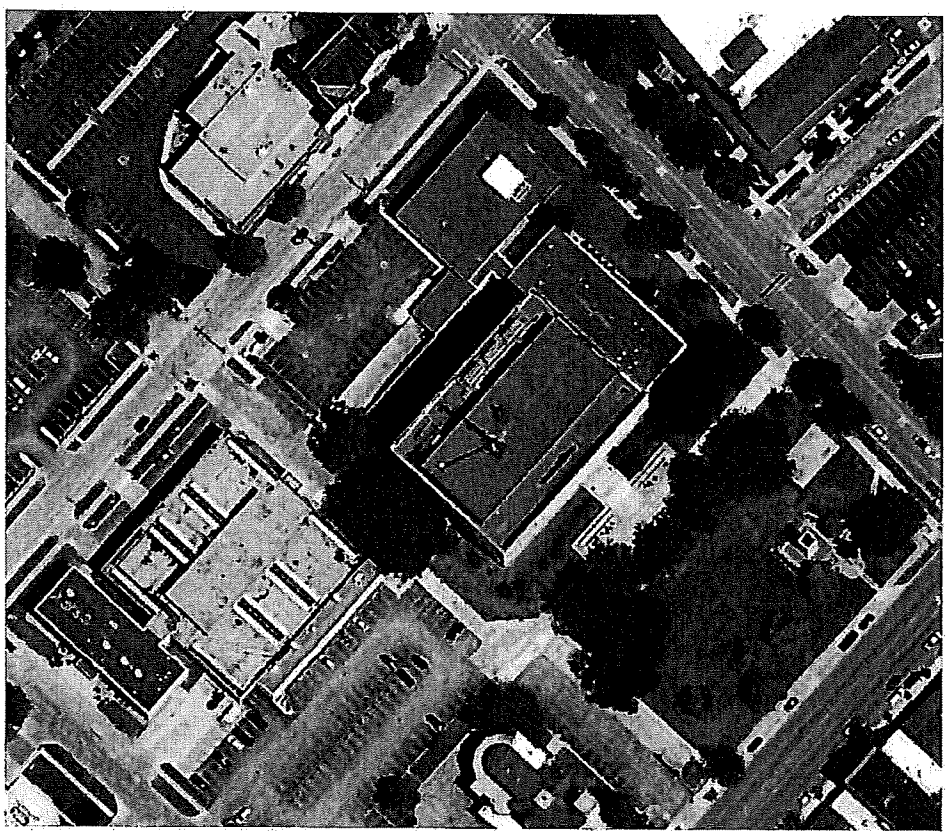
SAGINAW COUNTY, MICHIGAN

FACILITY ASSESSMENTS

FINAL
January 25, 2019



Prepared by:

DLZ MICHIGAN, INC.
Project No: 1841-6827-00

DLZ
ARCHITECTURE • ENGINEERING • PLANNING
SURVEYING • CONSTRUCTION SERVICES

505 Pleasant St, Ste 204, Saint Joseph, MI 49085-1269 | OFFICE 269.281.0744 | ONLINE WWW.DLZ.COM

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SECTION
01 EXECUTIVE SUMMARY

1.01 PROJECT SUMMARY

On behalf of Saginaw County, DLZ Michigan, Inc. (DLZ) has prepared an assessment of the following County Facilities:

.01 COUNTY OFFICE BUILDING
615 Court Street
Saginaw, Michigan 48602

.02 COURTHOUSE
111 South Michigan Avenue
Saginaw, Michigan 48602

.03 SHERIFF'S ADMINISTRATION
618 Cass Street
Saginaw, Michigan 48602

.04 JUVENILE DETENTION CENTER
3360 Hospital Road
Saginaw, Michigan 48603

.05 COMMISSION ON AGING
2355 Schust Road
Saginaw, Michigan 48603

.06 MARIE DAVIS SENIOR CENTER
233 North 2nd Avenue
Saginaw, Michigan 48607

.07 MOSQUITO CONTROL
211 Congress Avenue
Saginaw, Michigan 48602

1.02 PROJECT TEAM

This document reflects the efforts of a host of team members who have worked together to more fully understand and identify capital improvement needs of Saginaw County Facilities. The result is a comprehensive planning tool that provides options to address those needs. It is through their efforts and support that this project has been developed:

Department:	Representative:
Board of Commissioners	Michael A. Webster, Chair
Maintenance	Bernard Delaney, Director
Maintenance	Mark Seige, HVAC
Maintenance	Bob Krupnek, Electrical
Maintenance	Beth Capen, Administrative Services

1.03 ASSESSMENT GUIDELINES

.1 ASSESSMENT GOALS

Facility Assessments were conducted in November of 2018. The goal of the assessments was to identify recommended facility improvements regarding code compliance, immediate needs and 5-year planning. Facilities were evaluated relative to current building and accessibility codes, which have seen significant changes since many of these buildings were originally constructed. It was evident in each facility toured that existing infrastructure has been diligently maintained by County Maintenance. The assessments focused on the following systems:

.1 Accessibility

.2 Life Safety

.3 Interior Conditions

.4 Mechanical / Plumbing Systems

.5 Electrical Systems

.2 DOCUMENT REVIEW

The assessment was based on guidelines in the American Society for Testing and Materials (ASTM) Standard Guide for Property Condition Assessments and generally accepted industry standards.

Existing drawings, project manuals, and studies, as made available by the Owner, were reviewed to identify or assist in the identification of physical deficiencies, as well as any preceding or ongoing efforts or costs to investigate or remediate physical deficiencies at each facility.

.3 WALK-THROUGH SITE OBSERVATIONS

The objective of the site assessments was to visually observe the subject property to obtain information on material systems and components for the purposes of providing a brief description and identification of physical deficiencies to the extent that they are accessible and observable. Narratives of observed deficiencies are provided in Section 2 based on the following ratings criteria:

Deficiency Priority:

Priority 1 Currently Critical: Conditions in this category require immediate action to:

- Correct a cited safety hazard,
- Stop accelerated deterioration, or
- Return a facility to operation.

Priority 2 Potentially Critical: Conditions in this category, if not corrected expeditiously, will become critical within a year. Situations within this category include:

- Intermittent operations,
- Rapid Deterioration, or
- Potential life safety hazards.

Priority 3 Necessary – Not Yet Critical: Conditions in this category require appropriate attention to prevent deterioration or potential downtime and the associated damage or higher costs if deferred further.

Priority 4 Recommended: Conditions in this category include items that represent a sensible improvement to existing conditions. These are not required for the most basic function of the facility.

Priority 5 Appearance: Conditions in this category include finishes that have deteriorated and are required to maintain the required aesthetic standards.

Priority 6 Does Not Meet Current Codes/Standards – "Grandfathered": Conditions in this category include items that do not conform to existing codes but are considered "grandfathered" in their condition. No immediate action is required, but deficiencies should be upgraded to comply with current codes or standards.

Deficiency Category:

Category 1 Scheduled Maintenance: Maintenance that is planned and performed on a routine basis to maintain and preserve the condition. A repair that does not require specialized equipment, professional services, or contractors, but rather can be corrected within the skill set of typical property maintenance staff.

Category 2 Deferred Maintenance: Physical deficiencies that could have been remedied with routine maintenance, normal operating maintenance that was not performed when it was scheduled or is past its useful life resulting in immediate repair or replacement.

Category 3 Capital Renewal: Planned replacement of building systems that have reached the end of their useful life.

Category 4 Energy & Sustainability: Repair or replacement of equipment or systems are recommended to improve energy and sustainability performance.

Category 5 Security: System requires replacement due to a security risk or requirement.

Applicable Building and Fire Codes:

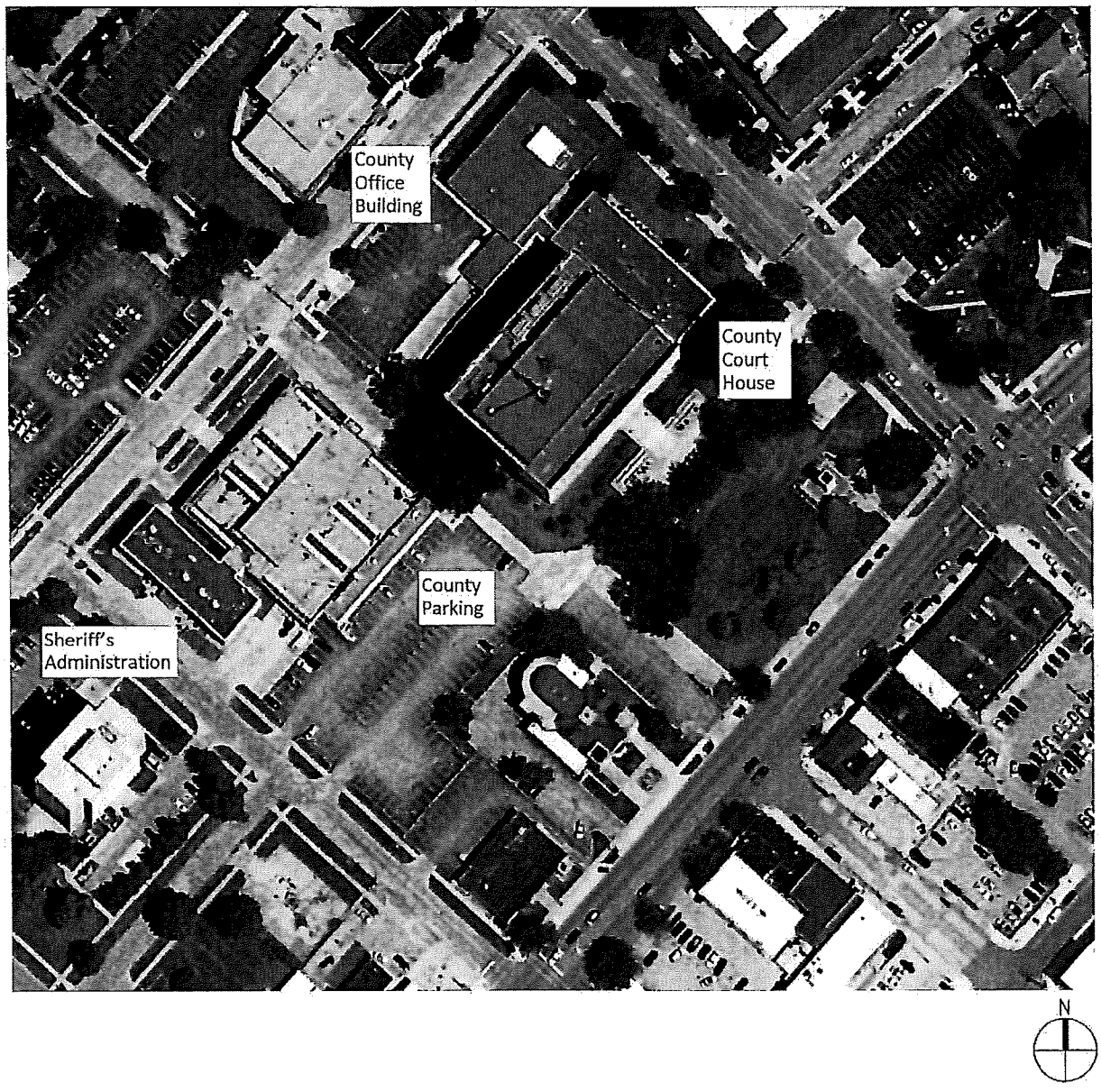
1) 2015 Michigan Building Code (2015 International Building Code)
2) 2014 National Electrical Code (with Michigan Amendments)
3) 2015 Michigan Mechanical Code
4) 2015 Michigan Plumbing Code
5) 2015 Michigan Energy Code (ASHRAE 90.1-2013)
6) NFPA 13 – 2010 Edition, Installation of Sprinkler Systems
7) NFPA 72 – 2010 Edition, National Fire Alarm Code
8) 2010 Americans with Disabilities Act (ADA) Standards for Accessible Design

SECTION
02 FACILITY ASSESSMENTS

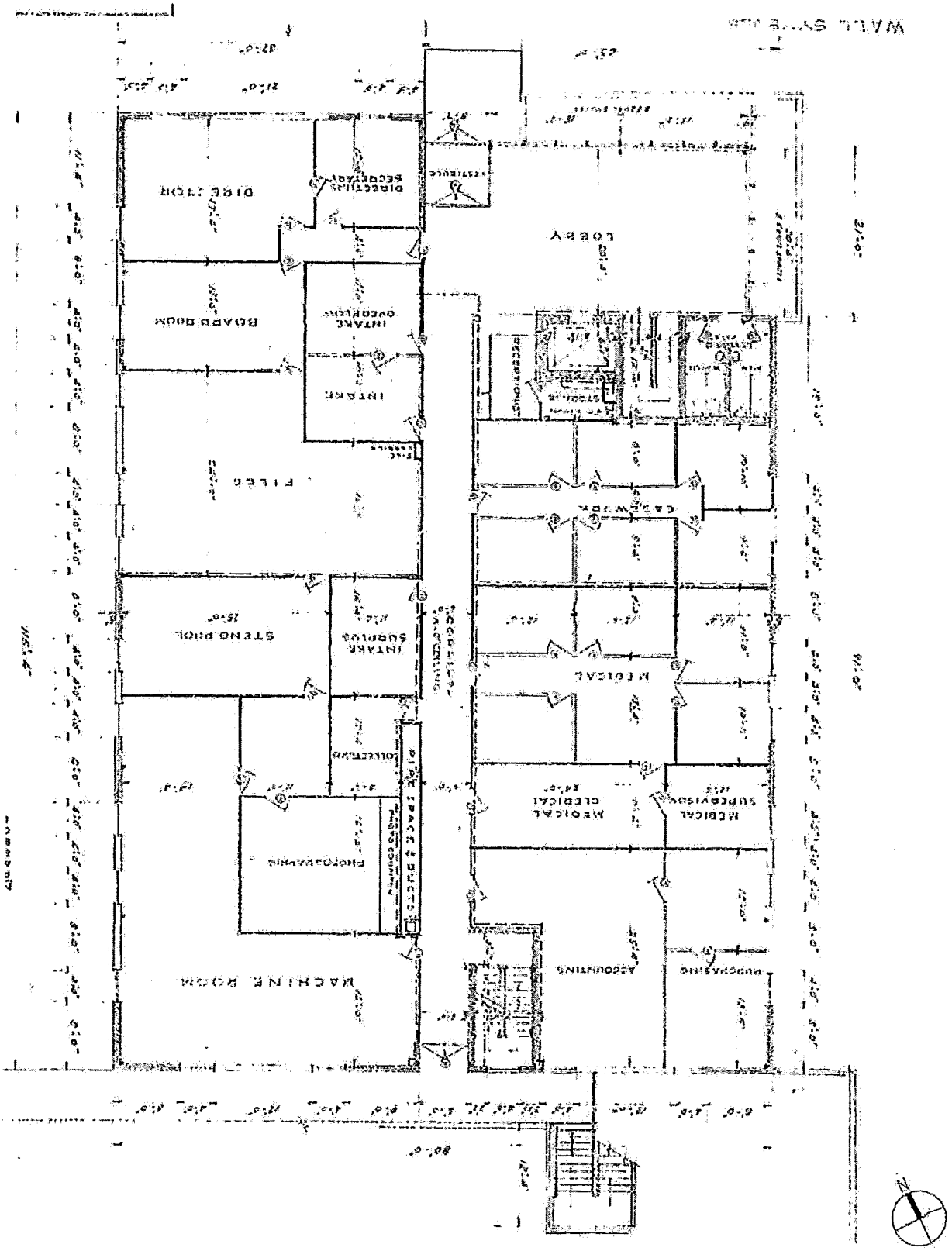
2.01 COUNTY OFFICE BUILDING

111 South Michigan Avenue
Saginaw, Michigan 48602
Year: 1964
Size: 36,000gsf
Floors: B-2

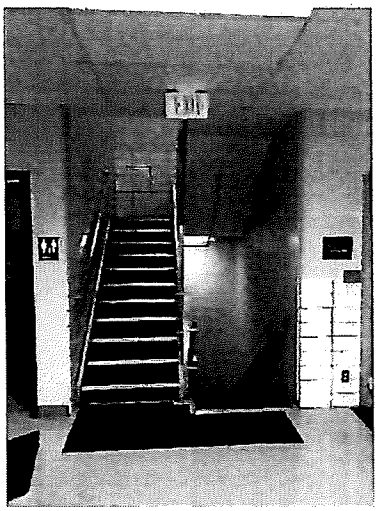
SITE PLAN

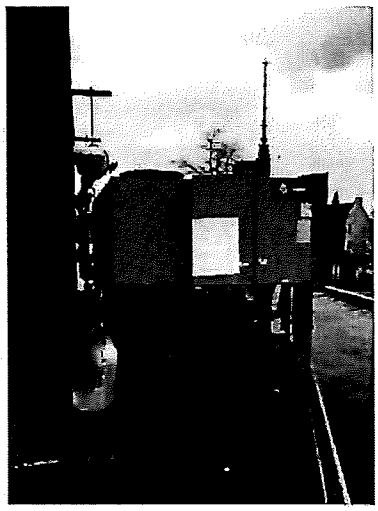


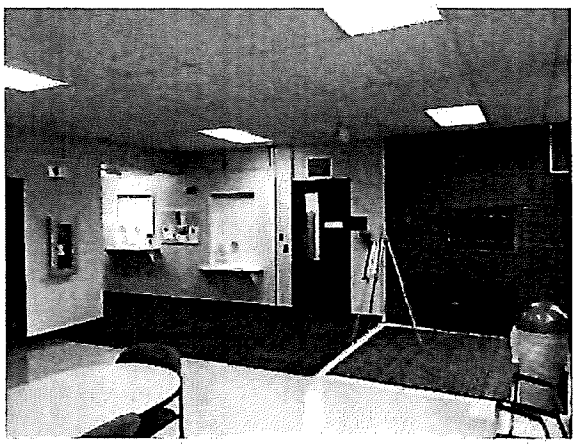
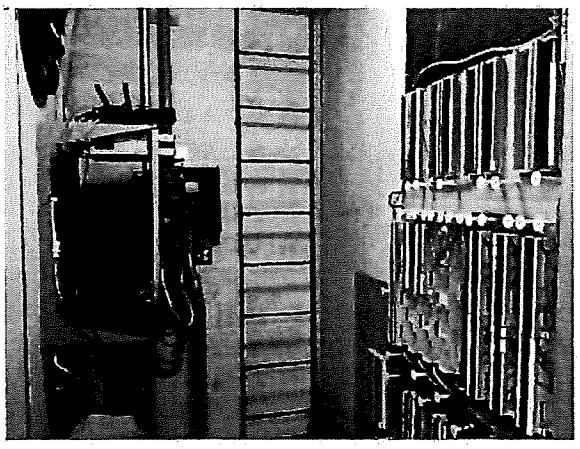
COUNTY OFFICE BUILDING
FLOOR PLAN



COUNTY OFFICE BUILDING
PHOTOS






COUNTY OFFICE BUILDING
ARCHITECTURAL SYSTEMS

.01 ACCESSIBILITY

SUMMARY

.1 Under Title II of the Americans with Disabilities Act (ADA), facilities designed, constructed, or altered by, on behalf of, or for the use of a public entity must be readily accessible and usable by individuals with disabilities (28 CFR 35.130).

.2 The County must 'reasonably modify' barriers to programs, activities, and services that limit access within existing facilities. However, the County does not have to take any action that it can demonstrate would result in a fundamental alteration in the nature of a program or activity, would create a hazardous condition for other people, or would represent an undue financial and administrative burden.

.3 The specific requirements for accessibility in a facility are based on the building's construction date. The first accessibility standards were published in 1991; the current guideline for new construction is the 2015 Michigan Building Code which incorporates by reference ANSI A117.1 and the federal 2010 ADA Standards for Accessible Design.

.4 The County Office Building was constructed prior to enacted of accessible design standards; subsequent alterations to the building must follow current guidelines.

PARKING

.1 The facility has a grade-level entrance for staff from the south parking area. However, disabled access to the facility is from an internal ramp connection to the Courthouse. The facility does not have a dedicated accessible entrance or parking.

ACCESSIBLE ROUTES AND RAMPS

.1 Corridors and turning widths are generally accessible.

.2 Public service areas have accessible counter heights.

.3 The elevator does not have adequate clear floor space per 407.4.1.

DOOR HARDWARE

.1 Doors are typically provided with accessible, lever type hardware and adequate push/pull clearance. There are a few non-accessible cylindrical type devices on the lower level. The staff entry does not have a power assisted door operator.

PLUMBING ELEMENTS

.1 Public toilets appear to be original and do not meet current accessibility guidelines.

COMMUNICATION ELEMENTS

.1 Public directional and space identification signage is limited and does not have tactile characters or compliant mounting heights.

IMMEDIATE NEEDS

.1 None.

5-YEAR PLANNING RECOMMENDATIONS

.1 Upgrade non-accessible door hardware and provide ADA operator at staff entry door.

.2 Upgrade toilet rooms to be fully ADA compliant.

.3 Upgrade signage to provide adequate space identification and tactile characters.

.4 Upgrade elevator to provide adequate floor space.

.02 LIFE SAFETY

SUMMARY

.1 This section identifies issues related to means of egress and fire suppression in the event of a fire or other emergency egress in accordance with the Michigan Building Code and NFPA.

.2 Refer to the Electrical Assessment for comments regarding the fire alarm system and exit signage.

.3 Occupancy Classification: Group B (Office), Group A-3 (Assembly). [Chapter 3]

.4 Construction Type II-A, NS: Non-combustible framing, 1-HR fire protection of structural elements. [Table 601]

.5 Allowable Height: 5 stories, 65 feet. [Table 504]

PATH OF EGRESS, STAIRS AND EXITS

.1 Stairs and exits are in compliant locations and sized according to use.

.2 Exit stairs are not in compliant fire-rated enclosures per MBC 1019.3.

.3 Stair handrails are not a compliant height or profile.

DOOR HARDWARE

.1 Doors are typically provided with accessible, lever type hardware.

.2 Exit doors are equipped with panic egress devices.

FIRE PROTECTION

.1 The basement level is sprinklered, the two floors above grade are not spinklered.

.2 Existing corridors are not fire rated. Corridors serving more than 30 people in a Group B (office) occupancies are required to be rated in non-sprinklered buildings per Table 1020.1.

IMMEDIATE NEEDS

.1 None.

5-YEAR PLANNING RECOMMENDATIONS

.1 Installation of rated stair enclosures are not practical in this facility. In lieu of rated enclosures, sprinkler the remainder of the facility and provide draft curtains (18" bulkhead in accordance with NFPA 13, section 8.15.4) around the stair shafts.

.2 Upgrade handrails to be a compliant height and profile.

.03 INTERIOR CONDITIONS

FINISHES

.1 Lower level partitions are glazed and painted concrete masonry units. First and second floor partitions are demountable and stop at the underside of suspended ceilings; they appear to be original.

.2 Flooring consists of original resilient tile and modern carpet tiles that are in good condition.

.3 Ceilings are 2'x4' suspended acoustic panels that are beginning to sag and discolor.

IMMEDIATE NEEDS

.1 None.

5-YEAR PLANNING RECOMMENDATIONS

.1 Install upgraded acoustic panel ceilings in coordination with proposed lighting and fire suppression upgrades.

.04 FIRE SUPPRESSION SYSTEMS

SUMMARY

.1 The building is partially sprinkled, specifically the lower level and the stairwell up to the first level. Fire protection incoming service is in the archives room.

EQUIPMENT

.1 The sprinkler header appears to be in fair condition. The header is located within an archives room; consider relocating or protecting stored materials.

DISTRIBUTION

.1 Distribution piping is limited to the lower level and stairwell up to the first level. Facilities staff noted no issues with the condition of the sprinkler piping or heads.

IMMEDIATE NEEDS

.1 None.

5-YEAR PLANNING

.1 Relocate the sprinkler header or build out small enclosure with an upsized floor drain to protect the archives room from the header.

.05 PLUMBING SYSTEMS

SUMMARY

.1 The building is served by independent incoming water service in the lower level mechanical room. An RPZ and water meter were both observed and appear in fair condition. Plumbing systems are limited to HVAC makeup water service and toilet room fixtures.

CODE COMPLIANCE

.1 Michigan Plumbing Code requires tempered water supplied through a local ASSE 1070-compliant thermostatic temperature limiting device be provided to all accessible plumbing fixtures. All accessible plumbing fixtures, current and future, should be provided with ASSE 1070 devices.

1.1 Although there is a limited lip to the edge construction to the current roof, the way the roof is sloped may allow water pooling and buildup around the drains and local roof area should a drain become obstructed.

1.2 Roof scuppers or secondary overflow drains with an above grade, normally observed discharge location should be considered.

EQUIPMENT

.1 The incoming water service RPZ and associated piping & insulation appear to be in fair condition. The RPZ is properly drained.

.2 The electric water heater and recirculation pump located in the lower level mechanical room are in fair condition.

2.1 Sections of the domestic hot water supply and return piping remain uninsulated. These should be insulated during standard maintenance work.

.3 All plumbing fixtures observed within the building were manually actuated. Fixtures were generally in good condition.

3.1 Lavatories appeared to be 1.5 gpm faucets with no thermostatic mixing valves
3.2 Water closets appeared to be 3.5gpf flush valve units
3.3 Urinals appeared to be 1.5gpf flush valve units.

DISTRIBUTION

.1 Domestic piping, insulation, and valves generally appeared to be in fair condition where observable within the lower level mechanical room.

.2 Facilities staff noted no known or ongoing issues with concealed domestic, storm, or sanitary piping systems.

.3 Roof drains are in generally good condition, although secondary roof drains or scuppers are not present.

.4 It was unclear whether any insulated PVC piping is used for plumbing purposes within the ceiling plenum spaces. If so, this piping should be insulated or replaced with a product that meets Michigan Mechanical Code requirements for flame/smoke spread resistance requirements in plenum return air spaces.

IMMEDIATE NEEDS

.1 Provide ASSE 1070-rated thermostatic mixing valves at all lavatories for scald protection and code compliance at accessible fixtures. Recommend increasing distribution water temperature in excess of 130°F to minimize risks associated with Legionella.

.2 Confirm and correct any exposed PVC piping in ceiling/plenum spaces.

5-YEAR PLANNING

.1 Insulate exposed domestic water piping.

.2 Replace all water closets and urinals with 1.6gpf and 0.125gpf fixtures, respectively.

.3 Provide secondary roof drains or scuppers to improve roof drainage.

.4 Update bathrooms fixtures as needed to meet ADA requirements.

.06 MECHANICAL SYSTEMS

SUMMARY

.1 The building is ventilated by two multi-zone air handling units, conditioning the air with steam heat from the Courthouse boiler plant, and locally provided chilled water from a rooftop air-cooled chiller. Perimeter radiant hot water heat Is provided throughout the building via heating hot water generated in the lower level mechanical room with a steam to hot water heat exchanger. Condensate is pumped back to the Courthouse plant for reuse. The building uses a plenum return air path, with wall and door grilles throughout to allow transfer of air back to the AHU's. The system is operational, but overall has exceeded its useful life. Controls are pneumatic, with a duplex air compressor in the basement providing air pressure.

CODE COMPLIANCE

.1 Michigan Mechanical Code notes "plenums shall be limited to uninhabited crawl spaces, areas above a ceiling or below the floor, attic spaces and mechanical equipment rooms." And "Corridors shall not serve as supply, return, exhaust, relief or ventilation air ducts" The general configuration of each floor using occupied spaces & corridors for air transfer does not comply with current code requirements.

EQUIPMENT

.1 Two Multizone air handling units with plenum returns serve the occupied spaces – one in the penthouse, and the other in the basement. Both are original to the building. Both use a steam hot deck and chilled water cold deck.
  1.1 All dampers, actuators, and associated gaskets and seals on the AHU's are original and in poor condition. The system has limited controllability. Facilities staff noted maintaining outdoor air ventilation to the units is challenging during design conditions.
  1.2 The penthouse AHU has limited maintenance access through a roof hatch ladder system.
  1.3 Coils and controls in the basement unit are original and are past their design life. Valves insulation are a mix of new and old.
  1.4 Coils in the penthouse AHU are less than 3 years old.

