

# **FACILITIES ASSESSMENT**

For

## **CITY OF WAUKEGAN**

100 N. Martin Luther King Jr. Ave  
Waukegan, IL 60085

January 3rd, 2018  
Project #: 1709

**RRP** ■ **INC.**

**ARCHITECTS-DESIGNERS**

1122 Douglas Ct.  
Waukegan, Illinois 60085  
(847) 336-0280

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**City of Waukegan**

Mayor Sam Cunningham & City Council  
100 N. Martin L. King Jr. Ave.  
Waukegan, IL 60085

**RE: Facility Assessment - Synopsis**

This assessment is a summary of the approximate 23 buildings or structures that were evaluated at 18 different locations. A walk through was completed with **RRP Inc.**, consultants and owner's representative at all locations. The types of building varied including Municipal facilities, vacant office spaces, theatres, historic buildings, and abandoned water tower structures.

The buildings constructed or renovated within the past 20 years are in good shape barring any typical maintenance. These buildings include City Hall, Genesee Theatre, Fire Station #2 & Fire Station #5. The City owns a number of buildings that are 30 years or older which are in need of maintenance and repairs. The buildings we felt required the most attention are the Public Works Facility and Police Station as these facilities are essential to city functions. Repairs and maintenance have been delayed or neglected for years. Several of the other buildings are vacant and have no clear vision for future development.

The Public Works facility is 34 years old. There have been no major renovations and many of the HVAC systems are well beyond their useful life. The nature of this facility subjects it to heavy wear and usage. We recommend beginning with functional repairs such as roof replacement, door replacement and HVAC renovations. Once these essential features are updated and repaired, cosmetic upgrades can be made.

A majority of the Police Station is approximately 50 years old but a portion of the original city hall building is 90 years old. There have been a few small remodeling projects in recent years, but no major renovations for more than 30 years. Some mechanical units date back to the 1960s. The City has been historically reluctant to put money into the station as it hoped to construct a new station. However, given the City's budget constraints a new station is not in the foreseeable future, therefore improvements will need to be made to ensure police department has functional workspace.

Estimates for these facilities have been placed into categories. A = Urgent, B = 1-3 years, C = 3-5 years, D = 5-10 years, R = Recommended. Urgent items (A) should be addressed as soon as possible. Other items (B,C,D) have an estimated time line for completion. Recommended items can be addressed at the City's discretion if they are financially feasible in the desired timeline. Estimates are very preliminary in nature. For more accurate estimates, further in depth investigation and design will be required.

We recommend allocating funds each year towards a city wide maintenance plan. Projects should be completed each year to ensure buildings are properly maintained.

## **Waukegan Public Works Facility**

Administration Office, Vehicle Storage Building, Vehicle Repair Garage, Cold Storage, Heated Garage, Animal Shelter & Salt Storage Dome

- 1 Bldg Name     **Waukegan Public Works Dept, Cold Storage, Animal Shelter & Salt Storage Dome**
- 2 Address       **1700 N McAree Rd**
- 3 Bldg Sq. Ft.   **121,000 SF Mezzanine 20,000+/- SF**
- 4 Year Built     **1983**
- 5 Use            **Public Works - Offices, Shop, Vehicle Storage**

### **Preliminary Information**

The building was built in 1983 as a new facility for the Waukegan Public Works. The Public Works campus also includes a cold storage facility, fuel station canopy, animal shelter, maintenance garage and salt storage dome. From our walk through it is apparent that maintenance on this property has been over looked by past administrations and directors of public works. There have been no major building renovations and many of the mechanical systems are original to the building. It should also be noted that mechanical systems for these types of buildings have short life spans due to the nature of their use.

Please see attached reports from Root Engineering Services regarding Mechanical, Electrical and Plumbing (MEP) systems assessments & Camplin Environmental Services for preliminary inspection of possible asbestos containing materials.

### **A. Exterior - Building Enclosure**

#### **1. Exterior Windows & Doors**

Aluminum entrance/egress doors are in fair condition. Aluminum windows are also in good condition. The exterior hollow metal man doors from shop and garage areas are in terrible shape and should be replaced. Hollow metal door frames, sheet metal trim & steel framing are rusted out at grade level. Overhead doors are old and will need replacement soon. The door steel framing is completely rusted out at the base of exterior doors. The framing for these doors should be repaired as soon as possible.

#### **2. Metal Wall Panels**

The buildings wall panels are nearly 35 years old and are definitely showing signs of age. Most of the panels are still in fair condition however, some of the walls panels and trim at grade levels are rusted from salt in the winter and are in need of replacement. Entire building could be re-painted.

#### **3. Roofing**

Existing roofing is an exposed fastener ribbed system that is beyond it's useful life time. There are portions of the roof gutter that are detached and open to weather and birds are nesting in these areas. The roof over the main office areas on the Southeast

portion of the building has numerous leaks as noted by many water damaged and broken ceiling tiles. Daylight can be seen above the ceiling at the high flashing where higher sloped roof ties to wall. The roof over the vehicle storage bays has fewer leaks, however this roof is quite old and will need attention the next three to five years. The roof insulation in many cases is torn and hanging from ceiling. We recommend a full tear off and roof replacement. Additional insulation could be installed along with a white interior facer which would help the overall appearance of the building. The gutter on North side of building should be cleaned by staff.

#### **4. Site**

The Public Works campus is completely fenced and is accessed from McAree Rd. The asphalt on the site is old and in need of replacement. The Salt Storage Dome is in dire need of repair or replacement. The cold storage building is aged as many parts of the metal wall panels are damaged from vehicles or machinery. The animal shelter on the site is showing signs of age and neglect.

### **B. Interior**

#### **1. Walls , Doors & Floors**

Interior walls are drywall or CMU and in good condition overall. There is some wear and tear due to the use and age of this building. Flooring in many areas is old and should be replaced.

#### **2. Ceilings & Lighting**

Dropped ceilings and grids are old and showing signs of age. There are many ceiling tiles with water damage or missing completely. Existing Light fixtures are also old and have outlived their useful life. Majority of existing fixtures use the old T-12 lamps and ballasts. These will become obsolete within the near future. The city has been contemplating a LED lighting upgrade project for this facility.

#### **3. Structure**

The building is a Pre-Engineered Metal Building. Overall the structure is in fair shape but there are some items that should be addressed. Many framing members are rusted out at the base of Overhead and Man doors. There is one column in the vehicle storage bay that has been damaged from being hit by a truck. The steel framing could be cleaned and painted to protect the structure from any further weathering.

#### **4. Egress & Exiting**

There are illuminated exit signs & emergency lights through out building. A few locations require an additional exit or emergency light. All exits are at grade level although main entrance may have a great slope than permitted by the American Disabilities Act (ADA). The building has two mezzanine areas that have only one access by stairs and no elevators. The steel railing at the main entrance should be replaced.

#### **5. Asbestos**

There were no immediate or obvious locations of any asbestos containing materials. See report from Camplin Environmental Services.

**C. Mechanical, Electrical, Plumbing, (MEP) Fire Alarm & Suppression**

**1. Mechanical:**

Due to the mixed use nature of this facility there are numerous types of mechanical systems. There is a conventional boiler, air handling units and condenser that service office and shop spaces. Vehicle bays have radiant heat. Carbon Monoxide sensing system is not functional and should be replaced promptly. There are also some issues with exhaust and fresh air systems. These systems should all be replaced as soon as possible.

**2. Electrical**

There is an 800A service in the building with a backup generator.

**3. Plumbing**

Plumbing service: Restrooms are in fair condition but not up to current ADA codes. Restrooms should be brought up to current code if any renovation takes place.

**4. Fire Alarm/Suppression**

Building is equipped with a Zoned Fire Alarm Panel with detectors, AV devices and pull stations throughout. There are no Visual strobe devices in restrooms. There is an automatic fire suppression system through out the building.

**D. RECOMMENDATION**

The public works campus has been neglected over the last 30 plus years. Many mechanical systems are in need of repair or replacement. Entire metal roof system needs replacement. Many exterior Overhead and man doors need replacement along with framing repairs.

- 1) Replace roofs over office areas and vehicle maintenance: \$530,000.00
- 2) Replace roof over vehicle storage: \$1,000,000.00
- 3) Replace 7 overhead doors and repair framing: \$80,000.00.
- 4) Replace 8 man doors and repair framing: \$45,000.00.
- 5) New Flooring: \$120,000.00
- 6) Replace front railing: \$10,000.00
- 7) Replace rusted metal wall panels at the base. \$50,000.00
- 8) Paint exterior: \$100,000.00
- 9) Resurface asphalt lot: \$800,000.00

**F. ADDITIONAL BUILDINGS ON SITE**

**1. Cold Storage Building - 9,500SF:**

The cold storage material building was also constructed in 1983 and is showing signs of age. Many of the metal wall panels and surrounding bollards have suffered damage from vehicles and equipment. Man doors are also in bad shape and should be replaced. (\$4,000.00 ea x 9 = \$36,000.00). OH doors are operational but are also aged and may need replacement. (Estimated \$10,000 ea x 9 = \$90,000.00). Some of the interior CMU walls have suffered damage and should be repaired. Lighting is old and should be upgraded. There is no water or HVAC systems in this building. There is an old walk-in cooler that should be recycled. The roofing could be coated to prevent and further water leakage: \$65,000.00

**2. Salt Storage Bin - 10,500+/- SF:**

The salt storage bin is in very bad shape. Portions of the wood structure are caving in and have suffered damage from vehicles. Shingle roofing is missing in areas and holes are in the roof. The concrete retaining walls have corroded from salt and weather. We recommend repairing wood structure and cleaning and patching interior concrete. Alternate: Demo and build new salt storage dome structure. Concrete walls could remain if patched properly.

**3. Animal Shelter 2,200 SF:**

The Animal Shelter is a Summit Pre-engineered metal building. The building is showing signs of age. Some roof leaks have been repaired. Building will most likely need a roof replacement as the roof is beyond its useful life time. A coating may be an option. The exterior doors are also in need of replacement. Windows are in fair shape and should last another 10 years. Some of the doggie doors to the exterior do not shut and should be repaired or replaced. There is stand alone 750 SF garage that is of newer construction and in good condition.

MEP systems are residential type and in fair condition. Some of this equipment may need replacement in 5-10 years. There is no Fire Protection system. Emergency and exit lights are adequate.

**4. Heated Garage:**

The heated garage area has minimal heating and window AC. Equipment should be serviceable for the next 10 years.

**5. Gas Pump Structure:**

Steel structure was hit by a truck and is deformed nonetheless, the structure is still sound. Painting the exposed steel structure could extend its lifetime as it is exposed to weather.

## **ROOT ENGINEERING SERVICES - MEP REPORT:**

### **Building Title and Address:**

Public Works Building, 1700 McAree

**General Comments:** This facility was constructed in 1985. Most observed systems date from original construction and have reached or exceeded their economic life. Estimated costs listed below are a very preliminary opinion of probable costs in the MEP trades only. A much more detailed review will be necessary to prepare a detailed and reliable cost estimate.

### **HVAC Systems:**

#### **-Public Works Office.**

This area is served by a grade mounted Trane 25 ton condensing unit and an indoor air handling unit which dates from original construction. The condensing unit is well past its economic life, uses obsolete R22 refrigerant and will almost certainly need replacement in the next 10 years. The air handling unit likely can be rebuilt in place, replace controls to achieve a long serving dependable system. Estimated cost: Condensing unit Replacement \$60,000. AHU rebuild/controls. \$45,000.

#### **-Water Department Office.**

This area is served by a small grade mounted Trane packaged unit which dates from original construction. This unit is well past its economic life, again uses R22 refrigerant, and will almost certainly need replacement in the next 10 years. Estimated cost \$17,000.

#### **Vehicle parking area.** This area is served by several systems.

- Infrared tube heaters are placed near the roof in most areas. Their age is unknown. Physical damage is evident in many of these units, and they appear to be very worn and in questionable condition. We expect replacement to be necessary in the next 10 years. Estimated cost \$90,000.
- Carbon monoxide sensing control system and alarm. This system is reportedly not functioning, and has been out of service for some time. This is a code violation for which we urge prompt replacement to put back into service. Estimated cost \$35,000.
- Roof exhaust fans serve the back-parking area, intended to exhaust vehicle fumes and ventilate the space, and are controlled by the carbon monoxide sensing system. These fans dating from original construction are clearly worn, and likely should be replaced or rebuilt. Estimated cost \$30,000.
- Four built up air handling units (AHU). These units are located on the mezzanine, use a hot water coil for heat, and have an array of dampers and fans, and date from original construction. This equipment is intended to ventilate the vehicle parking space, provide make up air, and exhaust the space, working with the carbon monoxide sensing controls and roof mount air conditioners. These AHU's are clearly worn, but are re-buildable (new belts, pulleys, motors, dampers, actuators, bearings). This equipment uses pneumatic controls which have likely become unreliable and maintenance intensive. We would recommend rebuilding these AHU's and replacing their controls in the next ten years. Very preliminary estimated cost \$145,000.
- Boiler plant. The installed boiler is rated at three million btu/hr boiler and dates from original construction, but appears to have a newer burner assembly. This equipment has reached its expected economic life, and is inefficient in comparison to modern equipment. Although this style of boiler can likely be re-tubed to extend its life, we would recommend replacement to a modern energy efficient condensing boiler. Boiler water is circulated with two frame mounted end suction pumps. These pumps look newer, and are of good quality; we would expect them

to be serviceable and reliable for at least 10 years, perhaps needing only a minor rebuild of coupling, seal and motor. The condition of hot water piping, valves, controls and accessories is unknown. If chemical water treatment has been consistently practiced, we would expect considerable remaining life for the piping system. Pipe insulation has some damage, as might be expected for its age, but is mostly serviceable. Estimated cost \$225,000.

**Vehicle repair bay area.** This area is also served by several systems.

- Carbon monoxide sensing control system and alarm. The repair bays CO system is separate from the vehicle parking area, and again is reportedly not functioning. We understand these fans are operated manually by the staff. These controls are a code violation for which we urge prompt replacement to put back into automatic service. Estimated cost \$25,000.
- Roof exhaust fans, intended for general exhaust are controlled by the carbon monoxide sensing system. These fans date from original construction are clearly worn, but are rebuildable (new belts, pulleys, motor, dampers/actuators, bearings). We would recommend rebuilding or replacing these units in the next ten years. Estimated cost \$45,000.
- Make up air units. Two suspended indoor indirect fire units are in place, and they clearly are replacement units which reportedly were installed in about 2002. This type of equipment lives a hard life in our climate, and will likely again need replacement in the next ten years. Estimated cost \$195,000.
- Spray booth system. This includes an exhaust fan array at the spray booth and a direct fire make up air unit in the repair bay. The age of this equipment is unknown, but appears worn. The lifetime of this equipment varies greatly with the amount of use it is given, particularly in cold weather. Given limited use, we would expect greater than 10 years life with careful maintenance.
- Tailpipe exhaust system. This system appears to be serviceable, but will likely need rebuilding and maintenance in the next 10 years. Estimated cost \$9000.
- Several small remote offices in this facility (including repair bay office) are conditioned with packaged terminal air conditioners (PTAC). The installed units appear beyond their expected economic life, and likely will need replacement in the next 10 years. Estimated cost \$18,000.
- Bridge Crane. We have no information on the condition of this equipment, but would expect it to be serviceable for the next 10 years given good maintenance.
- High Pressure heated water blaster for wash bay. This unit looks newer; however, the lifespan of this equipment is not long. Need for replacement of this equipment is possible in the next 10 years. Estimated cost \$18,000.

**Electrical Power Systems:**

The main service is 277/480v 3 phase 800 amperes fed from a pad mount ComEd utility transformer. The service is 100% backed up by a 225kw indoor diesel generator with automatic transfer switch (ATS) and base mounted fuel tank. It is our understanding that the generator has had good maintenance in its life, and given that this equipment is not used often, we would expect it to continue to serve for greater than 10 years. We do note that the ATS can be problematic, and could possibly require rebuild or replacement in the next 10 years. Main distribution is via a switchboard mounted on the mezzanine. We would expect this equipment to continue to serve adequately for the next 10 years. Other distribution including panel boards and step down transformers date from original construction are likely at their economic life. They will likely continue to serve adequately as they appear to be of good period quality, installed professionally, and do not appear overloaded or altered in inappropriate ways.

**Electrical Lighting Systems:**

- We note that typical finished space lighting uses obsolete and inefficient T12 fluorescent lighting, fixture (typically 2x4' troffers). We note that vehicle parking and repair bay lighting is typically 2x2' suspended HID fixtures, also obsolete and inefficient. We note that the availability of T12 lamps in the future will be an issue as the Department of Energy(DOE) has been working to phase them out of production. It is recommended that all new LED interior lighting be planned for the entire facility within the next 10 years. At very minimum, a plan to convert T12 lamp fixtures to T8 should be undertaken. We note that lighting control is as originally constructed; updating in certain cases to occupancy sensing controls is recommended. For most of this work, energy credits and grants are a possibility. Costs can vary widely depending on the owner's desire, but may range up to \$200,000.
- Exterior lighting systems are similarly dated. We have not observed the site at night, but improvements in efficiency and efficacy are certainly possible. We recommend that exterior lighting be included in the project planning. Again, costs will vary depending on the city's desires but perhaps \$40,000.

**Electrical Low Voltage Systems:**

We note that an addressable fire alarm system has been installed (perhaps 10 years old). This will likely serve for at least the next 10 years, although we note that audio visual alarm coverage does not comply with current code or ADA regulations. Cost to get existing fire alarm system up to current standard (mostly add many new audio visual alarm), very approximate cost \$40,000. We did not observe any audio, intercom, card access or similar systems.

**Plumbing Fixtures:**

Most fixtures observed date from original construction, and showed wear and tear commensurate with their age. Most are also obsolete and consume more water than modern fixture. We note that although some partial alterations have been done, restrooms observed were not fully compliant with ADA. Updating fixtures and altering facilities to comply with ADA is recommended in the next 10 years. Plumbing only cost for this alteration very approximate \$40,000.

**Plumbing Water System:**

A 3" water service is configured off the base of the FP riser, which is comfortably sized. We note that back flow preventers are in place from original construction. Water distribution was in copper pipe and professionally done. Pipe insulation was mostly intact in in reasonable condition for its age. The main water heater (near locker rooms) is a 420 mbh with a 500gal storage tank, and had inscriptions indicating it was installed in 1992. Water heaters often have limited lifespans, and replacement of this unit should be expected in the next decade. Estimated cost \$14,000.

**Plumbing Waste/vent/storm:**

These systems seem intact. No recommendations at this time.

**Plumbing Compressed Air:**

At least three air compressors (5 to 20hp) were observed. All seemed worn but serviceable. Some had air dryers, others did not. Compressed air pipe material depended on the service. One or perhaps two compressors will likely need replacement in the next 10 years. Estimated cost \$6,000.

**Fire Protection System:**

The FP system has an 8" water service with back flow preventer, a wet system zone for the office area, and three dry system zones for the vehicle parking and repair areas. These systems require maintenance but are unlikely to need replacement or repair.

**Building Title and Address:  
Animal Control Building, 1698 McAree**

**General Comments:**

This facility is a small metal building near the public works building, likely constructed at the same time. The observed MEP systems are residential type.

**HVAC Systems:**

- The front office has a PTAC unit which looked older and worn. It would be reasonable to expect the need to replace this unit in the next 10 years.
- Dog area. This space had a small gas fired unit heater likely dating from original construction, a small through wall exhaust fan, and a ducted residential cooling only air conditioner (two tons) which appears to have been added perhaps past 20 years ago. Odors in this area are an issue. Improvements to raise the ventilation rate would be desirable.
- Cat area. This small room is in similar condition as the dog area. The distress of the animals at the time precluded significant inspection of this space.
- Replacement of all this equipment should be expected in the next ten years. Estimated cost \$5000.
- The garage building has little ventilation, and is heated by a small gas fired unit heater.

**Plumbing Systems:**

Plumbing in this building includes a small restroom, a residential style washer, a residential water heater and a stainless-steel scullery sink. The water heater will likely need replacement in the next 10 years. Estimated cost \$1200.

**Electrical Systems:**

This facility has a residential 120/240v 200a electrical service with a residential load center. While not of commercial quality, it remains serviceable. Light fixtures are similar to that found in public works, with the same conclusions and recommendations appropriately. Estimated cost to upgrade lighting perhaps \$2500.

**Fire protection:**

None installed. No recommendations.

**Environmental Report:**

**Camplin Environmental Services (See full report from CES):**

**Public Works Garage and Out Buildings – 1700 McAree**

- Potential non-friable materials were noted in the building.
- No actions are required at this time.
- A comprehensive asbestos inspection prior to demolition or renovation of the buildings would cost approximately \$2,500.

**Animal Shelter and Garage – 1698 McAree**

- Potential non-friable materials were noted in the building.
- No actions are required at this time.
- A comprehensive asbestos inspection prior to demolition or renovation of the building would cost approximately \$500.

**Waukegan Facility Assessment - Cost Estimates**  
**Waukegan Public Works - 1700 N. McAree Rd.**

**WAUKEGAN PUBLIC WORKS**

ITEM	DESCRIPTION	RECOMMENDED WORK	PRIORITY	RENOVATION SUB-TOTAL
<b>Office &amp; Vehicle Building</b>				
1	Office & Vehicle Maint Roof	Remove and replace existing metal roof with new insulation	A	\$ 530,000.00
2	Vehicle Storage Roof	Remove and replace existing metal roof with new insulation	B	\$ 1,000,000.00
3	OH Doors	Remove and replace doors, repair steel framing	A	\$ 80,000.00
4	HM Man Doors	Remove and replace doors, repair steel framing	A	\$ 45,000.00
5	New Flooring	Remove and replace old carpet and flooring	D	\$ 120,000.00
6	Replace entry steel rail	Remove and replace steel hand rail	A	\$ 10,000.00
7	Metal Wall Panels	Repair or replace Metal wall panels	B	\$ 50,000.00
8	Paint building metal panels	Clean and paint entire building exterior panels	D	\$ 100,000.00
9	Asphalt Lot	Grind and overlay existing asphalt parking lot	D	\$ 800,000.00
10	Condensing Unit	Remove and replace CU	D	\$ 60,000.00
11	Office AHU	Rebuild AHU	D	\$ 45,000.00
12	Water Dept Trane Unit	Remove and replace RTU	D	\$ 17,000.00
13	Infrared Tube Heaters	Remove and replace Infrared Tube Heat	D	\$ 90,000.00
14	Carbon Monoxide System	Remove and replace CO Sensor system	A	\$ 35,000.00
15	Vehicle Storage Roof Exhaust	Replace or rebuild Roof Exhaust	B	\$ 30,000.00
16	Vehicle Storage AHUs	Replace or rebuild vehicle storage AHUs	D	\$ 145,000.00
17	Boiler Plant	Remove and replace boiler with condensing boilers	D	\$ 225,000.00
18	Repair Bay CO system	Remove and replace CO Sensor system	A	\$ 25,000.00
19	Repair Bay Roof Exhaust	Replace or rebuild Roof Exhaust	B	\$ 45,000.00
20	Repair Bay MUAUs	Remove and replace Make up air units	D	\$ 195,000.00
21	Repair Bay Tail Exhaust System	Remove and replace tailpipe exhaust system	D	\$ 9,000.00
22	Remote Offices PTAC	Remove and replace PTAC	D	\$ 18,000.00
23	Washbay System	Remove and replace washbay system	D	\$ 18,000.00
24	Interior Lighting Upgrade	Remove and replace interior lighting	B	\$ 200,000.00
25	Exterior Lighting Upgrade	Remove and replace exterior lighting	B	\$ 40,000.00
26	Fire Alarm Upgrade	Upgrade Fire Alarm system	R	\$ 40,000.00
27	Water Heaters	Remove and replace water heaters	D	\$ 14,000.00
28	Air Compressor	Remove and replace air compressor	D	\$ 6,000.00
<b>TOTAL</b>				<b>\$ 3,992,000.00</b>

<b>Cold Storage Building</b>				
1	Replace Man Doors	Remove and replace man doors	D	\$ 36,000.00
2	Replace Overhead Doors	Remove and replace OH Doors	D	\$ 90,000.00
3	Recoat Metal Roof	Install new roof coating	D	\$ 65,000.00
<b>TOTAL</b>				<b>\$ 191,000.00</b>

**Priority Code: A = Urgent, B = 1-3 years, C = 3-5 years, D = 5-10 years, R = Recommended**

All estimates are preliminary in nature. For more accurate estimates further investigation and design will be required.

