **Engage a structural engineer to further design the foundation structural repairs as noted in the Existing Conditions report, p 14.**

The structural engineer will address footing design, piling placement, seismic retrofitting, structural connections, and the approach to jacking the building to level the floors.

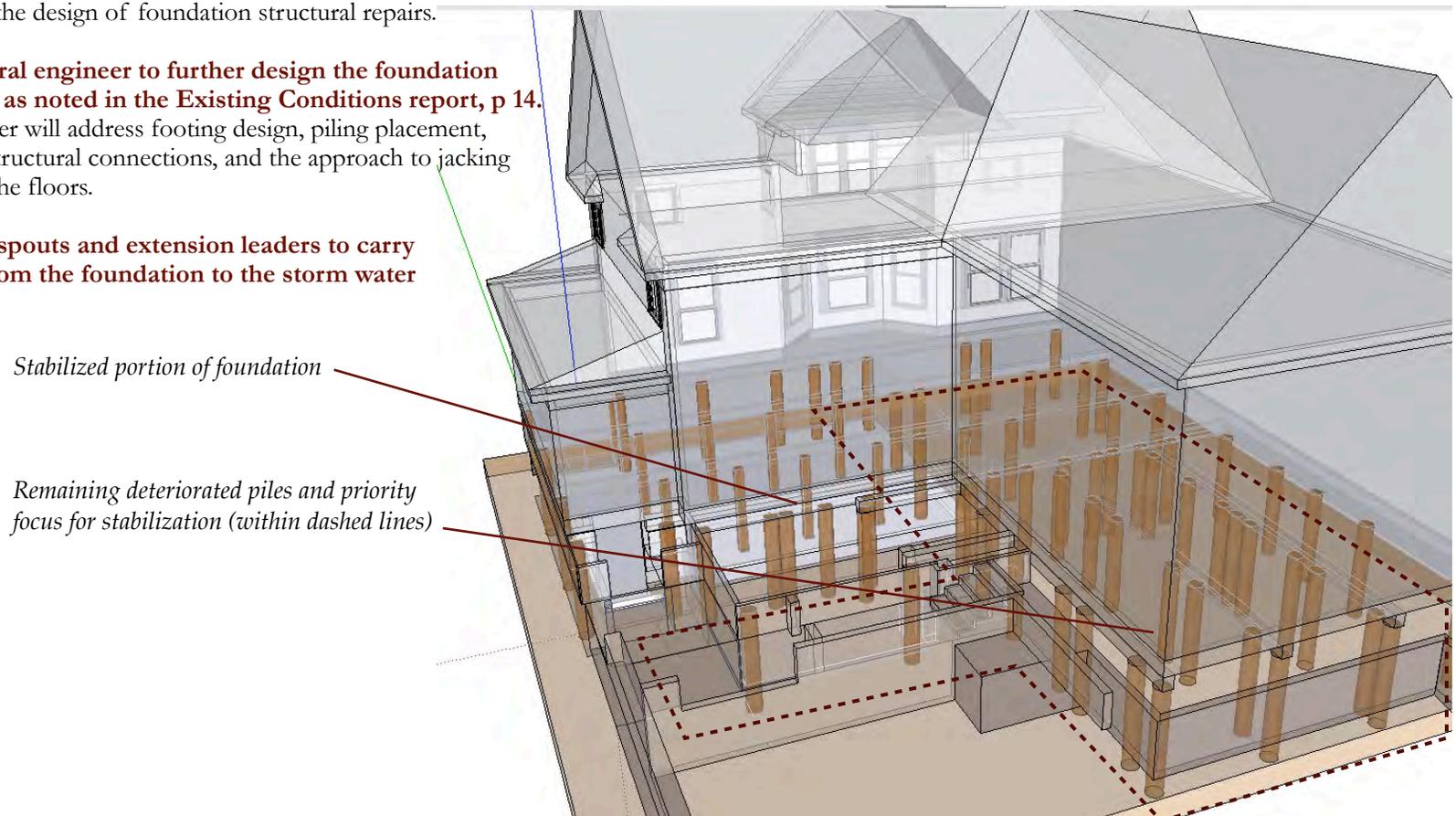
- **Install new downspouts and extension leaders to carry rainwater away from the foundation to the storm water system.**

- **Implement structural repairs with a qualified, local contractor experienced in similar projects in Ketchikan.**

While Historic Ketchikan and its volunteers can clean up and do prep work, a local contractor with building moving and piling reconstruction experience is a must. Since the building has settled as much as six inches at the west wall, the entire building will need to be jacked incrementally to approximate level. This will be done in conjunction with new foundation pilings, footings and bracings.

