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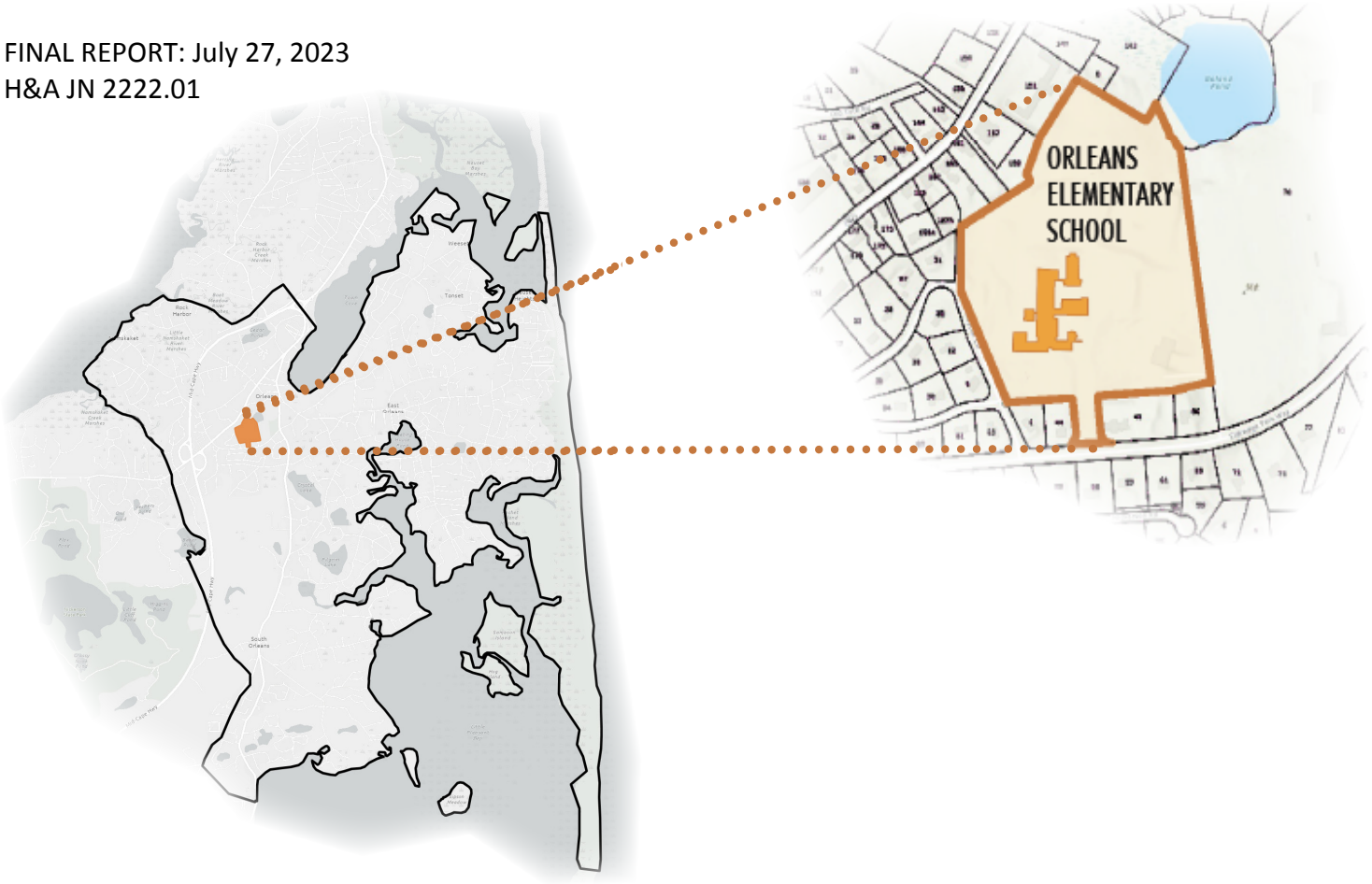
CAPITAL ASSET ASSESSMENT