				RENOVATION	
ITEM	DESCRIPTION	RECOMMENDED WORK	PRIORITY		SUB-TOTAL
<b>Salt Storage Dome</b>					
1	Repair	Repair damaged wood structure	A	\$	60,000.00
2	Repair interior Concrete	Remove and replace	C	\$	42,000.00
3	Install New Salt dome	Install new salt dome	D	\$	450,000.00
<b>TOTAL</b>				<b>\$</b>	<b>552,000.00</b>
<b>Animal Shelter</b>					
1	Replace Man Doors	Remove and replace man doors	D	\$	8,000.00
2	Replace Doggie Doors	Remove and replace dog doors	D	\$	10,000.00
3	Recoat Metal Roof	Install new roof coating	D	\$	14,000.00
4	Upgrade MEP Systems	Remove and replace	D	\$	8,700.00
<b>TOTAL</b>				<b>\$</b>	<b>40,700.00</b>
<b>Gas Pump Roof Shelter</b>					
1	Steel Structure	Paint steel structure	D	\$	20,000.00
2	Steel Structure	Repair steel structure	R	\$	5,000.00
<b>TOTAL</b>				<b>\$</b>	<b>25,000.00</b>

**Priority Code: A = Urgent, B = 1-3 years, C = 3-5 years, D = 5-10 years, R = Recommended**

All estimates are preliminary in nature. For more accurate estimates further investigation and design will be required.

## **Waukegan Police Station & 1721 Storage Garages**

- 1 Bldg Name**      **Waukegan Police Station (Original City Hall, Former Fire Station)**
- 2 Address**        **101 N. West St.**
- 3 Bldg Sq. Ft.**    **25, 950 SF Lower Level, 23,360 SF Main Level, 2,945 SF Second Floor**
- 4 Year Built**      **Original Building 1927-28, Additions 1961 & 1967, Renovated in 1983**
- 5 Use**              **Police Station, Storage Garages**

### **Preliminary Information**

The Original City Hall building was built in 1927 with an addition in 1928 of a council chambers which has since been renovated into a police training room. In 1967, there was a City Hall & Fire Station addition. In 1983 the facility was renovated with half the building becoming the Police Station and half remaining City Hall. In 2004, the City moved into the new adjacent City Hall building and the Police Station took over the entire building. There have been a few small renovations recently but portions of the building need to be reworked, expanded and upgraded for better functionality.

Please see attached reports from Root Engineering Services regarding MEP systems assessments & Camplin Environmental Services for preliminary inspection of possible asbestos containing materials.

### **A. Exterior - Building Enclosure**

#### **1. Exterior Windows & Doors**

Aluminum entrance/egress doors are in fair condition. Some of the exterior windows were replaced in the 1983 renovation. These are Aluminum windows that are in good condition. The windows on the South facade from the 1967 addition are an old steel sash window frame with single pane 1/4" clear glazing. Many of the operable windows do not work and have been sealed shut. Some of the glazing putty is damaged and loose and causing windows to leak. There was a grey tinted film installed on the windows that is old and peeled off in some places. These windows have outlived their useful lifetime and should be replaced as soon as possible. New insulated windows would help create a better environmental condition for offices and save energy. Exterior Hollow Metal doors are in fair condition. Sallie Port OH Roll up doors are in fair condition. Old wood double door in the basement should be replaced. Wood Door from basement Mechanical Room is old and in need of replacement. Steel windows in basement are beyond useful lifetime and should be replaced.

#### **2. Exterior: Masonry Panels**

The building exterior stone wall panels are 50 years old and are showing signs of age. There are some granite panels at the East entrance from Martin Luther King Jr Drive. Most of the panels are still in fair condition; however, some of the joints are in need of

re-pointing. Some of the stone could also benefit from a cleaning. The 911 center is coated partially with stucco in lieu of stone panels.

### **3. Roofing**

The entire building underwent a roofing replacement in 2011. The Garland roofing system is a flood coat and gravel built up roof. This roof has a 30 year warranty which covers the roof until 2041. In many cases if the roof is maintained well, the roofing membrane can be coated to extend the life of the roof (40 years or more). There were suspected roof leaks above the 911 emergency center. After extensive investigation it was determined that water was entering at an old Make Up Air Unit that serves the gun range in the basement. This unit should be replaced to prevent any further water infiltration.

### **4. Site**

The Police Station is located on a small site that shares a courtyard and small parking lot to the South with City Hall. There is a small parking lot on the Northside. This side of the building has access to sallie ports. The Police Dept shares parking lots with adjacent church buildings and across the street with a lawyer's office. The asphalt on the North side is old, has alligator cracking with some large pot holes. Asphalt should be replaced within 3-5 years.

## **B. Interior**

### **1. Walls & Doors**

Interior walls are drywall & CMU. The original building has plaster. Main corridor walls are a laminate wood panel that are old and dated. Some walls in the original buildings are showing signs of age. Interior doors on the original city hall are old wood doors and out lived their useful life time. HM frames and wood doors from 1983 renovated portions are in fair condition. Old wood doors and frames in the basement and other areas not renovated are in fair shape as they do not see a lot of use.

### **2. Ceilings & Lighting**

Dropped ceilings and grids are old and showing signs of age. There are many ceiling tiles with water damage or missing completely. Ceiling tiles have been damaged by either old roof leaks that have been repaired or sweating from mechanical piping. In 2011, cooling was added the two pipe heating system. Many of the existing pipes were not properly insulated and now sweat during the cooling season. We suggest replacing all insulation on piping before any ceiling project takes place. Existing Light fixtures are also old and have outlived their useful life. Majority of existing fixtures use the old T-12 lamps and ballasts. These will become obsolete within the near future. There are also many incandescent bulb fixtures in the basement that should be replaced. The city has been looking into completing an LED lighting upgrade project for this building.

### **3. Structure**

The original building structure is wood framing and exterior masonry walls. Overall this structure is in fair shape. The 1967 addition is a combination of steel and concrete beams and joists. This structure is in good shape in places observed above ceilings. Some brick masonry in the basement of the original basement that needs repair.

**4. Egress & Exiting**

There are illuminated exit signs & emergency lights through out building. There are a few locations that may benefit from an additional exit or emergency sign. There is only one entrance that exits at grade. The building lacks a true main entrance that can be controlled and provide pedestrian and ADA access.

**5. Asbestos**

There is some asbestos tile in the basement and other rooms in the Original building. Some of it is cracked and broken and should be remediated. In previous renovations, we have discovered asbestos pipe insulation above ceilings. In many cases these pipes are difficult to see as they are buried above ceilings. Interstitial space is packed with pipes, ducts, lights, etc. which makes for difficult access. See report from Camplin Environmental Services.

**C. MEP/Fire Alarm & Suppression**

**1. Mechanical:**

The building is served by several boilers & air handling units throughout the building. There is also radiant heating in the basement and first floor. In the 1985 renovation, a new mechanical penthouse was built with boilers and large dual duct air handler. In 2011, a new chiller was installed on the roof. The old radiant heat vents were converted to a two pipe heating/cooling system. The system is still on pneumatic controls which are problematic. There is an existing Make Up Air Unit that serves the gun range in the basement.

There are many temper valves and mechanical piping in the basement that may not be of use any more. This piping is believed to serve perimeter radiant heaters. It may be wise to investigate and determine what pipes are still active to demo what is possible. These pipes are heat only and do not have any insulation on them.

**2. Electrical**

The main service is 1200 Amp 120/208 V. There is a portable diesel generator on the North side of the building that serves the building. The generator in the mechanical penthouse is not able to power the entire building and thus not in service. There is a portable diesel generator that serves the building on the North side.

**3. Plumbing**

There are two separate water services in the building. Neither have an RPZ. Plumbing fixtures and restrooms are dated but in fair condition. A majority do not meet current ADA code if any renovations to restrooms are made they should be upgraded. Costs may vary depending on fixture counts and access to public facilities.

**4. Fire Alarm/Suppression**

Building is equipped with a Fire Alarm Panel with detectors, AV devices and pull stations throughout. There are no Audio/Visual strobe devices in restrooms to be brought up to code. There is an automatic fire suppression system that covers half of the building.

**D. RECOMMENDATION**

The building is definitely showing signs of it's age. There have been no major renovations in the building since 1983 with the exception of the new training room, renovated detective bureau and new chiller and AC. The building could use a cosmetic upgrades along with some MEP upgrades. Stored materials in the basement that should be cleared out as much as possible.

- 1) Replace the MUAU that serves Shooting Range. \$35,000.00
- 2) The windows along the South Facade are old steel windows that have outlived their useful lifetime. The windows are single paned clear glazing that are leaking and do not provide any resistance to solar gain. Replacing these windows will greatly assist with climate control inside the building and help with energy efficiency.  
Main Level window replacement \$150,000.00 Lower Level \$50,000.00
- 3) Existing insulation on mechanical piping should be replaced and sealed. Replace damaged ceilings and grid. \$50,000.00
- 4) Construct vestibule and ramp for accessible main entrance off West St. \$200,000.00
- 5) Resurface parking lot area to the North. \$90,000.00 to \$150,000.00
- 6) New AC split system for Computer/Data Room on the North West corner. \$8,000.00
- 7) Expand Evidence Storage: \$100,000.00
- 8) New Interview Rooms: \$80,000.00
- 9) Replace wood doors in basement: \$12,000.00
- 10) Install new Chiller Screen on roof: \$30,000.00

**E. ADDITIONAL BUILDINGS ON SITE**

**1. Garage Storage Buildings on 1721 N. McAree:**

The North building is approximately 12 years old and in good condition. This building houses the mobile police station unit. The exterior brick masonry and precast structure are in good shape. The roofing system is a mineral surface built up black roofing material. If the roof is out of warranty, we recommend installing a white coating on this roofing to increase it's reflectivity and lifetime. Exterior HM doors and frames are in good condition. OH door is in good shape. There is a triple basin settling tank on the West side of the building as the garage is used for maintenance and washing of vehicles. The building has a simple exhaust fan and gas heater. Deputy Chief Stevenson informed us that the gas bill for this building was astronomical so the heat has been shut off. It would be wise to try to determine the cause. Perhaps all the heat is being exhausted? Or a potential gas leak? More investigation would be necessary to determine the cause.

The South Building is older building and appears to have an addition. This building houses evidence storage. There are interior cage areas that were mostly empty. The age of this building is unknown. Exterior masonry is in fair condition. The roofing is a flood coat and gravel built up roofing that looks to be within 10 years old. The steel structure, wood joists and wood decking are in good condition. The concrete floor is in fair condition. There are no floor drains as the garage is for storage only. No vehicle work is done here. There are radiant heat pipes in the ceiling but it is unknown if they work. The existing Exhaust system appeared to work but was noisy and is in need of service.

**ROOT ENGINEERING SERVICES - MEP REPORT:**

**Building Title and Address:**

Police Department, 101 N West St

**General Comments:**

This original facility was constructed in 1928, with multiple additions in the 1960s. Observed systems were often very old, often modified versions of original construction, which have typically exceeded their economic life, typically badly obsolete and in need of repair or refurbishment. Estimated costs listed below are a very preliminary opinion of probable costs in the MEP trades only. A much more detailed review will be necessary to prepare a detailed and reliable cost estimate.

**HVAC Systems:**

- Chiller System. A new chiller, with circulating pumps, piping, controls, and replacement air handling unit coils was installed in 2011. This Carrier installed on the roof and is well within its economic life, and we would expect it to continue to serve with normal maintenance for at least ten years. We do note that the insulation jacket of roof mounted pipe is failing prematurely showing de-lamination and many perforations. This jacket appears to be of poor quality and should be replaced at once to avoid ruining the pipe insulation and subjecting the pipe to corrosive attack. We recommend Venture-clad jacket for this application. Estimated cost \$2500.
- Boiler plant. Three boilers were observed.
- The first was a modular boiler with five separate modules, each having separate venting, burners, and heat exchangers. This equipment is perhaps 40 years old, appears to be in functional condition, but is well beyond its expected economic lifespan. The reputation for this style of boiler is not generally favorable for long life, but it is not uncommon for individual modules to fail, leaving the remaining sections to continue to function, thus allowing some redundancy. It is recommended that this equipment be programmed for replacement in the next 10 years. Very preliminary estimated cost \$75,000.
- The second boiler is a Bryan CL series rated at 1200mbh, that we believe is less than 20 years old. As noted before, this Bryan has a good reputation, and we would expect it to serve for at least 10 more years given normal maintenance and chemical water treatment.
- The third boiler is a Weil McClain 600mbh conventional boiler in the Chief's area. This unit is likely at its expected economic life, and should be programmed for replacement in the next 10 years. We also note that the venting looks unusual and may need replacement. Very preliminary estimate \$55000
- Pumps, in all cases were frame mounted end suction pumps, apparently newer and in good condition. No recommendations.
- Fin tube radiant heat was used in many styles and in many areas. Most looked worn and in questionable condition.
- Air Handling Units. Four air handling units were observed. In all cases, a new chilled water coil along with controls and condensate pan and drainage was installed in each in 2011. Also in all cases, these units appear to date from original construction (1961 to 1975) and are well past their economic life. Pneumatic controls, mostly very old, were typical. We do note that these units are likely re-buildable in place (replace motors, pulleys, bearings,

dampers, actuators, hot water coils, controls, etc.) which allows an option to replacement. We further note that the 'dual duct mixing' and 'multi-zone' systems which the three largest units supply are obsolete, energy wasteful systems.

- The first and largest observed system was a large hot deck/cold deck AHU with supply and return fans and full economizer located in the mechanical roof mezzanine. Other than the new chilled water coil, this equipment looks to be in questionable condition. Zone controls for this system were pneumatically controlled dual duct mixing box which we believe were functional but worn. This equipment should likely be replaced or rebuilt in the next 10 years. The second unit was similar, but appears to have had other work done recently including new duct insulation. The third is a blower coil style constant volume single zone unit which served the former city council chambers. The last was a multizone unit in the chief's area. Zone control for this unit was with a pneumatically controlled multizone damper arrangement attached to the AHU. All appear worn and in need of updating, overhaul or replacement for all parts except chilled water coils and controls. A much more involved investigation is necessary for a reliable cost estimate, but we offer an estimate of \$180,000 at this time.
- Shooting Range. This area is served by a direct fired make up air unit and a built-up air handling unit Hepa exhaust system. The makeup air unit is in very bad condition, and it is our understanding that its replacement is in work. We understand the Hepa exhaust air handling unit has issues, particularly that the adjacent employee break room experiences much infiltration from the mechanical room, making it uncomfortable and perhaps unhealthy. We have ideas on how to improve this problem and would be happy to discuss. Estimated cost of the make-up air unit replacement, \$27000.
- 911 Center Roof Top Unit. The 911 center is served by a Trane 7.5-ton gas fired roof top unit that is less than 5 years old. We would expect this unit to serve for the next 10 years with normal maintenance.
- Fan coil units. Several south facing perimeter areas are served by fan coil units. These units have had some recent work, but it is our understanding that the piping feeding these units is not in all cases insulated and vapor sealed appropriately for chilled water, thus condensate leaks are the result.

### **Electrical Power Systems:**

The main service is 120/208v 3 phase 1200 ampere fed from a ComEd utility transformer. A second 800a switch gear (older) was also observed, likely was original main distribution, later back fed when a larger service was installed in a building addition. Distribution panels is mixture of older and newer, some of which appear full with no spaces available and in questionable condition. An older indoor generator was observed which we understand is no longer used as it is unreliable. The panel serving the 911 center is backed up with a portable (trailer mounted) generator with a dedicated automatic transfer switch. In total, we see the equipment serving this building as serviceable, not likely to have a major failure, but dated and restrictive evolution of components which have been altered when necessary only at minimum cost in past projects. To us, a public safety facility such as this should have generator backup over most of the building, and a very reliable and capable electrical distribution. We recommend a significant electrical upgrade project to this building be programmed in the next 10 years. Again, a much more involved investigation is necessary to accurately estimate cost, but we can offer \$220,000 at this time.

### **Electrical Lighting Systems:**

- We note that typical finished space lighting uses a variety of obsolete and inefficient T12 fluorescent (typically 2x4' troffers), and even some incandescent fixtures. We note that the availability of T12 lamps in the future will be an issue as the DOE has been working to phase them out of production. It is recommended that all new LED interior lighting be planned for the entire facility within the next 10 years. At very minimum, a plan to convert T12 lamp fixtures to T8 should be undertaken. We note that lighting control is as originally constructed; updating in certain cases to occupancy sensing controls is recommended. For most of this work, energy credits and grants are a possibility. Costs can vary widely depending on the owner's desire, but may range up to \$150,000
- Exterior lighting systems are similarly dated. We have not observed the site at night, but improvements in efficiency and efficacy are certainly possible. We recommend that exterior lighting be included in the project planning. Again, costs will vary depending on the owner's desires but perhaps \$8000.

### **Electrical Low Voltage Systems:**

We note that an addressable fire alarm system has been installed. This will likely serve for at least the next 10 years, although we note that audio visual alarm coverage does not comply with current code or ADA regulations. Cost to get existing fire alarm system up to current standard (mostly add many new audio-visual alarms), very approximate cost \$38,000. We did not observe any audio, intercom, card access or similar systems.

### **Plumbing Fixtures:**

Many observed fixtures were dated, and showed wear and tear commensurate with their age. Most are also obsolete and consume more water than modern fixture. We note that although some partial alterations have been done, restrooms observed were not fully compliant with ADA. Replacing and updating fixtures and altering spaces to comply with ADA is recommended in the next 10 years. Plumbing only cost for this alteration very approximate \$50,000. Additional \$50,000 of Architectural work.

### **Plumbing Water System:**

One water service was observed (in a closet). This service had no backflow preventer and appeared small for this size of building. We also note that water pipe was a mixture of copper and galvanized pipe. If a significant renovation is considered, it is recommended that a new water service with compliant backflow preventer be configured and the building be re-piped. The cost of this depends greatly on whether other systems, particularly new fire protection and plumbing fixtures are also included.

### **Plumbing Waste/vent/storm:**

The condition of the under floor sewers is unknown. We did observe a larger duplex dump pump system which likely is connected to drain tiles and the other basement drainage. These systems are reliable but need to be inspected, cleaned and maintained periodically.

### **Fire Protection System:**

The newer areas on the West side of this building are sprinkled; the older sections on the East side of building are not. The 4" sprinkler riser that is in place does have an obsolete backflow preventer. If a significant renovation project is considered for this building, we would recommend including a new fire protection riser/service, and sprinkler coverage for the entire building. A complete fire protection project for this building could cost \$400,000.

**Environmental Report:**

**Camplin Environmental Services (See full report from CES):**

**Main Police Station – 101 N. West Ave**

- The center portion of the first floor has previously been inspected for asbestos in 2012. Asbestos flooring was removed in the center section of the building in 2013 to accommodate a renovation project.
- Suspected asbestos containing materials still remain in the building. A majority of the suspect materials are found in the older east end of the building and include 9” floor tile, 12” floor tile, pipe insulation, and cement wall panels.
- One area that should be considered for action is the second floor east side air handling room. This room is carpeted with asbestos flooring beneath. The carpet has evidence of water damage which can create potential mold problems. It is recommended to abate the carpeting and asbestos flooring in this area. Asbestos abatement (abatement contractor and asbestos consultant) would cost approximately \$5,000-\$7,500.
- A comprehensive asbestos inspection of the building would cost approximately \$4,000. There was a previous limited asbestos inspection in 2013 conducted by United Analytical Services that tested water damaged/mold impacted building materials. This information can be incorporated into a more comprehensive asbestos inspection.

**Waukegan Facility Assessment - Cost Estimates**  
**Waukegan Police Station 101 N. West St.**

**WAUKEGAN POLICE STATION**

ITEM	DESCRIPTION	RECOMMENDED WORK	PRIORITY	RENOVATION SUB-TOTAL
<b>Architectural</b>				
1	Shooting Range MUAU	Replace MUAU, seal AHU & install new EF in Mech Rm	A	\$ 35,000.00
2	Main Level Windows	Remove and Replace	B	\$ 150,000.00
2A	Lower Level Windows	Remove and Replace	B	\$ 50,000.00
3	Leaking Pipe Insulation	Re-insulate leaking mechanical piping	B	\$ 50,000.00
4	ADA Entry Vestibule	Construct new ADA entry vestibule	R	\$ 200,000.00
5	Resurface Parking Lot	Grind and overlay existing asphalt parking lot	D	\$ 150,000.00
6	New AC for Data Room	Install new AC split system at Data Rm	B	\$ 8,000.00
7	New Evidence Storage	Expand evidence storage	R	\$ 50,000.00
8	New Interview Rooms	Re-insulate leaking mechanical piping	R	\$ 80,000.00
9	Basement Doors	Remove and replace double doors	D	\$ 12,000.00
10	Mechanical Screening	New chiller vision screening	D	\$ 30,000.00
11	Mech Rm	Abate Asbestos under carpet	R	\$ 7,500.00
12	Exterior masonry	Repair Masonry joints	D	\$ 50,000.00
<b>MEP</b>				
13	Roof Mech Piping	Reseal piping jacket	A	\$ 2,500.00
14	Penthouse Boilers	Remove and Replace	D	\$ 75,000.00
15	Original Building Boiler	Remove and Replace	D	\$ 55,000.00
16	Penthouse AHU	Remove and Replace	D	\$ 180,000.00
17	Electrical Upgrade	Upgrade	D	\$ 220,000.00
18	Interior Lighting Upgrade	Upgrade	C	\$ 150,000.00
19	Exterior Lighting Upgrade	Upgrade	C	\$ 8,000.00
20	Upgrade Fire Alarm System	Install new devices and upgrade FA	R	\$ 38,000.00
21	Plumbing Fixtures	Upgrade plumbing fixtures	D	\$ 100,000.00
22	Water Services	New RPZ	D	\$ 20,000.00
23	Sprinkler System	Sprinkle Remainder of Building	R	\$ 400,000.00
<b>TOTAL</b>				<b>\$ 2,121,000.00</b>

**Priority Code: A = Urgent, B = 1-3 years, C = 3-5 years, D = 5-10 years, R = Recommended**

All estimates are preliminary in nature. For more accurate estimates further investigation and design will be required.

