

Capital Needs Assessment

Prepared for:

SAU-39
1 School Street
Amherst, NH 03031



Clark School

Amherst, NH

May 31, 2017

Preliminary Report

Clark School: Property Overview

Total Buildings: 1

Total Area (sf) 27,000

<u>Building Type</u>	<u># Bldgs</u>
Elevator	1
Walk-up	
Townhouse	-
Totals:	1

Occupancy:

Financing:

Property/Development Age:

Year of Construction:

Year of Most Recent Rehab:

City & State:

Addresses:

OSI Project Number:

Assessment Date:

Assessment Conditions:

Assessor:

School

Municipal

23 years

1937

2008

Amherst, NH 03031

14 Foundry Street

17257

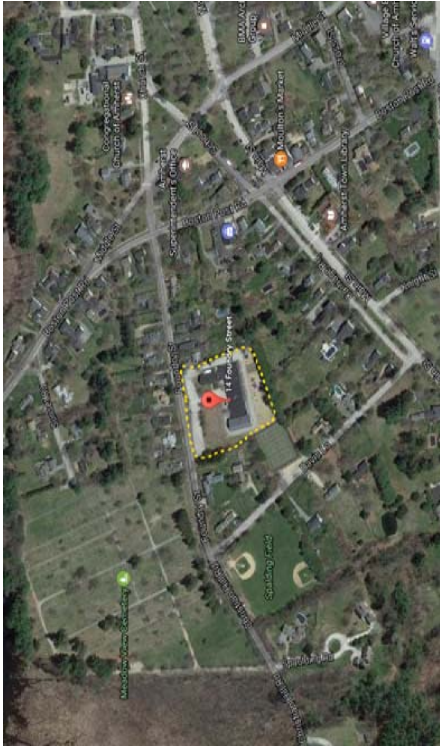
May 9, 2017

Cloudy, 55°F

David Jackson

Property Description:

This low-rise building was expanded and converted into an elementary school in 1994; the multipurpose building wing was added in 2008. The build is clad with a mix of vinyl and T1-11 (wood), and brick. The pitched roofs are covered with architectural shingles and the flat roof is covered with a rubber membrane. Windows are a mix of double glazed metal framed and vinyl framed models. The central mechanical room houses the hydronic heat boilers, which is controlled by an EMS. The classrooms are served by finned tube radiation, several through-wall convectors (heat and fresh air) and rooftop units (air conditioning and fresh air). The building uses municipal water and has its own leaching field.



Executive Summary

Clark School

Amherst, NH

Clark School is a low-rise building that serves over 600 students in Pre-Kindergarten and Kindergarten. The original building was built in 1972 and expanded most recently in 2008. Remarkable and excellent maintenance and service has helped to extend the useful life of many building systems and components. There are however several key needs that should be addressed in the near-term, including replacements of vinyl and T1-11 siding, upgrading the EMS, replacing the older boiler, upgrading the video monitoring system, and asphalt paving repairs. Future capital actions are based on useful life expectations and assume continued effective maintenance and physical management. Costs for the twenty-year plan total \$1,572,451 or \$58.24 per square foot in inflated dollars.

Site

The site, located on a large relatively flat parcel of land a, features asphalt paved parking, driveways, walkways, an outdoor play area, surrounding landscaping, and a gravity fed leaching field.

1. Costs for the development's site related elements total \$272,270 or \$10.08 per square foot in inflated dollars.

2. The parking lots, driveways, and walkways have areas that are isolated cracks; there is a depressed area along the side of the building that should be addressed in the near-term. The cost to repair these surfaces (crack-fill, sealcoat, and re-stripe) is shown in Years 1, 6, and 11; resurfacing is shown in Year 16.

3. The play equipment is to be replaced in Year 10. Interlocking rubber mats should be considered as the base for the play equipment to replace the existing pea-stone base. Also shown in Year 10 is the cost for future servicing to the septic system and leaching field. The landscaping is to be upgraded in Year 12 and the chain link fence is to be replaced toward the end of the plan in Year 17.

Mechanical Room

The central mechanical room contains two oil-fired boilers to produce hydronic (forced hot water) heat and an electric-heated domestic hot water (DHW) tank that serves the entire facility. The heating system is augmented with a pair of in-line fractional horsepower pumps used to distribute hydronic heat. Two additional DHW tanks are located in mechanical closets in other areas of the facility. The boiler plant is governed by an energy management system (EMS), which also controls the rooftop equipment (discussed in the Building Mechanical and Electrical report section), and monitors and controls space temperature throughout the building.

4. Costs related to the development's boilers and boiler room systems total \$121,989 or \$4.52 per square foot in inflated dollars.

5. The cost to upgrade the EMS is shown in Years 3, 11, and 19. The original boiler is to be replaced in Year 7, after 30 years of use. The plan also includes a service allowance in Year 10 for the newer boiler and replacement cost for the circulating pumps in Year 17. The DHW tank is to be replaced every 12 years starting in Year 4.

Building Mechanical and Electrical Systems

Major building systems include the fire sprinkler system, distribution piping for hydronic heat, domestic hot and cold water, sanitary wastewater, and natural gas services, heating, ventilation and air conditioning (HVAC) services, electrical, fire detection, security, and chair lift station.

6. Costs related to the development's mechanical and electrical systems total \$181,448 or \$6.72 per square foot in inflated dollars.

7. An allowance for anticipated repairs to the baseboard finned tube starts in Year 6. The plan also includes the cost to replace the convectors in Year 12, and the costs to replace packaged air conditioner and the air handlers in Year 13. The rooftop mounted energy ventilation (air-to-air heat exchangers) are to be replaced in Year 18.
8. A recent air quality study performed by a third party, showed several areas where carbon dioxide (CO₂) readings exceeded the desired level of 1,000 ppm (the maximum level for acceptable ventilation), indicating a need to provide reliable ventilation throughout the facility. The performance of the rooftop units should be monitored to ensure that adequate ventilation is provided throughout the entire facility.
9. The series of rooftop packaged units provide heating and cooling to specific areas of the building; each unit has a natural gas-fired combustion element and a direct expansion (DX) cooling coil; there are also several split DX air conditioning unit each serving specific program/support areas. The rooftop units and the split DX air conditioners are to be replaced in Year 10. The air-cooled condensers for the commercial refrigeration units are also to be maintained as operating concerns. The exhaust fans are to be upgraded in Year 12.