Orleans Elementary School

46 Eldredge Park Way, Orleans, MA 02653

FINAL REPORT: July 27, 2023
H&A JN 2222.01



150 LONGWATER DR
NORWELL MA
02061-1647
781-871-9804

100 GROVE ST
SUITE 303
WORCESTER MA
01605-2630
774-206-3360

habeebarch.com

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Town of Orleans

Town Manager

Kimberly Newman

knewman@town.orleans.ma.us

Director, Public Works and Natural Resources

Thomas Daley

tdaley@town.orleans.ma.us

Facilities Manager, Public Works and Natural Resources

Ron Collins

rcollins@town.orleans.ma.us

Orleans School Committee

Committee Chair

Gail Briere

Committee Vice Chair

Sassandra Roche

Committee Members

Ian Mack

Ginger Marks

Maxine Minkoff

Nauset Public Schools

Superintendent

Brooke Clenchy

clenchyb@nausetschools.org

Principal, Orleans Elementary School

Elaine Pender

pendere@nausetschools.org

Director of Business and Finance

Giovanna Venditti

vendittig@nausetschools.org

Executive Assistant to the Superintendent

Arlynn Consiglio

consiglioal@nausetschools.org

Assistant Director of Finance and Operations

Jim Nowack

nowackj@nausetschools.org

Architectural and Engineering Consultants

Habeeb & Associates Architects

150 Longwater Drive, Norwell, MA 02061

781-871-9804

President, Principal Architect

Steven C. Habeeb AIA, LEED AP

shabeeb@habeebarch.com

Job Captain

Julia O'Grady Assoc. AIA, LEED Green Assoc.

jogrady@habeebarch.com

100 Grove Street, Suite 303, Worcester, MA 01605

781-871-9804

Project Manager

Melissa Boynton, Assoc. AIA

mboynton@habeebarch.com

C. A. Crowley Engineering

645 County Street, Taunton, MA 02780

508-884-5094

President

Martin Vickey PE, LEED AP

mvickey@crowleyeng.com

KMA Architecture & Accessibility

One Bridge Street, Newton, MA 02458

617-641-2802

Managing Principal

Josh Safdie AIA

jsafdie@kmaccess.com

INTRODUCTION

The Town of Orleans School Committee and Select Board authorized the engagement of Habeeb & Associates Architects (H&A) to conduct an assessment of the Town's only elementary school facility to identify deficiencies in need of repair or replacement, items required to comply with current building codes, including accessibility, air quality improvements, as well as energy efficiency criteria. The overarching goal is to define the options available to the Town of Orleans in order to meet the educational needs of both the current and the projected enrollment of the kindergarten through grade five student population.

Similar to Orleans, the Towns of Brewster, Eastham and Wellfleet also have elementary schools and are members of the Nauset Public School District. The Nauset Public School District is comprised of one grade six through eight middle school, located in Orleans, and one grade nine through twelve high school located in Eastham. The District also provides pre-kindergarten programs at the Brewster Stony Brook Elementary School and the Eastham Elementary school.

In addition to the physical evaluation of the existing building and site amenities, the assessment includes itemized costs to address each deficiency, enrollment trends, building capacity, quality of space, flexibility of space, instructional practices, programmatic needs, technology infrastructure, and school use. Based on the projected enrollment of the student population and the desired educational program of the school, two options were developed to meet the needs of the student population. They are:

- Option 1 - Renovation of the existing building
- Option 2 - Replacement of the existing building

This report serves to outline a realistic comparison between Renovation and Replacement. However, it is up to the Town of Orleans and the Orleans School Committee to weigh the educational and socioeconomic factors of the community in order to select the most advantageous option. Advantages and disadvantages of each option are described in this report and include an itemized concept-level cost estimate for Replacement as well as an order of magnitude estimate required for Renovation.

The physical condition of the facility has been considered, as well as the educational suitability and adequacy of the building and site amenities. This report aims to guide the Town of Orleans in determining the measures that will be necessary to support the changing educational needs of the community.

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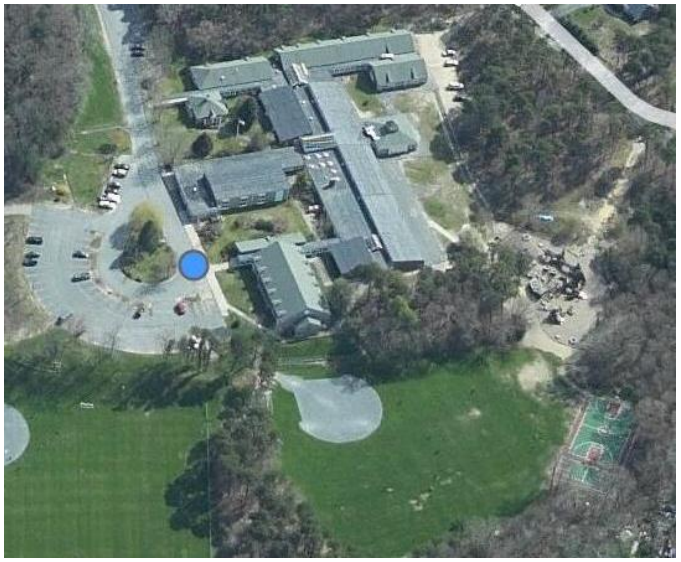
EXECUTIVE SUMMARY

The 2022-2023 enrollment at Orleans Elementary School is 145 students, which is the town's total enrollment from kindergarten through grade 5. This elementary school population is not expected to increase significantly over the next two decades.

