The City of Maitland Library: Facilities Assessment Report

BORRELLI + PARTNERS
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GENERAL OVERVIEW

Historical Background

The Maitland Public Library currently composes of (3) distinct building assemblies within its property. The original building was constructed in 1907, with additions made to the original structure in 1959 (wing additions), 1972 and 1989. The buildings composition has evolved to create a central open-air courtyard flanked on three sides by the original building and its subsequent additions. These additions are conjoined through two primary means; direct doorway access between additions or a connective element consisting of an enlarged enclosed hallway between the original building and successive building wing additions.

Site Context

Location: Is at 501 Maitland Ave. South. Property ends with Ventris Ave. West to the north, where additional parking can be found north of Ventris Ave. Maitland Civic Center is on the property immediately to the south. The property has a rail road line that runs north and south along the west. Driving areas though grounds are composed of asphalt, sidewalks are composed of concrete, additional parking is comprised of concrete with concrete parking bumper stop.

Scope of Work

As outlined in our scope of work dated January 15, 2014, Borrelli & Partners (B+P) and our consulting engineers have performed an existing conditions assessment/building systems evaluation of the City of Maitland Library located at 501 Maitland Ave, Maitland, Florida. Based on the request, field observations were conducted by the following consultant/disciplines:

- AVCON – civil engineering
- AVCON – structural engineering
- ECS- building envelope
- BORRELLI + PARTNERS- architecture
- BOBES – mechanical, electrical, plumbing engineering

Objective

In accordance with the City of Maitland, the purpose of this evaluation and report was to:

- Review the existing site & building conditions
  - Primary Property Site Elements; topography, drainage, parking and public access
  - Primary Building Elements: Foundations, structure, exterior walls, roof, windows, doors, trim, finishes

- Code Compliance: Handicap accessibility, means of exit, emergency lighting, fire resistance.
- Interior Building Elements: Ceilings, interior walls, doors, floors, fixed equipment & furnishings.
- Building Systems: Heating, ventilation, plumbing, electrical (power, data, alarm, communications), lighting

- Document existing conditions, then outline apparent deficiencies and problems.
- Provide a summary of design recommendations to either:
  - Near-term; demolish/rebuild (immediate needs)
  - Long-term; undertake targeted upgrades and improvements (within 5-10 years)
  - Maintenance; perform on-going remedial efforts

Scope of Inspections and Limitations

B+P and their consulting team provide this survey as an instrument of service for the exclusive use by The City of Maitland, FL. Attempts have been made to verify the reported information to the fullest extent possible utilizing visual observations.

Please note that as-built drawings of the building were not provided and any investigation into the acceptability of existing structures per the current Florida Building Code was not performed.

If information provided in this report is contrary to facts known by other readers, B+P should be notified so that an assessment of this information can be made in the context of this report. Our services have been performed under mutually agreed upon terms and conditions. If other parties wish to rely on this report, please have them contact B+P so that a mutual understanding and agreement of the terms and conditions for our services can be established prior to their use of this information.

FACILITY ASSESSMENT

CIVIL

Property Assessment

- Topography
  - Drainage appears to be poor to the east of the facility, but any access ponding would be within the lawn area and should not impede any visitors. The employee access road on the west side of the property crowns at approximately the NW corner of the addition and water then appears run north to Ventris Ave and south into the parking lot of the Maitland Civic Center. The facility is located on higher elevation as it rises to the north, and lowers to the south, approaching Lily Lake to the southeast.

- Drainage
  - To the north appears to be trapped at the entrance and exit driving paths, on the south side of Ventris Ave. The nearest inlet is on the north side of Ventris Ave., to the east, at the corner of Ventris and Maitland. To the east there is an inlet close to the original main entrance from Maitland, on the west side of Maitland. To the south the surface flow from the paved employee parking lot, through a small section of vegetation, and onto the parking lot of the Maitland Civic Center. Which then flows into Lake Lily to the southeast. To the west, there are 8-9 pass through locations built into the concrete wall that separates the library property from the railroad.

Design Recommendations

Near-Term

- The water feed at the southeast side of the facility was leaking the day of the on-site visit, consider correcting that.
- Correct the natural drainage from the employee parking lot to the Maitland Civic Center. Either by:
  - Adding in a flume.
  - Or replacing the vegetation with some larger stone that will not erode as the current vegetation does.
- Correct the step and ramp entrance/exit to the west that leads to and from the employee parking lot to ensure they meet current ADA standards.
  - Ensure that the step is even and uniform.
  - Build out a larger elevated area to take into account the door swing.
  - Add a handle rail for the step and ramp.
  - Add slip resistant materials to the steps and ramp.
  - Ensure the ramp has an acceptable change in elevation.
- Correct the entrance/exits to the property to meet current ADA standards.
  - Have a cross walk created across Ventris both to the west and the east (corner of Ventris and Maitland) of the additional parking lot.

  - Have ramps replaced with ADA ramps (sidewalk leading to the exit of the parking lot, and the proposed crosswalks, and on either side of the hanidcapped parking).
- Update the handicapped parking to be compliant with local code.
  - Size and access of the parking spots, signage, striping, etc.
- Improve the drainage at the entrance and exit.
  - Add an inlet on the south side of Ventris that ties into the same system for the inlet located at the NW corner of Ventris and Maitland.
- A section of the concrete additional parking lot was severely cracked. Consider addressing and correcting this issue.
- The interior of the facility was observed.
  - Consider updating doors to be ADA compliant and removing door knobs and installing updated hardware.
  - Consider updating the bathrooms to be ADA compliant.
  - Consider adding in additional exit signs and ensuring that they are at acceptable heights to be observed.
  - Consider adding in additional signage for fire extinguishers.

Long-Term (undertaking improvements within 5-10 years)

- Correct the drainage to the east of the facility in the lawn.
  - Add two drains: one for the low spot to the north, and one for the low spot to the south.
- Improve the roof drainage system (more gutters, new gutters, larger downspouts, well placed guards/damns, etc.)
- Replace damaged sidewalks and curbs as needed. Of the cracks observed, none of them posed any major slip or trip hazards now for the sidewalks.
- Resurface the asphalt parking lots and driving paths.
- The additional concrete parking lot is located very close to the railroad. Consider adding sort of barrier to protect those in case there was an issue with the railroad.
- The columns that are in place to hold the different segments of original rod iron fences were observed. Consider ensuring the foundation at the north sections are acceptable and repaired as needed.

Continued Maintenance (on-going remedial efforts)

- Clean out the areas to the west by the employee road and parking lot, for natural drainage towards the railroad through the existing openings in the concrete wall.
- Clean out downspouts and gutters.

STRUCTURAL

Property Assessment

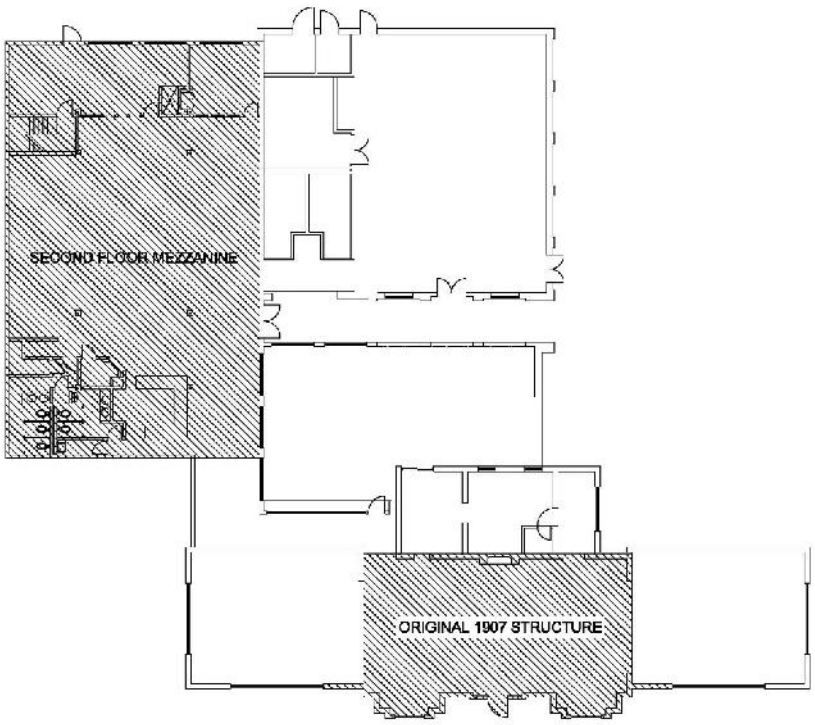
The structural scope of work, findings, and recommendations portion of the building assessment initially anticipated the need for a tabulated matrix breakdown of the deficiencies found during the visual inspections phase of the work. Due to finding too few deficiencies we have instead provided a simple listing of the deficiency found as indicated below. It is our opinion that the existing structure is in good condition. The near- and medium-term use of the structure can be continued, and the long-term use can also continue provided maintenance to the non-structural element including timely replacement of roofing material in accordance with the existing roof shingle recommended replacement timeframe and periodic inspections, replace caulking at windows and doors every 4 years, and maintain irrigation and other pressure lines near the building footprint.

Our investigation areas of focus were the first floor and second floor mezzanine since there were no apparent issues found at the exterior shell of the building or roof sheathing in the form of cracks and/or leaks into the plenum spaces. There were no indications of settlement of the floor or structural framing system at the ground, mezzanine level, or roof level found. No other conditions within the plenum space above the ceiling tiles showed signs of distress in the structural framing elements or the non-load bearing masonry walls and beams.

The one deficiency found included improper hangers used at the mezzanine mechanical units from suspending the hvac units and ducts from the mansard roof wood framing 2x10 rafters. The current hangers do not show a sign of distress however we cannot confirm the existing hangers' capacity and therefore adequacy should the existing hvac system be updated.

Recommendations with future building renovations include the following:

- Do not support hvac or other new units onto the mezzanine level mechanical room without first strengthening the second-floor framing in the space,
- Avoid removal or adjoining new structural elements onto the original 1907 building footprint, and
- Avoid additions such as transfer beams and build-up framing onto the existing roof rafters.


SECOND FLOOR MEZZANINE
ORIGINAL 1907 STRUCTURE

Building Envelope

Roofing

The original section of the library consisted of 3-tab asphalt shingles that were installed in 2017 over an unknown waterproofing, wooden substrate supported by wooden trusses. The roofing system consisted of hips, valleys and ridges. The drip edge is coated aluminum. The 1959 wing additions consist of a hip roof form with matching 3-tab asphalt shingles. The 1972 & 1989 additions consisted of 3-tab asphalt shingles that were installed in 2017 at the mansards around low sloped single-ply roofing membranes that were reportedly installed in approximately 2011. The perimeter was observed to be an aluminum coated metal coping cap and edge metal. Exhaust vents and plumbing vents were observed on the low sloped roofing sections. The drainage was observed to be gutters and downspouts on the steep sloped roofs. The low sloped roofs drain to the edge, scuppers and gutters and downspouts (carport). Pipe penetration was observed to be improperly flashed with sealant reaching the end of its useful life.

