A G E N D A
1-14 INFRASTRUCTURE COMMITTEE
January 14, 2021 at 10:00 AM

Call to Order

Approval of Minutes

1. Draft Min. from 12-10-20

Old Business

2. SE Bathroom
3. Old Marine Science Center
4. CIP
5. Make TS Chu a Public Street
6. Current Projects Update

New Business

City Manager Comments

Adjournment

	Roofing
Facility	
City Hall	Remove and replace damaged shingles as needed throughout the roof area. Ensure shingle type matches existing shingles and are installed with the properfastening and lapping patterns as called for in industry standard applications. Apply roofing cement to all exposed fasteners throughout the roof area. Ensure any previously installed cement or sealant remnants are removed before new application.

Remove and replace roof penetration flashings. Replace with industry standard flashings that correlate with the specific roof penetration. Ensure all previously existing flashing remnants are removed prior to the installation of the new flashing components.

The Old School Building		Remove and replace all sealant and roof cement applications in the roof area with an industry standard sealant specific to the substrate on which it is being applied (i.e. pedestrian cover to school abutment flashing, roof penetrations, etc.). Ensure all previously existing cement and sealant remnants are removed prior to the installation of the new components. Remove and replace damaged or corroded HVAC rain caps. Ensure replacement HVAC rain caps and their fastening methods are industry standard and meet code requirements for the location.

Install a compatible industry standard fabric reinforced liquid PMMA membrane flashing over the perimeter edge metal. Ensure positive lap and proper drainage.

Remove and replace prior repair areas that are deteriorating or holding moisture.

Remove any corroded metal components from the wall to roof abutment to prevent further rust jacking and flashing movement.

The Cafeteria Building		Install internal drainage system on the roof to prevent ponding or build crickets to push the water to the roofs perimeter. Ensure new drainage system is adequate for the specific roof square footage and existing roof system. Remove and replace roof penetration sealant with an industry standard sealant specific to the substrate and membrane which it is being applied. Ensure all previously existing sealant remnants are removed prior to the installation of the new sealants and the substrate is primed if applicable. Repair the detached flashing membrane on the West elevation at the roofs' perimeter. Properly adhere the membrane to the edge metal using a waterproof industry standard bonding adhesive or carry the membrane over the edge and attach with a termination bar and sealant. Ensure that the substrate is primed if applicable.

		Remove and replace prior repair areas that are deteriorating or holding moisture.
YMCA FITNESS BUILDING		Remove and replace the shingle roof to pedestrian cover abutment flashing and sealant with stainless steel or aluminum regletted flashing set in an industry standard sealant specific to the substrate on which it is being applied. Ensure that all previously existing sealant and flashing remnants are removed prior to the installation of the new components and the substrate is primed if applicable. The flashing over the new entry roof area should have a drip edge that extends beyond the masonry wall face to cover the pedestrian abutment. Clean out the joint area and install closed cell backer rod to ensure three-point adhesion and proper joint movement.

Make a note to inspect the roof deck thoroughly during future repairs or replacement. If the deck can be observed from the interior, it is recommended that this be performed to locate any decking that may be improperly braced or in a state of deterioration.

YMCA Gymnasium		Remove and replace the single ply membrane roof. The roof will more than likely need to be removed to the deck level due to ongoing leaks that could have damaged the insulation layers. The new roof should be installed in accordance with the manufacturers' specifications with proper flashings at its perimeter and at its abutment to through-roof components. Install industry standard thru-wall termination flashings at the adjoining façade on the East/West exterior parapet walls and over the duct wall entry of the low roof. This will require cutting into the exterior finish system and properly applying the flashing to the substrate wall. Ensure the newly installed flashing components drip edge laps positively over the roofing membrane and the new flashing components are properly sealed at the exterior finish system.

Remove and replace HVAC pans with new industry standard pans. Ensure the pans meet code requirements for the location and all fasteners that penetrate the roof curb are properly sealed with an industry standard sealant application.

Metal coping caps should be removed and replaced where they do not form a swell and hold moisture. The new roofing membrane should run up and over the parapet wall before new coping installation. The caps should have their lap joints sealed and a saddle cover coping piece should then be sealed atop the cap to ensure no leaks.

The pitch pans should be capped off with new flexible pitch pan pourable sealer.

The new roof membrane should be protected from any impact damage of downspout water pressure or choked support components.

In attempt to seal off the open air void between the terminating edge of the standing seam metal panel and the terminating edge of the gable, remove and replace the gable cap closure on the peak of the roof. Install butyl tape the length of the gable between the new metal termination cap and the standing seam metal roof panel. Ensure that the butyl tape fully encloses the void between the standing seam metal panel and the termination metal cap.
Remove and replace existing ridge cap throughout the roof area with a new industry standard ridge cap. Ensure the newly installed ridge cap is compatible with the existing roof system. Ensure proper lapping, flashing and closures are installed with the new ridge cap.

		Remove all topical applied repair areas. Install a fabric reinforced liquid PMMA membrane flashing over joints and repair areas. Prepare the metal panel as required by the fabric reinforced liquid PMMA membrane flashing manufacturer.
Fire Department Office Building		Remove and replace moisture damaged fascia and eyebrow roof trim lumber components. All lumber should be painted on all sides before application. Ensure new lumber is compatible with the existing building components and meets all code requirements for the location. Ensure new materials meet any historical code requirements necessary. Repair missing shingle and nail pop locations throughout the roof area. Ensure shingle type matches existing shingles and are installed to industry standards and wind loads. Apply high quality low modulus sealants that are designed to adhere to the substrate being sealed to at all open voids. Ensure any previously installed sealant remnants are removed before new application. A stainless steel, aluminum, or new material flashing hood should be installed beneath the roof watershed membrane and cover the roof to gable void. The hood should meet any necessary historical code requirements.

Fire Station (Bay)	Remove and replace exiting metal roof system, excluding the new addition over the Western most fire bay. Replace with compatible, weather resistant galvalume Kynar coated metal panel roof system and ensure all code and wind requirements are met for the location. Ensure all manufacturer specifications are followed during the installation process. Moisture damaged bag insulation will more than likely need to be removed and replaced as well.
The Marine Science Building	Make a note to inspect the roof deck thoroughly during future repairs or replacement. If the deck can be observed from the interior, it is recommended that this be performed to locate any decking that may be improperly braced or in a state of deterioration.

Remove and replace the modified bitumen roof and all of its roofing components.
The roof will more than likely need to be removed to the deck level due to
ongoing leaks that could have damaged the insulation layers. The new roof
should be installed in accordance with the manufacturers' specifications with
proper flashings at its perimeter coping and at its abutment to through-roof
components.

Remove gaskets and sealants from the skylight and replace with a high quality
low modulus sealant that is designed to adhere to the substrates being sealed to
at all open voids, gasket and sealant replacement areas. Ensure any previously
installed sealant remnants are removed before new application.

The Guard House	Remove and replace roof penetration sealant/cement with an industry standard sealant/cement specific to the substrate on which it is being applied. Ensure all previously existing flashing remnants are removed prior to the installation of the new flashing components and the substrate is primed if applicable. Remove debris from the external gutter system to ensure the free flow of water and ensure the proper expulsion of water from the roof area. Set a maintenance schedule to continue to do this quarterly each year.