10. An allowance to upgrade the video monitoring system, public address system, and the central clock is Years 1, 8, and 15. The battery powered emergency lights are to be replaced every ten years starting in Year 7. The fire alarm system is to be upgraded in the second half of the plan in Year 13.
11. The Garaventa chair lift station, added during the latest renovation provides access to the library, which is located on the second floor. No capital improvement to the chair lift station is anticipated during this 20-year plan.

Building Architectural Systems and Program Areas

This building features a flat roof covered with a rubber membrane and pitched roof sections covered with architectural shingles. The exterior walls are clad with brick, T1-11 (wood) panels, a vinyl siding (clapboard profile). The windows are a mix of metal framed and vinyl framed double glazed models. A metal frame storefront-type door is at the primary entrances. The secondary doors are single leaf solid metal models. Interior common areas include the classrooms, the multipurpose room, hallways, and stairways. The support areas feature the library, administration/support offices, and restrooms.

12. Costs related to the development's architectural systems total \$909,947 or \$33.70 per square foot in inflated dollars.

13. The vinyl siding, especially on the new building wing has a number of areas damaged by impact. Also, the T1-11 siding is showing signs of initial deterioration. The plan includes the costs to replace these existing building siding materials with a cementitious fiberboard product in Year 1, which will provided a more resilient and effective exterior wall finish than either the vinyl or T1-11. The brickwork appears to be in good condition and future repointing is shown in Year 16.
14. An allowance for anticipated failed window glazing replacement is shown starting in Year 12. Replacement of the service doors is shown in Year 18 and the secondary doors (classrooms and hallway) in Year 20.

15. Maintenance reported that the roof drain downspouts will occasionally freeze, which limits the effectiveness for snow melt drainage. The plan to add a snow-melt function (i.e. electric heat trace, etc.) is shown in Year 1; this item should be discussed at the client review meeting.
16. The plan includes the cost to reseal the seams of the rubber membrane in Year 10, to help extend the roof covering's useful life; the cost to replace the membrane is shown in Year 16. The architectural shingles are also to be replaced in Year 20.
17. Wall repainting and ceiling tile is shown every ten years starting in Year 7. Replacement of the vinyl composite tile (VCT) flooring is shown in Year 17. Also, allowances to replace classroom furnishings and equipment start in Year 5. Upgrade of the hallway shelving and coat hangers is shown in Years 7 and 17.
18. Replacement of ceiling tiles and repainting walls in the new building wing (Multipurpose Room and the Music/Arts Room are shown in Years 3 and 13.
- 19. Costs related to the school's support areas total \$86,798 or \$3.21 per square foot in inflated dollars.**
20. Future replacement of ceiling panels and repainting in the other program areas is shown in Years 7 and 17. The VCT is to be replaced in Year 17. The library furnishing and equipment replacement is shown in Years 9 and 19.
21. The concern about overheating in the library was discussed during the assessment. The overheating could be the result of standby heat that is being transferred from the hydronic heat distribution piping that runs under this space. One possible solution is to add, in Year 1, a thermostat-controlled variable speed exhaust fan. This fan would operate in a slow continuous mode until space temperatures exceed the predetermined temperature setting; at which point the fan speed increases to effectively vent the higher temperatures. This item should be discussed at the client review meeting.

Additional Notes:

1. The Physical Assessment of the property was conducted on May 9, 2017. Additional information was provided to ON-SITE INSIGHT by site staff and others. OSI was represented on this assignment by David Jackson. We would like to thank site staff for their assistance.
2. Regular updates of this plan are recommended to ensure careful monitoring of major building systems and to adjust the program to accommodate unanticipated circumstances surrounding the buildings, operations, and/or occupants.
3. This report is delivered subject to the conditions on Appendix A, *Statement of Delivery*.



A view of the main entrance.



The play area is located behind the building and sits on a pea-stone base.



An elevation view with the recent building wing addition in the foreground on the right.



The building is clad with vinyl (left arrow), T1-11 (right arrow) and brick.



The vinyl siding on the newer building wing has areas of impact damage.



A close-up of deteriorating wood trim above the T1-11 siding.



A view of the rubber membrane roofing (over the main portion of the school and several rooftop units. In the background is the original building wing.



The pitched roof of the original building is covered with architectural shingles (which is also used on the other pitched roofs).



The main hallway has ceiling tiles, painted walls and VCT flooring.



Classrooms also have ceiling tiles, painted walls and VCT flooring. Energy efficient fluorescent lighting (T8 lamps with electronic ballasts) are used throughout the facility.



A view of the library located on the upper floor of the original building wing.



This is the recently added multipurpose room.



This is the new oil-fired boiler.



The original oil-fired boiler is on the right and the fire sprinkler connection is on the left.



This is the above-ground double wall fuel oil storage tank.



This 80-gallon electric heated DHW tank serves the entire facility.



One of the air handlers.



This classroom has a through-wall convector (arrow) to provide heating and fresh air ventilation.



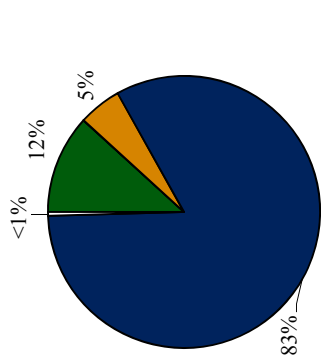
A view of the fire alarm control panel (FACP).



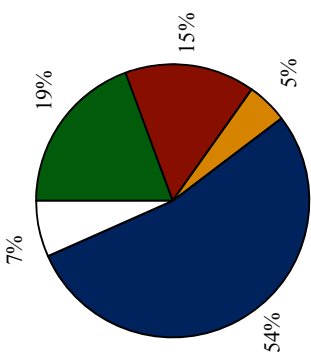
This Garaventa Lift (chair lift) is located in the original building wing and provides access to the three levels (basement, 1st and 2nd floors).

