

# FACILITY CONDITION ASSESSMENT FINDINGS

TOWN OF ATKINSON

December 2020

**Presenters:** 

Cheyenne Irby Kaustubh Chabukswar CEM, CRM

### Successful Asset Management:

Managing assets and budgets through predictive and focused strategies, rather than by unpredictable or reactive actions.

### AGENDA

**ABOUT BVNA** 

**SCOPE OUTLINE** 

**PROJCT ORGANIZATION** 

**METHODOLOGY** 

**OVERALL FCI SUMMARY** 

FCI RESULTS BY BUILDING

CONCULSIONS

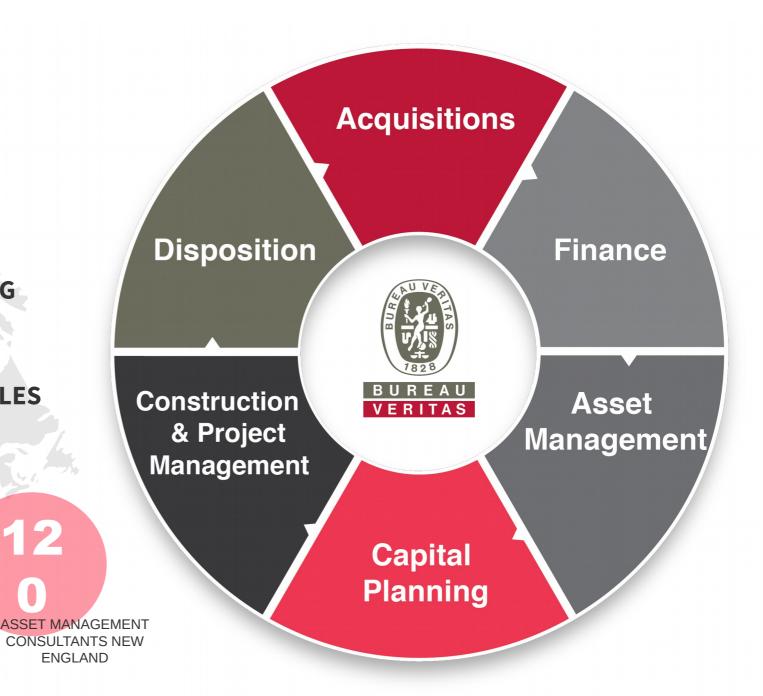




### **FACILITY SERVICES**

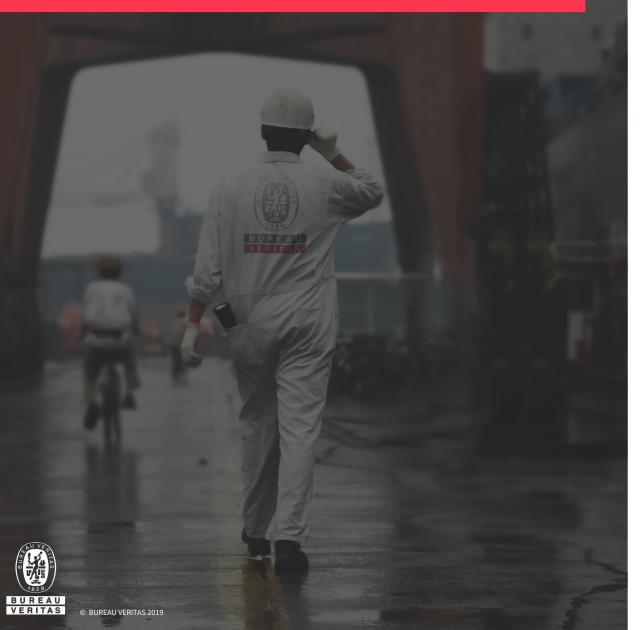
- FACILITY CONDITION ASSESSMENTS
- CAPITAL PLANNING
- ADA TRANSITION PLANS
- ENERGY AUDITS AND COMMISSIONING
- CMMS CONSULTING
- PREVENTIVE MAINTENANCE SCHEDULES

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### **PROJECT SCOPE**



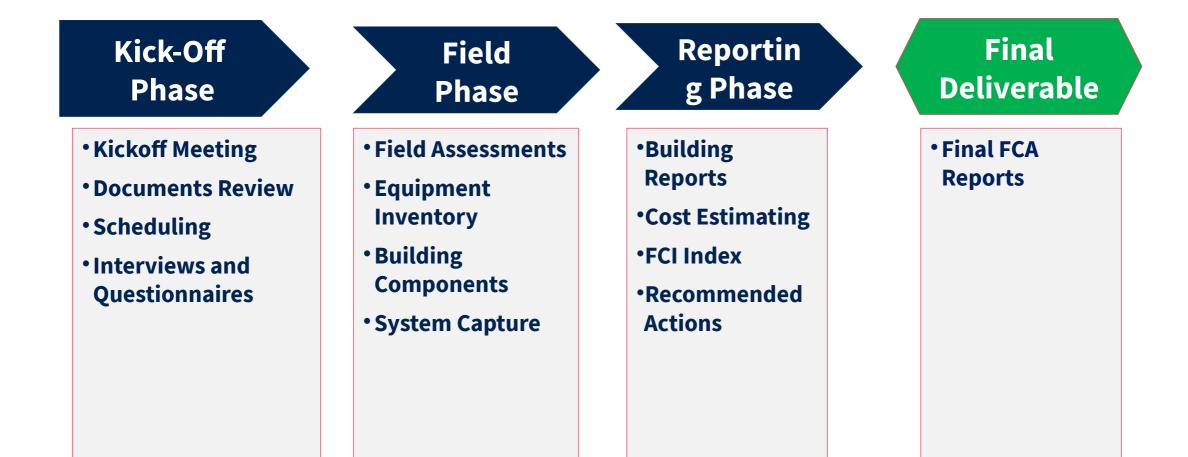
- Comprehensive Facility Condition Assessment
- Database Implementation
- Basis for Long Range Facility Planning
- Building Immediate Concerns
- Prioritization

# **PROJECT ORGANIZATION**

Facility(year built)	Total SF	Replacement Value
Community Center	6,000	\$444,300
Family Mediation	1,131	\$93,900
Fire Station (2000)	13,820	\$1,018,400
Historical Society	5,631	\$283,700
Library (2008)	11,600	\$1,048,100
Town Garage	4,700	\$110,400
Town Hall	5,936	\$639,700
Police Station	4,000	\$1,672,000

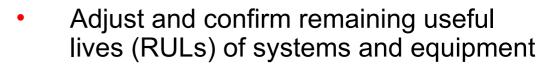


### **METHODOLOGY**





# **RECOMMENDED FIVE-YEAR** CYCLE ASSESSMENT



- Validate completed projects, update with actual costs and determine whether to reset projections or retire existing equipment
- Document new equipment information (manufacturer, model number, serial number, photographs)
- Rerun Capital Plan and Inventory Reports