.2 Perimeter hot water radiant heating generated in the lower level mechanical room with a single shell and tube steam to hot water heat exchanger and constant volume hot water pump.
  2.1 HEX and some HHW piping in the basement is not insulated
  2.2 The HHW pump is experiencing corrosion on the volute and may be approaching end of useful life.
  2.3 Observed insulation, valve, and piping condition on the HHW system ranges from fair to very poor.
  2.4 Steam condensate receiver is partially insulated and feeds condensate back to the Courthouse plant.

.3 Cooling is provided by a single 125T air cooled chiller with R-22 refrigerant on the roof.
  3.1 The unit is past its design life and requires increasing maintenance each year.
  3.2 R-22 is scheduled for complete production and import phaseout by January 2020, rapidly increasing maintenance and refrigerant replacement costs.
  3.3 With the upcoming available capacity in the courthouse chiller plant due to the existing jail demolition, elimination of this chiller and integration with the courthouse chilled water piping network is understood to be the current county plan for providing long term cooling to the building.

.4 The pneumatic controls compressor is generally in fair condition.

DISTRIBUTION

.1 Facilities staff noted the supply distribution ductwork is generally in fair condition.

.2 Plenum return system is in fair condition, although due to wall reconfigurations since construction facilities staff noted that the system seems to struggle to pull sufficient air back.

.3 It is unclear whether the ventilation equipment is capable of meeting current outside air ventilation requirements.

.4 Facilities staff noted the hydronic radiant heating piping system is generally in good condition.

IMMEDIATE NEEDS

.1 Update seals, gaskets, and dampers within the AHU's and perform testing and balancing to improve unit controllability.

5-YEAR PLANNING

.1 Insulate uninsulated steam and condensate piping and equipment within the lower level mechanical room.

.2 Revise building return air system for ceiling ducted/plenum return to meet current code requirements. It is understood current county budget plans call for conversion to a VAV with DDC system in the next 5 years.

.3 Provide chilled water from future available Courthouse chiller plant capacity. This is understood to be the current county plan as of January 2019.

.3 Replace current coils in basement air hander per current county budget plans.

.4 Convert building to DDC controls for improved controllability/fault detection and elimination of air compressor.

.5 Consider replacing air distribution system in its entirety. Convert building to rooftop or internal VAV air handling units with reheat boxes for each zone if ceiling conditions and chase spaces permit doing so. Alternately, replace current multizone units with new multizone units sized for current ventilation rate requirements.

.07 ELECTRICAL SYSTEMS

POWER DISTRIBUTION

.1 The primary service is a 277/480V, 800A, three-phase, 4-wire system served from the existing courthouse. The 800A, 277/480V distribution panel is a Square D QMB panelboard. The distribution transforms the 480V service into 120/208V, 600A, three-phase, four-wire. The transformer is a Square D, 150 KVA, energy efficient dry type transformer. The new 120/208V panel is a Square D, HCM I-Line panelboard. This panel feeds all the panels throughout the County Office building. There were no surge suppression devices observed.

.2 Conduit leaking water into drip pan in basement mechanical room.

GENERAL PURPOSE ELECTRICAL POWER

.1 The majority of the electrical system is original to the facility. Branch panelboards consist of Federal Pacific Electric Company panelboards. Panels are obsolete.

.2 Building appeared to have sufficient receptacles installed. A few receptacles within 6ft of water source are not GFCI.

.3 Power cabling is probably the same age as the building and insulation on this cabling is nearing its expected service life. Cabling conditions were not readily accessible to observe.

LIGHTING

.1 Interior light fixtures use T8 fluorescent lamps throughout the building. While the fixtures appear to be in fair condition and well maintained over the years, they are not energy efficient.

.2 Corridor fixtures on first floor have emergency battery ballast. Second floor emergency lighting consists of emergency wall packs. Fixtures appear to be in good condition.

.3 There are no exterior egress lighting fixtures located at each of the exterior discharge doors. The Michigan Building Code now requires exterior egress lights at each exit discharge door.

.4 Automatic controls are installed throughout building.

.5 Facility does not appear to have daylighting controls in accordance with ASHRAE/IES 90.1, 2013.

EMERGENCY POWER

.1 None.

COMMUNICATION

.1 There is a small IT cabinet in electrical closet. The facility now uses VOIP handsets for telephone communication. The existing POTs (Plain Old Telephone System) wiring (i.e. 2 pair wiring) and outlets in this building are no longer in use.

.2 Wireless Access Points (WAPS) are installed throughout building.

FIRE ALARM

.1 Fire alarm ties in to Courthouse fire alarm system. Fire alarm was recently upgraded (within the last 10 years) to Simplex 4100ES voice system.

.2 Confirm devices comply with ADA reach, visual, and audible alarm requirements.

.3 Elevator lobby is missing smoke detectors.

IMMEDIATE NEEDS

.1 Sealing leaking conduit (telephone system) in basement mechanical room.

.2 Install GFCI receptacles within 6ft of water source.

.3 Provide exterior egress lights at each exit discharge door.

5-YEAR PLANNING RECOMMENDATIONS

.1 Power cabling is probably the same age as the building and insulation on this cabling is nearing its expected service life. Cabling conditions were not readily accessible to observe. Recommend inspection of cable insulation; remove and replace as necessary.

.2 Install Surge Protection Devices (SPDs) at the main distribution and at panelboards feeding critical electronic loads (i.e. personal computers, IT room equipment, etc.).

.3 Replace branch panelboards.

.4 Replace fluorescent fixtures with LED fixtures. Check for potential rebates with Consumers energy.

.5 The new energy code requires daylighting for energy savings. Daylighting controls are required for any space where the combined input power of all lighting within side-lighted areas (spaces with windows) is greater than 150W. Lighting shall dim with photocontrol. Recommend adding daylighting sensors at the same time as the LED fixture replacement. LED fixtures come with standard dimming, unlike, fluorescent fixtures with dimming ballasts.

.6 Replace batteries in emergency wall packs and exit signs.

.7 A central inverter, with a central battery system should be considered to reduce ongoing maintenance of replacing individual batteries. This would be very cost effective if implemented at the same time as LED fixture upgrade.

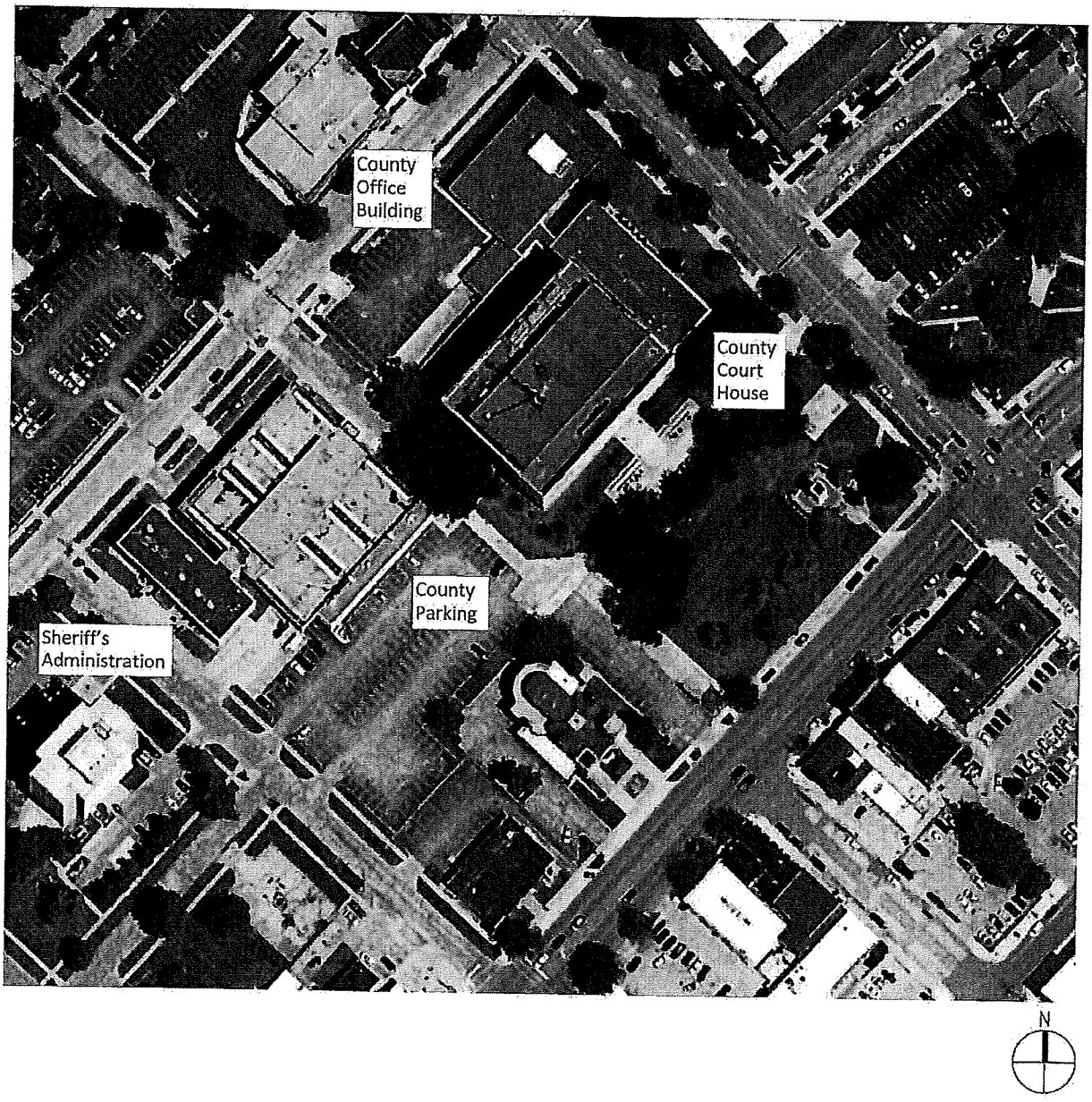
.8 Verify emergency fixtures automatically illuminates to an average of 1 foot-candle for a minimum of 90 minutes in interior and exterior stairways and ramps, exit passageways, vestibules, exterior landings for exit doorways, electrical equipment rooms, fire pump rooms and public restrooms with an area greater than 300 sq. ft.

.9 Remove unused telephone wiring and terminal blocks where possible and/or abandoned in place where not readily accessible. Maintain minimal quantity of active POTs lines for centrally monitored equipment such as fire alarm, security, and building management systems.

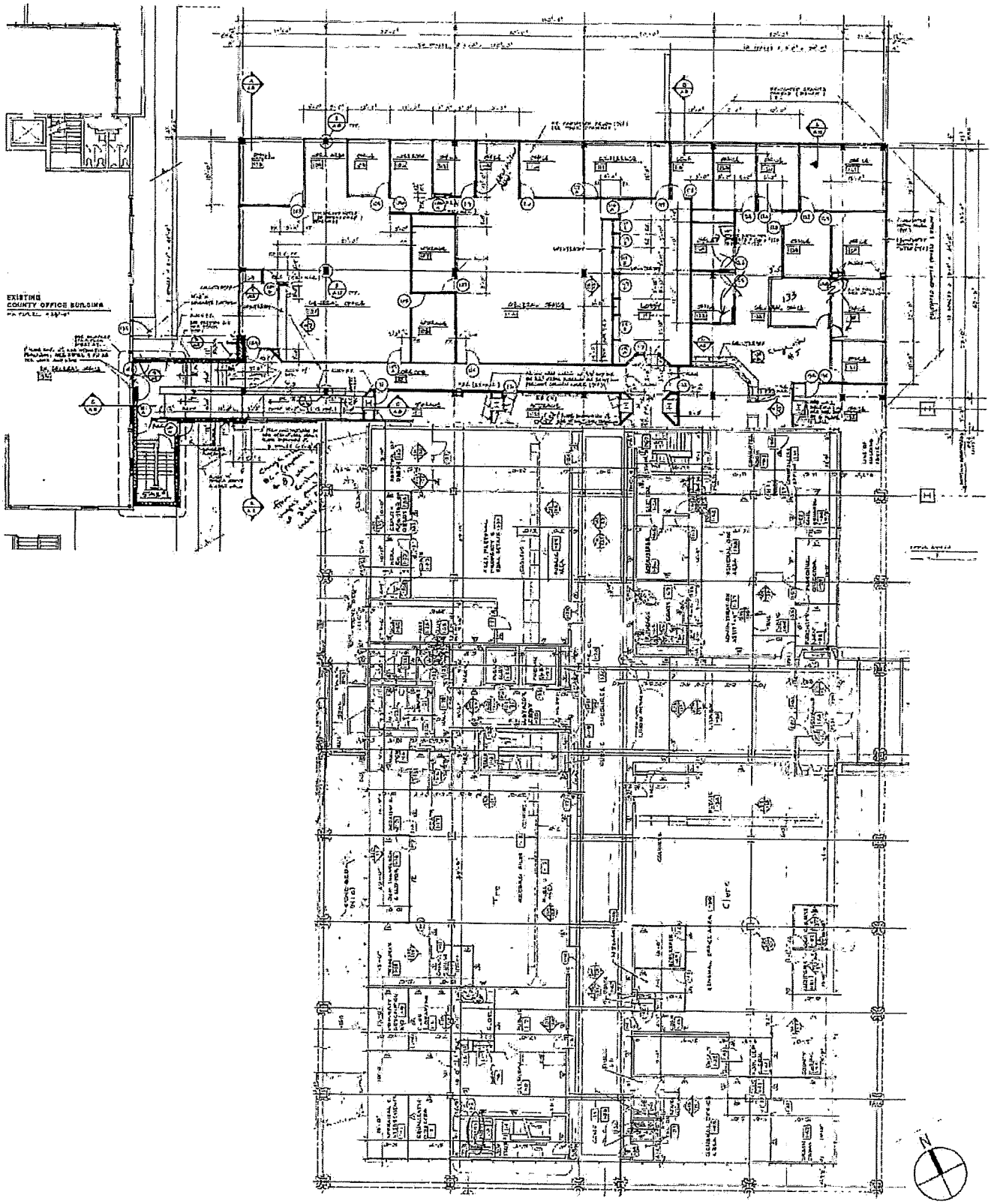
.10 Provide smoke detectors in the elevator lobby in compliance with current code.

2.02 COURTHOUSE
111 South Michigan Avenue
Saginaw, Michigan 48602
Original Year: 1968
Addition: 1995
Size: 125,000
Floors: B-4

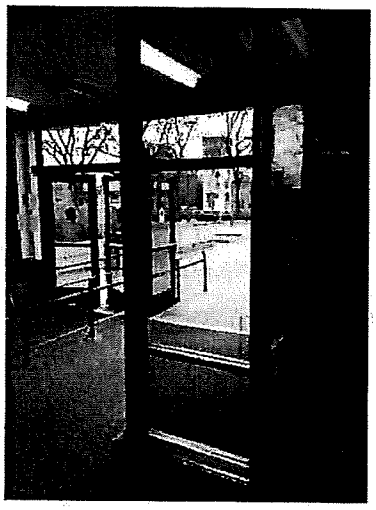
SITE PLAN

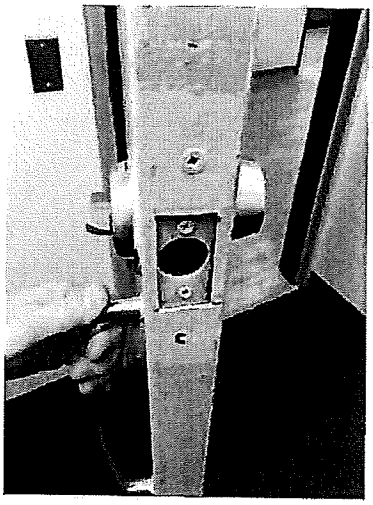
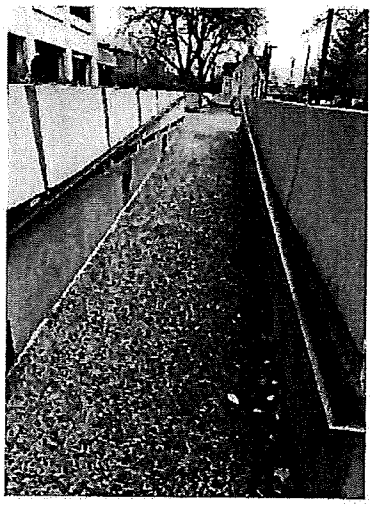
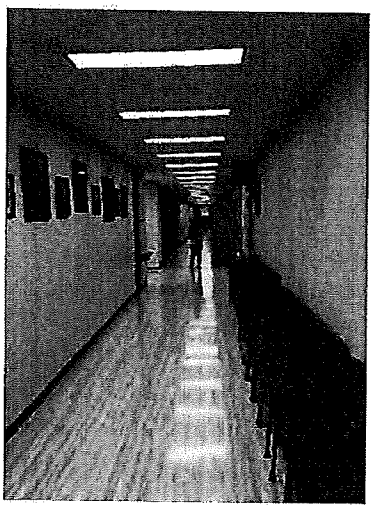
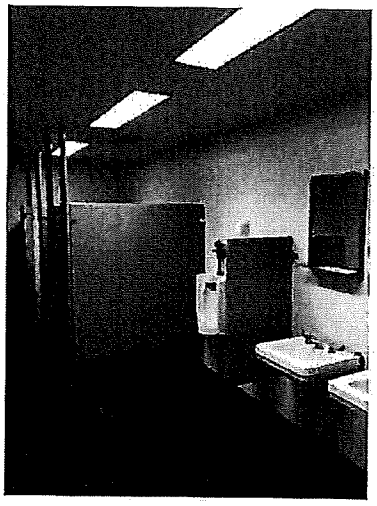
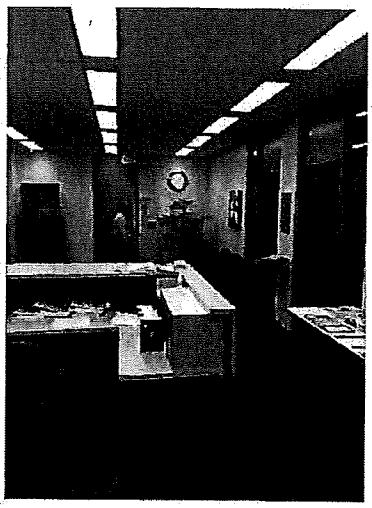
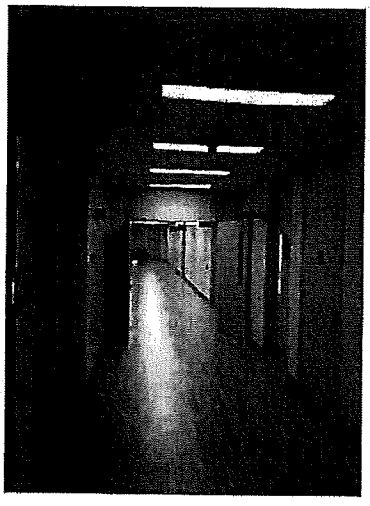
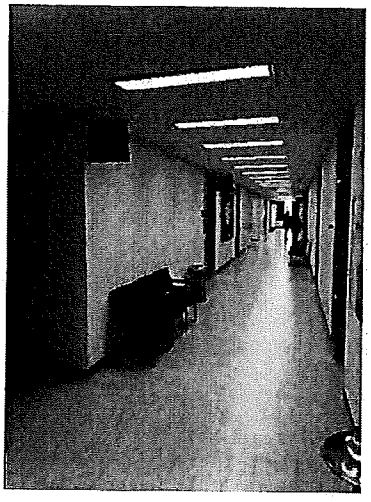


COURTHOUSE
FLOOR PLAN



COUNTY COURTHOUSE
PHOTOS



COUNTY COURTHOUSE
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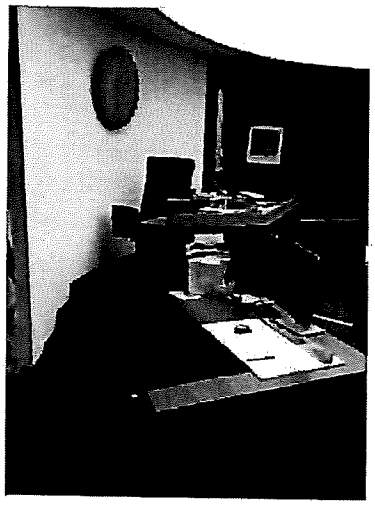
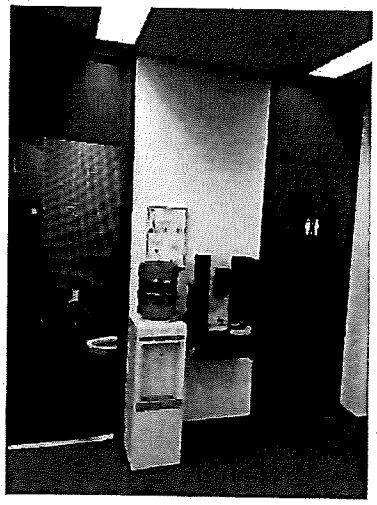
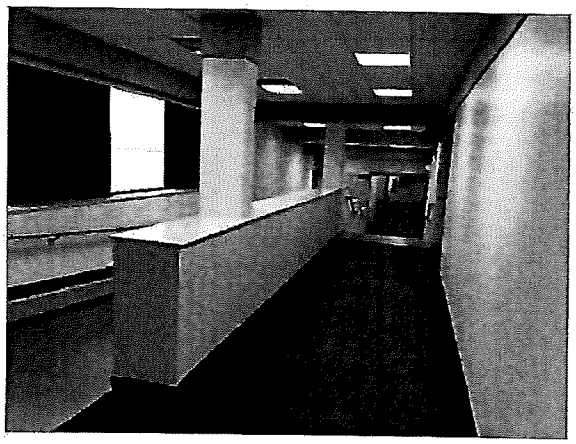
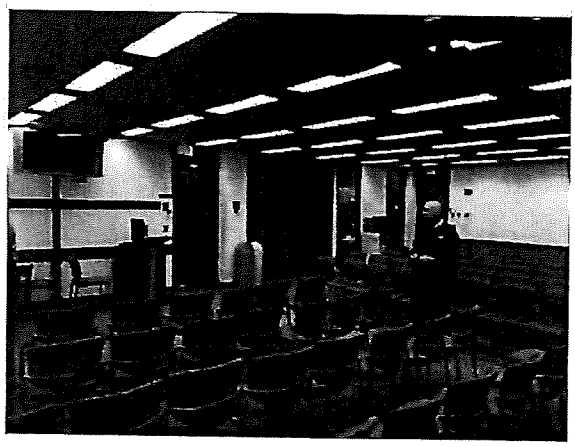
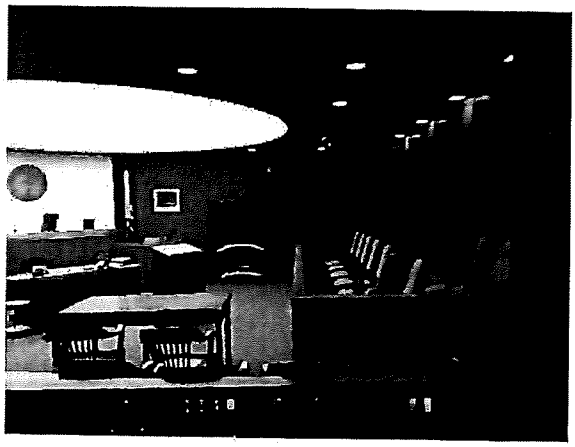
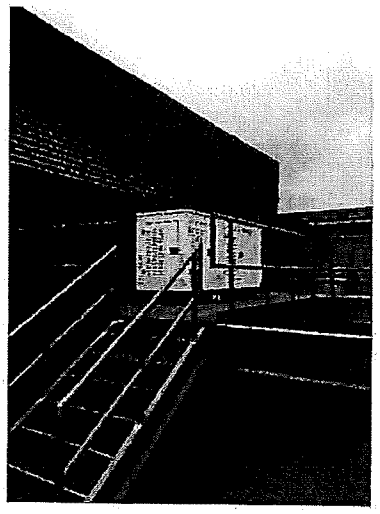
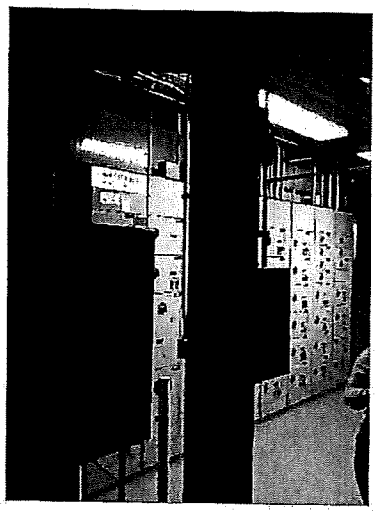
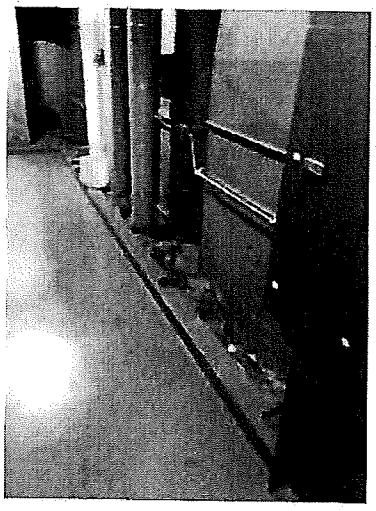
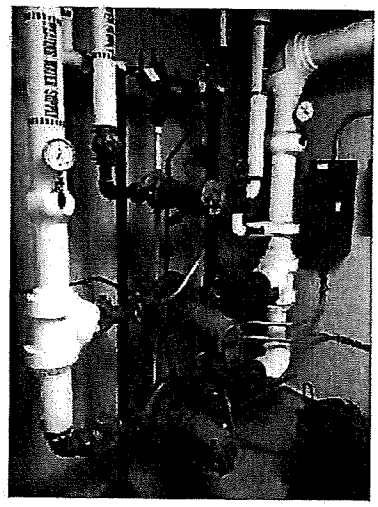
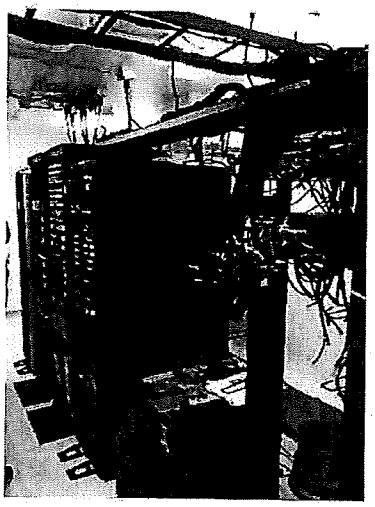
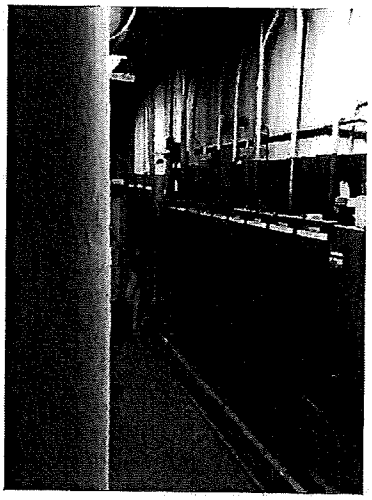
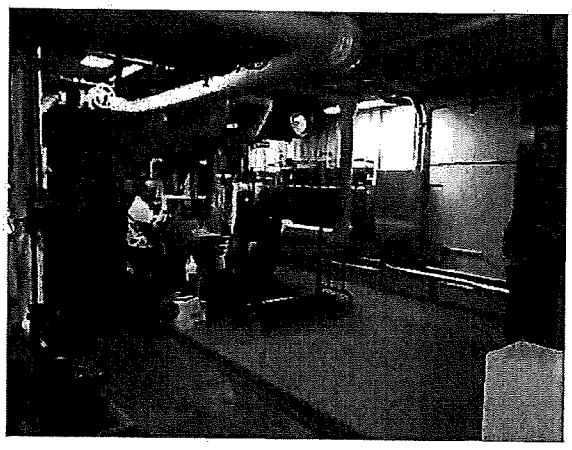







COUNTY COURTHOUSE
PHOTOS


COUNTY COURTHOUSE
ARCHITECTURAL SYSTEMS

.01 ACCESSIBILITY

SUMMARY

.1 The original Courthouse was constructed prior to enactment of accessible design standards; the addition was constructed in 1995 under ADA guidelines.

