REPORT OF FACILITY CONDITION ASSESSMENT



Rosman Elementary

Property Address: 167 Rosman School Rd Rosman, NC 28772

Prepared For:

Transylvania County Board of Commissioners 101 South Broad Street Brevard, NC 28712

Prepared By: Axias Project No. GA23-017 February 26, 2024













ВШ	LDING VALUE																				Building: GSF: Age: Address:	53000	Elementar rears old) an School Rd IC 28772		
Item No.	Condition	Recommendation	Priority Category	Deficiency Category	Impact of Failure	Condition	Froudability of Failure Frequency of	Failure Risk Score	Risk Category	Estimated Useful Life	Remaining Useful Life	Quantity	Unit of Measure	Unit Cost	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Required
Accessibilit														Year	1	2	3	4	5	6	7	8	9	10	
Required 1	possible. Future renovations for the elementary school will require compliance with ADA.	No anticipated capital expenditures.																							\$0
Site System Required	S																								
1	Site asphalt at parking lot and roadway areas was in a fair condition, but would benefit from repair works over the course of the study.	Crack fill, seal coat, and restripe the parking lot and roadway areas.	IV	SM	5	3	4 5	5 17	Low	7	3	9,165	SY	\$2.00			\$18,330							\$18,33	0\$36,660
2		Mill and overlay asphalt (10% of total area) to parking lot and roadway areas.	IV	CR	5	3	4 5	5 17	Low	15	10	920	SY	\$35.00										\$32,20	0 \$32,200
3	Site asphalt to the path/walkway around the grass playing field was in a fair condition, but cracked in places and require works over the study.	Crack fill and seal coat the path/walkway areas.	ш	SM	5	3	4 5	5 17	Low	7	3	2,100	SY	\$3.00			\$6,300								\$6,300
4	Site asphalt to the path/walkway around the grass playing field were in a fair condition, but cracked in places and require works over the study.	Mill and overlay asphalt to entire path/walkway area.	IV	CR	5	3	4 5	5 17	Low	15	10	2,100	SY	\$35.00										\$73,50	0 \$73,500
5		should be maintained as part of routine maintenance to comply with playground																							\$0
6	The recreation field if provided with two wood framed structures. The structures appeared to be in fair condition with minor areas of damaged wood and slipped shingles. It is recommended to budget for the refurbishment of the two structures.	Refurbish athletic field structures.	111	DM	5	3	4 5	5 17	Low	25	1	2	EA	\$5,000	\$10,000										\$10,000
7	The athletic field is provided with three wood and metal framed bleachers which appeared to be in poor condition. It is recommended to budget for the replacement of the bleachers.	Replace athletic field bleachers.	III	DM	5	3	4 5	5 17	Low	20	1	3	EA	\$4,500	\$13,500										\$13,500
8	recommended to hudget for the		IV	CR	5	4	4 5	5 18	Low	15	8	2	ALLOW	\$250,000								\$500,0	00		\$500,000











	LDING VALUE																	HITE				Building: GSF: Age: Address:	Rosman Ele 53000 1974 (49 years 167 Rosman So Brevard, NC 28	s old) chool Rd		
Item No.	Condition	Recommendation	Priority Category	Deficiency Category	Impact of Failure	Condition	Probability of Failure	Frequency of Failure	Risk Score	Risk Category	Estimated Useful Life	Remaining Useful Life	Quantity	Unit of Measure	Cuit Cost	2024	2025	۳ 2026	÷ 2027	د 2028	o 2029	00007	8 2031	c 2032	800 10	Required
9	A physical security assessment was provided by Safe Havens International. As part of their assessment, they identified areas around the site where additional fencing should be provided. It is recommended to budget an allowance for the installation of additional perimeter fencing per the Physical Security Assessment. Cost is a placeholder and could fluctuate.	Install additional site fencing.		CI	3	3	4	4	14 M	ledium	15	2	400	LF	\$90		\$36,000									\$36,000
Structural S Required																										
1	The building structural systems appeared to be in good condition and should continued to be monitored.																									\$0
Roofing Sys Required	stems																									
1	The standing seam metal roofing at the covered walkway areas was in a fair condition but is stained on the top layer.	Clean existing roof and paint with a suitable metal paint.	111	SM	5	2	5	5	17	Low	10	1	6,300	SF	\$3.00	\$18,900										\$18,900
2	The modified bitumen roof across the low- slope roof areas was in a poor condition. The roof is at the end of its useful life.	Fully strip off and replace the modified bitumen roof with a TPO membrane.	"	DM	3	2	3	2	10	High	20	1	37,000	SF	\$20.00	\$740,000										\$740,000
3	Asphalt shingles to the northern roof (excluding the gym, which has been recently re-roofed) were in a fair condition, but roof shingles are stained and based on age are expected to require replacement during the term.	Replace the asphalt roof shingles on a like-for-like basis.		CR	4	3	4	4	15 M	ledium	20	5	9,000	SF	\$5.00					\$45,000						\$45,000
Exterior Ele																										
Required 1	Exterior movement joints within the brickwork are filled with elastomeric sealant. Sealant joints across the building were in poor condition and were cracked and have dried out.	Replace exterior sealant joints.	III	DM	4	3	3	4	14 M	ledium	10	1	1,400	LF	\$10	\$14,000										\$14,000
2	Exterior windows and doors are set within exterior masonry walls. At the perimeters of the metal frames and the brickwork, a perimeter bead of elastomeric sealant is installed. Sealant joints were in a fair condition, but are expected to need replacement in the mid-term of the study.	Replace perimeter window sealant joints.	111	SM	4	4	4	5	17	Low	10	5	1,850	LF	\$10					\$18,500						\$18,500
3	The metal canopy structure was in a good condition and the majority of the supporting structure appeared to have been recently repainted. However the section at the south of the building was in poor condition and should be repainted as an operational expense. We anticipate that the metalwork will need to be repainted in the mid-term of the study.	Prepare metalwork to canopy walkway structure and repaint.	v	CR	5	4	4	5	18	Low	10	5	7,200	SF	\$8					\$57,600						\$57,600