## **TEN-YEAR NEEDS BY BUILDING**

Location	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total Escalated Estimate
Community Center	\$71,385	\$64,397	\$12,731	\$15,735	\$31,571	\$2,272	\$58,561	\$30,040	\$22,447	\$17,321	\$17,660	\$344,119
Family Mediation	\$23,054	\$14,152	\$0	\$5,158	\$23,112	\$8,115	\$1,540	\$3,659	\$741	\$0	\$9,911	\$89,443
Fire Station	\$45,226	\$0	\$3,978	\$63,737	\$0	\$221,439	\$0	\$78,294	\$0	\$0	\$317,057	\$729,731
Historical Society	\$45,901	\$18,375	\$35,988	\$4,589	\$11,959	\$18,780	\$776	\$15,467	\$697	\$23,747	\$184,291	\$360,570
Library	\$210,901	\$0	\$22,491	\$97,878	\$169	\$114,536	\$0	\$0	\$106,355	\$0	\$9,757	\$562,087
Town Garage	\$97,413	\$85,750	\$1,830	\$0	\$8,486	\$63,331	\$71,437	\$5,411	\$21,738	\$56,366	\$15,079	\$426,842
Town Hall	\$122,132	\$33,604	\$1,485	\$20,794	\$4,277	\$27,649	\$16,824	\$37,388	\$68,209	\$48,616	\$34,740	\$415,718
Police Station	\$68,500	\$0	\$6,970	\$0	\$152	\$89,948	\$0	\$8,818	\$5,409	\$176	\$271,175	\$451,149
Grand Total	\$684,512	\$216,278	\$85,474	\$207,890	\$79,725	\$546,071	\$149,139	\$179,077	\$225,597	\$146,226	\$859,670	\$3,379,65



### **CONDITION RANKING (1-5) SYSTEM AND EQUIPMENT**

			Remaining Useful Life - Typical Curve																		
	System Age																				
Ratin	System Age g Condition	Ne	ew						1/	3		1/	2		2/3	3			Fa	iluı	re
5	Excellent																				
4	Good																				
3	Fair																				
2	Poor																				
1	Crisis/Failure																				

		Deficiency	Deficiency
Rating	Condition	Range	Value
5	Excellent	0 to 5%	0.02
4	Good	5 to 10%	0.10
3	Fair	10 to 25%	0.33
2	Poor	25 to 50%	0.75
1	Failure/Crisis	> 50%	1.0

#### B3011 - Roof, Built-Up, Bitumen

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#### Excellent RUL 20 to 19 (>95% of EUL)

 New (or indistinguishable from new)

No anticipated maintenance required.

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**BUREAU VERITAS 2019** 



Good	F
UL 18 to 13 (>66% EUL left)	RU
Aside from age there is little directly observable that will show degradation of the Asset	•
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from "Excellent" down to "Good" condition Periodic inspection of flashing, parapets, curbs, and drainage

parapets, curbs, and drainage components is recommended as part of routine maintenance.



#### Fair RUL 12 to 3

 Isolated instances of bubbles/blisters, soft areas, fish mouth openings at seams
 No significant or systemic leaks observed/reported
 No systemic instances of bubbles/blisters, soft areas, fish mouth openings at seams

Isolated repairs may be required.



#### Poor RUL 2 to 1

Significant or systemic alligator cracking
Systemic instances of

 Systemic instances of bubbles/blisters, soft areas, fish mouth openings at seams
 Significant or systemic leaks observed/reported

Anticipate replacement. Replace roofing system only after substrate has been verified as acceptable.

#### **EUL 20 Years**



Failed RUL 0

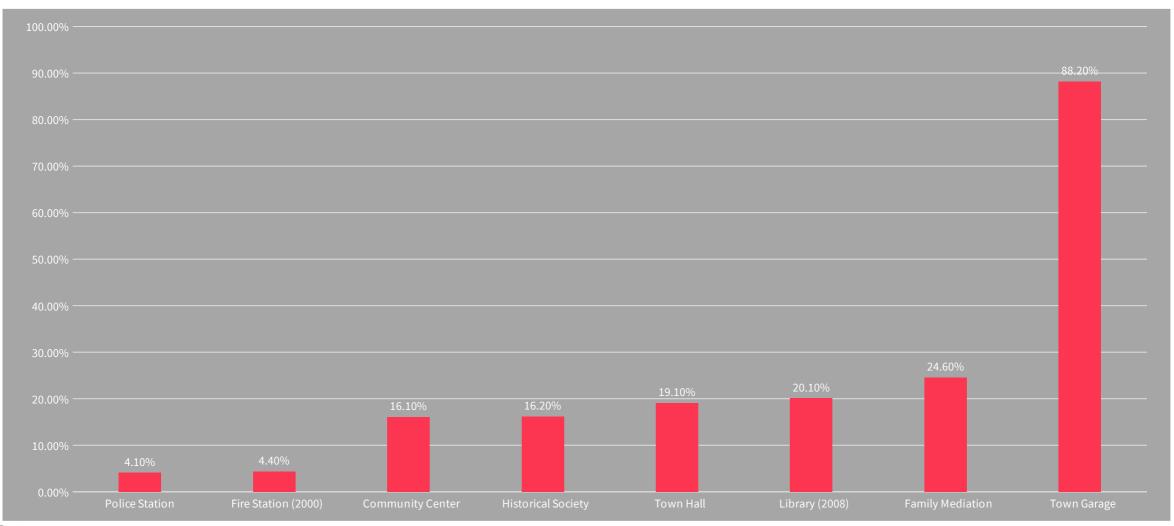
 Asset needs repairs, but (Repair \$) ≥ (Replacement \$)

Replace roofing system. roofing system only after substrate has been verified as acceptable. Anticipate replacement of at least some substrate. The Current Year FCI is the ratio of Immediate Repair Costs to the building's Current Replacement Value.

FCI CONDITION RATING	DEFINITION	PERCENTAGE VALUE	NUMBER OF SITES
Good	In new or well-maintained condition, with no visual evidence of wear, soiling or other deficiencies.	0% to 5%	1
Fair	Subjected to wear and soiling but is still in a serviceable and functioning condition.	> than 5% to 10%	0
Poor	Subjected to hard or long-term wear. Nearing the end of its useful or serviceable life.	> than 10% to 60%	5
Very Poor	Has reached the end of its useful or serviceable life. Renewal is now necessary.	> than 60%	1



# **RESULTS: CURRENT YEAR FCI SUMMARY (2020)**





# **10-YEAR FACILITY CONDITION INDEX (FCI) RATING**

• The 10 Year FCI is the ratio of Replacement Repair Costs over the period of 10 years to the building's Current Replacement Value.