As the Orleans Elementary School and Town of Orleans plan for future enrollments and flexibility to address changes in populations, it will be prudent to plan for slightly higher enrollments to accommodate a modest growth in population. The district should consider 232 students as a maximum enrollment for space planning purposes.

The existing school has been well-maintained over the years. However, infrastructure ages over time regardless of maintenance. Orleans Elementary School was originally constructed in 1956 with additions in 1960 and 1990. Age, size, and type of construction must be considered for future operational costs. Recent Capital Budget requests to address Orleans' aging infrastructure including replacement of boilers, water heaters, and classroom unit ventilators, have been or are in the process of being completed. Another factor to consider is how the existing aging structure would fare during natural disasters given that it was constructed when building codes did not address wind load, snow drift, and seismic issues.

One of the biggest concerns facing Orleans Elementary School is non-compliance with the accessibility code. Based on Massachusetts General Law, 521 CMR, Rules and Regulations of the Massachusetts Architectural Access Board, work items listed in the Assessment that are addressed as individual projects may trigger the need for additional accessible renovations. Generally, all new work must meet accessibility regulations. In addition, any work with a value over $500,000, either alone or in combination with other projects within a rolling three-year period will require basic accessibility upgrades. However, if the work exceeds 30% of the full and fair cash value of the building then complete building renovations for accessibility are required. The current valuation of the building is $6,822,000 as assessed in the property field card for fiscal year 2023. (See Appendix D). Undertaking any additional significant renovation to the existing school in the near future will trigger this complete building upgrade requirement. (See Appendix C).



Enrollment by Grade (2022-23)							
	K	**1**	**2**	**3**	**4**	**5**	**Total**
Orleans Elementary	17	30	21	19	28	30	145

Both options in this report are detailed on the following pages and include existing educational spaces, required educational spaces, operating capacities and projected costs for upgrades, additions and new structures. The options are in no particular order, as each has benefits and challenges which will require further analysis by the Town and School Committee prior to the selection of one to implement. Advantages and disadvantages of each option include estimated costs to execute the options and the magnitude of work required to modify the school.

DEVELOPMENT OF OPTIONS

Working with the Orleans School Committee and the Town of Orleans, Habeeb & Associates Architects (H&A) developed two options for consideration.

OPTION 1: RENOVATION OF THE EXISTING FACILITY

Option 1 is based on renovation of the existing school and associated site amenities to ensure that the entire facility and campus is accessible to all. The existing area of the facility is approximately 53,100 sf with a maximum effective enrollment capacity of 328 students.

The anticipated preliminary project budget is approximately $44.6M including all three priorities when escalated based on the completion of the project improvements within the next ten years. Priority 1 projects are expected to be completed within two years at a total escalated cost of $23.5M which includes accessibility upgrades throughout the facility of $2.8M. It should be noted that completing only Priority 1 work items will not achieve the goal for a complete project.

In addition to the accessibility upgrades, three high-cost budget work items (all in today's dollars) included in Priority 1 are the membrane and shingled roof replacement at $4.5M, replacement of the 1990 windows and roof glazing at $2.0M, and procurement of modular classrooms of $5.5M which will address displacement during the renovation. (See Appendix B). Alternatively, the Town of Orleans could look to other Nauset Schools for relocation of faculty and students during the work.

	Priority 1	Priority 2	Priority 3	Total
RENOVATION - Building Summary			**Orleans Elementary School**	
1. SITE	7,105,267	0	275,990	7,381,257
2. BUILDING ENVELOPE	7,342,595	2,696,928	257,725	10,297,248
3. BUILDING INTERIORS	4,500,795	169,000	1,600,820	6,270,615
4. MECHANICAL	1,777,880	173,212	5,344,300	7,295,392
5. ELECTRICAL	620,100	2,596,100	1,049,776	4,265,976
[1,2] Total:	21,346,637	5,635,240	8,528,611	35,510,488
Total Inflated @ 5% Compounded Annually	23,534,667	7,192,153	13,892,209	44,619,029

[1] Totals include Soft Costs (30%): Contingency, Administration and A/E Fees.

[2] Excludes approx. $8M-11M Structural Modifications as described below.

Additional testing is needed to determine if existing underground utilities to be replaced in the 1956/1960 areas contain hazardous materials. It is expected that due to the age of these utilities, abatement / remediation will be required, resulting in unknown additional project costs.