- Soffits
  - The building facilities roof soffits vary in type and repair based on their construction period (tongue and groove, plywood, drop ceiling with textured coating). The soffit/ fascia board was observed have HAD some maintenance at the north wing addition. The soffit was observed to be experiencing a loss of coating. The tongue and grove section of the soffit was exhibiting signs of separation and deteriorating coating. The newer soffits were observed to have adequate attic ventilation with openings protected by wire mesh.

- General Conditions:
  - The 3-tab asphalt shingle roofing systems appeared to be functioning as originally intended and in good condition.
  - The low-sloped roofing membrane was observed to have ponding occurring around the scuppers. The roofs appear to be functioning as originally intended and in good condition, except for the following: one area was observed to have a puncture in the membrane, one improperly flashed pipe penetration and sealant deterioration.
  - The soffit was in fair to poor condition with repairs and maintenance needing to be performed.

- Concerns
  - The collection of vegetation in the gutters does not allow for proper drainage.
  - The pipe penetration sealant is deteriorated and in need of replacement.
  - Various stages of deterioration within the soffit indicating potential dry rotting an in need of repair and or replacement.
  - The isolated hole in the single-ply roofing membrane could allow for potential moisture intrusion into the system.

- Problems
  - Interior water damage was observed in the original section of the library with various ceiling tiles exhibiting water stains. However, after performing and infrared scan of the areas no moisture was detected.

- Recommendations
  - Routine maintenance should be performed to remove vegetative debris from the roofing membranes and the gutters and downspouts. Annual roofing inspections should be made by a qualified inspector to maintain manufacturer warranties. Sealant should be replaced at a minimum of every seven years to prevent drying and cracking. Ponding should be directed off the roof. Hole in the roofing membrane should be repaired with compatible material and the one pipe penetration should be properly flashing in accordance with manufacturer specifications.
  - Refurbish existing roof soffits.

Envelope

The building consists of concrete block course with a block wainscot approximately five feet above ground level. Decorative wood trim was observed at the top brick course. The window sills were observed to be concrete formed.

- General Conditions
  - The brick was observed to be in fair condition with mortar tuck points observed in the original section of the facility in need to be re-done. Areas of continuous fault crack lines were observed from the wall head to the wall sill. The south elevation was observed to have the concrete window sill missing and the re-bar displaced and corroded. Deterioration of the vertical control joint sealant. The decorative wood trim was observed to exhibit coating loss and isolated areas of dry rot.
- Concerns
  - All areas show signs of brick wall cracking along fault lines (continuous fault crack from wall head to wall sill). The faults vary from through grout lines cracks to full brick splitting.
  - Exposed rebar with missing concrete window sills and other sill exhibiting vertical and horizontal cracking.
  - Deterioration of vertical control joints.
  - Dry rotted wood trim around the original windows at the east elevation, north side.

- Problems
  - Inadequate brick control joints.
  - Deteriorated control joint sealant.
  - Missing window sill concrete with deteriorated re-bar.

- Recommendations
  - Install brick control and expansion joints, re-tooling of faulty and failing grout lines and replacement of damaged brick.
  - Replace deteriorated sealant.
  - Repair and replace window sill concrete and rebar.

Entrances & Doors

The building has a mixture of wood frame and entry doors. The east entrance is the original building façade with wood framing and single glass panes and a double hollow core wood door at the meeting room located at the inner courtyard's east elevation. The inner court yard houses the bookstore's double wood framed full lite doors and the coated aluminum framed single door with a full lite pane for Adult Reading area. The west elevation has hollow core metal doors with metal framing servicing the mechanical and electrical rooms in addition to the staff entrance


MAITLAND PUBLIC LIBRARY

- General Conditions
  - The wood doors are in Fair condition.
  - The metal hollow core doors are exhibiting signs of corrosions and are in poor condition.
  - The aluminum Adult Reading room door is in fair to good condition.
  - The original entry door was observed to be out of alignment and in need of maintenance but is in fair condition.

- Concerns
  - The weather stripping needs replacement on the doors.

- The original front door needs re-alignment for proper closure.
- The corroded metal doors and framing at the west elevation need replacement for the mechanical and electrical rooms.

- Problems
  - The original entry door is in a state of fair condition, but need maintenance, re-alignment, and proper weather stripping.
  - The wood doors are in a state of fair condition but need maintenance and proper weather stripping.

- Recommendations
  - Replace all hollow metal doors and provide additional weather stripping door hardware accessories.
  - Conduct building wide door maintenance and refurbishment program to revitalize and maintain existing doors, to include door hardware upgrades such as kick plates, press pads etc., to reduce wear, tear and soiling on the doors.

Windows

The building is utilizing three different window types. The original windows are a sashed wood framed single pane. The north and south additions are installed with aluminum crank casement windows. The 1972 and 1989 building sections have storefront windows installed.

- General Conditions
  - The original building windows appeared to be in generally good condition overall and appear to have been recently repaired/ replaced.
  - The original buildings' door sidelight windows were observed to be in fair condition except for two panes that were observed to be cracked.
  - The casement windows located at the north and south wings were observed to be in poor condition with the sealant observed to be hardened and breaking loose from the windows.
  - The exterior window sills were observed to be cracked and displaced from their original conditions.
  - The exterior sealant around the window frames was observed to be in a state of deterioration.
  - The anodized aluminum storefronts appear to be in good service repair.

- Concerns
  - The single pane windows with the sealant deterioration is allowing for insect penetration, heat and cooling loss, and moisture intrusion into the system.

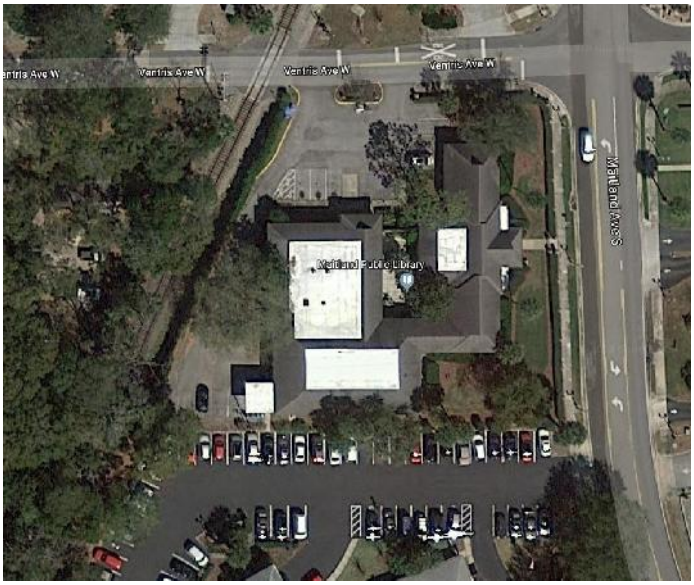
- Problems
  - The single pane aluminum windows along the 1959 wing addition show signs of deterioration of window sealant/caulking. The concrete window sills are also in a state of poor condition, due to several having signs of continued fault cracking and maintenance repair. The tile sill grout shows signs of deterioration along the window sill and needs repair. The deterioration of exterior sealant around the window frames needs removal and replacement.
  - The cracking and breaking of the exterior window sills is potentially allowing moisture into the brick wall cavity.
  - The landscaping sprinkler heads spray upwards toward the underside of the window sill and into the cracks.

- Recommendations
  - Replace the casement windows with new energy efficient storefront aluminum framed windows.
  - Refurbish the exterior concrete window sills.
  - Remove and replace exterior window sealant at the west elevation aluminum, framed windows.

ARCHITECTURE

Building Composition

The Maitland Public Library currently composes of (3) distinct building assemblies within its property. The original building was constructed in 1907, with additions made to the original structure in 1959 (wing additions), 1972 and 1989. The buildings composition has evolved to create a central open-air courtyard flanked on three sides by the original building and its subsequent additions. These additions are conjoined through two primary means; direct doorway access between additions or a connective element consisting of an enlarged enclosed hallway between the original building and successive building wing additions.



Aerial site photograph

Life Safety

- Emergency Lighting and Exit Signs- are comprised of a variety of illuminated directional sign and combination directional sign and lighting packs along all exit routes, signage is generally unobstructed, except for the exit sign behind the Teaching Kitchen. At the time of a prior remodeling of the Teaching Kitchen, a visible directional sign was not included to indicate the emergency exit when the addition blocked visibility of the existing emergency egress. Additionally, it does not appear that exterior lighting was provided to at all exit locations leading to a public way. Without a photometric study this cannot be confirmed.

Community Room Egress Exit

- Fire Alarm System is comprised of manual pull-stations, horn/strobe notification devices and smoke detectors. Building-wide coverage of these notification devices and smoke detectors appears to be adequate.
- Fire Hazards- potential fire hazards and combustible materials in the Library are those of a typical office occupancy. Office furniture, personal computers, bookcases, technical publications and metal file cabinets are materials typically populated throughout office spaces. A Break Room with small appliances, such as a microwave, toaster and coffee machine are located on the mezzanine level. A notable unusual concentration of combustible materials was observed in the storage area of the mezzanine.

ADA

The following is a Code review of relevant Florida Building Code (FBC) Accessibility Code relevant to building alteration, improvements and remodeling.

FBC Accessibility-202.3 Alterations. Where existing elements or spaces or common areas are altered, each altered element, space or area shall comply with the applicable requirements of Chapter 2.

- Exceptions
  - Unless required by 202.4, where elements or spaces are altered and the circulation path to the altered element or space is not altered, an accessible route shall not be required.
  - I alterations, where compliance with applicable requirements is technically infeasible, the alteration shall comply with the requirements to the maximum extent feasible.

FBC Accessibility-202.4 Alterations Affecting Primary Function Areas. In addition to the requirements of 202.3, an alteration that affects or could affect the usability of or access to an area containing a primary function shall be made so as to ensure that, to the maximum extent feasible, the path of travel to the altered area, including the rest rooms, telephones, and drinking fountains serving the altered area are readily accessible to and usable by individuals with disabilities, unless such alterations are disproportionate to the overall alterations in terms of cost pursuant to 202.4.1

- Exceptions
  - If a public entity has constructed or altered required elements of a path of travel in accordance with the specifications in either the 1994 or 1997 Florida Accessibility Code or the Uniform Federal Accessibility Standards, as an equivalent facilitation, before March 15, 2012, the public entity is not required to retrofit such elements to reflect incremental changes in this code solely because of an alteration to a primary function area served by that path of travel.

FBC Accessibility-202.4.1 Disproportionate Cost. Alterations made to provide an accessible path of travel to the altered area will be deemed disproportionate to the overall alteration when the cost exceeds 20% of the cost of the alteration to the primary function area.

FBC Accessibility-202.4.3 Series of small alterations. The obligation to provide an accessible path of travel may not be evaded by performing a series of small alterations to the area served by a single path of travel if those alterations could have been performed as a single undertaking.

FBC Accessibility- 202.4.3.2 Only alterations undertaken after January 26, 1992, shall be considered in determining if the cost of providing an accessible path of travel is disproportionate to the overall cost of the alterations.

