



STATE OF FACILITIES

City of Toledo Fire and Rescue Department

March 2023





EXECUTIVE SUMMARY



STATE OF FACILITIES

Toledo Fire and Rescue Department

Woolpert was engaged by the Toledo Fire and Rescue Department (TFRD) to conduct a facility condition assessment (FCA), which is an evaluation of the general health of physical facilities by identifying and prioritizing deficiencies that require correction for long-term use. Evaluations focused on in-kind replacements; upgrades or enhancements were not considered part of the assessment. An FCA is a snapshot of the asset conditions as observed on the days of the site visit and certain building deficiencies may not be apparent.

Date of assessment:

November 2022

Facilities assessed:

24

Area assessed:

281,000 square feet

Critical Asset Infrastructure

The cost of critical assets at or near the end of their useful life cycle and requiring replacement in one to two years:



Interior Construction/Finishes

Kitchen, bathroom, building
\$3,083,997



HVAC

AC, exhaust system
\$2,401,728



Site Improvement

Concrete, asphalt, fencing
\$2,121,240



Roofing

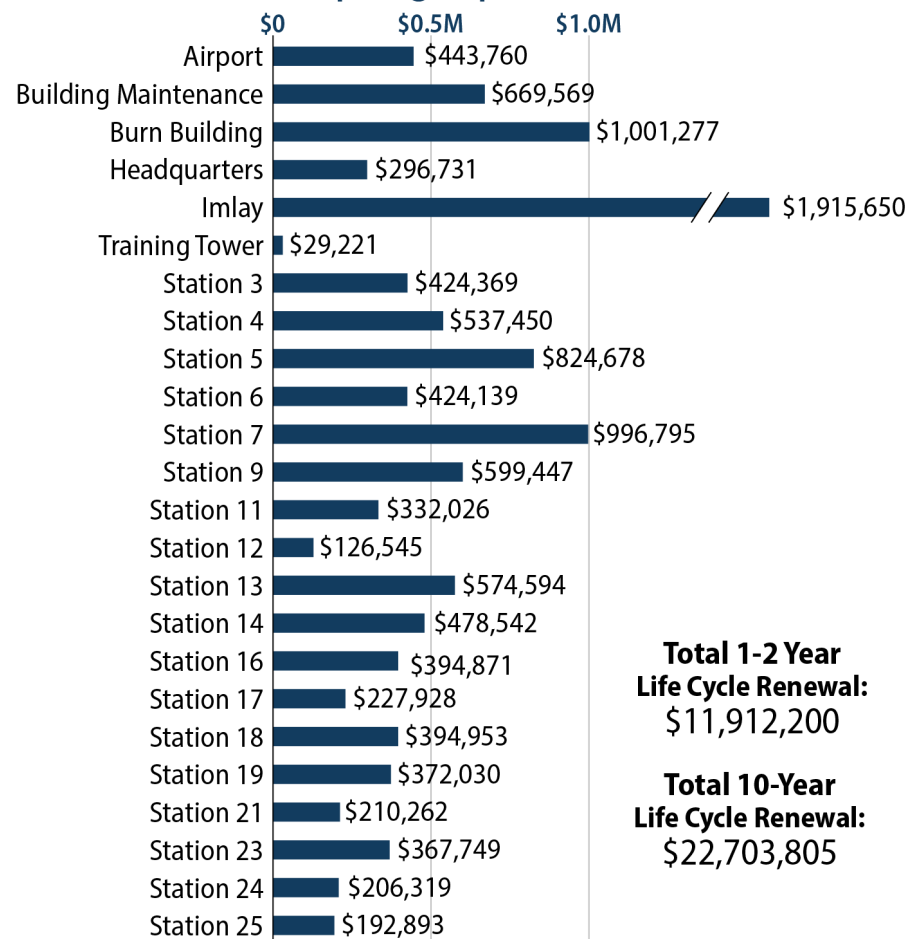
Replacement
\$1,912,393



Windows

Exterior enclosure
\$320,444

Cost of All Assets Requiring Replacement in 1-2 Years



**Total 1-2 Year
Life Cycle Renewal:**
\$11,912,200

**Total 10-Year
Life Cycle Renewal:**
\$22,703,805





Assessment Findings

The facility condition assessment identified over \$22 million in needed repairs or replacements over the next 10 years. The majority of this need was found to be at the interior building finishes.