## Waukegan Parking Garage – 225 N. County Ave.

- 1 Bldg Name 225 N County Parking Garage, Urban Edge Gallery
- 2 Address 225 N. County
- 3 Bldg Sq. Ft. 225,451 SF Total including 6,081 SF of Retail (Urban Edge)
- 4 Year Built 2005
- 5 Use Parking Garage, Urban Edge Art Gallery

### Preliminary Information

Parking structure was designed and built by Pickus Companies with estimated completion in late 2004 or early 2005. City provided PDF and hard copy sets of as built drawings and precast shop drawings.

Per our initial conversations with Brian Latz, we briefly walked the building and were informed of several problematic areas. Water pitches into exterior doors of stair penthouse on the SE corner. SE masonry CMU wall was saturated from rain water. Wall had been painted/sealed to prevent water from entering Elevator pit. Considerable water penetrates the Urban Edge Art Gallery at the South End of the parking garage.

A precast cap had recently fallen from the NE corner of the parking garage. The connection detail we observed was not a typical precast connection. It was apparent that many caulk joints have deteriorated and the building was in need of maintenance.

Roof leaks over Urban Edge have recently been repaired. Some repairs to steel canopies have been made. Several of the existing precast cornices have been caulked to prevent any further deterioration.

### General Observations - Exterior

#### Precast Structure & Concrete Double Tees

The overall structure of the parking garage is in good condition. The precast structure is in good condition although a few details are in need of maintenance. Concrete topping on double tees was for the most part very good with the exception of a few small areas. Caulking and backer rod at most concrete tee joints and at perimeters need to be replaced. This is typical for these types of structures.

#### Masonry

The decorative brick and precast masonry caps were in many places poorly designed and strangely installed. Large caulking joints have moved and are cracking from age. There was no masonry flashings or weep holes observed with the only exception being at street level. Several vertical joints are 2" wide or wider and have no caulking leaving masonry ties exposed to weather. Masonry ties are in good condition however. Several lintels were rusted and should be cleaned

and painted. Miscellaneous tuck pointing. The detail and condition of precast caps is our number one concern and should be addressed within the next 1-2 years.

### **Roofing**

All roofs observed were single ply EPDM roofs which typically carry a 10 to 15 year warranty. Penthouse roofs were in good condition. One penthouse roof had recently been replaced. These roofs could be coated to add a 10 year warranty if so desired. The roof above Urban Edge Art Gallery showed signs of numerous patches, the insulation felt wet and there was planting equipment set directly onto roofing membrane. Roof has been patched numerous times and was apparent that insulation was wet from years of water leakage. This roof will require full removal and replacement. All roofs lack a perimeter metal counter flashing which leaves screws, termination bar and caulking exposed to the elements. This condition can greatly shorten the life expectancy of roofs. See attached roofing report for photos.

### **Interior Spaces**

#### **Stairwells**

Interiors of the stair wells were in good condition and ADA compliant. Concrete stair , treads, risers and steel guard and handrails were in good condition. Lighting levels were adequate. Building exit signs were illuminated. Emergency light batteries were in working conditions. (Exit signs and Emergency lights should be tested regularly.) In the NW stair well, some of screws tying the window curtain wall to steel structure were missing or were backing out. (See photos) These connections should be verified and refasten where necessary. Doors were in good condition, a few locations show signs of rust. Door closer on Aluminum door to Clayton should be adjusted to close properly.

#### **Urban Edge Art Gallery**

The Urban Edge Gallery on the South End of the garage has consistently taken on water. This water could be coming from any number of places. Deteriorated caulk joints in all masonry caps and joints. The lack of base or through-wall flashings on all masonry above street level. Deteriorated caulk joints at all concrete double tee structural members and perimeter details. Poor roofing details such as lack of a perimeter metal counter flashing. Restrooms are in good condition and ADA compliant. Electrical in this space is piece meal with many extension cords and incandescent lights hung from structure that does not meet code.

#### **Main Electrical Panel Room:**

Inside the main electrical panel room we were informed that water consistently pours into this room. From the inside daylight could be seen on the East wall. Conduits are rusting and showing signs of deterioration. These areas should be closed up and caulked to prevent further water infiltration.

#### **Mechanical**

Simple mechanical systems (Reznor heating units) throughout the building were in good condition. Roof Top Units above Urban Edge Gallery although working were very loud and noisy. RTUs have a life expectancy of approximately 15 years. The building is estimated to be 12 years old. These units may need to be addressed within 3-5 years.

### **Fire Alarm/Suppression**

The building is equipped with a Fire Alarm System and Sprinkler System.

### **Asbestos**

No suspected asbestos containing materials were identified. If any large scale renovation occur an environmental consultant should inspect the building.

### **RECOMMENDATION**

It is a difficult task to prevent water from infiltrating spaces below parking decks since they are open air and mainly rely on caulking. Caulking eventually ages beyond it's use and allows water in. Also, there are certain conditions such as water flowing back into stair wells from parking deck that cannot be corrected. There is no way to re-pitch the existing structure and concrete tees so that water flows away from these areas. Below is our priority list of maintenance work.

- 1) We recommend starting with the critical items such as poor precast cap and masonry flashing details. Take steps to prevent water infiltrating Urban Edge and Electrical Room. The SE CMU wall should be re-pointed and flashing issues address. These items should be addressed within the next 1-2 years. Many of the precast connections have been dressed and caulked but since they are exposed to weather they could quickly deteriorate. If budget is a concern perhaps it can be completed in phases going floor by floor starting at the top.
- 2) The entire parking deck is in need of re-caulking all joints. After all concrete double Tees have been re-caulked the anchors between double tees should be addressed. Remove rust, cleaned and paint and patch concrete. Once again if budget is a concern we recommend completing work in phases going floor by floor starting at the top.
- 3) Installing metal counter flashing to all roof to wall perimeters. Replace or coat roofs as required within 3-5 years.
- 4) Replace screws on window curtain wall attachments to steel structure.

**Waukegan Facility Assessment - Cost Estimates**  
**Parking Garage - 225 N. County St.**

**Parking Garage**

ITEM	DESCRIPTION	RECOMMENDED WORK	PRIORITY	RENOVATION SUB-TOTAL
	Architectural			
1	Concrete Double Tee Joints	Remove and Replace joints (three levels)	B	\$ 270,000.00
2	Pre-Cast ledges/caps	Remove and reset Precast caps	A	\$ 70,000.00
3	Urban Edge Roof	Remove and replace roof	C	\$ 25,000.00
4	RTUs	Remove and Replace RTUs	C	\$ 30,000.00
5	Three penthouse roofs	Install metal counter flashing and roof coating	D	\$ 17,000.00
6	Electrical room	Caulk and seal water from Elec room	A	\$ 5,000.00
7	Curtain Wall Windows	Refasten Support screws	B	\$ 5,000.00
8	SE CMU Wall	Repoint and water proof CMU wall	B	\$ 50,000.00
9	Masonry Caulk Joints	Grind & recaulk vertical caulk joints	C	\$ 100,000.00
<b>TOTAL</b>				<b>\$ 572,000.00</b>

**Priority Code: A = Urgent, B = 1-3 years, C = 3-5 years, D = 5-10 years, R = Recommended**

All estimates are preliminary in nature. For more accurate estimates further investigation and design will be required.

## Waukegan City Hall

- 1 Bldg Name Waukegan City Hall
- 2 Address 100 N. MLK Jr. Ave
- 3 Bldg Sq. Ft. Basement 13,033SF, 1st Floor 12,903SF, 2nd Floor 19,156SF, 3rd Floor 16,096SF
- 4 Year Built 2004
- 5 Use City Hall, Total SF 61,190

### Preliminary Information

The New City Hall building was built in 2004. To date no major renovations have taken place. There have been some issues with the exterior courtyard and stone steps. The fountain in the center of courtyard has been inoperable for the past 6-7 due to high maintenance costs. Overall, the building is in good shape. There have been on going problems with some of the MEP systems.

Please see attached reports from Root Engineering Services & Camplin Environmental Services.

### A. Exterior - Building Enclosure

#### 1. Exterior Windows & Doors

Aluminum entrance/egress doors are in good condition. There is an Aluminum curtain wall system with 1" insulating glazing though out most of the building. The framing is in good condition however some of the insulated glazing panels have leaked the interior gas and have condensation between the glass panes (approximately 18 panes). None of the glazing is tinted which allows for a great deal of solar heat in the building. Carpet that is exposed to this direct sun light has faded. The window detailing at the Council Chambers has a poor detail that allows exterior air to infiltrate directly into the building. This detail should be sealed and insulated if possible.

#### 2. Exterior Masonry & Panels

The building exterior stone wall panels or brick masonry that are both in good shape. There are exposed columns on the North face of the building that have column enclosures that also appear to be in good condition.

#### 3. Roofing

The original roof is a ballasted EPDM which has a typical lifetime of 15-20 years. The city should verify if any warranty exists. The roof is 13 years old and should be monitored closely. We do not believe that coating or retrofitting these types of roof is good practice. The existing roof deck on the West end is pitched toward the building perimeter and water sheds down the West Facade. An infrared of existing roofing should be completed to determine if insulation is wet.

**4. Site**

The City Hall is located on a small site that shares a courtyard with the adjacent Police Station. There are some issues with the monumental stairs on the East side of the building. The stones are separating and causing gaps. There have also been concerns about the ADA accessibility. The fountain that runs through the center of the courtyard has not functioned in several years. The maintenance and cost of operation became an issue and it was decided to suspend the operation of the fountains.

**5. Building overhangs**

Certain areas such as the council chambers and mayors office experience very cold floors in the winter. These areas have no interior spaces below them. Also, the detail which allows exterior air to penetrate the building enclosure may contribute to this.

**B. Interior**

**1. Walls, Doors, Finishes**

Interior walls are drywall & interior brick masonry on upper floors and CMU walls in the basement. HM frames and wood doors are in good shape. There are a few signs of wear and tear on the doors. Some of the carpeting in various areas is worn and showing signs of ages. Certain locations (i.e. council chambers) have faded severely as the glazing installed is clear and provides no solar protection.

**2. Ceilings & Lighting**

Dropped ceilings and grids are in good. Light fixtures are T-8 lamp fixtures and are in good condition. Drywall ceilings and soffits are in good condition.

**3. Structure**

The building structure is steel framing and exterior masonry walls. Our visual inspection found the structure in good shape.

**4. Egress & Exiting**

There are illuminated exit signs through out building that are externally illuminated by the emergency lighting which runs on a generator. There are a few locations that may benefit from an additional exit sign. Most exterior egress doors are at grade level with ramps. Stairwells are maintained and in good condition. There is an elevator that serves all floors.

**5. Asbestos**

There were no suspected Asbestos Containing Materials observed. See report from Camplin Environmental Services.

**C. MEP/Fire Alarm & Suppression**

**1. Mechanical:**

The building is served by boilers in the basement and air handlers throughout the buildings. There is a grade mounted chiller outside the building across a vehicle access road to the South. Several pumps have burnt out and have needed to be replaced. The fresh air intake in the basement has been problematic as it sucks in snow and rain

into interior duct work. Our engineer has run into similar conditions with fresh air intakes that are recessed into area wells.

**2. Electrical**

The electrical service is a large 2000 Amp service. Electrical Room is in need of some additional cooling.

**3. Plumbing**

Plumbing service: Restrooms are in good condition and meet current ADA code. The grease interceptors installed at all kitchenettes have not been maintained and are being replaced as they are causing issues. Typically grease interceptors are only installed where commercial food is being served. There is a sanitary line in the basement that has been problematic as the basement restroom has seen increased usage due to the installation of a work out room in the basement. Only solution may be to cut up floor and replace sanitary line.

**4. Fire Alarm/Suppression**

Building is equipped with a Fire Alarm Panel with detectors, AV devices and pull stations throughout. There is an automatic fire suppression system through out building.

**D. RECOMMENDED WORK**

- 1) Seal the window base detail at Council Chambers to prevent air leakage. \$5,000.00  
Insulating these interstitial areas would be difficult as areas are sealed off. These areas are also visible from the exterior so any insulation would be seen through the clear glazing.
- 2) Replace carpet in council chambers that has faded from solar infiltration. \$30,000.00
- 3) Repair or replace window panes that have condensation. \$10,000.00
- 4) Additional Exit Signs: \$500.00
- 5) Loading Dock Lift Replacement: \$12,000.00
- 6) Roofing Replacement: \$453,000.00

**ROOT ENGINEERING SERVICES REPORT:**

**Building Title and Address:**

City Hall Building, 100 N. Martin Luther King

**General Comments:**

This facility was constructed in 2004. Most observed systems date from original construction and are well within their economic life. Certain systems were identified as problem areas which are discussed below.

**HVAC Systems:**

- Chiller. The installed unit is a Carrier installed on grade in a mechanical yard perhaps 50' from the building. This unit is well within its economic life, and we would expect it to continue to serve with normal maintenance for at least ten years. Some discussion that a chiller compressor had failed; to our thinking, a failure of this type is not typical, nor is it unprecedented. No trend can be derived from one failure. We do note that chilled water supply and return pipe is routed underground and under a driveway before entering the building, the pipe material is unknown. There may be concern for corrosion or physical failures with this arrangement.
- Boiler. Installed system is a Bryan CL series. This boiler has conventional (non-condensing) combustion, hence about 80% combustion efficiency. With that, this system has a conventional flue venting system, with mechanical room combustion air required. These boilers have a reputation for reliability and long service life, but are obsolete in terms of energy efficiency. It was reported that the burner refractory failed prematurely and required replacement; we find this unusual. Despite this early failure, we would expect this boiler to serve reliably for at least ten years with normal maintenance and consistent chemical water treatment.
- Outside air intake. Outside air intake from this AHU is via a wall louver in a below grade area well near a driveway. A reported issue of snow being drawn into the louver has been reported, thus causing problems. We have found that little can be done to prevent fluffy snow from being drawn in to these type of low intakes (particularly if the system goes into economizer mode); however, we have seen the addition of drain pans piped to building drainage anywhere snow melting occurs can manage the problem (under OA duct, in the ahu mixing box, other as needed).
- Pumps. Two each hot water and chilled water end suction frame mounted pumps were observed. Although the pumps themselves were reported as reliable, multiple motor failures were reported. We note that these pumps, and other equipment are speed controlled with variable frequency drives (VFD). It is now a well-known problem that VFD control can deteriorate the bearings and wire insulation of conventional motors, causing early failure. The solution is to install 'inverter grade' motors. We suspect failures of conventional motors (controlled by VFD's) will continue until all are inverter grade. We recommend any future motor replacements be inverter grade for any equipment using a VFD. We would expect the two motors which have not failed to date to suffer a similar failure in the next few years (perhaps \$1800.00).
- Office built up air handling unit. The installed units are durable and long-lasting equipment for which minimum 30-year life is expected given normal maintenance. Component failures may occur, but this type of air handling unit is very rebuildable, allowing component replacement; it should be reasonably expected to have an occasional actuator, sensor, or

damper fail next ten years. We do note that the VAV fans on these units are controlled by VFD's. It is unknown if the drive motors for these fans are inverter grade. If they are not, please expect failure. Perhaps \$2,000.00

- City Council Chambers built up air handling unit. Same comments as Office air handling unit. We note that this is a congested mechanical room which makes any alteration work difficult.
- VAV terminal units. We observed many VAV terminal units, all with hot water reheat coils. This equipment is reliable, but do occasionally fail, typically the control actuator or a thermostat.
- Cold floors. Certain floors were reported as cold in the winter which have a courtyard below (such as the mayor's office AND the city council chambers). This is almost certainly caused by insufficient heat in the interstitial space under the floor, but above the courtyard ceiling insulation. Corrections for this likely involve getting more heat into that interstitial space (hot water fin tube or electric heater).
- Building Automation System. A Johnson Controls BAS was observed. These systems often need updating, and minor repairs, but we would expect this system to continue to serve effectively for the next 10 years.

#### **Electrical Power Systems:**

The main service is 277/480v 3 phase 2000 ampere fed from a pad mount ComEd utility transformer near the chiller. The service is 100% backed up by an outdoor natural gas generator with automatic transfer switch (ATS). It is our understanding that the generator has had good maintenance in its life, and given that this equipment is not used often, we would expect it to continue to serve for greater than 10 years given normal maintenance. Main distribution is via a switchboard mounted in the basement electrical room. We would expect this equipment to continue to serve adequately for the next 10 years. Other distribution including many panel boards, a 600a motor control center in the mechanical room, numerous step-down transformers, and similar. All distribution dates from original construction, and are all well within their economic life, and will likely continue to serve adequately as they appear to be of good, installed professionally, and do not appear overloaded or altered in inappropriate ways.

#### **Electrical Lighting Systems:**

We note that typical finished space lighting uses T8 fluorescent lighting fixture (typically 2x4' troffers and wraparounds) with some decorative architectural lighting in selected areas. No recommendations on this typical lighting, although the city should likely plan to upgrade to high efficiency LED lighting in the next 20 years. Additionally, we observed self-luminating unpowered exit lights in a number of locations; these use radioactive tritium to be visible in a power outage. These units gradually lose their effectiveness as the tritium decays. Likely that expiration date will be reached in the next 10 years requiring replacement. Estimated cost \$3,000.

Exterior lighting systems are similar. We note much of the outdoor lighting has been upgraded to modern and efficient LED. We have not observed the site at night, but what we observed looked appropriate.

**Electrical Low Voltage Systems:**

We note that an addressable fire alarm system is in place from original construction. This will likely serve for at least the next 10 years, and appeared compliant with current code. This building does have existing audio, card access, video, data server, voice over IP phone, etc.; we have no comment on these systems.

**Plumbing Fixtures:**

Most fixtures observed date from original construction, and were in good condition and compliant with current ADA requirements. Original design called for grease interceptors at all kitchenette locations. These are generally problematic if not maintained. We were informed that many have failed and have been replaced with a traditional trap. Although the occasional faucet or drinking fountain may fail no significant fixture replacements are foreseen in the next 10 years.

**Plumbing Water System:**

A 3" water service is configured off the base of the FP riser, which is comfortably sized. We note that an RPZ back flow preventer is in place from original construction, which appears compliant and appropriate. Water distribution was in copper pipe and professionally done. Pipe insulation was mostly intact in good condition. The main water heater is a 75 mbh storage tank type with conventional combustion, which appeared to date from original construction. Water heaters often have limited life spans, and replacement of this unit should be expected in the next decade. Estimated cost \$3,000.00.

**Plumbing Waste/vent/storm:**

These systems seem intact. Large duplex sump pump systems of good quality and professional installation were observed. There was a report that under certain conditions, snow is drawn into a mechanical area well, then into the air handling unit, where it will eventually melt and make the AHU appear to have a leak. Given the existing conditions, few solutions can be suggested others than installing an auxiliary drain pan under the outside air intake of the AHU. No other recommendations at this time.

**Courtyard Fountain system:**

It is our understanding that this expensive system has been abandoned, not used for perhaps 8 years. Its condition is unknown. When it was operating, it was known to clog with debris relatively quickly, thus requiring constant maintenance.

**Fire Protection System:**

The FP system has an 8" water service with RPZ back flow preventer, and appears to be a wet pipe system in all cases. These systems require maintenance but are unlikely to need replacement or repair.

**Environmental Report:**  
**Camplin Environmental Services (See full report from CES):**

**Waukegan City Hall – 100 N. MLK, Jr. Ave**

- Potential non-friable materials were noted in the building.
- No actions are required at this time.
- A comprehensive asbestos inspection prior to demolition or renovation of the building would cost approximately \$1,500.

**Waukegan Facility Assessment - Cost Estimates**  
**City Hall Building - 100 N. MLK Jr. Ave**

**WAUKEGAN CITY HALL**

ITEM	DESCRIPTION	RECOMMENDED WORK	PRIORITY	RENOVATION SUB-TOTAL
Architectural				
1	Mayor's Office, Council Chambers	Install backer rod and caulk joint	A	\$ 5,000.00
2	Council Chambers	Replace faded Carpet	B	\$ 30,000.00
3	Replace Window Panes	Replace glazing with condensation or broken	A/C	\$ 10,000.00
4	Additional Exit Signs	Install new exit signs	B	\$ 500.00
5	Loading Dock Lift	Remove and replace loading dock lift	C	\$ 12,000.00
6	Roofing	Remove and replace EPDM Roofs	D	\$ 453,000.00
MEP				
1	Pumps	Replace pumps for VFDs	D	\$ 1,800.00
2	Drive motors	Replace VAV motors for VFD issues	D	\$ 2,000.00
3	Upgrade Exit signs	Replace Tritium Exit Signs	D	\$ 3,000.00
4	Water Heater	Replace water heater	D	\$ 3,000.00
5	Basement Mech Rm	Replace under floor sanitary line	B	\$ 10,000.00
6	Basement Airintake Duct	Install pan and drain	B	\$ 6,000.00
7	Elec Room	New Exhaust/Cooling	B	\$ 5,000.00
8	Basement	Underfloor sanitary piping replacement	D	\$ 8,500.00
				0.00
				0.00
<b>TOTAL</b>				<b>\$ 549,800.00</b>

**Priority Code: A = Urgent, B = 1-3 years, C = 3-5 years, D = 5-10 years, R = Recommended**

All estimates are preliminary in nature. For more accurate estimates further investigation and design will be required.

## Waukegan Fire Department Station 1

- 1 Bldg Name      Waukegan Fire Department - Station 1
- 2 Address        1101 Belvidere Road
- 3 Bldg Sq. Ft.    23,360 SF Main Level, 2,945 SF Second Floor
- 4 Year Built      Original Building 40s? Renovated in 1983.
- 5 Use             Fire Station & Offices

### Preliminary Information

The date of the Original building is unknown. It was previously a gas station that also housed a tire store and a ski shop on the second floor. In 1983 it was renovated into the current Fire Station #1. This is the City's main fire station that also houses administration offices. The building is showing signs of age but is still in fair condition. Overall, the Fire Stations are well maintained as they are able to access special funds for station upkeep.

Please see attached reports from Root Engineering Services regarding MEP systems assessments & Camplin Environmental Services for preliminary inspection of possible asbestos containing materials.

### A. Exterior - Building Enclosure

#### 1. Exterior Windows & Doors

Main aluminum entrance doors are in good condition and exits at grade level to city sidewalk. Exterior windows were replaced in the 1983 renovation and are in good condition. OH Doors on apparatus bay are in good condition. There are a few exterior man doors that are showing signs of rust and age. The door on the South side of truck bays should be replaced soon.