FCI CONDITION RATING	DEFINITION	PERCENTAGE VALUE	NUMBER OF SITES
Good	In new or well-maintained condition, with no visual evidence of wear, soiling or other deficiencies.	0% to 5%	0
Fair	Subjected to wear and soiling but is still in a serviceable and functioning condition.	> than 5% to 10%	0
Poor	Subjected to hard or long-term wear. Nearing the end of its useful or serviceable life.	> than 10% to 60%	1
Very Poor	Has reached the end of its useful or serviceable life. Renewal is now necessary.	> than 60%	6



### **RESULTS: TEN-YEAR FCI SUMMARY (2020 – 2030)**

400.00% —								
350.00% —								368.60%
300.00% —								_
250.00% —								
200.00% —								
150.00% —								
100.00% —			68.90%				83.40%	_
50.00% —	27.00%	40.10%		61.50%	57.60%	52.30%		
0.00% —	Police Station	Fire Station (2000)	Community Center	Historical Society	Town Hall	Library (2008)	Family Mediation	Town Garage





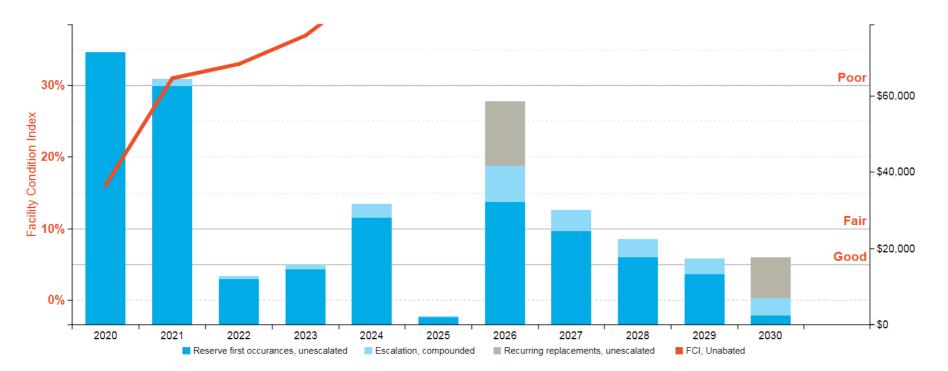
**BV BUILDING & INFRASTRUCTURE** 

**RESULTS BY BUILDING** FACILITY CONDITION ASSESSMENT



#### FCI Analysis: Community Center

Replacement Value: \$ 444,300; Inflation rate: 3.0%

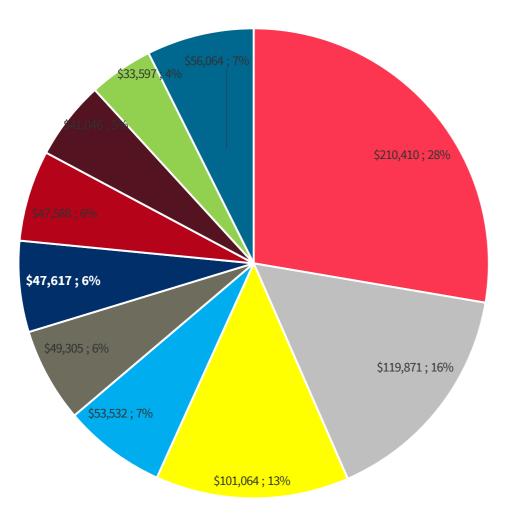


### **Top Upcoming Concerns:**

- Upgrade of fire alarm system- \$10,000 in 2020
- Mill and overlay of asphalt parking lot \$27,213 in 2021
- Seal and stripe of parking lot \$13,410 in 2021

System Expenditure Forecast						
System	Immediate	Short Term (1-2 yr)	Near Term (3-5 yr)	Med Term (6-10 yr)	Long Term (11-20 yr)	TOTAL
Structure	\$2,219	-	-	\$6,610	\$4,005	\$12,834
Facade	\$9,560	-	\$11,364	\$14,775	\$17,833	\$53,532
Roofing	\$2,490	-	-	\$23,393	\$21,734	\$47,617
Interiors	\$25,050	\$28,592	\$7,674	\$46,161	\$102,933	\$210,410
Plumbing	\$1,200	-	-	\$739	\$4,673	\$6,612
HVAC	-	-	\$26,168	\$782	\$14,096	\$41,046
Fire Protection	-	-	-	\$391	\$16,675	\$17,066
Electrical	\$210	-	-	\$4,355	\$96,499	\$101,064
Fire Alarm & Electronic Systems	\$10,000	-	-	-	\$23,597	\$33,597
Equipment & Furnishings	\$1,700	-	-	\$19,066	\$28,539	\$49,305
Site Development	\$5,249	\$3,090	\$4,370	-	\$34,879	\$47,588
Site Pavement	\$3,705	\$45,442	-	\$20,188	\$50,536	\$119,871
Site Utilities	-	-	-	\$9,552	-	\$9,552
Follow-up Studies	\$5,000	-	-	-	-	\$5,000
Accessibility	\$5,000	-	-	-	-	\$5,000
TOTALS	\$71,400	\$77,200	\$49,600	\$146,100	\$416,000	\$760,100





- Interiors
- Site Pavement
- Electrical
- Facade
- Equipment & Furnishings
- Roofing
- Site Development
- HVAC
- Fire Alarm & Electronic Systems

Other



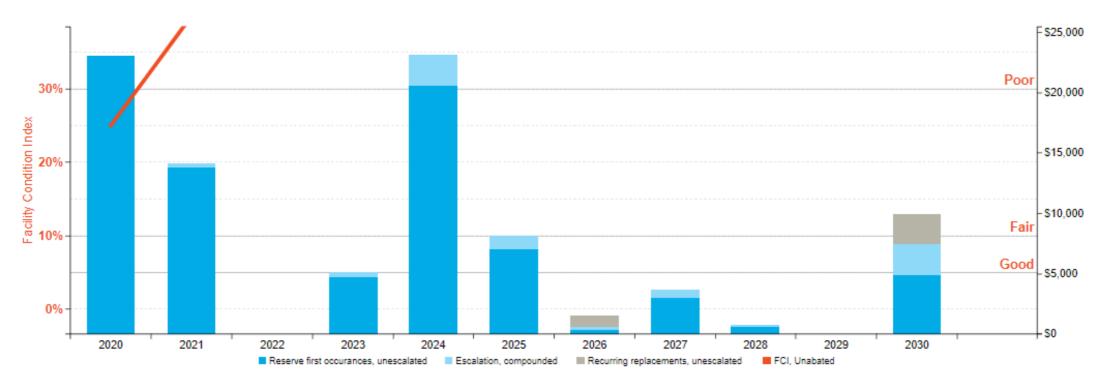
### **RESULTS BY BUILDING: FAMILY MEDIATION & JUVENILE SERVICES**



### **RESULTS BY BUILDING: FAMILY MEDIATION**

#### FCI Analysis: Family Mediation

Replacement Value: \$ 93,900; Inflation rate: 3.0%



### **Top Upcoming Concerns:**

- ADA study for bathrooms and interior paths of travel \$7,500 in 2020
- Mill and overlay of asphalt parking lot \$7,700 in 2021