PARKING

.1 The facility has designated accessible parking in the public parking lot southwest of the facility; the main entrance is accessible by ramp from the parking area.

ACCESSIBLE ROUTES AND RAMPS

.1 Corridors and turning widths in public areas are generally accessible.

.2 Public service transaction windows on each floor typically do not have a space with compliant height counters and knee/toe clearance.

.3 Public elevators are ADA compliant.

.4 The ramped connection to the County Office Building is ADA compliant.

.5 Courtrooms do not have assisted listening devices and the benches, witness stands, and jury boxes are not accessible.

DOOR HARDWARE

.1 Doors are typically provided with accessible, lever type hardware and adequate push/pull clearance. There are a few non-accessible cylindrical type devices in various parts of the facility.

PLUMBING ELEMENTS

.1 Public toilets appear to be original and do not meet current accessibility guidelines.

COMMUNICATION ELEMENTS

.1 Public directional and space identification signage is limited and does not have tactile characters or compliant mounting heights.

IMMEDIATE NEEDS

.1 None.

5-YEAR PLANNING RECOMMENDATIONS

.1 Upgrade non-accessible door hardware.

.2 Upgrade toilet rooms to be fully ADA compliant.

.3 Upgrade signage to provide adequate space identification and tactile characters.

.4 Upgrade Courtrooms to be fully ADA compliant.

.02 LIFE SAFETY

SUMMARY

.1 This section identifies issues related to means of egress and fire suppression in the event of a fire or other emergency egress in accordance with the Michigan Building Code and NFPA.

.2 Refer to the Electrical Assessment for comments regarding the fire alarm system and exit signage.

.3 Occupancy Classification: Group B (Office), Group A-3 (Assembly). [Chapter 3]

.4 Construction Type II-A, NS: Non-combustible framing, 1-HR fire protection of structural elements. [Table 601]

.5 Allowable Height: 5 stories, 65 feet. [Table 504]

PATH OF EGRESS, STAIRS AND EXITS

.1 Stairs and exits are in compliant locations and sized according to use.

.2 Egress stairs are in fire-rated enclosures per MBC 1019.3.

.3 Egress stairs in the original facility do not have compliant guardrails or handrails.

DOOR HARDWARE

.1 Doors are typically provided with accessible, lever type hardware.

.2 Exit doors are equipped with panic egress devices.

FIRE PROTECTION

.1 The basement level is fully sprinklered. A standpipe and fire pump serve hose cabinets on each floor and the penthouse mechanical room. Some IT spaces have clean-agent systems, and there is a ground level fire department connection

.2 Assembly occupancies (Courtrooms and spaces with an occupant load greater than 50) on floors above the level of exit discharge are required to be sprinklered per 903.2.1.3.

.3 The facility's construction classification requires floors, and penetrations in the floor, to be 1-HR rated per Table 601. Penetrations in the floor for mechanical equipment in the penthouse are not fire-stopped. The large penetration for ductwork also requires a guardrail.

.4 Fire-rated doors are required to be self-closing and positive latching per 716.5. Several fire doors were observed to have inoperable latches and held open with floor stops.

.5 The data center in the basement appears to have originally been placed in a rated enclosure, which has since been modified and is no longer rated.

.6 Review existing sprinkler layout for high-piled file storage areas with fire protection contractor to confirm compliance.

SECURITY

.1 The scope of this assessment did not specifically address issues related to security in the Courthouse. Refer to the Michigan Court Security Manual and the National Center for State Courts for recommendations regarding entrances, prisoner holding, transfer, and general security.

IMMEDIATE NEEDS

.2 Upgrade guardrails and handrails in egress stairs and floor openings to be a compliant height and profile.

.3 Firestop penetrations in rated partitions; provide rated enclosure for the data center.

.4 Upgrade fire door hardware to be self-closing and positive-latching as necessary.

5-YEAR PLANNING RECOMMENDATIONS

.1 Provide fire suppression for the remainder of the facility to accommodate existing assembly occupancies (courtrooms).

.03 INTERIOR CONDITIONS

FINISHES

.1 Toilet room finishes including floors, partitions, and counters are dated.

.2 Interior partitions include both painted concrete masonry units and gypsum wallboard and are generally in good condition.

.3 Flooring in public areas has recently been upgraded to LVT, offices are typically carpet and in good condition. Courtroom carpeting is worn and dated.

.4 Ceilings include both original acoustic tile and 2'x 5' suspended acoustic panels that are in fair condition.

.5 The facility has asbestos in the sprayed fire-proofing and mechanical insulation. There is a plan in-place to abate Asbestos Containing Materials (ACMs) in the facility in 2019.

IMMEDIATE NEEDS

.1 None.

5-YEAR PLANNING RECOMMENDATIONS

.1 Conduct asbestos abatement as planned.

.2 Install upgraded acoustic panel ceilings in coordination with proposed lighting and fire suppression upgrades.

.3 Upgrade toilet room finishes and fixtures in coordination with proposed ADA upgrades.

.4 Upgrade courtroom finishes in coordination with proposed ADA upgrades.

.04 FIRE SUPPRESSION SYSTEMS

EQUIPMENT

.1 The sprinkler header appears to be in fair condition.

.2 The clean agent systems are in good condition.

DISTRIBUTION

.1 Distribution piping is limited to the lower level and stairwell up to the first level. Facilities staff noted no issues with the condition of the sprinkler piping or heads.

IMMEDIATE NEEDS

.1 None.

5-YEAR PLANNING RECOMMENDATIONS

.1 Expand fire suppression to upper floors as-needed per life-safety assessment. It is likely that installation of a fire suppression system will mitigate or eliminate the need to re-spray structural elements after abatement procedures.

.05 PLUMBING SYSTEMS

SUMMARY

.1 The building domestic cold water service is provided by a redundant dual RPZ incoming service. Domestic cold water is fed through a pair of 100% redundant booster pumps to both the Courts and Jail buildings. Gas fired storage-type hot water heaters on the basement and penthouse levels serve domestic hot water needs with associated recirculation lines and pumps. Roof drains and internal sanitary lines discharge into the County Combined Sewage Outflow system.

CODE COMPLIANCE

.1 Michigan Plumbing Code requires tempered water supplied through a local ASSE 1070-compliant thermostatic temperature limiting device be provided to all accessible plumbing fixtures. All accessible plumbing fixtures, current and future, should be provided with ASSE 1070 devices.

.2 Michigan Plumbing Code requires secondary roof drains or scuppers "where the roof perimeter construction extends above the roof in such a manner that water will be entrapped if the primary drains allow buildup for any reason".

2.1 The roof parapet is tall and would prevent drainage from the roof should the drains become obstructed. Roof scuppers or secondary overflow drains with an above grade, normally observed discharge location should be implemented to protect roof mounted HVAC equipment.

2.2 The roofing membrane was recently installed by Tremco and is in good condition.

.3 Michigan Building Code requires emergency eyewash & shower stations to be designed to meet ANSI-Z3581-2014 requirements. This includes a provision for serving each wash station with tempered water – defined as between 60°F – 100°F. Currently the penthouse EEWS station is served by cold water only which will not meet these requirements during most of the year. EEWS stations are also required to be located within 55 feet or less of any sources of injury/chemical impact. Refer to overall building code assessment to determine if current eyewash location is acceptable.

.4 Michigan Building Code requires water fountains to be dual-height where ADA requirements must be met. Water fountains observed within the building were all single-height. Recommend updating with dual-height units within ADA upgrades.

EQUIPMENT

.1 The water heater located in the penthouse is in good condition.

.2 The hot water recirculation pump is in the penthouse is in good condition.

.3 The Emergency Eyewash & Shower is in fair condition, although it is only served by cold water.

.4 All plumbing fixtures observed within the building were manually actuated. Fixtures were generally in good condition.

4.1 Lavatories appeared to be 1.5 gpm faucets with thermostatic mixing valves in only one bathroom.

4.2 Water closets appeared to be 3.5gpf flush valve units

4.3 Urinals appeared to be 1.5gpf flush valve units.

.5 The water heater and hot water recirculation pump located in the basement are in good condition.

.6 The booster pumps in the basement are in fair condition, and although they are well maintained are approaching the end of their design life.

6.1 Pumps operate in a constant-volume manner and are sized for 100% redundancy for both the Courts and Jail loads. When the Jail is demolished, they will be very oversized. Recommend replacing the pumps with a variable- flow packaged skid system sized for the Courts only.

.7 The incoming water service dual RPZ's and associated piping are relatively new and are in good condition. The incoming service line and shutoff valve appears to be original and is poor condition. Confirm both fire and domestic water have serviceable RPZs. Access within the mechanical room is extremely limited.

DISTRIBUTION

.1 Domestic piping, insulation, and valves generally appeared to be in fair condition where observable

IMMEDIATE NEEDS

.1 Provide ASSE 1070-rated thermostatic mixing valves at all lavatories for scald protection and code compliance at accessible fixtures. Recommend increasing distribution water temperature in excess of 130°F to minimize risks associated with Legionella.

5-YEAR PLANNING RECOMMENDATIONS

.1 Assess and update emergency eyewash system as needed.
.2 Replace all water closets and urinals with 1.6gpf and 0.125gpf fixtures, respectively.
.3 Update bathrooms fixtures as needed to meet ADA requirements.
.4 Replace original incoming service RPZ.
.5 Provide roof overflow drains or scuppers.
.6 Replace booster pump system with right-sized variable flow skid system after Jail demolition.
.7 Provide dual-height water fountains.
.8 Abate ACMs in mechanical insulation.

.06 MECHANICAL SYSTEMS

SUMMARY

.1 The Courthouse houses a penthouse/roof mounted central boiler and chiller plant which serve the Courthouse, Jail, and County Office building with steam for space heating, and the Jail and Courts with chilled water for space cooling. The original courthouse is served by penthouse air handling units and return air fans serving dual duct terminal boxes on all floors. The addition to the courthouse is served by a mix of packaged rooftop units and air handlers. These units use a mix of heat and chilled water from the central plant, and local DX-cooling. A steam to hot water heat exchanger loop in the penthouse is used to provide radiant perimeter heat on all floors. A steam to hot water heat exchanger loop in the basement provides heat to some of the addition air handlers as well. Main IT spaces are served by dedicated Liebert cooling-only DX units. A glycol-hot water system serves the vehicle ramp to access the basement garage areas.

CODE COMPLIANCE

.1 Michigan Energy Code may require the replacement of all pneumatic controls with DDC controls, specifically regarding upgrades to the boiler plant, chiller plant, or main air handling systems, depending on the scope of capital improvements implemented. This may have cascade impacts including the potential to require demand-control ventilation in some spaces.
.2 Michigan mechanical code requires a manual boiler shutoff outside of the mechanical room.
.3 The lower level access and storage area is also used for facilities vehicle storage. Michigan mechanical code requires an exhaust fan to ventilate vehicle storage areas.
.4 Current energy code requires a combination of air and water-side economizer controls. Should DDC controls be installed, the capability of the existing systems to support economizer operation should be assessed. (air/water)
.5 Current energy code places limitations on fan motor and brake horsepower sizes based on the systems served. The current fans may need to meet these requirements if they ever require replacement. It has not been determined whether they currently exceed horsepower limits.
.6 Michigan Building code requires smoke exhaust and/or pressurization for stairwells and elevator shafts on buildings over 50 feet tall from the lowest point of entry. No building stairwells or elevator shafts currently use smoke exhaust or pressurization systems. A stair and elevator exhaust/pressurization isolation system should be provided to allow a safe corridor of egress out of the building from upper levels.

EQUIPMENT

.1 The boilers are in good condition. They currently operate in an alternating 100% redundant lead-lag manner and the lead boiler rarely operates at greater than 30% fire rate.

.2 The water treatment and main condensate receiver tank systems are in good condition.

.3 The four condensate receivers throughout the building are in fair condition.

.4 The Chillers are in fair condition.

.5 The original air handlers are in poor condition. Although well maintained, the units are original to the building and the coils have reached the end of their useful lives. Some units have already had coil replacements, and the rest are planned to have coil replacements conducted within the next year through the current Capital Upgrades budget.

.6 The floor mounted return air fan enclosures contain exposed belt drives, and unguarded openings down large duct risers from levels below. These conditions increase risk of injury or falls in confined spaces.

.7 Some chase openings with duct serving levels below are not enclosed and a fall risk exists the length of the chases. Additionally, it is possible Asbestos containing material may be present within these chases. It is understood the county has included full abatement of all ACM within the courthouse in future capital upgrade budget projections.

.8 The dual-duct terminal boxes are difficult to access in many places, and facilities staff noted that hot and cold calls are often traced back to mixing dampers at the boxes which have failed due to exceeding their useful life.

.9 The controls throughout the building are pneumatic, and facilities staff noted they are in generally good condition. DDC controllers interface with pneumatics at the air handling units, chillers, boilers, and pumps. The head-end equipment is tied into the County BAS system.

.10 The radiant heating system serving the access ramp is in fair condition.

.11 The steam to hot water heat exchanger in the penthouse serving the perimeter radiant system is in fair condition. It is a constant volume system with 3-way valves at the radiators. Radiant heat is controlled independently of the terminal boxes serving the same spaces.

.12 IT systems are cooled by dedicated Liebert & Rheem units or both self-contained or split-system styles. Systems were generally observed to be in good condition. One Rheem unit in a smaller IT room did not have a condensate drain switch provided to prevent overflow into the IT room it served should the condensate pump fail.

DISTRIBUTION

.1 Duct systems were in fair condition within the mechanical penthouse. Some duct is internally insulated and very dusty. Most ductwork is original to the Building. Facilities staff noted that ductwork on lower level ceilings is in fair conditions, but due to ceiling system scan be extremely difficult to access and maintain.

.2 Piping – Steam, chilled water, heating hot water, condensate, gas, and controls piping and insulation was in fair condition where observed. Facilities staff noted that piping in lower level ceilings is in fair conditions, but due to ceiling system scan be extremely difficult to access and maintain. Staff also noted some piping is not routed as indicated on the drawings.

.3 Utility distribution feed to the Sheriff's Administration through the Jail will need to be refed following Jail demotion.

.4 Upon Jail demolition, the boiler and chiller plants will have a large amount of excess capacity. It is understood the chiller plant will be used to serve the County Office building.

IMMEDIATE NEEDS

.1 Provide condensate pump failure interlock on Rheem AHU serving IT room.

.2 Consider smoke exhaust/pressurization controls for elevator shafts and stairwells. Integrate with fire alarm system.

.3 Enclose duct chases on penthouse. Abate ACM material in duct chases.

.4 Provide fan belt guards and fall protection in return air fan plenum. Provide door interlocks to shut fan down when fan plenum is opened.

5-YEAR PLANNING RECOMMENDATIONS

.1 Provide boiler shutoff controls outside of mechanical room.

.2 Provide exhaust fan operating on VOC sensor in the access ramp/vehicle storage area.

.3 Repurpose central plant energy generation with decommissioning of existing Jail for County Office Building chilled water tie in. It is understood this is the current county plan.

.4 Consider update to variable flow secondary chilled water loop. Replace unit chilled water control valves with two-way DDC valves and associated controls on the pumps.

.5 Provide DDC controls throughout building. Replace all dampers and actuators in terminal dual-duct boxes. Perform pre-and post-construction test and balance of all systems. It is understood current county budget plans call for conversion to a VAV with DDC system in the next 5 years.

.6 Examine, clean, and potentially line (Duct Armor or equivalent) all existing ductwork.

.07 ELECTRICAL SYSTEMS

POWER DISTRIBUTION

.1 The primary service is a new 8320V, three-phase system from the utility. The new 8320V service feeds the primary switchgear in the basement electrical room. The 8320V switchgear feeds the new Square D substation and existing General Electric substation located in the penthouse mechanical room.

.2 The existing General Electric substation transforms the 8320V service to 1000A, 480/277V, 3-phase, 4-wire. The existing substation feeds the panels on each floor (plug-in feeder duct) and motor control centers. The existing General Electric substation is obsolete with no replacement parts readily available. Breakers for substation were tested on 3/31/18 by Northern Electric Testing and two breakers failed the testing. The new Square D substation transforms the 8320V service to 2000A, 480/277V, 3-phase, 4-wire. The substation feeds the chillers and a new Square D distribution panel PPA. Motor control centers located in penthouse and basement are old General Electrical motor control centers and are obsolete.

.3 Each floor consists of two electrical rooms/closets that serve the North and South sides of the building. Each room consists of a 30A fuse that serves a 15 KVA step-down transformer and a 120/208V, 3-phase, 4-wire branch panel, and a 100A fuse that serves a 480/277V panel. The equipment in the electrical rooms are General Electric and obsolete. The electrical closet on the first floor does not have the required 3ft clearance for the electrical equipment. The basement consists of original and new electrical equipment. The original equipment is General Electric and obsolete. The newer electrical equipment is Square D. There were no surge suppression devices observed.

GENERAL PURPOSE ELECTRICAL POWER

.1 The majority of the electrical system is original to the facility. Branch panelboards consist of General Electric panelboards. Panels are obsolete.

.2 Building appeared to have sufficient receptacles installed. Few receptacles within 6ft of water source are not GFCI.

.3 Power cabling is probably the same age as the building and insulation on this cabling is nearing its expected service life. Cabling conditions were not readily accessible to observe.

LIGHTING

.1 Interior light fixtures use T8 fluorescent lamps throughout the building. While the fixtures appear to be in fair condition and well maintained over the years, they are not energy efficient.

.2 Light fixtures in courtrooms are obsolete.

.3 Fixtures in the corridor and new addition have emergency battery ballast. Owner recently added exit signs with emergency heads in courtrooms. Large open offices and other large rooms do not have emergency lighting. Fixtures appear to be in good condition.

.4 There are no exterior egress lighting fixtures located at each of the exterior discharge doors. The Michigan Building Code requires exterior egress lights at each exit discharge door.

.5 Automatic controls are installed throughout building.

.6 Did not observe daylighting controls in rooms with side lighting

EMERGENCY POWER

.1 Courthouse building has two generators. One generator is a 200KW Cummins generator that only serves critical loads. The Automatic Transfer Switch (ATS) that serves this generator is a 400A, Cummins ATS located in the penthouse. The second generator is a 125 KW Cummins generator that serves IT only. The ATS for this generator is a 100A, Cummins ATS located in the basement electrical room. IT loads are also served by an Emerson UPS. The Liebert UPS that previously served the IT equipment is abandoned in place. There were no surge suppression devices observed.

COMMUNICATION

.1 There is a large main distribution frame (MDF) cabinet located in the IT room in the basement. The IT equipment is backup by UPS and generator power.

.2 The owner now uses VOIP handsets for telephone communication. The existing POTs (Plain Old Telephone System) wiring (i.e. 2 pair wiring) and outlets in this building are no longer in use.

.3 Wireless Access Points (WAPS) are installed throughout building.

FIRE ALARM

.1 Fire alarm was recently upgraded (within the last 10 years) to Simplex 4100ES voice system. System is in good condition.

.2 Confirm devices comply with ADA reach, visual, and audible alarm requirements.

IMMEDIATE NEEDS

.1 Replace existing General Electric substation in the Penthouse.

.2 Install GFCI receptacles within 6ft of water source.

.3 Provide exterior egress lights at each exit discharge door.

5-YEAR PLANNING RECOMMENDATIONS

.1 Relocate panels in first floor electrical closets. Electrical equipment requires 3ft clearance.

.2 Power cabling is probably the same age as the building and insulation on this cabling is nearing its expected service life. Cabling conditions were not readily accessible to observe. Recommend inspection of cable insulation. If cabling has lost required insulation, it is recommended to replace cabling.

.3 Install Surge Protection Devices (SPDs) at the main distribution and at panelboards feeding critical electronic loads (i.e. personal computers, IT room equipment, etc.).

.4 Recommend all original General Electric equipment be replaced.

.5 Recommend replacing fluorescent fixtures with LED fixtures.

.6 Recommend replacing lighting in courtrooms with new LED fixtures.

.7 Recommend replacing batteries in emergency wall packs and exit signs.

.8 Recommend adding emergency lighting/night lights in large open office areas.

.9 A central inverter system, with a central battery system should be considered to reduce ongoing maintenance of replacing individual batteries. This would be very cost effective if implemented at the same time as LED fixture upgrade.

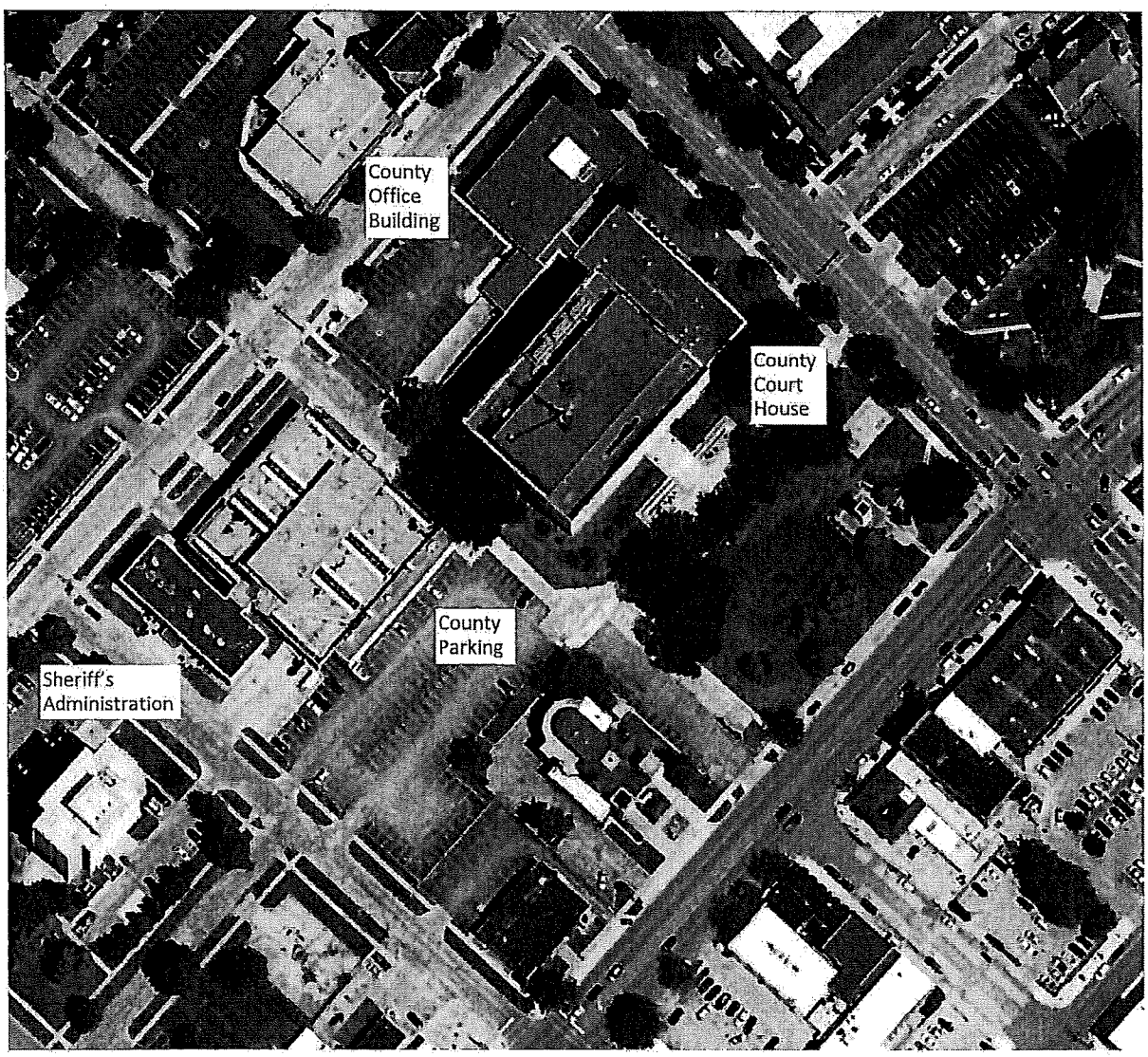
.10 The new energy code requires daylighting controls for energy savings. Daylighting controls are required for any space where the combined input power of all lighting within side lighted areas is greater than 150W. Lighting shall dim with photocontrol. Recommend adding daylighting controls at the same time as the LED fixture replacement. LED fixtures come with standard dimming, unlike, fluorescent fixtures with dimming ballasts.

.11 Recommend verifying emergency fixtures automatically illuminates to an average of 1 foot-candle for a minimum of 90 minutes in interior and exterior stairways and ramps, exit passageways, vestibules, exterior landings for exit doorways, electrical equipment rooms, fire pump rooms and public restrooms with an area greater than 300sf.

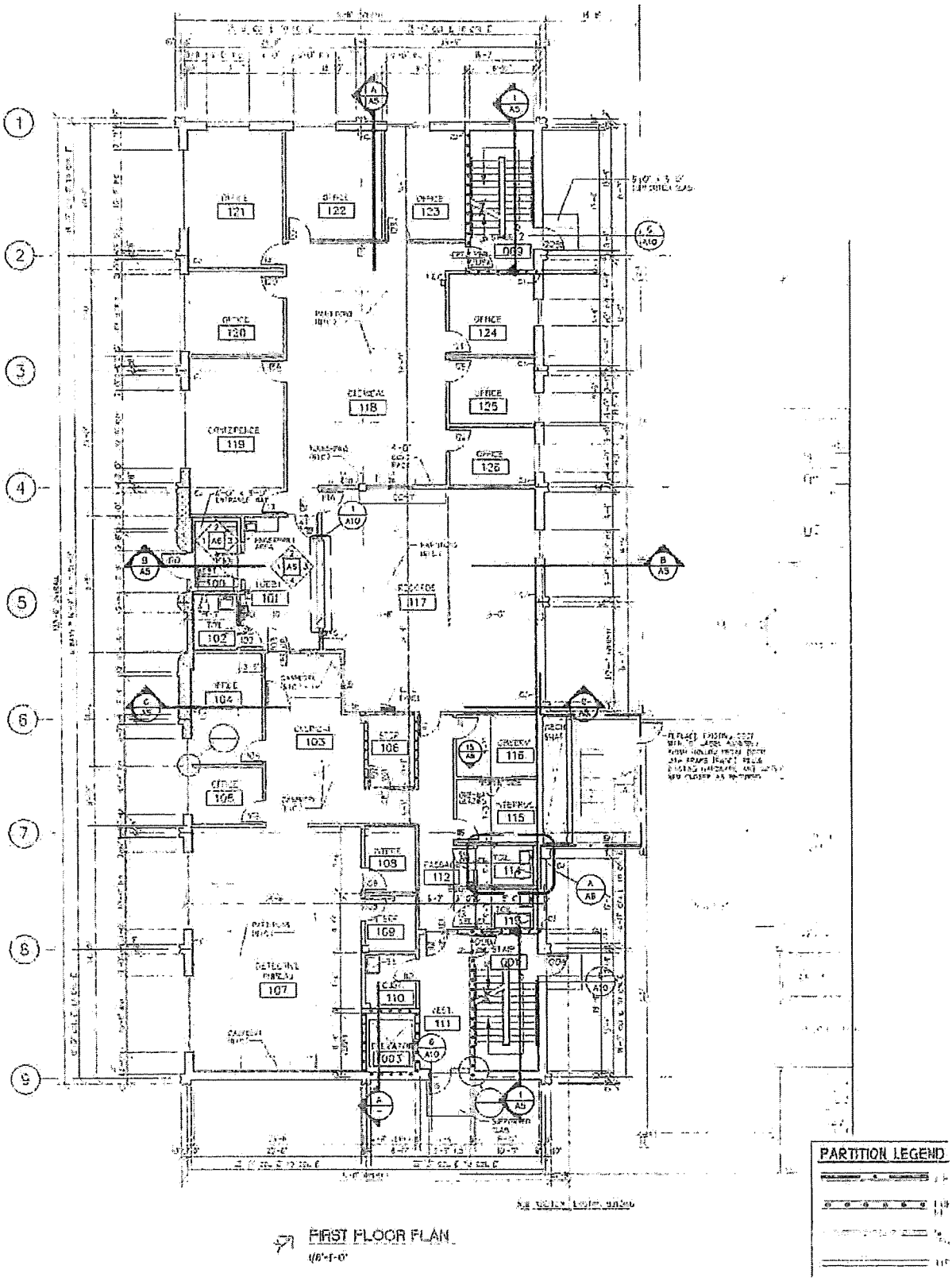
.12 Remove unused telephone wiring and terminal blocks where possible and/or abandoned in place where not readily accessible. Maintain minimal quantity of active POTs lines for centrally monitored equipment such as fire alarm, security, and building management systems.