Capital Needs Summary

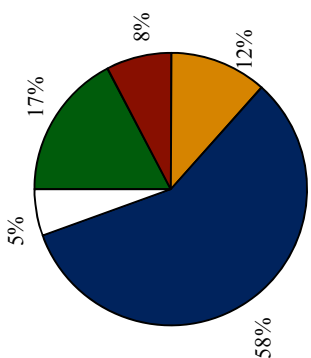
Clark School



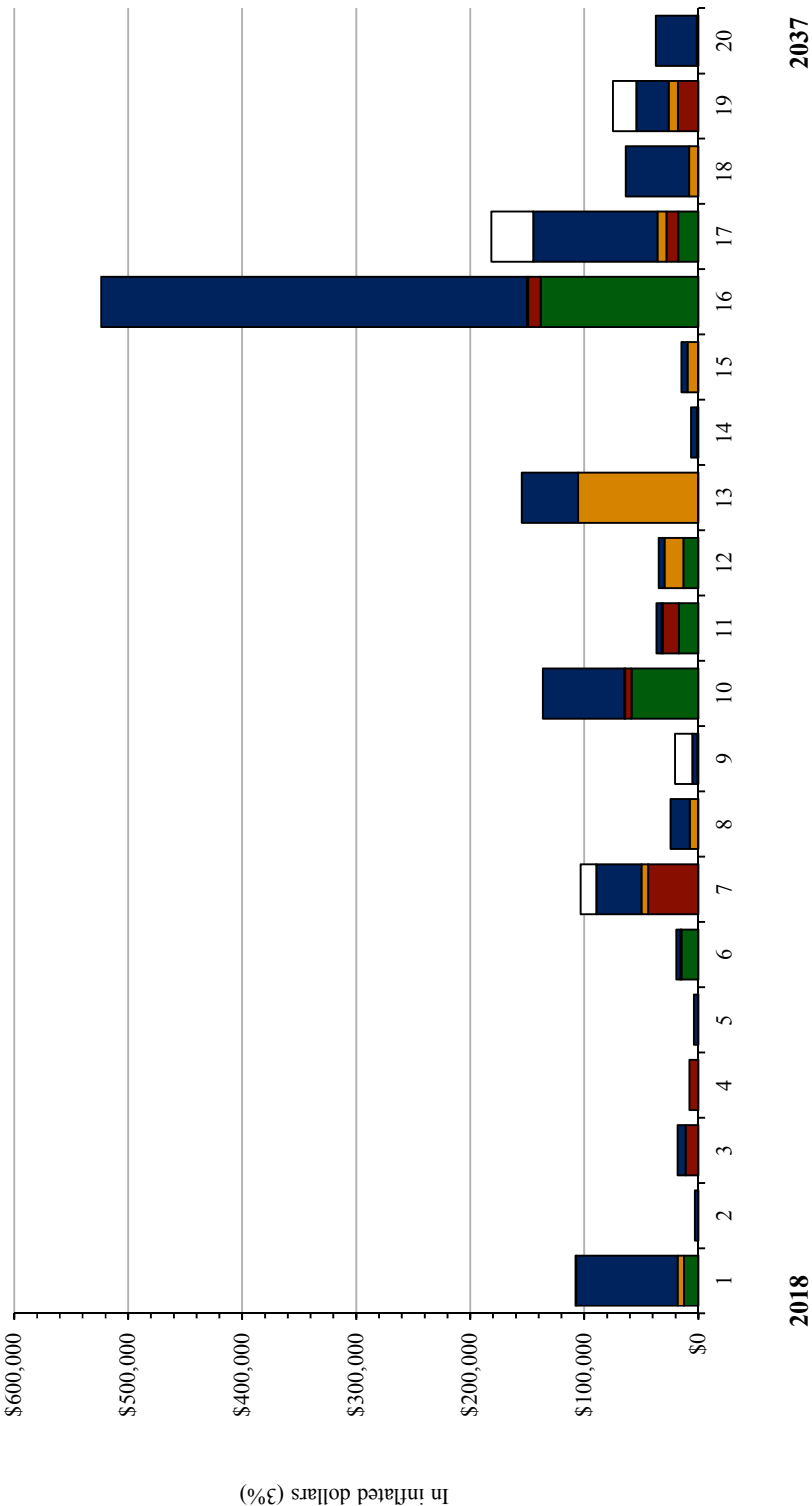
Year One Distribution



Ten Year Distribution



Twenty Year Distribution



Total Costs by Building System (inflated dollars)

	2018		2037	
	In Year 1		In Years 1-20	
Site Systems	\$12,681 or \$.47 / SF		\$272,270 or \$10.08 / SF	
Mechanical Room	\$5,500 or \$.20 / SF		\$121,989 or \$4.52 / SF	
Building Mech. & Elec.	\$88,962 or \$3.29 / SF		\$181,448 or \$6.72 / SF	
Building Architectural	\$500 or \$.02/SF		\$909,947 or \$33.70 / SF	
Program Areas	\$107,643 or \$3.99/SF		\$86,798 or \$3.21/SF	
In inflated dollars:	\$107,643 or \$3.99/SF		\$1,572,451 or \$58.24/SF	
In current dollars:	\$107,643 or \$3.99/SF		\$1,109,774 or \$41.10/SF	