For long-range planning purposes, the first three years of projected need were combined to calculate a three-year Facility Condition Index (FCI). This provides an understanding of the current needs of a facility as well as the projected needs in the near future. A three-year FCI was calculated by dividing the combined three-year need by the total replacement cost.

Approximately half of TFRD facilities are considered in fair condition. Airport Training, Building Maintenance and the Burn Building are considered in critical condition with a 3-Year FCI of 32 percent, 73 percent, and 100 percent, respectively. Fire Stations noted in poor condition include Stations 4, 7, 9, 11, 13, 14, and 16. Imlay Vehicle Maintenance is also considered in poor condition with an FCI of 25 percent.

Strategic Recommendations

It is recommended that TFRD focus on its critical asset infrastructure to support the goals and mission of the Fire Department.

Additionally, the Burn Building is beyond its useful life and in the poorest condition. TFRD should consider replacement of this facility in the next two years.

Specific Areas of Focus

Replacement recommended in next one to two years.



Parking lot resurfacing and concrete work:

- Imlay
- Station 4
- Station 5
- Station 11
- Station 13
- Station 16
- Station 19
- Station 23
- Station 25



Fencing:

- Imlay
- Station 9
- Station 19



Replace roofing:

- Headquarters
- Building Maintenance
- Airport Training
- Station 4
- Station 5
- Station 9
- Station 14
- Station 16
- Station 18
- Station 19
- Station 23
- Station 24



Window replacement:

- Station 9
- Station 16
- Station 17
- Station 21



Plymovent exhaust system:

- All stations
- Imlay
- Building Maintenance
- Station 14
- Station 18
- Station 19



Central air installation:

- Station 5



Kitchen renovation:

- Station 4
- Station 5
- Station 7
- Station 9



Bathroom renovation:

- Station 11
- Station 14
- Station 19



Building rebuild:

- Burn Building



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INTRODUCTION

Woolpert was engaged by the City of Toledo Fire and Rescue Department (TFRD) to conduct a facility condition assessment in November 2022. The purpose of the assessment is to provide information that can be used in future planning and decision-making. Results from the assessment include rough order of magnitude cost estimates for current and future needs and a Facility Condition Index (FCI) for each facility. The FCI is used throughout the facility condition assessment industry as an indicator of a building's overall condition. For master planning purposes, a three-year FCI was calculated to understand current and near-term needs impacting the condition of the facility.

The facilities in the scope of work included:

- Airport Training
- Building Maintenance
- Headquarters
- Imlay (Vehicle Maintenance)
- Station 11
- Station 12
- Station 13
- Station 14
- Station 16
- Station 17
- Station 18
- Station 19
- Station 21
- Station 23
- Station 24
- Station 25
- Station 3
- Station 4
- Station 5
- Station 6
- Station 7
- Station 9
- Training Tower

Assessment findings have been provided to TFRD in Microsoft Excel format for use in planning efforts. A summary of findings per building can be found in Appendix A. Individual building reports are included in Appendix D.



METHODOLOGY

A facility condition assessment identifies building components and systems and rates their general condition. Findings from the assessment are prioritized for near- and long-term decision-making. In the assessment, architectural, mechanical, and electrical engineering professionals performed a visual observation that did not include intrusive measures, destructive investigations, or testing.

Figure 1 illustrates the components of each facility that was included in each building assessment. Additionally, the assessment incorporated input provided by facility end-users, where applicable. At the conclusion of the building assessment, findings were compiled to develop the current repair costs and anticipated future life cycle needs for each facility.



Figure 1: Facility Condition Assessment Building Systems

The assessment evaluates both current deficiencies, and future life cycle needs to give a holistic view of the condition of the facilities. Current deficiencies are those items needing repair or replacement. The life cycle analysis forecasts when a system reaches the end of its useful life. An example of a life cycle system replacement might be a roof with a 20-year life that has been in place for 15 years and thus may need replacement in five years. An example of a facility deficiency might include a broken light fixture or an inoperable rooftop air conditioning unit.

Cost Estimating

Rough order magnitude cost estimates were developed based on industry standards and local market knowledge. The estimated replacement cost includes both the material cost and installation of the asset. This information is intended to assist in the prioritization and resource allocation associated with maintenance and capital replacement projects. Cost estimates are determined using specific characteristics (size/capacity) of each asset along with available cost information, which include industry standards, RSMeans, and data sourced through McKinstry's construction division.