FBC Accessibility-202.5 Alterations to qualified historic buildings and facilities. Alterations to a qualified historic building or facility shall comply with 202.3 and 202.4 to the maximum extent feasible.

FBC Accessibility-213.2 Toilet Rooms and Bathing Rooms. Where toilet rooms are provided, each toilet room shall comply with 603.

- Exceptions
  - In alterations where it is technically infeasible to comply with 603, altering existing toilet or bathing rooms shall not be required where a single unisex toilet room or bathing room complying with 213.2.1 is provided and located in the same area and on the same floor as existing in accessible toilet or bathing rooms.

FBC Accessibility-213.3 Plumbing Fixtures and Accessories. Plumbing fixtures and accessories provided in a toilet room or bathing room required to comply with 213.2. shall comply with 213.3.

FBC Accessibility-213.1 Toilet Compartments. Where toilet compartments are provided, at least one toilet compartment shall comply with 604.8.1.

- Problems
  - Drinking Fountains- (1) & not accessible.
  - Restrooms- not accessible, fixtures not accessible
  - Kitchen- NA; teaching kitchen only.
  - Protruding Objects; Fire extinguisher in Adult Reading Room

- Recommendations from this Code Review:

Near Term:

- Provide additional directional signage for emergency exit in the community room and conduct an exterior photometric study to confirm if lighting that levels meet FBC requirements for illuminated means of egress to a public way.
- Test all fire alarm systems to ensure a proper working order.
- Sort and organize the concentration of combustibles in the storage area of the mezzanine level to minimize fire hazard potential.
- Relocate fire extinguishers in the Adult Reading Room or replace them within semi-recessed cabinetry.

Long Term:

- Replace existing non-ADA compliant drinking fountain with an ADA accessible fixture.
- Consider remodeling the (2) library entrance public restrooms (currently with 2 fixtures each) into (2) single-user ADA compliant restrooms. Note the reduction from 4 toilet fixtures to 2 toilet fixtures will affect allowable building occupancy per FBC Plumbing Code.

Restrooms

The existing building features (2) sets of male/female public restrooms and two staff restrooms for a total of six rooms. Fixture counts (12 overall) are itemized as follows;
Lobby Restrooms consist of (2) fixtures each per gender.
Library Restrooms consist of (3) fixtures each per gender.
Mezzanine Staff Restroom, single fixture, single occupant.
Bookstore single fixture, single occupant.

- General Conditions:
  - Lobby Restroom fixtures and finishes are in Good condition.
  - Library Restroom fixtures and finishes are in Fair condition.
  - Mezzanine Staff Restroom fixtures and finishes are in Good condition.
  - Bookstore Staff Restroom fixtures and finishes are presumed to be in Fair condition but were not fully unobservable due to area being utilized as a general storage room at the time of survey.

Lobby Restroom

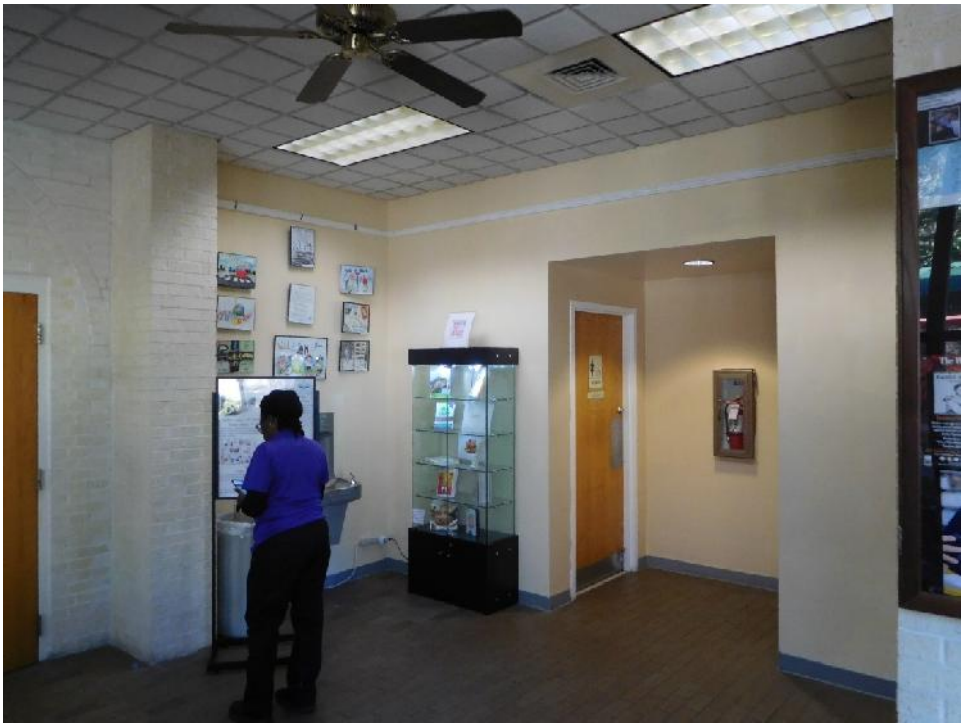
Women's Library Restroom

Men’s Library Restroom

Staff Mezzanine Restroom

Book Store Restroom

- Concerns
  - Lobby Restroom does not have library staff observability unless the lobby doors are open rooms are accessible to the public prior to them passing a staff observation check point. This arrangement could pose a security concern.
  - Mezzanine Staff Restroom fixture and millwork were residential in nature and may not survive the same life cycle and durability expectations of commercial grade fixtures and finishes used elsewhere in facility.



Lobby Restroom not observable by Library Entry Desk

- Problems
  - None of the restrooms meet current FBC 2017 or ADA Code requirements.
  - Based on FBC Plumbing, building occupancy may be restricted because of lower fixture counts, if brought up to FBC 2017 and ADA Code requirements. Fixture reductions may be necessary for previously mentioned restroom improvements, given current restroom floor area sizes and layout orientations.

- Recommendations

Near Term

  - No recommendations.

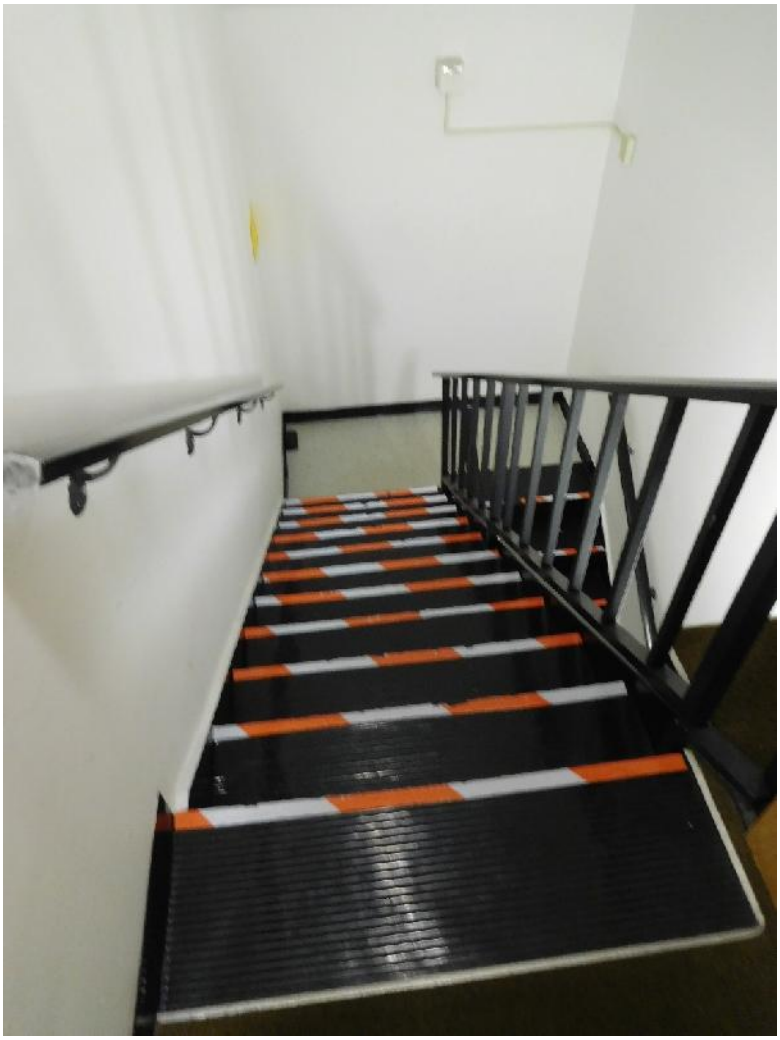
Long Term

  - Consider remodeling the (2) existing (2 fixtures each) library entrance public restrooms into (2) single-user ADA compliant restrooms. Note: the reduction of fixture counts may negatively affect building occupancy.

Stairs

The building features (2) sets of existing stairs (1989 construction) servicing either end of the second-floor Mezzanine level.

- General Conditions
  - The stairs appear to be in Good condition



Mezzanine Stairs (stair well)

Second Mezzanine stairs

Note handrails and stair landing are not FBC compliant

- Problems
  - Stair handrails do not meet FBC 2017 requirements.
  - Currently no ADA compliant means of access exists to vertically transport handicapped end-users up to the Mezzanine area. As such occupancy classification and use of this area is limited per FBC.

- Recommendations

Near Term

- No recommendations.

Long Term

- Consider replacing existing stair handrails with FBC compliant handrails.

Teaching Kitchen

The building features a single, non-stove top, residential Teaching Kitchen within the Meeting Room area.

- General Conditions:
  - Teaching Kitchen functions appear to be in good working condition. Millwork appears in Good condition. Plastic laminate counter tops appear to be in good condition. The residential dishwasher, oven, built-in microwave and refrigerator all appear to be in good condition. Sink and faucet appear to be in good working condition.

Teaching Kitchen in Community Room

Teaching Kitchen

- Concerns
  - At the time of previous remodel to add Teaching Kitchen, visual connection to emergency exit sign was compromised. It does not appear that relocation of existing or adding replacement emergency exit signage was provided to address this visual break. Additionally, it does not appear that specific exterior lighting was provided to all exit locations leading to a public way. Without a photometric study this cannot be confirmed.

Community Room Egress Door

- Problems
  - No reported or observable problems.

- Recommendations

  Near Term

  - Provide additional directional signage for emergency exit in the Community Room and conduct an exterior photometric study to confirm lighting levels that meet FBC requirements for illuminated means of egress to a public way.

Book Lift

The building features a single shaft book equipment lift in the Staff Workroom (1989 construction) servicing the second-floor Mezzanine.

Book Lift

- General Conditions
  - The condition of the book lift is Fair. It is a dated system that does not show signs or observations of routine maintenance and servicing.

- Concerns
  - No safety signage is present to indicate that this is an equipment lift (only) and is restricted from passenger use.

- Problems
  - No reported problems or observations.

- Recommendations

  Near Term:

  - Have a lift-manufacturer or lift-servicing technician inspect conditions of lift, gears, motor and doors; then service accordingly.

Interior Finishes

Walls

Interior walls consist primarily of gypsum wall board with varying wall finishes; most wall surfaces are painted and limited few are finished with wall paper. There are limited areas that have exposed brick as the wall system and finish.