2.03 SHERIFF'S ADMINISTRATION
618 Cass Street
Saginaw, Michigan 48602
Addition: 1994
Size: 20,000gsf
Floors: B-2

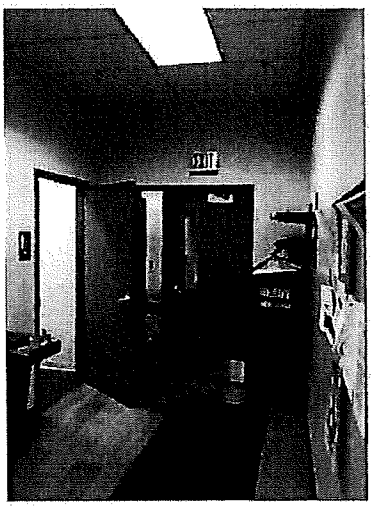
SITE PLAN

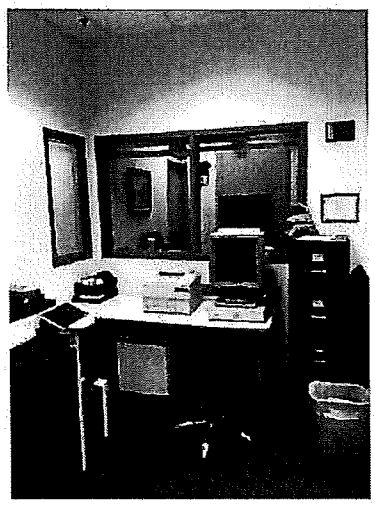


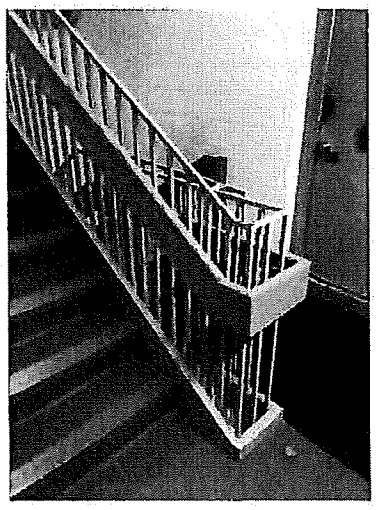
SHERIFF'S ADMINISTRATION
FLOOR PLAN

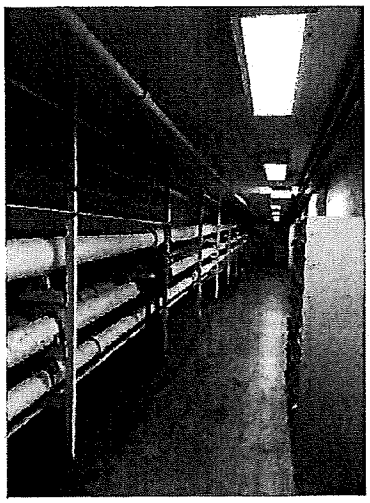


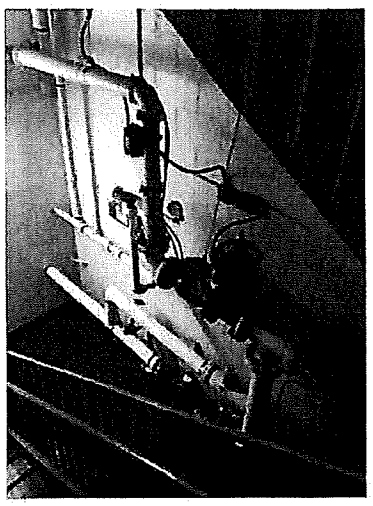
SHERIFF'S ADMINISTRATION
PHOTOS

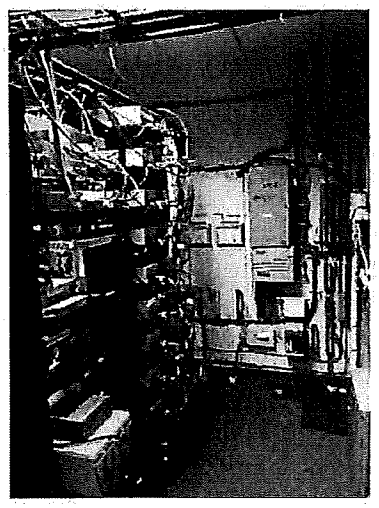












SHERIFF'S ADMINISTRATION
ARCHITECTURAL SYSTEMS

.01 ACCESSIBILITY

SUMMARY

.1 The Sheriff's Administration facility addition was constructed in 1994.

PARKING

.1 The facility has designated accessible parking in the public parking lot east of the facility; the main entrance is accessible at grade.

ACCESSIBLE ROUTES AND RAMPS

.1 Corridors and turning widths in public areas are generally accessible.

.2 The entry lobby transaction window does not have a space with compliant height counters and knee/toe clearance.

.3 The elevator is ADA compliant.

DOOR HARDWARE

.1 Doors are typically provided with accessible, lever type hardware and adequate push/pull clearance.

PLUMBING ELEMENTS

.1 Toilets on the 1st floor do not meet current accessibility guidelines; toilets on the 2nd floor are generally accessible.

COMMUNICATION ELEMENTS

.1 The facility only has space identification signage at toilet rooms; none at stairs or offices.

IMMEDIATE NEEDS

.1 None.

5-YEAR PLANNING

.1 Upgrade 1st floor toilet rooms to be fully ADA compliant.

.2 Upgrade signage to provide adequate space identification and tactile characters.

.02 LIFE SAFETY

SUMMARY

.1 This section identifies issues related to means of egress and fire suppression in the event of a fire or other emergency egress in accordance with the Michigan Building Code and NFPA.

.2 Refer to the Electrical Assessment for comments regarding the fire alarm system and exit signage.

.3 Occupancy Classification: Group B (Office). [Chapter 3]

.4 Construction Type II-B, S: Non-combustible framing. [Table 601]

.5 Allowable Height: 4 stories, 75 feet. [Table 504]

PATH OF EGRESS, STAIRS AND EXITS

.1 Stairs and exits are in compliant locations and sized according to use.

.2 Egress stairs are in fire-rated enclosures per MBC 1019.3.

.3 Egress stairs have compliant guardrails; however, the handrails are not compliant.

DOOR HARDWARE

.1 Doors are typically provided with accessible, lever type hardware.

.2 Exit doors are equipped with panic egress devices.

FIRE PROTECTION

.1 The building is fully sprinklered.

IMMEDIATE NEEDS

.1 None.

5-YEAR PLANNING RECOMMENDATIONS

.1 Upgrade handrails in egress stairs to be a compliant profile.

.03 INTERIOR CONDITIONS

SUMMARY

.1 This section identifies issues related to interior architectural finishes including floors, walls, and ceilings.

FINISHES

.1 Interior partitions include both painted concrete masonry units and gypsum wallboard and are generally in good condition.

.2 Flooring in public areas has recently been upgraded to LVT, offices are typically carpet and is in good condition.

.3 Ceilings are typically 2'x2' suspended acoustic panels that are in good condition.

.4 Toilet room finishes including floors, partitions, and counters are dated.

IMMEDIATE NEEDS

.1 None.

5-YEAR PLANNING RECOMMENDATIONS

.1 Upgrade toilet room finishes including floors, partitions, and counters.

.04 FIRE SUPPRESSION SYSTEMS

SUMMARY

.1 The building is fully sprinkled, with a pre-action dry pipe system serving the 911 center, and an FM-200 clean agent system serving the 911 IT Room.

CODE COMPLIANCE

.1 Current location of the Fire Department Connection as it relates to access and visibility needs to be reviewed for compliance with current codes.

EQUIPMENT

.1 The sprinkler header appears to be in generally good condition.

.2 The Dry Pipe Pre-Action System appears to be in generally good condition.

.3 The Clean Agent system appears to be in generally good condition.

DISTRIBUTION

.1 Facilities staff noted no issues with the condition of the sprinkler piping or heads.

IMMEDIATE NEEDS

.1 N/A

5-YEAR PLANNING

.1 N/A

.05 PLUMBING SYSTEMS

SUMMARY

.1 The building is served by independent incoming water service in the lower level mechanical room. Plumbing systems are limited to serving toilet room fixtures and storm drainage.

CODE COMPLIANCE

.1 Michigan Plumbing Code requires tempered water supplied through a local ASSE 1070-compliant thermostatic temperature limiting device be provided to all accessible plumbing fixtures. All accessible plumbing fixtures, current and future, should be provided with ASSE 1070 devices.

.2 Michigan Plumbing Code requires secondary roof drains or scuppers "where the roof perimeter construction extends above the roof in such a manner that water will be entrapped if the primary drains allow buildup for any reason".

2.1 The roof parapet is several feet tall and would prevent drainage from the roof should the drains become obstructed. Roof scuppers or secondary overflow drains with an above grade, normally observed discharge location should be implemented to protect the large amount of roof mounted HVAC and 911 Communications equipment.

.3 Michigan Plumbing Code requires backflow prevention to be provided at all incoming water utilities. Currently there is no RPZ or double check valve on the incoming domestic cold-water service to the building. A backflow preventer that meets local utility requirements should be provided on the incoming cold-water service.

EQUIPMENT

.1 The gas water heater and recirculation pump located in the lower level mechanical room are in generally good condition.

1.1 Sections of the domestic hot water supply and return piping remain uninsulated. These should be insulated during standard maintenance work.

.2 All plumbing fixtures observed within the building were manually actuated. Fixtures were generally in good condition.

2.1 Lavatories appeared to be 1.5 gpm faucets with no thermostatic mixing valves
2.2 Water closets appeared to be 3.5gpf flush valve units
2.3 Urinals appeared to be 1.5gpf flush valve units.

DISTRIBUTION

.1 Domestic piping, insulation, and valves generally appeared to be in good condition where observable within the lower level mechanical room.

.2 Facilities staff noted no known or ongoing issues with concealed domestic, storm, or sanitary piping systems.

.3 Roof drains are in generally good condition, although secondary roof drains or scuppers are not present.

IMMEDIATE NEEDS

.1 Provide secondary roof drains or scuppers to improve roof drainage. Due to the critical nature of the rooftop equipment on this building, accelerated revision of this condition is recommended.

.2 Provide ASSE 1070-rated thermostatic mixing valves at all lavatories for scald protection and code compliance at accessible fixtures. Recommend increasing distribution water temperature in excess of 130°F to minimize risks associated with Legionella.

.3 Provide a backflow preventer that meets local utility requirements on the incoming cold-water service.

5-YEAR PLANNING

.1 Insulate exposed domestic water piping.

.2 Replace all water closets and urinals with 1.6gpf and 0.125gpf fixtures, respectively.

.3 Update bathrooms as needed to meet ADA requirements.

.06 MECHANICAL SYSTEMS

SUMMARY

.1 The building is ventilated by a combination of single zone furnaces in the basement, and packaged rooftop units ducted to the spaces. All units are DX-cooled and have gas heat. The furnaces in the basement are "twinned" and operate in parallel. All units are constant volume and are designed to provide outside air ventilation. The IT and 911 call center spaces are served by a dedicated Leibert self-contained air conditioning unit and Rheem cooling-only air handler- both with remote condensers mounted to the roof.

CODE COMPLIANCE

.1 Michigan Mechanical Code requires a minimum of 3 feet vertical clearance between outside air intakes and contaminant sources above them. The clearance distance between the furnace combustion vents and the ventilation outside air intake needs to be confirmed to be greater than or equal to 3 feet. If not, a PVC gooseneck extension can be provided on the furnace flue to meet separation requirements.

EQUIPMENT

.1 The basement furnaces and associated condensers appear to be in good condition.

.2 All packaged rooftop units appear to be in good condition.

.3 The indoor packaged Liebert unit appears to be in good condition.

3.1 The Liebert remote condensing unit is heavily corroded and may be approaching the end of its useful life. Facilities staff noted no operational issues. It is understood replacement of the entire Liebert unit is within the 2020 county capital upgrades plan.

.4 The Rheem air handler serving the 911 IT closet has a condensate pump, but no overflow switch or alarm. Recommend the addition of an overflow switch linked to an audible alarm and AHU shutoff to increase IT protection from condensate overflow into the space.

.5 All roof-mounted exhaust fans appear to be in good condition.

.6 Controls for all HVAC units are by local single-zone wall-mounted thermostats. No pneumatics are present within the building, and none of the units are currently communicating with the BAS.

DISTRIBUTION

.1 All forced air supply and return distribution is ducted and concealed within the ceilings and walls.

IMMEDIATE NEEDS

.1 Provide condensate pump overflow switch, alarm, and unit shutoff.

5-YEAR PLANNING

.1 Confirm furnace combustion and outside air intake clearances (3' min.) are met.

.2 Replace Liebert condenser and indoor unit as needed.

.07 ELECTRICAL SYSTEMS

POWER DISTRIBUTION

.1 The primary service is an existing 277/480V, 400A and 125A (for emergency), three-phase, 4-wire system served from the existing Jail. The Jail will soon be demolished and the existing services will need to be refed from a new utility service and a new transfer switch (this work is part of current jail project). The existing distribution panels are Square D I-Line panelboards. The distribution transforms the 480V service into 120/208V, 3-phase, 4-wire using two transformers. The transformers are Square D, 150 KVA and 112.5 KVA, insulated transformers. The 120/208V panels are Square D, NQOD panelboards. There was no surge protection devices observed on any normal distribution equipment.

GENERAL PURPOSE ELECTRICAL POWER

.1 A majority of the electrical system is original to the facility. Branch panelboards consist of Square D panelboards. Panels are in good condition.

.2 Panelboard in copy room does not have the required NEC working clearance. Copy machine is interfering with panelboard clearance.

EMERGENCY POWER

.1 This building is served by a 250KW Cummins generator and a Liebert UPS EXM unit. The ups provides backup power for the 911 call center. The ups has a redundant feed of 15KW on each side of the unit. The primary 125A, 277/480V feed is protected by a surge protection device. This is the only surge protection observed in the building.

.2 Lighting protection nodes were observed on the roof of this building.

LIGHTING

.1 The interior lighting fixtures use T8 fluorescent lamps throughout the building. While the fixtures appear to be in fair condition and well maintained over the years, they are not energy efficient.

.2 Fixtures have emergency battery ballast. There are also emergency wall packs in buildings. Fixtures appear to be in good condition. However, the battery packs located in each fixture are typically rated to last 5-7 years and re likely nearing their service life.

.3 There are no exterior egress lighting fixtures located at each of the exterior discharge doors. The Michigan Building Code now requires exterior egress lights at each exit discharge door.

.4 Automatic controls are installed throughout building.

.5 Did not observe daylighting controls in rooms with side lighting.

COMMUNICATION

.1 There is a main distribution frame (MDF) located in the IT room in 911 call center. The cabinet is backed up by ups power.

.2 There was another small IDF cabinet that was observed as a wall mounted cabinet.

.3 The owner now uses VOIP handsets for telephone communication. The existing POTs (Plain Old Telephone System) wiring (i.e. 2 pair wiring) and outlets in this building are no longer in use.

.4 Wireless Access Points (WAPS) are installed throughout building.

FIRE ALARM

.1 Fire alarm ties in to Jail fire alarm system; upgrade will be required when the Jail is demolished.

.3 Confirm devices comply with ADA reach, visual, and audible alarm requirements; missing pull stations at exit doors.

IMMEDIATE NEEDS

.1 Provide new fire alarm system with pull stations at exit doors per current codes.

.2 Provide exterior egress lights at each exit discharge door.

5-YEAR PLANNING RECOMMENDATIONS

.1 Recommend that SPDs be installed at the main distribution and at panelboards feeding sensitive electronic loads (i.e. personal computers, data room equipment, etc.).

.2 Relocate any objects interfering with NEC required clearance of 3ft for electrical equipment.

.3 Cabling conditions were not readily accessible to observe. Recommend inspection of cable insulation. If cabling has lost required insultation, it is recommended to replace cabling.

.4 Recommend replacing fluorescent fixtures with LED fixtures.

.5 Recommend replacing batteries in emergency wall packs and exit signs.

.6 A central inverter system, with a central battery system should be considered to reduce ongoing maintenance of replacing individual batteries. This would be very cost effective if implemented at the same time as LED fixture upgrade.

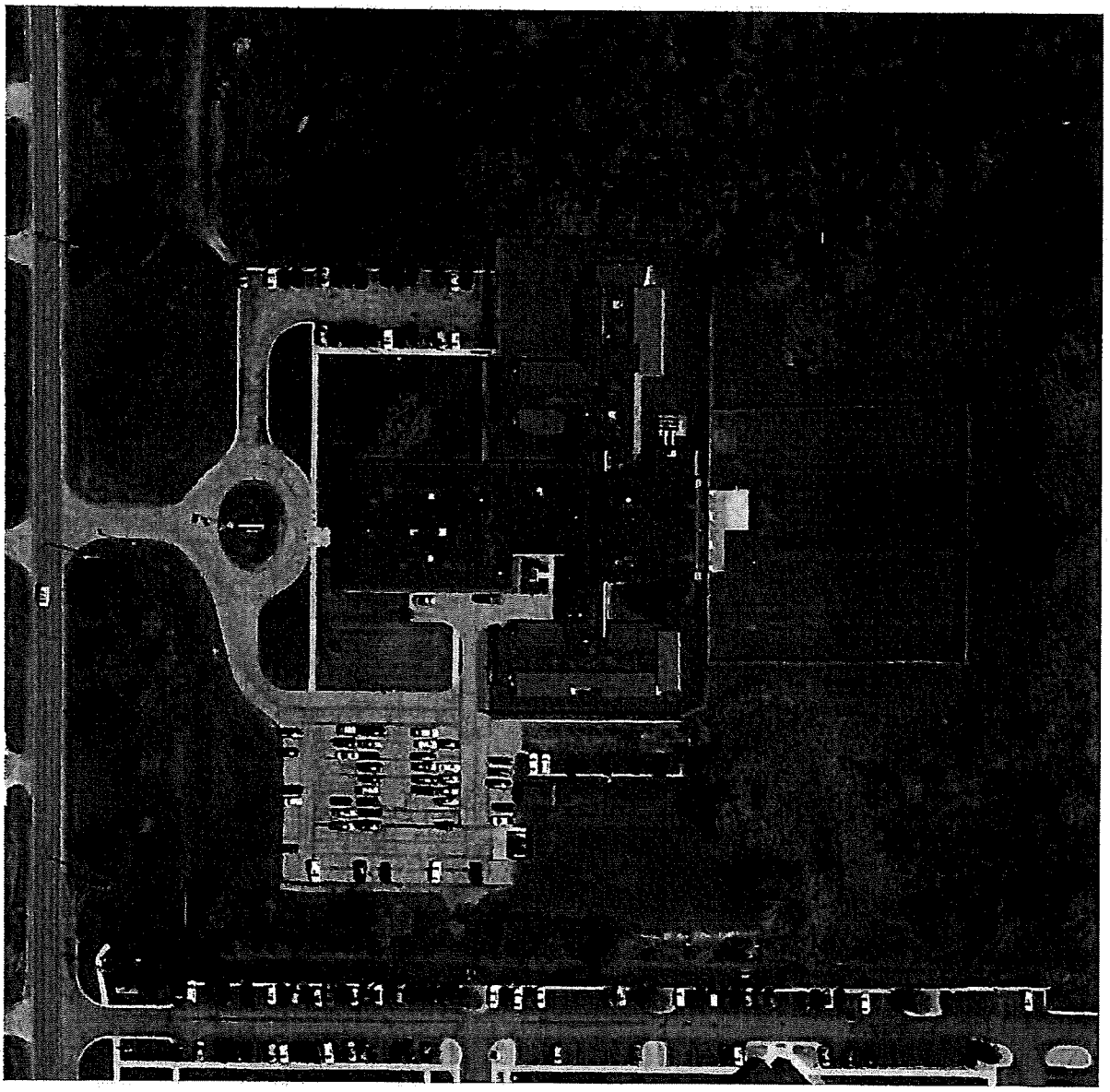
.7 The new energy code requires daylighting controls for energy savings. Daylighting controls are required for any space where the combined input power of all lighting within side lighted areas is greater than 150W. Lighting shall dim with photocontrol. Recommend adding daylighting controls at the same time as the LED fixture replacement. LED fixtures come with standard dimming, unlike, fluorescent fixtures with dimming ballasts.

.8 Recommend verifying emergency fixtures automatically illuminates to an average of 1 foot-candle for a minimum of 90 minutes in interior and exterior stairways and ramps, exit passageways, vestibules, exterior landings for exit doorways, electrical equipment rooms, fire pump rooms and public restrooms with an area greater than 300sf.

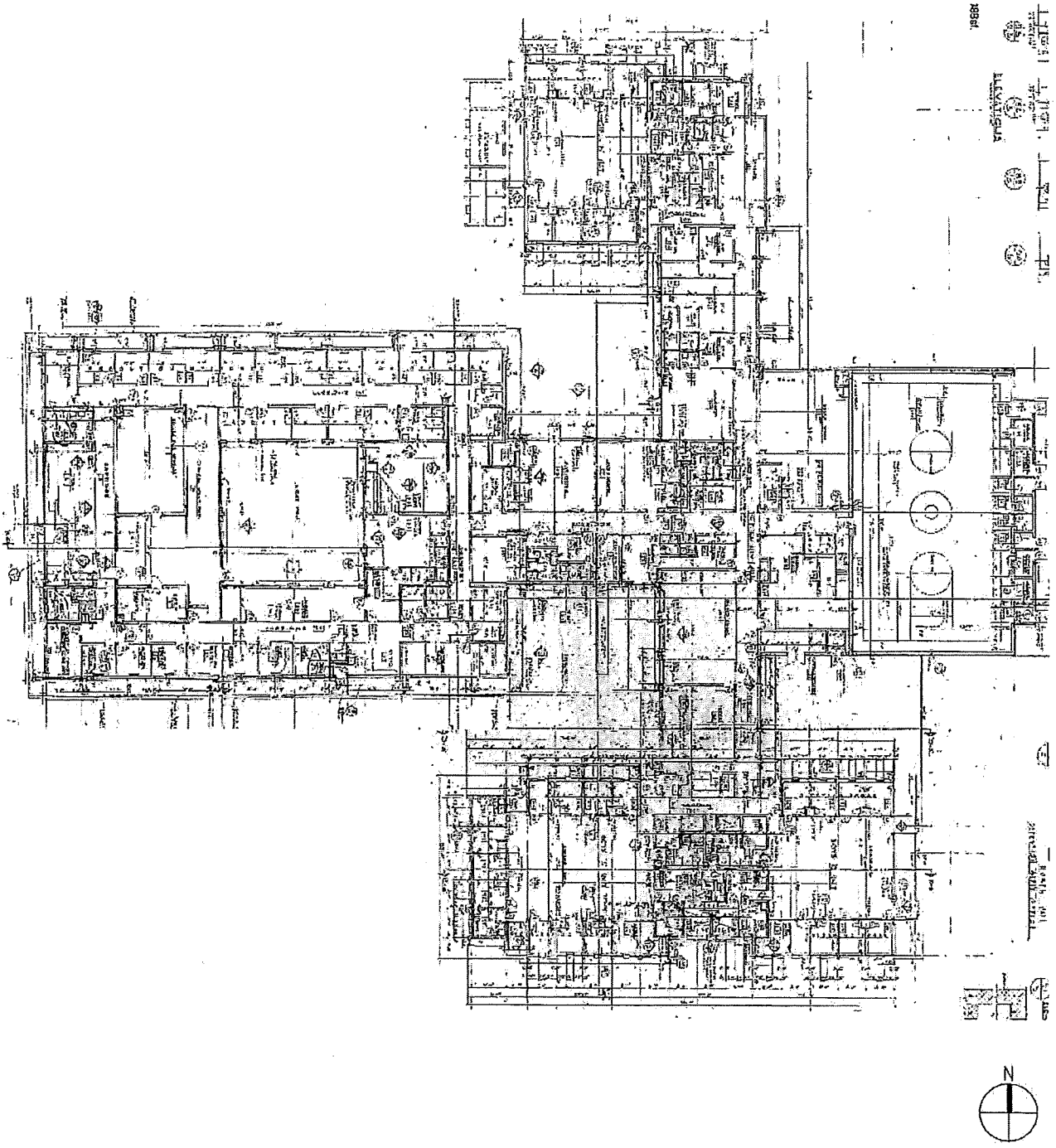
.9 Remove unused telephone wiring and terminal blocks where possible and/or abandoned in place where not readily accessible. Maintain minimal quantity of active POTs lines for centrally monitored equipment such as fire alarm, security, and building management systems.

2.04 JUVENILE DETENTION CENTER
3360 Hospital Road
Saginaw, Michigan 48603
Year: 1967
Size: 50,000gsf
Floors: 1

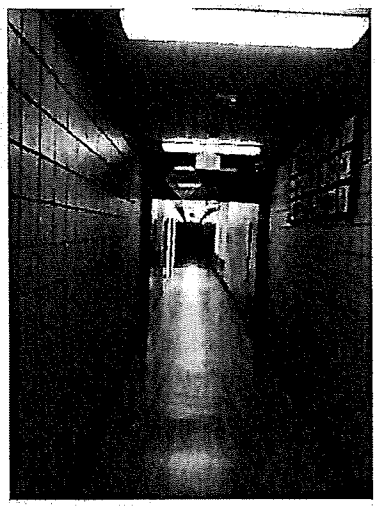
SITE PLAN

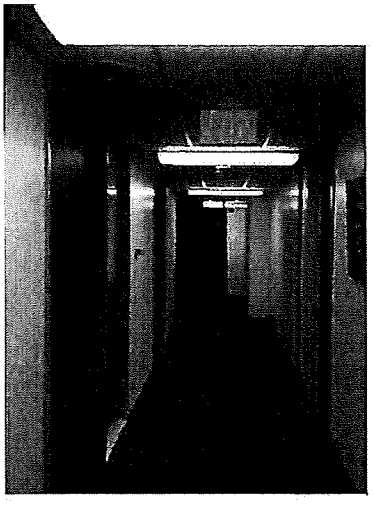


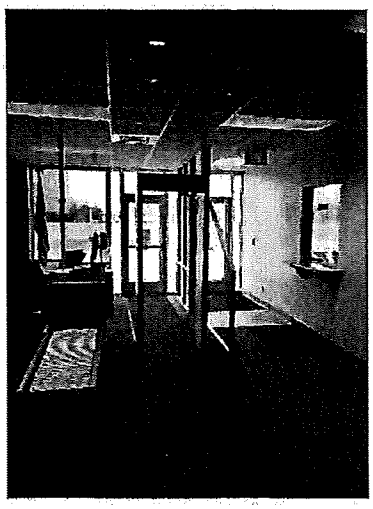
JUVENILE DETENTION CENTER
FLOOR PLAN

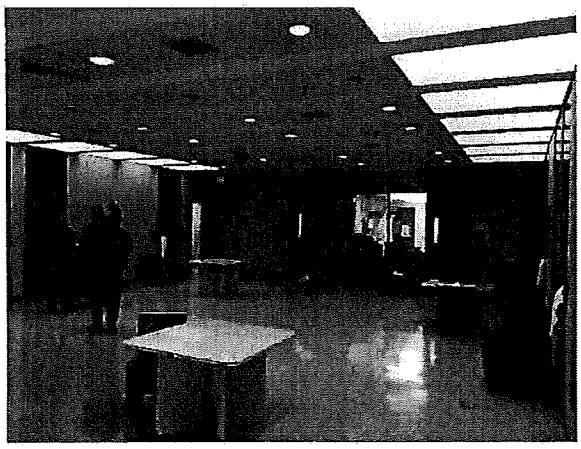


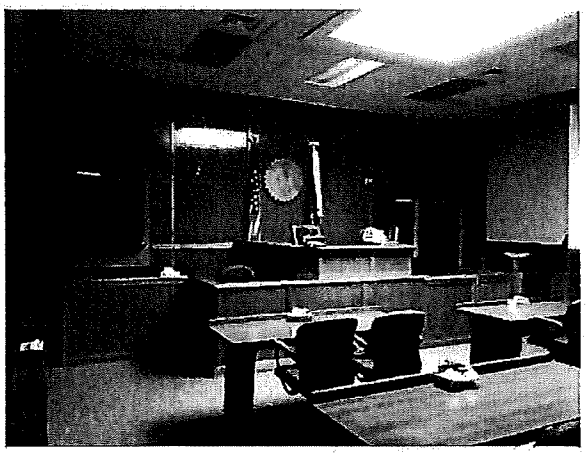
JUVENILE DETENTION CENTER
PHOTOS











JUVENILE DETENTION CENTER
ARCHITECTURAL SYSTEMS

.01 ACCESSIBILITY

SUMMARY

.1 The facility was constructed prior to enactment of accessible design standards.