		Remove and replace any moisture damaged fascia lumber components. Ensure new lumber is compatible with the existing building components and meets all code requirements for the location. Paint the lumber on both sides before installation. Ensure new materials meet any historical code requirements necessary. Prepare the tin and inspect the intensity of the corrosion on the panels. Remove and replace any panels that have corroded through or at the brink of doing so. Coat all other areas with a liquid applied rust inhibitor and then paint to match existing.
The Police Department		Remove and replace the single ply membrane roofs. The roofs will more than likely need to be removed to the deck level due to ongoing leaks that could have damaged the insulation layers unless they are direct applied. The new roof should be installed in accordance with the manufacturers' specifications with proper flashings at its perimeters. Remove and replace the sealant at the shingle to membrane roof abutments with an industry standard sealant specific to the substrate on which it is being applied. Ensure all previously existing flashing/sealant remnants are removed prior to the installation of the new flashing/sealant components and the substrate is primed if applicable. Repair the detached flashing membrane on the North portion of the building at the roof's rear perimeter. Properly adhere the membrane to the edge metal/external gutter system using a waterproof industry standard bonding adhesive. Ensure that the substrate is primed if applicable. Apply roofing cement to all exposed fasteners throughout the roof area including box vent fasteners. Ensure any previously installed sealant remnants are removed if applicable.

Consider the installation of additional ventilation in various roof areas. Ensure the current ventilation system is adequate for this roof's specific square footage. Attic and deck heat are the number one cause of shingles becoming brittle prematurely.

Remove and replace damaged shingles along the central dormer's ridge cap.
Ensure shingle type matches existing shingles and are industry standard. Prior
to the installation on new shingles, ensure the UV exposed underlayment in the
above mentioned area is still competent

Water and Sewer Building		Replace the existing weight cradle for the satellite components with an elevated weight cradle to ensure no moisture gets trapped or held against the membrane roofing. The new weight cradle should allow moisture to pass beneath it.

Water and Sewer Lab	Remove debris and vegetation from the East side of the external gutter system on the South elevation to ensure the free flow of water into the downspouts. Replace the above mentioned gutter stalk if applicable with a new compatible industry standard gutter stalk. Remove and replace the impact damaged metal panels with a compatible, weather resistant metal panel and ensure all code requirements are met for the location. Ensure all manufacturer specifications are followed during the installation process. Install pipe vent boots on the pipe vent roof penetrations. Ensure all code requirements are met for the location. Ensure all manufacturer specifications are followed during the installation process.

The Campground Office/Store		Remove debris from underneath the Front central dormer where the shingled roof ties into the dormer. Inspect for proper flashings at the abutment behind the debris and lumber shims. Repair missing shingle locations throughout the roof area. Ensure shingle type matches existing shingles and are installed by current industry and wind standards. Remove the existing roofing cement around the chimney and replace with an industry standard metal counter flashing component. Ensure that the counter flashing component is sealed and all manufacturer specification are followed during the installation process.

Repair the roof deck area in the rear of the campground office where a sump has
formed and is holding water. Ensure new decking is compatible with the roof
system and meets all code requirements.

Racked shingles can result in wind damage due to the lack of the shingle weight
atop adjacent shingles. This is more than likely the reason debris was noted
beneath the exposed corner shingles. The only way to fully correct racked
shingles is to remove and replace the shingles. A maintenance program could
be implemented to keep debris cleaned from beneath the shingles but this
obviously would do nothing more for wind protection.

The Campground House		Repair missing and damaged shingle locations throughout the roof area. Ensure shingle type matches existing shingles and are installed by current industry and wind standards. Remove debris from the external gutter system and the roof vents to ensure the free flow of water and air. Remove and reset the roof ridge vent. Ensure the entirety of the ridge vent is fastened and secured to the roof deck. Remove all debris from the perimeter of the ridge vent to allow proper airflow. Remove and replace perimeter shingles in areas where the shingles do not overhang the fascia by at least ¾”.
North Beach Concession Stand		Install butyl sealant at the standing seam voids along all standing seam terminations on the high end of the roof. Ensure the sealant caps the panel fold and is installed in accordance with the manufacturer’s specifications.

The Marine Rescue Squadron	Remove and replace the existing shingle roof system. Install new industry standard underlayment and shingles. Ensure the new roof system is compatible with the building and that all code requirements are met. Ensure the new roof system is installed in coordination with the manufacturer's specifications. Replace decking in areas if applicable. Ensure perimeter flashings and drip edge metals cover the vertical fascia below so no moisture can potentially find a route into the attic and wall.
NB Grill Restaurant	Remove all debris from the roof.

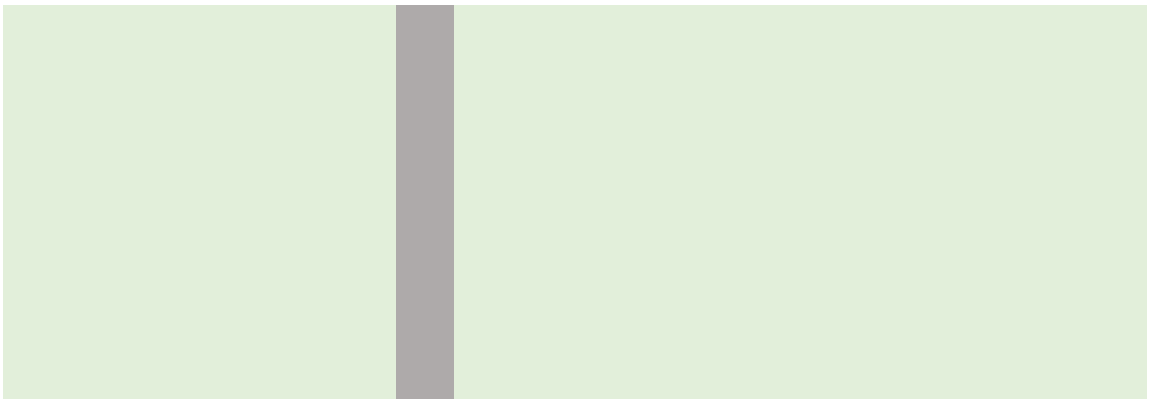
		Relocate the shingled roof's underlayment termination over the top of the edge metal to ensure that any moisture that intrudes past the shingles is able to weep out off the roof versus beneath the edge metal.
		Remove and replace roofing cement at roof penetrations with industry standard cement specific to the substrate on which it is being applied. Ensure all previously existing cement remnants are removed prior to the installation of the new cement and the substrate is primed if applicable.
		Apply high quality low modulus sealants that are designed to adhere to the substrate being sealed to at all open siding voids and sealant replacement areas. Ensure any previously installed sealant remnants are removed before new application.
		Remove and replace the cap sheet around the grease vent. Remediate the vent on the South portion of the roof so that grease overflow does not make contact with the bituminous roof material in this area. Install a secondary sacrificial cap sheet over the new roofing area to decrease roof deterioration if the vent overflows in the future. Remove patch material in the central portion of the roof and replace with a bituminous roofing component that is compatible with the existing roof system in this area. Ensure coordination with the manufacturer specifications during the installation process.

		Make a note to inspect the roof deck thoroughly during future repairs or replacement. If the deck can be observed from the interior, it is recommended that this be performed to locate any decking that may be improperly braced or in a state of deterioration.
Tybee Arts Building		Remove and replace both the North and the South roofs. Replace with new industry standard roofing that is compatible with the building components. Ensure new roof meets code for the location and all manufacturer specifications are followed during the installation process. Ensure new materials meet any historical code requirements necessary. Install new flashings at penetrations and perimeters where they apply.

Remove and replace wall abutment flashing between the North and South roofs.
Replace with new industry standard through metal through wall flashing
component. Ensure the new flashing component is compatible with the roof and
building components.