- General Conditions
  - Majority of interior walls appear to be in Good condition.

- Concerns
  - Many exposed electrical conduit race ways are surfaced mounted directly to drywall finishes throughout public spaces such as; light switches, new light fixtures, fire alarm stations, strobes, security alarm control stations, motion sensors etc.

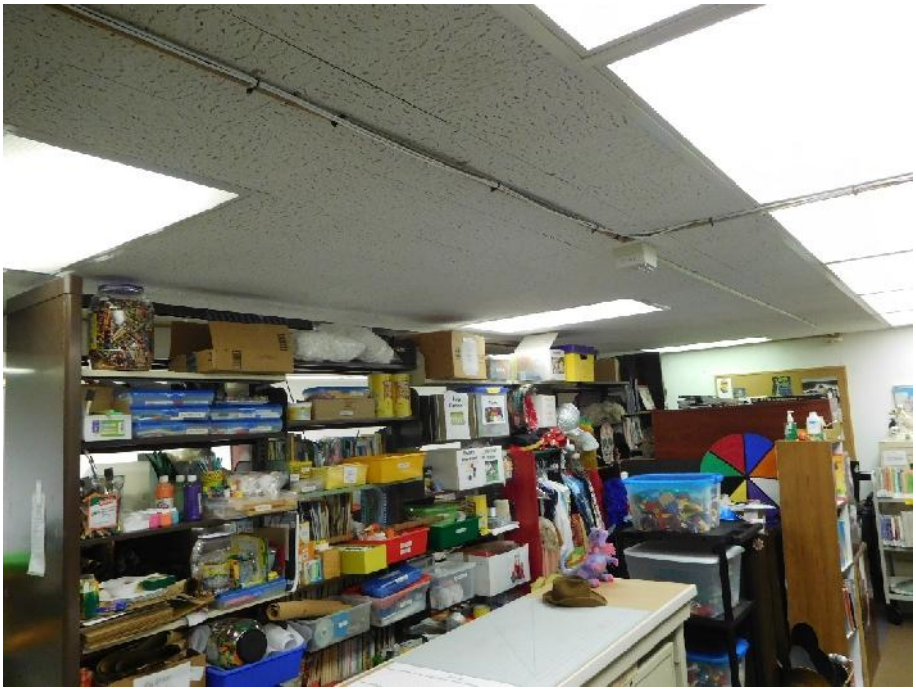
Library Staff Room. Note surface mounted electrical lines.

Note exposed electrical conduit in Main Library

Main Library; Exposed electrical lines.

Adult Reading Room; exposed electrical lines

Mezzanine; exposed electrical lines



Mezzanine; exposed electrical lines

- Areas where brick is the wall system and is exposed, there is a juxtaposition between the original brick and infill brick both in texture and coloring (yellowish to off white) highlighting the construction variation.

Expressed variation of brick type

Expressed variation of brick type

- Several areas have light duty corner guards in place. Regarding an overall facility coverage, they are inconsistently placed and relegated to general zones, rather than a comprehensive protection to entire facility. In several areas these light duty corner guards are failing due to active environmental conditions that limit their intended effective use.

Example of light duty corner guard

- Where public seating is presented with loose furnishing chairs, associated adjacent walls show signs of abrasive wear from regular contact with chair backs.

Chair scuffing of wall surface

- Problems
  - Several areas around the Adult Reading Room windows show signs of water intrusion and damage (previously noted in roof and window observations).

- Recommendations

Near Term

- Install building-wide (wall) corner guard treatment, removing existing light duty corner guards and replacing with guards whose duty matches their use. This includes areas currently unprotected and highly trafficked.
- Provide chair rails along walls where chairs are placed.

Long Term

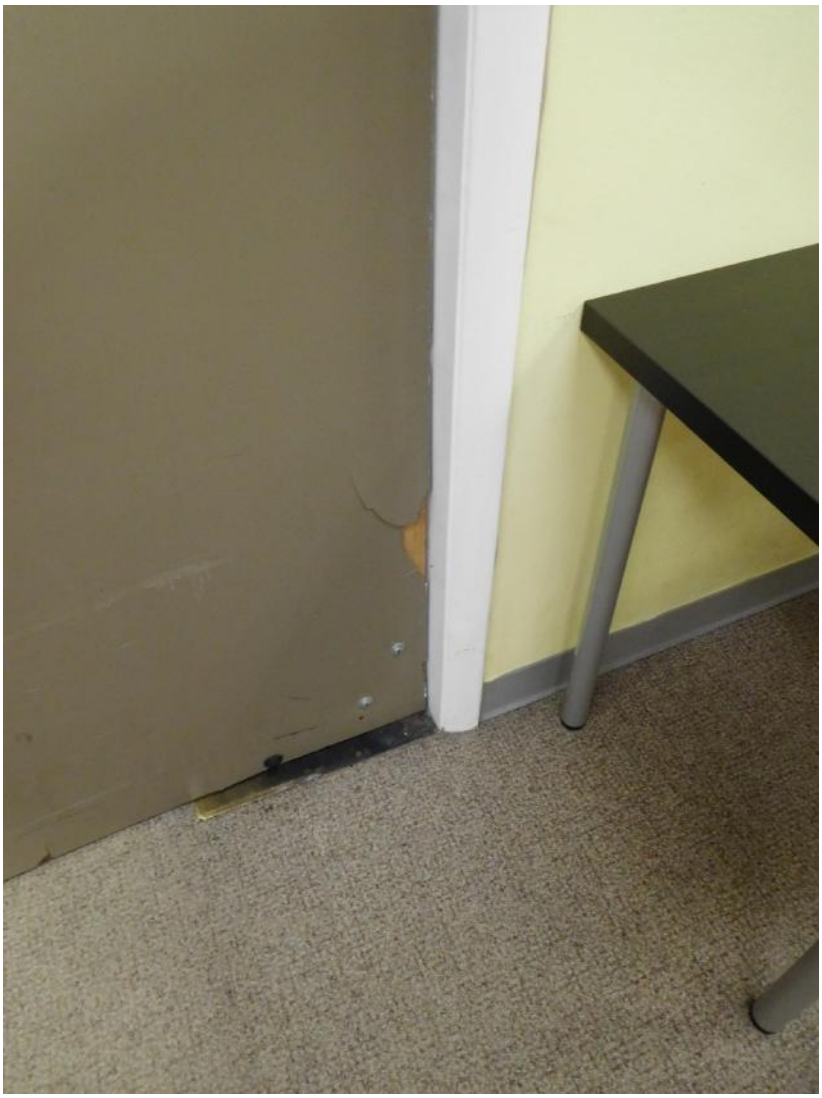
- Conduct electrical wiring renovations to remove surface mounted electrical conduit then install electrical conduit and wiring within the building's walls and ceiling soffits.

Interior Doors

Interior doors are primarily wood frame with a variety of light duty hollow core wood doors of various finishes (exposed wood grain and plastic laminate).

- General Conditions
  - Overall door conditions are Fair, however higher traffic patterns and higher utilization give way to greater wear on the doors. Conditions range from Poor to Failing.
- Concerns
  - While overall door conditions ae fair, there are no consistencies with door protection treatments that would mitigate wear, service and maintenance. Example; stainless steel push plates eliminate the oiling and soiling of wood doors.
  - The wide mix and variety of door types and finishes do not provide a uniform aesthetic language through the facility.
- Problems
  - The most heavily utilized doors are showing signs of excessive wear. Deferring maintenance repair of refurbishment will lead more quickly toward door failure, often
  - these doors and their state of deterioration are publicly visible.

Damaged Staff Room Door



Damaged Staff Room Door

- Recommendations

Near Term:

- Conduct building wide door maintenance and refurbishment program to maintain or revitalize existing door assemblies. Include door hardware upgrades such as kick plates, press pads etc., to reduce wear, tear and soiling on doors.
- Remove doors and frames to staff offices and replace with commercial grade wood door and frame assemblies to match existing office.

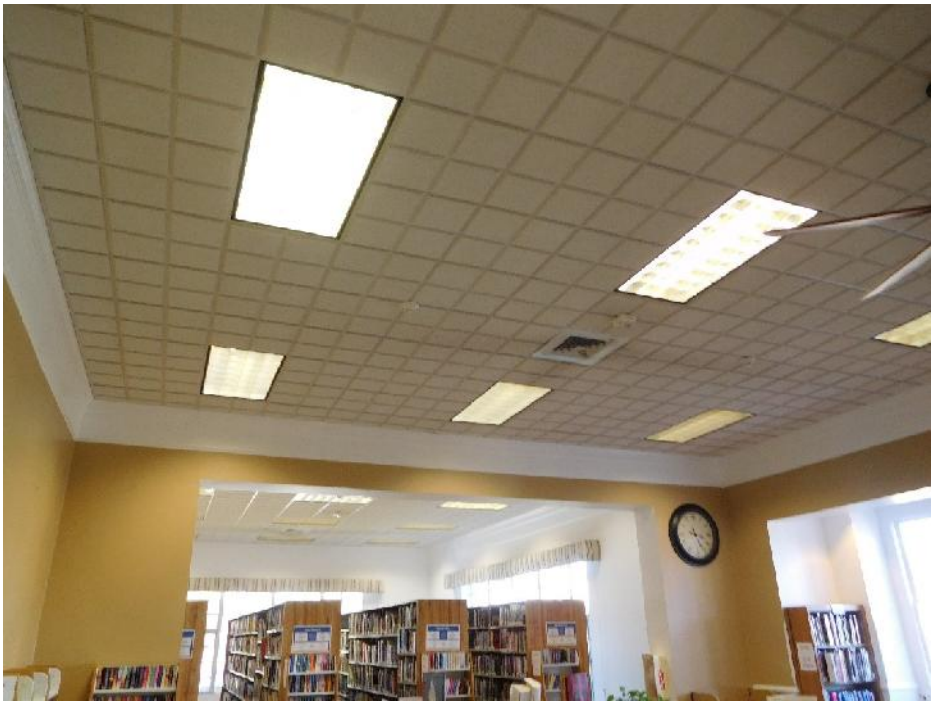
Ceilings

The building primarily makes use of four types of ceiling finishes:

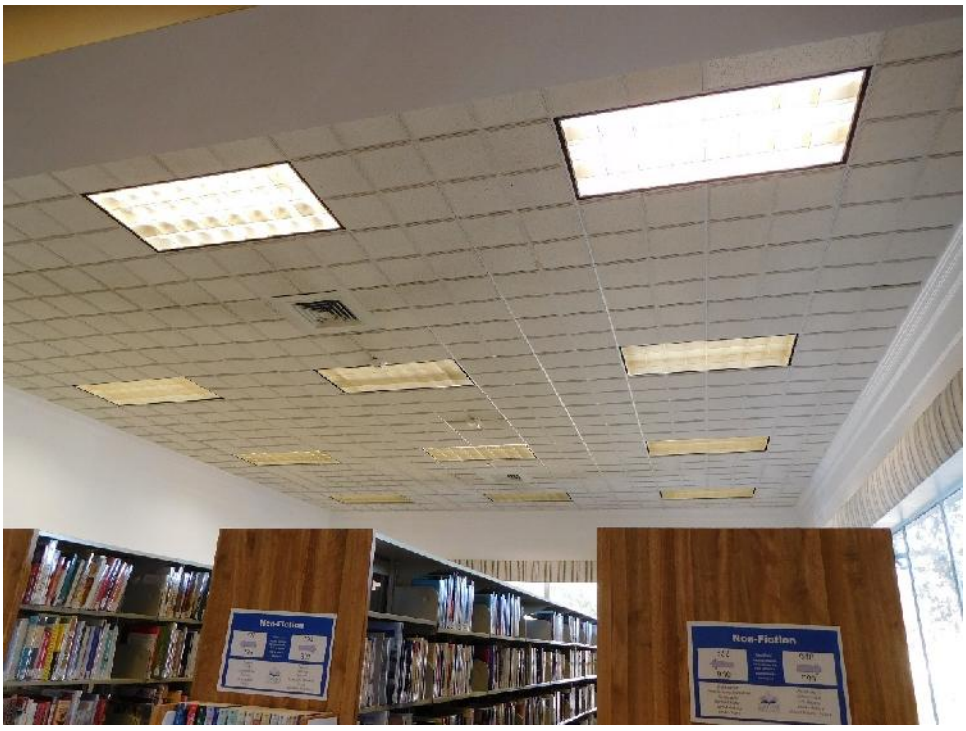
1. Coffer type Acoustical Ceiling Tile (ACT) system survives generally through the Reading Room (1907 construction) Book Stacks (1959 construction), and Courtyard facing hallways. This tile profile is no longer in production.
2. Flat-panel type ACT system survives generally at Bookstore and non-public areas (1959 construction).
3. Adhesive applied ceiling tile system survives generally at mezzanine (1989 construction).
4. Hard surface painted gypsum board survives generally at Book Stacks (1989 construction) and most restrooms throughout the facility.

- General Conditions
  - Acoustical ceiling tile is in Poor condition most notably due to its service life. There is discoloration, warping, sagging, edge condition deterioration and damaged tiles that have not been replaced. In some areas, missing tiles have either been replaced with dissimilar type and finish, or not been replaced altogether.
  - Gypsum board hard ceilings are generally in Good to Fair condition.

Community Room Ceiling Tiles



Adult Reading Room ceiling tiles



Adult Reading Room ceiling tiles

- Concerns
  - Due to the limited availability of the product, several areas have new lighting systems, fire alarm systems, phone lines, data lines electrical conduit mounted directly to the underside of the ceiling tiles in direct view of the public.
  - In some areas where damaged tiles have been removed, they have either been replaced with dissimilar type and finish, or not been replaced altogether. Both these conditions occur within public observation areas.
  - In areas where the gypsum board hard ceilings have received damage from water intrusion they have either not been fully remediated (Adult Reading Room) or have been spot fixed and painted over. In the case of the later, which accentuates a noticeable visual variation between what has been spot-fixed and what has survived. Refurbishment is limited to the affected area, effectively still highlighting the treated area by the variation between the refurbishment and unaffected area.

Mis-matched ceiling tiles

Water stain of ceiling tiles

- Problems
  - Due to the assembly nature (tongue & groove) and the out of stock and manufacture of the product, ceiling areas that are damaged are not being replaced showcasing worn damaged and continued deteriorating finish system observable to the public.

- Recommendations

Near Term:

  - No recommendations.

Long Term:

  - Comprehensive removal and replacement all Acoustical Ceiling Tiles (ACT). At that time replace the surface mounted electrical conduit inside of the ACT system. (It was noted due to the age and obsolescence of the existing square ceiling tiles, upgraded lighting, data and electrical lines were surface mounted to the ceiling system).
  - Consider servicing and updating light fixtures.

Flooring

The facility features primarily two floor finishes; carpet throughout the library area and vinyl tile throughout the community/meeting/teaching room and conference room areas.

- General Conditions
  - The general condition for both the carpeting and vinyl tile is in Good condition.
- Concerns
  - The Community Room is a highly used public area and is showing signs of heavy use. This area needs periodic maintenance to floor; stripping, cleaning, re-waxing and buffing.

Community Room flooring

- Problems
  - No problems referenced by library staff.

- Recommendations

  Near Term:

  - Provide a comprehensive cleaning and re-waxing of resilient flooring system.

Window Interior Finishes

The library has a series of differing window finishes associated with differing construction phases and installations, which consists of drywall, tile and brick finishes.

- General Conditions
  - Most of the interior window finishes appear to be in good repair.
- Concerns
  - With the wide variety of window type interior finish, drywall, tile and brick; maintenance observation and review will not be systematic and uniform, as the material property differs and thus the maintenance protocol. It appears that the drywall finish is the most susceptible to wear and damage. Other than the problem areas noted, appear to be in good repair.
- Problems
  - Original building wood frame windows in the Adult Reading Room have signs of water intrusion above the interior window head, jamb wall return and sill.
  - The single pane aluminum windows along the 1959 wing addition show signs of water damage and intrusion along the window jamb.

Reading Room window

Library Lobby storefronts

Adult Reading Room wood window system; note water damage

Adult Reading Room wood window system; note water damage

Adult Reading Room wood window system; note water damage

Adult Reading Room; note water damage

- Recommendations:

  Near Term:

  - Remediate and repair water damage to interior finishes.

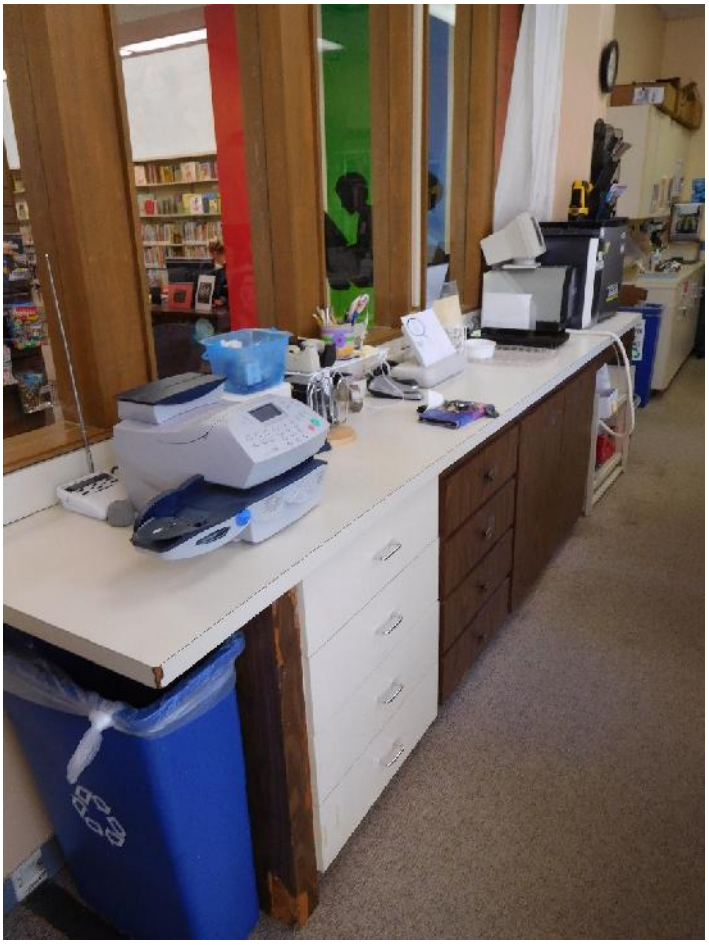
  Long Term:

  - Due to the satisfactory condition of interior window finishes no recommendations are issued.

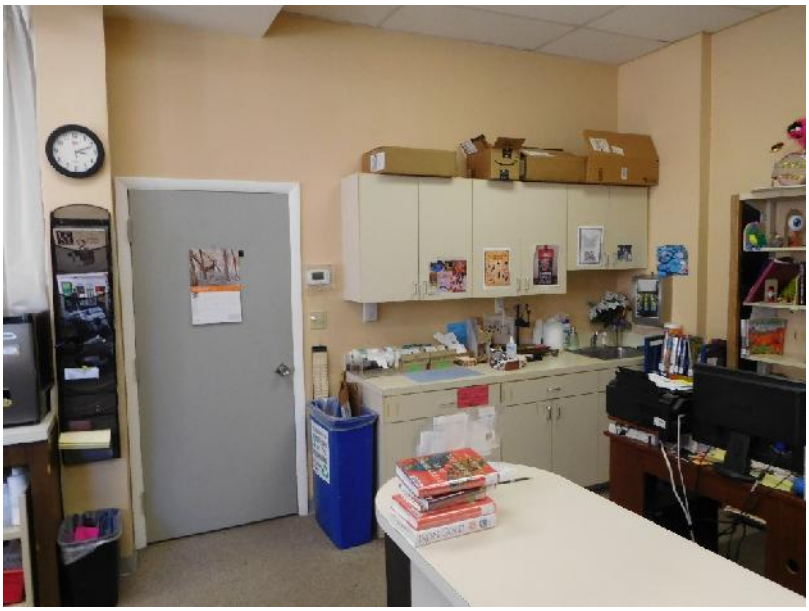
Millwork

The facility supports limited amount of built-in millwork used in the following areas; Staff Work Room, Conference Room, Meeting Room Storage, Teaching Kitchen and Staff Break Room. The most utilized millwork consists primarily of case goods utilized to create large furnishing components such as the reception desk, circulation desk and public-use computer areas.

- General Conditions
  - Condition of most of the millwork is Good. Heavier utilized pieces show subsequent higher degree of wear and deterioration. The newest installed furnishings are in Good to Excellent condition. Teaching Kitchen furnishing are in Excellent condition.
- Concerns
  - With both the millwork and casework; their types and finishes are widely varied and reflect widely differing aesthetic additions to the facility. As such, there is an ad hoc appearance that creates a clashing aesthetic language particularly where conflicting systems are utilized in close vicinity.



Staff Room Millwork



Staff Room Millwork

Staff Room Millwork

Library Main Desk

Library Main Desk

Children's Reading Room Desk

Meeting Room Storage Units

While being in Good condition and high appearance value, have construction and detailing is of a light duty residential nature. There does not appear to be adequate lateral bracing, and particle board fabrications do not lend itself to high utilization, wear or service life. This installation also does not appear to have been programmed into the space utilization or storage needs, but it was something added and incorporated into use; the utilization of curtains as a system enclosure would unify that space.

Meeting Room Storage

Meeting Room Storage

Meeting Room Storage

Meeting Room Storage

- Problems
  - It was reported that while storage systems are in place throughout the facility, they are not typically geared towards meeting the specific storage needs ideally required for supporting/enhancing the library and the service programs they offer.

Recommendations

Near Term:

- No recommendations.

Long Term:

- Undergo a programmatic storage assessment for the library's needs, with concentrated focus on the Multi-Purpose Community Room. Remove and replace existing storage units (residential type) with commercial millwork targeted to address the programmatic needs of the service program.