BUI	LDING VALUE															HHE				Building: GSF: Age: Address:	Rosman 53000 1974 (49 ye 167 Rosman Brevard, NC	n School Rd		
Item No.	Condition Recommend		Priority Category	Category	Impact of Failure	Probability of	Failure Failure Risk Score	Risk Category	Estimated Useful Life	Remaining Useful Life	Quantity	Unit of Measure	Unit Cost	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Required
Interiors Required													Year	1	2	3	4	5	6	7	8	9	10	
1	Interiors appeared to be typical finishes and fair condition for an educational establishment. Allowance only includes renewal of interior finishes and minor renovations of restrooms. Does not include reconfiguration of space or address items related to educational adequacy.	ope will vary	v	CR	5 3	3 5	5 18	S Low	15	5	53,000	SF	\$50.00					\$2,650,000						\$2,650,000
2	A physical security assessment was provided by Safe Havens International. As part of their assessment, they identified areas within the school which should be provided with a vestibule to limit continued access throughout the school. Based on this recommendation, it is recommended to budget for the installation of vestibules to limit access throughout the school.	er Physical	11	CI	3 3	3 3	3 12	High		2	53,000	SF	\$2		\$106,000									\$106,000
Mechanical																								
Reauired										1 1														
Required	The two roof-mounted air-cooled chillers manufactured by Trane in 2013 serve the central and south portions of the building, including the library. The chillers appear to be operating adequately with no major signs of deficiencies or maintenance neglect. The chillers will reach the end of their recommended useful life during the study period and should be replaced.	oled chillers.	IV (CR	2 3	3 4	5 14	Mediur	m 20	7	104	TON	\$4,500							\$468,000				\$468,000
	manufactured by Trane in 2013 serve the central and south portions of the building, including the library. The chillers appear to be operating adequately with no major signs of deficiencies or maintenance neglect. The chillers will reach the end of their recommended useful life during the study	ed life extension	IV (3 4		Mediur			104	TON	\$4,500 \$1,200							\$468,000		\$48,00	0	\$468,000 \$48,000