#### 2. Exterior Masonry & Stucco

The building is brick masonry that is in good condition. There is some cracking on the masonry piers on the West side of the building. Some of the expansion joints should be caulked. Portions of the building are stucco plaster which has some cracking but is in fair condition.

#### 3. Roofing

The shingle roofing appears to be in fair condition. It is believed to be approximately 34 years old. There are no known leaks. The flat roofing portions and barrel roof over the apparatus bays have been replaced within the last 5 years and have a 30 year warranty. The flat roof on the station tower is in fair condition. This roof should be monitored if any leaks occur.

#### **4. Site**

The Station is located on the corner of Jackson St. & Belvidere Rd with the main entrance being located off Jackson. Existing landscaping and trees have recently been removed from the East and North sides of the building. We are informed that new landscaping will be installed. Existing concrete on the North and South sides of apparatus bays is cracked in many places and has heaved in others from years of patching. It is recommended that entire concrete sections be removed and replaced. Asphalt is in fair condition should be considered for resurfacing within 5 years. We were informed that the site had oil and gas storage tanks on the site that were removed but none of the soil was remediated. We recommend having soil tested to determine if it contains any contaminants. The concrete at the exterior patio area is cracked and pitches back towards the building. We were told that this concrete patio will be replaced by the Fire Dept.

### **B. Interior**

#### **1. Finishes, Walls, & Doors**

Interior walls are drywall & CMU and are in good condition. Flooring is in good condition. Wood doors and frames from 1983 renovated portions are in good shape. Some of the OH Doors in truck bays may need new electric operators. Replace as needed.

#### **2. Ceilings & Lighting**

Dropped ceilings and grids are old and showing signs of age. Existing lighting is in fair condition. There are some old T-12 fixtures but many of the fixtures have been replaced by T-8 fixtures or LEDs.

#### **3. Structure**

The original truck bay building structure is wood trusses that appear in good shape. The exterior masonry is in good shape.

#### **4. Egress & Exiting**

There are illuminated exit signs & emergency lights through out building. The building is served by two back up generators. The second floor has two means of egress and an elevator making a majority of the spaces ADA accessible. Exterior egress locations are at grade.

#### **5. Asbestos**

There were no signs of ACM in the building. See report from Camplin Environmental Services.

**C. MEP/Fire Alarm & Suppression (See RES report for detailed description)**

**1. Mechanical:**

The building is served by Bryant boilers & air handling units. There is a separate water heater system for the truck bays.

**2. Electrical**

The main service is 800 Amp 120/208 V. There are two back up generators.

**3. Plumbing**

The water services in the building is equipped with an RPZ. Plumbing fixtures and Restrooms are dated but in fair condition. A majority of restrooms do not meet current ADA code if any renovations are made they should be upgraded.

**4. Fire Alarm/Suppression**

Building is equipped with a Fire Alarm Panel with detectors, AV devices and pull stations throughout. There are no Visual strobe devices in restrooms to be brought up to code. There is an automatic fire suppression system in the building.

**D. RECOMMENDATION**

- 1) Replace the Concrete Slab entrances to SE and NW. \$150,000 for entrance off Belvidere. \$75,000 for Jackson St. entrance.
- 2) Asphalt parking lot: \$100,000.00.
- 3) Shingle Roof: \$25,000.00
- 4) Caulk and dress Masonry Joints: \$10,000.00

**E. ADDITIONAL BUILDINGS ON SITE**

**1. Garage Storage:**

There is a pre-engineered metal panel, wood frame and structure storage garage located on the Southwest corner of the site. The exact age of the building is unknown. The metal wall and roof panels are in good shape. There is a Fire Alarm System but no sprinkler system. The building has heat only with a unit heater. The life time of these units is typically 30 years or more.

## **ROOT ENGINEERING SERVICES - MEP REPORT:**

**Building Title and Address:** Fire Station #1 1101 Belvidere Road

**General Comments:** This facility is the largest of the five fire stations, with the largest apparatus bay, and the largest office area, and the most commercial grade systems. It is our understanding that most MEP systems of this building date from a 1983 reconstruction/addition project. To our thinking this building should be considered for a significant renovation, which should include replacing or reworking most MEP systems.

### **HVAC Systems:**

- Office and crew spaces are served by two commercial indoor air handling units, each with a roof mounted condensing unit. The larger unit is a multizone style with a hot water hot deck and a DX cold deck, all with electrical controls. This air handling unit appeared worn, but its condensing unit is relatively new and in excellent condition. We note that multizone AHU's are not energy efficient, and this one appears to have worn controls of questionable reliability. The smaller AHU is a constant volume blower coil style with hot water and DX coils. It is coupled with a very old 7.5 ton condensing unit which is well past its expected service life. We would recommend planning to replace the small condensing unit, and overhauling or replacing the two air handling units in the next 10 years or if a significant building renovation is considered.
- Boiler. We observed a Bryan CL180 1800mbh hot water boiler with circulating pumps and accessories which date from 1982. We understand that this boiler had just been serviced including a tube cleaning. This equipment is now past its expected service life. This equipment could continue to serve, but to our thinking it would be prudent to plan its replacement in the next 10 years or at the next building renovation. Very preliminary estimate of \$50,000.00.
- Apparatus Bay. We observed many hot water unit heaters, all of which appeared functional but worn; this is long lasting equipment, but it is well past its expected economic life; replacing them in kind or with a different system should likely be included if a building renovation is considered. Also in place is a 'Plymovent' sliding rail tailpipe exhaust system which is intended to capture tailpipe exhaust, but automatically disconnect as vehicles hurriedly leave. The Plymovent system (which is used in all stations) appeared serviceable. These systems typically need periodic servicing which should be expected.
- IT Room. We observed a ductless split system dedicated to this room. No recommendations.

### **Electrical Systems:**

- Service was 800a 3ph 4w 120/208v via a ground mounted ComEd transformer. The distribution was mostly from 1983 reconstruction, is serviceable but worn. If a significant renovation is considered, this gear should likely be reworked.
- Two generators observed. The first was 60kw, indoor, natural gas near the service entrance and was coupled with an automatic transfer switch. It backed up only selected emergency loads. This generator was older, but appeared to be in serviceable condition. This older unit may need replacement in the next ten years, say \$20k. If a major renovation is considered

for this building, as it is the main fire station for this department, we would recommend a new distribution that is 100% backed up by generator.

- The second generator was 16kw single phase, mounted on the roof, and dedicated to the IT room equipment. This is a light commercial unit, less than 10 years old. With normal maintenance, we would expect this unit to be serviceable for the next ten years. We note that the newer load center in the IT room was left open with the face plate removed and the bus exposed. This is a safety hazard that should be corrected.
- Lighting was mixed older and newer t12 and t8 fluorescent lamp fixtures (troffers, low bays, strips and wraparounds), and some HID high bay fixtures. We did see some fixtures recently converted to LED retrofit lamps. Any proposed renovation project for this building should include near complete lighting replacements.
- A compliant addressable fire alarm was in place. At the next significant renovation, we would recommend updating the fire alarm devices to meet current code, particularly complete coverage with audio visual alarms.

#### **Fire Protection System:**

A dry pipe full coverage fire protection system is installed. This system will require maintenance, but no other recommendations.

#### **Plumbing System:**

- Domestic water service had a 2" meter but no backflow preventer. Any renovation work should include configuring a compliant RPZ to this service.
- For apparatus bay drainage, we understand a compliant triple basin interceptor is in place.
- We observed an AO Smith boiler style 300mbh commercial water heater coupled with a storage tank near the apparatus bay. We find it very surprising that any water heater has lasted this long. It should be expected that this unit will need replacement in the next 10 years. Say \$10000.
- We also observed a 199mbh tank type water heater in the boiler room. This heater appeared to be only two years old, it is likely that this relatively new unit will serve reliably for the next 10 years.
- Original fixtures appeared quite worn although they remain serviceable. Nothing appeared ADA compliant. Any contemplated renovation should replace/reconfigure fixtures.
- Two air compressors were observed, both around 5hp. One had a mechanical failure and was waiting on parts to repair. This equipment will likely continue to serve but will require periodic repair and maintenance.

#### **Environmental Report:**

#### **Camplin Environmental Services (See full report from CES):**

#### **Fire Station #1 – 1101 Belvidere Road**

- No asbestos information was available on this building prior to the walk-through.
- The building has undergone some significant renovations in 1983. Most of the materials observed would be classified as a post-1980 building material. However, there are still some older materials remaining in the building that could be asbestos containing.
- No areas were identified that would require action at this time.
- A comprehensive asbestos inspection of the building would cost approximately \$3,500.

## Waukegan Fire Department Station 2

- 1 Bldg Name      Waukegan Fire Department - Station 2
- 2 Address        4505 W. McGaw Rd.
- 3 Bldg Sq. Ft.    8,090 SF Main Level
- 4 Year Built      Built in 1997.
- 5 Use             Fire Station

### Preliminary Information

The single story Fire Station 2 was built in 1997. The building is a combination of oversized brick masonry and vinyl siding. The building and site are both in good condition. MEP systems are maintained and in good condition.

Please see attached reports from Root Engineering Services regarding MEP systems assessments & Camplin Environmental Services for preliminary inspection of possible asbestos containing materials.

### A. Exterior - Building Enclosure

#### 1. Exterior Windows & Doors

HM Entry doors are in good condition. OH Doors are also in good condition. Aluminum clad wood windows are in good condition.

#### 2. Exterior Cladding

The brick masonry and vinyl siding are both in good condition.

#### 3. Roofing

The shingle roofing has been replaced within the last year. New shingle roofs typically last 20-30 years depending on the shingle. New roof vents were added.

#### 4. Site

The site is in very good condition. Concrete drives are holding up well and the site landscaping is also in good shape.

### B. Interior

#### 1. Finishes, Walls, & Doors

Interior walls are drywall & CMU and are in good condition. Flooring is in good condition. Wood doors and HM frames from are in good shape. OH Doors in truck bays are also in good condition.

**2. Ceilings & Lighting**

Suspended ceiling tiles and grid throughout are in good condition. T-8 lights are in good condition.

**3. Structure**

The exterior masonry and structure appear in good condition.

**4. Egress & Exiting**

There are illuminated exit signs & emergency lights through out building. The building is served by a generator. Exterior egress locations are at grade level.

**5. Asbestos**

There were no signs of ACM in the building. See report from Camplin Environmental Services.

**C. MEP/Fire Alarm & Suppression**

**1. Mechanical:**

The building is served by residential furnaces and condensing units. There is a separate water heater system for the truck bays.

**2. Electrical**

The main service is 400A. There is a back up generator that serves the building.

**3. Plumbing**

The water services in the building is equipped with an RPZ. Plumbing fixtures and Restrooms are in good condition and meet 1997 ADA standards.

**4. Fire Alarm/Suppression**

Building is equipped with a Fire Alarm Panel with detectors, AV devices and pull stations throughout. There is an automatic fire suppression system in the building.

**D. RECOMMENDATION**

The facility is 20 years old and has been kept up well. As long as mechanical systems are maintained there should be no major repairs or replacements with the exception of residential condenser units.

**E. ADDITIONAL BUILDINGS ON SITE**

**1. Garage Storage:**

There is a small storage garage on site that is also in good condition.

**ROOT ENGINEERING SERVICES - MEP REPORT:**

**Building Title and Address:** Fire Station #2 4505 W. McGaw Road

**General Comments:** This facility was opened in 1997. In general, this building shows wear, but is not 'old'.

**HVAC Systems:**

- Two residential furnace/condensing unit split systems were observed, with no outside air intake ventilation to our review. From this, we would say this building is not compliant with ventilation codes now, or in 1997.
- These residential systems originally had Carrier residential zoning control packages in place. It is our understanding that problems with these control systems compelled those in charge to disconnect and abandon them perhaps 10 years ago.
- The apparatus bay had radiant tube heat. At their age, failures of these systems are likely to appear. Perhaps \$5000 should be budgeted for this.
- The apparatus bay also had a Plymovent vehicle tail pipe trolley system. Ongoing repairs of hoses, trolleys, etc. is typical with this system and should be expected.
- Again, in the apparatus bay, the only other exhaust is a wall mounted propeller fan on a manual switch. Current code and good safety practice of today is to have an automatic system which measures carbon monoxide and oxides of nitrogen in spaces with internal combustion engines. These systems engage high volume exhaust fans whenever concentrations of pollutants rise to levels of concern, and alarms when levels become dangerous (for reference- Toxalert.com). We would recommend such a system in this case.
- The kitchen had a commercial grade type 1 cooking hood. However, we did not see any make up air unit of similar. If this is the correct situation, we would expect the residential building to under significant negative pressure when the kitchen fan is operating; likely negative compared to the apparatus bay. This is particularly be as this condition could draw vehicle exhaust into the living quarters.
- In the next 10 years, we would expect the furnaces and the one condensing unit not yet changed to need replacement. Very preliminary estimate of \$15,000.
- In the next ten years, we would recommend correcting the installed systems to add make up air and ventilation air to this building. Very preliminary estimate of \$15,000.

**Electrical Systems:**

- Service was 400a 3ph 4w 120/208v. The distribution looked to be of good period quality, not overloaded or modified in inappropriate ways, had available spares, and was reasonably labeled.
- Installed generator was 30kw, indoor, natural gas, and was coupled with an automatic transfer switch. It backed up only selected loads. This unit appeared to be in serviceable condition.
- Lighting was typically t8 fluorescent lamps with various style fixtures depending on the application.
- A compliant addressable fire alarm was in place, along with devices and sensors which appeared appropriate.
- No recommendations.

**Fire Protection System:**

- The installed dry pipe fire riser and FP coverage looked appropriate.
- This riser did have a compliant RPZ back flow preventer and fire alarm devices.
- No recommendations.

**Plumbing System:**

- Domestic water service had a 2" meter and a compliant 2.5" RPZ backflow preventer.
- For apparatus bay drainage, we observed an apparently compliant triple basin interceptor.
- We observed a two AO Smith light commercial water heater (one electric, one gas). The gas unit near the residential area looked newer and in good condition. The older electric heater appeared older, perhaps exceeding its expected life span.
- Some new fixtures appear to have been added over the life of the building. We note that the water pipe for these alterations had typically not been insulated. We recommend any bare water pipe be insulated.
- Original fixtures appeared worn but serviceable. All looked to be ADA compliant.
- In the next 10 years, at minimum a water heater replacement should be expected.

**Environmental Report:**

**Camplin Environmental Services (See full report from CES):**

**Fire Station #2 – 4505 W. McGaw Road**

- Potential non-friable materials were noted in the building.
- No actions are required at this time.
- A comprehensive asbestos inspection prior to demolition or renovation of the building would cost approximately \$1,500.

## Waukegan Fire Department Station 3

- 1 Bldg Name      Waukegan Fire Department - Station 3
- 2 Address        216 N. Lewis Avenue
- 3 Bldg Sq. Ft.    3,982 SF Main Level, 1,240 SF Basement
- 4 Year Built      Built in 1952.
- 5 Use             Fire Station

### Preliminary Information

Fire Station 3 was constructed in 1952. The building is a single story with a partial basement and is built with residential style construction. The building is a combination of oversized brick masonry and vinyl siding. The facility is limited due to the size of the truck bays. Given the building setbacks additions are not possible. Studies have been done to raise truck bays and install a second floor. It has been noted that the location of this station would be better suited further West in order to provide a better response time to all parts of the city.

Please see attached reports from Root Engineering Services regarding MEP systems assessments & Camplin Environmental Services for preliminary inspection of possible asbestos containing materials.

### A. Exterior - Building Enclosure

#### 1. Exterior Windows & Doors

Existing exterior doors are wood residential style with storm doors and given their age they are in fair condition. Wood windows with storms are also in fair condition.

#### 2. Exterior Cladding

The building has a combination of brick and stone masonry along with some wood siding that are all in fair condition given their age. On the Southwest portion of the building there has been some settlement which has caused the brick masonry to crack. A portion of the wall has settle so that the windows at this location do not function properly.

#### 3. Roofing

The age of shingle roofing is believed to be approximately 10 years old. This roofing should last another 10 to 15 years at minimum.

#### 4. Site

The site is in good condition with the exception of the concrete to the South of the site. The concrete is cracked and broken and pitches back towards the building. Parking is limited on the site. Shift changes require rotating cars.

**B. Interior**

**1. Finishes, Walls, & Doors**

Interior walls are in good condition. Flooring is in good condition. Wood doors and HM frames from are in good shape. OH Doors in truck bays are also in good condition.

**2. Ceilings & Lighting**

Suspended grid in the basement is below a spline ceiling and in bad shape. Plaster or drywall ceilings have holes in places. There is some damage to ceilings in bunk room from concrete foundation settlement. Ceiling in the apparatus bay is also cracked. Lighting is old and outdated. There are both T-8 & T-12 fixtures in the building.

**3. Structure**

Overall, The exterior masonry and structure appear in good condition. The settlement condition at the Southwest corner should be further investigated to determine what is causing the condition. The concrete floor in the truck bays is cracked and in need of replacement. We believe this is caused because the West portion is only slab on grade causing differential settlement. Excavation would need to be complete to determine the cause.

**4. Egress & Exiting**

The building does not have illuminated exit signs & emergency lights through out building. The building is served by a generator. Exterior egress locations have a steps and are not ADA accessible.

**5. Asbestos**

The basement stairs are suspected asbestos tile. There was some suspected asbestos pipe insulation that was seen through a hole in ceiling above a closet space. See report from Camplin Environmental Services.

**C. MEP/Fire Alarm & Suppression**

**1. Mechanical:**

The building is served by residential type furnaces and window AC units.

**2. Electrical**

The main service is 200 Amp. There is a back up generator.

**3. Plumbing**

The 1.5" water service does not have an RPZ. Plumbing fixtures are old and do not meet current ADA standards. Upgrading to ADA would be impossible as floor plan does not allow for expansion. We were informed that much of the plumbing in the basement has been redone. The building size does not allow for separate men's and women's locker room area. There is no triple basin settling tank.

#### **4. Fire Alarm/Suppression**

Building has an old Fire Alarm system with only a few detectors and audio/visual devices throughout building. There is an automatic fire suppression system in the basement .

#### **D. RECOMMENDATION**

The facility is 65 years old and outdated. Options are limited with regards to height and site to increase it's functionality. The Fire Department has not put much money into maintaing this facility as they would like to one day have a new fire station in a better location to serve the City. All estimates are preliminary and should be reviewed before work shall take place.

- 1) Replace concrete slab on South side: \$10,000.

#### **E. ADDITIONAL BUILDINGS ON SITE**

##### **1. Garage Storage:**

There is a small storage garage that is in fair condition. There is no power to this building as it is only used for cold storage.

### **ROOT ENGINEERING SERVICES - MEP REPORT:**

**Building Title and Address:** Fire Station #3, 216 N Lewis Avenue

**General Comments:** This facility was believed to have opened in 1952 and was the most residential and light duty of any of the stations observed. All systems appeared very worn, obsolete, arguably inadequate. We do not offer piecemeal replacement costs for this building, as it is our understanding that the abandonment of the station is being considered in favor of a new facility in a location further west. If this facility is to stay in service, a complete overhaul of all MEP systems is recommended.

#### **HVAC Systems:**

- No central air conditioning is in place, only window units in selected locations are installed. Thus, no mechanical ventilation was in place in occupied areas.
- A small gas fired hot water boiler was observed in the basement mechanical room. Weil McLain, perhaps 100 mbh in, and very old. This unit is well past its economic service life and necessary replacement or overhaul should be expected in the next 5 years.
- The apparatus bay was heated with gas fire unit heaters which appeared newer and perhaps in good condition. These units however have a relatively short service life.
- The apparatus bay also had a Plymovent vehicle tail pipe trolley system with an outside mounted blower. Ongoing repairs of hoses, trolleys, etc. is typical with this system and should be expected.
- No additional exhaust in the apparatus bay. As previously described, we recommend automatic exhaust systems in apparatus bays.

- The kitchen had a residential hood over the gas range. As discussed previously, we recommend upgrading to a commercial grade type 1 cooking hood with a make-up air unit in these kitchens.

**Electrical Systems:**

- Service was 200a 1ph 3w 120/240v via an aerial drop. The distribution can be fairly described as a mess and should be considered obsolete and of questionable reliability. We would recommend complete replacement of all distribution and an upgrade of the service if this facility is to be kept in service.
- Installed generator was 15kw, indoor, natural gas, and was coupled with an automatic transfer switch. It backed up only a very few selected loads. This unit appeared to be in serviceable condition but of small capacity, likely appropriate to upgrade if this facility is to remain in service.
- Lighting was a mixture of t12/t8 fluorescent, with some incandescent fixtures (all older). We would recommend complete lighting replacement if this facility is to remain in service.
- A very old zoned fire alarm was in place. If this facility is retained, a complete replacement of the fire alarm system is recommended.

**Fire Protection System:** None installed.

**Plumbing System:**

- Domestic water service had a 1.5" meter but no backflow preventer.
- For apparatus bay drainage, we did not observe an interceptor of any kind.
- All fixtures were considerably worn. No fixture in this facility appeared ADA compliant.
- If this facility is to be kept in service, we would recommend all plumbing systems to be overhauled replaced and reworked.

**Environmental Report:**

**Camplin Environmental Services (See full report from CES):**

**Fire Station #3 – 216 N. Lewis**

- No asbestos information was available on this building prior to the walk-through.
- There are still some older materials remaining in the building that could be asbestos containing including floor tiles on stairs and pipe insulation above the ceiling in the basement closet.
- No areas were identified that would require action at this time.
- A comprehensive asbestos inspection of the building would cost approximately \$2,000.

## Waukegan Fire Department Station 4

- 1 Bldg Name      Waukegan Fire Department - Station 4
- 2 Address        825 Golf Rd
- 3 Bldg Sq. Ft.    3,685 SF First Floor, 3,960 SF Second Floor
- 4 Year Built      Built in 1967
- 5 Use             Fire Station

### Preliminary Information

Fire Station 4 is a two story structure built in 1967. The building is brick masonry with steel columns and steel joists structure. Some of the building mechanical systems are old as they date back to original construction. Partial AC has been installed recently on the second floor. Sprinkler system was added in 2014. The building is old but in fair condition for being 50 years old.

Please see attached reports from Root Engineering Services regarding MEP systems assessments & Camplin Environmental Services for preliminary inspection of possible asbestos containing materials.

### A. Exterior - Building Enclosure

#### 1. Exterior Windows & Doors

Exterior aluminum and hollow metal doors are in fair condition. Existing windows are old but are in fair condition. Curtain wall glazing system is clear single pane and does not provide good thermal protection.

#### 2. Exterior Cladding

The building masonry is in fair condition. Some of the locations at window ACs are in need of repair and masonry re-pointing job may be in order. Some of the lintels need to be cleaned and painted as the wall most likely took on water before roof replacement. There are some cantilevered areas with stone caps that allow water infiltration. These caps should be covered with ice and water shield and metal counter flashing to prevent any further water infiltration. Clean and paint lintels.