- **A moisture barrier should be installed over the unfinished portions of the basement/crawl space**

This measure would keep moisture from wicking up through the dirt floor.



4) WINDOWS & DOORS RECOMMENDATIONS

- **Retain and restore all exterior historic windows.**

While wood windows are renewable over an indefinite period of time with proper care and maintenance, decades have passed at Yates Memorial Hospital with little attention paid to the windows. The sashes have often been painted shut, ropes are broken or frayed, the paint and putty have deteriorated, the hardware may be broken or missing and the wood may be rotted or damaged. The work ahead is to repair and restore window frames and sashes showing evidence of surface cracking and rot. It will require pulling the sash, repairing the sills and frames in place, protecting the historic glass, re-glazing after repairs to the frames and sashes, painting, and, finally, reinstallation with appropriate weather stripping. In addition, all decorative features will be restored, including hood molds and decorative moldings.

- **Replace missing exterior windows on east elevation with matches to the historic windows**

Four second floor windows on the east elevation were removed entirely or replaced by non-historic windows. The two center double-hung windows will need to be replaced by double-hung windows identical to the originals. There remain several double-hung windows of the same dimensions on the west facade of the building that can be used as models for matching the historic windows. Similarly, the two low, casement windows on either side of the double-hungs must be replaced, once again using as a model the same windows on the west facade.

- **Restore the historic glassed-in entry porch as the primary entry**

While the entry porch structure remains, the distinctive multi-paned windows surrounding the three exterior sides of the porch have been removed. As one of the most important character-defining features of the building, restoring the porch window wall and entry doors are an early priority. Restoration drawings will be prepared for fabrication of the replacement windows to match the exact proportions of the historic porch. As part of design development, consideration will be given to using insulated glass windows as an energy conservation measure if the historic sash and mullion proportions can be maintained. French doors at each end of the porch are key entry points to the building; on one side, from Mission Street and, on the other, for an ADA access point of entry.

- **As part of overall energy conservation program, install storm windows at all locations**

While old single-pane glass windows can be a major source of heat loss, adding a wood storm window can approximate the R-value of an insulated glass replacement. Much of the heat loss of the present historic windows will be reduced by caulking gaps around the sashes, replacing loose, broken or missing glazing compound, and installing window stripping.



- **Replace non-historic exterior entry doors with period doors**

The two entry doors (one off the entry porch and the other at the east wall adjacent to the Tobin Building) will be replaced by doors that reflect the period of significance of the building (to be located at salvage companies or building recycling facilities).

5) INTERIOR FEATURES & FINISHES RECOMMENDATIONS

- **Preserve all original door, window, baseboard and decorative trim throughout the building.**

In the few places where trim has been removed (the two restrooms on the first floor and the kitchen on the second floor), restore the period trim to match other areas of the interior.

- **Restore the entry porch interior and the entry room to its period character.**

These are two of the most public spaces in the building and provide the first impression to visitors. Non-period lighting fixtures should be replaced with appropriate fixtures. The historic fireplace surround, hearth and mantelpiece should be preserved. If it is determined that the fireplace can be used again, appropriate repairs to the firebox and flue must be undertaken. The sheathing on the west side of the porch is the original beaded material and should be retained if its condition is determined to be sufficiently sound upon removal of a particle board covering material.

- **Retain and restore the interior transom windows and hardware**

In most cases, the original transom windows and their working hardware are in place (some are painted over as can be noted in the photo opposite). Paint will be removed and hardware restored as necessary.

- **Maintain the historic fir floors throughout the second floor and where they remain on the first floor.**

The floors are the original vertical-grain, tongue and groove fir and are in excellent condition. Inspection of the flooring indicates that it has always been unfinished except for successive coats of paint. The floors could be sanded and coated with a clear finish or, alternatively, remain painted in a color to complement the ultimate interior color choices.