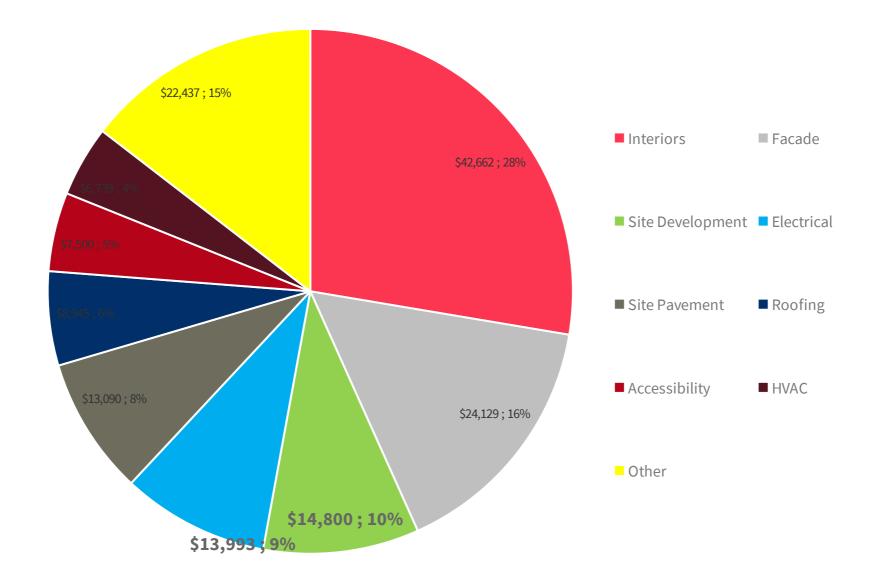
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### RESULTS BY BUILDING: FAMILY MEDIATION

System Expenditure Forecast						
System	Immediate	Short Term (1-2 yr)	Near Term (3-5 yr)	Med Term (6-10 yr)	Long Term (11-20 yr)	TOTAL
Structure	\$684	-	-	\$3,658	-	\$4,342
Facade	\$4,495	-	\$11,817	\$741	\$7,076	\$24,129
Roofing	-	-	\$6,629	-	\$2,316	\$8,945
Interiors	\$2,575	-	\$16,697	\$9, <mark>1</mark> 03	\$14,287	\$42,662
Plumbing	-	\$566	-	-	\$882	\$1,448
HVAC	-	-	-	-	\$6,739	\$6,739
Fire Protection		-	-	\$358	\$481	\$839
Electrical	\$600	-	\$1,238	\$806	\$11,349	\$13,993
Fire Alarm & Electronic Systems	\$2,200	-	-	-	\$3,973	\$6,173
Equipment & Furnishings	-	\$4,635	-	-	-	\$4,635
Site Pavement	-	\$8,950	-	\$1,182	\$2,958	\$13,090
Site Development	-	-	-	-	\$14,800	\$14,800
Follow-up Studies	\$5,000	-	-	-	-	\$5,000
Accessibility	\$7,500	-	-	-	-	\$7,500
TOTALS	\$23,100	\$14,200	\$36,400	\$15,900	\$64,900	\$154,300



### RESULTS BY BUILDING: FAMILY MEDITATION

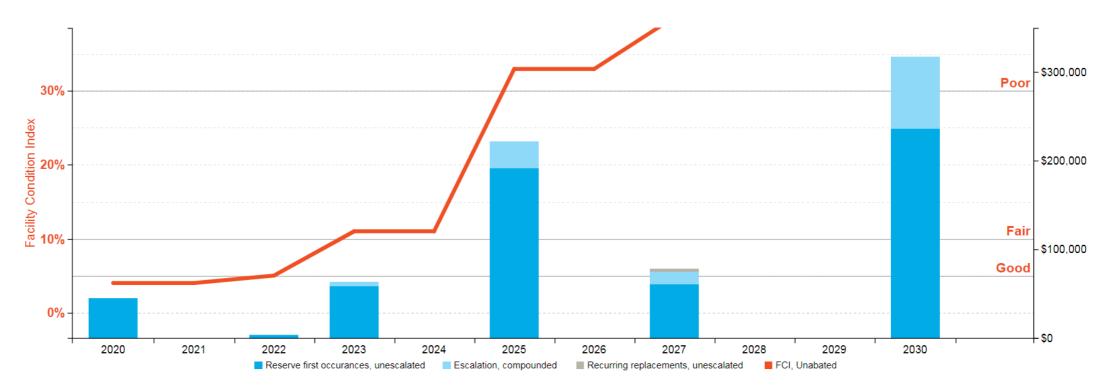






#### FCI Analysis: Fire Station

#### Replacement Value: \$ 1,018,400; Inflation rate: 3.0%

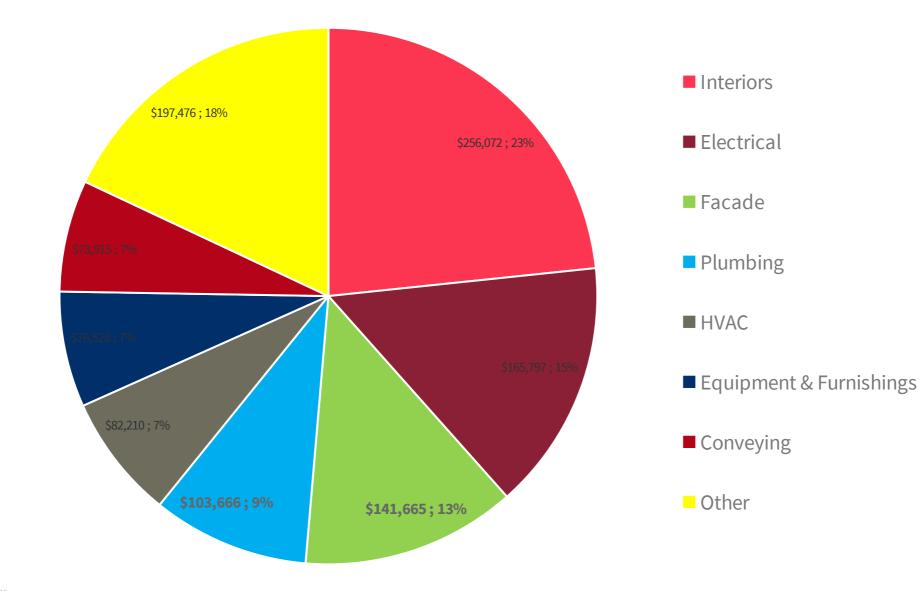


#### **Top Upcoming Concerns:**

- Replacement of Fluorescent Tube, T8 lights \$28,426 in 2020
- Replacement of fire alarm control panel \$15,000 in 2020