Public Works Office and Shop		Remove and replace exiting metal roof system, excluding the new addition over the Facility Directors office. Replace with compatible, weather resistant galvalume Kynar coated metal panel roof system and ensure all code and wind requirements are met for the location. Ensure all manufacturer specifications are followed during the installation process. Moisture damaged bag insulation will more than likely need to be removed and replaced as well. Trim the Oak tree branches at the entrance of the public works building so that there is no contact between the tree and the newly installed roof components. Clean the clogged downspout that is preventing the drainage of the gutter system. It was noted that the gutter and its brackets were bowed/bent from the standing water load. If the gutter/straps are deformed to the point where the components do not successfully operate or leak, remove and replace the external gutter system and down spouts with new industry standard gutters and down spouts. Ensure the new components are compatible with the building and all manufacturer specifications are followed during installation. Ensure down spouts seam and gutter seams are sealed with an industry standard sealant. Install a gutter guard to prevent future downspout clogging.

Remove and replace metal flashing components at the public works add on to
the mechanic shop tie in. Ensure that all flashing are positively lapped over the
metal roof system and all flashing terminations are properly sealed with an
industry standard sealant.



Exterior	Electrical
Destructive openings should be made to confirm the wall design. If the wall is multiwythe without a cavity, the lack of weeps is a minimal result. If the wall is a cavity type and moisture is being observed near the interior floor elevation, the exterior masonry should be removed at the floor elevation, a through wall flashing installed against the substrate wall and the exterior masonry reinstalled with the proper weep spacing. The flashing should have a drip edge that extends to or just beyond the masonry wall face.	Exterior electrical panels are rusting and need to be replaced. Enclosure integrity is being compromised.
Corroded lintels should be removed, inspected for metal loss and sanded/primed/painted or replaced with new. The exterior masonry should be removed just above the lintel elevation and a through wall flashing installed against the substrate wall and the exterior masonry reinstalled with the proper weep spacing. The flashing should have a drip edge that extends to or just beyond the masonry wall face.	Exterior receptacles are not type WR (Weather Resistant) with heavy duty while in use covers.

Sprung metal clips are manufactured to install plywood over a window that sits within a masonry rough-in. Screws and nails should not be utilized for storm protection.	Generator needs permanent platform with steps to access generator breakers and controls with without a ladder.
Staining should cease with proper window frame sealing and fastener penetration repairs.	Generator needs exterior mounted emergency stop switch.
The masonry that is cracking or dislodged should be removed and replaced. Proper lintels and flashing should prevent any further rust jacking.	There were no fire alarm visuals noted in public bathrooms. These should be added.
Apply high quality low modulus sealants that are designed to adhere to the substrate being sealed at all open voids. Ensure any previously installed sealant remnants are removed before new application.	No fire alarm pull stations were noted at exterior exits. These should be added.
Route any drain lines that may keep masonry damp to an area where moisture is properly dispersed onto the ground.	Cracked fixture lens and buckled fixture lens were noted. These should be repaired. Surface mounted warp lens on fixtures in some toilets were falling off. These should be repaired. Fluorescent lighting is old technology and is being phased out. Replacement parts will become difficult to find. Recommend replacing with LED technology.

	Replace all exterior mounted receptacles with ground fault type WR with heavy duty while in use covers.
Shroud the PTAC units in a hooded aluminum or stainless steel sheath with a rain hood lid. Install with a 3/8” perimeter void where closed cell backer rod and sealant can be installed to form a proper joint. If lumber is to remain the void filler around the PTAC, it should be replaced with primed and painted lumber (both sides) and installed with proper perimeter terminations and sealants that prevent the lumber from absorbing moisture.	Panelboard cover missing on the 200 amp main breaker panel. Repair.
Remove the vinyl siding at all termination and abutment points. Install proper termination channels that will catch water and send it to a weep channel at the sidings bottom. If a waterproof underlayment is not being utilized beneath the siding, remove all siding, properly apply a waterproofing sheet membrane and properly reinstall the siding with its new termination components.	Panel clearances compromised. Items stores in front of panel. Provide code required clearances of 3.’

Corroded lintels should be removed, inspected for metal loss and sanded/primed/painted or replaced with new. The exterior masonry should be removed just above the lintel elevation and a through wall flashing installed against the substrate wall and the exterior masonry reinstalled with the proper weep spacing. The flashing should have a drip edge that extends to or just beyond the masonry wall face.	There was no panel circuit directory indicating equipment served. Provide directory.
The masonry that is cracking or dislodged should be removed and replaced. Sealant joint installation should be utilized at the masonry to soffit abutment to cushion the abutment of the two rigid surfaces and prevent crushing/cracking.	Emergency lights were not working in spin room when test button was pushed. Repair.
The cementitious/masonry components should be scraped of loose elastomeric coating, primed (if recommended by the new coating manufacturer) and recoated. The moisture intrusion must be stopped before recoating or the new coating will blister from trapped moisture.	Fire alarm visuals were not noted in toilets or some exercise rooms. These should be added.
Unseal any weep point at the bottom of any wall covering system and provide a flashing that diverts the water from the wall covering to the ground.	Fluorescent lighting is old technology and is being phased out. Replacement parts will become difficult to find. Recommend replacing with LED technology.

Destructive openings should be made to confirm the wall design. If the wall is multiwythe without a cavity the lack of weeps is a minimal result. If the wall is a cavity type and moisture is being observed near the interior floor elevation, the exterior masonry should be removed at the floor elevation, a through wall flashing installed against the substrate wall and the exterior masonry reinstalled with the proper weep spacing. The flashing should have a drip edge that extends to or just beyond the masonry wall face.	Emergency lights were not working in cafeteria and kitchen areas when test buttons were pushed. Repair.
To repair the improper flashing, the entry cover roof and the exterior masonry just above the roof / wall intersection should be removed. Install through wall flashing against the substrate wall with a drip edge that extends beyond the masonry wall face. Reinstall the existing masonry and install a new entry cover roof making sure that the new flashing drip edge covers the shingles that abut the wall.	No exterior emergency lights at exterior exits were installed. Provide.
Corroded lintels should be removed, inspected for metal loss and sanded/primed/painted or replaced with new. The exterior masonry should be removed just above the lintel elevation and a through wall flashing installed against the substrate wall and the exterior masonry reinstalled with the proper weep spacing. The flashing should have a drip edge that extends to or just beyond the masonry wall face.	No ground fault type WR receptacles were installed near wall hung HVAC units for maintenance purposes. Install within 25’ of units.

At the same time that the corroded lintels are being replaces, remove and replace the corroded door frame.	One MC cable connection to exit sign in cafeteria was not secured to wall. Secure.
All spalling or degraded concrete should be removed from the soffits. If structural steel is exposed, check for metal loss, prepare and coat the steel with a rust inhibitor and primer. Install the proper concrete patch material for overhead use.	Label exterior service disconnect as to what it serves.
Apply high quality low modulus sealants that are designed to adhere to the substrate being sealed to at all open voids. Ensure any previously installed sealant remnants are removed before new application.	Label exterior panel breakers as to what they serve.
	Install fire alarm pull stations and audible/visual devices.
	Fluorescent lighting is old technology and is being phased out. Replacement parts will become difficult to find. Recommend replacing with LED technology.
Apply high quality low modulus sealants that are designed to adhere to the substrate being sealed to at all open voids. Ensure any previously installed sealant remnants are removed before new application.	Panel board covers were not installed. Panel interiors were exposed. Install covers.