For planning purposes, allowances were included for additional costs above and beyond the labor and materials required to complete the work. Allowances include escalation, administrative fees, and professional services fees. It is important to note that these cost estimates are budgetary in nature. It would be anticipated that the actual cost of repairs will vary at the time of construction.

To calculate the FCI, a theoretical replacement cost for each facility was calculated. The replacement cost was calculated by applying a cost per square foot to the actual building area. It should be noted that the costs are theoretical and do not represent the actual cost of procuring and constructing a brand-new facility.



LIFE CYCLE RENEWAL FORECAST

The life cycle renewal forecast is a significant factor in planning future capital needs. During the assessment, each major building system was analyzed to approximate its remaining useful life. The forecast is based on the approximate age, observed condition, and/or viable information from on-site representatives. Life cycle renewal may be defined as the projection of future building system costs based upon an individual system's expected serviceable life. The analysis considers typical service life of building components based on industry standards and best practices. While an item may be in good condition now, it is possible for it to reach its end of life before the date of a planned construction project.



Figure 2 provides the 10-year life cycle renewal forecast for major building systems. The 10-year capital renewal cost is \$22,703,850. Over 50 percent of the ten-year need is expected in the next two years. One million of the need in year two is associated with replacing the Burn Building. It should be noted that these values and timings are estimated for capital planning purposes. The TFRD should anticipate significant investment in their facilities in the near term. See Appendix B for summary information.

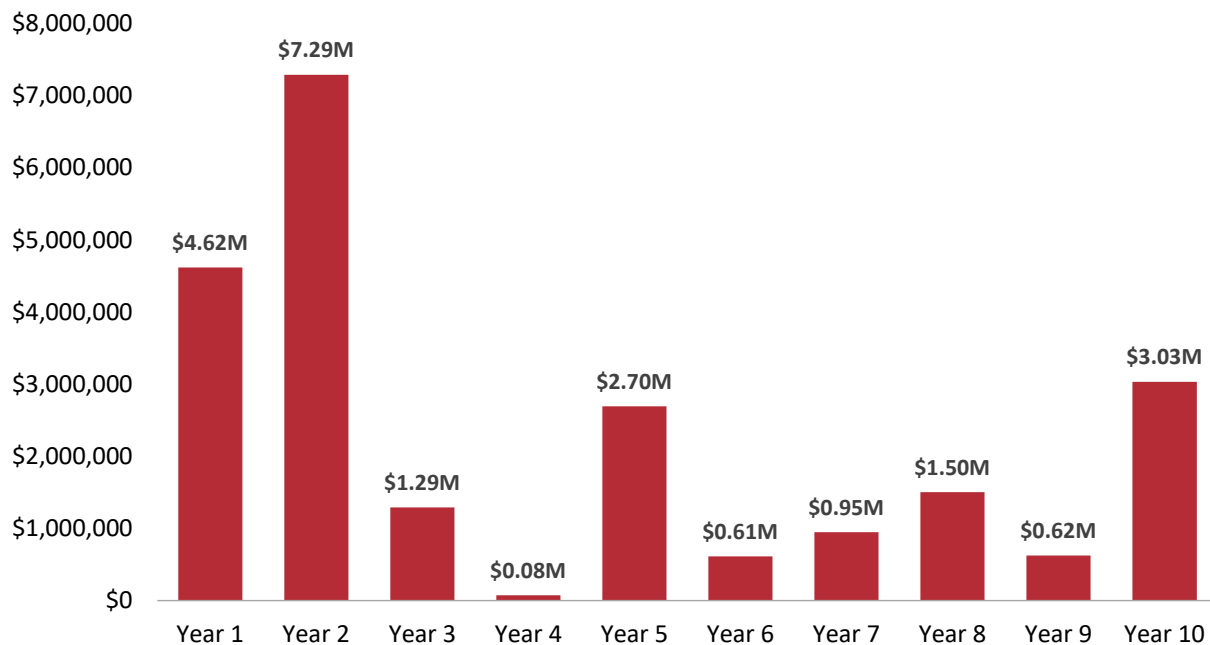


Figure 2: 10-Year Life Cycle Renewal Forecast for Major Building Systems



10-Year Need by Building

Table 1 provides the 10-year need for each TRFD facility. The need is fairly evenly distributed amongst the facilities with Imlay (Vehicle Maintenance) requiring the most need over the next ten years; however, it should be noted that Imlay is also one of the larger facilities.