PARKING

.1 The facility has a grade-level entrance from the parking area south of the facility. The facility does not have a dedicated accessible entrance or parking.

ACCESSIBLE ROUTES AND RAMPS

.1 Corridors and turning widths are generally accessible.

.2 The main entry transaction window is not an accessible counter height.

.3 Courtrooms do not have assisted listening devices and the benches, witness stands, and jury boxes are not accessible.

.4 The facility does not have any designated accessible cells.

DOOR HARDWARE

.1 Doors hardware is a combination of accessible, lever type hardware and non-accessible cylindrical type devices. The staff entry does not have a power assisted door operator.

PLUMBING ELEMENTS

.1 Staff and secure toilet facilities appear to be original and do not meet current accessibility guidelines.

COMMUNICATION ELEMENTS

.1 Public directional and space identification signage is limited and does not have tactile characters or compliant mounting heights.

IMMEDIATE NEEDS

.1 None.

5-YEAR PLANNING

.1 Upgrade non-accessible door hardware and provide ADA operator at the main entrance.

.2 Upgrade toilet facilities to be fully ADA compliant.

.3 Upgrade signage to provide adequate space identification and tactile characters.

.4 Upgrade Courtrooms to be fully ADA compliant.

.02 LIFE SAFETY

SUMMARY

.1 This section identifies issues related to means of egress and fire suppression in the event of a fire or other emergency egress in accordance with the Michigan Building Code and NFPA.

.2 Refer to the Electrical Assessment for comments regarding the fire alarm system and exit signage.

.3 Occupancy Classification: Group B (Office), Group I-3 (Institutional). [Chapter 3]

.4 Construction Type II-B, S: Non-combustible framing. [Table 601]

.5 Allowable Height: 4 stories, 75 feet. [Table 504]

PATH OF EGRESS, STAIRS AND EXITS

.1 The facility has an adequate number and location of exits.

DOOR HARDWARE

.1 The main entrance is equipped with panic egress devices.

.2 Detention door hardware is mechanically keyed; there is no electronic access control. The keying system is original to the facility and difficult to service; replacement parts are limited.

FIRE PROTECTION

.1 The building is fully sprinklered.

IMMEDIATE NEEDS

.1 None.

5-YEAR PLANNING RECOMMENDATIONS

.1 Install a modern, electronically controlled access system for detention occupancies.

.03 INTERIOR CONDITIONS

FINISHES

.1 Partitions in detention areas are painted concrete masonry units; partitions in court and office areas are gypsum wallboard.

.2 The main entry floor is carpet, corridors are newly installed LVT in good condition. Courtroom carpeting is worn and dated. Floors in detention areas are resilient tile that are worn and dated.

.3 Ceilings in court and office areas are 2'x4' suspended acoustic panels that are in fair condition. Ceilings in the day rooms are acoustic tile that is worn, dated, and not detention grade.

IMMEDIATE NEEDS

.1 None.

5-YEAR PLANNING RECOMMENDATIONS

.1 Upgrade all finishes in the courtrooms in coordination with accessibility and lighting upgrades.

.2 Upgrade all finishes in Juvenile Detention totaling approx. 30,000sf in coordination with accessibility and lighting upgrades. Goal would be to promote a more 'normalized' residential environment for juveniles.

.04 FIRE SUPPRESSION SYSTEMS

SUMMARY

.1 The building is fully sprinkled. The kitchen area has a wet agent dedicated system for grease fires.

EQUIPMENT

.1 The sprinkler header appears to be in good condition

.2 The wet agent system in the kitchen appears in fair condition.

DISTRIBUTION

.1 Distribution piping is in good condition where observed. Facilities staff noted no issues with the condition of the sprinkler piping or heads.

IMMEDIATE NEEDS

.1 None.

5-YEAR PLANNING

.1 Replace exposed sprinkler heads in detention areas with concealed heads.

.05 PLUMBING SYSTEMS

SUMMARY

.1 The building domestic cold-water service is provided by a single RPZ incoming service. Gas fired storage-type hot water heaters on the basement serve domestic hot water needs with associated recirculation lines and pumps. Roof drains and internal sanitary lines discharge into the County Combined Sewage Outflow system.

CODE COMPLIANCE

.1 Michigan Plumbing Code requires tempered water supplied through a local ASSE 1070-compliant thermostatic temperature limiting device be provided to all accessible plumbing fixtures. All accessible plumbing fixtures, current and future, should be provided with ASSE 1070 devices.

.2 Michigan Plumbing Code requires secondary roof drains or scuppers "where the roof perimeter construction extends above the roof in such a manner that water will be entrapped if the primary drains allow buildup for any reason".

2.1 The roof parapet is tall at the clerestory windows and in some areas the combindation of clerestory locations and roof slopes may prevent drainage from areas of the roof should the drains become obstructed. Roof scuppers or secondary overflow drains with an above grade, normally observed discharge location should be implemented in these areas of the roof to protect roof-mounted HVAC equipment.

.3 Michigan code requires water fountains to be dual-height where ADA requirements must be met. Water fountains observed within the building were all single-height. Recommend updating with dual-height units within ADA upgrades.

EQUIPMENT

.1 The water heaters located in the basement are in good condition.

.2 The hot water recirculation pump is in the basement is in good condition.

.3 All plumbing fixtures observed within the building were manually actuated. Fixtures were generally in good condition.

3.1 Lavatories appeared to be 1.5 gpm.

3.2 Water closets appeared to be 3.5gpf flush valve units

3.3 Urinals appeared to be 1.5gpf flush valve units.

3.4 Correctional fixtures are provided in detention areas and individual cells. The fixtures do not have pinned cleanouts, or remote water control systems. Water service shut-downs are accomplished by entering the detention day rooms, opening an access panel, and manually shutting the supply valves to a fixture off. Facilities staff noted no ongoing behavioral issues with juveniles that regularly require water shut-off or sanitary cleanout use.

.4 The incoming water service RPZ and associated piping appears to be in poor condition. Access within the water room is from the exterior of the building only.

.5 A grease interceptor is in the floor of the kitchen storage area. Facilities staff noted the unit is only cleaned upon backup, and not a regular schedule.

.6 The building sump pumps appeared to be in fair condition.

DISTRIBUTION

.1 Domestic piping, insulation, and valves generally appeared to be in fair condition where observable

.2 Piping within the chases in correctional areas was in poorer condition than in exposed mechanical areas. This piping was also not insulated.

IMMEDIATE NEEDS

.1 Provide ASSE 1070-rated thermostatic mixing valves at all lavatories for scald protection and code compliance at accessible fixtures. Recommend increasing distribution water temperature in excess of 130°F to minimize risks associated with Legionella.

.2 Implement a scheduled maintenance plan to clean the kitchen grease interceptor prior to backups.

5-YEAR PLANNING

.1 Replace all water closets and urinals with 1.6gpf and 0.125gpf fixtures, respectively.

.2 Update bathrooms fixtures as needed to meet ADA requirements.

.3 Replace original incoming service RPZ.

.4 Provide roof overflow drains or scuppers in areas where needed.

.5 Provide dual-height water fountains.

.6 Consider the addition of pinned cleanouts to detention fixtures, and a domestic water remote shutoff control system at either the pod or sleeping room level.

.06 MECHANICAL SYSTEMS

SUMMARY

.1 A combination of packaged gas-fired DX-cooled rooftop units and central dual-deck AHU's in the penthouse serve the Juvenile Detention building. Central heating and cooling for non-packaged equipment is provided by a constant volume primary-only chilled water loop, and a constant volume primary-secondary heating water loop. The kitchen has a dedicated gas-fired makeup air unit and grease exhaust systems.

CODE COMPLIANCE

.1 Michigan mechanical code requires a manual boiler shutoff outside of the mechanical room. A code consultant should be consulted to determine what an appropriate location for a remote shutoff location outside of the basement mechanical area would be.

.2 Michigan mechanical code requires 0.75 cfm/sf of exhaust ventilation be provided to all detention sleeping rooms that contain a plumbing fixture. Currently, all air serving detention areas is returned to the air handling units. A separate exhaust airstream with associated makeup air is recommended for all detention sleeping rooms with plumbing fixtures in them.

.3 Michigan mechanical code requires smoke exhaust and associated smoke dampers be provided in I-3 occupancies. No dedicated smoke control systems are currently present in I-3 rated areas.

.4 It was unclear whether the grease hood in the kitchen is properly designed for the current cooking equipment. A kitchen consultant or the AHJ should assess the current cooking equipment compared to the installed exhaust and hood system.

EQUIPMENT

.1 The chiller and associated piping is in fair condition; however, the chiller operates on R-22 which is scheduled for 2020 phaseout.

.2 The chilled water pumps are in fair condition, and although they have been well maintained are approaching the end of their design life.

.3 The heating water plant is less than 10 years old and all boilers and pumps are in good condition.

.4 The dual-deck indoor air handling units are original to the building and are in fair condition. The common return air fan is slated for immediate replacement in conjunction with the conversion from underground to rooftop return ductwork.

.5 The packaged rooftop equipment ranges for good to poor condition primarily based on age and exposure to weather conditions.

.6 The kitchen exhaust fans are in good condition.

.7 Controls are a mix of DDC and pneumatics and are in fair condition. The controls air compressor is in good condition.

DISTRIBUTION

.1 Chilled water piping and insulation in the mechanical mezzanine is in poor condition.

.2 Heating water piping and insulation is in good condition

.3 Supply ductwork where observed able is in fair condition. Facilities staff noted no general issues with the ductwork or terminal boxes.

.4 The underfloor return ductwork has failed across the site and is in the process of being replaced with rooftop and ceiling mounted return ductwork, and a new return air fan for the mezzanine AHU's.

.5 Rooftop gas piping is over 20 years old and is in poor condition due to exposure.

IMMEDIATE NEEDS

.1 Provide dedicated smoke evacuation fans and associated controls/communication with fire alarm and BAS on detention pods. Update building HVAC controls as needed to integrate.

.2 Assess grease hood/cooking equipment pairing. Replace/re-size as needed.

5-YEAR PLANNING RECOMMENDATIONS

.1 Consider the addition of a remote boiler shutoff button for the basement mechanical room systems.

.2 Replace packaged rooftop and dual deck indoor AHU's serving Detention areas with VAV rooftop units and hot water reheat terminal boxes designed for code-required exhaust airflows in sleeping rooms with plumbing fixtures. Update other areas served by the indoor AHU's at the same time to single duct VAV. The rooftop return ductwork currently planned to be installed may or may not be salvageable as part of this update.

.3 Replace chilled water piping, pumps, and chiller.

.4 Replace rooftop gas piping in-kind. Consider epoxy coating for long term exposure durability.

.5 Convert building to integrated DDC control.

.07 ELECTRICAL SYSTEMS

POWER DISTRIBUTION

.1 The primary service is an existing 277/480V, 1200A, three-phase, 4-wire system from the utility. The service entrance distribution panel is a Square D I-Line panelboard located in the electrical room that opens to the outside. This room also houses the 400A automatic transfer switch. The distribution panel serves distribution panels DP1, LPA, the chiller and the ATS. Distribution panel DP1 serves a transformer that transforms the 277/480V power into 120/208V, 3-phase, 4-wire. Distribution panel DP1 is a Square D panel. The 120/208V distribution panel is an old General Electric distribution panel that is obsolete. The transformer is a 112.5 KVA General Electric transformer that is obsolete. Panel LPA serves lighting loads. Panel LPA is a General Electric panel and is obsolete.

GENERAL PURPOSE ELECTRICAL POWER

.1 Electrical system consists of newer Square D and Cutler-Hammer panelboards, and original General Electric panelboards. Square D and Cutler-Hammer panelboards are in good condition. General Electric panelboards are in good condition but obsolete.

EMERGENCY POWER

.1 This building is served by a 200KW Cummins generator. The generator provides power for essential loads and security. The transfer switch is a 400A Cummins automatic transfer switch. The 400A emergency feed serves a motor control center (MCC) in the mechanical penthouse. The MCC is Square D and serves panels and mechanical equipment loads. There was no surge protection observed.

LIGHTING

.1 The interior lighting fixtures use T8 fluorescent lamps throughout the building. While the fixtures appear to be in fair condition and well maintained over the years, they are not energy efficient.

.2 Fixtures have emergency battery ballast. Fixtures appear to be in good condition. However, the battery packs located in each fixture are typically rated to last 5-7 years and likely nearing their service life.

.3 There are no exterior egress lighting fixtures located at each of the exterior discharge doors. The Michigan Building Code now requires exterior egress lights at each exit discharge door.

.4 Automatic controls are installed throughout building.

.5 Lighting in Dayrooms and cells seem low.

.6 A few covers for light fixtures in day rooms are missing.

.7 Did not observe daylighting control in rooms with side lighting or skylights.

COMMUNICATION

.1 There is a main distribution frame (MDF) located in the IT room in the courts area.

.2 IT room was warm; there was no cooling observed in this space.

.3 The owner now uses VOIP handsets for telephone communication. The existing POTs (Plain Old Telephone System) wiring (i.e. 2 pair wiring) and outlets in this building are no longer in use.

.4 Wireless Access Points (WAPS) are installed throughout building.

FIRE ALARM

.1 Fire alarm was recently upgraded (within the last 10 years) to Simplex 4100ES voice system. System is in good condition. Remove abandoned smoke zone panel located in basement mechanical room.

.2 Confirm devices comply with ADA reach, visual, and audible alarm requirements.

IMMEDIATE NEEDS

.1 Provide exterior egress lights at each exit discharge door.

5-YEAR PLANNING RECOMMENDATIONS

.1 Provide SPDs at the main distribution and at panelboards feeding sensitive electronic loads (i.e. personal computers, IT room equipment, etc.).

.2 Verify desks in Sleeping and Day Rooms have a minimum of 20 foot-candles; upgrade as required.

.2 Remove abandoned smoke zone equipment.

.3 Replace outdated General Electric panelboards.

.4 Upgrade fluorescent and HID fixtures with LED throughout facility.

.5 Replace batteries in emergency wall packs and exit signs.

.6 A central inverter system, with a central battery system should be considered to reduce ongoing maintenance of replacing individual batteries. This would be very cost effective if implemented at the same time as LED fixture upgrade.

.7 The new energy code requires daylighting controls for energy savings. Daylighting controls are required for any space where the combined input power of all lighting within side lighted and skylight areas is greater than 150W. Lighting shall dim with photocontrol. Recommend adding daylighting at the same time as the LED fixture replacement. LED fixtures come with standard dimming, unlike, fluorescent fixtures with dimming ballasts.

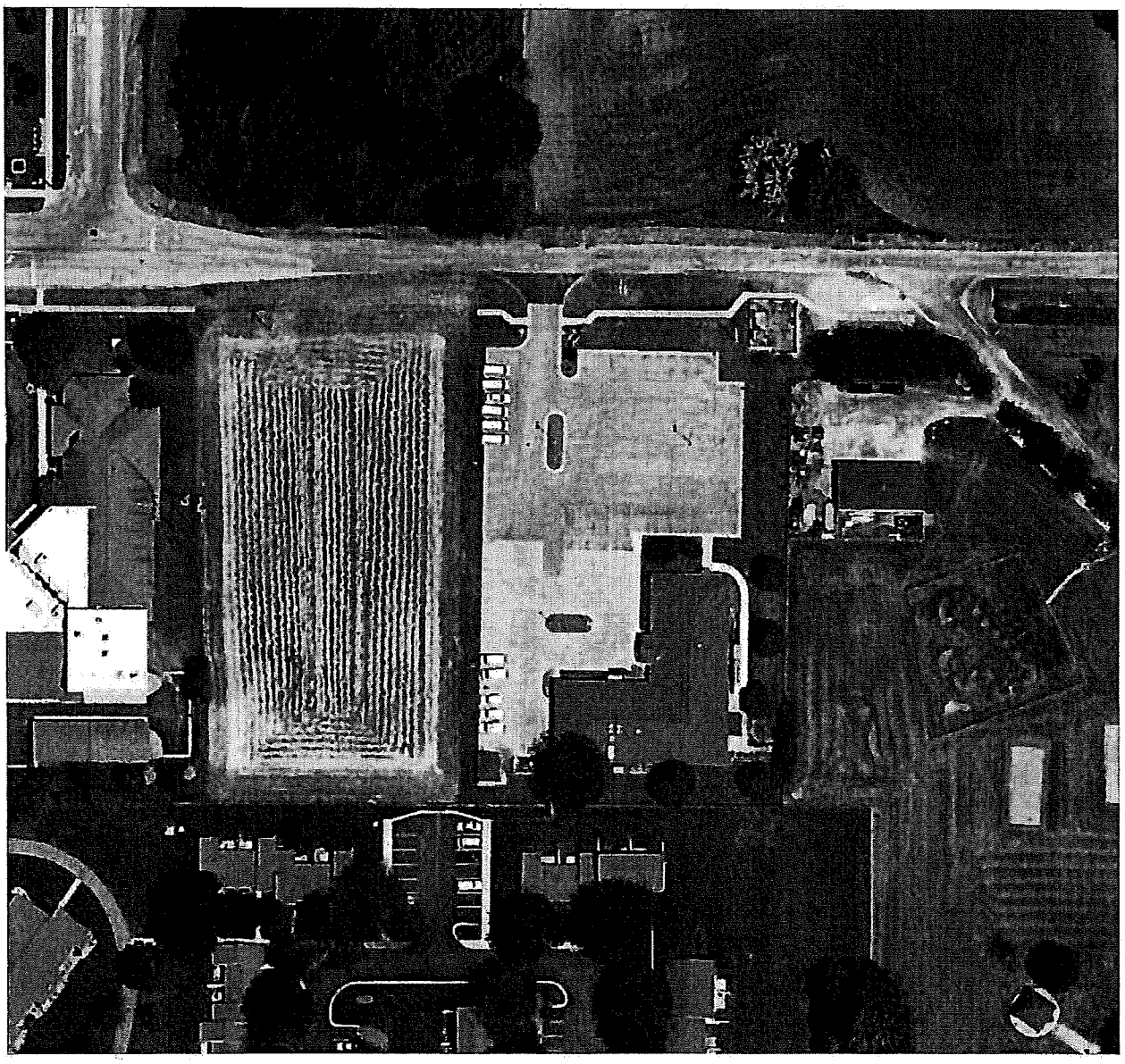
.8 Verify emergency fixtures automatically illuminates to an average of 1 foot-candle for a minimum of 90 minutes in interior and exterior stairways and ramps, exit passageways, vestibules, exterior landings for exit doorways, electrical equipment rooms, fire pump rooms and public restrooms with an area greater than 300 sq. ft.

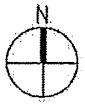
.9 Remove unused telephone wiring and terminal blocks where possible and/or abandoned in place where not readily accessible. Maintain minimal quantity of active POTs lines for centrally monitored equipment such as fire alarm, security, and building management systems.

.10 Add cooling to IT room.

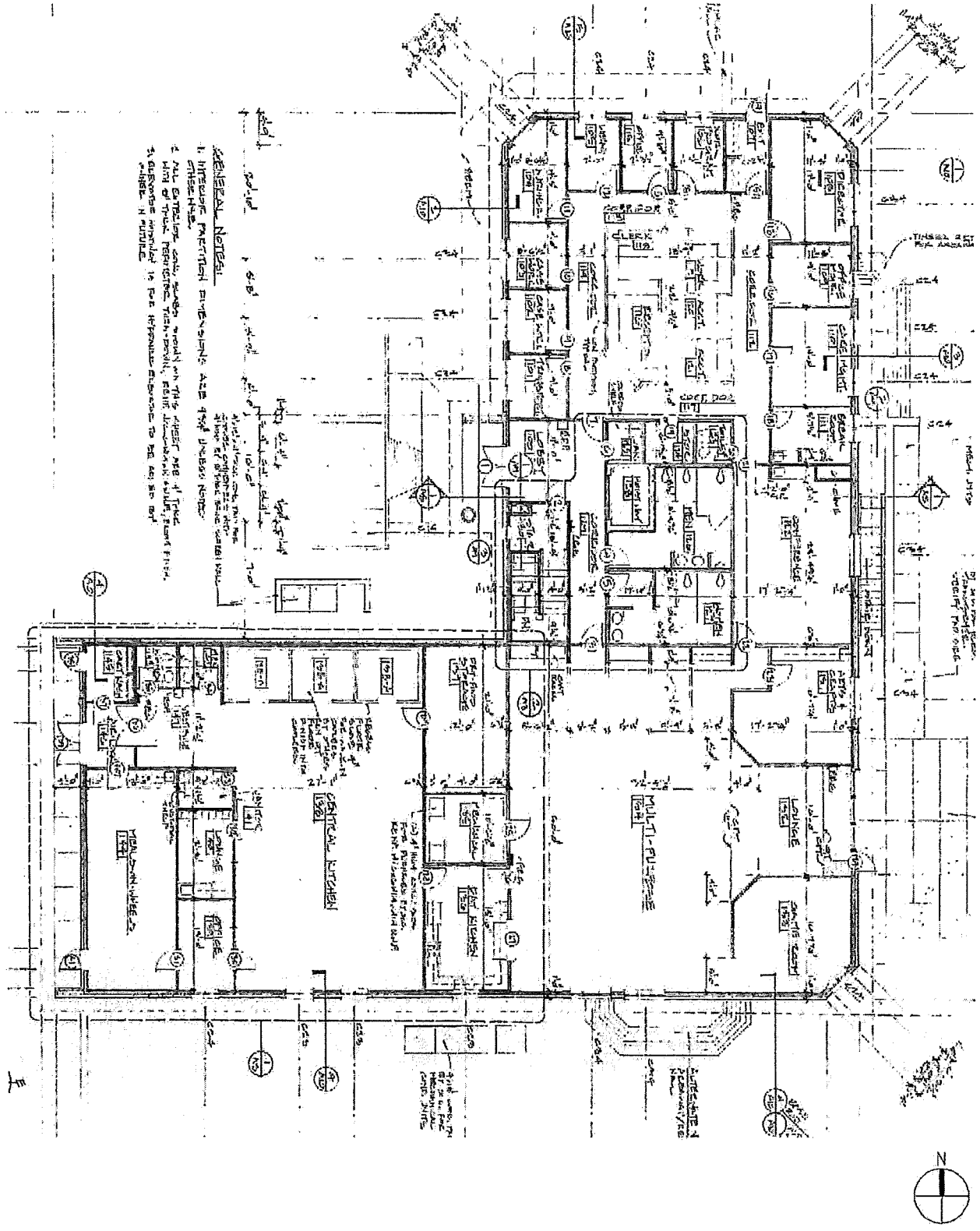
2.04 COMMISSION ON AGING
2355 Schust Road
Saginaw, Michigan 48603
Year: 1994
Size: 13,800gsf
Floors: B-1

SITE PLAN

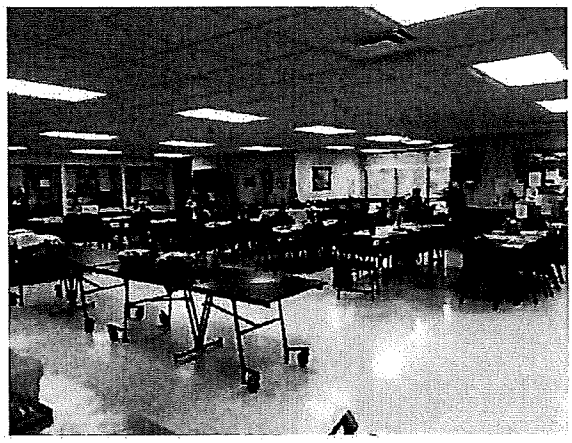


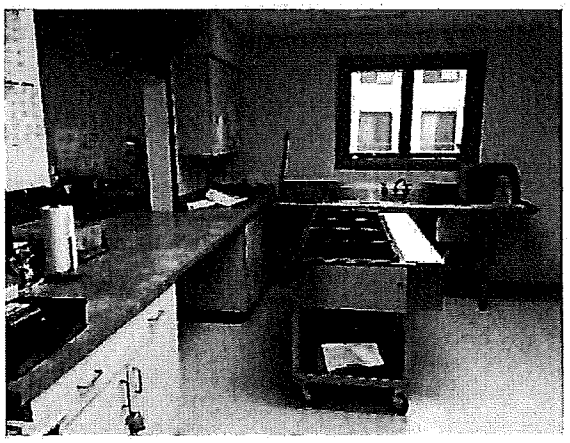


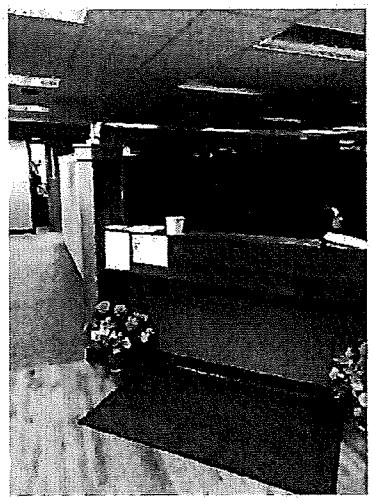
COMMISSION ON AGING
FLOOR PLAN

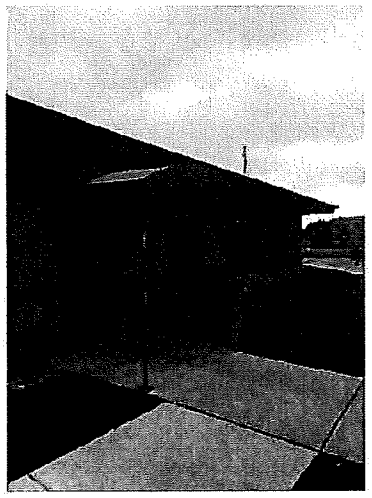


COMMISSION ON AGING
PHOTOS









COMMISSION ON AGING
ARCHITECTURAL SYSTEMS

.01 ACCESSIBILITY

SUMMARY

.1 The Commission on Aging facility addition was constructed in 1994.

PARKING

.1 The facility has designated accessible parking; the main entrance is accessible at grade.

ACCESSIBLE ROUTES AND RAMPS

.1 Corridors and turning widths in public areas are generally accessible.

.2 The service counter adjacent to the lobby is not a compliant height.

.3 The kitchen service counter adjacent to the community room is not an accessible height.

.4 The elevator is ADA compliant.

DOOR HARDWARE

.1 Doors are typically provided with accessible, lever type hardware and adequate push/pull clearance.

.2 The main entrance has a powered, sliding ADA door operator.

PLUMBING ELEMENTS

.1 Public toilets on both levels are generally accessible, staff toilets do not meet ADA guidelines.