The cementitious/masonry components should be scraped of loose elastomeric coating, primed (if recommended by the new coating manufacturer) and recoated. The moisture intrusion must be stopped before recoating or the new coating will blister from trapped moisture.	Clearances in front of panels were not maintained panels were inaccessible. Provide 3' clearances An exterior cable box door was open exposing cabling and connections to the elements. Secure cover. MC cable was not properly secured leaving top of panels. Secure per code. There were no type WR ground fault receptacles with heavy duty while in use covers installed near exterior mechanical equipment. Install within 25' of equipment. No fire alarm visual devices were noted in corridors. Install per code in public areas. There were no emergency lights in toilets. There were no emergency lights at exterior exits. Install at exits. One emergency light was not working in fitness room. Correct.

	There was yellow nonmetallic sheathed cabling leaving top of panel and entering into ceiling cavity above dropped acoustical tile ceiling exposed. This is not permissible per NEC 334.12.A(2). Correct. Support MC cabling leaving top of panel near top of panel between ceiling and panel cabinet per code.
Destructive openings should be made to confirm the wall design. If the wall is multiwythe without a cavity the lack of weeps is a minimal result. If the wall is a cavity type (observed on the West face near the loading dock as a cavity) and moisture is being observed near the interior floor elevation, the exterior masonry should be removed at the floor elevation, a through wall flashing installed against the substrate wall and the exterior masonry reinstalled with the proper weep spacing. Before flashing installation, the waterproofing of the substrate wall should be verified. The vapor barrier was observed as brittle and torn while onsite. Masonry removal would be needed to remove, replace or install substrate waterproofing. The flashing should have a drip edge that extends to or just beyond the masonry wall face.	Recess door frames were not latched to fixture housing in some areas. Correct.
Apply high quality low modulus sealants that are designed to adhere to the substrate being sealed to at all open voids. Ensure any previously installed sealant remnants are removed before new application.	Fixture lens were dirty in some areas. Clean

The masonry mortar that is cracking or dislodged should be removed and replaced at the masonry to finish system abutment(s).	One exterior wall pack fixture door/lens cover was open exposing fixture lamp/lamp socket to exterior elements. Fix.
A joint should be allowed between two substrate components that have differential movement capacities. This is typically allowed by an expansion joint. No joint was observed between the exterior finish wall system and the masonry. This had caused the two to squeeze and pull against one another causing cracks and mortar loss.	No emergency lights were noted in toilets.
Adjust grading and landscaping so the soil sloping is proper and removes water and soil sediment from the building components.	A few exit signs were loose and not secured to outlet boxes. Correct.
Repair leaking gutter joints and collector heads with submersible sealant or replacement.	Fluorescent lighting is old technology and is being phased out. Replacement parts will become difficult to find. Recommend replacing with LED technology.
The horizontal termination row locks should be removed and reinstalled at an angle to shed water toward the exterior of the building to ensure no moisture holds atop the row locks and soaks into the wall cavity.	
Remove and replace metal soffit panels after leak points above have been mitigated.	

Apply high quality low modulus sealants that are designed to adhere to the substrate being sealed to at all open voids and sealant replacement areas. Ensure any previously installed sealant remnants are removed before new application.	Recommend installing self-contained emergency and exit lights.
The lumber components should be scraped of loose paint and be recoated with a high quality exterior paint. Moisture intrusion must be stopped before recoating or the new coating will not adhere or delaminate from trapped moisture.	Fixture lens were dirty. Clean fixture lens.
Water should be diverted to the sides of the doorway by installing a low curb or hump onto the concrete drive into the garage. A threshold gasket could also be added to the bottom of the operable garage door to form a seal when it compresses to the concrete when the door if fully closed.	Install maintenance receptacles near exterior mechanical equipment. Type WR
	Recommend installing self-contained smoke detectors with audibles in sleeping quarters.
	Replace antiquated plug fuse panel in bathroom.

	Fluorescent lighting is old technology and is being phased out. Replacement parts will become difficult to find. Recommend replacing with LED technology.
Apply high quality low modulus sealants that are designed to adhere to the substrate being sealed to at all open voids and sealant replacement areas. Ensure any previously installed sealant remnants are removed before new application.	Couple of high bay HID fixtures were missing reflectors and lamp.
The cementitious/masonry components should be scraped of loose elastomeric coating, primed (if recommended by the new coating manufacturer) and recoated. The moisture intrusion must be stopped before recoating or the new coating will blister from trapped moisture.	Some of the emergency lighting fixtures tested were not working. Repair.
Remove and replace all downspout collector heads and replace with new, compatible, industry standard collector heads. Ensure all corners, laps, and fastener penetrations in the new collector head are sealed using a compatible industry submersible sealant.	One receptacle cover on truck bay was broken. Repair.
	Load center in truck bay showed rust signs. Remove rust and paint. The fluorescent and HID lighting is old technology and is being replaced by LED technology. Recommend upgrading to LED technology.
Apply high quality low modulus sealants that are designed to adhere to the substrate being sealed to at all open voids and sealant replacement areas. Ensure any previously installed sealant remnants are removed before new application.	Emergency lighting in public bathrooms was not working. Repair.

Remove the existing sealant bead along what appeared to be the low eyebrow roof's thru-wall counter flashing component's weep line. This should be done to allow moisture to properly weep from the wall adjacent to the shingled low roof.	No fire alarm audible/strobes were installed in bathrooms. Install as required.
Rout cracks to clean sharp edges and patch cracked split face blocks with a proper exterior no shrink crack repair mortar.	Bathroom fixture lens were cracked and dirty. Repair.
Multiple blocks were observed as shifted and should be removed and replaced.	The electrical panels were inaccessible. Provide access to panels.
Remove and replace damaged aluminum wall panels with like materials. Terminate the panels properly with termination tracks and sealant.	No maintenance receptacles were installed in vicinity of exterior mechanical units. Furnish and install
Remove and replace damaged aluminum wall panels with like materials. Terminate the panels properly with termination tracks and sealant.	Some additional emergency lights are needed though out. Provide in egress path.

Remove the vinyl siding at all termination and abutment points. Install proper termination channels that will catch water and send it to a weep channel at the sidings bottom. If a waterproof underlayment is not being utilized beneath the siding, remove all siding, properly apply a waterproofing sheet membrane and properly reinstall the siding with its new termination components. The cementitious/masonry components should be scraped of loose elastomeric coating, primed (if recommended by the new coating manufacturer) and recoated. The moisture intrusion must be stopped before recoating or the new coating will blister from trapped moisture. Window frames should be repaired by mechanically reattaching the out of place piece and properly sealed or if the piece is broken and not reusable, the windows should be removed and replaced along with proper rough-in preparation as recommended by the new window manufacturer.	An exterior panel located on screen wall was rusting. Replace with 316 stainless steel style.
Replace the top glass pane of the front central 2nd level window. Ensure that the glass fully fits into the window's framing unlike the current assembly. Ensure new materials meet any historical code requirements necessary. To perform this, the glazing putty will need to be removed and replaced at the glass pane to frame abutment. The glazing putty should be inspected, removed and replaced where needed on all other windows.	Exterior receptacles installed were not type WR. Replace.
Remove and replace any moisture damaged or splitting lumber siding and trim components. Ensure new lumber is compatible with the existing building components and meets all code requirements for the location. Paint the lumber on both sides before installation. Ensure new materials meet any historical code requirements necessary.	Some of the exterior receptacles did not have while in use covers installed. Provide.