Capital Needs Summary

Clark School
Amherst, NH 03031

OSI Ref: 17257
Property Age: 23 Years
Financing: Municipal

Number of Buildings: 1
Total Number of Units: 27000
Occupancy: School

	2018 Year 1	2019 Year 2	2020 Year 3	2021 Year 4	2022 Year 5	2023 Year 6	2024 Year 7	2025 Year 8	2026 Year 9	2027 Year 10
Site Systems										
Surface	\$12,681	\$0	\$0	\$0	\$0	\$14,700	\$0	\$0	\$0	\$45,667
Site Distribution Systems	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$13,048
Site Sub-Total	\$12,681	\$0	\$0	\$0	\$0	\$14,700	\$0	\$0	\$0	\$58,715
Mechanical Room										
Boilers	\$0	\$0	\$11,139	\$0	\$0	\$0	\$44,132	\$0	\$0	\$5,480
Boiler Room Systems	\$0	\$0	\$0	\$7,758	\$0	\$0	\$0	\$0	\$0	\$0
Mechanical Sub-Total	\$0	\$0	\$11,139	\$7,758	\$0	\$0	\$44,132	\$0	\$0	\$5,480
Building Mech. & Electrical										
Mechanical	\$0	\$0	\$0	\$0	\$0	\$835	\$860	\$886	\$912	\$939
Electrical	\$5,500	\$0	\$0	\$0	\$0	\$0	\$4,872	\$6,764	\$0	\$0
Elevators	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Mechanical & Electrical Sub-Total	\$5,500	\$0	\$0	\$0	\$0	\$835	\$5,731	\$7,650	\$912	\$939
Building Architectural										
Structural and Exterior	\$87,462	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Roof Systems	\$1,500	\$3,090	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$66,855
Classrooms/Halls/Stairs	\$0	\$0	\$0	\$0	\$3,770	\$3,884	\$27,442	\$4,120	\$4,244	\$4,371
Gym/Restrooms/Locker Rms	\$0	\$0	\$6,970	\$0	\$0	\$0	\$12,117	\$12,481	\$0	\$0
Building Architectural Sub-Total	\$88,962	\$3,090	\$6,970	\$0	\$3,770	\$3,884	\$39,559	\$16,601	\$4,244	\$71,226
Support Areas										
Cafeteria/Stage	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Library	\$500	\$0	\$0	\$0	\$0	\$0	\$5,256	\$0	\$15,201	\$0
Admin Offices	\$0	\$0	\$0	\$0	\$0	\$0	\$5,168	\$0	\$0	\$0
Kitchen	\$0	\$0	\$0	\$0	\$0	\$0	\$3,370	\$0	\$0	\$0
Program Areas Sub-Total	\$500	\$0	\$0	\$0	\$0	\$0	\$13,793	\$0	\$15,201	\$0
Total Capital Costs	\$107,643	\$3,090	\$18,109	\$7,758	\$3,770	\$19,418	\$103,216	\$24,250	\$20,357	\$136,360

Clark School

Costs on these two pages are aggregated by category from the Capital Needs worksheets which follow. Total capital costs on these two pages are carried forward to line F of the Replacement Reserve Analysis(es) that follow.

2028 Year 11	2029 Year 12	2030 Year 13	2031 Year 14	2032 Year 15	2033 Year 16	2034 Year 17	2035 Year 18	2036 Year 19	2037 Year 20
\$17,042	\$13,150	\$0	\$0	\$0	\$138,291	\$17,692	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$17,042	\$13,150	\$0	\$0	\$0	\$138,291	\$17,692	\$0	\$0	\$0
\$14,111	\$0	\$0	\$0	\$0	\$0	\$10,431	\$0	\$17,876	\$0
\$0	\$0	\$0	\$0	\$0	\$11,062	\$0	\$0	\$0	\$0
\$14,111	\$0	\$0	\$0	\$0	\$11,062	\$10,431	\$0	\$17,876	\$0
\$968	\$16,569	\$64,901	\$1,057	\$1,089	\$1,122	\$1,155	\$8,008	\$8,248	\$1,263
\$0	\$0	\$40,634	\$0	\$8,319	\$0	\$6,547	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$968	\$16,569	\$105,535	\$1,057	\$9,408	\$1,122	\$7,703	\$8,008	\$8,248	\$1,263
\$0	\$276	\$285	\$293	\$302	\$4,424	\$321	\$2,809	\$340	\$29,809
\$0	\$0	\$0	\$0	\$0	\$363,788	\$25,841	\$0	\$0	\$0
\$4,502	\$4,637	\$4,776	\$4,920	\$5,067	\$5,219	\$57,390	\$26,662	\$27,462	\$5,874
\$0	\$0	\$44,298	\$0	\$0	\$0	\$25,360	\$26,121	\$426	\$438
\$4,502	\$4,914	\$49,359	\$5,213	\$5,369	\$373,431	\$108,912	\$55,593	\$28,228	\$36,122
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$7,063	\$0	\$20,429	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$23,473	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$6,338	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$36,874	\$0	\$20,429	\$0
\$36,622	\$34,633	\$154,894	\$6,270	\$14,778	\$523,905	\$181,611	\$63,601	\$74,781	\$37,384

Clark School
SITE SYSTEMS

(Expected Useful life)

Replacement Items	Quantity	Cost per unit in 2018 \$\$	Total Cost in 2018 \$\$	AGE (Years)	EUL (Years)	Replacement Schedule Year of action AND duration of project	Notes
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SURFACE

Parking/Driveways/Walkways	36,230 sf	2.45	\$88,764	Varies	20	16 in 1 Year	Asphalt paved; depressed area near catch basin Resurface in Year 16; see crack-fill/sealcoat for repairs
Crack-Fill and Sealcoat	36,230 sf	0.35	\$12,681	Varies	5	1 /6 /11 in 1 Year	Allowance to crack-fill, sealcoat, and re-stripe in Years 1, 6, and 11
Sidewalks	sf						
Outdoor Courts	sf						
Retaining Walls	If						
Retaining Walls	If						
Fencing - Chain Link	315 lf	35.00	\$11,025	8	25	17 in 1 Year	Along the rear of property by play area Replace in Year 17
Dumpsters & Enclosures	ls						
Play Equipment	1 ls	35000.00	\$35,000	10	20	10 in 1 Year	Metal and high impact plastic equipment. Replace in Yr 10; consider interlocking rubber mat base.
Site Lighting	ls						
Site Lighting	ea						
Landscaping	1 ls	9500.00	\$9,500	23	60	12 in 1 Year	Surrounding lawn, flowerbeds and trees. Allowance to upgrade in Year 12 Stone sign, in good condition
Entry Signage	1 ea		\$0	23	30		Maintain out of Operating
Storage Shed	ls						
Concession Stand Building	ls						

SITE DISTRIBUTION SYSTEMS

Gas Lines	ls						
Sanitary Lines	1 ls		\$0	23	60		Maintain out of Operating
Cold Water Lines	1 ls		\$0	23	60		Maintain out of Operating
Electric Distribution	1 ls		\$0	23	60		Maintain out of Operating
Sanitary Leach fields	1 ls	10000.00	\$10,000	23	60	10 in 1 Year	Gravity-fed, recent sewer line repair; possible mix of storm and sewer. Monitor and discuss. Upgrade in Year 10
Miscellaneous	lf						

Projected Capital Needs Over Twenty Years

Clark School

Costs projected at 3%

SITE SYSTEMS

Replacement Items	Year 1 2018	Year 2 2019	Year 3 2020	Year 4 2021	Year 5 2022	Year 6 2023	Year 7 2024	Year 8 2025	Year 9 2026	Year 10 2027	Year 11 2028	Year 12 2029	Year 13 2030	Year 14 2031	Year 15 2032	Year 16 2033	Year 17 2034	Year 18 2035	Year 19 2036	Year 20 2037
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SURFACE