- **Maintain the original staircase, balustrade and stairwell detailing**

The staircase and handsome balustrade are in excellent condition and need only re-painting in colors to complement other interior colors. Consideration should be given to open the wall surrounding the stairwell on the second floor. It will be determined if the stairwell was once open with a second floor railing surrounding it. If so, the second floor surrounding wall could be removed with a period-appropriate handrail installed.

- **Following structural repairs (building leveling), installation of new wiring, piping and possible fire sprinkler system, patch plaster cracks and damaged plaster sections and restore to match original surfaces.**

There will be considerable repairs required of lath and plaster walls after leveling the structure and installing new mechanical and electrical systems.



Original window, baseboard and ceiling trim should be repaired and repainted. The fluorescent overhead lighting should be removed.



The fireplace surround, mantel and hearth should be restored and made operable (if code allows).



The 2nd floor transom lights, fir floors, nurses' closets and all trim shall be restored.



The central staircase features shall be preserved and painted complementary colors.

6) FIRE & LIFE SAFETY RECOMMENDATIONS

- **Identify uses for the building that minimize modifications to meet code requirements**

Code requirements are essential to understand at this stage of the building assessment so as to accommodate them in a manner that does not jeopardize the building's materials and historic character (see Existing Conditions: Fire & Life Safety, pp 20-22). While the Yates Memorial Hospital is the subject of this assessment, this code analysis included the abutting Tobin Building due to the present integrated configuration of the two buildings. At this stage of restoration planning, a decision has not been made as to the modifications to be made to the Tobin Building to accommodate restoration of the Yates Memorial Hospital.

- **Consider excluding hotel, boarding house and overnight accommodations uses and limiting the size of any possible restaurant and/or coffee shop tenants.**

These uses could have more stringent fire separation, exiting and fire protection requirements that might have a detrimental effect on the historic character of the interior and exterior spaces (such as the existing open stair).

- **Develop and implement a program for public safety including fire detection, alarm and suppression.**

This should be an immediate priority to address the life and safety of present users of the building as well as a program for long-term life safety requirements. The immediate initiatives shall include smoke detectors for both the Yates Memorial Hospital and adjoining Tobin Building as well as carbon monoxide detection, exit lighting and emergency egress light fixtures. For longer term occupancies after restoration, a review of the International Building Code (IBC) and Fire Code (IFC) will need to be done to determine the building occupancies, separations, egress and exiting requirements especially addressing any potential overnight accommodations and cooking areas. The results of this review will then be used in the electrical design to determine fire and life safety code requirements.

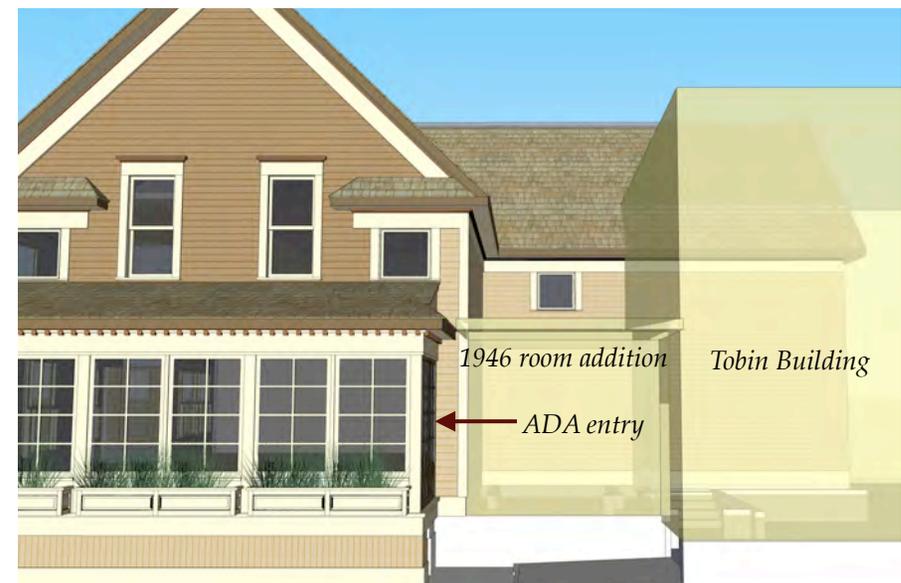
- **Consider installation of a fire suppression sprinkler system.**