COMMUNICATION ELEMENTS

.1 The facility has limited space identification signage at toilet rooms; none at stairs or offices.

IMMEDIATE NEEDS

.1 None.

5-YEAR PLANNING

.1 Upgrade staff toilet rooms to be fully ADA compliant.

.2 Upgrade signage to provide adequate space identification and tactile characters.

.3 Upgrade service counters to be fully accessible.

.4 Replace ADA toilets.

.02 LIFE SAFETY

SUMMARY

.1 This section identifies issues related to means of egress and fire suppression in the event of a fire or other emergency egress in accordance with the Michigan Building Code and NFPA.

.2 Refer to the Electrical Assessment for comments regarding the fire alarm system and exit signage.

.3 Occupancy Classification: Group B (Office), Group A (Assembly). [Chapter 3]

.4 Construction Type V-B, S: Any framing. [Table 601]

.5 Allowable Height: 3 stories, 60 feet. [Table 504]

PATH OF EGRESS, STAIRS AND EXITS

.1 Stairs and exits are in compliant locations and sized according to use.

.2 Stair handrails are compliant.

DOOR HARDWARE

.1 Doors are typically provided with accessible, lever type hardware.

.2 Exit doors are equipped with panic egress devices.

FIRE SUPPRESSION

.1 The facility is fully sprinklered.

IMMEDIATE NEEDS

.1 None.

5-YEAR PLANNING RECOMMENDATIONS

.1 None.

.03 INTERIOR CONDITIONS

FINISHES

.1 Partitions are painted concrete masonry units and wood stud with gypsum sheathing. Partition are in good condition.

.2 Flooring in office areas consist of newly installed LVT and carpet that is in good condition. Flooring in kitchen and service areas is clay tile in good condition. Flooring in the community room is original resilient tile that is worn and dated.

.3 Ceilings are generally 2'x 2' suspended acoustic ceiling panels that are in good condition.

.4 There is a leak at the intersection of the floor and exterior wall in the northeast corner of the facility. Water appears to be entering the exterior wall above the basement wall waterfproofing.

IMMEDIATE NEEDS

.1 None.

5-YEAR PLANNING RECOMMENDATIONS

.1 Upgrade flooring in the community center and adjacent corridors.

.2 Repair flashing/waterproofing at the northeast corner of the facility.

.04 FIRE SUPPRESSION SYSTEMS

SUMMARY

.1 The building is fully sprinkled, with an ANSUL system integrated with the Kitchen Hood. A Dry Pipe system serves the attic space.

CODE COMPLIANCE

.1 Current Fire Marshal or AHJ should confirm current configuration of equipment and ANSUL dispersion head locations under the hood meet Fire Code requirements.

EQUIPMENT

.1 The sprinkler header appears to be in generally good condition.

.2 The ANSUL system appears to be in generally good condition and had up-to date inspection tags at the time site work was conducted.

DISTRIBUTION

.1 Facilities staff noted no issues with the condition of the sprinkler piping or heads.

IMMEDIATE NEEDS

.1 None.

5-YEAR PLANNING

.1 None.

.05 PLUMBING SYSTEMS

SUMMARY

.1 The building is served by independent incoming water service in the lower level mechanical room. Plumbing systems serve limited to serving toilet room fixtures, and kitchen fixtures and grease drainage.

CODE COMPLIANCE

.1 Michigan Plumbing Code requires tempered water supplied through a local ASSE 1070-compliant thermostatic temperature limiting device be provided to all accessible plumbing fixtures. All accessible plumbing fixtures, current and future, should be provided with ASSE 1070 devices.

.2 Michigan Plumbing Code requires backflow prevention to be provided at all incoming water utilities. Currently there is no RPZ or double check valve on the incoming domestic cold-water service to the building. A backflow preventer that meets local utility requirements should be provided on the incoming cold-water service.

.3 Michigan Plumbing Code requires grease interceptors and solids interceptors be provided downstream of garbage disposals but said interceptors should not serve non-grease bearing fixtures as well. There appear to be 2 non-original garbage disposals within the kitchen which require interceptors. One appears to have one in the ground that has been encased in concrete and is not readily accessible. Both disposals and any other fixtures serving grease-laden food or dishes should be connected to the appropriate solids and grease interceptors.

.4 Michigan Mechanical Code requires a Type II hood be provided over all "dishwashers and appliances that produce heat or moisture and do not produce grease or smoke as a result of the coking process, except where the heat and moisture loads from such appliances are incorporated into the HVAC system design or into the design of a separate removal system." It should be confirmed the current HVAC system is sized to support the heat and moisture load from the commercial dishwasher.

EQUIPMENT

.1 The gas water heater and recirculation pump located in the lower level mechanical room are in generally good condition.
  1.1 Small sections of the domestic hot water supply and return piping remain uninsulated. These should be insulated during standard maintenance work.

.2 Both the sewage ejection and building subdrain sump pits and pumps appeared in generally good condition.

.3 All plumbing fixtures observed within the building were manually actuated. Fixtures were generally in good condition.
  3.1 Lavatories appeared to be 1.5 gpm faucets with no thermostatic mixing valves
  3.2 Water closets appeared to be 3.5gpf flush valve units
  3.3 Urinals appeared to be 1.5gpf flush valve units.

.4 Kitchen sinks and associated fixtures were observed to be in generally good condition.
  4.1 The grease interceptor appears to have been disconnected and sealed. Confirm this unit is accessible and operational; replace as necessary.

DISTRIBUTION

.1 It was unclear whether any insulated PVC piping is used for plumbing purposes within the ceiling plenum spaces. If so, this piping should be insulated or replaced with a product that meets Michigan Mechanical Code requirements for flame/smoke spread resistance requirements in plenum return air spaces.

.2 Domestic piping, insulation, and valves generally appeared to be in fair condition where observable within the lower level mechanical room.

.3 Facilities staff noted no known or ongoing issues with concealed domestic, storm, or sanitary piping systems.

IMMEDIATE NEEDS

.1 Provide ASSE 1070-rated thermostatic mixing valves at all lavatories for scald protection and code compliance at accessible fixtures. Recommend increasing distribution water temperature in excess of 130°F to minimize risks associated with Legionella.

.2 Confirm and correct any exposed PVC piping in ceiling/plenum spaces.

.3 Provide a backflow preventer that meets local utility requirements on the incoming cold-water service.

.4 Provide grease and solids interceptors where required within the Kitchen Space.

5-YEAR PLANNING

.1 Replace all water closets and urinals with 1.6gpf and 0.125gpf fixtures, respectively.

.2 Update bathrooms fixtures and water fountain(s) as needed to meet ADA requirements.

.3 Provide a Type II kitchen hood over the dishwasher or revise the HVAC equipment if not currently configured to address the heat and moisture loads.

.06 MECHANICAL SYSTEMS

SUMMARY

.1 The building is conditioned by 8, single zone, constant volume DX-cooled Gas-fired air handling units. A series of exhaust fans and a direct fired gas makeup air unit serve the kitchen ventilation systems. The furnaces are a combination of fully ducted, and plenum return units. 4 air handlers are in each mechanical room – one on the lower level and another on the ground floor.

CODE COMPLIANCE

.1 Michigan Building Code limits total R-22 refrigerant to less than 13 lbs/ 1000 cubic feet of internal volume. Based on total charges present in the 4 cooling coil circuits within the ground floor mechanical room, the space is near this limit. The limit can be exceeded but requires refrigerant monitoring and exhaust systems. Alternately, R-410a has double the allowable limit, and replacing one or more of the current cooling coils with an R-410a system may alleviate the concern.

EQUIPMENT

.1 All furnaces and condensers appear to be in generally good condition, however parts are no longer readily available for the current units.

1.1 Facilities staff noted the intent to replace the furnaces as-needed with higher efficiency units (96% gas, R-410a coils meeting current ASHRAE standards).

.2 All roof-mounted exhaust fans appear to be in good condition.

.3 The kitchen makeup air unit is in fair condition.

3.1 Control is currently fully manual. Improved controls to tie hood exhaust operation directly to the MAU are now available.

.4 Controls for all HVAC units are by local single-zone wall-mounted thermostats. No pneumatics are present within the building, and none of the units are currently communicating with the BAS.

DISTRIBUTION

.1 All visible ductwork was in good condition and properly insulated.

.2 Outside air is provided to all units.

.3 Supply to the northern office areas is via under-slab ductwork. Facilities staff noted there are no known issues with the duct, but it is all original to the building. The office area uses plenum return to a main return duct back to the basement furnaces.

IMMEDIATE NEEDS

.1 Confirm existing R22 refrigerant limits are not exceeded in ground floor mechanical room.

5-YEAR PLANNING

.1 Update kitchen grease exhaust/MAU integration for automated operation. DDC

.2 Consider a VAV retrofit for both the hood and the makeup air unit. Systems now exist to control hood airflow based on smoke load, not just on-off.

.3 Inspect, clean, and line if needed the existing under-slab ductwork. Consider an internally-applied latex-based lining product (Duct Armor, or equivalent).

.07 ELECTRICAL SYSTEMS

POWER DISTRIBUTION

.1 The primary service is a 120/208V, 800A, three-phase, 4-wire system from the utility. The 800A, 120/208V distribution panel is a Square D I-line panelboard. Distribution panel is in good condition. There were no surge suppression devices observed.

GENERAL PURPOSE ELECTRICAL POWER

.1 The electrical system is original to the facility. The branch panels consist of Square D panels and are in good condition

.2 Building appeared to have sufficient receptacles installed. Few receptacles within 6ft of water source are not GFCI.

LIGHTING

.1 The interior lighting fixtures use T8 fluorescent lamps throughout the building. While the fixtures appear to be in fair condition and well maintained over the years, they are not energy efficient.

.2 The exterior fixtures are old HID fixtures. While the fixtures appear to be in fair condition and well maintained over the years, they are not energy efficient.

.3 The exterior soffit fixtures are hard to maintain.

.4 Emergency lighting consists of lighting with battery backup and emergency wall packs in hallways. Fixtures appear to be in good condition. However, the battery packs located in each fixture are typically rated to last 5-7 years and likely nearing their service life.

.5 There are no exterior egress lighting fixtures located at each of the exterior discharge doors. The Michigan Building Code now requires exterior egress lights at each exit discharge door.

.6 Automatic controls are installed throughout building.

.7 Did not observe daylighting controls in rooms with side lighting.

EMERGENCY POWER

.1 Building has a small Cummins generator and Cummins ats that provides back up power for the cooler and freezer loads. The panel serving these loads is Panel 'F'. Panel 'F' is a 60A, 120/208V three-phase, 4-wire panel. Equipment is in good condition. There was no surge suppression devices observed. The generator and ats was recently installed. The old generator has been abandoned in place.

COMMUNICATION

.1 There is a small wall mounted IT cabinet in basement. There are signs of water damage on ceiling tiles. Also, IT room is very warm.

.2 The owner now uses VOIP handsets for telephone communication. The existing POTs (Plain Old Telephone System) wiring (i.e. 2 pair wiring) and outlets in this building are no longer in use.

FIRE ALARM

.1 Fire alarm system is a Simplex 4008. System is in good condition. Owner has a service contract with Vanguard to test fire alarm system.

.2 Confirm devices comply with ADA reach, visual, and audible alarm requirements.

IMMEDIATE NEEDS

.1 Install GFCI receptacles within 6ft of water source.

.2 Provide exterior egress lights at each exit discharge door.

5-YEAR PLANNING RECOMMENDATIONS

.1 Install SPDs at the main distribution and at panelboards feeding sensitive electronic loads (i.e. personal computers, IT room equipment, etc.).

.2 Remove abandoned generator.

.3 Upgrade fluorescent and HID fixtures with LED, throughout facility.

.4 The new energy code requires daylighting for energy savings. Daylighting controls are required for any space where the combined input power of all lighting within side lighted areas is greater than 150W. Lighting shall dim with photocontrol. Recommend adding daylighting at the same time as the LED fixture replacement. LED fixtures come with standard dimming, unlike, fluorescent fixtures with dimming ballasts.

.5 Replace batteries in lighting, emergency wall packs and exit signs.

.6 A central inverter system, with a central battery system should be considered to reduce ongoing maintenance of replacing individual batteries. This would be very cost effective if implemented at the same time as LED fixture upgrade.

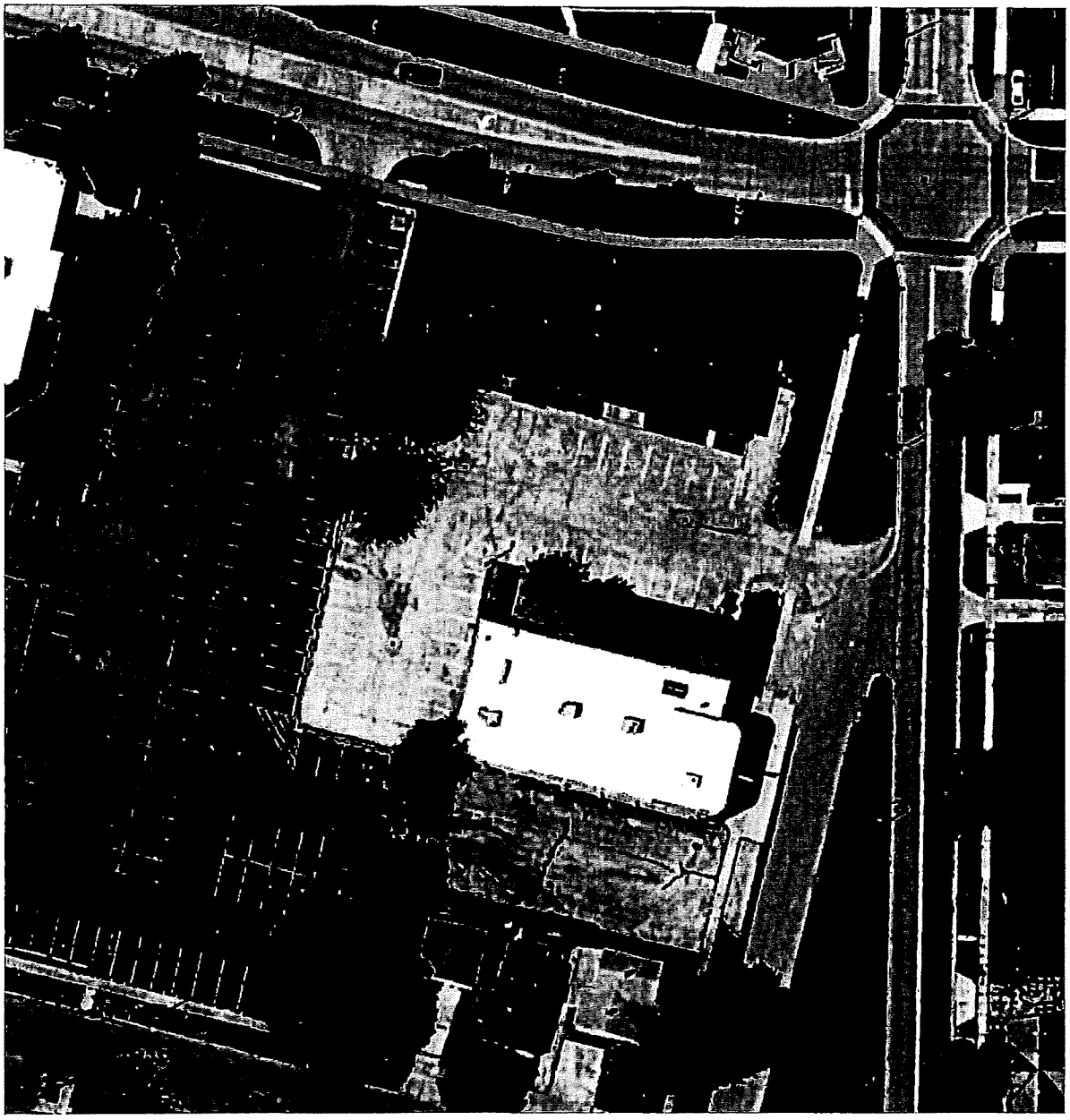
.7 Verify emergency fixtures automatically illuminates to an average of 1 foot-candle for a minimum of 90 minutes in interior and exterior stairways and ramps, exit passageways, vestibules, exterior landings for exit doorways, electrical equipment rooms, and public restrooms with an area greater than 300 sq. ft.

.8 Remove unused telephone wiring and terminal blocks where possible and/or abandoned in place where not readily accessible. Maintain minimal quantity of active POTs lines for centrally monitored equipment such as fire alarm, security, and building management systems.

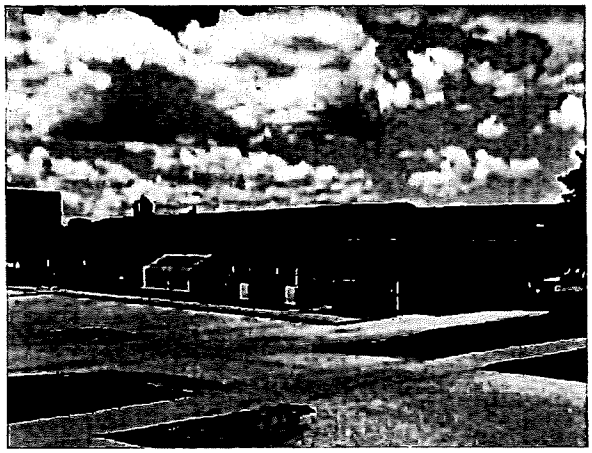
.9 Seal water leak adjacent to IT room and adding cooling to room.

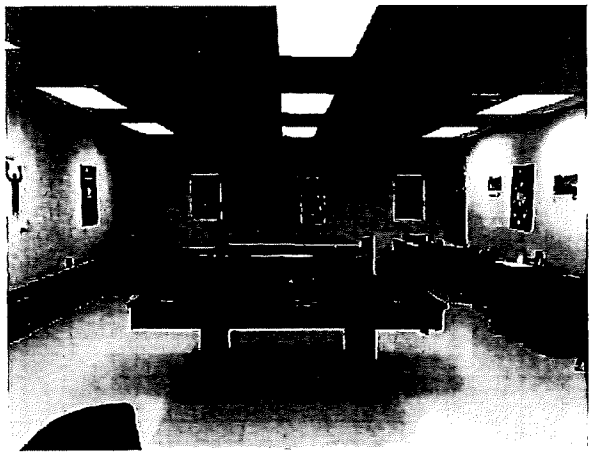
2.06 MARIE DAVIS SENIOR CENTER
233 North 2nd Avenue
Saginaw, Michigan 48607
Year: 1964
Size: 6,000gsf
Floors: 1

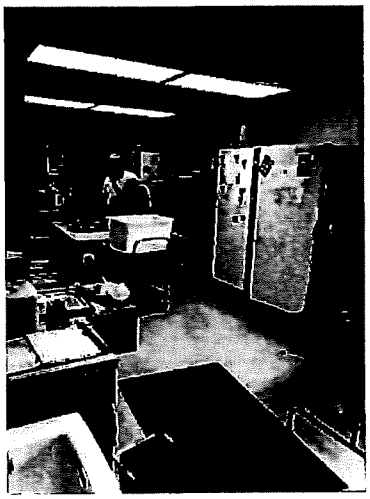
SITE PLAN

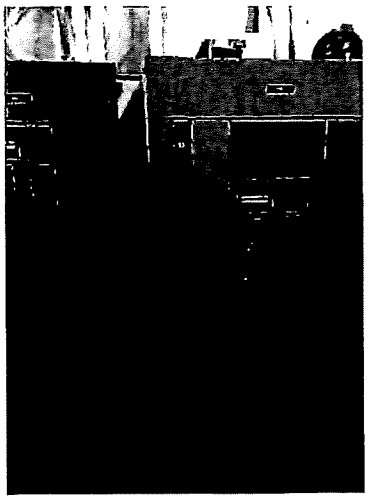


MARIE DAVIS SENIOR CENTER
PHOTOS









MARIE DAVIS SENIOR CENTER
ARCHITECTURAL SYSTEMS

.01 ACCESSIBILITY

SUMMARY

.1 The Marie Davis Senior Center was constructed in ____.

PARKING

.1 The facility has designated accessible parking; the main entrance is accessible at grade.

ACCESSIBLE ROUTES AND RAMPS

.1 Corridors and turning widths in public areas are generally accessible.

.2 The kitchen service counter adjacent to the community room is not an accessible height.

DOOR HARDWARE

.1 Doors typically do not have accessible, lever type hardware and adequate push/pull clearance.

.2 The main entrance does not have a powered ADA door operator.

PLUMBING ELEMENTS

.1 Toilets do not meet ADA guidelines.

COMMUNICATION ELEMENTS

.1 Facility space identification signage does not meet ADA guidelines.

IMMEDIATE NEEDS

.1 None.

5-YEAR PLANNING

.1 Upgrade toilet rooms to be fully ADA compliant.

.2 Upgrade signage to provide adequate space identification and tactile characters.

.3 Upgrade service counters to be fully accessible.

.4 Add powered ADA to entry doors.

.02 LIFE SAFETY

SUMMARY

.1 This section identifies issues related to means of egress and fire suppression in the event of a fire or other emergency egress in accordance with the Michigan Building Code and NFPA.

.2 Refer to the Electrical Assessment for comments regarding the fire alarm system and exit signage.

.3 Occupancy Classification: Group B (Office), Group A (Assembly). [Chapter 3]

.4 Construction Type V-B, S: Any framing. [Table 601]

.5 Allowable Height: 3 stories, 60 feet. [Table 504]

PATH OF EGRESS, STAIRS AND EXITS

.1 Exits are in compliant locations and sized according to use.

DOOR HARDWARE

.1 Doors are not provided with accessible, lever type hardware.

.2 Exit doors are equipped with panic egress devices.

FIRE SUPPRESSION

.1 The facility is not sprinklered.

IMMEDIATE NEEDS

.1 None.

5-YEAR PLANNING RECOMMENDATIONS

.1 Replace door hardware to meet accessibility and egress requirements.

.03 INTERIOR CONDITIONS

SUMMARY

.1 This section identifies issues related to interior architectural finishes including floors, walls, and ceilings.

FINISHES

.1 Partitions are wood stud with gypsum sheathing. Partition are in good condition.

.2 Flooring consists of both carpet and original resilient tile that is worn and dated.

.3 Ceilings are suspended acoustic panels that are in fair condition.

IMMEDIATE NEEDS

.1 None.

5-YEAR PLANNING RECOMMENDATIONS

.1 Upgrade flooring throughout.

.2 Upgrade ceilings in coordination with lighting and mechanical upgrades.

.04 FIRE SUPPRESSION SYSTEMS

SUMMARY

.1 The building does not have a fire suppression system.

.05 PLUMBING SYSTEMS

SUMMARY

.1 The building is served by independent incoming water service in the ground floor mechanical room. Plumbing systems serve limited to serving toilet room fixtures, and kitchen fixtures. An RPZ is present on the incoming water service.

CODE COMPLIANCE

.1 Michigan Plumbing Code requires tempered water supplied through a local ASSE 1070-compliant thermostatic temperature limiting device be provided to all accessible plumbing fixtures. All accessible plumbing fixtures, current and future, should be provided with ASSE 1070 devices.

.2 Based on the current use profile within the kitchen area (pre-prepared food reheating and service – no cooking or commercial dish cleaning) a grease or solids interceptor is not likely required by code.

.3 Michigan Plumbing Code requires domestic hot water recirculation to fixtures greater than 50 feet from a hot water source. The distance between the hot water heater and furthest fixture should be confirmed to be less than 50 feet since no recirculation pump is present.

EQUIPMENT

.1 The gas water heater located in the ground floor mechanical room is original to the building but is in fair condition.

.2 No recirculation pump or piping is used for domestic hot water temperature control.

.3 All piping is insulated, and the insulation is in fair condition.

.4 All plumbing fixtures observed within the building were manually actuated. Fixtures were generally in good condition.
- 4.1 Lavatories appeared to be 1.5 gpm faucets with no thermostatic mixing valves
- 4.2 Water closets appeared to be 3.5gpf flush tank units
- 4.3 Urinals appeared to be 1.5gpf flush valve units.

.5 Kitchen sink and associated fixtures were observed to be in generally good condition.

DISTRIBUTION

.1 Domestic piping, insulation, and valves generally appeared to be in good condition where observable within the mechanical room.

.2 Facilities staff noted there have been historical issues with the main building drain backing up and periodically pushing sandy material into the building. It was unknown whether previous inspections of the line have been conducted.

IMMEDIATE NEEDS

.1 Provide ASSE 1070-rated thermostatic mixing valves at all lavatories for scald protection and code compliance at accessible fixtures. Recommend increasing distribution water temperature in excess of 130°F to minimize risks associated with Legionella.

.2 Inspect the drain line and repair or replace if required.

5-YEAR PLANNING

.1 Consider adding a grease and solids interceptor to the kitchen sink as a best practice.

.2 Provide a domestic hot water recirculation pump and piping if required by current codes.

.3 Replace the original boiler with a high efficiency condensing unit.

.06 MECHANICAL SYSTEMS

SUMMARY

.1 The building is conditioned by two self-contained ducted cooling units with now-disabled outside air ventilation, and perimeter radiant heat, provided by a hot water boiler and constant volume pumps. Exhaust fans serve the kitchen and bathroom areas.

CODE COMPLIANCE

.1 Michigan Mechanical Code requires minimum outside air ventilation which is currently not provided due to the lack of controllability on the self-contained units. New units should be designed to meet outside air ventilation requirements.

EQUIPMENT

.1 The self-contained air handlers are original to the building and are in poor condition past their useful life.
- 1.1 The units have integral electric strip heat, but because the radiant systems appear to handle the full load of the building, these have been disabled.
- 1.2 The units are difficult to get parts for ands require complex annual teardowns and cleanings.

.2 The hot water boiler is original to the building, and although operational, has also exceeded its design life.

.3 The hot water distribution pumps are original to the building and are in fair condition. Facilities staff noted no issues with their performance.

.4 The expansion tank is original to the building and is in fair condition but is not insulated.

.5 Exhaust fans serving general occupancy areas have been abandoned in place. The original need for cigarette smoke exhaust is no longer present.

.6 The exhaust fan serving the kitchen is operational and in fair condition.

.7 The radiant heat radiators appear oversized based on occupant hot calls even in the dead of winter and are very difficult to control.

.8 All equipment is locally controlled with digital thermostats on the self-contained units, and a mix of manual and thermostatic control valves on the hot water radiators.

DISTRIBUTION

.1 Some of the grilles and diffusers appear stained – likely from previous smoking taking place within the space.

.2 Outside air is provided to the self-contained units but has been closed off due to the units not operating properly with outside air being provided.

.3 All forced air supply duct work and hydronic perimeter heat piping is concealed in the ceilings and walls; however, facilities staff noted no issues with the distribution systems.

.4 Controllability of the building radiant heat system is limited, and leads to repeated hot calls from occupants. Occupants attempt to remedy the issue by opening windows, which sometimes makes the building even more difficult to control.

IMMEDIATE NEEDS

.1 Replace the self-contained units with split gas-fired DX-cooling air handlers and outside air ventilation. It us understood replacement of both air handlers is identified within the current 202 county capital upgrades plan.

5-YEAR PLANNING

.1 Provide DDC controls and integrate with hydronic system with the new air handlers for full building temperature control.

.2 Replace the original hot water boiler with a condensing hot water boiler.

.3 Replace the constant volume hot water pumps with variable volume pumps and appropriate control valves on the radiant heat system.

.07 ELECTRICAL SYSTEMS

POWER DISTRIBUTION

.1 The primary service is a 120/208V, 400A, three-phase, 4-wire system from the utility. The 400A, 120/208V distribution panel is a Westinghouse B1CB panelboard. Distribution panel is in good conditions but is original to the building and obsolete. There were no surge suppression devices observed.

GENERAL PURPOSE ELECTRICAL POWER

.1 The electrical system is original to the facility. The branch panels A and B are 225A, 120/208V Westinghouse panelboards. Panels are in good conditions but are original to the building and obsolete

.2 Building appeared to have sufficient receptacles installed. Few receptacles within 6ft of water source are not GFCI.

.3 Power cabling is probably the same age as the building and insulation on this cabling is nearing its expected service life. Cabling conditions were not readily accessible to observe.