Apply high quality low modulus sealants that are designed to adhere to the substrate being sealed to at all open voids and sealant replacement areas. Ensure any previously installed sealant remnants are removed before new application.	Emergency lighting was not working on the battery mode. Correct all. There was no emergency lighting located at exterior exits. Provide. Overall the electrical system was in very good condition.
Apply high quality low modulus sealants that are designed to adhere to the substrate being sealed to at all open voids and sealant replacement areas. Ensure any previously installed sealant remnants are removed before new application.	No maintenance receptacles are installed near HVAC units in attic. Provide.
Repair any damaged fiber cement siding with cement siding patch product made of an acrylic mortar compound for patching. Paint the siding to match existing.	Exterior receptacles are not type WR or installed with a heavy duty while in use cover. Correct.
Prepare, prime and paint all metal doors and frames to prevent corrosion. Utilize an exterior rust inhibitor and/or high quality exterior paint.	Noted dirty fixture lens throughout. Clean throughout.

Looks like mildew may have accumulated on fixture lens in investigation area. Clean and sanitize to get rid of mold.

A missing fixture was noted in men's restroom. A temporary strip fixture was installed in place of missing fixture. Match existing fixtures.

Several fixture lens doors throughout are not fully latched in place. Correct all.

One smoke detector in corridor still had dustcover installed from construction.
Remove.

Generator is in poor condition. A lot of rust noted and base is rusting away

Generator did not have an emergency stop outside of building.

Provide a generator sign at transfer switch service equipment indicating type and location of on site generator.

Apply high quality low modulus sealants that are designed to adhere to the substrate being sealed to at all open voids and sealant replacement areas. Ensure any previously installed sealant remnants are removed before new application.	Due to 2 different voltages in building, 208V & 480V, the color-coding scheme utilized should be posted on MCC and panelboard.
Remove and replace any moisture damaged or splitting lumber window trim components. Ensure new lumber is compatible with the existing building components and meets all code requirements for the location. Paint the lumber on both sides before installation. Scrape, prep and paint all lumber with a high quality exterior paint	Pump room fixture lens covers were loose. Repair.
The remove and repoint the cracks in the mortar. Seal the cracks in the masonry with a high quality low modulus sealants.	Different color fixture lamps were utilized.
The cementitious/masonry components should be scraped of loose elastomeric coating, primed (if recommended by the new coating manufacturer) and recoated. The moisture intrusion must be stopped before recoating or the new coating will blister from trapped moisture.	Fixture lens on 2nd floor office were dirty. Clean all lens.
	Disconnect switch serving exterior A/C unit did not have proper clearances to access. Remove/relocate.
	There was no maintenance receptacle near outdoor A/C unit. Furnish and install.
	Fluorescent and HID lighting is old technology and is being replaced with LED technology.

	Plaque required identifying the two services, 208V and 480V one for panel and one for MCC to indicate service disconnect 1 of 2, etc. The 208 volt service required a main disconnect at panel.
Apply high quality low modulus sealants that are designed to adhere to the substrate being sealed to at all open voids and sealant replacement areas. Ensure any previously installed sealant remnants are removed before new application.	Circuit directory required for 200 amp load center. Provide.
New metal wall panels could be removed and replaced but it appears that there has been frame movement. Installing new wall panels would only repair the building aesthetically. A foundation study should be performed to report on the settlement of the foundation.	Disconnect switch required on primary side of dry type transformer. Install.
	Provide additional supports for type ENT raceway. Support 3' on centers and within 3' of outlet boxes, fittings, etc. No maintenance receptacles located near outdoor condensing unit. Provide. Ground fault receptacles not installed at counter sink in lab. Provide. Ground fault receptacle at sink in breakroom not working.

	Surface mounted fixture in breakroom is missing lamps and lens cover. Repair/replace. Fixture lens in toilets need cleaning. Provide emergency lighting and exit signs. All exterior mounted receptacles should be type WR, ground fault with heavy duty while in use cover. Open splices and covers missing on junction/outlet boxes. Correct. Fluorescent and HID lighting systems is old technology. Recommend upgrading to LED technology.
Apply high quality low modulus sealants that are designed to adhere to the substrate being sealed to at all open voids and sealant replacement areas. Ensure any previously installed sealant remnants are removed before new application. Cover the larger voids with a vinyl siding patch. Apply perimeter sealant between the cover and the existing siding. The larger joints in the siding should receive closed cell backer rod and sealant.	Multiple service disconnects exceeding code requirements. Correct. Inadequate clearances in front of electrical equipment located in electrical closet. Provide minimum of 3’ clearance.
Adjust grading and landscaping so the soil sloping is proper and removes water and soil sediment from the building components. If this is not possible due to the surrounding build of the office building it is recommended that the process of drainage installation as observed on the back porch area be carried to the adjacent building faces that are seeing moisture intrusion at the floor elevation.	Inadequate supports for nonmetallic sheath cable. Support 4 ½ feed on centers and with 12” of cable entry to electrical enclosures.

Open electrical spaces in electrical closet without junction boxes. Enclose all with junction boxes.

No maintenance receptacle in vicinity of outdoor A/C unit. Provide one.

Receptacle/outlet in electrical closet without a device plate cover. Furnish and install.

Exterior receptacles are not of type WR in while-in-use covers. Correct all.

Vending machine receptacles are not ground fault type. Provide GFI protection.

Fixture lens are missing in some areas. Correct.

Missing trim at some downlights in storage room. Provide trims.

Cracked lens on surface wrap fixture in storage room. Fix.

Improper clearance of service conductors passing over roof. A minimum of 3’ required per code 230.24 clearances. Correct

The storm preparation penetrated window frames appeared to be taking and releasing a small amount of water. Slight staining was observed at the bottom of the frame jamb to sill that did not appear to be staining the siding. Seal the penetrations with a small dab of sealant to prevent any interior window frame corrosion.	Recent code changes (2017) require protection above that required in 2005 such as: All branch circuits in dwelling units require arc fault circuit interrupted protection. Ground fault protection now required for dishwashers. All kitchen receptacles at counter tops should be ground fault type.
Apply high quality low modulus sealants that are designed to adhere to the substrate being sealed to at all open voids and sealant replacement areas. Ensure any previously installed sealant remnants are removed before new application.	Meter and exterior circuit breaker are inaccessible. They are covered up with trash cans. Provide access and work clearances of 3’ per code.
The horizontal termination between the differential wall panel types should be removed and reinstalled at an angle to shed water toward the exterior of the building to ensure no moisture holds atop the termination and soaks into the wall cavity. Installing a cant piece of like material set in a bed of sealant and sealed across the top leg could also provide the same protection yet be a maintenance item with sealant removal and replacement cycles in the future.	Missing while in use covers on exterior receptacles. Replace.
	Exterior receptacles are not type WR. Replace.

Apply high quality low modulus sealants that are designed to adhere to the substrate being sealed to at all open siding voids and sealant replacement areas. Ensure any previously installed sealant remnants are removed before new application.	One receptacle at sink counter was not ground fault type.
Prepare, prime and paint all metal doors, frames and straps to prevent corrosion. Utilize an exterior rust inhibitor and/or high quality exterior paint.	Receptacle in mens restroom was not ground fault type and should be.
Coat the deck to vinyl terminations with a lumber treatment/waterproofer to prevent lumber deterioration	Dishwasher was not on ground fault breaker and needs to be. Exterior receptacles are not type WR and are in need of while-in-use covers. Exterior porch downlights are rusting. Replace. An exterior receptacle above utility meter underside of second floor is not grounding type or ground fault type and does not have a cover. Correct. There is no maintenance receptacle at outdoor A/C unit. The exterior well pump disconnect/controller is rusting and in bad condition. Replace.
Apply high quality low modulus sealants that are designed to adhere to the substrate being sealed to at all open siding voids and sealant replacement areas. Ensure any previously installed sealant remnants are removed before new application.	Exterior receptacles are not type WR with while in use covers. Correct all.