Parking/Driveways/Walkways	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$138,291	\$0	\$0	\$0	\$0
Crack-Fill and Sealcoat	\$12,681	\$0	\$0	\$0	\$0	\$14,700	\$0	\$0	\$0	\$0	\$17,042	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sidewalks	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Outdoor Courts	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Retaining Walls	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Retaining Walls	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Fencing - Chain Link	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$17,692	\$0	\$0	\$0
Dumpsters & Enclosures	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Play Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$45,667	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Site Lighting	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Site Lighting	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Landscaping	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$13,150	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Entry Signage	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Storage Shed	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Concession Stand Building	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

SITE DISTRIBUTION SYSTEMS

Gas Lines	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sanitary Lines	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Cold Water Lines	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Electric Distribution	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sanitary Leach fields	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$13,048	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Miscellaneous	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Clark School
MECHANICAL ROOM

(Expected Useful life)

Replacement Schedule
Year of action AND duration of project

Replacement Items	Quantity	Cost per unit in 2018 \$\$	Total Cost in 2018 \$\$	AGE (Years)	EUL (Years)	Replacement Schedule Year of action AND duration of project	Notes
BOILERS							
Boiler - Original	1 ea	36960.00	\$36,960	23	30	7	HB Smith sectional, redundant source for heating Replace in Year 7
Boiler - New	1 ea	4200.00	\$4,200	8	30	10	Budenis oil-fired, primary boiler Service allowance in Year 10
Controls - EMS	1 ea	10500.00	\$10,500	8	20	3 /11 /19	Andover Controls EMS governs boiler plant & rooftop equip Allowance to upgrade in Years 3, 11, and 19
Circulating Pumps	2 ea	3250.00	\$6,500	8	25	17	In-line 2 hp pumps Replace in Year 17
Boiler Secondary Pumps	1s						
Chilled Water Pumps	1s						
Cooling Water Pumps	ea						
Condensate & Feed Water	1s						
Variable Frequency Drives	1s						
Combustion Air	1 1s		\$0	8	30		Louvered air source Maintain out of Operating
Flue Exhaust	1 1s		\$0	8	30		Metal flues, no loose or damaged sections observed Maintain out of Operating
BOILER ROOM SYSTEMS							
Boiler Room Piping/Valves	1 1s		\$0	Varies	25		No observed leaks or pipe corrosion Maintain out of Operating
Heat Exchanger	ea						
DHW Generation	1 ea	7100.00	\$7,100	8	12	4 /16	Electric-heated SEPCO 80-gallon tank Replace in Years 4 and 16
DHW Storage	ea						
DHW Pumps	1s						
DHW Pumps	ea						
Boiler Room Piping Insulation	1 1s		\$0	23	30		Maintain out of Operating
Fuel Oil Storage	1 ea		\$0	8	30		Double-wall above-ground storage tank (4,000 gal cap) Maintain out of Operating
Fuel Oil Transfer System	1s						
Sump Pumps	ea						

Projected Capital Needs Over Twenty Years

Clark School

Costs projected at 3%

MECHANICAL ROOM

Replacement Items	Year 1 2018	Year 2 2019	Year 3 2020	Year 4 2021	Year 5 2022	Year 6 2023	Year 7 2024	Year 8 2025	Year 9 2026	Year 10 2027	Year 11 2028	Year 12 2029	Year 13 2030	Year 14 2031	Year 15 2032	Year 16 2033	Year 17 2034	Year 18 2035	Year 19 2036	Year 20 2037
Boiler - Original	\$0	\$0	\$0	\$0	\$0	\$0	\$44,132	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Boiler - New	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,480	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Controls - EMS	\$0	\$0	\$11,139	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$14,111	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$17,876	\$0
Circulating Pumps	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$10,431	\$0	\$0	\$0
Boiler Secondary Pumps	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Chilled Water Pumps	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Cooling Water Pumps	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Condensate & Feed Water	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Variable Frequency Drives	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Combustion Air	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Flue Exhaust	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

BOILER ROOM SYSTEMS

Boiler Room Piping/Valves	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Heat Exchanger	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
DHW Generation	\$0	\$0	\$0	\$7,758	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$11,062	\$0	\$0	\$0	\$0
DHW Storage	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
DHW Pumps	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
DHW Pumps	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Boiler Room Piping Insulation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Fuel Oil Storage	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Fuel Oil Transfer System	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sump Pumps	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Clark School

BUILDING MECHANICAL AND ELECTRICAL

(Expected Useful life)

Replacement Schedule

Year of action AND duration of project

Replacement Items	Quantity	Cost per unit in 2018 \$\$	Total Cost in 2018 \$\$	AGE (Years)	EUL (Years)	Notes
BUILDING MECHANICAL						
Building Fire Suppression	1 ls		\$0	23	50	Connected to water main Backflow preventer in place; maintain out of Operating
Hydronic Heat Distribution	1 ls		\$0	23	50	No observed or reported systemic problems Maintain out of Operating
Domestic Hot/Cold Water Dist.	1 ls		\$0	23	50	No observed or reported systemic problems Maintain out of Operating
Building Sanitary Waste & Vent. Dist.	1 ls		\$0	23	40	No observed or reported systemic problems Maintain out of Operating
Building Gas Distribution	ea					
Building Air Conditioning	1 ea	12300.00	\$12,300	7	20	Trane rooftop mounted unit (5-tons of cooling) Replace
Air Handler Unit -HVAC	2 ea	11500.00	\$23,000	7	20	Attic mounted and basement unit Replace
Air Handler Unit - HV	1 ea	9500.00	\$9,500	7	20	Basement location Replace
Rooftop EV Units	3 ea	2750.00	\$8,250	7	25	Heat reclaim/exchanger units Replace in Year 18
Smoke Exhaust	1 ls		\$0	7	25	Rooftop mounted Maintain out of Operating
Convectors	1 ls	11250.00	\$11,250	Varies	20	Wall and ceiling mounted units Repair allowance
Finned Tube Radiation	1 ls	10800.00	\$10,800	23	35	Hydronic finned tube, in good condition Repair allowance starts in Year 6
BUILDING ELECTRICAL						
Building Power Wiring	1 ls		\$0	23	99	Monitor
Emergency Generator	ls					
Emergency Lights	1 ls	4080.00	\$4,080	3	10	Battery powered emergency fixtures in common area Replace in Years 7 and 17
Smoke / Fire Detection	1 ls	28500.00	\$28,500	7	20	Mircon FACP w/hardwired detection and alarm devices Upgrade in Year 13
Signaling / Communication	1 ls	5500.00	\$5,500	Varies	20	Video monitoring, central clock, P/A system Upgrade allowance
BUILDING ELEVATORS						
Shafts and Doorways	1 ea		\$0	7	30	Garaventa chairlift station at original building wing Maintained by full service contract
Cabs	ea			5		
Machine Room Equipment	ls					
Service Lift	ls					