#### 3. Roofing

The roofing was replaced in 2012 with a 30 years warranty Garland Mineral Surface Modified Bitumen Roofing system. Roof is under warranty until 2042. Routine maintenance such as cleaning roof drains is recommended. There is a tornado siren installed on roof that should be maintained regularly. Tie wires should be inspected regularly to insure siren is secured.

#### 4. Site

The site is in fair condition. Parking is adequate. The asphalt is showing signs of age. There is some alligator cracking and some large cracks in some locations. Various

locations have been patched. Recommend crack seal and coating at a minimum. Asphalt should be replaced with concrete within 5 years.

**B. Interior**

**1. Finishes, Walls, & Doors**

Interior walls are drywall & CMU and are in good condition. Flooring is in fair condition. Wood doors and HM frames from are in good shape. OH Doors in truck bays are also in good condition.

**2. Ceilings & Lighting**

Plaster, acoustical or drywall ceiling is in fair condition. Some of the old T12 lights have been replaced with T-8s lamps or LED as they were in need of replacement.

**3. Structure**

The exterior masonry and structure appear in sound condition. The building is in need of a full re-pointing job within 5 years.

**4. Egress & Exiting**

The building has illuminated exit signs & emergency lights through out building. The building is served by a generator. Rear Exterior egress has a step up and is not ADA accessible. There are two stairs from the second floor but no elevator.

**5. Asbestos**

No asbestos containing materials were identified at our walk through. See report from Camplin Environmental Services.

**C. MEP/Fire Alarm & Suppression (See report from Root Engineering Services)**

**1. Mechanical:**

The building is served by an old 1968 boiler from the original construction. New condensers and air handler have been added to cool the bunk and locker rooms on the second floor. The remainder of the building is cooled by window ACs.

**2. Electrical**

The main service is 400 Amp. There is a back up generator.

**3. Plumbing**

There is a 1.5" water service with no RPZ. Plumbing fixtures are old and do not meet current ADA standards. Once again upgrading to ADA restrooms would be impossible due to the limited floor plan. Sprinkler service is a separate service and has an RPZ.

**4. Fire Alarm/Suppression**

Building has a Fire Alarm system and automatic fire suppression system.

**D. RECOMMENDATIONS**

1)	Re-point entire building:	\$132,000.00
2)	New Concrete paving:	\$160,000.00
3)	New metal cap at stone over hangs:	\$5,000.00
	Clean and paint lintels:	\$2,000.00
4)	Replace windows:	\$50,000.00

**E. ADDITIONAL BUILDINGS ON SITE**

**1. Garage Storage:**

There is a small storage garage on site that is in good condition.

**ROOT ENGINEERING SERVICES - MEP REPORT:**

**Building Title and Address:** Fire Station #4 825 Golf Road

**General Comments:** This facility was believed to have opened in 1968. Any original system is very worn, and likely obsolete, and we did not observe extensive upgrades. We do not offer piecemeal replacement cost for this building, as to our opinion, it is in need of an extensive renovation of most MEP systems.

**HVAC Systems:**

- One residential furnace/condensing unit split systems was observed serving the upstairs area, with no outside air intake ventilation to our review. This equipment is older, replacement will likely be necessary soon.
- A gas fired hot water boiler was observed in the mechanical room. Bryan model CL90, 900 mbh in, dated 1968. It is unknown if this unit has been re-tubed or had it burner replaced; if not, it is past its economic service life and necessary replacement or overhaul should be expected in the next 10 years.
- The apparatus bay was heated with hot water unit heaters which appear very worn and in questionable condition.
- The apparatus bay also had a Plymovent vehicle tail pipe trolley system with an outside mounted blower. Ongoing repairs of hoses, trolleys, etc. is typical with this system and should be expected.
- Again, in the apparatus bay, the only other exhaust is a wall mounted propeller fan on a manual switch. Current code and good safety practice of today is to have an automatic system which measures carbon monoxide and oxides of nitrogen in spaces with internal combustion engines. These systems engage high volume exhaust fans whenever concentrations of pollutants rise to levels of concern, and alarms when levels become dangerous (for reference- Toxalert.com). We would recommend such a system in this case.
- The kitchen had a residential hood over the six-burner gas range. At the next renovation, we would recommend upgrading to a commercial grade type 1 cooking hood with a make-up air unit.

**Electrical Systems:**

- Service was 400a 1ph 3w 120/240v via an aerial drop across the street. The distribution was mostly from original construction and should be considered obsolete and of questionable reliability. We would recommend replacement of most distribution at the next significant renovation of this facility
- Installed generator was 20kw, outdoor, natural gas, and was coupled with an automatic transfer switch. It backed up only selected loads. This unit appeared to be in serviceable condition.
- Lighting was typically t12 fluorescent lamps with very old fixtures. We would recommend complete lighting replacement at the next significant renovation of this facility.
- A compliant addressable fire alarm was in place. At the next significant renovation, we would recommend updating the fire alarm devices to meet current code, particularly complete coverage with audio visual alarms.

**Fire Protection System:**

- The installed sprinkler pipe fire riser and FP coverage looked appropriate.
- This riser did have a RPZ.
- At the next significant renovation, we would recommend updating the fire protection at minimum with correct backflow prevention.

**Plumbing System:**

- Domestic water service had a 1.5" meter but no backflow preventer.
- For apparatus bay drainage, we did not observe an interceptor of any kind.
- We observed a State residential grade gas water heater, likely greater than 10 years old. The capacity of this unit appears to be much lower than other stations, we suspect it is undersized for its service.
- All fixtures were considerably worn. No fixture in this facility appeared ADA compliant.
- At the next significant renovation, we would recommend all plumbing systems to be overhauled replaced and reworked.

**Environmental Report:**

**Camplin Environmental Services (See full report from CES):**

**Fire Station #4 – 825 Golf Road**

- No asbestos information was available on this building prior to the walk-through.
- The building has undergone some renovations over the years. Most of the materials observed would be classified as a post-1980 building. However, there are still some older materials remaining in the building that could be asbestos containing. Older looking suspected asbestos containing pipe insulation was noticed in a storage room north of the apparatus bay. No areas were identified that would require action at this time.
- A comprehensive asbestos inspection of the building would cost approximately \$3,500.

## Waukegan Fire Department Station 5

- 1 Bldg Name Waukegan Fire Department - Station 5
- 2 Address 3221 N. Green Bay Rd.
- 3 Bldg Sq. Ft. 11,410 SF Main Level
- 4 Year Built Built in 2000
- 5 Use Fire Station, Training Center

### Preliminary Information

The single story Fire Station 5 was completed in 2000 and in good condition. The building is located on a 1.75 acre piece of Property on the City's NW side. The site includes an alley way easement and a portion of the NW detention pond extends over an easement for a future extension of Elizabeth Ave. We were informed that the septic field is undersized to accommodate the facility as designed. Apparatus bay floor drains tie into the septic field which most likely overload the field. The facility also operates as a training space and this additional load may not have been included into the septic field design.

Please see attached reports from Root Engineering Services regarding MEP systems assessments & Camplin Environmental Services for preliminary inspection of possible asbestos containing materials.

### A. Exterior - Building Enclosure

#### 1. Exterior Windows & Doors

Aluminum storefront windows and entry doors are in good condition. HM egress doors are in good condition. OH Doors are also in good condition however exterior paint is peeling. Fire Dept is going to have doors repainted. Aluminum windows are in good condition.

#### 2. Exterior Cladding

The brick masonry and stainless metal panels on apparatus bay are in good condition.

#### 3. Roofing

The standing seam metal roofing on the apparatus bay is in good condition. Metal roofs typically have a 25-30 years warranty depending on the manufacturer. The ballasted EPDM flat roof is approximately 17 years old. There was a recent repair made of a large tear in the roof. This roofing should be monitored as it is out of warranty and EPDM roofs typically only last 15-20 years and it is nearing replacement. Roofing should be infrareded to determine if there is any wet insulation.

#### 4. Site

The site is in good condition. Concrete drives and curbs are holding up well and the site landscaping is also in good shape. There is some training equipment on site that we

are told will be removed. The big concern is the septic field on site which was under sized. We recommend hiring a septic field designer to explore other options which may include purchasing some adjacent land. There is no simple or easy solution as City sanitary sewer is located at Yorkhouse and Green Bay Rd.

## **B. Interior**

### **1. Finishes, Walls, & Doors**

Interior walls are drywall & CMU and are in good condition. Flooring is in good condition. Wood doors and HM frames from are in good shape.

### **2. Ceilings & Lighting**

Suspended ceiling tiles and grid throughout are in good condition. Lighting is T-8 lamps and in good condition.

### **3. Structure**

The exterior masonry and structure appear in good condition.

### **4. Egress & Exiting**

There are illuminated exit signs & emergency lights through out building. The building is served by a generator. Exterior egress locations are at grade level.

### **5. Asbestos**

There were no signs of ACM in the building. See report from Camplin Environmental Services.

## **C. MEP/Fire Alarm & Suppression**

### **1. Mechanical:**

The building is served by residential carrier furnaces & condensing units on grade. There is a separate water heater system for the truck bays.

### **2. Electrical**

The main service is 600 Amp. There is a back up generator that serves the building.

### **3. Plumbing**

The water service in the building is equipped with an RPZ. Plumbing fixtures and Restrooms are in good condition and meet ADA standards. Apparatus bay has a triple compartment settling tank.

### **4. Fire Alarm/Suppression**

Building is equipped with a Fire Alarm Panel with detectors, AV devices and pull stations throughout. There is an automatic fire suppression system in the building.

**D. RECOMMENDATION**

The facility is about 17 years old and has been kept up well.

- 1) Replace EPDM roof. \$180,000.00
- 2) Replace or relocate septic field. \$500,000.00

**E. ADDITIONAL BUILDINGS ON SITE**

**1. Training Structure:**

There is training structure on site that we are told will be removed.

**ROOT ENGINEERING SERVICES - MEP REPORT:**

**Building Title and Address:** Fire Station #5. 3221 Green Bay Road

**General Comments:** This facility was opened in 2000. In general, this building shows wear, but is not 'old'.

**HVAC Systems:**

- Three residential furnace/condensing unit split systems were observed, with outside air intake ventilation configured to all three. There is concern for this light duty residential equipment to have outside air intake which is not preheated because it can make return air temperatures to the furnace unacceptably cold during frigid outside condition, perhaps causing premature heat exchanger failure. We would expect all three of these furnaces to need replacement in the next 10 years, perhaps \$12,500.
- One of the three condensing units appear to have been replaced. We would expect the other two to need replacement in the next 10 years. (approx. \$10,000).
- The apparatus bay had radiant tube heat. Wear and tear failures of components of these systems are likely to happen. Perhaps \$5000 should be budgeted for this in the next 10 years.
- The apparatus bay also had a Plymovent vehicle tail pipe trolley system. Ongoing repairs of hoses, trolleys, etc. is typical with this system and should be expected.
- Again, in the apparatus bay, the only other exhaust is a wall mounted propeller fan on a manual switch. Current code and good safety practice of today is to have an automatic system which measures carbon monoxide and oxides of nitrogen in spaces with internal combustion engines. These systems engage high volume exhaust fans whenever concentrations of pollutants rise to levels of concern, and alarms when levels become dangerous (for reference- Toxalert.com). We would recommend such a system in this case.
- The kitchen had a commercial grade type 1 cooking hood. However, we did not see any make up air unit of similar. If this is correct, we would expect the residential part of the building to under significant negative pressure when the kitchen fan is operating; likely negative compared to the apparatus bay. This is particularly be as this condition could draw vehicle exhaust into the living quarters. In the next ten years, we would recommend installing a simple make up air system to work in conjunction with the kitchen hood. Very preliminary estimate of \$4000.

**Electrical Systems:**

- Service was a generous 600a 3ph 4w 120/208v. The distribution looked to be of good period quality, not overloaded or modified in inappropriate ways, had available spares, and was reasonably labeled.
- Installed generator was 100kw, indoor, natural gas, and was coupled with an automatic transfer switch. It backed up only selected loads. This unit appeared to be in serviceable condition.
- Lighting was typically t8 fluorescent lamps with various style fixtures depending on the application.
- A compliant addressable fire alarm was in place, along with devices and sensors which appeared appropriate.
- No recommendations.

**Fire Protection System:**

- The installed 6" wet pipe fire riser and FP coverage looked appropriate.
- This riser did have a compliant RPZ back flow preventer.
- No recommendations.

**Plumbing System:**

- Domestic water service had a 2" meter and a compliant 3" RPZ backflow preventer.
- For apparatus bay drainage, we observed an apparently compliant triple basin interceptor.
- Two gas meters were used, presumably one for the generator, the second for all other load.
- Original fixtures appeared worn but serviceable. Most facilities appeared ADA compliant.
- We observed a boiler style 199mbh water heater coupled with a 200-gallon water storage tank. This style water heater is long lasting, but it is possible the boiler style heater may need replacement in the next 10 years. Perhaps \$8000.

**Environmental Report:**

**Camplin Environmental Services (See full report from CES):**

**Fire Station #5 – 3221 N. Greenbay Road**

- Potential non-friable materials were noted in the building.
- No actions are required at this time.
- A comprehensive asbestos inspection prior to demolition or renovation of the building would cost approximately \$1,500.

## Waukegan Facility Assessment - Cost Estimates

### Fire Stations 1 - 5

#### Fire Station 1 - 1101 Belvidere Road

ITEM DESCRIPTION	RECOMMENDED WORK	PRIORITY	RENOVATION SUB-TOTAL
Architectural			
1	Exterior Concrete Drives Entrances	Remove and replace concrete entrance from Belvidere	C \$ 150,000.00
1A	Exterior Concrete Drives Entrances	Remove and replace concrete entrance to Jackson	C \$ 75,000.00
2	Asphalt Parking Lot	Resurface asphalt parking lot	C \$ 100,000.00
3	Roof	Replace shingle roof	D \$ 25,000.00
4	Masonry Jts	Caulk and dress masonry jts	B \$ 10,000.00
5	Soil at old storage tanks	Test soil for potential contamination	R \$ 4,000.00
MEP			
1	Boiler	Replace Boiler	D \$ 50,000.00
2	Generator	Replace Generator	D \$ 20,000.00
3	Water heater	Replace Water Heater	D \$ 10,000.00
4			
<b>TOTAL</b>			<b>\$ 444,000.00</b>

#### Fire Station 2 - 4505 W. McGaw

ITEM DESCRIPTION	RECOMMENDED WORK	PRIORITY	RENOVATION SUB-TOTAL
Architectural			
1	None		
MEP			
1	Apparatus Bay	Replace radiant heat tubes	D \$ 5,000.00
2	Mech Systems	Replace furnaces and condensing units	D \$ 15,000.00
3	Apparatus Bay	MUAU and ventilation	D \$ 15,000.00
4	Water Heater	Replacement	D \$ 10,000.00
<b>TOTAL</b>			<b>\$ 45,000.00</b>

#### Fire Station 3 - 216 N. Lewis Ave

ITEM DESCRIPTION	RECOMMENDED WORK	PRIORITY	RENOVATION SUB-TOTAL
Architectural			
1	South West entrance	Replace damage concrete that slopes to building	B \$ 10,000.00
MEP			
1	Apparatus Bay	Replace radiant heat tubes	D \$ 5,000.00
2	Mech Systems	Replace furnaces	D \$ 15,000.00
3	Apparatus Bay	MUAU and ventilation	D \$ 15,000.00
4	Water Heater	Replacement	D \$ 10,000.00
<b>TOTAL</b>			<b>\$ 55,000.00</b>

## Fire Station 4 - 825 Golf Road

ITEM DESCRIPTION	RECOMMENDED WORK	PRIORITY	RENOVATION SUB-TOTAL
Architectural			
1 Building Masonry	Re-point entire building	D	\$ 132,000.00
2 Exterior Concrete Drives Entrances	Remove and replace asphalt w/ concrete	C	\$ 160,000.00
3 Exterior Stone caps	Install new metal caps, clean and paint steel lintel	B	\$ 7,000.00
4 Exterior Windows	Replace windows with 1" insul glass and frames	D	\$ 50,000.00
MEP			
1 Boiler	Replace Boiler	D	\$ 25,000.00
2 Water heater	Replace Water Heater	D	\$ 8,000.00
3 New AC for building			
TOTAL			\$ 382,000.00

## Fire Station 5 - 3221 N. Green Bay Road

ITEM DESCRIPTION	RECOMMENDED WORK	PRIORITY	RENOVATION SUB-TOTAL
Architectural			
1 EPDM Roof	Replace roofing	D	\$ 180,000.00
2 Septic Field	Remove and replace	D	\$ 500,000.00
MEP			
1 Mech Systems	Replace furnaces	D	\$ 12,500.00
2 Condensing Unit	Replace condensing unit	D	\$ 10,000.00
3 Apparatus bay	Replace radiant heat tubes	D	\$ 5,000.00
4 Apparatus bay	ToxAlert and Ventilation	D	\$ 10,000.00
5 Kitchen Hood	MUAU	D	\$ 4,000.00
6 Water heater	Replace Water Heater	D	\$ 8,000.00
TOTAL			\$ 729,500.00

**Priority Code: A = Urgent, B = 1-3 years, C = 3-5 years, D = 5-10 years, R = Recommended**

All estimates are preliminary in nature. For more accurate estimates further investigation and design will be required.

## Genesee Theatre

- |   |                     |   |
|---|---------------------|---|
| 1 | <b>Bldg Name</b>    | <b>Genesee Theatre</b>  |
| 2 | <b>Address</b>      | <b>203 N Genesee St (116 W Clayton per Lake Co. Tax Maps)</b> |
| 3 | <b>Bldg Sq. Ft.</b> | <b>Approximately 121,163 SF</b>                               |
| 4 | <b>Year Built</b>   | <b>1927, Renovation Completed in 2004</b>                     |
| 5 | <b>Use</b>          | <b>Theatre/Convention/Meeting Space</b>                       |

### Preliminary Information

The Genesee Theatre originally opened in 1927. The building underwent a complete renovation in the early 2000s and reopened in 2004. The space is currently used as a Theatre and Meeting/Convention facility. Portions of the building are shared with adjacent building to the North, 221 Genesee St, which is now the Three Brothers Theatre. The adjacent building shares a water service, sprinkler service and Fire Alarm system with the Genesee Theatre. Electric service may also be shared. This would make it difficult and expensive to separate 221 Genesee from the Theatre Building.

Please see attached reports from Root Engineering Services regarding MEP systems assessments & Camplin Environmental Services for preliminary inspection of possible asbestos containing materials.

### A. Exterior - Building Enclosure

#### 1. Exterior Windows & Doors

Exterior entrances have been replaced Aluminum storefront entrance doors and windows. Service man doors are hollow metal doors and frames and in good shape. Windows on main level have been replaced. Existing windows on 2nd to the 5th floors are original wood single hung windows with single paned glazing. Storm windows were installed on the interior as part of the 2004 renovation. The windows were repainted in the fall of 2012. The paint has held up good on most windows but some of the worst windows have peeled again. This will most likely be a continued maintenance issue that will need addressing every 7-10 years. A long term plan should be put in place to remove and replace existing hung windows. Decorative windows above lobby are in good condition. It was noted that some windows may benefit from shades or blinds such as south facing windows. Glazing is single paned and clear which provides no protection from solar rays or heat gain.

#### 2. Exterior Masonry Cladding

The South and West façades are a combination of face brick and decorative stone work that was re-pointed as part of the renovation and is in good condition. North and South are adjacent buildings. East facade is a common brick which was re-pointed in 2012

along with some roof parapets. Masonry parapets above roof line should be re-pointed.

There are parapets and a mechanical courtyard between the main house and the lounges and offices on the West facade that should be re-pointed in its entirety. This location is known to have water infiltration. The precast panels on the back stage addition are cracking and nearing failure. These joints should be ground out and re-caulked.

### **3. Roofing**

Existing roofing is a single ply TPO roofing system that is approximately 15 years old. We were informed that the TPO roof system has a warranty that expires in 2022. We were also told that some seams have needed to be re-welded. The roofing insulation should be inspected with an infrared scan to determine if there is any wet insulation. If no wet insulation is found, the roof should be coated within the next 3 to 5 years before any potential failures would require a full tear off and replacement. This coating can extend the warranty for 10 years.

The roof deck above the main entrance has had roof leaks in the past. Leaks in this roof are difficult to assess because there are many penetrations and the roofing surface is covered with walking pads.

### **4. Site**

The building is accessed from city sidewalks to the West & South that are in good condition. The East side has an asphalt parking lot that is in good condition.

## **B. Interior**

### **1. Walls, Doors, Finishes**

All interior walls, doors, frames, flooring and finishes have been replaced and are in good condition. Any asbestos plaster has been encapsulated with the potential exception of plaster on 5th floor.

### **2. Ceilings & Lighting**

All ceilings and lighting have been replaced or were installed new. Lighting is T8 fixtures in offices and mechanical spaces. Much of the public spaces and main house have decorative incandescent fixtures.

### **3. Structure**

Building structure throughout building is in good shape. We did observe that one column on the South side is exposed to some ground water. The base of the column is rusted and should be addressed as soon as possible before any further deterioration occurs.

### **4. Egress & Exiting**

There are illuminated exit signs & emergency lights is adequate throughout building. The building also has an emergency generator.

**5. Asbestos**

The only observed suspected Asbestos Containing Materials was possibly the remnants of plaster on the 5th floor. We were informed that asbestos containing materials in the walls have been encapsulated. See report from Camplin Environmental Services.

**C. MEP/Fire Alarm & Suppression (See RES report for detailed description)**

**1. Mechanical:**

The building is served by boilers in the 5th floor Mechanical room, 2 large chillers on the roof and Air Handling Units throughout the building. (Including the basement and portions of 221 Genesee St.)

**2. Electrical**

The 3000A electrical service has been upgraded and is well sized.

**3. Plumbing**

Plumbing service: There is a new water service and RPZ installed during renovation. All public restrooms have been upgraded and meet ADA compliance on all levels.

**4. Fire Alarm/Suppression**

Building has a Fire Alarm Panel system and Automatic Fire Suppression sprinkler system. The sprinkler system also serves the adjacent building to the North. If the 221 building is sold it would cause an issue because the sprinkler and Fire system would need to be cut off and new service and panels would need to be installed at 221.

**D. RECOMMENDATION**

- 1) The caulk joints on the precast panels for the back stage addition are showing signs of age. Many of the joints are cracked and nearing failure. The joints should be re-caulked as soon as possible. \$20,000.00
- 2) There is still a great deal of common brick masonry that needs to be re-pointed, especially in the mechanical courtyard. Re-point courtyard: \$100,000.00.  
Remaining building, various locations: \$50,000.00.
- 3) The single hung windows with clear single pane glazing are original to the building and approximately 90 years old. The new interior storm windows make them inoperable. The glazing is in fair condition however windows have been repainted 5 years ago and will most likely need another repainting in 5 years to maintain them. Replacing them would be expensive but could help save on energy bills and climate comfort. \$500,000.00 - \$750,000.00 We would suggest shades or blinds at certain locations to help block some of the solar gain. Painting windows \$75,000.00.
- 4) Monitor the condition of the roofing at the existing roof system is nearing the end of it's useful lifetime. An infrared evaluation could be determined if the insulation is dry and a new coating could be installed to extend warranty additional 10 years. InfraRed cost \$2,000.00. New roof Coating with 10 year warranty: \$350,000.00.
- 5) Shore structure and replace existing steel column base: \$3,000,00.
- 6) Remove materials and Place roofing pads under planters on roof: \$1,000.00.