System Expenditure Forecast						
System	Immediate	Short Term (1-2 yr)	Near Term (3-5 yr)	Med Term (6-10 yr)	Long Term (11-20 yr)	TOTAL
Structure	-	-	\$54	-	\$73	\$127
Facade	-	-	-	\$127,536	\$14,129	\$141,665
Roofing	-	-	-	-	\$42,801	\$42,801
Interiors	\$1,800	-	\$86,234	\$80,807	\$87,231	\$256,072
Conveying	-	-	-	\$73,915	-	\$73,915
Plumbing	-	-	\$7,703	\$37,095	\$58,868	\$103,666
HVAC	-	-	\$41,243	\$429	\$40,538	\$82,210
Fire Protection	-	-	\$24,204	-	\$233	\$24,437
Electrical	\$28,426	-	\$68,777	\$16,931	\$51,663	\$165,797
Fire Alarm & Electronic Systems	\$15,000	-	\$1,385	\$553	\$25,527	\$42,465
Equipment & Furnishings	-	\$636	\$27,153	\$11,861	\$36,878	\$76,528
Site Development	-	-	-	\$36,957	-	\$36,957
Site Pavement	-	\$3,341	\$28,402	\$3,874	\$9,697	\$45,314
Site Utilities	-	-	-	\$5,375	-	\$5,375
TOTALS	\$45,300	\$4,000	\$285,200	\$395,400	\$367,700	\$1,097,400



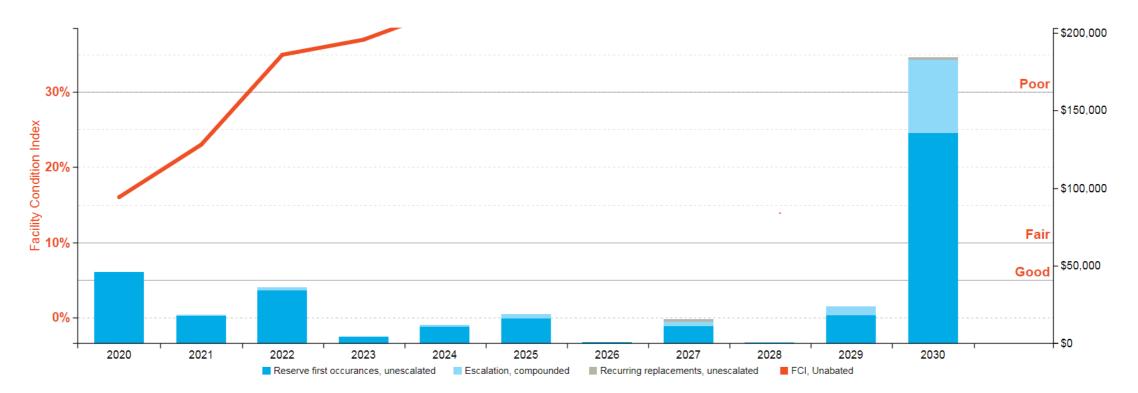


BUREAU VERITAS



#### FCI Analysis: Historical Society

Replacement Value: \$ 283,700; Inflation rate: 3.0%

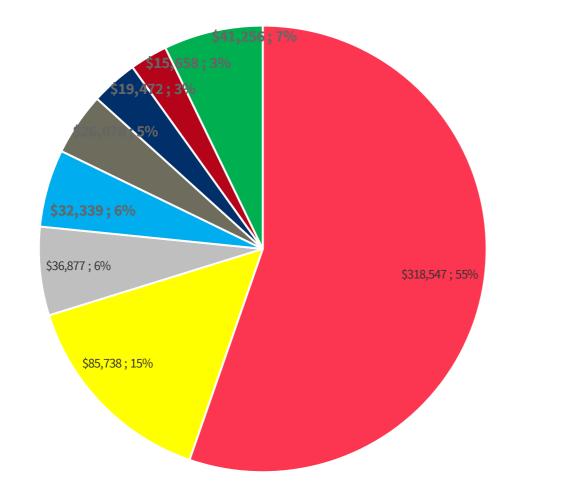


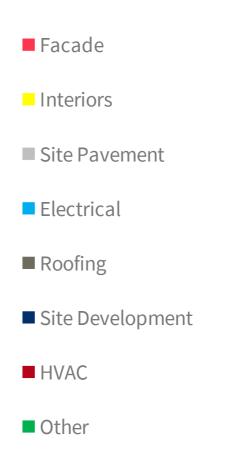
### **Top Upcoming Concerns:**

- ADA study for interior paths and egress \$7,500 in 2020
- Painting of exterior walls \$13,080 in 2021

System Expenditure Forecast						
System	Immediate	Short Term (1-2 yr)	Near Term (3-5 yr)	Med Term (6-10 yr)	Long Term (11-20 yr)	TOTAL
Structure	\$2,500	-	-	\$1,343	\$1,806	\$5,649
Facade	\$11,750	\$13,472	-	\$203,560	\$89,765	\$318,547
Roofing	-	-	-	\$1,937	\$24,141	\$26,078
Interiors	\$16,537	\$10,471	\$7,543	\$1,806	\$49,381	\$85,738
Plumbing	\$5,233	-	-	\$1,435	\$8,220	\$14,888
HVAC	-	-	-	-	\$15,658	\$15,658
Fire Protection	-	-	-	\$179	\$240	\$419
Electrical	\$880	-	\$27,783	\$1,182	\$2,494	\$32,339
Fire Alarm & Electronic Systems	-	-	-	-	\$11,300	\$11,300
Site Pavement	-	\$30,416	-	\$1,844	\$4,617	\$36,877
Site Development	-	-	-	\$11,683	\$7,789	\$19,472
Follow-up Studies	\$1,500	-	-	-	-	\$1,500
Accessibility	\$7,500	-	-	-	-	\$7,500
TOTALS	\$45,900	\$54,400	\$35,400	\$225,000	\$215,500	\$576,000