Station 5 and Station 7 have the next largest needs of approximately \$1.5 million each. Nearly 80 percent of Station 5's need is expected in the next five years. Station 5's roofing, interior paint finish and ceilings are in poor condition, in need of replacement/painting and comprise nearly half a million in replacement costs in the next two years. Over 50 percent of Station 7's need in the next five years, approximately \$287 thousand of this is related to replacing the vehicle exhaust system in Year 1.

Table 1: 10-Year Need by Building

Building Name	Total
Station 3	\$ 774,375
Station 4	\$ 1,288,413
Station 5	\$ 1,623,595
Station 6	\$ 1,121,708
Station 7	\$ 1,410,881
Station 9	\$ 998,982
Station 11	\$ 590,441
Station 12	\$ 999,114
Station 13	\$ 1,055,918
Station 14	\$ 961,380
Station 16	\$ 782,467
Station 17	\$ 444,225
Station 18	\$ 690,655
Station 19	\$ 808,718
Station 21	\$ 801,885
Station 23	\$ 646,643
Station 24	\$ 485,242
Station 25	\$ 798,410
Airport Training	\$ 851,283
Training Tower	\$ 29,221
Building Maintenance	\$ 817,970
Headquarters	\$ 1,163,833
Imlay (Vehicle Maintenance)	\$ 2,557,214
Burn Building	\$ 1,001,277
TOTAL	\$22,703,850



10-Year Need by System

Figure 3 illustrates the 10-year forecast by major building systems. Approximately 38 percent of the future need is related to the interior building finishes with most of the interior finishes needing replacement in the next five years. It should be noted that just over one million dollars of this need is related to the Burn Building replacement. Mechanical systems make up approximately 20 percent of the need, with most of these replacements expected in years 6-10.

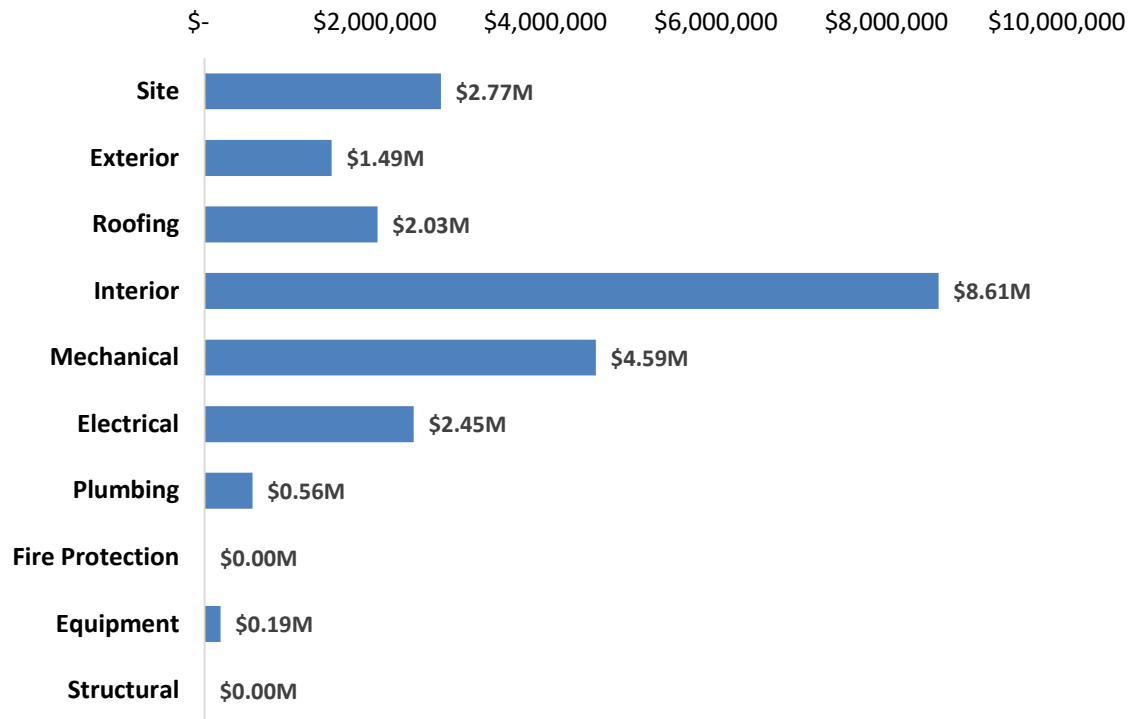


Figure 3: 10-Year Need by Building System



PRIORITIZATION

Building components were ranked according to six priority levels, with Priority 1 items being the most critical to address. Priorities are assigned to building components based on each system's importance in keeping the facility operational.