	LDING VALUE																		HITEL				Building: GSF: Age: Address:	Rosman E 53000 1974 (49 yea 167 Rosman Brevard, NC 2	s old) ichool Rd		
Item No.	Condition	Recommendation	Priority Category	Deficiency Category	Impact of Failure	Condition	le lit	Frequency of Failure	Risk Score	Risk Category	Estimated Useful Life	Remaining Useful Life	Quantity	Init of Maserica	Unit of Measure	Unit Cost Aear	2024	2025	د 2026	4 2027	2028	o 2029	5030	2031	ы 2032	2033 10	Required
4	The AHUs serving the majority of the building are recessed in the ceiling and reportedly difficult to properly maintain. Most units are a 1990's vintage and are at the end of their recommended useful life. Based on the location of the units in the central hallway ceilings and age of the equipment, we recommend budgeting for the replacement of the AHUs and as needed ductwork. The maintenance staff has found greater success installing new AHUs into new mechanical closets, instead of working around crowded plenum space in central hallways.		111	CR	4	3	3	4	14	Mediu	m 20	2	16	E	ĒĀ	\$45,000		\$720,000									\$720,000
5	The building management system (BMS) is built on the Niagara framework with Johnson Controls Metasys control hardware installed in 1999. The BMS gives a broad overview of the Property with select items controlled via the web-based interface. The system is limited but remains operational. Resources and supplies for older BMS versions are difficult to obtain. Upgrades include hardware replacements and software advancements, and upgrades from pneumatics. It is recommended to upgrade the BMS and HVAC control systems in conjunction with the AHU replacements.	Upgrade BMS system.	Ш	CR	4	3	4	4	15	Mediu	m 15	2	53,00	10 S	SF	\$3.25		\$172,250									\$172,250
Electrical Required																											
1	The main distribution and electrical panels throughout the school were manufactured by GE and appear to have been installed at the time of construction. Electrical equipment of this type typically has a service life of 40 years depending on the manufacturer and availability of replacement components. Given the potential for obsolete components, it is recommended to upgrade the original GE electrical panels in the late term of the study period. This scope should be included in any future full scale renovations.	Upgrade 1974 vintage GE electrical panels.	111	CR	3	3	4	5	15	Mediu	m 40	2	53,00	10 S	SF	\$8.00		\$424,000									\$424,000
2	Security and access control systems are limited at the school. It is recommended that a security and access control system is installed throughout the building. A security and access control specialist should be consulted to determine the system requirements. The cost recommendation is a place holder and could fluctuate based on the final system design.	systems and school safety.	11	CI	2	3	3	4	12	High	15	2	53,00	10 S	SF	\$4.25		\$225,250									\$225,250









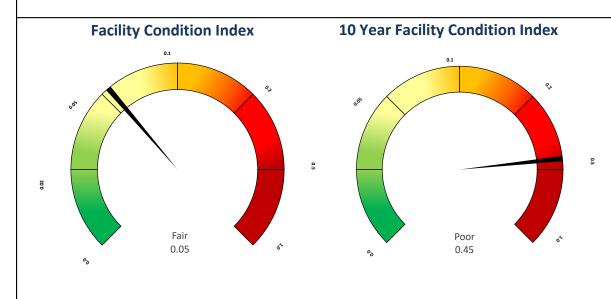


BUILC	XIQS DING VALUE																	Building: GSF: Age: Address:	Rosman Ele 53000 1974 (49 years 167 Rosman So Brevard, NC 28	old) chool Rd		
Item No.	Condition	Recommendation	Priority Category Deficiency	Lategory Impact of Failure	Condition Probability of Failure	Frequency of Failure Risk Score	Risk Category	Estimated Useful Life Remaining Useful	Quantity	Unit of Measure	Unit Cost	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Required
Plumbing											Year	1	2	3	4	5	6	7	8	9	10	
Required																						
0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Domestic water is provided to the site via an onsite well. The well was not directly observed but was reported to be operational with no major deficiencies. We cypically recommend periodic water quality testing along with ongoing preventative maintenance. Well pump replacements cypically cost less than \$2,000 and are covered by operational expenses.																					\$0
O P 2 ty re re	Domestic hot water is primarily provided by one oil fired water heater manufactured by PVI in 2017. Water heaters of this type sypically have a 15 year service life. It is recommended to budget for the replacement of the water heater during the study period.	Replace 2017 PVI water heater.	IV CR	3	4 4	5 16	Medium	15 8	1	EA	\$45,000								\$45,000			\$45,000
ft g rr ir 3 th n a a p p	he tanks it is recommended to continue to	Remove underground storage tank install new above ground code/regulation compliant storage t	III CR	3	3 4	4 14	Medium	30 4	1	ALLOW	\$175,000				\$175,000							\$175,000
Fire & Life Saf	fety																					
4 cc a 1 si tł p n		Upgrade fire alarm control panel, annunciator, and as needed devices	. II CR	1	3 4	4 12	High	15 1	1	ALLOW	\$25,000	\$25,000										\$25,000
Conveyance S	Systems																					
	Conveyance systems are not installed at the building.	No recommendations.																				\$0
Deficiency	y Definition Prio	rity Definition	Risk De	efinition							ired Cost	\$821,400	\$1,930,780	\$24,630	\$175.000	\$2,771,100	\$0	\$468,000	\$545,000	\$48,000	\$124,030	\$6,907,940
SM	Scheduled Maintenance	,		itical (4-8						(2023	JS-Dollars)	<i>₹</i> 021,400	\$1,550,760	<i>⊋∠</i> 4,030	\$175,000	\$2,171,100	οÇ	3408,000	əə45,000	340,000	ş124,030	\$6,907,940
DM	Deferred Maintenance	,		gh (9-13							ired Cost for 1st 3 years then	\$887,112	\$2,252,062	\$31,027	\$196.964	\$3,212,464	\$0	\$575,581	\$690,390	\$62,629	\$166,686	\$8,074,915
CR EN	Capital Renewal			edium (1							Per Yr.)	,007,112	<i><i><i>Y2</i>,232,002</i></i>	431,027	9190,904	<i>43,212,404</i>	U.	10,001	2030,390		÷100,000	38,074,915
CI	Capital Improvement v			,=, 20	*]				al Cost \$/ SF/ Yr.)	\$15.50	\$36.43	\$0.46	\$3.30	\$52.28	\$0.00	\$8.83	\$10.28	\$0.91	\$2.34	\$130.34