While such a system may not be required, the team believes it could help meet long term protection of this historic building and its occupants and could be accomplished with minimal visual or physical impact on the building's historic materials and architectural features. It appears possible to conceal piping to significant spaces such as lobbies, corridors, and public spaces by routing pipes through adjoining office space and by using the attic space for the second floor.

7) ACCESSIBILITY RECOMMENDATIONS

- **Develop an accessible circulation route to and through the building, including dedicated handicapped parking and accessible entry.**

A key design challenge will be the access ramp required to accommodate the 42" differential between grade and first floor level. The planned boardwalk connecting Dock and Mission Streets may accommodate up to 12" of the rise required. A ramp would then connect the boardwalk to the north end of the entry porch utilizing the space now occupied by a 1946 addition to the historic footprint of the building. The sketch below indicates the area between the two buildings that can accommodate the ADA ramp. This solution would meet the spirit of the ADA objectives by enabling access through the primary public entrance to the building and it would do so without permanent damage to character-defining features. If this means of accessibility proves feasible, an accessible circulation route through the interior of the first floor can be accommodated. ADA access to the second floor will not be possible without installation of an elevator and this is not foreseen in the near future due to budgetary limitations.



- **Provide an ADA compliant bathroom on the first level.**

An ADA-accessible restroom (for public and staff use) can be provided with a reconfiguration of the existing remodeled (and deteriorated) restrooms adjacent to the stairwell. This will require removal of the unnecessary shower, relocation of fixtures and modifications to existing walls and openings.

8) HAZARDOUS MATERIALS RECOMMENDATIONS

- **Engage certified environmental firm(s) to complete asbestos and lead surveys to identify suspect materials and to plan and implement an abatement program as needed.**

As noted earlier, insulation, wallboard, plaster, tile, window glazing, siding surface treatments and vinyl flooring are potential sources for asbestos. In addition, in the course of the electrical system review, cloth insulation was noted on several of the older electrical feeder and branch circuits. This type of insulation may contain asbestos. A certified asbestos abatement contractor will take samples of these and other materials from each room (ceilings, walls and floors) and from the exterior of the structure (roof, walls, windows, crawl space) and then secure laboratory reviews. The contractor would then provide an engineer's estimate for abating any asbestos containing materials. Another firm would conduct a Lead Based Paint (LBP) survey and provide similar services.

- **Remediate any remaining moisture and mold present within the building and, if determined necessary, engage an environmental firm to conduct a mold/moisture survey similar to the services provided for asbestos and lead.**

Historic Ketchikan has taken necessary steps to prevent water or moisture intrusion from the roof system. As noted earlier, Historic Ketchikan now occupies the Yates Memorial Hospital and since April 2013, the building has been heated and ventilated. Wet and rotted materials remain in the basement/crawl space and these materials will be removed and this will continue as the building is readied for the restoration steps outlined in this historic structure report. If mold is evident, Historic Ketchikan will then work with a mold remediation contractor to remediate the growth.

9) ELECTRICAL/MECHANICAL SYSTEMS RECOMMENDATIONS

- **Engage an electrical engineering firm to design the electrical system.**

The Building Code requires a clear demarcation between the Yates Memorial Hospital and the Tobin Building. Given uncertain funding, the design may need to accommodate incremental installation of an entirely new system including service entry, panel boards, feeder and branch circuitry and devices. The electrical system design will therefore provide a roadmap for improvements as funding is available. As the restoration work moves ahead, the existing system, including substandard panels and wiring, will be entirely removed.

- **Install initial infrastructure to improve life safety**

As noted under Fire & Life Safety Recommendations, a priority action is to determine the proper smoke and carbon monoxide detector layout to protect the exit path from the Tobin Building apartment to the first floor exit and install the appropriate detectors and alarms.