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

- Correct a cited safety hazard
- Stop accelerated deterioration
- Return a facility or equipment to operational status

Priority 2: Potentially Critical - Conditions in this category, if not corrected expeditiously, could deteriorate to priority 1 critical within a year. Situations within this category include:

- Intermittent operations
- Rapid deterioration
- Potential life safety hazards

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

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

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

Priority 6: Does Not Meet Current Codes/Standards - Conditions in this category include items that do not conform to existing codes but may be grandfathered in the current condition. No action is required at this time, but should substantial work be undertaken in contiguous areas, certain existing conditions may require correction to comply with current code standards.

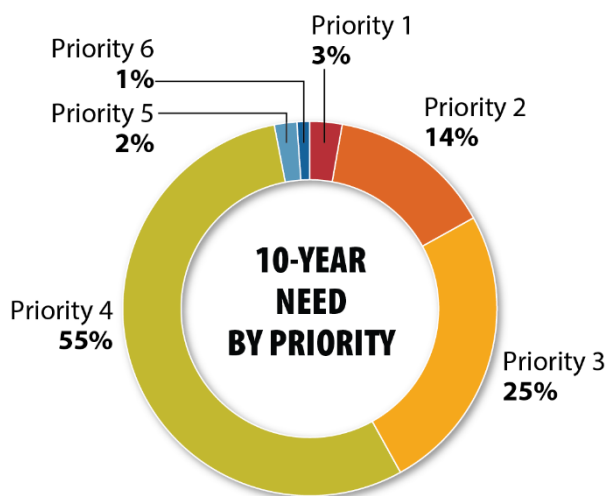


Figure 4 shows the 10-year need by priority for the TFRD facilities. Over 55 percent of the need is considered Priority 4, indicating these repairs are needed but not required for the facility to function. Priority 1 deficiencies noted were related to fire alarm and sprinkler systems in need of replacement with most of the need noted at Station 6 and Headquarters. Roof replacements comprise approximately half of the Priority 2 replacement items and were identified for replacement in the next two year.

Figure 4: 10-Year Need by Priority



FACILITY CONDITION INDEX

The Facility Condition Index (FCI) is used throughout the facility condition assessment industry as an indicator of a building's overall condition. The FCI provides a metric to compare dissimilar facilities across a portfolio. To calculate the FCI, the total repair cost is divided by the total replacement cost. A facility with a higher FCI percentage is in worse condition than a facility with a lower FCI.

Good	0-5%
Fair	5-10%
Poor	10-30%
Critical	<30%

Different organizations and industries utilize varying scales to link FCI to condition. For TFRD condition assessment, the ranges are illustrated in Figure 5.. FCI's less than 5 percent are considered good, 5 to 10 percent fair, 10 to 30 percent poor, and greater than 30 percent critical. Facilities in the critical category may be more cost effective to replace than repair. This is also due to efficiency gains with more modern facilities and equipment.

Figure 5: FCI Rating Scale

It is important to note that the FCI at which a facility should be considered for replacement is often debated and modified based on the property owner's or facility manager's approach to facility management. Also, FCI is not the only factor considered when determining the need for renovation, replacement, or closure of a facility. Historical significance, community sentiment, functional adequacy, and the availability of capital funding are factors that are analyzed when making decisions.

Three-Year FCI

A three-year FCI was calculated by combining the current deficiencies and three-year needs. For decision-making purposes, it is prudent to consider repairs and replacements required in the near future. The replacement value represents the estimated cost of replacing the current building with another building of like size, based on today's estimated cost of construction in the Toledo, Ohio area.