Noted Concerns & Problems by Library Staff

- Problems
  - Library staff noted a recurring issue with the presence of large rodents that has not yet been abated. Staff reports; chewing and disturbances of food packaging, rodent droppings around food items in storage areas, signs of nesting and material acquisition such as shredded paper, fabric and cardboard, and displays of territorial behavior when physically encountered. This behavior intrusion indicates rodent habitation within the facility, and not solely for shelter or feeding.

- Recommendations

Near Term:

- Engage a qualified rodent-removal services.

ELECTRICAL

The existing Duke Energy transformer serving the building is located to the South of the building. The transformer size is 75 KVA at 208Y/120V, 3 Phase. The service size is 200 amps.

Interior Power Distribution

The existing main distribution panel is in the Janitor's Closet behind the Service Desk area. The panel is a Square D I-Line, 600 amp, 208Y/120V, 3 phase, main lug only with no spaces or spares and appears to be in good condition.

The existing main Electrical Room is on the West side of the building. There are (3) distribution panels in the room which appear to be in excellent condition. The panel on the left was added to provide power for Kitchen equipment and is an Eaton PRL1a panel, 225 amp, 208Y/120V, 3 phase, 42 circuit with a 200 amp main breaker. The panel has 29 spaces.

The middle panel “D2” is a General Electric A Series panel, 225 amp, 208Y/120V, 3 phase, 30 circuit, main lug only with no spaces or spares.
The panel “L2” on the right is a General Electric A Series panel, 225 amp, 208Y/120V, 3 phase, 36 circuit, main lug only with 4 spaces and 2 spares.

Main Distribution Panel

Main Electrical Room Distribution Panels
There is an Electrical Closet in the older part of the building in the Book Sales Room that contains disconnect switches and (2) sub-panels. All of this equipment is old but appears to be in good condition.
Sub-Panel “A” on the left is a Square D QO Series panel, 125 amp, 208Y/120V, 3 phase, 16 circuit, main lug only with 7 spaces.

Sub-Panel “B” on the right is a Square D QO Series panel, 125amp, 208Y/120V, 3 phase, 20 circuit, main lug only with no spaces or spares.

Electrical Closet Sub-Panels

Exterior Disconnect Switch

All interior and exterior disconnect switches for mechanical equipment appear to be in good condition.

Interior Disconnect Switches

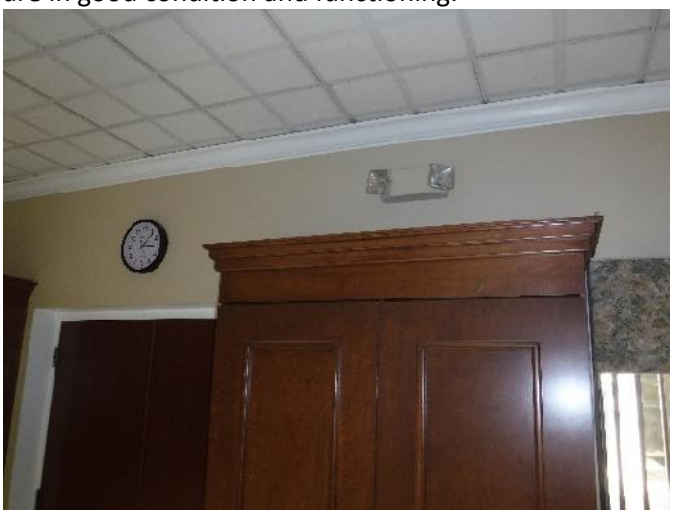
Lighting - Interior

There are many types of Lighting Fixtures installed throughout the building including recessed 2'x4' parabolic fluorescents, surface mounted fluorescents and fluorescent downlights. Lighting levels throughout the building are very good and the fixtures have been very well maintained.

Typical Recessed Lighting Fixtures

Typical Recessed Lighting Fixtures

Emergency Lighting is provided by Emergency Wall Packs and coverage appears to be good. All exit signs are in good condition and functioning.



Typical Emergency Lighting

Typical Exit Sign

Lighting – Exterior

Exterior Lighting is provided by recessed downlights, wall mounted fixtures and bollard fixtures at the parking area. Fixtures are in good condition and coverage appears to be adequate.

Exterior Downlights

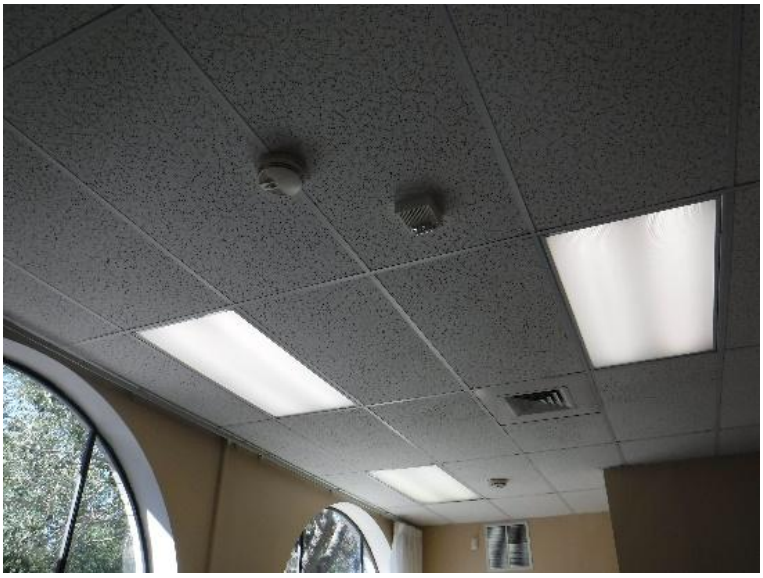
Floodlights

Bollard Fixtures

Fire Alarm System

The existing Fire Alarm System is composed of manual pull stations, horn/strobe notification devices and smoke detectors. Building-wide coverage of notification devices and smoke detectors appears to be adequate.

Annunciator Panel and Pull Station



Typical Notification Device and Smoke Detectors

- Design Recommendations

  Near-Term
  - No Recommendations

  Long-Term
  - Consider replacing fluorescent lighting with energy efficient LED lighting.

  Continue Maintenance
  - The building electrical system seems to be well maintained, especially the lighting. Continue present maintenance program.

MECHANICAL/HVAC

The building is air conditioned by a total of (8) eight split system, direct expansion, R-410 refrigerant and R-22 refrigerant AC systems ranging in size from 1.5 tons to 10 tons. Most of the air conditioning equipment appears to be in good to excellent condition with units ranging in age from 1 year 3 months to 6 years in age. However, there are two AC systems that are older and utilize R-22 refrigerant which was phased out many years ago. Those systems are probably 10-15 years old. The AC equipment is manufactured by numerous companies including Goodman, Lennox and Trane.

All systems convey air to the spaces that they serve via fiberglass ductwork feeding ceiling mounted supply air diffusers. All return systems are fully ducted with fiberglass ductwork. There are no return air plenum ceilings in this building.

All supply air and return air fiberglass duct board appears to be in good condition and is properly supported. The duct systems consist of a combination of rigid fiberglass duct board and round flexible ductwork. There also appears to be a small amount of metal ductwork in some portions of the building. This metal ductwork appears to be very old and is probably left over from a long time ago.

Each diffuser or grille is connected to the ductwork above the ceiling utilizing insulated flexible ductwork.

Multipurpose Room

The Multipurpose room is approximately 2,900 square feet in size. This room is served by a single 10-ton air handling unit (AHU-3) located in a 1st floor mechanical room adjacent to the Multipurpose room. This AHU is coupled with as single dual compressor, air cooled condensing unit (CU-3) located on the west side of the building. This condensing unit is located near the driveway and is protected by 3 bollards. This equipment is in excellent condition and is only 15 months old. Since the unit is served by a condensing unit with dual compressors, it has the ability to stage down to about 50% of its maximum capacity. This is beneficial since the space is often empty and does not always need 10 tons of cooling. This unit has an electric resistance heater rated at 26.2 KW.

The Air Handling Unit has outside air which enters the main return duct form a 3’-6” x 2’-0” exterior wall louver located on the west wall of the Mechanical Room.

Condensate from this AHU discharges to a floor mounted condensate drain that runs under slab.

The ceiling diffusers consist of 2’x2’ lay in panels in the acoustical ceiling grid. The diffusers look old and this particular type of ceiling diffuser does an average job of distributing the air.

Refrigerant piping is routed overhead from the mechanical room to a location closer to the outdoor condensing unit. It is then routed exposed on the exterior wall of the building and along the ground to the Condensing Unit.

10 Ton Air Handling Unit (AHU-3)

10 Ton Condensing Unit (CU-3)

Fiberglass Ductwork at Mechanical Room

New Reading Room/Stacks- West Side

The West Reading Stacks room is approximately 4,100 square feet in size. This room is served by (2) two five-ton horizontal air handling units located in a 2nd floor mechanical room above the 1st floor ceiling. These air handling units are coupled with (2) two five-ton, air cooled, pad mounted condensing units. These condensing units (CU-1/CU-2) are located on the Southeast side of the building in a corner of the building that serves as a mechanical yard for 5 units. This equipment is in excellent condition and is only 15 months old.

This equipment is in excellent condition. This unit has an electric resistance heater rated at 26.2 KW.

These Air Handling Units do not appear to have any outside air.

Condensate from these AHUs discharges via PVC piping through the attic that is routed to the exterior.

Refrigerant piping is routed overhead from the mechanical room to a location closer to the outdoor condensing unit. It is then routed exposed on the exterior wall of the building and along the ground to the Condensing Unit.

The ceiling diffusers consist of ten 2'x2' lay in ceiling diffusers in the acoustical ceiling grid. The diffusers look old and this particular type of ceiling diffuser does an average job of distributing the air.

The return air grilles serving this room consist of wall mounted grilles located on the west wall of this room.

(2) 5 Ton Air Handling Units

(2) 5 Ton Condensing Units

Fiberglass Supply Air Ductwork at Mechanical Room

Fiberglass Return Air Ductwork at Mechanical Room

Supply Air Diffusers at Reading Room

Supply Air Diffusers at Reading Room

Original Reading Room/Stacks - East Side

This room is served by (2) two five-ton horizontal air handling units (non-tagged air handling units) located in the ceiling above the bookstore to the West of the reading rooms. These AHUs are difficult to access for service and maintenance. These air handling units are served by two air cooled, pad mounted condensing units located on the Southeast side of the building in a corner of the building that serves as a mechanical yard for 5 units. This equipment is in excellent condition and appears to be less than 3 or 4 years old.

These Air Handling Units do not appear to have any outside air.

Condensate from these AHUs discharges via PVC piping through the attic that is routed to the exterior.

Refrigerant piping is routed overhead from the air handling units to a location closer to the outdoor condensing units. It is then routed exposed on the exterior wall of the building and along the ground to the Condensing Units.

The ceiling diffusers consists of (4) four 2'x2' lay in ceiling diffusers located in the acoustical ceiling grid. The diffusers look old and this particular type of ceiling diffuser does an average to poor job of distributing the air.