Projected Capital Needs Over Twenty Years

Clark School

Replacement Items	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
BUILDING MECHANICAL AND ELECTRICAL																				
BUILDING MECHANICAL																				
Building Fire Suppression	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Hydronic Heat Distribution	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Domestic Hot/Cold Water Dist.	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Building Sanitary Waste & Vent. Dist.	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Building Gas Distribution	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Building Air Conditioning	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$17,537	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Air Handler Unit -HVAC	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$32,793	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Air Handler Unit - HV	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$13,545	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Rooftop EV Units	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,818	\$7,023	\$0
Smoke Exhaust	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Convectors	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$15,573	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Finned Tube Radiation	\$0	\$0	\$0	\$0	\$0	\$835	\$860	\$886	\$912	\$939	\$968	\$997	\$1,027	\$1,057	\$1,089	\$1,122	\$1,155	\$1,190	\$1,226	\$1,263
BUILDING ELECTRICAL																				
Building Power Wiring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Emergency Generator	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Emergency Lights	\$0	\$0	\$0	\$0	\$0	\$0	\$4,872	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,547	\$0	\$0	\$0
Smoke / Fire Detection	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$40,634	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Signaling / Communication	\$5,500	\$0	\$0	\$0	\$0	\$0	\$0	\$6,764	\$0	\$0	\$0	\$0	\$0	\$0	\$8,319	\$0	\$0	\$0	\$0	\$0
BUILDING ELEVATORS																				
Shafts and Doorways	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Cabs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Machine Room Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Service Lift	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Clark School

BUILDING ARCHITECTURE

(Expected Useful life)

Replacement Schedule

Replacement Items	Quantity	Cost per unit in 2018 \$\$	Total Cost in 2018 \$\$	AGE (Years)	EUL (Years)	Year of action AND duration of project	Notes
STRUCTURE							
Foundation	849 lf		\$0	23	50		Partial basement and concrete slab Monitor
Framing	ls						
Slab	sf						
Miscellaneous	ls						
BUILDING EXTERIOR							
Exterior Common Doors	3 ea		\$0	Varies	35		Maintain out of Operating
Automatic Door Openers	ea						
Secondary Doors	14 ea	1200.00	\$16,800	Varies	35	20 in 1 Year	Replace
Service Doors	1 ea	1500.00	\$1,500	12	30	18 in 1 Year	Replace
Storm Doors	ea						Brickwork in good condition
Exterior Walls - Brick	4,455 ttl sf 223 sf	11.85	\$2,640	23	60	16 in 1 Year	Allowance to repaint in Year 16
Exterior Walls - Vinyl	10,500 sf	7.15	\$75,075	23	60	1 in 1 Year	Significant impact damage on new building wing. Replace w/cement fiberboard product in Year 1. Discuss
Exterior Walls - T1-11	1,733 ls	7.15	\$12,387	23	40	1 in 1 Year	
Exterior Caulking	1 ls		\$0	23	10		
Trim, Soffit & Fascia	ls						
Window Frames - Metal	66 ea		\$0	8	35		Double glazed, in good condition Maintain out of Operating
Window Frames - Vinyl	41 ls		\$0	8	35		Double glazed, in good condition Maintain out of Operating
Window Lintels	ea						
Window Glass	21 ea	140.00	\$2,996	8	20	12 over 15 Years	Allowance for glazing damage (breaks and fogging) starts in Year 12
Storm / Screen Windows	ls						
Balcony Railings	ea						
Fire Escapes	ea						
Bldg Mounted Lighting	1 ls		\$0	23	15		

Projected Capital Needs Over Twenty Years

Clark School

Costs projected at 3%

BUILDING ARCHITECTURE

Replacement Items	Year 1 2018	Year 2 2019	Year 3 2020	Year 4 2021	Year 5 2022	Year 6 2023	Year 7 2024	Year 8 2025	Year 9 2026	Year 10 2027	Year 11 2028	Year 12 2029	Year 13 2030	Year 14 2031	Year 15 2032	Year 16 2033	Year 17 2034	Year 18 2035	Year 19 2036	Year 20 2037
Foundation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Framing	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Slab	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Miscellaneous	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

STRUCTURE

BUILDING EXTERIOR

Exterior Common Doors	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Automatic Door Openers	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Secondary Doors	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$29,459
Service Doors	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,479	\$0	\$0
Storm Doors	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Exterior Walls - Brick	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,112	\$0	\$0	\$0	\$0
Exterior Walls - Vinyl	\$75,075		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Exterior Walls - TI-I	\$12,387		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Exterior Caulking	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Trim, Soffit & Fascia	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Window Frames - Metal	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Window Frames - Vinyl	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Window Lintels	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Window Glass	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$276	\$285	\$293	\$302	\$311	\$321	\$330	\$340	\$350
Storm / Screen Windows	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Balcony Railings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Fire Escapes	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Bldg Mounted Lighting	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Clark School

BUILDING ARCHITECTURE--continued

(Expected Useful life)

Replacement Items

Quantity

Cost per unit
in 2018 \$\$

Total Cost
in 2018 \$\$

AGE
(Years)

EUL
(Years)