LIGHTING

.1 The interior lighting fixtures use T8 fluorescent lamps throughout the building. While the fixtures appear to be in fair condition and well maintained over the years, they are not energy efficient.

.2 The exterior fixtures are old HID fixtures. While the fixtures appear to be in fair condition and well maintained over the years, they are not energy efficient.

.3 Emergency lighting consists of exit signs with emergency heads. Fixtures appear to be recently installed and in good condition.

.4 There are no exterior egress lighting fixtures located at each of the exterior discharge doors. The Michigan Building Code now requires exterior egress lights at each exit discharge door.

.5 Did not observe automatic controls throughout building. Automatic controls are now required in building per energy code.

.6 Did not observe daylighting controls in rooms with side lighting.

.7 Lighting control station is an old General Electric control station. It is obsolete and can't get replacement parts.

EMERGENCY POWER

.1 None.

COMMUNICATION

.1 There is a small wall mounted IDF cabinet in janitor's closet. There is a sink within 6ft of receptacles serving equipment. Receptacles are not GFCI.

.2 The owner now uses VOIP handsets for telephone communication. The existing POTs (Plain Old Telephone System) wiring (i.e. 2 pair wiring) and outlets in this building are no longer in use.

FIRE ALARM

.1 Fire alarm has recently been installed within 2-3 years. Fire alarm system is a Simplex 4006. System is in good condition

.2 Confirm devices comply with ADA reach, visual, and audible alarm requirements.

IMMEDIATE NEEDS

.1 Install GFCI receptacles within 6ft of water source.

.2 Provide exterior egress lights at each exit discharge door.

.3 Recommend replacing lighting control station or provide localized controls in each room.

5-YEAR PLANNING RECOMMENDATIONS

.1 Install automatic lighting controls.

.2 Power cable insulation is nearing the end of expected service life; inspect and upgrade as required.

.3 Install SPDs at the main distribution and at panelboards feeding sensitive electronic loads (i.e. personal computers, IT room equipment, etc.).

.4 Upgrade branch panelboards.

.5 Replace fluorescent and HID fixtures with LED throughout facility.

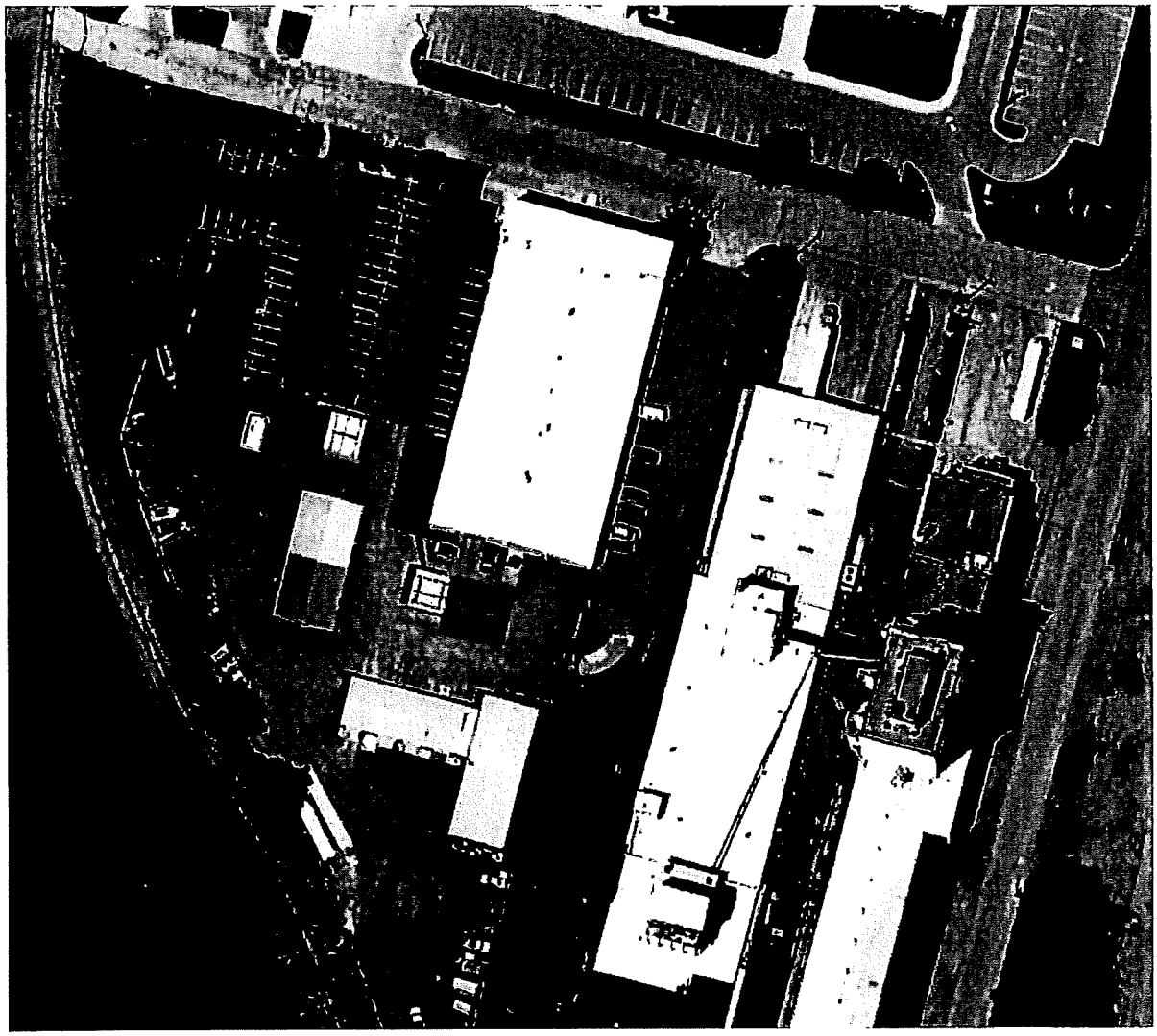
.6 The new energy code requires automatic lighting control and daylighting for energy savings. Daylighting controls are required for any space where the combined input power of all lighting within side lighted areas is greater than 150W. Lighting shall dim with photocontrol. Recommend adding occupancy control and daylighting at the same time as the LED fixture replacement. LED fixtures come with standard dimming, unlike, fluorescent fixtures with dimming ballasts.

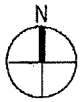
.7 Verify emergency fixtures automatically illuminates to an average of 1 foot-candle for a minimum of 90 minutes in interior and exterior stairways and ramps, exit passageways, vestibules, exterior landings for exit doorways, electrical equipment rooms, and public restrooms with an area greater than 300 sq. ft.

.8 Remove unused telephone wiring and terminal blocks where possible and/or abandoned in place where not readily accessible. Maintain minimal quantity of active POTs lines for centrally monitored equipment such as fire alarm, security, and building management systems.

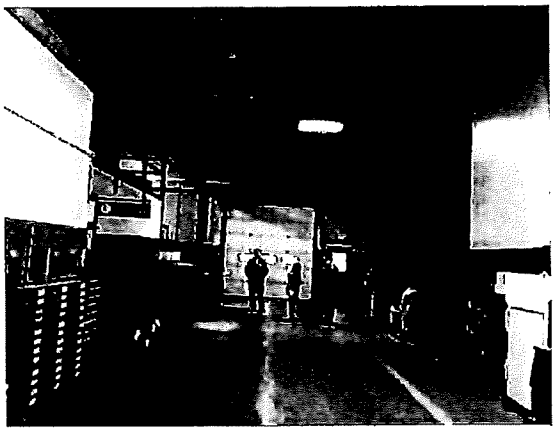
2.07 MOSQUITO CONTROL
211 Congress Avenue
Saginaw, Michigan 48602
Year: 1964
Size: 24,400gsf
Floors: 2

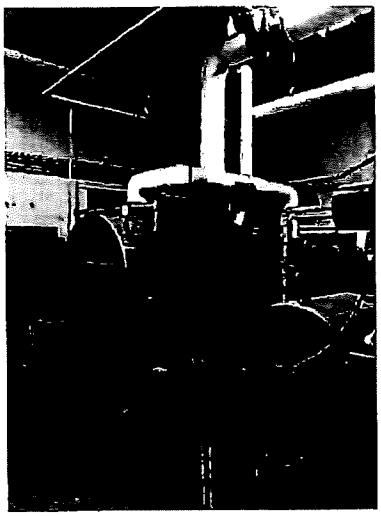
SITE PLAN

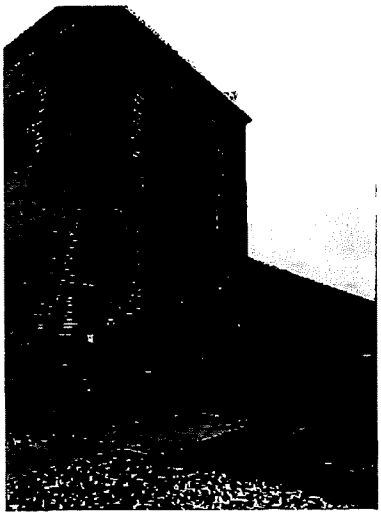


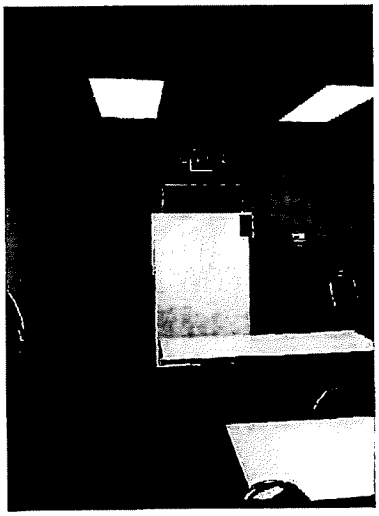


MOSQUITO CONTROL
PHOTOS









MOSQUITO CONTROL
ARCHITECTURAL SYSTEMS

.01 ACCESSIBILITY

SUMMARY

.1 The original Mosquito Control facility construction pre-dates current accessibility guidelines.

PARKING

.1 The facility has designated accessible parking; the main entrance is accessible at grade.

ACCESSIBLE ROUTES AND RAMPS

.1 Corridors and turning widths in public areas are generally accessible.

.2 Service and break room counters are not at an accessible height.

DOOR HARDWARE

.1 Some doors have non-accessible cylindrical hardware, others have accessible, lever type hardware and adequate push/pull clearance.

.2 The main entrance does not have a powered ADA door operator.

PLUMBING ELEMENTS

.1 The women's public toilet is accessible, the remainder of toilets do not meet ADA guidelines.

COMMUNICATION ELEMENTS

.1 Facility space identification signage does not meet ADA guidelines.

IMMEDIATE NEEDS

.1 None.

5-YEAR PLANNING

.1 Upgrade toilet rooms to be fully ADA compliant.

.2 Upgrade signage to provide adequate space identification and tactile characters.

.3 Upgrade service and break room counters to be fully accessible.

.4 Add a powered ADA operator to entry doors.

.02 LIFE SAFETY

SUMMARY

.1 This section identifies issues related to means of egress and fire suppression in the event of a fire or other emergency egress in accordance with the Michigan Building Code and NFPA.

.2 Refer to the Electrical Assessment for comments regarding the fire alarm system and exit signage.

.3 Occupancy Classification: Group B (Office), Group A (Assembly). [Chapter 3]

.4 Construction Type V-B, S: Any framing. [Table 601]

.5 Allowable Height: 3 stories, 60 feet. [Table 504]

PATH OF EGRESS, STAIRS AND EXITS

.1 Most Exits are in compliant locations and sized according to use. However, the conference room on the 2nd FL requires a second means of egress. The second exit from this space has been barricaded and the exterior exit stairs have been removed.

DOOR HARDWARE

.1 Exit doors are not equipped with panic egress devices (devices are not required for exits designed for fewer than 50 occupants).

FIRE SUPPRESSION

.1 The paint shop is sprinklered; fire protection incoming service is in the boiler room. The remainder of the building is not sprinklered.

.2 In addition to fire suppression, the paint shop requires a 1hr rated separation per MBC Table 509. Refer also to the International Fire Code, Section 2404 for applicable requirements.

.3 Assembly occupancies (Spaces with an occupant load greater than 50, greater than 750sf) on floors above the level of exit discharge are required to be sprinklered per 903.2.1.3. Confirm occupancy of 2nd floor conference room.

IMMEDIATE NEEDS

.1 Provide a compliant second exit from the 2nd Floor. Per MBC, this exit needs to be in the form of a stair with guard and handrails but does not need to be enclosed.

5-YEAR PLANNING RECOMMENDATIONS

.1 Upgrade door hardware to be accessible and egress compliant.

.2 Confirm requirements for fire protection on the 2nd floor per occupant load.

.3 Provide a rated enclosure for the paint shop, including doors, penetrations, and mechanical and electrical upgrades.

.03 INTERIOR CONDITIONS

FINISHES

.1 Partitions are a combination of masonry and wood stud with gypsum sheathing. Partition are in fair condition.

.2 Flooring in office and public areas is carpet and LVT and is in good condition. Flooring in service areas is exposed concrete.

.3 Ceilings in office and public areas are suspended acoustic panels that are in good condition. Ceilings in service areas are exposed structure.

IMMEDIATE NEEDS

.1 None.

5-YEAR PLANNING RECOMMENDATIONS

.1 None.

.04 FIRE SUPPRESSION SYSTEMS

SUMMARY

.1 The building is partially sprinkled, specifically the spray booth. Fire protection incoming service is in the boiler room.

EQUIPMENT

.1 The incoming sprinkler line only has a single check valve and is not supervised by the fire alarm system.

DISTRIBUTION

.1 Distribution piping is limited to a single main from the incoming service to the spray booth. Due to active spray operations, the sprinkler system was not observed while on site. No distribution issues were noted by facilities staff.

IMMEDIATE NEEDS

.1 None.

5-YEAR PLANNING

.1 Provide code compliant incoming sprinkler service and integrate with fire alarm system.

.05 PLUMBING SYSTEMS

SUMMARY

.1 The building is served by independent incoming water service in the ground floor boiler room. An RPZ and water meter were both observed and appear in fair condition. Plumbing systems serve HVAC makeup water service and general plumbing fixtures throughout the building.

CODE COMPLIANCE

.1 Michigan Plumbing Code requires tempered water supplied through a local ASSE 1070-compliant thermostatic temperature limiting device be provided to all accessible plumbing fixtures. All accessible plumbing fixtures, current and future, should be provided with ASSE 1070 devices.

.2 Michigan Plumbing Code requires oil water separators to be provided in "repair garages" where floor or trench drains are provided. Because floor drains currently exist in areas which communicate with engine repair and fabrication areas, an oil water separator is recommended downstream of these drains.

.3 Michigan Building Code requires emergency eyewash & shower stations to be designed to meet ANSI-Z3581-2014 requirements. This includes a provision for serving each wash station with tempered water – defined as between 60°F – 100°F. Currently the EEWS station is served by cold water only which will not meet these requirements during most of the year. EEWS stations are also required to be located within 55 feet or less of any sources of injury/chemical impact. Refer to overall building code assessment to determine if current eyewash location is acceptable.

EQUIPMENT

.1 The water heater is located in the boiler room and is in good condition.

.2 The hot water recirculation pump is in the boiler room and is in fair condition.

.3 The Emergency Eyewash & Shower is in fair condition, although it is only served by cold water currently.

.4 All plumbing fixtures observed within the building (except one electronic water closet) were manually actuated. Fixtures were generally in good condition.
- 4.1 Lavatories appeared to be 1.5 gpm faucets with thermostatic mixing valves in only one bathroom.
- 4.2 Water closets appeared to be 3.5gpf flush valve units
- 4.3 Urinals appeared to be 1.5gpf flush valve units.

.5 The incoming water service RPZ and associated piping & insulation appear to be in fair condition. The RPZ is not drained to a local floor drain.

.6 Garage areas are not served by local area or trench drains. Interior vehicle storage areas currently slope through exterior shop areas to area drains located on exterior walls.

DISTRIBUTION

.1 Domestic piping, insulation, and valves generally appeared to be in fair condition where observable

IMMEDIATE NEEDS

.1 Provide ASSE 1070-rated thermostatic mixing valves at all lavatories for scald protection and code compliance at accessible fixtures. Recommend increasing distribution water temperature in excess of 130°F to minimize risks associated with Legionella.

5-YEAR PLANNING

.1 Assess and update emergency eyewash system as needed.

.2 Replace all water closets and urinals with 1.6gpf and 0.125gpf fixtures, respectively.

.3 Update bathrooms fixtures as needed to meet ADA requirements.

.4 Provide trench or area drains and oil water separator for vehicle storage and repair areas.

.06 MECHANICAL SYSTEMS

SUMMARY

.1 The building is heated by a single steam boiler and associated condensate return system. Cooling is provided by multiple single-zone constant volume DX-cooled air handlers of varying age. Steam heat serves a variety of ducted heating coils, propeller unit heaters, and radiators.

CODE COMPLIANCE

.1 The storage area includes vehicle storage. Michigan mechanical code requires an exhaust fan and outside makeup air to ventilate vehicle storage areas.

.2 Michigan mechanical code requires a manual boiler shutoff outside of the mechanical room. A code consultant or the local AHJ should be consulted to determine what an appropriate location for a remote shutoff location outside of the boiler room would be.

.3 The wood shop dust collection system may fall under the requirements of section 511 of the Michigan Mechanical code, and it is unclear whether the local AHJ would allow the "point of use" exception to apply. If not, the current installation may not meet section 511 performance requirements.

.4 The incoming gas service and meter is located in a confined area of a storage room. It is unclear whether the current installation meets building and fire codes. The local AHJ should be consulted for further direction.

.5 The exhaust fan serving the paint spray room should comply with all applicable requirements of section 502 of the Michigan Mechanical Code, and any applicable cross-referenced codes.

.6 The fume hood and lab exhaust system in the Mosquito Control lab/workroom should meet all applicable requirements of section 510 of the Michigan Mechanical Code, and any applicable cross-referenced codes.

EQUIPMENT

.1 The boiler and condensate receiver tank are in fair condition, and although well maintained, have exceeded their design lives.

.2 The prop unit heaters are in fa in fair condition, and although well maintained, have exceeded their design lives.

2.1 At least one-unit heater has been reconfigured to serve as a ducted unit, which may void manufacturer UL and other safety ratings.

.3 The R-22-based cooling only air handler and condenser serving the maintenance offices is in fair condition, and although well maintained, has exceeded their design life.

.4 Steam radiators throughout the building are a mix of manual and thermostatic control and are all in fair condition. Some radiators are original to the building.

.5 A window air conditioning unit on the second floor appears to have been abandoned in place. It was unclear whether it is still used given the change in the room occupancy/use.

.6 The air handlers and DX condensers serving mosquito control areas were in good condition where observable.

.7 The ceiling fans serving the mosquito control garage area are in good condition.

.8 Supply diffusers and grilles where were in good to fair condition throughout the building.

.9 The mosquito control fume hood is not enclosed and may pose a safety concern depending on what lab operations take place.

DISTRIBUTION

.1 Gas piping is generally in good condition where observable.

.2 Steam and condensate piping, accessories, and insulation are in fair condition. Although facilities staff noted no issues with the system, some steam traps and piping are original to the building and have exceeded their design life.

.3 Ductwork varies from fair to good where observable.

IMMEDIATE NEEDS

.1 Update multiple exhaust and ventilation systems identified within the code compliance section.

5-YEAR PLANNING

.1 Update steam boiler or replace with gas -fired ventilating units.

.2 Integrate DDC controls as needed,

.3 Update R-22 air handler(s) to R410a units.

.07 ELECTRICAL SYSTEMS

POWER DISTRIBUTION

.1 The primary service is a 120/240V, 600A, three-phase, 4-wire delta system from the utility. The 600A, 120/240V distribution panel is a new Square D I-line panelboard. The original service disconnect and panel have been abandoned in place. Distribution panel feeds 120/240V branch panels throughout the building. There were no surge suppression devices observed.

GENERAL PURPOSE ELECTRICAL POWER

.1 The electrical system has been updated in some areas, but some equipment is original to the facility. The branch panels consist of Square D and old Bull Dog panelboards. The Bull Dog panelboards are obsolete and can't get replacement parts. The Square D panels are in good condition.

.2 One door of the electrical closet won't open due to conduits being installed at top of opening. Door interferes with dedicated clearance of electrical equipment.

.3 The facility appeared to have sufficient receptacles installed. Receptacles installed in the garage are not GFCI. A few receptacles within 6ft of water source are not GFCI.

.4 Electrical devices and equipment in the spray room, and within 5ft of the space, are not rated hazardous rated (Class I, Div 1/Div 2).

.5 Power cabling is probably the same age as the building and insulation on this cabling is nearing its expected service life. Cabling conditions were not readily accessible to observe.

LIGHTING

.1 The interior lighting fixtures use T8 fluorescent lamps throughout the building. While the fixtures appear to be in fair condition and well maintained over the years, they are not energy efficient.

.2 The exterior fixtures are LED.

.3 There is no emergency lighting installed on first level. Second level has recently been remodeled. Emergency lighting consists of exit signs with emergency heads. Fixtures appear to be recently installed and in good condition.

.4 There are no exterior egress lighting fixtures located at each of the exterior discharge doors. The Michigan Building Code now requires exterior egress lights at each exit discharge door.

.5 Automatic controls are installed in office areas.

.6 Did not observe daylighting controls in rooms with side lighting.

EMERGENCY POWER

.1 None.

COMMUNICATION

.1 There is a small wall mounted IT cabinet in janitor's closet. There is a sink within 6ft of receptacles serving equipment. Receptacles are not GFCI.

.2 Owner stated that IT equipment crashes frequently. It is not known if building currently has fiber. Currently IT utility is Charter Spectrum

.3 The owner now uses VOIP handsets for telephone communication. The existing POTs (Plain Old Telephone System) wiring (i.e. 2 pair wiring) and outlets in this building are no longer in use.

FIRE ALARM

.1 There is currently no fire alarm installed.

IMMEDIATE NEEDS

.1 Recommend installing Fire Alarm system per IBC.

.2 Recommend providing exterior egress lights at each exit discharge door.

.3 Recommend installing GFCI receptacles within garage areas and 6ft of water source.

5-YEAR PLANNING RECOMMENDATIONS

.1 Recommend installing Class 1, Division 2 electrical devices/ equipment within 3ft radius of spray room doors per NEC.

.2 Recommend installing emergency fixtures that automatically illuminates to an average of 1 foot-candle for a minimum of 90 minutes in interior and exterior stairways and ramps, exit passageways, vestibules, exterior landings for exit doorways, electrical equipment rooms, and public restrooms with an area greater than 300 sq. ft.

.3 Power cabling is probably the same age as the building and insulation on this cabling is nearing its expected service life. Cabling conditions were not readily accessible to observe. Recommend inspection of cable insulation. If cabling has lost required insultation, it is recommended to replace cabling.

.4 Recommend that SPDs be installed at the main distribution and at panelboards feeding sensitive electronic loads (i.e. personal computers, IT room equipment, etc.).

.5 Recommend branch panelboards be replaced.

.6 Recommend replacing fluorescent fixtures with LED fixtures.

.7 The new energy code requires daylighting controls for energy savings. Daylighting controls are required for any space where the combined input power of all lighting within side lighted areas is greater than 150W. Lighting shall dim with photocontrol. Recommend adding occupancy control and daylighting at the same time as the LED fixture replacement. LED fixtures come with standard dimming, unlike, fluorescent fixtures with dimming ballasts.

.8 Recommend unused telephone wiring and terminal blocks be removed where possible and/or abandoned in place where it is not readily accessible. minimal quantity of active POTs lines are still recommended to remain for telephone exchange powered POTS telephone outlets (i.e. as backup communication should the VOIP system go down) for auto-dialers for centrally monitor equipment as fire alarm, security, and building management systems.

.9 Recommend upgrading IT systems for building to reduce data outages.

SECTION 03 .01

NAME: County Office Building
Address: 615 Court Street
Year Built: 1964
Size: 36,000gsf
Floors: B-2

Deficiency Priority 1. Currently Critical
2. Potentially Critical
3. Necessary, not yet critical
4. Recommended
5. Appearance
6. Does not meet Code / Standard

Deficiency Category 1. Scheduled Maintenance
2. Deferred Maintenance
3. Capital Renewal
4. Energy & Sustainability
5. Security

DESCRIPTION					CONDITION			AGE		CAPITAL BUDGET		
SPECIFICATION DIVISION	FLOOR/S	DESCRIPTION	MANUF. / MODEL	PHOTO ID	NOTES, OBSERVATIONS	DEFICIENCY PRIORITY	DEFICIENCY CATEGORY	INSTALLATION DATE	EXPECTED USEFUL LIFE	5 YEARS QUANTITY / UNIT	5 YEARS COST / UNIT	5 YEARS SUB-TOTAL
02		EXISTING CONDITIONS										
												$0.00
										SUBTOTAL		$0.00
05		METALS										
		Stairs, Guard and Handrails			Replace stair handrails	3	3			2	$5,000.00	$10,000.00
										SUBTOTAL		$10,000.00
08		OPENINGS										
		Doors, Frames and Hardware			ADA hardware upgrades	3	3			1	$5,000.00	$5,000.00
												$0.00
										SUBTOTAL		$5,000.00
09		FINISHES										
		LVT			Basement					1	$15,000.00	$15,000.00
		Painting			Basement					1	$15,000.00	$15,000.00
		Acoustical Panel Ceilings			Floors B-2	4	3			3	$60,000.00	$180,000.00
		Toilet Rooms			ADA, Finish Upgrade	6	3			4	$30,000.00	$120,000.00
												$0.00
										SUBTOTAL		$330,000.00
12		FURNISHINGS										
		Solar Shades			Solar shades for ext windows					1	$12,000.00	$12,000.00
		ADA Signage			ADA Space, Directional Signage	6	3			1	$5,000.00	$5,000.00
										SUBTOTAL		$17,000.00
14		CONVEYING EQUIPMENT										
		Elevators			Modernize, ADA compliant					1	$200,000.00	$200,000.00
										SUBTOTAL		$200,000.00
21		FIRE PROTECTION										
		Sprinkler Header			Relocate/enclose at Archives	4	5			1	$36,000.00	$36,000.00
		Wet-Pipe Sprinkler Systems			Floors 1-2	2	3			2	$36,000.00	$72,000.00
										SUBTOTAL		$108,000.00
22		PLUMBING										
		ASSE 1070 Mixing Valves			Per plumbing code	6	1			9	$500.00	$4,500.00
		Provide Secondary Roof Drains			Improve drainage - code based	6	3			1	$25,000.00	$25,000.00
		Insulate Exposed Domestic Water Piping				4	1			1	$1,000.00	$1,000.00
		Insulate PVC Piping			Replace exposed PVC in plenum	4	1			1	$5,000.00	$5,000.00
										SUBTOTAL		$35,500.00
23		HVAC										
		Air Handler VFD								1	$12,500.00	$12,500.00
		Chiller Tie-In								1	$145,500.00	$145,500.00
		New AHU, Bsmt								1	$20,326.00	$20,326.00
		Insulate exposed steam piping			Lower level Mechanical Room (S/lf)	6	1			1	$1,000.00	$1,000.00
		Replace Mechanical System			New Mechanical and DDC	4	3			1	$1,080,000.00	$1,080,000.00
										SUBTOTAL		$1,259,326.00
26		ELECTRICAL										
		Interior Lighting			LED Lighting Upgrade, FL B-2	4	4			3	$84,000.00	$252,000.00
		Exterior Egress Lighting				6	1			1	$1,000.00	$1,000.00
		GFCI Receptacles				6	1			1	$500.00	$500.00
		Panelboard Replacement				4	2			2	$13,080.00	$26,160.00
		New branch circuits for misc. power				4	2			3	$24,000.00	$72,000.00
		Surge Protection Devices				4	3			1	$1,000.00	$1,000.00
												$0.00
										SUBTOTAL		$352,660.00
27		COMMUNICATIONS										
						5	2					$0.00
										SUBTOTAL		$0.00
28		ELECTRONIC SAFETY AND SECURITY										
		Install smoke detector in elevator lobby				6	2			1	$500.00	$500.00
										SUBTOTAL		$500.00
32		SITE IMPROVEMENTS										
											$0.00	$0.00
										SUBTOTAL		$0.00
										COUNTY OFFICE BUILDING - SUBTOTAL		$2,317,986.00