**ROOT ENGINEERING SERVICES - MEP REPORT:**

**Building Title and Address:**

Genesee Theatre Building, 203 N. Genesee

**General Comments:**

The original Genesee Theatre was a 'grand movie palace' constructed in 1925. It fell into disrepair in the 70's and 80's, and was unoccupied through most of the 90's. In 2003 this facility was completely rebuilt with all new mechanical, electrical and plumbing systems. Virtually all of these systems are currently within their economic life.

**HVAC Systems:**

- Chillers. Two installed 190-ton air cooled Carrier units were observed on the roof. This equipment is well within its economic life, and we would expect them to continue to serve with normal maintenance for at least ten years.
- Boiler. Installed system is three Unilux series 2000mbh boilers. These boilers have conventional (non-condensing) combustion, hence about 80% combustion efficiency. With that, this system has a conventional flue venting system, with mechanical room combustion air required. We would expect this boiler to serve reliably for at least ten years with normal maintenance and consistent chemical water treatment.
- Pumps. Three each hot water and chilled water end suction frame mounted pumps were observed. Although the pumps themselves were reported as reliable, motor failures were reported. Please see our notes regarding motor failure with variable frequency drive described for City Hall; the same notes apply here. We recommend any future motor replacements be inverter grade for any equipment using a VFD. We would expect the VFD controlled motors which have not failed to date to suffer a similar failure in the next few years (perhaps \$6000).
- VAV built up air handling units. The Genesee system has 10 air handling units (AHU) of varying layout and size, three of which are 'variable air volume' (VAV) type with variable frequency drive fans. The installed equipment is durable and long lasting for which minimum 30-year life is expected given normal maintenance. Component failures may occur, but this type of air handling unit is very rebuildable, allowing component replacement; it should be reasonably expected to have an occasional actuator, sensor, or damper fail in the next ten years. We do note that the fans on the three VAV units are controlled by VFD's. It is unknown if the drive motors for these fans are inverter grade. If they are not, please expect early failure. Perhaps \$12000
- Constant volume air handling units. We believe seven of the 10 AHU are constant volume, they are similar to the VAV AHU's but do not have the VFD's that cause conventional motors to fail. Other than that, the same comments as VAV air handling units apply.
- VAV terminal units. We observed many VAV terminal units, all with hot water reheat coils on the VAV AHU systems (#1, # 6 and #7). This equipment controls heating and cooling to individual zones with both direct digital controlled (DDC) and pneumatic actuators. Terminal units are generally reliable. Ductwork and duct insulation looked intact and functional. No recommendations.
- Building Automation System. A Siemens BAS was observed. These systems often need periodic updating, but we would expect this system to continue to serve effectively for the next 10 years.

**Electrical Power Systems:**

The main service is 277/480v 3 phase 3000 ampere fed from a pad mount ComEd utility transformer. A main switchboard with main circuit breaker with ground fault was observed in the basement. Numerous 480v panelboards, step down transformers, 120/208 panel boards were observed throughout the facility. The mechanical room had a 600a motor control center which had a variety of motor starters and VFD's. A 30kw 480v emergency generator (natural gas for fuel) was observed on the roof to the north of the stage, using natural gas fuel with an automatic transfer switch (ATS). It is our understanding that the generator has had regular maintenance in its life, and given that this equipment is not used often, we would expect it to continue to serve for greater than 10 years given normal maintenance. All distribution dates from renovation, and are all well within their economic life, and will likely continue to serve adequately as they appear to be of good quality, installed professionally, and do not appear overloaded or altered in inappropriate ways.

**Electrical Lighting Systems:**

We note that this facility has a wide variety of lighting, almost all dates from the major renovation. The non-specialized lighting typically uses T8 fluorescent lamps (typically 2x4' troffers and wraparounds). No recommendations on this typical lighting. Exterior lighting systems are similar. We have not observed the site at night, but what we observed looked appropriate.

**Electrical Low Voltage Systems:** We note that an addressable fire alarm system is in place from the major renovation. This will likely serve for at least the next 10 years, and appeared compliant with current code. This building does have extensive audio, video, data server, and theatrical systems; we have no comment on these systems.

**Plumbing Fixtures:** Most fixtures observed date from the major renovation, and were in good condition and compliant with current ADA requirements. Although the occasional faucet or drinking fountain may fail, no significant fixture replacements are foreseen in the next 10 years.

**Plumbing Water System:**

A 4" water service is configured off the base of the FP riser, which is comfortably sized. We note that an RPZ back flow preventer is in place, compliant and appropriate. Water distribution was in copper pipe and professionally done. Pipe insulation was intact in in good condition. The main water heater is a 400 mbh boiler style with a 300gal storage tank type with conventional combustion which appeared to date from the major renovation. Water heaters often have limited lifespans, and replacement of this unit should be expected in the next decade. Estimated cost \$8000. The remainder of the system is likely reliable for the coming ten years.

**Plumbing Waste/vent/storm:** These systems seem intact. Duplex sump pump systems of good quality and professional installation were observed. No recommendations at this time.

**Fire Protection System:** The FP system has an 8" water service with RPZ back flow preventer, and a 50hp fire pump with controller. All spaces are wet pipe sprinkled. These systems require maintenance but are unlikely to need replacement or repair in the next 10 years.

**Environmental Report:**

**Camplin Environmental Services (See full report from CES):**

**Genesee Theater – 201 to 215 N. Genesee**

- No asbestos information was available on this building prior to the walk-through.
- The building has undergone some significant renovations in the early 2000's. Asbestos was removed during the renovation but no records were available from the theater management. Most of the materials observed would be classified as newer post-1980 building materials. There are still some older materials in the building that could potentially contain asbestos such as plaster which had been encapsulated prior to the renovation.
- All materials look to be in good condition. No action are required at this time.
- A comprehensive asbestos inspection of the building would cost approximately \$5,000. There was discussion of a comprehensive asbestos inspection being performed prior to the building renovation in the early 2000's. However, no asbestos inspection documents could be located by the theater management. If this document can be located the cost of the comprehensive asbestos study could be significantly reduced.

**Waukegan Facility Assessment - Cost Estimates**  
**GENESEE THEATRE - 203 N. Genesee St.**

**Genesee Theatre - 203 N. Genesee St.**

ITEM	DESCRIPTION	RECOMMENDED WORK	PRIORITY	RENOVATION SUB-TOTAL
Architectural				
1	Backstage Addition	Re-Caulk precast panels	A	\$ 20,000.00
2	Exterior Masonry (Courtyard)	Re-point all masonry joints	D	\$ 100,000.00
2A	Exterior Masonry (Misc)	Re-point all masonry joints	D	\$ 50,000.00
3	Windows	Remove & Replace Windows	R	\$ 750,000.00
3A	Windows	Repaint Windows	D	\$ 75,000.00
4	Roof	Infrared for wet insulation	C	\$ 2,000.00
4A	Roof	Install new roof coating (10 year warranty)	C	\$ 350,000.00
5	Basement	Replace	B	\$ 3,000.00
6	Roof	Remove	A	\$ 1,000.00
MEP				
1	Motors for VFDs	Replace	D	\$ 6,000.00
2	VAVs with VFDs	Replace	D	\$ 12,000.00
<b>TOTAL</b>				<b>\$ 1,294,000.00</b>

**Priority Code: A = Urgent, B = 1-3 years, C = 3-5 years, D = 5-10 years, R = Recommended**

All estimates are preliminary in nature. For more accurate estimates further investigation and design will be required.

## **221 Genesee St. - Three Brothers Theatre**

- |                       |   |
|-----------------------|---|
| <b>1 Bldg Name</b>    | <b>Old JC Penny's, Former Clock Wise Theatre</b>        |
| <b>2 Address</b>      | <b>221 N Genesee St</b>                                 |
| <b>3 Bldg Sq. Ft.</b> | <b>9,015 SF , 1,410 SF Mezzanine</b>                    |
| <b>4 Year Built</b>   | <b>circa 1940s</b>                                      |
| <b>5 Use</b>          | <b>Currently used by Three Brothers Theatre Company</b> |

### **Preliminary Information**

The building is the old JC Penny's building. Previous occupants include the Genesee Theatre Organization offices and the Clockwise theatre. The space is currently used by Three Brothers Theatre. Portions of the building are shared with adjacent Genesee Theatre. The Genesee Theatre occupies the entire basement of this building. The building shares a sprinkler, fire alarm, electric and water service with the Genesee Theatre. Separating this building from the Genesee Theatre would be difficult and expensive.

Please see attached reports from Root Engineering Services regarding MEP systems assessments & Camplin Environmental Services for preliminary inspection of possible asbestos containing materials.

### **A. Exterior - Building Enclosure**

#### **1. Exterior Windows & Doors**

Aluminum storefront entrance door and windows on main level West facade are in fair condition and both exit at grade level. Second floor windows on West facade are old single paned steel frame windows and have out lived their useful lifetime.

#### **2. Exterior Cladding**

West façade facing Genesee St. is stone and granite and in fair condition. North and South are adjacent buildings. East facade is a common brick which is in need of re-pointing. There is also a brick chimney that needs re-pointing. Several bricks appear ready to fall. Masonry parapets above roof line should be re-pointed. Re-caulk any damaged clay tiles.

#### **3. Roofing**

Existing roofing is a single ply TPO roofing system that is approximately 14 years old that is most likely a retrofit over an existing roof. The roof is most likely near or at its typical useful life. There is no known warranty although it is believed to have been completed around the same time as Genesee Theatre roof. The roofing insulation should be inspected with an infrared scan to determine if there is any wet insulation. If no wet insulation is found, the roof should be coated with the next year or two before any potential failures would require a full tear off and replacement. The parapet caps

have clay coping tiles however they are in fair condition and should be caulked and maintained regularly. We observed this building for a second time a few weeks later and discovered that a good portion of the roof was covered with standing water. This was three days after last rain fall. Brian Hewitt noted that it is a regular occurrence and many times he has to sweep the water to the drains. Ponding water should be evaporated within 48 hours. This amount of water on the roof is trouble some. We recommend full tear off and replacement so that appropriate pitch can be added to the roofing. Estimate is \$330,000.00.

#### **4. Site**

The building is on a small site accessed from city sidewalks to the West that are in good shape. The East side has an asphalt alley way access that is in fair condition.

### **B. Interior**

#### **1. Walls, Doors, Finishes**

The building has moveable partitions as the space functions as a black box versatile theatre. The walls, ceilings and doors on the main floor are in fair condition and function well enough for their intended purpose. There is a storage mezzanine on the East portion. There is also second story with small offices and a furnace room on the West Side. These rooms are not used and have fallen into disrepair.

#### **2. Ceilings & Lighting**

Ceiling in the main theatre space is plaster or drywall. Holes have been cut into the ceiling to attach theatre lights and sprinkler system. There is a combination of fluorescent fixtures and stage lighting. Suspended acoustical ceiling tile & grid is in decent condition. Light fixtures are older but in fair condition.

#### **3. Structure**

Building structure is steel columns and joists that appear to be in good condition. The Basement foundation is in good condition.

#### **4. Egress & Exiting**

There are illuminated exit signs & emergency lights through out building. The building is most likely connected to the emergency generator for the theatre. West exit is at grade level. There is only one means of egress from the basement. The second floor area is only accessible from the theatre side and has one means of egress.

#### **5. Asbestos**

There is some potential asbestos on the second floor office area. VCT or mastic. See report from Camplin Environmental Services.

#### **6. Basement**

The entire basement has been over taken by the Genesee Theatre. There is a locked door that prevents access to the basement.

**C. MEP/Fire Alarm & Suppression (See RES report for detailed description)**

**1. Mechanical:**

The building is served by unit radiant heaters in the theatre. There is a furnace that serves the second floor. There is a furnace that serves the main theatre room that appears to be demoed or abandoned. There is no AC in this building.

**2. Electrical**

The electrical service is shared with the Genesee Theatre. There are electrical panels in one of the Restrooms which is a code violation.

**3. Plumbing**

Plumbing service: Restrooms are old but in fair condition but do not meet current ADA standards. There are electrical panels in Restroom which is a code violation. The buildings water is shared with Genesee Theatre.

**4. Fire Alarm/Suppression**

Building has a Fire Alarm Panel system and Automatic Fire Suppression sprinkler system that is tied into the Genesee Theatre. If this building is ever sold it would cause an issue because the sprinkler system would need to be cut off.

**D. RECOMMENDATION**

- 1) Closely monitor the condition of the roof. The roof holds water and may be infiltrating roof system. Complete infrared to verify if roof insulation is wet. \$2,000.00
- 2) Remove and replace roof: \$300,000.00
- 3) Replace windows on West Facade: \$30,000.00
- 4) Re-point exterior masonry and chimney: \$48,000.00

## **ROOT ENGINEERING SERVICES - MEP REPORT:**

### **Building Title and Address:**

Three Brothers Theatre, 221 North Genesee

### **General Comments:**

This facility was originally part of the 'JC Penney' building, likely original construction from the 50's. Significant alterations and renovations were done to these spaces, converting it to a community small theatre intended for small audiences, at the same time as the Genesee Theatre renovation. It is to note that basement level of this building is effectively part of the larger Genesee theatre complex and houses much of the electrical distribution and one large air handling unit.

### **HVAC Systems:**

- The small theatre spaces are not air conditioned or set up with engineered ventilation, we observed only hot water unit heaters fed from Genesee theatre boilers. The lack of engineered ventilation is a code issue of some concern for a public space like a theatre. We did observe above ceiling ductwork from an abandoned older system, no longer functional.
- Partial upper level office mezzanine. This office space was conditioned by a residential style furnace. No engineered ventilation was evident (again a code issue). The furnace and its accompanying condensing unit date from the Genesee renovation and are past their economic life. Replacement will likely be needed in the next 10 years, perhaps \$5000.
- Outside air and relief ductwork are evident on the north wall and roof of this space, which are part of Genesee AHU-1 which is located in the basement below.

### **Electrical Systems:**

- A mixture of distribution equipment is evident in these spaces, some professionally done, some improvised, some very old. We did observe 50's era panel boards in the men's room (current code does not allow this). Non-specialty lighting was also a mixture of T8 fluorescent and improvised fixtures. A significant theatrical lighting system was in place and apparently functional. Clearly the renovation work done in 2003 to these spaces left some old systems behind. From this, issues are likely to arise with this building in the next 10 years, but the exact nature is difficult to predict.
- Fire Alarm. Alarm devices were in place. These were believed to be controlled/ monitored by the Genesee Theatre FACP.

### **Fire Protection System:**

The theatre areas were sprinkled, from the Genesee Theatre system.

### **Plumbing System:**

First floor restrooms are in place, and are best described as minimalist. Fixtures were likely new in 2003, water is from the Genesee theatre systems, while the sewer is likely adapted from original construction. ADA requirements are likely met with these facilities. A small private restroom is present on the upper level mezzanine; it is clearly not ADA compliant, and may not be functional. No recommendations at this time.

**Environmental Report:**

**Camplin Environmental Services (See full report from CES):**

**Three Brothers/Old Clockwise – 221 N. Genesee**

- No asbestos information was available on this building prior to the walk-through.
- The building has undergone some significant renovations in the early 2000's. Most of the materials observed would be classified as a post-1980 building.
- No areas were identified that would require action at this time.
- A comprehensive asbestos inspection of the building would cost approximately \$2,500.

**Waukegan Facility Assessment - Cost Estimates**  
**THREE BROTHERS THEATRE - 221 N. Genesee St.**

**Three Brothers - 221 N. Genesee St.**

ITEM	DESCRIPTION	RECOMMENDED WORK	PRIORITY	RENOVATION SUB-TOTAL
Architectural				
1	Roof	Infrared to test for wet insulation	A	\$ 2,000.00
2	Roof	Remove & replace existing roof	C	\$ 300,000.00
3	West Windows	Remove and replace windows	D	\$ 30,000.00
4	Exterior Masonry	Repoint granite panels & East common brick	D	\$ 48,000.00
MEP				
1	New Ventilation & AC	Install engineered ventilation to code	R	\$ 50,000.00
2	Mezzanine Furnace	Install new	D	\$ 5,000.00
3	Electrical Panels	Relocate Electrical Panels	B	\$ 30,000.00
<b>TOTAL</b>				<b>\$ 465,000.00</b>

**Priority Code: A = Urgent, B = 1-3 years, C = 3-5 years, D = 5-10 years, R = Recommended**

All estimates are preliminary in nature. For more accurate estimates further investigation and design will be required.

## Waukegan Metra Station - Union Pacific Line

1	Bldg Name	Waukegan Metra Station - Union Pacific
2	Address	95 Spring St.
3	Bldg Sq. Ft.	3,485 SF
4	Year Built	1989
5	Use	Metra Rail Station

### Preliminary Information

The single story Union Pacific Metra Station was completed in 1989. The lobby and restrooms portions of the building are maintained by the City of Waukegan. Metra maintains locker rooms and toilet rooms for their employees along with ticket booth. The facility underwent some exterior renovations approximately a year and a half ago. Surrounding walks were replaced and an accessible ramp was installed. Also, at this time the flat roofing portion was replaced by Metra. There were also two condenser units and furnaces replaced approximately three months ago.

Please see attached reports from Root Engineering Services regarding MEP systems assessments & Camplin Environmental Services for preliminary inspection of possible asbestos containing materials.

### A. Exterior - Building Enclosure

#### 1. Exterior Windows & Doors

Aluminum storefront entrance doors and windows on West facades are in fair condition and both exit at grade level. There are some press plates on the aluminum windows that have been removed by vandals. These should be replaced. There is a loose piece of aluminum break metal at the NE corner of the building entrance. Exterior HM door on Metra side is rusting out and will need replacement.

#### 2. Exterior Cladding

Brick masonry is in good condition.

#### 3. Roofing

The flat roofing membrane system was replaced approximately a year and a half ago. The existing age is not known. The standing seam metal roofing is approximately 30 years old and most likely out of warranty however these roofs can last nearly 50 years if maintained. Some of the paint on metal roof panels is peeling and will need repainting within 5 years.

**4. Site**

The building is accessed from concrete sidewalks that are new and in good condition. These were renovated a year and a half ago to provide better accessibility. The asphalt parking lots are in fair condition.

**B. Interior**

**1. Walls, Doors, Finishes**

The passenger side has glazed masonry block that is in good condition. HM frames and doors are in fair condition. Flooring in the station is also in good condition. Flooring in restrooms and janitor's closet are in need of replacement. On the Metra side some of the CMU or gyp brd walls need patching or painting.

**2. Ceilings & Lighting**

Ceilings are drywall in most areas and suspended acoustical ceiling tiles in locker rooms. The Lennox unit above the ceiling in Women's locker room had open junction boxes. These should be covered and ceiling tile replaced. Many of the light fixtures appear to have been replaced with T-8 lamp fixtures.

**3. Structure**

Building masonry structure appears in good shape from visual inspection.

**4. Egress & Exiting**

There are illuminated exit signs & emergency lights however some of them are not working. These exit signs and emergency lights should be replaced. All exterior exits are at grade level.

**5. Asbestos**

Any flooring tile replacements should be tested for asbestos in mastic. See report from Camplin Environmental Services.

**C. MEP/Fire Alarm & Suppression**

**1. Mechanical:**

The building is served by two residential furnaces, ceiling mounted air handler & pad mounted condensing units. Furnaces and one of condensing units have been recently replaced.

**2. Electrical**

There is a 200 Amp single phase three wire service on the Metra side. There are two meters on the exterior.

**3. Plumbing**

Plumbing service: Water service is on the Metra building side Mechanical Room. Public Restrooms are in need of a face lift but do not meet current ADA standards. They were constructed Pre-ADA requirements. We could most likely complete a

facelift of flooring and painting however if fixtures are upgraded then the facility may need to be upgraded as well. However, it may not be difficult to upgrade these restrooms due to space constraints. Shower and restrooms on Metra side also do not meet ADA code.

#### **4. Fire Alarm/Suppression**

Building has no Fire Alarm system or Fire Suppression.

### **D. RECOMMENDATION**

Overall the building is in pretty good condition. Restrooms are in need of renovation.

- 1) Replace (3) exit signs and (1) emergency lights. \$500.00
- 2) Replace aluminum window framing pressure cover plates and break metal. \$2,000.00
- 3) Paint metal roofing panels. \$10,000.00
- 4) Restrooms are not required to be upgraded to ADA unless they are remodeled. Estimated cost: \$150,000.00. Upgrading these restrooms would be a large undertaking as the SF required of rooms sizes and access are greatly increased.

### **ROOT ENGINEERING SERVICES - MEP REPORT:**

#### **Building Title and Address:**

Metra Station. 95 N Spring Street

**General Comments:** This facility is a single-story train station divided into two parts: passenger area and Metra crew area.

#### **HVAC Systems:** Observed systems were:

- Two residential furnaces in the mechanical/electrical room of the crew area, coupled with outside grade mounted residential condensing units. This equipment appears to be recently replaced. We were not able to trace ductwork on these units, it was not clear exactly what area each unit served.
- One older above ceiling mounted furnace (above the women's restroom) was observed with an older condensing unit mounted outside. Again, we could not trace ductwork, but we were told this unit serves the ticket office. We did note this is an unusual looking unit, with an unusual venting method.
- Exhaust fans for the locker room and shower areas were evident, but no make up air unit was observed.
- One window air mount air conditioner serving the concession stand was observed. We note that this unit discharges its waste heat into the passenger area, a poor technique.
- In all cases, we did not observe any outside air intakes for these systems. We note that this residential equipment does not have the capability to bring in much outside air. We also note that without outside air ventilation, this facility does not comply with current building code. We finally note that with the appropriate locker room exhaust fans installed, and the lack of outside air being brought in by the conditioning equipment, this building will pull negative

pressure, likely causing drafts, condensation, and a variety of undesirable results. In the next ten years, we would recommend the systems serving this building be upgraded to commercial grade equipment which is compliant with ventilation code, and has engineered code compliant ventilation. Perhaps \$30,000.00

**Electrical Systems:**

- This building has a duplex single phase electrical service; a 200-ampere rated 120/240v service for the crew area, and a 100a rated 120/240v service for the passenger area. Panelboards were observed in the equipment closets, and was commercial grade, and appeared worn but serviceable. Lights were conventional, mostly T8 fluorescent fixtures; again, worn but serviceable. An addressable fire alarm was observed, and is likely serviceable for the next 10 years.

**Fire Protection System:** None installed.

**Plumbing System:**

- The water service was 1.5" meter with a 2" RPZ backflow preventer. Plumbing fixtures including flush valve wall mount water closets and urinals, wall mount lavatories, and mop sinks in both the passenger and crew areas. Showers were in place in the men's and women's locker rooms. All fixtures were serviceable but worn. One water heater served the entire building, 75-gallon 100mbh commercial grade with non-condensing combustion, which appeared to be relatively new.