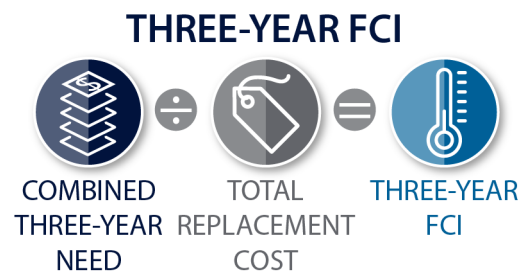


Figure 6: FCI Calculation

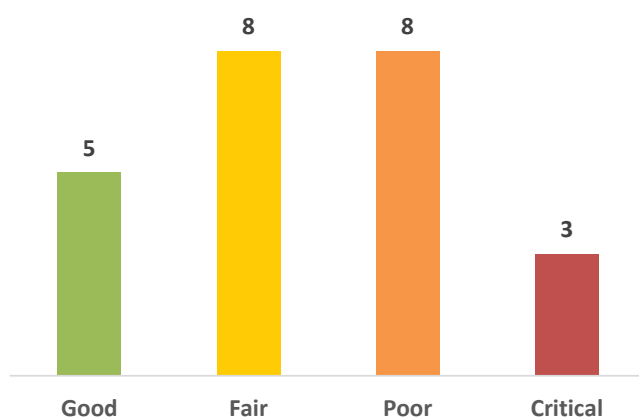


Figure 7: Building Count by FCI Condition Rating

Approximately half of TFRD facilities are considered in fair condition. Airport Training, Building Maintenance and the Burn Building are considered in critical condition with a 3-Year FCI of 32 percent, 73 percent, and 100 percent, respectively. Fire Stations noted in poor condition include Stations 4, 7, 9, 11, 13, 14, and 16. Imlay Vehicle Maintenance is also considered in poor condition with an FCI of 25 percent. Individual building FCI's can be found in Appendix A.



FINDINGS AND RECOMMENDATIONS

The facility condition assessment identified over \$22 million in needed repairs or replacements over the next 10 years. The majority of this need was found to be at the interior building finishes.

For long-range planning purposes, the first three years of projected need were combined to calculate a three-year Facility Condition Index (FCI). This provides an understanding of the current needs of a facility as well as the projected needs in the near future. A three-year FCI was calculated by dividing the combined three-year need by the total replacement cost.

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Strategic Recommendations

It is recommended that TFRD focus on its critical asset infrastructure to support the goals and mission of the Fire Department.

Additionally, the Burn Building is beyond its useful life and in the poorest condition. TFRD should consider replacement of this facility in the next two years.

Critical Asset Infrastructure

The cost of critical assets at or near the end of their useful life cycle and requiring replacement in one to two years:



Interior Construction/Finishes

Kitchen, bathroom, building
\$3,083,997



HVAC

AC, exhaust system
\$2,401,728



Site Improvement

Concrete, asphalt, fencing
\$2,121,240



Roofing

Replacement
\$1,912,393



Windows

Exterior enclosure
\$320,444



APPENDIX A – SUMMARY OF FINDINGS

Building Name	Area	Year Built	10 Year Need	3 Year FCI	Condition
Station 3	20,700	2014	\$ 774,375	3.05%	Good
Station 4	6,900	1971	\$ 1,288,413	18.92%	Poor
Station 5	18,300	1968	\$ 1,623,595	9.79%	Fair
Station 6	25,551	2012	\$ 1,121,708	3.16%	Good
Station 7	12,432	1969	\$ 1,410,881	17.35%	Poor
Station 9	7,000	1989	\$ 998,982	20.36%	Poor
Station 11	7,440	1966	\$ 590,441	11.68%	Poor
Station 12	14,500	2012	\$ 999,114	1.69%	Good
Station 13	8,070	1985	\$ 1,055,918	13.79%	Poor
Station 14	6,128	1930	\$ 961,380	15.45%	Poor
Station 16	5,200	1979	\$ 782,467	19.21%	Poor
Station 17	7,500	1979	\$ 444,225	5.79%	Fair
Station 18	10,350	1975	\$ 690,655	10.40%	Fair
Station 19	7,440	1965	\$ 808,718	9.86%	Fair
Station 21	9,300	1931	\$ 801,885	4.53%	Good
Station 23	7,440	1966	\$ 646,643	9.41%	Fair
Station 24	9,116	1997	\$ 485,242	5.12%	Fair
Station 25	11,020	1964	\$ 798,410	5.93%	Fair
Airport Training	8,400	1976	\$ 851,283	32.13%	Critical
Training Tower	3,000	1976	\$ 29,221	5.73%	Fair
Building Maintenance	5,520	1970	\$ 817,970	72.79%	Critical
Headquarters	18,405	1970	\$ 1,163,833	4.76%	Good
Imlay (Vehicle Maintenance)	46,000	1967	\$ 2,557,214	24.56%	Poor
Burn Building	5,900	1976	\$ 1,001,277	99.83%	Critical
			\$ 22,703,850		