(2) 5 Ton Condensing Units

Supply Air Diffusers at Reading Room

2nd Floor Mezzanine/Stacks

This area is served by a single 3.5-ton vertical air handling unit (AHU-2.1) located in the 2nd floor mechanical room above the 1st floor ceiling. This AHU is served by a single wall mounted return air grille (20"x20") located in the 2nd floor just above the floor. The condensing unit serving this area (CU-2.1) is located on the Southeast side of the building on a concrete pad. This

This Air Handling Unit does not have any outside air.

Condensate from this AHU discharges via PVC piping through the attic to the exterior.

Refrigerant piping is routed overhead from the mechanical room to a location closer to the outdoor condensing unit. It is then routed exposed on the exterior wall of the building and along the ground to the Condensing Unit. This refrigerant piping is protected by a metal shroud.

The supply air from this system is conveyed through very small ceiling diffusers located throughout the 2nd floor space. These ceiling diffusers do a poor job of distributing the air.

All supply air and return air fiberglass duct board appears to be in good condition and is properly supported. The systems consist of a combination of rigid fiberglass duct board and round flexible ductwork. There also appears to be some metal ductwork in some portions of the building. This metal ductwork appears to be very old and is probably left over from a long time ago.

Each diffuser or grille is connected to the ductwork above the ceiling utilizing insulated flexible ductwork. Typical flexible ductwork lengths observed were approximately 8-12 feet in length.

The return air grilles serving this room consist of wall mounted grilles located on the west wall of this room.

3.5 Ton Air Handling Unit (AHU-2.1)

3.5 Ton Condensing Unit (CU-2.1)

Return Air Grille & Thermostat (AHU-2.1)

IT Room/Server Room

This room is served by a dedicated 1.0-ton Mitsubishi mini split AC system. The condensing unit serving this area is located on the Northeast side of the building in an exterior corner of the building near the entrance to the Library.

Refrigerant piping is routed overhead from the air handling unit to a location closer to the outdoor condensing unit. It is then routed exposed on the exterior wall of the building and along the ground to the Condensing Unit.

1.0 Ton Condensing Unit

Exhaust Fans

The 1st floor Public Restrooms at the Lobby are served by ceiling mounted exhaust grilles located above the water closets. It was difficult to ascertain if the exhaust system was operational.

The 1st floor Restrooms located behind the Book Check Out desk are served by ceiling mounted exhaust grilles located above the water closets. It was difficult to ascertain if the exhaust system was operational and we could not find an on-off switch in the restroom for this fan.

The 2nd floor restroom has a ceiling mounted exhaust fan with a plastic inlet grille. This exhaust fan discharges through an uninsulated metal flexible duct routed in the ceiling space to a wall on the outside of the building. This fan was controlled by a wall mounted light switch.

HVAC Controls

All the existing AC systems appear to be controlled by stand-alone wall mounted thermostats dedicated to each unit. Some of the thermostats appear to have a programmable capability. These thermostats

are located throughout the facility. This means that the owner must physically go to each thermostat to adjust temperatures and to turn off the AC systems or place them in an unoccupied setback mode.

- HVAC Recommendations

  Near-Term

  - Test & Balance: we recommend that a Test & Balance be performed on all the HVAC systems serving this facility to establish a baseline of how the systems are operating. This would mainly consist of a Test, and not a Balance. This baseline would give the owner a good idea of the system performance throughout the facility and if any equipment isn't operating – i.e. exhaust fans, old AC units. This would also assist in the addition of outside air to the AC systems in this facility.

  - Outside Air: We recommend that outside air be brought into all existing AHUs that currently do not have any outside air. The building has a total of 5 restrooms and based on the current code requirements the exhaust from these restrooms should total at least 800 CFM. Based on this the building is most likely operating at a negative pressure given that only one AHU appears to have outside air. In addition, the current code (2017 Florida Mechanical Code) and best engineering practices call for outside air provisions to all occupied spaces in order to maintain adequate indoor air quality and a healthy environment. The code required outside air (per 2017 Florida Building Code - Table 403.1.1) for this building based on its size and occupancy use is approximately 1500 CFM -1800 CFM. Right now, the 10 Ton unit serving the Multipurpose Room is probably providing approximately 400 CFM – 500 CFM of outside air.

  - Equipment Replacement: We recommend that consideration be given to replacing the existing the two R-22 systems which serve the 2nd floor reading stacks and the west offices. These units are old and inefficient, and the R-22 refrigerant is very expensive to purchase in case there is a leak. The replacement units will be much more energy efficient.

  Long-Term

  - Consider relocating the (2) two air handling units serving the East Reading Stacks to a ground mounted vertical configuration. These units are difficult to access and service in their current location.

  - Consider replacing the 1.0-ton AC system with a new more efficient AC system of similar configuration. The existing system appears to be 7-10 years old and will eventually need to be replaced.

  - Consider replacing the ceiling mounted supply air diffusers throughout the facility with better performing ceiling diffusers which will also improve the aesthetics in the spaces.

  - Central HVAC Controls: We recommend that a basic rudimentary control system be installed that would allow the user to monitor and control temperatures and AC equipment status from a single location. This system could consist of several Webstats which would allow interface and monitoring through the internet.

Continue Maintenance

- The building HVAC system seems to be well maintained with equipment being properly serviced and replaced when needed. Continue present maintenance program.

PLUMBING

The domestic water plumbing system for this building is copper. The domestic water piping appears to be in good condition and there is no evidence of domestic water plumbing leaks. The staff also indicated that there have been no domestic water plumbing leaks.

The building storm drain system consists of a gutter and downspout drainage system. There are no internal roof drains. The gutter and downspout system appear to be in good condition with no evidence of drainage problems.

Domestic Water Plumbing Piping

Gutter and Downspout Storm Drain System

Water Heating

There is a 30 gallon tank type water heater in the first floor storage closet. This water heater serves the two first floor restrooms by the checkout desk and the 2nd floor employee lounge and restroom. This water heater appears to be several years old and in good working condition.

There is a tankless instant electric water heater in the first floor lobby women's restroom. This water heater serves the first floor lobby women's and men's restroom. This water heater appears to be a few years old and is in good working condition.

There is a tankless instant electric water heater under the counter in the first floor multipurpose break room. This water heater serves the counter sink in the multipurpose break room. This water heater appears to be fairly new and in good working condition.

30 Gallon Tank Type Water Heater

30 Gallon Tank Type Water Heater

Lobby Restroom Tankless Electric Water Heater

First Floor Multipurpose Break Room
Electric Water Heater

Plumbing Fixtures

Multipurpose Room

There is a counter sink in the multipurpose room break room. This counter sink appears to be fairly new in and in very good condition.

Multipurpose Break Room Counter Sink

Lobby

There is an electric water cooler in the Lobby. This water cooler appears to be fairly new and in very good condition.

Lobby Electric Water Cooler

Lobby Restrooms

The plumbing fixtures in the lobby restrooms consist of manual flush valve wall hung water closets, a manual flush valve urinal and wall hung lavatories. These plumbing fixtures appear to be fairly new and in excellent conditon.

Lobby Women's Restroom Lavatory

Lobby Women's Restroom Water Closet

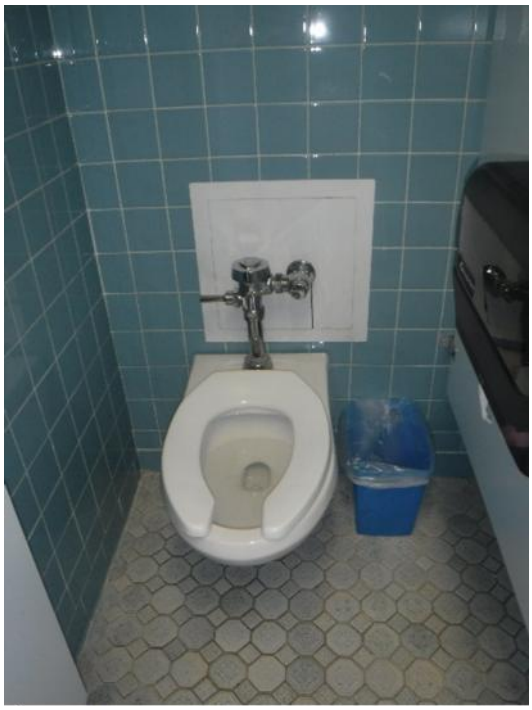
Lobby Men's Restroom Urinal

Lobby Men's Restroom Water Closet

1st Floor Restrooms

The plumbing fixtures in the 1st floor restrooms consist of manual flush valve water closets, a floor mounted manual flush valve urinal, counter mounted lavatories and a mop sink in the men's restroom area. These plumbing fixtures are older and appear to be in good working condition.

1st Floor Women's Restroom Children's Water Closet



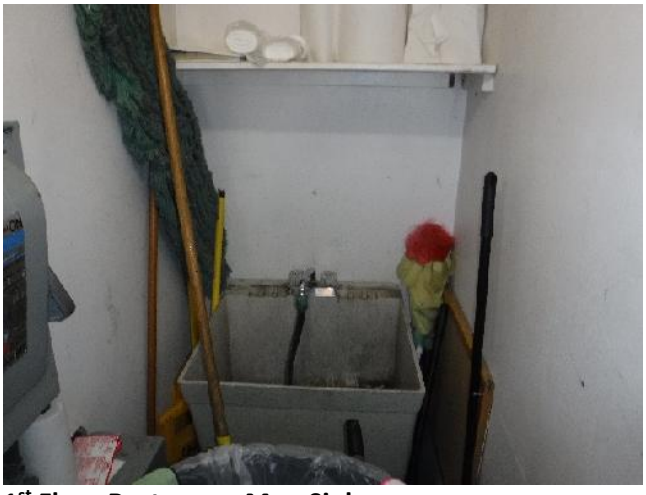
1st Floor Women's Restroom
Water Closet

1st Floor Women's Restroom Lavatories

1st Floor Men's Restroom Urinal

1st Floor Men's Restroom Water Closet

1st Floor Men's Restroom Lavatories



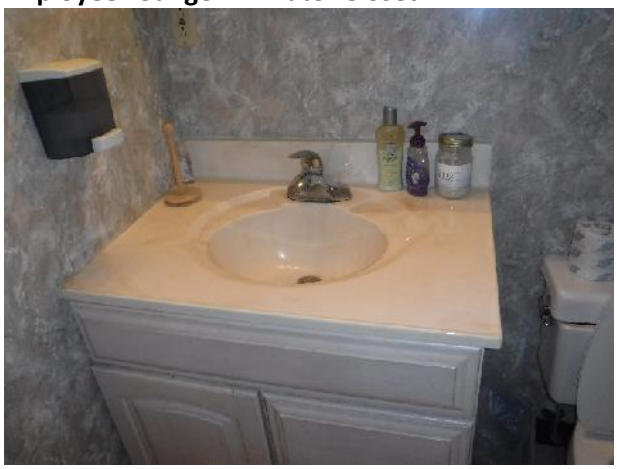
1st Floor Restrooms Mop Sink

2nd Floor Employee Lounge and Restroom

The plumbing fixtures in the 2nd floor Employee Lounge and Restroom consist of a counter sink in the lounge, a tank type water closet and counter mounted lavatory in the restroom. These plumbing fixtures are older and appear to be in good working condition.