**Environmental Report:**

**Camplin Environmental Services (See full report from CES):**

**METRA Train Station – 95 Spring Street**

- Potential non-friable materials were noted in the building.
- No actions are required at this time.
- A comprehensive asbestos inspection prior to demolition or renovation of the building would cost approximately \$500.



## **Office Space - 227 Genesee St.**

- 1 Bldg Name Old JC Penny's, Former Planning & Zoning
- 2 Address 227 N Genesee St
- 3 Bldg Sq. Ft. 5,233 SF 1st Floor, 826 SF 2nd Floor, 5,233 SF Basement
- 4 Year Built circa 1940s-50s?, Renovated in the Early 1990s?
- 5 Use Vacant Office Space

### **Preliminary Information**

The building is the old JC Penny's building. The building housed planning and zoning department until they moved into the new City Hall. Currently vacant. Central stair case has been enclosed. There is a second story area on the West side that is inaccessible from the main floor. Stairs have been removed. No access is known. The electricity is only working in a portion of the building. It is currently not known why.

Please see attached reports from Root Engineering Services regarding MEP systems assessments & Camplin Environmental Services for preliminary inspection of possible asbestos containing materials.

### **A. Exterior - Building Enclosure**

#### **1. Exterior Windows & Doors**

Aluminum storefront entrance door and windows on West facades are in fair condition and both exit at grade level. Second floor windows on West facade are steel frame windows. They are single pane and most likely out lived their useful lifetime. We are not able to access the second floor to determine how they looked from the interior. It is our best guess that if they are similar to 221 Genesee, they are in need of replacement.

#### **2. Exterior Cladding**

West façade facing Genesee St. is stone and granite and in fair condition. North and South are adjacent buildings. East facade is a common brick which is in need of re-pointing. Masonry parapets above roof line should be re-pointed. Re-caulk any damaged clay tiles. The brick masonry chimney that serves the old basement boiler is in need of re-pointing. Since this boiler is believed to be no longer functional, the chimney could most likely be cut down to roof level. The brick masonry at the exterior stair egress is water damaged and needs to be replaced.

#### **3. Roofing**

Existing roofing is a Built Up Roofing membrane system that is aged but still in fair condition. Perimeter flashings are in decent condition. The parapet caps are clay coping tiles however they are in fair conditions. The lifetime of this roof could be extended if it were to be coated within the next year or two. This could be done by contractors or city workers.

There is some steel angle framing on the roof above the second floor area. This steel framing should be removed from so that it does not cause any leaks. There are two (2) RTUs on the roof. One has been replaced recently and one looks to be in fair condition but will most likely need replacement in 3-5 years. There is some re-pointing on the brick parapet walls

#### **4. Site**

The building is accessed from city sidewalks to the West. The East side has an asphalt alley access that is in fair condition.

### **B. Interior**

#### **1. Walls, Doors, Finishes**

The former office consists of narrow hallways and small offices. There are a few file rooms and conference rooms. Interior walls are gyp board partitions and in good condition. There were a few locations that show signs of water damage. Doors & frames are in fair condition.

#### **2. Ceilings & Lighting**

Ceilings are suspended acoustical ceilings and grid and drywall soffits which are in good condition. Light fixtures are older but in fair condition.

#### **3. Structure**

Building structure in the basement is steel beams and concrete deck and is in good shape. The interior of the foundation walls look good and there is no sign of any water leakage. The old center stair case has been closed up with new steel beams and structure.

#### **4. Egress & Exiting**

There are illuminated exit signs & emergency lights on the main level however some of them do not appear to be operational. The West exterior egress is at grade level. The East exterior egress has stairs. There is only one means of egress from the basement and there were no exit or emergency lights observed. There is a second floor area on the West side that is inaccessible. The staircase in the rear of the building is in fair condition. The old central staircase from JC Penny's has been closed up with steel beams, metal deck and concrete slab.

#### **5. Asbestos**

The basement has two pipes with asbestos insulation that run along the entire North Wall. Existing boiler most likely has asbestos containing materials that would need to be abated before a replacement. The boiler however is no long in use. See report from Camplin Environmental Services.

#### **6. Basement**

The basement has basically been abandoned. There were no working lights. There was a leaking sanitary waste pipe line. The basement was musty and smelled of mold

and mildew. There is no exhaust or fresh air provided in the basement which is a code violation. The lights were not working.

**C. MEP/Fire Alarm & Suppression**

**1. Mechanical:**

The building is served by two (2) RTUs on the Roof. One Trane unit appears to be relatively new and should last another 10 years. The typical useful lifetime of RTUs is 15 years. I would expect replacement will be necessary for the older RTU within the next 5 years.

**2. Electrical**

There is a small 200 Amp panel but electric service is confusing. It is not known why portions of the building have no electricity. Further investigation will be required to assess problem.

**3. Plumbing**

Plumbing service: Restrooms are in good condition but do not meet current ADA standards. There is a leaking sanitary waste pipe in the basement that should be repaired immediately as this may contribute to the mold/mildew in the basement. The water supply most likely comes from adjacent building to the South (221 Genesee). The sanitary lines also tie into 221 N Genesee.

**4. Fire Alarm/Suppression**

Building has no Fire Alarm system or Fire Suppression.

**D. RECOMMENDATION**

It is a difficult task to prevent water from infiltrating spaces below parking decks since they are

- 1) Repair leaking sanitary piping: \$2,000.00
- 2) Complete roof insulation infrared \$2,000. Coat existing roofing to extends it's lifetime. \$35,000.00
- 3) Complete masonry re-pointing on the East facade and parapets. \$25,000.00
- 4) Abate asbestos in the basement. Pipe insulation and boiler. \$20,000.00
- 5) Basement should be cleaned of all debris. \$5,000.00
- 6) Complete masonry re-pointing on the West facade. \$10,000.00
- 7) Replace West windows (second floor): \$10,000.00

**ROOT ENGINEERING SERVICES - MEP REPORT:**

**Building Title and Address:**

Office Spaces, 227 North Genesee

**General Comments:**

This facility was originally part of the 'JC Penney' building, likely original construction from the 50's. Renovations to these spaces, converting it to an office for Waukegan Zoning occurred at the early 1990's. Zoning reportedly moved out of this space when the new Waukegan City Hall was opened in 2004. This space is believed to be unoccupied since then. The basement space of 227 is a mixture of unfinished and abandoned areas with a framed-up stair case, no heat or ventilation, non-functional lighting and considerable debris; this basement space is not occupiable at this time.

**HVAC Systems:**

The office renovation work of the '90's configured roof top systems with above ceiling ductwork. The RTU's appeared to be newer (perhaps only a few years old) although we were not able to inspect them closely. The remainder of the system appears functional. No recommendations.

**Electrical Systems:**

Electrical in 227 was confusing; we could only GET the lights on the north side of the space to work, while the south side would not. Brief investigation could not find a reason for this. Lighting installed was 2x4 prismatic troffers with conventional control which we saw as conventional and usable once the power issue is sorted out. Panel boards on the first floor clearly were replaced in the 90's work, and looked capable. Other than fixing the unknown issue with distribution, we have no other recommendation.

**Fire Alarm**

Alarm devices were in place. These were believed to be controlled/monitored by a zoned FACP.

**Fire Protection System:**

This space is not sprinkled at this time.

**Plumbing System:**

First floor restrooms are in place. Fixtures were likely installed from the 90's renovation, and appear capable. This building has its own water service (old) which does not have a listed back flow preventer which is required by current code. No recommendations at this time.

**Environmental Report:**  
**Camplin Environmental Services (See full report from CES):**

**Old JC Penney/Planning & Zoning – 227 N. Genesee**

- No asbestos information was available on this building prior to the walk-through.
- The building has undergone some significant renovations in the early 2000's. Most of the finishing materials (drywall, floor tile, ceiling tile) observed would be classified as a newer post-1980 building material. However, there was damaged older plaster near the northwest corner of the second floor.
- There was also suspected asbestos-containing pipe insulation and boiler insulation in the basement of the building.
- One area that should be considered for action is the damaged plaster near the northwest corner of the second floor. The plaster appears to be part of a pipe riser column with suspected asbestos insulation behind the damaged plaster wall. It is recommended that this material be tested to determine if asbestos is present. Cost to test the plaster wall and insulation is approximately \$500.
- A comprehensive asbestos inspection of the building would cost approximately \$2,500.

**Waukegan Facility Assessment - Cost Estimates**  
**227 N. Genesee St.**

**227 N. Genesee St.**

ITEM	DESCRIPTION	RECOMMENDED WORK	PRIORITY	RENOVATION SUB-TOTAL
<b>Architectural</b>				
1	Basement Waste Piping	Repair leaking sanitary pipe	A	\$ 2,000.00
2	Roof	Infrared to test for wet insulation	A	\$ 2,000.00
2A	Roof	Coat existing roofing to extend lifetime	A	\$ 35,000.00
3	East Façade	Repoint existing masonry	B	\$ 25,000.00
4	Basement Asbestos	Abate asbestos on pipe insulation and boiler	R	\$ 20,000.00
5	Basement	Remove materials and debris	R	\$ 5,000.00
6	West Façade	Repoint granite panels	D	\$ 10,000.00
7	West Windows	Remove and replace windows	D	\$ 10,000.00
<b>MEP</b>				
1	Main Floor Elec Distribution	Investigate electrical distribution issues	R	\$ 5,000.00
2	Fire Alarm	Install new Fire Alarm System	R	\$ 40,000.00
3	New domestic and Fire service	Install new domestic and fire water service	R	\$ 50,000.00
4	Fire Suppression	Install new sprinkler system	R	\$ 50,000.00
5	Lighting	Upgrade to LED lights	R	\$ 40,000.00
<b>TOTAL</b>				<b>\$ 294,000.00</b>

**Priority Code: A = Urgent, B = 1-3 years, C = 3-5 years, D = 5-10 years, R = Recommended**

All estimates are preliminary in nature. For more accurate estimates further investigation and design will be required.

## Carnegie Library

1 Bldg Name	Carnegie Library
2 Address	98 State Rte 137 (1 Sheridan Rd)
3 Bldg Sq. Ft.	Approx 8,204 SF
4 Year Built	1902-1903
5 Use	Vacant, Storage

### Preliminary Information

The old Carnegie Library has been vacant for many years. Building is on historical registry National Park Service's National Register of Historic Places. The building is in need of major interior renovation. The interior is in disrepair. The windows are very old and in need of replacement. Many window panes are broken and should be boarded up. The masonry needs to be addressed especially the brick wall on the North and East side. The roofing and skylight have been replaced recently and are in good condition.

Please see attached reports from Root Engineering Services regarding MEP systems assessments & Camplin Environmental Services for preliminary inspection of possible asbestos containing materials.

### A. Exterior - Building Enclosure

#### 1. Exterior Windows & Doors

Existing windows and doors are believed to be original to the building. Many window panes are cracked and broken. Many windows are covered with plywood to prevent any weather or animals from entering the building. The windows are in dire need of replacement. Exterior doors would most likely need to be refurbished to maintain the history of the building.

#### 2. Masonry

The exterior cut stone masonry is in good shape however it is in need of re-pointing the joints and some cleaning. Some of the masonry at the roof line may need to be reset. The rough stone masonry at grade level needs re-pointing. The brick masonry on the North and East facades is in desperate need of re-pointing. Some of the bricks are defacing and the mortar joints are completely eroded. There are portions of stone on the NE of building that are in need of replacement. Some stones around old door ways need to be repaired as potential holes could be open for animals to infiltrate.

#### 3. Roofing

Existing roofing is a Built Up Roofing mineral membrane system that has been replaced within 3-5 years and is in very good condition. Pitch pans should be topped off. Roof drains should be cleaned of debris. There is roofing mastic coating some of the masonry on inside of parapet. This material should be removed, re-pointed and sealed

properly. Some of the flashing details around the ornamental stone work will need to be re-caulked every few years. Roof needs some minimal general maintenance.

**4. Site**

The building is located on a small corner site. It is accessed from city sidewalks to the West & South. Street parking only. No ADA access to the building.

**B. Interior**

**1. Walls & Doors**

Existing walls are very damaged and in disrepair. Doors are old wooden doors. It is yet to be determined if they could be salvaged.

**2. Ceilings & Lighting**

Ceilings are either extremely damaged or completely missing. Lights are powered by exposed wires surface mounted in the basement or are temporary in nature.

**3. Structure**

The structure is made up of interior and exterior masonry bearing walls and wood beams and joists. Interior masonry appeared to be in good shape. Wood joists appeared to be solid although in many cases wood subflooring was completely missing. These areas were blocked off. There are a few sections of wood joists in the basement that have been reinforced with additional wood posts and beams. Some of the basement foundation walls show signs of water seepage. A majority of the foundation walls are in need of re-pointing.

**4. Egress & Exiting**

Exterior doors are all very old and in many cases original to the building. There are no exits that are at grade or accessible. There is no exit or emergency lighting.

**5. Asbestos**

There appeared to be no suspect ACM. See report from Environmental Consultant.

**C. MEP/Fire Alarm & Suppression**

**1. Mechanical/HVAC:**

The building has no HVAC systems installed. There were some small portable unit heaters.

**2. Electrical**

Electric service is 400A and comes in on the East side of the building. Majority of the power and lighting have been removed. There is some temporary lighting in a few areas. Old knob and tube wiring is through out. It is unclear whether it is still active. In need of a complete interior electrical upgrade.

**3. Plumbing**

Water service has been removed inside the building. There is a sump in the basement that was full of water with only one pipe entering the pipe. It is not clear where this sump pit drains.

**4. Fire Alarm/Suppression**

No fire alarm system. No automatic sprinkler system.

**D. RECOMMENDATION**

At this time it is difficult to estimate or determine what work should take place as there is no clear plan for the building from the City. GWDC has an interest in purchasing the building to renovate into a museum. We recommended keeping the building shell as secure and in good repair in order to prevent any further deterioration. At a minimum, make sure windows are sealed and any broken glass is removed. Large holes in stone masonry should be patched and brick stone wall on the NE corner should be re-point. The building however could really use an entire masonry re-pointing job and window replacement.

- 1) Masonry repairs and roof maintenance: \$2,500.00
- 2) Existing broken glass at windows should be removed and sealed to prevent weather and animal infiltration. \$5,000.00
- 3) Re-point entire building and clean stone: \$300,000.00
- 4) Replace existing windows: \$400,000.00

**E. GENERAL COMMENTS**

The building houses many stored materials that should be cleaned out as much as possible. Some of these items (wood doors) pose a potential fire hazard as the building is not equipped with a Fire Alarm or Suppression system.

**ROOT ENGINEERING SERVICES - MEP REPORT:**

**Building Title and Address:**

Carnegie Library. Sheridan and Washington

**General Comments:**

The Carnegie Library is an historic library facility built in 1902, but has not been in active use for decades. Most MEP systems have been abandoned or removed.

**HVAC Systems:**

None. The original boiler has been removed along with most pipe. It is our understanding that this building has been unheated for decades. Some remnants of ductwork on the upper level are visible. Should this facility be put back into use, all new systems would obviously be necessary.

**Electrical Systems:**

A 400A CT compartment with meter socket system is present, but all permanent distribution inside the building has been demolished. A very temporary junction box to accommodate plug load and temporary light strings was observed. The remnants of the original 1902 knob and tube wiring was visible in some areas, this wiring method has been obsolete since the 1930's. Should this facility be put back into use, all new systems would obviously be necessary.

**Fire Protection System:**

None

**Plumbing System:**

All fixtures have been demolished. The remnants of a waste pipe are visible in the lower levels. What we believe was a capped water service through the west wall was evident. Should this facility be put back into use, all new systems and services would obviously be necessary.

**Environmental Report:**

**Camplin Environmental Services (See full report from CES):**

**Carnegie Library – 98 Sheridan Road**

- No asbestos information was available on this building prior to the walk-through.
- The building has been gutted but a few suspected asbestos-containing materials remain in the building.
- One area that should be considered for action is the clean-up of the small remnant of suspected asbestos pipe insulation and cement panels in the old basement boiler room. Costs to remove the pipe insulation remnant and cement panel would be approximately \$3,000-\$5,000.
- A comprehensive asbestos inspection of the building would cost approximately \$3,000.



## **Greater Waukegan Development Coalition - 13 N. Genesee St.**

- |                       |   |
|-----------------------|---|
| <b>1 Bldg Name</b>    | <b>GWDC (former Police Substation)</b>                                      |
| <b>2 Address</b>      | <b>13 N Genesee St</b>  |
| <b>3 Bldg Sq. Ft.</b> | <b>Basement 3,820 SF, 1st Floor 3,820 SF, 2nd Floor 3,820 SF</b>            |
| <b>4 Year Built</b>   | <b>Circa 1880-90</b>  |
| <b>5 Use</b>          | <b>Office Space - Great Waukegan Development Coalition, Design Studio-C</b> |

### **Preliminary Information**

The building is believed to have been the old Dirken & Dirken building. Previous occupants include the Waukegan Police Substation which included an interior renovation. Currently houses the GWDC. The West Facade was redone. The building is in need of full roof tear off and replace and mechanical upgrades. There is also masonry work required on the Chimney, North & West parapet walls and North & East facades. This building has recently been sold to the Great Waukegan Development Coalition.

Please see attached reports from Root Engineering Services & Camplin Environmental Services.

### **A. Exterior - Building Enclosure**

#### **1. Exterior Windows & Doors**

Aluminum entrance doors on East & West facades are in fair condition and both exit at grade level. Windows on East facade second floor windows are wood/aluminum windows in fair condition. West façade has aluminum windows with 1" clear insulating glass that are in good condition. Windows on North façade are old wood frames with single pane glazing. These windows should be replaced. Existing egress doors are aluminum storefront entry type and in fair condition.

#### **2. Masonry**

West masonry façade facing Genesee St. is in good condition and has been replaced recently. Interior of West parapet walls needs to be rebuilt as it is bowed from water infiltration. East and North facades need tuck pointing and repairs. East facade appears to be stripped of an old terra cotta cladding. A study could be performed to determine if new cladding should be installed. North parapet wall needs to be rebuilt with existing clay tile coping caps replaced. South façade above roof level is shared with adjacent building and in good condition. Existing masonry chimney is tilted and leaning towards the East.

#### **3. Roofing**

Existing roofing is a built up roof membrane system that is well beyond it's useful life time. There are large gaps in many of the perimeter flashings. The terra cotta coping tiles and precast caps are cracked and broken allowing water leakage. The field seams

are curling from insulation being wet. We recommend a full tear off and replacement as soon as possible. In addition to roof replacement, masonry repair should take place at the same time.

#### **4. Site**

The building is accessed from city sidewalks to the West. The East side has a small parking lot. The canopy over the East entrance is old and in poor shape and should be removed and replaced.

### **B. Interior**

#### **1. Walls & Doors**

Interior walls are plaster or drywall and in good condition. There are a combination of HM and wood frames and wood doors. Some of the wood doors are old but still in good condition.

#### **2. Ceilings & Lighting**

Ceilings are a combination of plaster, suspended acoustical ceilings and grid and drywall soffits which are in good condition. Light fixtures are older but in fair condition.

#### **3. Structure**

Building structure is in good shape. The interior of the foundation walls look good and there is no sign of any water leakage. The North portion has steel joists and concrete floor. The South half is 3 x 12 wood joists and wood subfloor.

#### **4. Egress & Exiting**

There are illuminated exit signs & emergency lights through out building. Both exterior exits are at grade level. There are two means of egress the basement although materials should be removed from stair egress from basement. There is only one means of egress from second floor. The staircase is in good shape although handrails do not meet current code. There was a second stair case to second floor that has been built over. There is an elevator however it is not operational so basement and second floor are not accessible. A new elevator would need door modifications to be ADA compliant.

#### **5. Asbestos**

The basement has some suspected asbestos floor tile. Existing boiler most likely has asbestos containing materials that would need to be abated before a replacement. See report from Camplin Environmental Services.

### **C. MEP/Fire Alarm & Suppression**

#### **1. Mechanical:**

The building is served by an old, outdated boiler & air handling unit in the basement. There is and old AC unit from the 50s that does not work. The basement and second floor have radiant heat but they do not appear to be in working condition. There is a split system AC unit that serves a portion of the first floor.

**2. Electrical**

There is an old electrical panel service in the basement. There is an old ceramic fuse sub panel. Lighting is mostly T12 fluorescent fixtures.

**3. Plumbing**

Plumbing service: Restrooms are in good condition but do not meet current ADA codes. Restrooms need not be upgraded unless renovations take place. Grab bars should be added to locations where missing. Second story restrooms have accessible signage however the second story is not accessible.

**4. Fire Alarm/Suppression**

Building is equipped with a Zoned Fire Alarm Panel with detectors, av devices and pull stations. Firewolf FWC4EZ panel. There are no Visual strobe devices in restrooms. There is an automatic fire suppression system in the basement however it is not functional. System was fed from adjacent building to the South when both were owned by the City of Waukegan. Building to the South was sold and by code they could no longer share a water/sprinkler service so it was disconnected.

**D. RECOMMENDATION**

- 1) Masonry and roof repairs are urgent and should be taken care as soon as possible. Replace existing roof, rebuild chimney, and masonry parapets. \$130,000.00  
Note: If Boiler is replaced, chimney will not need to be re-built to current height.
- 2) Re-point North and East Facades. \$50,000.00
- 3) Install new sprinkler water service. \$50,000.00
- 4) Demo existing canopy and install new \$15,000.00
- 5) Replace exterior windows on North Facade. \$6,000.00
- 6) Abate asbestos flooring in basement: \$12,000.00
- 7) Abate asbestos pipe insulation: \$7,500.00
- 8) The Boiler & air handling unit are still working but are most likely expensive to repair. These units are old and inefficient and should be replaced. Demo asbestos boiler \$7,500.00. See MEP for replacement costs.

**E. GENERAL COMMENTS**

Stored materials should be cleaned out as much as possible. Some of the materials of the basement still remain from the Waukegan Police Substation.

**ROOT ENGINEERING SERVICES - MEP REPORT:**

**Building Title and Address: Great Waukegan Development Coalition, 13 N. Genesee**

**General Comments:**

This facility was opened is and older downtown two level building which has been cosmetically renovated, but has very dated MEP systems.

**HVAC Systems:**

Systems in this building were mostly very old, and were confusing to us. What was observed:

- Pacific Boiler. This is a very old unit, perhaps dating from the early '50's or late '40's. It continues to function, but is decades past its economic life span. We also note that efficiency of this old unit is likely very low. Although this type of equipment has been known to serve long lives if well maintained, we would recommend programming replacement of this equipment in the near future. Very preliminary \$35000. This does not include any asbestos abatement; we are not asbestos experts, but equipment of this era commonly has extensive asbestos lagging
- A second stand up boiler/water heater was observed, and believed to be abandoned.
- Built up air handling unit (basement). The observed air handling unit installed in the basement dates from at least the '50's. It was paired with an air conditioning compressor unit which is seemingly abandoned and not functional, apparently using a sacrificial water condenser. This air handling unit clearly heats the building, we could not locate a heating coil in this AHU. This seems to be a single zone constant volume all air system, with only one thermostat. Given this, we imagine that control will be poor even if equipment is fully functional and well balanced. This equipment is also far past its lifetime, and we would recommend programming its replacement in the near future. Costs could vary widely on replacement of this system, particularly given the crude control. Also, a gas fired heat + air conditioning all air system could be configured which would allow not replacing the boiler. We could see replacement systems from \$42000 to \$80000. This item will require more study before a cost estimate could be considered reliable.