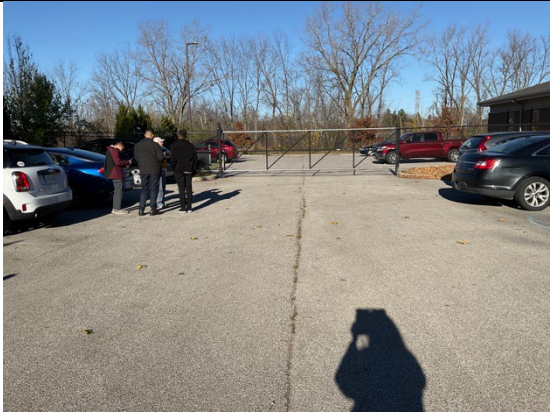
APPENDIX B – 10 YEAR NEED

Building Name	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total
Station 3	\$ 95,795	\$ 146,574	\$ 88,599	\$ 2,476	\$ 137,632	\$ 53,655	\$ 18,737	\$ 137,937	\$ 16,835	\$ 76,133	\$ 774,375
Station 4	\$ 151,958	\$ 385,492	\$ 148,074	\$ -	\$ 234,357	\$ 78,873	\$ 61,920	\$ 11,315	\$ 123,188	\$ 93,237	\$ 1,288,413
Station 5	\$ 612,069	\$ 258,348	\$ 69,920	\$ 40,398	\$ 344,049	\$ -	\$ 6,764	\$ 40,563	\$ 57,410	\$ 194,072	\$ 1,623,595
Station 6	\$ 424,139	\$ -	\$ -	\$ -	\$ 255,780	\$ -	\$ -	\$ 10,730	\$ -	\$ 431,060	\$ 1,121,708
Station 7	\$ 561,345	\$ 435,451	\$ 135,574	\$ -	\$ -	\$ -	\$ 141,090	\$ 137,422	\$ -	\$ -	\$ 1,410,881
Station 9	\$ 435,706	\$ 163,740	\$ 148,952	\$ -	\$ -	\$ -	\$ -	\$ 250,584	\$ -	\$ -	\$ 998,982
Station 11	\$ 174,867	\$ 157,159	\$ 124,227	\$ 6,190	\$ -	\$ 5,569	\$ 42,345	\$ 12,862	\$ 43,703	\$ 23,520	\$ 590,441
Station 12	\$ 114,875	\$ 11,670	\$ 2,404	\$ -	\$ 114,743	\$ 198,923	\$ 3,639	\$ 32,244	\$ -	\$ 520,616	\$ 999,114
Station 13	\$ 336,365	\$ 238,229	\$ 9,796	\$ -	\$ 29,368	\$ -	\$ 400,352	\$ 4,598	\$ -	\$ 37,209	\$ 1,055,918
Station 14	\$ 265,099	\$ 213,442	\$ 18,391	\$ -	\$ 66,808	\$ -	\$ 10,958	\$ 237,123	\$ 69,036	\$ 80,523	\$ 961,380
Station 16	\$ 146,780	\$ 254,754	\$ 122,880	\$ 6,190	\$ 32,696	\$ 5,569	\$ 47,567	\$ 19,815	\$ 88,828	\$ 57,388	\$ 782,467
Station 17	\$ 126,307	\$ 101,621	\$ -	\$ 6,190	\$ 28,641	\$ 46,838	\$ -	\$ 12,820	\$ 45,009	\$ 76,798	\$ 444,225
Station 18	\$ 95,795	\$ 299,158	\$ 169,987	\$ 5,955	\$ 13,887	\$ 6,567	\$ 65,641	\$ 25,416	\$ -	\$ 8,249	\$ 690,655
Station 19	\$ 141,806	\$ 230,224	\$ 12,934	\$ -	\$ 77,188	\$ 32,403	\$ -	\$ 110,347	\$ 51,181	\$ 152,635	\$ 808,718
Station 21	\$ 97,472	\$ 112,790	\$ 11,094	\$ -	\$ 236,282	\$ 32,889	\$ 13,217	\$ 15,133	\$ 8,353	\$ 274,655	\$ 801,885
Station 23	\$ 203,611	\$ 164,137	\$ -	\$ 2,476	\$ 207,054	\$ -	\$ 3,490	\$ -	\$ -	\$ 65,873	\$ 646,643
Station 24	\$ 156,932	\$ 49,387	\$ 38,656	\$ 6,190	\$ 123,184	\$ 88,304	\$ -	\$ -	\$ -	\$ 22,589	\$ 485,242
Station 25	\$ 181,223	\$ 11,670	\$ 149,901	\$ -	\$ 268,175	\$ 6,567	\$ -	\$ -	\$ 13,247	\$ 167,625	\$ 798,410
Airport Training	\$ 2,719	\$ 441,041	\$ 15,049	\$ -	\$ 48,050	\$ 3,152	\$ 37,772	\$ 115,475	\$ 94,640	\$ 93,385	\$ 851,283
Training Tower	\$ -	\$ 29,221	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 29,221
Building Maintenance	\$ 122,262	\$ 547,307	\$ 13,498	\$ -	\$ 6,376	\$ -	\$ 2,259	\$ 35,491	\$ 1,206	\$ 89,571	\$ 817,970
Headquarters	\$ -	\$ 296,731	\$ 10,085	\$ -	\$ 382,356	\$ 52,735	\$ 94,930	\$ 265,912	\$ -	\$ 61,084	\$ 1,163,833
Imlay (Vehicle Maintenance)	\$ 173,066	\$ 1,742,584	\$ 4,808	\$ -	\$ 89,213	\$ -	\$ 676	\$ 26,796	\$ 11,769	\$ 508,301	\$ 2,557,214
Burn Building	\$ -	\$ 1,001,277	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,001,277
	\$ 4,620,193	\$ 7,292,007	\$ 1,294,830	\$ 76,066	\$ 2,695,840	\$ 612,045	\$ 951,359	\$ 1,502,582	\$ 624,406	\$ 3,034,523	\$ 22,703,850