- **Install initial electrical system improvements to meet life safety and security requirements**

Prior to installation of a new electrical system, there are a number of electrical improvements necessary to meet the needs of Historic Ketchikan's occupancy of the building. These include outside lighting, security lighting, and interior lighting and appliances in selected areas of the building. In some cases, this will require replacement wiring, repair or installation of new lighting fixtures or outlets, etc. Initial priorities will include the Mission Street entry exterior lighting, a system of fixtures in the crawl space to enable navigating this area as foundation improvements begin, lighting and outlets for the Historic Ketchikan office, and replacement fixtures for the restrooms. These improvements will be guided by the electrical system plan referred to above.

- **Engage a mechanical engineering firm to design a replacement mechanical system.**

In the design development phase of the restoration, a mechanical engineer will design all mechanical systems to meet code, to satisfy energy conservation objectives, and to respect the historic and architectural features of the building. As with the electrical system, there will need to be a clear demarcation between the Yates Memorial Hospital and the Tobin Building which now houses the boiler that once served the Yates. It is anticipated that a new electric boiler or baseboard heating system will be the preferred method of heating the restored Yates Memorial Hospital.

ALL WORK RECOMMENDATIONS: YEAR ONE PRELIMINARY COST ESTIMATES

The list of work recommendations represent a multi-year commitment to restore Yates Memorial Hospital. Preliminary cost estimates for the priority recommended work activities in the first year of restoration are as follows:

| | |
|---|------------------|
| 1) Site Recommendations | |
| Master site plan and as-built site survey | 9,000 |
| 2) Building Envelope Recommendations | |
| Entry stair construction | 6,000 |
| Year one of east and Mission Street facades siding restoration | 10,000 |
| 3) Foundation System Recommendations | |
| Design and construction of foundation improvements | 45,000 |
| 4) Windows & Doors Recommendations | |
| Replacement /restoration of east facade, 2 nd story windows | 5,000 |
| Year one of window frame, sash restoration program | 10,000 |
| Design and contract drawings for entry porch windows | 3,000 |
| 5) Interior Finishes & Features Recommendations | |
| Painting and repairs only in year one | 3,000 |
| 6) Fire & Life Safety Recommendations | |
| Install priority life safety equipment (exit lighting, detectors, etc.) | 3,000 |
| Design of fire suppression sprinkler system | 3,000 |
| 7) Accessibility Recommendations | |
| Design of primary ADA entry access ramp | 5,000 |
| 8) Hazardous Materials Recommendations | |
| Conduct asbestos and lead environmental assessments | 5,000 |
| 9) Electrical/Mechanical Systems Recommendations | |
| Design of electrical/mechanical improvements | 10,000 |
| Installation of priority electrical and heating improvements | 3,000 |
| <hr/> | |
| Total Year One Preliminary Cost Estimate | \$120,000 |

Note: Accomplishing the priority activities outlined in the Year One Preliminary Cost Estimates is dependent on securing financial resources including grants, donations, volunteer contributions, etc. The budgeted activities are therefore subject to change.

The historic building report team used historic photos and a digital model to develop reconstruction drawings. In this case, a 1946 photo (along with other earlier photos) helped us define the proportions of the window groupings along the entry porch.



REFERENCES

General Historic Preservation References

Alaska Historical and Architectural Inventory Forms, Alaska Office of History and Archaeology, Anchorage Alaska.

National Park Service, *National Register of Historic Places Bulletin 15; How to Apply to the National Register.*

National Park Service, *National Register Bulletin 24. "Guidelines for Local Survey: A Basis for Preservation Planning."*

National Park Service, *Preservation Brief 28. "Cultural Resource Management Guideline: Compliance with Section 106 of the National Historic Preservation Act.*

National Park Service, *National Register Bulletin: How to Apply the National Register Criteria for Evaluation.*

Ketchikan Historic Preservation References

Allen, June, "Bayview, Who's Buried There?" Sit News, Ketchikan, April 29, 2002.

Jenkins, Thomas, *The Man of Alaska: Peter Trimble Rowe*, 1943.

Mackovjak, James, Unpublished research on Alaska sawmills, 2011.