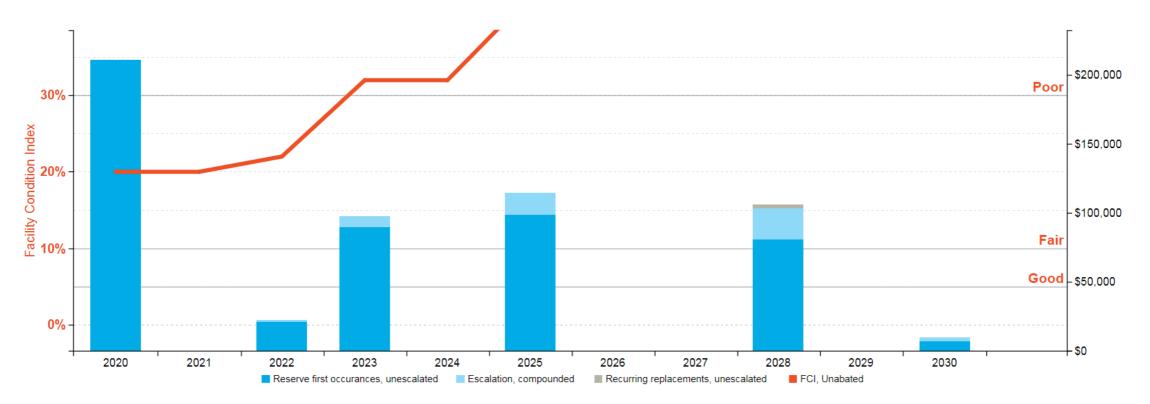






### FCI Analysis: Library

Replacement Value: \$ 1,048,100; Inflation rate: 3.0%

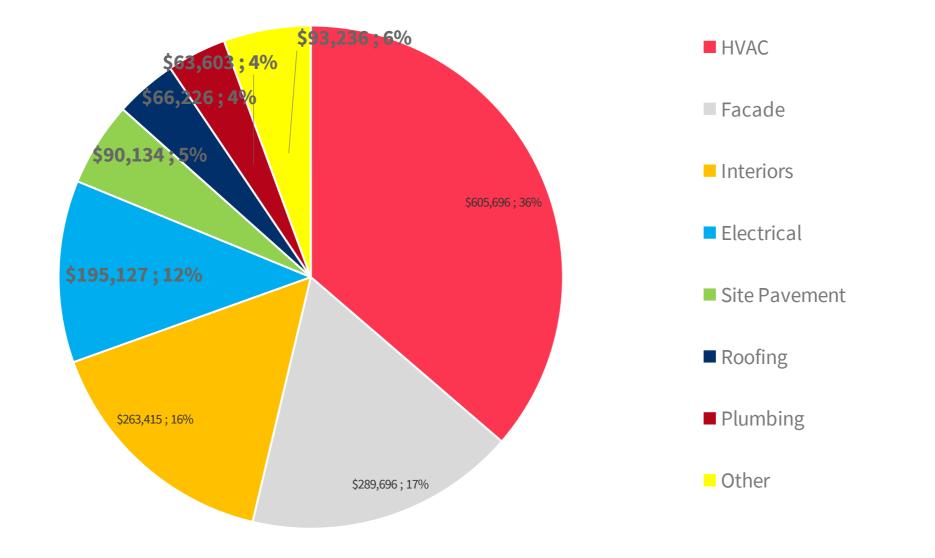


#### **Top Upcoming Concerns:**

- Demolish and re-install 100% new CertainTeed siding- \$200,000 in 2020 // Replace damaged boards -\$80,000 in 2020
- Replacement of heat pumps(12.5 Tons and 30 Tons)- \$21,200 in 2022 and \$45,000 in 2023

System Expenditure Forecast						
System	Immediate	Short Term (1-2 yr)	Near Term (3-5 yr)	Med Term (6-10 yr)	Long Term (11-20 yr)	TOTAL
Structure	-	-	-	-	-	-
Facade	\$200,000	-	\$463	-	\$89,233	\$289,696
Roofing	\$9,900	-	-	\$55,839	\$487	\$66,226
Interiors	-	-	\$112,233	-	\$151,182	\$263,415
Plumbing	-	-	\$14,751	-	\$48,852	\$63,603
HVAC	-	\$22,491	\$60,316	<b>\$10,150</b>	\$512,739	\$605,696
Fire Protection	-	-	\$168	-	\$226	\$394
Electrical	-	-	\$1,738	\$22,728	\$170,661	<b>\$1</b> 95,127
Fire Alarm & Electronic Systems	-	-	\$16,390	-	\$25,536	\$41,926
Equipment & Furnishings	-	-	\$2,993	-	\$4,292	\$7,285
Site Utilities	-	-	-	\$10,640	\$8,937	\$19,577
Site Pavement	\$1,001	-	\$3,520	\$4,081	\$81,532	\$90,134
Site Development	-	-	-	\$12,667	\$11,387	\$24,054
TOTALS	\$211,000	\$22,500	\$212,600	\$116,200	\$1,105,100	\$1,667,200







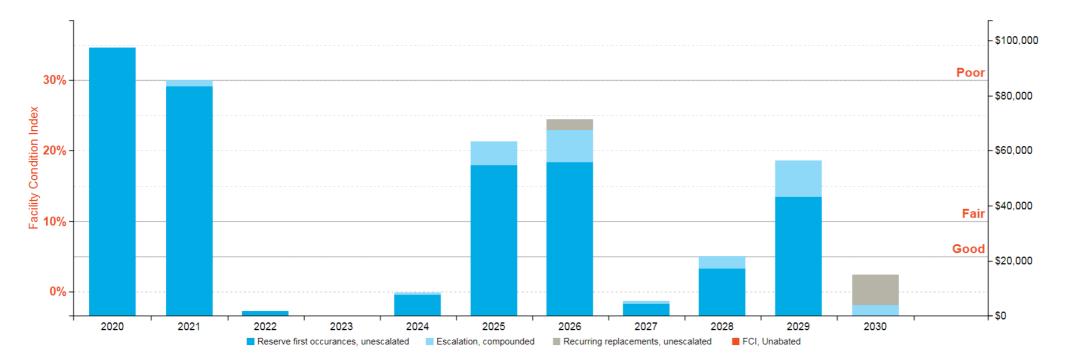
### **RESULTS BY BUILDING: TOWN GARAGE**



### **RESULTS BY BUILDING: TOWN GARAGE**

#### FCI Analysis: Town Garage

#### Replacement Value: \$ 110,400; Inflation rate: 3.0%



#### **Top Upcoming Concerns:**

- Replacement of retaining wall \$41,600 in 2020
- Replacement of wood modular building \$40,000 in 2021
- Mill and overlay of asphalt parking lot \$31,325 in 2021

### **RESULTS BY BUILDING:** TOWN GARAGE

#### System Expenditure Forecast Immediate Short Term Near Term Med Term Long Term System (1-2 yr) (3-5 yr) (6-10 yr) (11-20 yr) Facade \$22,012 \$1,030 \$52,167 \$139,558 \$26,361 Roofing \$1,810 \$37,431 --\$4,275 Interiors \$11,163 \$15,002 -Plumbing \$619 \$16,934 \$11,640 --HVAC \$2,640 \$2,736 \$7,866 --**Fire Protection** \$358 \$481 ---Electrical \$220 \$2,987 \$295 \$24,528 -**Fire Alarm & Electronic Systems** \$475 \$268 \$789 --\$9,840 \$15,330 Equipment & Furnishings --**Special Construction & Demo** \$2,040 \$41,200 ---Site Development \$41,600 \$1,830 \$5,067 --Site Pavement \$36,411 \$4,808 \$12,347 --Site Utilities \$4,120 ----Follow-up Studies \$5,000 ----