Remove the T-1-11 siding at all termination and through-wall abutment points. Install proper termination channels and flashings that will catch water and send outboard of the exterior siding via a drip edge. If a waterproof underlayment is not being utilized beneath the siding, remove all siding, properly apply a waterproofing sheet membrane and properly reinstall the siding with its new termination components.	Fixtures in kitchen are dirty with broken lens. Replace all fixtures.
Remove and replace any moisture damaged fascia lumber components. Ensure new lumber is compatible with the existing building components and meets all code requirements for the location. Paint the lumber on both sides before installation. Ensure new materials meet any historical code requirements necessary.	Exit signs in kitchen are dirty. Replace
	Main breakers in exterior panels need to be identified as to “service disconnects 1 of 2 and 2 of 2.”
	MC cable is improperly supported. Support per NEC.
	Branch circuit color coding exterior panels is not consisted from phase to phase. Correct.

	Conductors in panels are not grouped in workman like manner. Correct. Knockouts in panels are not plugged. Provide inserts. Grounds and neutrals terminate on same bar. Separate. Panel cabinets do not appear to be bonded or grounded. Correct. Conductors pass through cabinet knockout without protection or cable connectors. Provide protection. There are no circuit directories on panels indicating what equipment is being serviced by what breakers. Provide directories In general electrical system is in fair condition.
Remove and replace window glass pane to frame glazing putty. The glazing putty should be inspected, removed and replaced where needed on all original type windows.	Some of the exit signs were not working and need to be repaired. Correct.

Remove and replace any moisture damaged or splitting lumber siding and trim components. Ensure new lumber is compatible with the existing building components and meets all code requirements for the location. Paint the lumber on both sides before installation. Ensure new materials meet any historical code requirements necessary.	There was no emergency lighting at exterior exits. Provide.
Apply high quality low modulus sealants that are designed to adhere to the substrate being sealed to at all open voids and sealant replacement areas. Ensure any previously installed sealant remnants are removed before new application.	There was no maintenance receptacle at outdoor A/C unit. Provide.
	The two main circuit breakers at service panels need to be identified as “service disconnect 1 of 2 and 2 of 2.” Correct.
An expansion joint should be installed between the lumber siding wall system and the masonry.	Additional MC cable supports are needed. Support per code.
Retrofit components should be removed and their rough-ins should be waterproofed and flashed. A drip edge should exist to hang over the top of the component framing when reinstalled.	The two service load centers were inaccessible with items stored in front of them. They need to be accessible with maintenance clearance of 3’ in front of them. Correct. Provide fire alarm system per NFPA for places of assembly.

Apply high quality low modulus sealants that are designed to adhere to the substrate being sealed to at all open voids and sealant replacement areas. Ensure any previously installed sealant remnants are removed before new application.	Additional raceway supports are needed in some areas.
Metal wall panels that are corroded at through-wall openings and at the ground elevation should be removed and replaced. Utilize butyl tape and gasketed fasteners for attachment to the existing/neighboring panels.	Exterior receptacles are not WR. Replace with type WR.
The through-wall components should be removed and a through wall flashing installed against the underside of the wall panel head. The flashing should drain off both termination opening at the ends of the 90* bent flashing. The flashing should have a drip edge that extends just beyond the wall panel face.	Maintenance receptacle is needed in the vicinity of the outdoor A/C compressor unit.

Apply high quality low modulus sealants that are designed to adhere to the substrate being sealed to at all open siding voids and sealant replacement areas. Ensure any previously installed sealant remnants are removed before new application.	The disconnect switch serving the A/C outdoor unit is rusted very badly. Replace.
Remove the T-1-11 siding at all termination and through-wall abutment points. Install proper termination channels and flashings that will catch water and send outboard of the exterior siding via a drip edge. If a waterproof underlayment is not being utilized beneath the siding, remove all siding, properly apply a waterproofing sheet membrane and properly reinstall the siding with its new termination components.	Some of the fluorescent fixtures are in need of repair or replacement.
Remove and replace any fascia and soffit lumber components damaged by the flooded gutter. Ensure new lumber is compatible with the existing building components and meets all code requirements for the location. Paint the lumber on both sides before installation. Ensure new materials meet any historical code requirements necessary.	Lighting not working in toilets. Correct
	Dirty fixture lens in office. Clean all fixtures. unit.
	Fluorescent and HID lighting are old technology and being replaced with LED technology. Upgrade to LED technology. Replace. Provide emergency lighting and exit signs throughout.

Mechanical	Plumbing	Structural
The GSHP units are approximately 10 years old, and appear to be in working order. GSHP units have a life expectancy of 20 to 25 years if properly maintained. One issue to be aware of with GSHP systems in this area is the possibility of warming up the well field if the heat being rejected to the well field is not used later for heating. GSHP systems work best in areas that have a near equal heating and cooling degree days, since the heat that is rejected during the cooling season is used to heat the building during the heating season. If a well field heats up, the available capacity of the system reduces for the cooling system. If this should occur a hybrid system, utilizing a cooling tower during the	Water closets, urinal, and lavatories all appeared in working condition. Additional fixtures may be required if any future renovations are performed.	
Units that served occupied space will need to have the minimum code required outside air added. This will affect the cooling and heating load, and would require modifications to allow this. The total amount of outside air may be reduced with systems that can clean the air as indicated in ASHRAE 62 (i.e. Bi-Polar Ionization with needle point technology), and the outside air load to the units may be reduced with an energy recovery wheel.	Electric water heaters appear to be in working condition. If new fixtures are installed with lower water flows, water heaters may not perform as well due to a minimum flow rate being required to activate heater.	

If any renovations are to occur to the space, the rest rooms will be required to be brought up to current code standards and have a mechanical exhaust system. The exhaust system can be used with the energy recovery wheel.

A Direct Digital Control (DDC) should be evaluated for this location. This will give maintenance crews the ability to remotely monitor the various systems in the building, as well as improving energy use for the building.

The piping for the building should last the life of the building.

The existing PTAC units are in poor condition. PTAC units generally last for 10 to 15 years if maintained. The building is a good candidate to be renovated with a variable refrigerant system (VRF/V) VRF/V systems are energy efficient systems that utilize multiple DX air handlers spread throughout a building and tie back to larger outdoor units. They are well suited to existing buildings where space constraints do not allow traditional units to be installed.	Re-install wall hung urinals. Ensure at least one urinal is installed to comply with ADA requirements, 16 inches from floor to lip.
Wall hung unit appears to be a recent addition and is in good condition.	Make stall to ADA water closet ADA compliant. Stall width and depth should be a minimum of 60 inches wide by 59 inches deep.

Verify code required outside air is being provided to the units. If not, provide the minimum code required outside air the units. This will affect the cooling and heating load, and would require modifications to allow this. The total amount of outside air may be reduced with systems that can clean the air as indicated in ASHRAE 62 (i.e. Bi-Polar Ionization with needle point technology), and the outside air load to the units may be reduced with an energy recovery wheel.

Plumbing piping should last the life of the building.