Martinson, Charles, and Kuklok, Dennis, *Atlas of the Ketchikan Region* prepared for the Ketchikan Gateway Borough Planning Dept., 1980.

Reeve, Stephen, and Kuklok, Dennis, RAI Development Solutions, "*Historic Survey of Downtown Ketchikan Commercial Area*" prepared for Alaska Office of History and Archaeology, the Ketchikan Gateway Borough Planning Department and the Ketchikan Historic Commission, 2011.

Roppel, Patricia, Unpublished research notes and cards for the Tongass Historical Society Museum, various dates.

Ross, Ken, *Pioneering Conservation in Alaska*, University Press of Colorado, 2006.

Tucker, Philip, and Benner, Gary, *Ketchikan: A Historic Properties Survey Vol. II, History and Preservation.* 1984.

US Department of Agriculture, *A History of the United States Forest Service in Alaska: The Alexander Archipelago and Tongass National Forest through 1910.*

Other

Van Cleave, Richard, *Construction Projects List*, Tongass Historical Museum, unpublished document, 2011 and Research Notes on the Alaska Sportsman, 2012.

Ketchikan Telephone Books

Citizens Light, Power & Water Company Telephone Directory. 1910-1933
Ketchikan Public Utilities Telephone Directory, 1935-2011.

Alaska-Yukon Directories

Alaska-Yukon Gazetteer and Business Directory. Seattle: R. L. Polk & Co. 1901-1902, 1909-1910, 1911-1912, 1915-1916, 1923-1924.

City Directories

Polk's Ketchikan (Alaska) City Directory. 1962-1999

Fire Maps

Sanborn Fire Insurance Maps for Ketchikan, Alaska. 1914, 1927, 1927 updated through 1946, 1927 updated through 1952.

Periodicals

Alaska Magazine: Ethel Dassow, "Alaska Magazine, The Voice for the Last Frontier," October 1984.

Miami Daily Metropolis, "Far -Reaching Benefit of Mission Hospitals," June 17, 1922.

Spirit of Missions: Episcopal Church. Domestic and Foreign Missionary Society (1897- 1925).

Photographs

All historic photographs are courtesy of the Tongass Historical Museum, City of Ketchikan, except as noted. Current photographs and digital images are provided by Stephen Reeve, RAI Development Solutions.

Publications

Members, St. John Episcopal Church, *A Brief History of St. John's Episcopal Church: Ketchikan, Alaska,* (date unknown).

Stuck D.D., Hudson, *The Alaskan Missions of the Episcopal Church: A brief sketch, historical and descriptive,* 1920.

Tax Records

Town of Ketchikan Tax Assessment Roll.
1909-1919.

City of Ketchikan Tax Assessment Roll.
1920-1955.

Tongass Historical Museum, Vertical Files

Ketchikan Maps

1900 - *Map Showing a Portion of the Supplemental Plat of the Town of Ketchikan, Alaska.*

1910 - *Plat of the Subdivisional Survey of Ketchikan Townsite, U.S. Survey No. 437.*

1922 - *Map of Ketchikan Power Company Showing Buildings, and Log Storage, Wharf and Joining Property on Tide Flats.*

Circa 1925 - Plat maps of Ketchikan Streets, Blocks 1-38.

1943 - Port of Ketchikan Security Maps.

Circa 1980 - City of Ketchikan Property Map.

2006 - Ketchikan Gateway Borough Aerial Photo.

Ketchikan Newspapers

Alaska Fishing News (1934-1945)

Daily Miner (1906-1914)

Daily Progressive-Miner (1915-1919)

First City News (1925-1926)

Helm Bay and Ketchikan Miner (1900)

Ketchikan Alaska Chronicle (1919-1957)

Ketchikan Daily Alaska Fishing News (1945-1947)

Ketchikan Daily News (1922-1923)

Ketchikan Daily News (1947-present)

Ketchikan Miner (1907-1915)

Ketchikan Mining News (1907)

Ketchikan Record (1989-1990)

Ketchikan Times (1919-1920)

Ketchikan Weekly Journal (1919-1920)

Mining Journal (1901-1907)

Morning Mail (1913-1914)

Saturday Mail (1914-1915)

Southeastern Log (1971-1989)