Replacement Schedule

Year of action AND duration of project

Notes

ROOF SYSTEMS

Structure	21,959 sf		\$0	23	40		Wood frame and wood decking
Roof - Asphalt Shingles	7,320 sf	4.40	\$32,207	7	23	16 over 2 Years	Monitor
Roof - Rubber Membrane	14,640 sf	14.85	\$217,398			/16 in 1 Year	On original and newest building wings
Roof		3.50	\$51,239	10	20	10 in 1 Year	Replace in Yr 16
Roof	1s			18			Allowance to reseal seams in Yr 10
Roof	sf			5			Replace membrane in Yr 16
Roof Drainage	1 1s	1500.00	\$1,500	Varies	40	1 in 1 Year	
Skylights	5 ea		\$0	5	25		Gutters and downspouts; roof drainage freeze-ups
Roof Access	1 ea	3000.00	\$3,000	ADD	20	2 in 1 Year	Allowance to add ice-melt system in Yr 1
Chimney	1s						Allowance to add roof access from attic (original bldg wing)

CLASSROOMS

Walls	13,350 sf	0.70	\$9,345	Varies	10	7 /17 in 1 Year	Painted
Ceilings	9,352 sf	1.10	\$10,287	Varies	10	7 /17 in 1 Year	Repaint in Years 7 and 17
Floors	9,352 sf	4.10	\$38,343	Varies	20	17 over 3 Years	Suspended ceiling tiles
Movable Partitions	ea			Varies			Replace
Lighting	1 1s		\$0	Varies	25		VC T, in good condition
Furniture	1 1s	42000.00	\$42,000	Varies	20	5 over 20 Years	Replace starting in Year 17
Equipment	1 1s	25000.00	\$25,000	Varies	25	5 over 20 Years	Fluorescent fixtures
Miscellaneous	1s						Maintain out of Operating; consider LEDs -Discuss

HALLS/STAIRS/FOYER

Walls	24,850 sf	0.70	\$17,395	3	10	7 /17 over 2 Year	Desks, chairs, tables, etc.
Ceilings	2,637 sf	1.10	\$2,901	3	10	7 /17 over 2 Year	Replacement allowance
Floors	2,637 sf	4.10	\$10,812	Varies	20	17 over 2 Year	Computers, projectors, screens, whiteboards, etc.
Shelving/Coat Racks	1 1s	5000.00	\$5,000	Varies	30	17 over 20 Year	Replacement allowance
Lighting	1 1s		\$0	23	20		Fluorescent fixtures
Miscellaneous	1s						Maintain out of Operating; consider LEDs -Discuss

Projected Capital Needs Over Twenty Years

Clark School

Costs projected at 3%

BUILDING ARCHITECTURE--continued

Replacement Items	Year 1 2018	Year 2 2019	Year 3 2020	Year 4 2021	Year 5 2022	Year 6 2023	Year 7 2024	Year 8 2025	Year 9 2026	Year 10 2027	Year 11 2028	Year 12 2029	Year 13 2030	Year 14 2031	Year 15 2032	Year 16 2033	Year 17 2034	Year 18 2035	Year 19 2036	Year 20 2037
Structure	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Roof - Asphalt Shingles	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$25,089	\$25,841	\$0	\$0	\$0
Roof - Rubber Membrane	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$66,855	\$0	\$0	\$0	\$0	\$0	\$338,699	\$0	\$0	\$0	\$0
Roof	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Roof	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Roof Drainage	\$1,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Skylights	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Roof Access	\$0	\$3,090	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Chimney	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

CLASSROOMS

Walls	\$0	\$0	\$0	\$0	\$0	\$0	\$11,158	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$14,996	\$0	\$0	\$0
Ceilings	\$0	\$0	\$0	\$0	\$0	\$0	\$12,283	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$16,508	\$0	\$0	\$0
Floors	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$20,510	\$21,125	\$21,759	\$0
Movable Partitions	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lighting	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Furniture	\$0	\$0	\$0	\$0	\$2,364	\$2,434	\$2,508	\$2,583	\$2,660	\$2,740	\$2,822	\$2,907	\$2,994	\$3,084	\$3,176	\$3,272	\$3,370	\$3,471	\$3,575	\$3,682
Equipment	\$0	\$0	\$0	\$0	\$1,407	\$1,449	\$1,493	\$1,537	\$1,583	\$1,631	\$1,680	\$1,730	\$1,782	\$1,836	\$1,891	\$1,947	\$2,006	\$2,066	\$2,128	\$2,192
Miscellaneous	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

HALLS/STAIRS/FOYER

Walls	\$0	\$0	\$0	\$0	\$0	\$0	\$10,385	\$10,697	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$13,957	\$14,376	\$0	\$0
Ceilings	\$0	\$0	\$0	\$0	\$0	\$0	\$1,732	\$1,784	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,327	\$2,397	\$0	\$0
Floors	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$8,675	\$8,935	\$0	\$0
Shelving/Coat Racks	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$401	\$413	\$426	\$438
Lighting	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Miscellaneous	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Clark School

BUILDING ARCHITECTURE--continued

(Expected Useful life)

Replacement Items	Quantity	Cost per unit in 2018 \$\$	Total Cost in 2018 \$\$	AGE (Years)	EUL (Years)	Replacement Schedule		Notes
MULTIPURPOSE/ART & MUSIC								
Walls	4,740 sf	0.70	\$3,318	7	10	3	/13	Painted Repaint
Ceilings	2,956 sf	1.10	\$3,252	7	10	3	/13	Ceiling tiles Replace
Floors	2,956 sf		\$0	7	30			Linoleum sheet resilient flooring Maintain out of Operating
Furniture	1 ls	15000.00	\$15,000	7	20	13		Desks, chairs, tables, etc. Replacement allowance
Accessories/Equipment	1 ls	9500.00	\$9,500	7	20	13		Program supplies, shelving, etc. Replacement allowance
SUPPORT AREAS CAFETERIA and STAGE								
Walls	sf							
Ceilings	sf							
Floors	sf							
Furnishings	ls							
Equipment	ls							
LIBRARY								
Walls/Ceilings	2,611 sf	0.85	\$2,219	3	10	7	/17	Ceiling tiles and painted walls Replace tiles and repaint walls
Floors	1,015 sf	2.15	\$2,182	23	60	7	/17	Hardwood floors Refinish in Years 7 and 17
Furnishing	1 ls	4000.00	\$4,000	Varies	10	9	/19	Tables, chairs, shelving, etc. Replacement allowance
Equipment	1 ls	8000.00	\$8,000	Varies	10	9	/19	Computers Replacement allowance
Miscellaneous	1 ls	500.00	\$500	ADD	20	1		Reported concern of space overheating. Allowance to add thermostat-controlled exhaust fan in Yr 1. Discuss
ADMIN/SUPPORT OFFICES								
Walls/Ceilings	5,092 sf	0.85	\$4,328	3	10	7	/17	Ceiling tiles and painted walls Replace tiles and repaint walls
Floor Covering	2,512 sf	4.10	\$10,299	Varies	20	17		VCT Replace in Year 17
Equipment	1 ls		\$0	Varies	10			Desks, chairs, cabinets, computers, copier, etc. Maintain out of Operating
RESTROOMS								
Walls/Ceilings	3,320 sf	0.85	\$2,822	3	10	7	/17	Ceiling tiles and painted walls Replace tiles and repaint walls
Floors	508 275 sf	4.10	\$1,128	Varies	30	17		Mix of ceramic tiles, VCT, and newer luxury vinyl tiles Replace VCT in Year 17
Fixtures	1 ls		\$0	23	20			Wall-hung sinks, toilets and urinals Maintain out of Operating
Appliances	1 ls		\$0	23	25			Partitions, mirrors, light fixtures, grab bars, etc. Maintain out of Operating