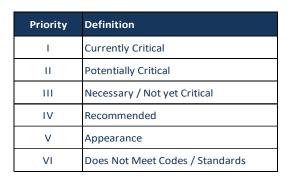
Financial Summary



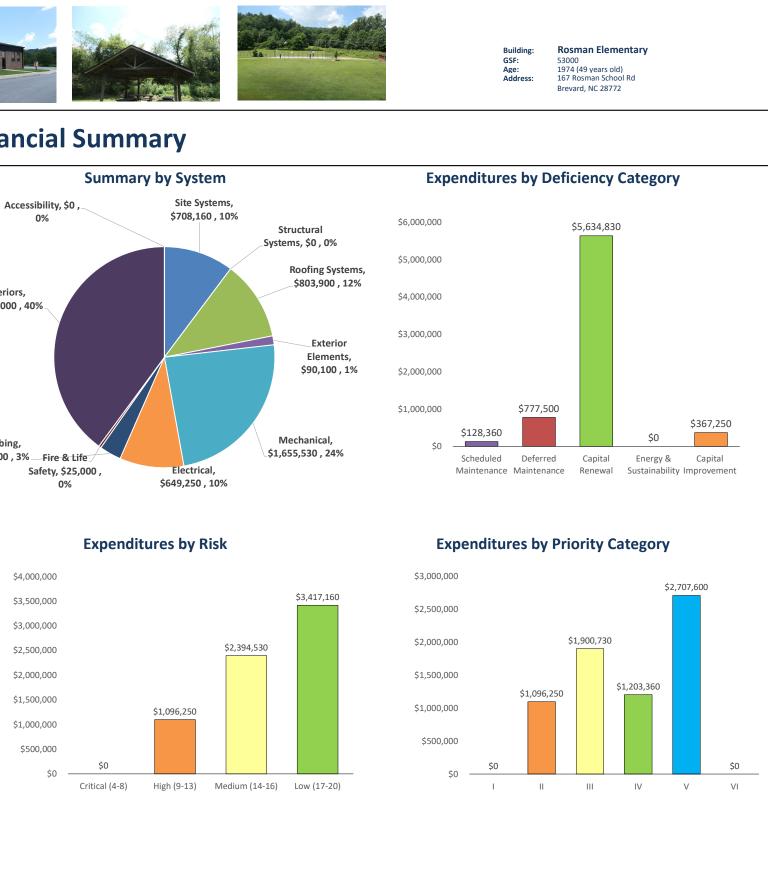
0%	\$708,160 , 10%		\$6,000,000
		Structural	<i>\$0,000,000</i>
		_Systems, \$0 , 0%	
		Roofing Systems,	\$5,000,000
Interiors, \$2,756,000 , 40%		\$803,900 , 12%	\$4,000,000
		Exterior	\$3,000,000
		Elements, \$90,100 , 1%	\$2,000,000
			\$1,000,000
Plumbing, \$220,000 , 3% Fire & Life		Mechanical, \$1,655,530 , 24%	\$0
Safety, \$25,000,	Electrical,		
0%	\$649,250 , 10%		

FCI Range	Condition Description
0.00-0.02	Excellent condition, typically new construction
0.02 - 0.05	Good Condition, renovations occur on schedule
0.05-0.1	Fair Condition, in need of normal renovation
0.1-0.2	Below average condition, major renovationrequired
0.2-0.5	Poor condition, total renovation needed
0.5 - 1	Complete facility replacement indicated

Risk	Definition
Critical	Critical (4-8)
High	High (9-13)
Medium	Medium (14-16)
Low	Low (17-20)









Representative Photos



Exterior walkway and sidewalk/path areas



Deteriorated modified bitumen roof and previous repairs



Aged electrical switchgear





Deteriorated movement joints in brickwork



Commerical water heater



Deteriorating asphalt shingle roof covering



Air-cooled chiller installed on roof



Fire alarm control panel

Building: GSF: Age: Address: **Rosman Elementary** 53000 1974 (49 years old) 167 Rosman School Rd Brevard, NC 28772



Previous repairs to modified bitumen roof



Air handler in mechanical room



Restroom with partial accessibility upgrades