Employee Lounge Counter Sink

Employee Lounge RR Water Closet



Employee Lounge RR Counter Mounted Lavatory

Exterior Hose Bibbs

There are (2) exterior wall mounted hose bibbs. These hose bibbs appear to be in good working condition with no evidence of leaks.

Exterior Wall Mounted Hose Bibb

Exterior Wall Mounted Hose Bibb

- Design Recommendations

  Near-Term
  - No Recommendations

  Long-Term
  - As plumbing fixtures are replaced, we recommend replacing with water conserving 1.28 GPF water closets, water conserving 1/8 GPF urinals and water conserving .50 GPM flow faucets.

  Continue Maintenance
  - The building plumbing system seems to be well maintained. Continue present maintenance program.

Appendix A
Plumbing Equipment List

Type Water Heater (1st floor storage closet)
A.O. Smith Model EEST 30T 913
Serial Number MF95-0045131-913
30 Gallon Capacity
Dual Non-Simultaneous 4500 W electric heaters
240 volt/3 phase/60 cycle

Tankless Electric Water Heater (Lobby Restrooms)
Powerstream Pro Model
Serial Number

Tankless Electric Water Heater (Multipurpose Break Room)
Rheem EcoSense Model RETE-18
240 volt/60 cycle
7.5 amps
18 KW

BUILDING RENOVATION RECOMMENDATIONS

CIVIL

Near-Term

- The water feed at the southeast side of the facility was leaking the day of the on-site visit, consider correcting that.
- Correct the natural drainage from the employee parking lot to the Maitland Civic Center. Either by:
  - Adding in a flume.
  - Or replacing the vegetation with some larger stone that will not erode as the current vegetation does.
- Correct the step and ramp entrance/exit to the west that leads to and from the employee parking lot to ensure they meet current ADA standards.
  - Ensure that the step is even and uniform.
  - Build out a larger elevated are to take into account the door swing.
  - Add a handle rail for the step and ramp.
  - Add slip resistant materials to the steps and ramp.
  - Ensure the ramp has an acceptable change in elevation.
- Correct the entrance/exits to the property to meet current ADA standards.
  - Have a cross walk created across Ventris both to the west and the east (corner of Ventris and Maitland) of the additional parking lot.
  - Have ramps replaced with ADA ramps (sidewalk leading to the exit of the parking lot, and the proposed crosswalks, and on either side of the accessible parking).
- Update the handicapped parking to be compliant with local code.
  - Size and access of the parking spots, signage, striping, etc.
- Improve the drainage at the entrance and exit.
  - Add an inlet on the south side of Ventris that ties into the same system for the inlet located at the NW corner of Ventris and Maitland.
- A section of the concrete additional parking lot was severely cracked. Consider addressing and correcting this issue.
- The interior of the facility was observed.
  - Consider updating doors to be ADA compliant and removing door knobs and installing updated hardware.
  - Consider updating the bathrooms to be ADA compliant.
  - Consider adding in additional exit signs and ensuring that they are at acceptable heights to be observed.
  - Consider adding in additional signage for fire extinguishers.

Long-Term (undertaking improvements within 5-10 years)

- Correct the drainage to the east of the facility in the lawn.
  - Add two drains: one for the low spot to the north, and one for the low spot to the south.

- Improve the roof drainage system (more gutters, new gutters, larger downspouts, well placed guards/damns, etc.)
- Replace damaged sidewalks and curbs as needed. Of the cracks observed, none of them posed any major slip or trip hazards at the moment for the sidewalks.
- Resurface the asphalt parking lots and driving paths.
- The additional concrete parking lot is located very close to the railroad. Consider adding sort of barrier to protect those in case there was an issue with the railroad.
- The columns that are in place to hold the different segments of original rod iron fences were observed. Consider ensuring the foundation at the north sections are acceptable and repaired as needed.

Continued Maintenance (on-going remedial efforts)

- Clean out the areas to the west by the employee road and parking lot, for natural drainage towards the railroad through the existing openings in the concrete wall.
- Clean out downspouts and gutters.

Structure

Recommendations with future building renovations include the following:

- Do not support hvac or other new units onto the mezzanine level mechanical room without first strengthening the second-floor framing in the space,
- Avoid removal or adjoining new structural elements onto the original 1907 building footprint, and
- Avoid additions such as transfer beams and build-up framing onto the existing roof rafters.

Architectural

Roofing

Near Term:

- To provide adequate service life for the roofing systems, maintenance staff should be directed to clear debris, moss, leaves and twigs from the roof. They should check flashing for damage, corrosion or holes that may need repair or replacement. Loose or damaged shingles should be replaced. They should also check caulking and sealants around the roof for cracking, aging or damage. Old, worn out or damage sealants should be replaced and documented. Gutters and downspouts should be check for debris or blockage on a regular basis and should be integrated into landscape management program. Particular attention to and observations should be made at all points of roofing transitions, seams and differential roofing types as these are common points of movement and potential failure locations.

- Refurbish existing roof soffits.

Envelope

Near Term:

- Install brick control and expansion joints, re-tooling of faulty and failing grout lines and replacement of damaged brick.

Life Safety & ADA

Near Term:

- Provide additional directional emergency sign in the community room and conduct an exterior photometric study to confirm lighting levels meet FBC requirements for illuminated means of egress to public way.
- Test all fire alarm systems to ensure proper working order.
- Sort and organize the concentration of combustibles in the storage area of the mezzanine to minimize fire hazard potential.
- Relocate fire extinguishers in the Adult Reading Room or replace them with semi-recessed cabinetry.

Long Term:

- Replace existing non-ADA compliant drinking fountain with an ADA accessible fixture.
- Consider remodeling the (2) library entrance public restrooms (2 fixtures each) into (2) single-user ADA compliant restroom. Note the reduction of 2 fixture count may affect building occupancy.

Entrances & Doors

Near Term:

- Replace all hollow metal doors and provide additional weather stripping door hardware accessories.
- Conduct building wide door maintenance and refurbishment program to revitalize and maintain existing doors, to include door hardware upgrades such as kick plates, press pads etc., to reduce wear, tear and soiling on the doors.

Windows

Near Term:

- Replace the 1959 addition single pane aluminum windows and sills with commercial aluminum double pane, thermally broken window system.
- Refurbish water damage along Adult Reading Room window ceiling and sill areas.

Restrooms

Near Term:

No recommendations.

Long Term:

- Consider remodeling the (2) library entrance public restrooms (2 fixtures each) into (2) single-user ADA compliant restroom. Note the reduction of 2 fixture count may affect building occupancy.

Stairs

Near Term:

No recommendations.

Long Term:

- Consider replacing stair railing system with FBC compliant railings.

Book Lift

Near Term:

- Have a manufacturer maintenance service conducted for the lift, gears, motor and doors.

Interior Finishes

Near Term:

- Install a building wide wall corner guard renovation, removing existing light duty corner guards and replacing with guards whose duty matches their use. This includes those areas currently unprotected and highly trafficked.
- Provide chair rails along walls where chairs are placed.

Long Term:

- Conduct electrical service line renovation to remove surface mounted electrical conduit and install electrical conduit within the building's wall and ceiling soffits.

Interior Doors

Near Term:

- Conduct building wide door maintenance and refurbishment program to revitalize and maintain existing doors, to include door hardware upgrades such as kick plates, press pads etc., to reduce wear, tear and soiling on the doors.
- Removed door and frame to staff offices and replace with commercial wood door and frame to match existing office.

Ceilings

Near Term:

No recommendations.

Long Term:

- Comprehensive removal and replacement all acoustical ceiling tiles. At that time replace the surface (ACT) mounted electrical conduit inside of the ceiling system. (It was noted due to the age and obsolescence of the existing square ceiling tiles, upgraded lighting, data and electrical lines were surface mounted to the ceiling system).
- Consideration to updating lighting fixtures and service.

Flooring

Near Term:

- Provide a comprehensive cleaning and re-waxing of resilient flooring system.

Millwork

Near Term:

No recommendations.

Long Term:

- Undergo a programmatic storage assessment for the library with concentrated focus on the multi-use community room. Remove and replace existing storage units (residential in nature) with commercial millwork geared towards the programmatic needs of the service programs provided by the library.

Electrical

Near-Term
No Recommendations

Long-Term
- Consider replacing fluorescent lighting with energy efficient LED lighting.

Continue Maintenance
- The building electrical system seems to be well maintained, especially the lighting. Continue present maintenance program.

Mechanical

Near-Term

- Test & Balance: we recommend that a Test & Balance be performed on all of the HVAC systems serving this facility to establish a baseline of how the systems are operating. This would mainly consist of a Test, and not a Balance. This baseline would give the owner a good idea of the system performance throughout the facility and if any equipment isn't operating – i.e. exhaust fans, old AC units. This would also assist in the addition of outside air to the AC systems in this facility.

- Outside Air: We recommend that outside air be brought into all existing AHUs that currently do not have any outside air. The building has a total of 5 restrooms and based on the current code requirements the exhaust from these restrooms should total at least 800 CFM. Based on this the building is most likely operating at a negative pressure given that only one AHU appears to have outside air. In addition, the current code (2017 Florida Mechanical Code) and best engineering practices call for outside air provisions to all occupied spaces in order to maintain adequate indoor air quality and a healthy environment. The code required outside air (per 2017 Florida Building Code - Table 403.1.1) for this building based on its size and occupancy use is approximately 1500 CFM -1800 CFM. Right now, the 10 Ton unit serving the Multipurpose Room is probably providing approximately 400 CFM – 500 CFM of outside air.

- Equipment Replacement: We recommend that consideration be given to replacing the existing the two R-22 systems which serve the 2nd floor reading stacks and the west offices. These units are old and inefficient, and the R-22 refrigerant is very expensive to purchase in case there is a leak. The replacement units will be much more energy efficient.

Long-Term

- Consider relocating the (2) two air handling units serving the East Reading Stacks to a ground mounted vertical configuration. These units are difficult to access and service in their current location.

- Consider replacing the 1.0-ton AC system with a new more efficient AC system of similar configuration. The existing system appears to be 7-10 years old and will eventually need to be replaced.

- Consider replacing the ceiling mounted supply air diffusers throughout the facility with better
  - performing ceiling diffusers which will also improve the aesthetics in the spaces.

- Central HVAC Controls: We recommend that a basic rudimentary control system be installed that would allow the user to monitor and control temperatures and AC equipment status from a single location. This system could consist of several Webstats which would allow interface and monitoring through the internet.

Continue Maintenance

- The building HVAC system seems to be well maintained with equipment being properly serviced and replaced when needed. Continue present maintenance program.

Plumbing

Near-Term

No Recommendations

Long-Term

- As plumbing fixtures are replaced, we recommend replacing with water conserving 1.28 GPF water closets, water conserving 1/8 GPF urinals and water conserving .50 GPM flow faucets.

Continue Maintenance

- The building plumbing system seems to be well maintained. Continue present maintenance program.