Projected Capital Needs Over Twenty Years

Clark School

Costs projected at 3%

BUILDING ARCHITECTURE--continued

Replacement Items	Year 1 2018	Year 2 2019	Year 3 2020	Year 4 2021	Year 5 2022	Year 6 2023	Year 7 2024	Year 8 2025	Year 9 2026	Year 10 2027	Year 11 2028	Year 12 2029	Year 13 2030	Year 14 2031	Year 15 2032	Year 16 2033	Year 17 2034	Year 18 2035	Year 19 2036	Year 20 2037
Walls	\$0	\$0	\$3,520	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,731	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Ceilings	\$0	\$0	\$3,450	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,636	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Floors	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Furniture	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$21,386	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Accessories/Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$13,545	\$0	\$0	\$0	\$0	\$0	\$0	\$0

MULTIPURPOSE/ART & MUSIC

CAFETERIA and STAGE

Walls	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Ceilings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Floors	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Furnishings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

LIBRARY

Walls/Ceilings	\$0	\$0	\$0	\$0	\$0	\$0	\$2,650	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,561	\$0	\$0	\$0
Floors	\$0	\$0	\$0	\$0	\$0	\$0	\$2,606	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,502	\$0	\$0	\$0
Furnishing	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,067	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,810	\$0
Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$10,134	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$13,619	\$0
Miscellaneous	\$500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

ADMIN/SUPPORT OFFICES

Walls/Ceilings	\$0	\$0	\$0	\$0	\$0	\$0	\$5,168	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,945	\$0	\$0	\$0
Floor Covering	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$16,527	\$0	\$0	\$0
Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

RESTROOMS

Walls/Ceilings	\$0	\$0	\$0	\$0	\$0	\$0	\$3,370	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,528	\$0	\$0	\$0
Floors	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,809	\$0	\$0	\$0
Fixtures	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Appliances	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Appendix A: Statement of Delivery

Our Capital Needs Assessment (the "CNA" or the "Report") on the subject property is delivered subject to the following terms and conditions:

1. The report and analysis may be relied upon by you as a description of the observed current conditions of the building and site improvements, only as of the date of this report, and with the knowledge that certain limitations and exceptions within the report that are the reflective of the scope of services as defined in our contract. Although care has been taken in the performance of this assessment, ON-SITE INSIGHT, Inc. (and/or its representatives) makes no representations regarding latent or concealed defects that may exist and no warranty or guarantee is expressed or implied. This report is made only in the best exercise of our ability and judgment. Conclusions reached in this report assume current and continuing responsible ownership and competent property management.
2. We have undertaken no formal evaluation of environmental concerns, including but not limited to asbestos containing materials (ACMs), lead-based paint, chlorofluorocarbons (CFCs), polychlorinated biphenyls (PCBs), and mildew/mold.
3. Conclusions in this report are based on estimates of the age and normal working life of various items of equipment and/or statistical comparisons. Actual conditions can alter the useful life of any item. When an item needs immediate replacement depends on many factors, including previous use/misuse, irregularity of servicing, faulty manufacture, unfavorable conditions, Acts of God and unforeseen circumstances. Certain components that may be working when we made our inspection might deteriorate or break in the future without notice.
4. To prepare this report, we used historic data on capital activities and costs, blueprints (when available), and current prices for capital actions. We have not independently verified this information, have assumed that it is reliable, but assume no responsibility for its accuracy.
5. Unless otherwise noted in the report, we assume that all building components meet code requirements in force when the property was built.
6. If accessibility issues are referenced in the report, the site elements, common areas, and dwelling units at the development were examined for compliance with the requirements of the Uniform Federal Accessibility Standards (UFAS), and for Massachusetts properties, the Massachusetts Architectural Accessibility Board (AAB). The methodology employed in undertaking this examination is adapted from a Technical Assistance Guide (TAG-88-11) titled "Supplemental Information About the Section 504 Transition Plan Requirements" published by the Coordination and Review section of the U.S. Department of Justice Civil Rights Division, and the AAB Rules and Regulations, 521 CMR effective July 10, 1987. The Guide also incorporates the requirements of UFAS, published April 1, 1988 by the General Services Administration, the Department of Defense, the Department of Housing and Urban Development, and the U.S. Postal Service. Changes in legislation and/or regulations may make some observations moot.
7. Response Actions and estimated costs of responses were developed by ON-SITE INSIGHT, Inc. If additional structural work is necessary, costs for some Response Actions may exceed estimates. Whenever the Response Action is to remove, reposition, or modify walls, a competent structural engineer should be retained before any work is done, because such investigation may disclose that a Response Action is either more costly than estimated, or is not possible.
8. Conclusions reached in this report assume current and continuing responsible ownership and competent property management. Any unauthorized reliance on or use of the report, including any of its information or conclusions, will be at the third party's sole risk. For the same reasons, no warranties or representation, express or implied in this report, are made to any such third party. Reliance on the report by the client and all authorized parties will be subject to the terms, conditions and limitations stated in the contract Terms and Conditions. The limitation of liability defined in the Terms and Conditions is the aggregate limit of ON-SITE INSIGHT's liability to the client and all relying parties.
9. Regular updates of this plan are recommended to ensure careful monitoring of major building systems and to adjust the program to accommodate unanticipated circumstances surrounding the buildings, operations, and/or occupants.