**Electrical Systems:**

- The observed electrical service is very dated, using a wiring troff and disconnect switch arrangement. The voltage is 120/208v 3ph, capacity appears to be 400a. Panels were a mixture of very old (1950's?) breaker and fuse boxes, and newer small capacity residential load centers which were likely installed as quick cheap fixes when the space was cosmetically renovated. This electrical system is antiquated, could have reliability problems, and will be a limiting factor for any future plans of this building. Any significant project should include complete rework of the electrical distribution. Service and distribution update could be \$40000.
- Light fixtures were mostly replaced in the cosmetic renovation (within the past 10 years). They appear to typically be T8 or T12 troffers and wraparounds, with simple wall switching. No recommendations at this time.

- The installed fire alarm system dates from perhaps the late '90's, and is a zoned system rather than the preferred addressable system. To the best of our knowledge, the AHJ will likely not demand and updated fire system if a significant project is contemplated, but this may change in coming years. No recommendations at this time.

### **Plumbing System:**

- Fixtures. Most fixtures were newer, from a recent renovation. No recommendations.
- Water. Water service has a small 1" meter at the west end of the basement with no backflow preventer. The lack of a backflow preventer is a code issue which may be an issue if a significant project is contemplated. The size of this service will restrict fixture selection to tank type toilets only. Water pipe was mostly copper (likely fitted for the cosmetic renovation), although some older galvanized was observed. We observed most of the water pipe was un-insulated, which is a code issue, perhaps \$3800 to correct this. Two water heaters were observed, one was a residential style 40 gal gas fired unit near the boiler; the second was a 30 gallon lowboy electric. The lifespan of these inexpensive water heaters is short, replacement will likely be necessary in the next 5 years, say \$3000.
- Should a new water service be dug in (see FP systems below), setting up a new domestic water service will likely be necessary, including an RPZ back flow preventer. The cost of this will depend on whether flush valve fixtures are desired. Assuming a small service is retained, say \$5500 for this new service.
- Waste vent. The original building sewer was in use, 4" cast iron. Renovation work of recent years fitted PVC pipe for new fixtures. No recommendations.

### **Fire Protection Systems:**

Curiously, the basement of this building has fire protection pipe and sprinklers fitted in the basement, however, this pipe has been disconnected from its original riser (which was in an adjacent address). We understand that this resulted from a past change in building ownership. If this fp pipe is to be placed in service, it is clear that a new water service must be dug in and a new riser fitted for this address. We believe that the AHJ will direct the connection of this pipe and likely more if a major renovation is undertaken in this building. Very rough estimate of \$35000 for this work.

### **Environmental Report:**

### **Camplin Environmental Services (See full report from CES):**

#### **Greater Waukegan Development Coalition Rental – 13 N. Genesee**

- No asbestos information was available on this building prior to the walk-through.
- Highly suspected asbestos pipe insulation was noted above the dropped ceiling near the front west section of the building. Other suspected asbestos containing materials were also noted including older 9" floor tile and boiler insulation found in the basement.
- One area that should be considered for action is patching or removing the minor damage to pipe insulation above the dropped ceiling in the front west side of the building. Costs to patch the pipe insulation would be approximately \$2,500. Asbestos removal of the pipe insulation (abatement contractor and asbestos consultant) would be approximately \$5,000-\$7,500.
- A comprehensive asbestos inspection of the building would cost approximately \$3,000.

**Waukegan Facility Assessment - Cost Estimates**  
**Greater Waukegan Development Coalition - 13 N. Genesee St.**

**GWDC - 13 N. Genesee St.**

ITEM	DESCRIPTION	RECOMMENDED WORK	PRIORITY	RENOVATION SUB-TOTAL
<b>Architectural</b>				
1	Roof & Masonry	Remvoe & replace roof & chimney, repair masonry	A	\$ 130,000.00
2	North & East Facades	Re-point masonry joints	B	\$ 50,000.00
3	New sprinkler service	Install new 4" water line with RPZ, tie in domestic	B	\$ 35,000.00
4	Rear Canopy	Demo existing canopy, install new	B	\$ 15,000.00
5	Windows on North Facade	Remove and replace windows	D	\$ 6,000.00
6	Basement	Abate asbestos tile in basement	D	\$ 12,000.00
7	Pipe insulation	Abate asbestos pipe insulation	D	\$ 7,500.00
8	Basement boiler	Abate asbestos on boiler	D	\$ 7,500.00
<b>MEP</b>				
1	New Boiler	Demo and install new boiler	B	\$ 35,000.00
2	NEW AHU w/ AC	Demo existing AHU, install new with AC	D	\$ 80,000.00
3	Electric Service	Upgrade existing electric service	D	\$ 40,000.00
4	Hot Water Pipe	Install new insulation	B	\$ 3,800.00
5	Hot Water Heater	Install new Hot Water Heater	D	\$ 3,000.00
<b>TOTAL</b>				<b>\$ 424,800.00</b>

**Priority Code: A = Urgent, B = 1-3 years, C = 3-5 years, D = 5-10 years, R = Recommended**

All estimates are preliminary in nature. For more accurate estimates further investigation and design will be required.

## Water Towers

**1. 102 Keller Ave, Concrete Water Tower:**

This water tower has been abandoned as a water tower for more than 20 years. The tower will never be used a water tower station in the future. The concrete structure is sound but there is some spalling concrete on the tank above which is a safety hazard. The structure is surrounded by a chain link fence which should remain. The city stores old fittings, piping and materials inside. Many of the pipes were old asbestos water pipes. We do not see any reason to put money into this facility to try and repair the crumbling concrete. The structure itself will most likely stand for a very long time. It would be very expensive to demolish this structure as the walls are several feet thick. Patch damaged concrete \$150,000.00.

**2. Old Johnson Motors, Steel Water Tower:**

This water tower is a remnant of the old Johnson Outboards/OMC manufacturing plant that was demolished in 2016. The water tower is no longer operational. Corroded – unprotected. Clean, paint and repair, as required. Alternate: demolish. Bracing rods are loose, anchorage details damaged. Steel bearing plates corroded. The tower is structurally sound however the paint is peeling and some of the steel details need repair. It is believed that the paint could be old lead paint. Abate lead paint and refinish \$200,000.00. See attached report from Camplin Environmental Services. Test for Lead paint \$1,500.00. We recommend testing the structure for lead paint so that a better estimate could be determined.

## Waukegan Facility Assessment - Cost Estimates Water Towers

### Concrete Water Tower, 102 Keller Ave and Johnson Motors Tower, Lakefront

ITEM	DESCRIPTION	RECOMMENDED WORK	PRIORITY	RENOVATION SUB-TOTAL
<b>102 Keller Ave, Concrete Water T</b>				
1	Concrete tower	Patch spalling concrete	R	\$ 150,000.00
<b>TOTAL</b>				<b>\$ 150,000.00</b>
<b>Johnson Motors Water Tower, Lakefront</b>				
1	Steel Structure	Abate lead paint & Paint steel structure	R	\$ 200,000.00
2	Steel Structure	Repair and patch steel plates and rods	R	\$ 50,000.00
3	Steel Structure	Test for Lead Paint	R	\$ 1,500.00
<b>TOTAL</b>				<b>\$ 251,500.00</b>

**Priority Code: A = Urgent, B = 1-3 years, C = 3-5 years, D = 5-10 years, R = Recommended**

All estimates are preliminary in nature. For more accurate estimates further investigation and design will be required.

## Waukegan Facility Assessment - Cost Estimate Totals

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WAUKEGAN PUBLIC WORKS - 1700 N. McAree Rd	\$4,800,700.00
WAUKEGAN POLICE DEPARTMENT - 101 N West Ave.	\$2,121,000.00
WAUKEGAN PARKING GARAGE & URBAN EDGE - 225 N. County Ave	\$572,000.00
WAUKEGAN CITY HALL - 100 N. MLK Jr Ave	\$549,800.00
WAUKEGAN FIRE STATIONS 1 TO 5	\$1,655,500.00
GENESEE THEATRE -	\$1,294,000.00
THREE BROTHERS - 221 N. GENESEE ST.	\$465,000.00
METRA STATION	\$252,500.00
OFFICE SPACE - 227 N. GENESEE ST.	\$294,000.00
CARNEGIE LIBRARY	\$707,500.00
GREATER WAUKEGAN DEVELOPMENT COALITION - 13 N. GENESEE ST.	\$424,800.00
WATER TOWERS	\$401,500.00
<hr/>	
<b>SUBTOTAL</b>	<b>\$13,538,300.00</b>
10% CONTINGENCY	\$1,353,830.00
10% A&E FEES (Budgetary)	\$1,353,830.00
<hr/>	
<b>TOTAL</b>	<b>\$16,245,960.00</b>



# CAMPLIN

Environmental Services, Inc.

November 6, 2017

**RRP Inc.** Architects-Designers  
1122 Douglas Ct.  
Waukegan, IL 60085

Attention: Jonathan P. Pekkarinen, R.A.

Subject: Pre-Renovation Asbestos Inspection  
Select Buildings for the City of Waukegan

Dear Jon,

We have completed our preliminary building walk through to identify potential suspected asbestos-containing materials. The report divides our findings by the year the building was initially constructed.

- **Pre-1981 buildings** have a high potential to contain friable and non-friable asbestos materials. Friable asbestos releases asbestos fibers into the air by mere hand pressure and is heavily regulated. Non-friable asbestos does not release asbestos fiber into the air unless subject to aggressive or mechanical disturbance such as pulverizing through sanding, sawing, drilling, grinding activities.
- **Newer buildings constructed after 1980** could have some non-friable asbestos materials (drywall, flooring, roofing) but most likely do not. However, the USEPA and Illinois EPA require that any building (regardless of date of construction) must be inspected for asbestos prior to demolition or renovation. Therefore, we have provided building summaries for pre-1981 building that include recommended actions for highly suspect asbestos-containing materials. Those building built after 1980 will generally only have an estimate for conducting a pre-demolition/renovation asbestos inspection.

Information on each building includes a summary of prior documentation of asbestos activities (if available for review), whether known or suspected asbestos was visually observed, areas requiring action, and an estimate to conduct a comprehensive asbestos inspection. Note that friable materials (mechanical systems insulations, spray-on fire proofing, sound proofing plasters, and decorative plasters) and non-friable flooring materials (floor tile, sheet flooring, and related adhesives and mastics) found in buildings constructed prior to 1981 are presumed to contain asbestos unless testing proves they are negative per OSHA and Illinois Department of Labor asbestos regulations. All other suspected asbestos containing materials would have to be tested prior to demolition or renovation activities as required by the Illinois EPA. Buildings built after 1980 are not required to be presumed to be asbestos by OSHA or the Illinois Department of Labor. However, a comprehensive asbestos inspection would be required by the Illinois EPA prior to renovation or demolition activities or if non-friable materials become damaged.

A listing of the buildings and our findings is as follows:

## Pre-1981 Buildings

### Main Police Station – 410 Robert Sabonjian Place

- The center portion of the first floor has previously been inspected for asbestos in 2012. Asbestos flooring was removed in the center section of the building in 2013 to accommodate a renovation project.
- Suspected asbestos containing materials still remain in the building. A majority of the suspect materials are found in the older east end of the building.
- One area that should be considered for action is the second floor east side air handling room. This room is carpeted with asbestos flooring beneath. The carpet has evidence of water damage which can create potential mold problems. It is recommended to abate the carpeting and asbestos flooring in this area. Asbestos abatement (abatement contractor and asbestos consultant) would cost approximately \$5,000-\$7,500.
- A comprehensive asbestos inspection of the building would cost approximately \$6,000. There was discussion of a previous asbestos inspection (prior to 2012) conducted by United Analytical Services. If this document can be located the cost of the comprehensive asbestos study could be significantly reduced.

### Tech Hub Rental – 13 N. Genesee

- No asbestos information was available on this building prior to the walk-through.
- Highly suspected asbestos pipe insulation was noted above the dropped ceiling near the front west section of the building. Other suspected asbestos containing materials were also noted including older 9” floor tile and boiler insulation found in the basement.
- One area that should be considered for action is patching or removing the minor damage to pipe insulation above the dropped ceiling in the front west side of the building. Costs to patch the pipe insulation would be approximately \$2,500. Asbestos removal of the pipe insulation (abatement contractor and asbestos consultant) would be approximately \$5,000-\$7,500.
- A comprehensive asbestos inspection of the building would cost approximately \$3,000.

### Carnegie Library – 98 Sheridan Road

- No asbestos information was available on this building prior to the walk-through.
- The building has been gutted but a few suspected asbestos-containing materials remain in the building.
- One area that should be considered for action is the clean-up of the small remnant of suspected asbestos pipe insulation and cement panels in the old basement boiler room. Costs to remove the pipe insulation remnant and cement panel would be approximately \$3,000-\$5,000.
- A comprehensive asbestos inspection of the building would cost approximately \$3,000.

### Three Brothers/Old Clockwise – 221 N. Genesee

- No asbestos information was available on this building prior to the walk-through.
- The building has undergone some significant renovations in the early 2000’s. Most of the materials observed would be classified as a post-1980 building.
- No areas were identified that would require action at this time.
- A comprehensive asbestos inspection of the building would cost approximately \$2,500.

#### Old JC Penney/Planning & Zoning – 227 N. Genesee

- No asbestos information was available on this building prior to the walk-through.
- The building has undergone some significant renovations in the early 2000's. Most of the finishing materials (drywall, floor tile, ceiling tile) observed would be classified as a newer post-1980 building material. However, there was damaged older plaster near the northwest corner of the second floor.
- There was also suspected asbestos-containing pipe insulation and boiler insulation in the basement of the building.
- One area that should be considered for action is the damaged plaster near the northwest corner of the second floor. The plaster appears to be part of a pipe riser column with suspected asbestos insulation behind the damaged plaster wall. It is recommended that this material be tested to determine if asbestos is present. Cost to test the plaster wall and insulation is approximately \$500.
- A comprehensive asbestos inspection of the building would cost approximately \$2,500.

#### Genesee Theater – 201 to 215 N. Genesee

- No asbestos information was available on this building prior to the walk-through.
- The building has undergone some significant renovations in the early 2000's. Asbestos was removed during the renovation but no records were available from the theater management. Most of the materials observed would be classified as newer post-1980 building materials. There are still some older materials in the building that could potentially contain asbestos such as plaster which had been encapsulated prior to the renovation.
- All materials look to be in good condition. No areas were identified that would require action at this time.
- A comprehensive asbestos inspection of the building would cost approximately \$5,000. There was discussion of a comprehensive asbestos inspection being performed prior to the building renovation in the early 2000's. However, no asbestos inspection documents could be located by the theater management. If this document can be located the cost of the comprehensive asbestos study could be significantly reduced.

#### Fire Station #1 – 1101 Belvidere Road

- No asbestos information was available on this building prior to the walk-through.
- The building has undergone some significant renovations in 1983. Most of the materials observed would be classified as a post-1980 building material. However, there are still some older materials remaining in the building that could be asbestos containing.
- No areas were identified that would require action at this time.
- A comprehensive asbestos inspection of the building would cost approximately \$3,500.

#### Fire Station #3 – 216 N. Lewis

- No asbestos information was available on this building prior to the walk-through.
- There are still some older materials remaining in the building that could be asbestos containing including floor tiles on stairs and pipe insulation above the ceiling in the basement closet.
- No areas were identified that would require action at this time.
- A comprehensive asbestos inspection of the building would cost approximately \$2,000.

#### Fire Station #4 – 825 Golf Road

- No asbestos information was available on this building prior to the walk-through.
- The building has undergone some renovations over the years. Most of the materials observed would be classified as a post-1980 building. However, there are still some older materials remaining in the building that could be asbestos containing. Older looking suspected asbestos containing pipe insulation was noticed in a storage room north of the

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- No areas were identified that would require action at this time.
- A comprehensive asbestos inspection of the building would cost approximately \$3,500.

## Post-1980 Buildings

### Public Works Garage and Out Buildings – 1700 Mcaree

- Potential non-friable materials were noted in the building.
- No actions are required at this time.
- A comprehensive asbestos inspection prior to demolition or renovation of the buildings would cost approximately \$2,500.

### Animal Shelter and Garage – 1698 Mcaree

- Potential non-friable materials were noted in the building.
- No actions are required at this time.
- A comprehensive asbestos inspection prior to demolition or renovation of the building would cost approximately \$500.

### Fire Station #2 – 4505 W. McGaw Road

- Potential non-friable materials were noted in the building.
- No actions are required at this time.
- A comprehensive asbestos inspection prior to demolition or renovation of the building would cost approximately \$1,500.

### Fire Station #5 – 3221 N. Greenbay Road

- Potential non-friable materials were noted in the building.
- No actions are required at this time.
- A comprehensive asbestos inspection prior to demolition or renovation of the building would cost approximately \$1,500.

### METRA Train Station – 95 Spring Street

- Potential non-friable materials were noted in the building.
- No actions are required at this time.
- A comprehensive asbestos inspection prior to demolition or renovation of the building would cost approximately \$500.

### Waukegan City Hall – 100 N. MLK, Jr. Ave

- Potential non-friable materials were noted in the building.
- No actions are required at this time.
- A comprehensive asbestos inspection prior to demolition or renovation of the building would cost approximately \$1,500.

Please let me know if you have any questions.

Cordially,

*Jeffery C. Camplin*

Jeffery C. Camplin, CSP, CPEA, CET

President

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Telephone (847)-292-1190 • Fax (847)-837-1852 • Email [mundycamp@aol.com](mailto:mundycamp@aol.com)

Illinois Licensed Asbestos Professional #100-00091



# CAMPLIN

Environmental Services, Inc.

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November 11, 2017

**RRP Inc.** Architects-Designers  
1122 Douglas Ct.  
Waukegan, IL 60085

Attention: Jonathan P. Pekkarinen, R.A.

Subject: Lead Paint on Water Tower

Dear Jon,

I have attached a flowchart that explains the process of addressing lead-based paint on structures such as water towers that may have lead-based paint (see attached appendix A). The first step is to test the paint for the presence of lead. Cost to test the water tower would be \$1,500.00.

Once it is determined if lead is present or not, a clearer scope of work can be developed based upon the questions listed in the attached flowchart. Right now there is not enough information available to provide an accurate abatement and/or repainting budget. The interior of the tank may also have lead paint or coatings that would need to be addressed as well.

Please let me know if you have any other questions.

Cordially,

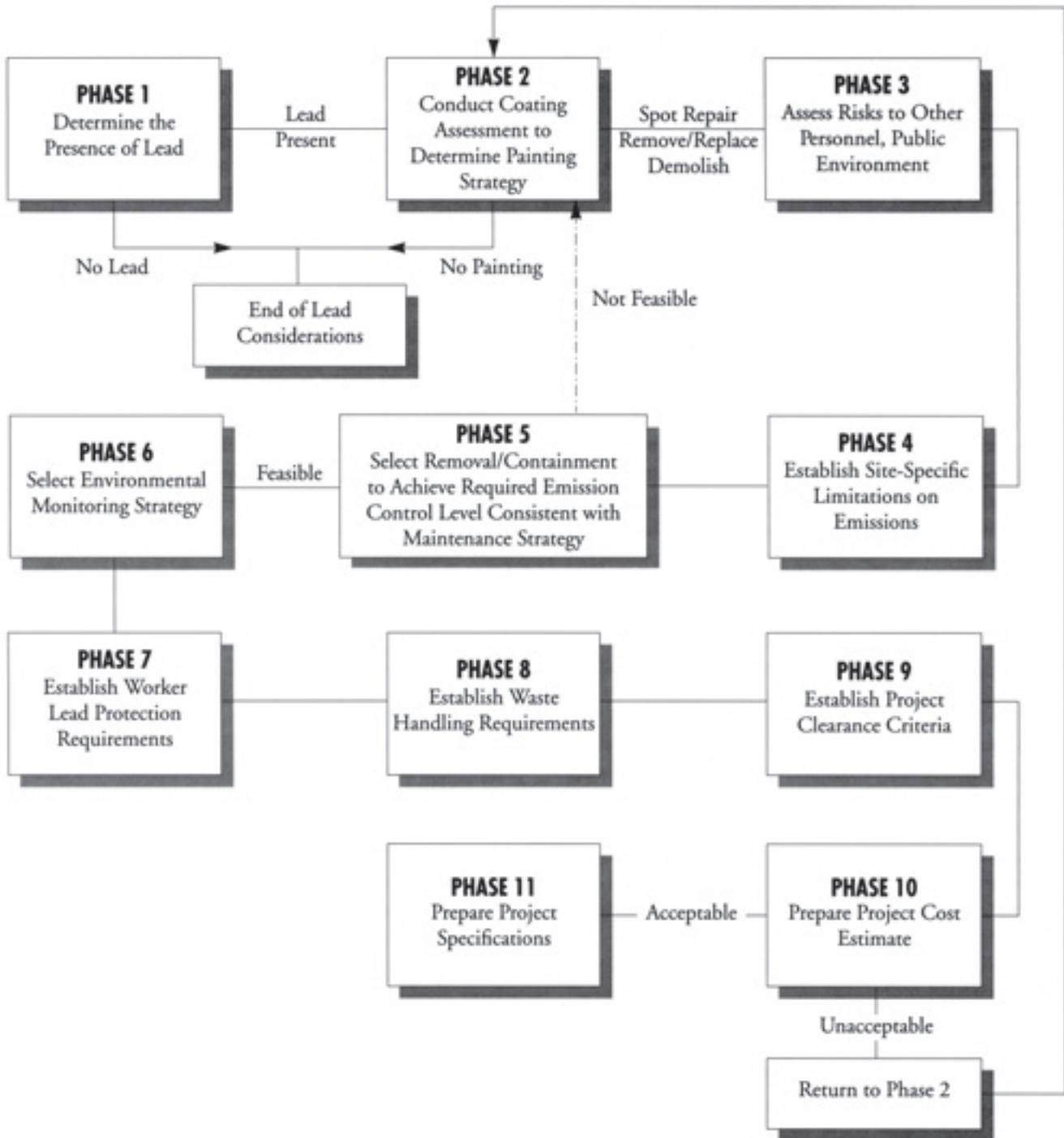
*Jeffery C. Camplin*

Jeffery C. Camplin, CSP, CPEA, CET

President

Illinois Licensed Asbestos Professional #100-00091

## Appendix A—Design Path for Project Design—Industrial Lead Paint Management



This flow chart is reproduced with permission from "Project Design, Industrial Lead Paint Removal Handbook, Volume II," published in 1994 by Technology Publishing Co.