SECTION 03 .02

NAME: County Courthouse
Address: 111 S. Michigan Ave.
Year Built: 1968, 1995
Size: 125,000gsf
Floors: B-4

Deficiency Priority 1. Currently Critical
2. Potentially Critical
3. Necessary, not yet critical
4. Recommended
5. Appearance
6. Does not meet Code / Standard

Deficiency Category 1. Scheduled Maintenance
2. Deferred Maintenance
3. Capital Renewal
4. Energy & Sustainability
5. Security

DESCRIPTION					CONDITION			AGE		CAPITAL BUDGET		
SPECIFICATION DIVISION	FLOOR/S	DESCRIPTION	MANUF. / MODEL	PHOTO ID	NOTES, OBSERVATIONS	DEFICIENCY PRIORITY	DEFICIENCY CATEGORY	INSTALLATION DATE	EXPECTED USEFUL LIFE	QUANTITY / UNIT	COST / UNIT	5 YEARS SUB-TOTAL
02		EXISTING CONDITIONS										
		Asbestos (ACM)			Abate entire facility					1	$1,200,000.00	$1,200,000.00
									SUBTOTAL			$1,200,000.00
05		METALS										
		Stairs, Guard and Handrails			Replace Guard/Handrails at Stairs	6	3			3	$10,000.00	$30,000.00
		Stairs, Guard and Handrails			Install Guardrail at Mech Room	6	3			1	$5,000.00	$5,000.00
									SUBTOTAL			$35,000.00
08		OPENINGS										
		Doors, Frames and Hardware			Misc. hardware upgrades	6	3			1	$5,000.00	$5,000.00
												$0.00
									SUBTOTAL			$5,000.00
09		FINISHES										
		Painting			Stairwells					1	$60,000.00	$60,000.00
		Carpeting			Equalization, Civil					1	$75,000.00	$75,000.00
		Acoustical Panel Ceilings			Throughout facility					1	$300,000.00	$300,000.00
		Toilet Rooms			ADA, Finish Upgrade					4	$30,000.00	$120,000.00
		Courtrooms			ADA, Finish Upgrade	5,6	3			11	$180,000.00	$1,980,000.00
		Fire rated partitions			Firestopping and rated partitions	6	3			1	$10,000.00	$10,000.00
									SUBTOTAL			$2,545,000.00
12		FURNISHINGS										
		Solar Shades			Reduce energy cost					1	$35,000.00	$35,000.00
		ADA Signage			ADA Space, Directional Signage	6	3			1	$25,000.00	$25,000.00
									SUBTOTAL			$60,000.00
14		CONVEYING EQUIPMENT										
		Elevators, Detention			Modernize, ADA compliant					1	$270,000.00	$270,000.00
									SUBTOTAL			$270,000.00
21		FIRE PROTECTION										
		Wet-Pipe Sprinkler Systems			Floors 1-5					5	$30,000.00	$150,000.00
									SUBTOTAL			$150,000.00
22		PLUMBING										
		Misc Plumbing Repairs								1	$75,000.00	$75,000.00
		ASSE 1070 Mixing Valves			Per plumbing code	6	1			1	$8,000.00	$8,000.00
		Secondary Roof Drains			Add scuppers	6	3			1	$30,000.00	$30,000.00
		Replace Original RPZ			Beyond design life	4	3			1	$15,000.00	$15,000.00
		Update Eyewash Shower			Provide tempered water	6	1			1	$10,000.00	$10,000.00
		Replace Booster Pump			Variable speed, duplex skid system	4	1			1	$20,000.00	$20,000.00
		ADA Water Fountains			Dual Height (per installation)	6	3			1	$4,000.00	$4,000.00
									SUBTOTAL			$162,000.00
23		HVAC										
		HVAC for DPW			New HVAC for DPW					1	$41,389.00	$41,389.00
		New AHU			Replace 3 remaining Units					3	$60,000.00	$180,000.00
		Smoke Exhaust/Pressure			Stairwell and Elevator smoke control	6	3			5	$40,000.00	$200,000.00
		Condensate Pump Interlock			prevent IT room water release	4	1			1	$500.00	$500.00
		Plenum Fan Safety			fall and belt protection, door interlock	6	1			1	$8,000.00	$8,000.00
		Boiler Shutoff Controls			Remote boiler shut down controls	6	3			1	$20,000.00	$20,000.00
		Vehicle Storage Exhaust			Ramp area ventilation	6	1			1	$15,000.00	$15,000.00
		Chilled Water VFD			2-way valves, requires full DDC	4	3,4			1	$125,000.00	$125,000.00
		DDC Controls			Full building DDC	6	3,4			1	$625,000.00	$625,000.00
		Clean and line ducts			Pre-and post construction T&B	4	2			1	$218,750.00	$218,750.00
									SUBTOTAL			$1,433,639.00
26		ELECTRICAL										
		Emergency Power			Phone, Data Closets					1	$20,000.00	$20,000.00
		Interior Lighting			LED Upgrade					1	$51,000.00	$51,000.00
		Exterior Egress Lighting				6	1			1	$1,000.00	$1,000.00
		GFCI Receptacles				6	1			1	$500.00	$500.00
		8320V Substation Replacement				1	1			1	$150,000.00	$150,000.00
		New Panelboards and MCC's				4	2			1	$136,250.00	$136,250.00
		Interior LED Lighting and controls				4	4			5	$175,000.00	$875,000.00
		New branch circuits for misc. power				4	2			5	$50,000.00	$250,000.00
		Surge Protection Devices				4	2			1	$1,000.00	$1,000.00
									SUBTOTAL			$1,484,750.00
27		COMMUNICATIONS										
		Remove Liebert Unit								1	$1,000.00	$1,000.00
									SUBTOTAL			$1,000.00
28		ELECTRONIC SAFETY AND SECURITY										
		Security Upgrades			Phones, Cameras at Parking					1	$74,000.00	$74,000.00
									SUBTOTAL			$74,000.00
32		SITE IMPROVEMENTS										
		Paving, Asphalt			Director, Employee Lots					1	$232,000.00	$232,000.00
		Paving, Concrete			Sidewalks, Dock					1	$85,000.00	$85,000.00
									SUBTOTAL			$317,000.00
									COUNTY COURTHOUSE - SUBTOTAL			$7,737,389.00

SECTION 03 .03

NAME: Sheriff's Administration
Address: 618 Cass Street
Year Built: 1994 (Addition)
Size: 20,000gsf
Floors: B-2

Deficiency Priority 1. Currently Critical
2. Potentially Critical
3. Necessary, not yet critical
4. Recommended
5. Appearance
6. Does not meet Code / Standard

Deficiency Category 1. Scheduled Maintenance
2. Deferred Maintenance
3. Capital Renewal
4. Energy & Sustainability
5. Security

DESCRIPTION					CONDITION			AGE		CAPITAL BUDGET		
SPECIFICATION DIVISION	FLOOR/S	DESCRIPTION	MANUF. / MODEL	PHOTO ID	NOTES, OBSERVATIONS	DEFICIENCY PRIORITY	DEFICIENCY CATEGORY	INSTALLATION DATE	EXPECTED USEFUL LIFE	5 YEARS QUANTITY / UNIT	COST / UNIT	SUB-TOTAL
02		EXISTING CONDITIONS										
												$0.00
									SUBTOTAL			$0.00
05		METALS										
		Stairs, Guard and Handrails			Replace Handrails	6	3			2	$4,000.00	$8,000.00
									SUBTOTAL			$8,000.00
08		OPENINGS										
		Doors, Frames and Hardware			911 Egress Door					1	$8,000.00	$8,000.00
												$0.00
												$0.00
									SUBTOTAL			$8,000.00
09		FINISHES										
		Toilet Rooms			ADA, Finish Upgrade	6	3			2	$30,000.00	$60,000.00
												$0.00
												$0.00
												$0.00
									SUBTOTAL			$60,000.00
12		FURNISHINGS										
		Solar Shades			Solar shades for ext windows					1	$10,000.00	$10,000.00
		ADA Signage			ADA Space, Directional Signage					1	$5,000.00	$5,000.00
									SUBTOTAL			$15,000.00
14		CONVEYING EQUIPMENT										
		Elevators, Detention										$0.00
									SUBTOTAL			$0.00
21		FIRE PROTECTION										
										$0.00		$0.00
										$0.00		$0.00
												$0.00
									SUBTOTAL			$0.00
22		PLUMBING										
		Provide ASSE 1070 Mixing Valves			Per plumbing code	6	1			1	$5,000.00	$5,000.00
		Provide Secondary Roof Drains			Add scuppers	6	3			1	$30,000.00	$30,000.00
		ADA Water Fountains			Dual Height (per installation)	6	3			1	$4,000.00	$4,000.00
		Install RPZ if required			None currently installed	6	3			1	$10,000.00	$10,000.00
									SUBTOTAL			$49,000.00
23		HVAC										
		Condensate Pump Interlock			prevent IT room water release	4	1			1	$500.00	$500.00
		Replace Liebert Unit (911)			10 Ton DX Unit	4	3			1	$62,000.00	$62,000.00
		Furnace Combustion Separations			Currently may not meet code	6	1			1	$500.00	$500.00
									SUBTOTAL			$63,000.00
26		ELECTRICAL										
		Distribution, Panels			Replace Electrical Feed after Jail					1	$75,000.00	$75,000.00
		Exterior Egress Lighting				6	1			1	$1,000.00	$1,000.00
		Interior LED Lighting and controls				4	4			3	$46,669.00	$140,007.00
		New branch circuits for misc. power				4	2			3	$13,334.00	$40,002.00
		Surge Protection Devices				4	2			1	$1,000.00	$1,000.00
												$0.00
									SUBTOTAL			$257,009.00
27		COMMUNICATIONS										
		Fire Alarm System				2	1			1	$20,000.00	$20,000.00
									SUBTOTAL			$20,000.00
28		ELECTRONIC SAFETY AND SECURITY										
												$0.00
									SUBTOTAL			$0.00
32		SITE IMPROVEMENTS										
												$0.00
									SUBTOTAL			$0.00
										SHERIFF'S ADMINISTRATION - SUBTOTAL		$480,009.00

SECTION 03 .04

NAME: Juvenile Detention
Address: 3360 Hospital Rd
Year Built: 1967
Size: 50,000gsf
Floors: 1

Deficiency Priority 1. Currently Critical
2. Potentially Critical
3. Necessary, not yet critical
4. Recommended
5. Appearance
6. Does not meet Code / Standard

Deficiency Category 1. Scheduled Maintenance
2. Deferred Maintenance
3. Capital Renewal
4. Energy & Sustainability
5. Security

DESCRIPTION					CONDITION			AGE		CAPITAL BUDGET		
SPECIFICATION DIVISION	FLOOR/S	DESCRIPTION	MANUF. / MODEL	PHOTO ID	NOTES, OBSERVATIONS	DEFICIENCY PRIORITY	DEFICIENCY CATEGORY	INSTALLATION DATE	EXPECTED USEFUL LIFE	QUANTITY / UNIT	COST / UNIT	5 YEARS SUB-TOTAL
02		EXISTING CONDITIONS										$0.00
											SUBTOTAL	$0.00
05		METALS										$0.00
												$0.00
											SUBTOTAL	$0.00
08		OPENINGS										
		Doors, Frames and Hardware			ADA hardware upgrades	3	3			1	$5,000.00	$5,000.00
		Detention Door Hardware			Security Upgrades	3	3			1	$500,000.00	$500,000.00
												$0.00
											SUBTOTAL	$505,000.00
09		FINISHES										
		Painting										$0.00
		Carpeting										$0.00
		Juvenile Detention- 17,000sf			ADA, Finish, Security Upgrade	4, 6	3			1	$1,200,000.00	$1,200,000.00
		Courtroom			ADA, Finish Upgrade	5,6	3			1	$180,000.00	$180,000.00
												$0.00
											SUBTOTAL	$1,380,000.00
12		FURNISHINGS										
		ADA Signage			ADA Space, Directional Signage	6	3			1	$5,000.00	$5,000.00
											SUBTOTAL	$5,000.00
14		CONVEYING EQUIPMENT										
		Elevators, Detention										$0.00
											SUBTOTAL	$0.00
21		FIRE PROTECTION										
		Fire Pumps									$0.00	$0.00
		Clean Agent Fire Suppression									$0.00	$0.00
		Wet-Pipe Sprinkler Systems										$0.00
											SUBTOTAL	$0.00
22		PLUMBING										
		Provide ASSE 1070 Mixing Valves			Per plumbing code	6	1			1	$5,000.00	$5,000.00
		Replace Original RPZ			Beyond design life	4	3			1	$20,000.00	$20,000.00
		Provide Secondary Roof Drains			Add scuppers	6	3			1	$20,000.00	$20,000.00
		ADA Water Fountains			In Div. 09	6	3			1	$0.00	$0.00
		Pinned Cleanouts			In Div. 09	4	5			1	$0.00	$0.00
		Remote Water Control System			In Div. 09	4	5			1	$0.00	$0.00
											SUBTOTAL	$45,000.00
23		HVAC										
		Boiler Shutoff Controls			Remote boiler shut down controls	6	3			1	$2,500.00	$2,500.00
		Grease Hood Updates			Match Hood to kitchen fixtures	6	3			1		$0.00
		HVAC Upgrade - Detention Exhaust				6	3			1	$500,000.00	$500,000.00
		HVAC Upgrade - Detention Smoke Control				6	3			4	$50,000.00	$200,000.00
		New Chiller				4	3			1	$250,000.00	$250,000.00
		DDC Controls Upgrade				4,6	3			1	$250,000.00	$250,000.00
		Replace rooftop gas piping			Beyond useful life	3	3			1	$20,000.00	$20,000.00
											SUBTOTAL	$1,222,500.00
26		ELECTRICAL										
		Exterior Egress Lighting				6	1			1	$1,000.00	$1,000.00
		Interior LED Lighting, controls- Commercial				4	4			1	$230,000.00	$230,000.00
		Interior LED Lighting, controls- Detention				4	4			1	$120,000.00	$120,000.00
		New branch circuits for misc. power				4	2			1	$100,000.00	$100,000.00
		Surge Protection Devices				4	2			1	$1,000.00	$1,000.00
		New panelboards				4	2			1	$40,000.00	$40,000.00
												$0.00
											SUBTOTAL	$492,000.00
27		COMMUNICATIONS										
		Fire Alarm System				2	1			1	$20,000.00	$20,000.00
											SUBTOTAL	$20,000.00
28		ELECTRONIC SAFETY AND SECURITY										$0.00
											SUBTOTAL	$0.00
32		SITE IMPROVEMENTS										$0.00
											SUBTOTAL	$0.00
											JUVENILE DETENTION - SUBTOTAL	$3,669,500.00

SECTION 03 .05

NAME: Commission on Aging
Address: 2355 Schust Rd.
Year Built: 1994
Size: 13,800gsf
Floors: B-1

Deficiency Priority 1. Currently Critical; 2. Potentially Critical; 3. Necessary, not yet critical; 4. Recommended; 5. Appearance; 6. Does not meet Code / Standard

Deficiency Category 1. Scheduled Maintenance; 2. Deferred Maintenance; 3. Capital Renewal; 4. Energy & Sustainability; 5. Security

DESCRIPTION					CONDITION			AGE		CAPITAL BUDGET		
SPECIFICATION DIVISION	FLOOR/S	DESCRIPTION	MANUF. / MODEL	PHOTO ID	NOTES, OBSERVATIONS	DEFICIENCY PRIORITY	DEFICIENCY CATEGORY	INSTALLATION DATE	EXPECTED USEFUL LIFE	QUANTITY / UNIT	COST / UNIT	5 YEARS SUB-TOTAL
02		EXISTING CONDITIONS										
												$0.00
											SUBTOTAL	$0.00
05		METALS										
												$0.00
												$0.00
											SUBTOTAL	$0.00
07		THERMAL AND MOISTURE PROTECTION										
		Waterproof NW Corner			Waterproof, Repair int. finishes	2	3			1	$10,000.00	$10,000.00
											SUBTOTAL	$10,000.00
08		OPENINGS										
		Doors, Frames and Hardware										$0.00
		Windows / Storefront										$0.00
											SUBTOTAL	$0.00
09		FINISHES										
		Flooring			Upgrade with LVT throughout	5	3			1	$30,000.00	$30,000.00
		Services Counters			ADA, Finish Upgrade	6	3			2	$5,000.00	$10,000.00
		Toilet Rooms, Public			ADA, Finish Upgrade	6	3			2	$5,000.00	$10,000.00
		Toilet Rooms, Staff			ADA, Finish Upgrade	6	3			1	$30,000.00	$30,000.00
												$0.00
											SUBTOTAL	$80,000.00
12		FURNISHINGS										
		Solar Shades										$0.00
											SUBTOTAL	$0.00
14		CONVEYING EQUIPMENT										
		Elevators, Detention										$0.00
		ADA Signage			ADA Space, Directional Signage					1	$5,000.00	$5,000.00
											SUBTOTAL	$5,000.00
21		FIRE PROTECTION										
		Fire Pumps									$0.00	$0.00
		Clean Agent Fire Suppression									$0.00	$0.00
		Wet-Pipe Sprinkler Systems										$0.00
											SUBTOTAL	$0.00
22		PLUMBING										
		Provide ASSE 1070 Mixing Valves			Meet current plumbing code (per fixture)	6	1			1	$500.00	$500.00
		Provide RPZ			None present	6	3			1	$15,000.00	$15,000.00
		ADA Water Fountains			Dual Height (per installation)	6	3			1	$4,000.00	$4,000.00
		Confirm Plenum PVC			Correct if present (per lineal foot)	6	2			1	$30.00	$30.00
		Type II Kitchen Hood			For Dishwasher if required	6	3			1	$25,000.00	$25,000.00
											SUBTOTAL	$44,530.00
23		HVAC										
		Refrigerant Limits			Lower level mechanical room	6	1			1	$15,000.00	$15,000.00
		Automate MAU/Grease Exhaust			Improved control	4	4			1	$2,500.00	$2,500.00
		VAV Kitchen Hood System			Instead of Automate exhaust	4	4			1	$25,000.00	$25,000.00
		Clean and Line Underslab Duct			Pre-and post construction T&B	4	2			1	$24,150.00	$24,150.00
											SUBTOTAL	$66,650.00
25		ELECTRICAL										
		Exterior Egress Lighting				6	1			1	$1,000.00	$1,000.00
		GFCI Receptacles				6	1			1	$200.00	$200.00
		Interior LED Lighting and controls				4	4			2	$48,300.00	$96,600.00
		Surge Protection Devices				4	2			1	$1,000.00	$1,000.00
		Remove Generator								1	$1,000.00	$1,000.00
												$0.00
											SUBTOTAL	$99,800.00
27		COMMUNICATIONS										
		Data Systems										$0.00
		Audio-Visual Systems										$0.00
											SUBTOTAL	$0.00
28		ELECTRONIC SAFETY AND SECURITY										
												$0.00
												$0.00
											SUBTOTAL	$0.00
32		SITE IMPROVEMENTS										
												$0.00
												$0.00
											SUBTOTAL	$0.00
											COUNCIL ON AGING - SUBTOTAL	$305,980.00

SECTION 03 .06

NAME: Marie Davis
Address: 233 N. 2nd Ave.
Year Built: 1964
Size: 6,000gsf
Floors: 1

Deficiency Priority 1. Currently Critical
2. Potentially Critical
3. Necessary, not yet critical
4. Recommended
5. Appearance
6. Does not meet Code / Standard

Deficiency Category 1. Scheduled Maintenance
2. Deferred Maintenance
3. Capital Renewal
4. Energy & Sustainability
5. Security

DESCRIPTION					CONDITION			AGE		CAPITAL BUDGET		
SPECIFICATION DIVISION	FLOOR/S	DESCRIPTION	MANUF. / MODEL	PHOTO ID	NOTES, OBSERVATIONS	DEFICIENCY PRIORITY	DEFICIENCY CATEGORY	INSTALLATION DATE	EXPECTED USEFUL LIFE	5 YEARS QUANTITY / UNIT	COST / UNIT	SUB-TOTAL
02		EXISTING CONDITIONS										
												$0.00
												$0.00
									SUBTOTAL			$0.00
05		METALS										
												$0.00
												$0.00
									SUBTOTAL			$0.00
08		OPENINGS										
		Doors, Frames and Hardware			ADA, Egress Upgrades	6	3			1	$12,000.00	$12,000.00
												$0.00
									SUBTOTAL			$12,000.00
09		FINISHES										
		Flooring			Upgrade with LVT throughout	5	3			1	$30,000.00	$30,000.00
		Acoustical Panel Ceilings			Upgrade with lights	5	3			1	$30,000.00	$30,000.00
		Services Counters			ADA, Finish Upgrade	6	3			2	$5,000.00	$10,000.00
		Toilet Rooms			ADA, Finish Upgrade	6	3			2	$30,000.00	$60,000.00
												$0.00
									SUBTOTAL			$130,000.00
12		FURNISHINGS										
		ADA Signage			ADA Space, Directional Signage					1	$5,000.00	$5,000.00
									SUBTOTAL			$5,000.00
14		CONVEYING EQUIPMENT										
												$0.00
												$0.00
									SUBTOTAL			$0.00
21		FIRE PROTECTION										
											$0.00	$0.00
												$0.00
									SUBTOTAL			$0.00
22		PLUMBING										
		Provide ASSE 1070 Mixing Valves			Meet current plumbing code (per fixture)	6	1			1	$500.00	$500.00
		Provide recirculation pump & piping			None present	6	4			1	$2,000.00	$2,000.00
		Replace water heater			Beyond design life	4	4			1	$7,500.00	$7,500.00
		ADA Water Fountains			Dual Height (per installation)	6	3			1	$4,000.00	$4,000.00
		Inspect & Repair Drain line			ongoing backup issues	3	2			1	$2,500.00	$2,500.00
		Kitchen solids interceptor			best practice	4	3			1	$5,000.00	$5,000.00
									SUBTOTAL			$21,500.00
23		HVAC										
		Replace grilles & diffusers			stained - prior smoking in space	5	1			10	$250.00	$2,500.00
		Replace self contained AHU's			beyond design life, failing components	3	3			2	$16,000.00	$32,000.00
		Full DDC controls			integrate AHU's and radiant system	4	3,4			1	$24,000.00	$24,000.00
		replace hot water boiler			beyond design life	4	3,4			1	$35,000.00	$35,000.00
		variable volume hot water loop			pumps & valves, requires DDC	4	3,4			1	$12,000.00	$12,000.00
									SUBTOTAL			$105,500.00
26		ELECTRICAL										
		Exterior Egress Lighting				6	1			3	$1,000.00	$3,000.00
		GFCI Receptacles				6	1			1	$200.00	$200.00
		Interior LED Lighting and controls				4	4			1	$21,000.00	$21,000.00
		New branch circuits for misc. power				4	2			1	$12,000.00	$12,000.00
		Surge Protection Devices				4	2			1	$1,000.00	$1,000.00
		New Panelboards				4	2			3	$5,000.00	$15,000.00
												$0.00
									SUBTOTAL			$52,200.00
27		COMMUNICATIONS										
												$0.00
												$0.00
									SUBTOTAL			$0.00
28		ELECTRONIC SAFETY AND SECURITY										
												$0.00
												$0.00
												$0.00
32		SITE IMPROVEMENTS										
												$0.00
												$0.00
									SUBTOTAL			$0.00
									MARIE DAVIS SENIOR CENTER - SUBTOTAL			$326,200.00

SECTION 03 .07

NAME: Mosquito Control
Address: 211 Congress Ave.
Year Built: 1964
Size: 21,600gsf
Floors: 2

Deficiency Priority 1. Currently Critical
2. Potentially Critical
3. Necessary, not yet critical
4. Recommended
5. Appearance
6. Does not meet Code / Standard

Deficiency Category 1. Scheduled Maintenance
2. Deferred Maintenance
3. Capital Renewal
4. Energy & Sustainability
5. Security

DESCRIPTION					CONDITION			AGE		CAPITAL BUDGET		
SPECIFICATION DIVISION	FLOOR/S	DESCRIPTION	MANUF. / MODEL	PHOTO ID	NOTES, OBSERVATIONS	DEFICIENCY PRIORITY	DEFICIENCY CATEGORY	INSTALLATION DATE	EXPECTED USEFUL LIFE	QUANTITY / UNIT	COST / UNIT (5 YEARS)	SUB-TOTAL
02		EXISTING CONDITIONS										
												$0.00
												$0.00
									SUBTOTAL			$0.00
05		METALS										
		Stairs, Guard and Handrails			2nd FL Emergency Egress					1	$20,000.00	$20,000.00
												$0.00
									SUBTOTAL			$20,000.00
08		OPENINGS										
		Windows / Storefront			Window Sill Replacement					1	$7,000.00	$7,000.00
												$0.00
									SUBTOTAL			$7,000.00
09		FINISHES										
		Services Counters			ADA, Finish Upgrade	6	3			2	$5,000.00	$10,000.00
		Toilet Rooms			ADA, Finish Upgrade	6	3			2	$30,000.00	$60,000.00
		Upgrade Spray Room to Class I Div I			Fire, Elec, Mech upgrades	6	3			1	$100,000.00	$100,000.00
												$0.00
									SUBTOTAL			$170,000.00
12		FURNISHINGS										
												$0.00
												$0.00
									SUBTOTAL			$0.00
14		CONVEYING EQUIPMENT										
		ADA Signage			ADA Space, Directional Signage					1	$5,000.00	$5,000.00
												$0.00
									SUBTOTAL			$5,000.00
21		FIRE PROTECTION										
		Wet-Pipe Sprinkler Systems			Upgrade building coverage	6	3			1	$30,000.00	$30,000.00
									SUBTOTAL			$30,000.00
22		PLUMBING										
		Provide ASSE 1070 Mixing Valves			Meet current plumbing code (per fixture)	6	1			1	$500.00	$500.00
		Trench drains and Oil Water Separator			Vehicle storage and maintenance areas	6	4			1	$150,000.00	$150,000.00
		ADA Water Fountains			Dual Height (per installation)	6	3			1	$4,000.00	$4,000.00
		Update Eyewash Shower			Provide tempered water	6	1			1	$10,000.00	$10,000.00
									SUBTOTAL			$164,500.00
23		HVAC										
		Replace R-22 DX Coils			R-22 Phaseout, (cost per unit)	4,6	1,3			1	$5,000.00	$5,000.00
		Vehicle Storage Ventilation			Exhaust fan and Makeup Air	6	3			1	$75,000.00	$75,000.00
		Wood Shop Dust Collection			May not meet current code	6	3			1	$50,000.00	$50,000.00
		Update Steam boiler			New boiler	4	3			1	$65,000.00	$65,000.00
		Mosquito Control Lab Hood			May not meet current code	6	3			1	$20,000.00	$20,000.00
									SUBTOTAL			$215,000.00
26		ELECTRICAL										
		Exterior Egress Lighting				6	1			3	$1,000.00	$3,000.00
		GFCI Receptacles				6	1			1	$200.00	$200.00
		Interior LED Lighting and controls				4	4			1	$170,000.00	$170,000.00
		New branch circuits for misc. power				4	2			1	$12,000.00	$12,000.00
		Surge Protection Devices				4	2			1	$1,000.00	$1,000.00
		New Panelboards				4	2			4	$5,000.00	$20,000.00
												$0.00
									SUBTOTAL			$206,200.00
27		COMMUNICATIONS										
												$0.00
												$0.00
									SUBTOTAL			$0.00
28		ELECTRONIC SAFETY AND SECURITY										
		Fire Alarm				6	1			1	$24,100.00	$24,100.00
									SUBTOTAL			$24,100.00
32		SITE IMPROVEMENTS										
												$0.00
												$0.00
												$0.00
									SUBTOTAL			$0.00
									MOSQUITO CONTROL - SUBTOTAL			$841,800.00