APPENDIX C – SUPPORTING PHOTOGRAPHS

Building	Description	Photo
Station 6	Exterior Drainage	 A photograph showing a concrete surface with a circular drain cover and a smaller, partially covered drain. A yellow curb is visible in the upper right corner.
Station 7	Interior Paint	 A photograph of an interior space, likely a locker room, showing significant peeling and cracking of the ceiling paint. A fluorescent light fixture is visible on the right.
Station 13	Interior Paint	 A photograph of an interior wall showing extensive peeling and cracking of the paint. A red fire door is visible on the right side of the frame.

Station 23	Parking Lot	
Station 24	Cabinetry	
Station 12	East Parking Lot	
Building Maintenance	Door Metal- Exterior	

Station 4	Walls - Tile - Interior	
Station 11	Ceiling - Concrete Plaster	
Station 25	Water Heater	
Airport Training	Parking Lot/ Drive	

Headquarters	Roofing	
Station 3	Flooring - VCT	
Station 18	Interior Paint	
Station 21	Flooring - Vinyl	

Station 16	Parking Lot - Asphalt	 A photograph showing a close-up of a parking lot surface made of asphalt. The asphalt is heavily cracked and weathered, with a large, irregular crack running across the foreground. In the background, a white van and other vehicles are parked on a similar surface.
Station 19	Wall - Wood - Exterior	 A photograph of the exterior wall of a building. The wall is made of light-colored wood siding. There is a large window with a dark frame. Below the window, there is a red door that is slightly ajar. A small black light fixture is mounted on the wall to the right of the door.
Imlay Vehicle Maintenance	Roof	 A photograph of a roof covered in gravel. The gravel is dark and appears to be a mix of small stones and pebbles. The roof is sloped, and there are some shadows visible on the surface.
Station 14	Wood Veneer - Exterior	 A photograph of the exterior of a brick building. The building has a red brick facade with white decorative elements. There is a large red garage door on the right side. Above the door, the letters 'FRL' are visible in white. A small black light fixture is mounted on the wall to the left of the door.