If any renovations are to occur to the space, the rest rooms will be required to be brought up to current code standards and have a mechanical exhaust system.
The exhaust system can be used with the energy recovery wheel.

A Direct Digital Control (DDC) should be evaluated for this location. This will give maintenance crews the ability to remotely monitor the various systems in the building, as well as improving energy use for the building.

Wall hung units appear to be in good working condition, and appear to be fairly new.	Remove trash from floor drain in kitchen area.
If units supply greater than 2,000 CFM of design supply air, install a duct smoke detector in duct. Upon activation of duct smoke detector, the unit shall be deenergized and an alarm shall sound.	Make fixtures comply with ADA requirements.
Verify code required outside air is being provided to the units. If not, provide the minimum code required outside air the units. This will affect the cooling and heating load, and would require modifications to allow this. The total amount of outside air may be reduced with systems that can clean the air as indicated in ASHRAE 62 (i.e. Bi-Polar Ionization with needle point technology), and the outside air load to the units may be reduced with an energy recovery wheel	Additional fixtures are required to comply with International Plumbing Code to type of space the building is being used for.

If any renovations are to occur to the space, the rest rooms will be required to be brought up to current code standards and have a mechanical exhaust system. The exhaust system can be used with the energy recovery wheel.	Ensure water heater is set to 140F in accordance with the International Plumbing Code and Health Code.
A Direct Digital Control (DDC) should be evaluated for this location. This will give maintenance crews the ability to remotely monitor the various systems in the building, as well as improving energy use for the building.	Plumbing piping should last the life of the building.
Install code required outside air duct to existing air handler that does not have outside air. The total amount of outside air may be reduced with systems that can clean the air as indicated in ASHRAE 62 (i.e. Bi-Polar Ionization with needle point technology), and the outside air load to the units may be reduced with anenergy recovery wheel.	Pipe material should last the life of the building.

Outdoor unit platform was constructed in a way which impedes access to outdoor units. Design of platform should be reconsidered.	Install fixtures which comply with ADA height requirements.
Insulate condensate drain lines.	
Revaluate equipment size for weight room to determine if unit is sized correctly. If high humidity is an issue, a dehumidification system mounted to the unit should be considered to eliminate the requirement to drain the system manually. An ERV may also be considered to help dehumidify the air.	
If any renovations are to occur to the space, the rest rooms will be required to be brought up to current code standards and have a mechanical exhaust system. The exhaust system can be used with the energy recovery wheel.	
A Direct Digital Control (DDC) should be evaluated for this location. This will give maintenance crews the ability to remotely monitor the various systems in the building, as well as improving energy use for the building.	

Package rooftop units have a life span of approximately 15 to 20 years. Given the area these units are located, and the fact that the condensing coils are not coated, this life span will be reduced. Future units should be specified with epoxy coated coils on the condenser and evaporator to prevent corrosion.	Fix water leak at water closet in women's restroom/locker area.
Install guard rails around edge of roof where exhaust fan is installed to comply with code requirements.	Fixtures should last the lifetime of the building.

Replace air devices with aluminum type air devices to prevent rusting.	Relocate rain water collection cistern in order to provide access to crawl space.
Provide electric wall heater in fire riser to prevent freezing of fire suppression pipes.	Pipes should last the lifetime of the building
A Direct Digital Control (DDC) should be evaluated for this location. This will give maintenance crews the ability to remotely monitor the various systems in the building, as well as improving energy use for the building.	

Units that served occupied space will need to have the minimum code required outside air added. This will affect the cooling and heating load, and would require modifications to allow this. The total amount of outside air may be reduced with systems that can clean the air as indicated in ASHRAE 62 (i.e. Bi-Polar Ionization with needle point technology), and the outside air load to the units may be reduced with an energy recovery wheel. Ventilate the oxygen storage area as required by code.	Re-secure pipe support on exterior sanitary line to ensure proper drainage of system.
Ventilate locker rooms to meet code requirements.	

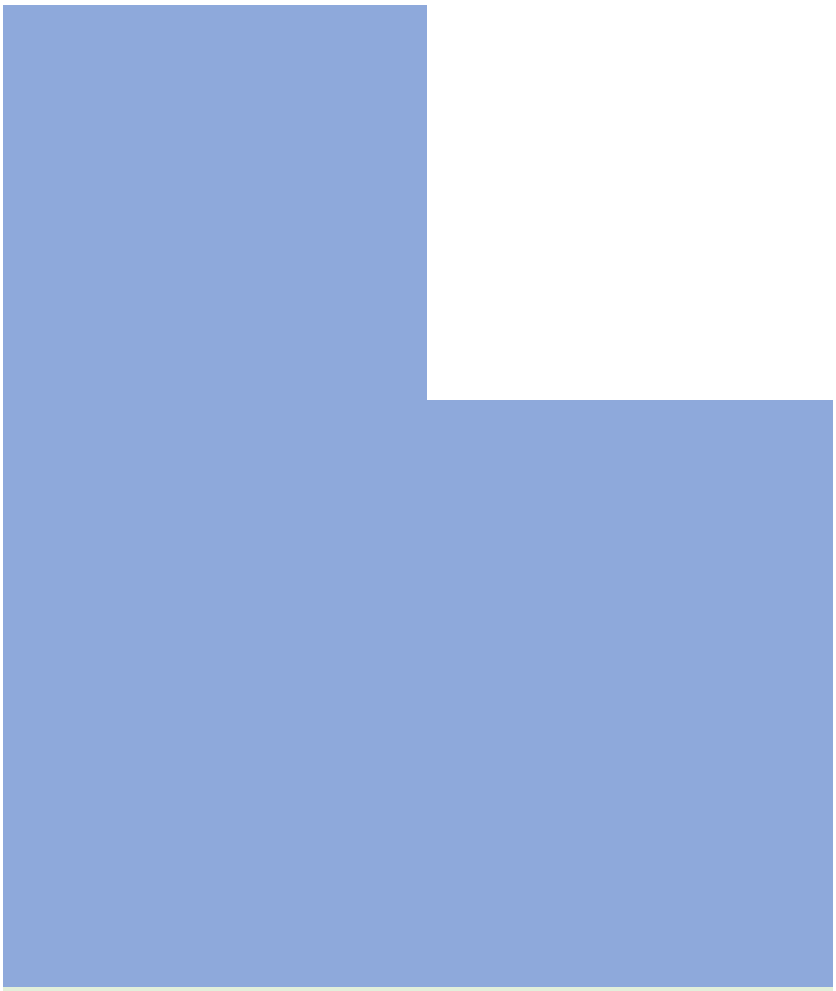
The current use of the space is in question due to a new Marine Science Center being constructed elsewhere on the island. The only space to remain operational are the public restrooms.	Pipes should last the entire life of the building.

Units that serve occupied space will need to have the minimum code required outside air added. This will affect the cooling and heating load, and would require modifications to allow this. The total amount of outside air may be reduced with systems that can clean the air as indicated in ASHRAE 62 (i.e. Bi-Polar Ionization with needle point technology), and the outside air load to the units may be reduced with an energy recovery wheel.

Exhaust fans are in bad shape in the public restrooms and should be replaced.

The air handlers are in fair condition, and could possibly be reused, depending on the future use of the space.

Direct Digital Control (DDC) should be evaluated for this location. This will give maintenance crews the ability to remotely monitor the various systems in the building, as well as improving energy use for the building.