-

\$87,600

-

\$71,900

-

\$170,100

\$7,500

\$97,500

TOTAL

\$241,128

\$39,241

\$30,440

\$29,193

\$13,242

\$28,030

\$1,532

\$25,170

\$43,240

\$48,497

\$53,566

\$4,120

\$5,000

\$7,500

\$570,800

-

\$144,000

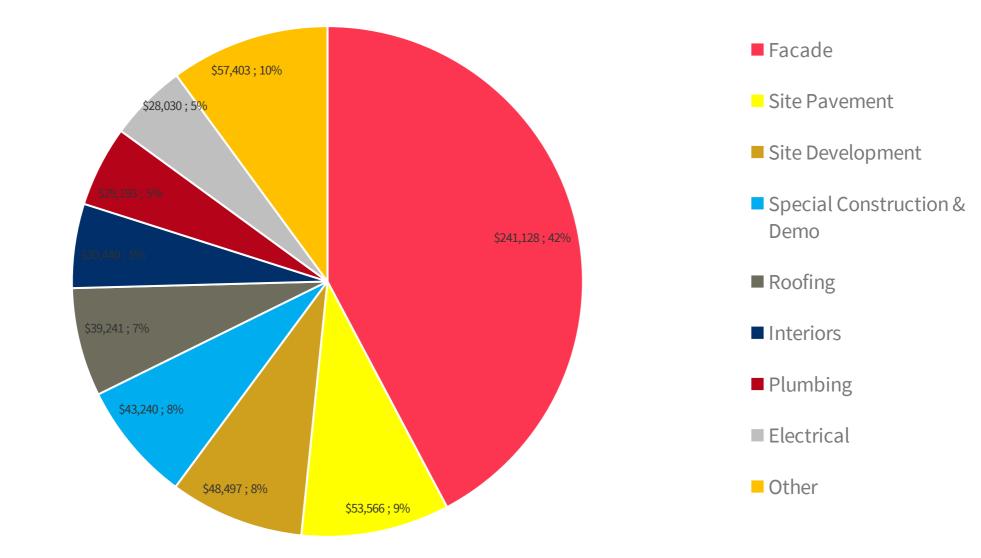
\$839



Accessibility



### **RESULTS BY BUILDING:** TOWN GARAGE

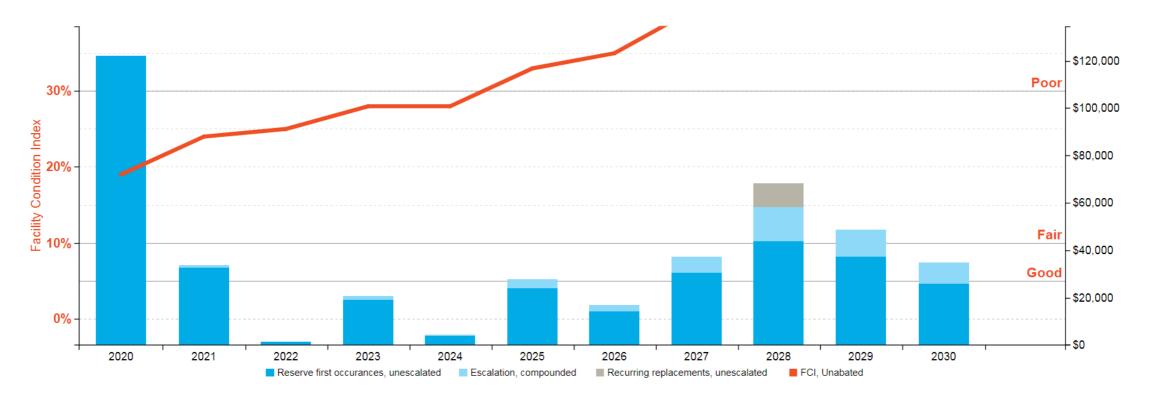






#### FCI Analysis: Town Hall

Replacement Value: \$ 639,700; Inflation rate: 3.0%

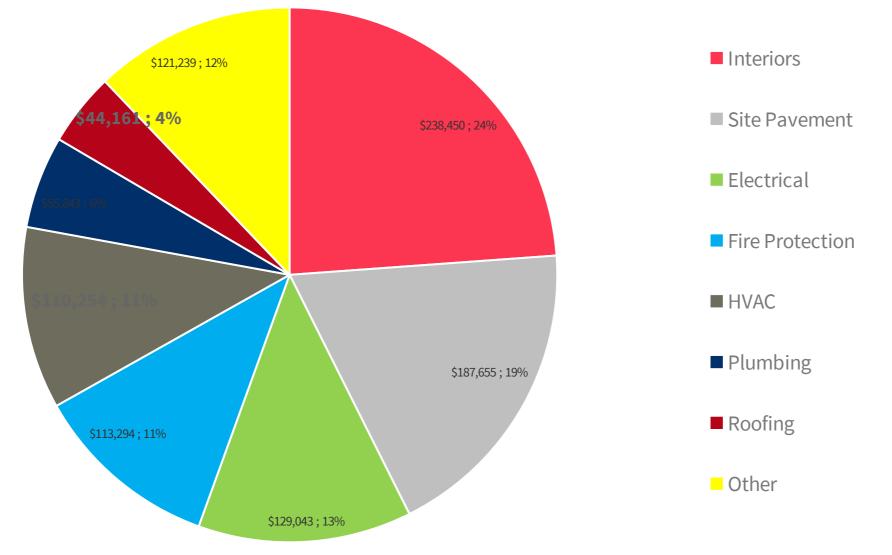


#### **Top Upcoming Concerns:**

- Replacement of well pump controller \$35,600 in 2020
- Installation of transfer switch \$20,000 in 2020
- Installation of generator \$20,000 in 2020

System Expenditure Forecast										
System	Immediate	Short Term (1-2 yr)	Near Term (3-5 yr)	Med Term (6-10 yr)	Long Term (11-20 yr)	TOTAL				
Structure	\$7,950	-	-	-	-	\$7,950				
Facade	-	-	-	\$27,118	-	\$27,118				
Roofing	\$360	-	-	\$40,172	\$3,629	\$44, <mark>1</mark> 61				
Interiors	\$2,650	\$33,603	\$1,159	\$101,278	\$99,760	\$238,450				
Plumbing	-	\$1,485	\$9,157	-	\$45,201	\$55,843				
HVAC	\$4,200	-	\$4,276	\$14,322	\$87,456	\$110,254				
Fire Protection	\$35,600	-	\$9,729	\$1,564	\$66,401	\$113,294				
Electrical	\$40,000	-	\$17,329	-	\$71,714	\$129,043				
Fire Alarm & Electronic Systems	\$11,872	-	-	\$5,375	\$21,442	\$38,689				
Equipment & Furnishings	-	-	-	\$1,844	\$4,348	\$6, <mark>1</mark> 92				
Site Pavement	\$1,500	-	\$11,063	\$12,826	\$162,266	\$187,655				
Site Development	-	-	-	\$1,266	\$14,800	\$16,066				
Site Utilities	\$4,000	-	-	-	\$7,224	\$11,224				
Follow-up Studies	\$14,000	-	-	-	-	\$14,000				
TOTALS	\$122,200	\$35,100	\$52,800	\$205,800	\$584,300	\$1,000,000				