Properly trap condensate drain lines	Plumbing piping should last the life of the building
Verify requirement for Type I hood over range. At the very least provide range hood with fire suppression system.	Plumbing fixtures are in good shape and should last 20 years

The units are relatively new and should last 15 to 20 years if properly maintained.	Plumbing piping should last the life of the building.
Install Type I hood over the range in the break room. Refer to section 507 of the International Mechanical Code for more information. Provide any documentation that show exception to this code requirement. Determine cause for organic growth/dust on air devices. Change filters at a regular interval on all air handlers and ERV units.	Plumbing fixtures are relatively new and should last roughly 20 years.

Determine cause for leak around ductless unit in Squad Room. Fix and repair unit as required.

Ensure outside air is being provided for rooms with ductless units. Units that serve occupied space will need to have the minimum code required outside air added.

Improve access to units in attic Mezzanines. Especially at the attic mezzanine area at the court room.

Move supply take-off on AHU-7 to be after the duct mounted SKD. Refer to 606.2.1 in the Georgia Amendments to the International Mechanical Code for more information.

Ensure generator room has enough air flow for the generator to operate properly.
Provide a heater in the space for freeze protection.

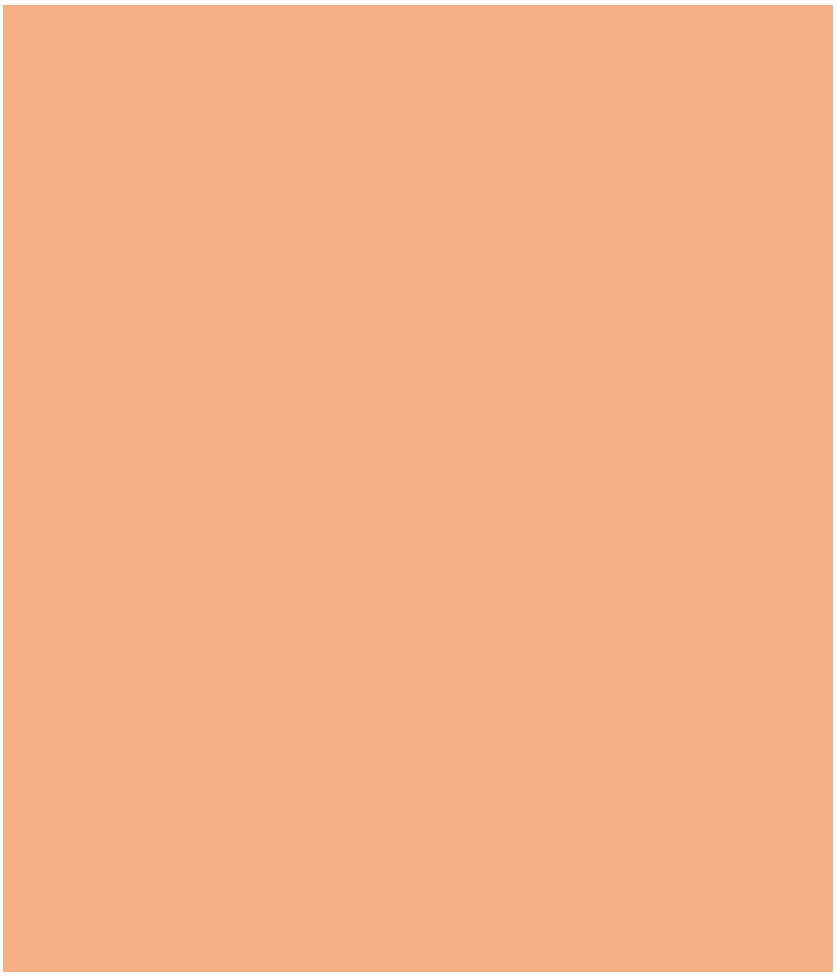
A Direct Digital Control (DDC) should be evaluated for this location. This will give maintenance crews the ability to remotely monitor the various systems in the building, as well as improving energy use for the building.

Units that serve occupied space will need to have the minimum code required outside air added. This will affect the cooling and heating load, and would require modifications to allow this. The total amount of outside air may be reduced with systems that can clean the air as indicated in ASHRAE 62 (i.e. Bi-Polar Ionization with needle point technology).	Fix leaking water closet.
Mechanically ventilate the restroom.	
Reinstall the wall heater in restroom for freeze protection.	
Fully support package unit on platform.	

Units that serve occupied space will need to have the minimum code required outside air added. This will affect the cooling and heating load, and would require modifications to allow this. The total amount of outside air may be reduced with systems that can clean the air as indicated in ASHRAE 62 (i.e. Bi-Polar Ionization with needle point technology).	Pipe material should last the life of the building.	The foundation settlement is a concern for the future stability of the building. A foundation study should be performed to determine the cause of the settlement of the foundations and to be able to determine the best repair procedures.
	Install fixtures which comply with ADA height requirements.	A geotechnical investigation should also be performed to help determine the cause of the settling.
	Install an eye wash station in the storage area.	
	Verify need for acid dilution in lab area.	

Units that serve occupied space will need to have the minimum code required outside air added. This will affect the cooling and heating load, and would require modifications to allow this. The	Plumbing piping should last the life of the building
Re-connect new split system to existing ductwork in camp store. This will provide better cooling and heating of the space.	Plumbing fixtures are in good shape and should last 20 years.
	Install water hammer arrestors at each washer connection box on both hot and cold water lines.

Fix leaking water heater



Ensure supply air is filtered.

Ensure water temperature is to 140F to comply with the International Plumbing Code and Health Department requirements.

Ensure fly fan is set to on position after work is completed in space.

Provide the minimum code required outside air the units. This will affect the cooling and heating load, and would require modifications to allow this. The total amount of outside air may be reduced with systems that can clean the air as	Plumbing piping should last the life of the building Plumbing fixtures are in good shape and should last 20 years.
Ensure grease hoods and associated ductwork are cleaned at regular intervals.	Ensure water heater is set to 140F in accordance with International Plumbing Code and Health Department requirements.

If package unit supply air is greater than 2,000 CFM of design air, install a duct smoke detector in duct. Upon activation of duct smoke detector, the unit shall be de-energized and an alarm shall sound.	Plumbing piping should last the life of the building	

Provide the minimum code required outside air the units. This will affect the cooling and heating load, and would require modifications to allow this. The total amount of outside air may be reduced with systems that can clean the air as indicated in ASHRAE 62 (i.e. Bi-Polar Ionization with needle point technology), and the outside air load to the units may be reduced with an energy recovery wheel.	Plumbing fixtures are in good shape and should last 20 years.	
If any renovations are to occur to the space, the rest rooms will be required to be brought up to current code standards and have a mechanical exhaust system. The exhaust system can be used with the energy recovery wheel.	Make fixtures comply with ADA requirements	
	Additional fixtures are required to comply with International Plumbing Code to type of space the building is being used for.	

Units that serve occupied space will need to have the minimum code required outside air added. This will affect the cooling and heating load, and would require modifications to allow this. The total amount of outside air may be reduced with systems that can clean the air as indicated in ASHRAE 62 (i.e. Bi-Polar Ionization with needle point technology).	Pipe material should last the life of the building.
Replace air devices with aluminum air devices.	Install fixtures which comply with ADA height requirements.
According to NFPA 30A for Minor repair garages, natural ventilation is allowed to be used so long as two side are open during occupied hours. This however may be not feasible to use at all times. Repair the existing wall prop fan to be used during those times.	Install an eye wash station in the shop area.

NFPA 30A does not cover vehicle exhaust. A separate mobile vehicle exhaust system should be considered for the shop area as well to prevent the build up of harmful emissions in the space.