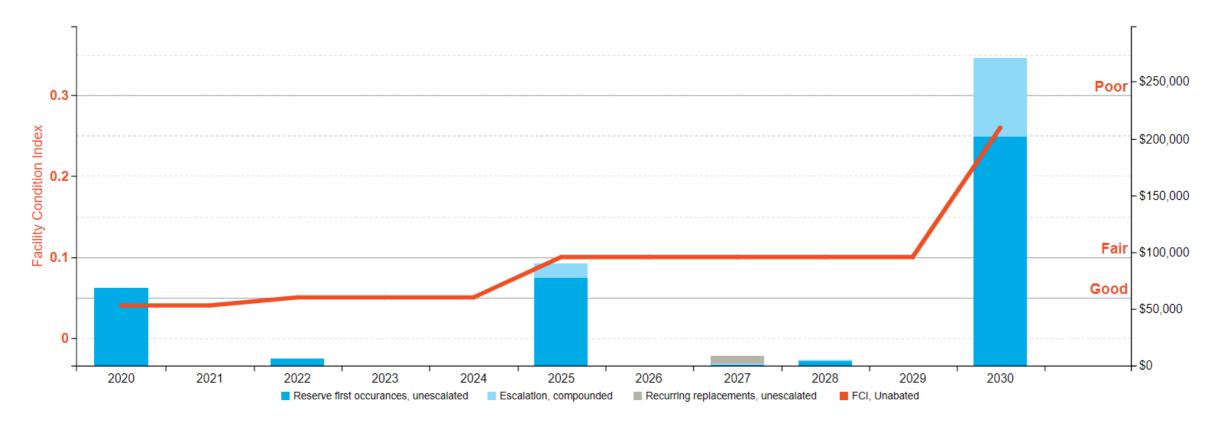


B U R E A U V F R I T A S



#### FCI Analysis: Police Station

Replacement Value: \$ 1,672,000; Inflation rate: 3.0%

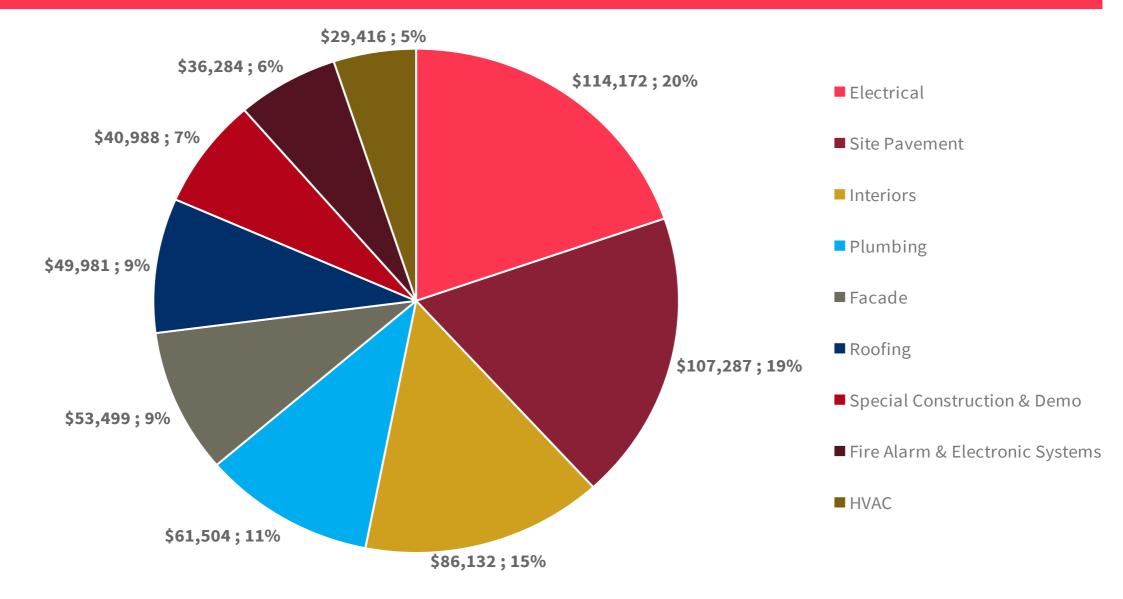


#### **Top Upcoming Concerns:**

- Exterior Wall Repair \$17,000 in 2020
- Installation of generator \$20,000 in 2020

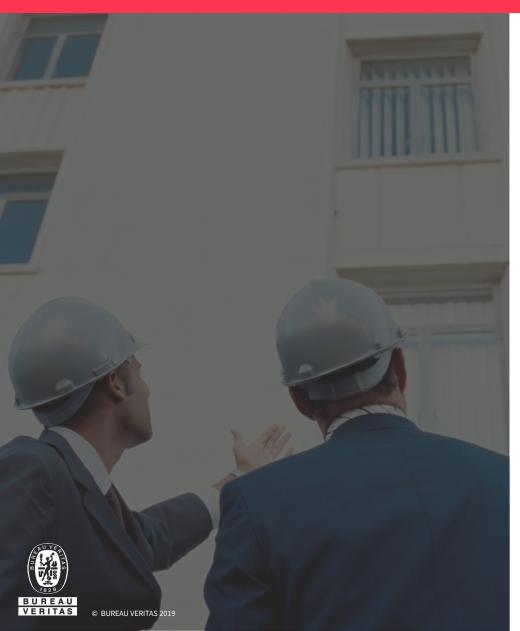
System Expenditure Forecast										
System	Immediate	Short Term (1-2 yr)	Near Term (3-5 yr)	Med Term (6-10 yr)	Long Term (11-20 yr)	TOTAL				
Facade	\$16,500	-	\$2,434	-	\$34,565	\$53,499				
Roofing	-	-	\$3,524	\$3,628	\$42,829	\$49,981				
Interiors	-	-	\$30,313	\$31,984	\$23,835	\$86,132				
Plumbing	-	-	-	\$48,010	\$13,494	\$61,504				
HVAC	\$1,400	-	-	\$27,549	\$467	\$29,416				
Fire Protection	-	-	\$1,391	\$8,063	\$1,869	\$11,323				
Electrical	\$31,100	-	\$52,282	\$2,122	\$28,668	<b>\$1</b> 14,172				
Fire Alarm & Electronic Systems	-	-	-	\$36,284	-	\$36,284				
Equipment & Furnishings	-	-	-	\$2,349	-	\$2,349				
Special Construction & Demo	-	-	-	\$40,988	-	\$40,988				
Site Pavement	-	\$6,970	<mark>\$</mark> 151	\$76,930	\$23,236	\$107,287				
Site Development	-	-	-	\$7,658	\$18,927	\$26,585				
Follow-up Studies	\$12,000	-	-	-	-	\$12,000				
Accessibility	\$7,500	-	-	-	-	\$7,500				
TOTALS	\$68,500	\$7,000	\$90,100	\$285,600	\$187,900	\$639,100				







### **CONCLUSIONS / RECOMMENDATION**



- Facility condition assessment performed to assess the condition of all assets across properties
- Facility condition assessment allows planning for the repair, maintenance and upgrade of assets
- Make transition from FCA or Reserves to Capital Planning (maintain a current plan)
- Five-year refresh of data and costs are recommended



# THANK YOU

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