An operational limitation of the current facility is the challenge of securing areas of the building during after-hours events, while still allowing access to accessible restrooms. Access to these restroom facilities is a necessity when public events are held at the school. Currently, there are no accessible restrooms available when public spaces are cordoned off from the classrooms. Providing compliant restrooms adjacent to public gathering spaces would allow for more secure use of these spaces, while ensuring the safety and protection of the remainder of the building.

Improving the existing facility would preserve more classrooms than required for current and projected enrollment, which would provide flexibility of usage. The Art and Music classrooms as well as the Media Center and Cafetorium are larger than what would be allowed in a new building when considering the Mass School Building Authority (MSBA) standards.

Structural Assessment

Based upon our review of the existing available plans, the building was constructed in three phases:

- 1955 original construction with deep metal longspan roof deck supported by masonry bearing walls.
- 1960 addition with deep metal longspan roof deck supported by masonry bearing walls. At the building exterior, the walls consist of brick veneer, cavity and concrete masonry unit back up walls.
- 1990 addition with wood deck, wood framed trusses, joists and laminated veneer lumber beams in the academic wing, and metal roof deck, steel trusses and framing for the gymnasium.

A large-scale renovation project may trigger additional structural work as outlined in the International Existing Building Code (IEBC) and 780 CMR; Massachusetts State Building Code amendments to the International Building Code (IBC) codes. The additional structural work required would depend upon the extent of renovations and the work area affected by the renovation. Level 1 involves the removal or replacement of materials with new that serve the same purpose. This would apply to a project like a roof replacement. Level 2 involves reconfiguration of space less than 50% of the building area, or the installation of additional equipment. Level 3 involves alterations which exceed 50% of the building area.

A renovation project would not alter the occupancy and use classification. 780 CMR 102.6 and 102.6.1 allow existing conditions to be considered compliant at the time of installation in a building that has obtained a legal certificate of occupancy.

Regarding structural provisions, any modifications to the structure or increase in loads must be evaluated to determine compliance with IEBC and IBC. Massachusetts building code amendments (780 CMR) require identification of snow drift surcharge areas on a roof (loading and width of drift), identification for proposed dead loads for future photovoltaics and confirmation of capacity, though it is not required to augment existing framing unless the proposed load increases the dead load of the roof assembly by more than 3 psf (pounds per square foot), cumulative since original construction.

Wind loading requirements have increased since the period of construction of the existing facility, 1955 through 1990. In addition to wind loading, there are now provisions for wind borne debris zones in hurricane prone regions and within 1 mile of a coastline. In Orleans, the wind speed of 140 mph results in the requirements for hurricane prone regions, in particular affecting any window or framed atrium skylight design.

Note that buildings designed prior to the mid-1960's did not take into account designing for snow drift loads. There are areas on the 1956/1960 building where large snow wells are created in the low roof areas between the adjacent sloped roofs which create a potential overloading location. Further, the current code required snow design loads are historically 20-40% higher than original design snow loads of the 1950's and 1960's. While it is not a requirement to strengthen the structure to meet current design loads (unless the structure it is being modified or has loads added to it), facilities staff should be aware of snow load and drift conditions that may adversely affect the structural integrity of the roof framing.

Similarly, buildings designed prior to 1975 did not include the provisions for design for seismic load required in current codes. There are however provisions in the current code that may require seismic enhancements for an existing building depending on the Seismic Design Category of the building and existing soils profile. This may include attachment of roof and floor diaphragms (plates) to the perimeter walls. In general, if building structures are not altered/reconfigured, it is not necessary to bring existing structures up to current code requirements. If buildings are significantly altered, or the building is voluntarily upgraded to meet current codes, this would typically involve reinforcement of masonry shear and bearing walls, reinforcement of exterior walls and anchoring the veneer to the masonry back up walls.

IEBC Section 807: Alterations Level 2, Structural requires new elements to be designed and connected to meet current codes. Alterations cannot reduce the structural capacity of any element and cannot increase the stress in an existing element by more than 5% unless it is proven that the element has capacity for the stress increase. If an alteration increases lateral loads to the building, the structure must be altered or shown to meet the required capacity using reduced seismic forces prescribed by the Code.

We anticipate that a building renovation would not trigger code requirements that significantly impact the building structure or require significant structural upgrades. This would result in a renovated building designed for the code required loads in place in the period under which it was built, 1955 through 1990. Should the Town feel compelled to upgrade the structure to meet current code required wind, snow, and seismic forces, we estimate an order of magnitude cost of $150-$200 per square foot (adding approximately $8M-$11M to the project cost) to complete these structural upgrades in conjunction with a renovation project.

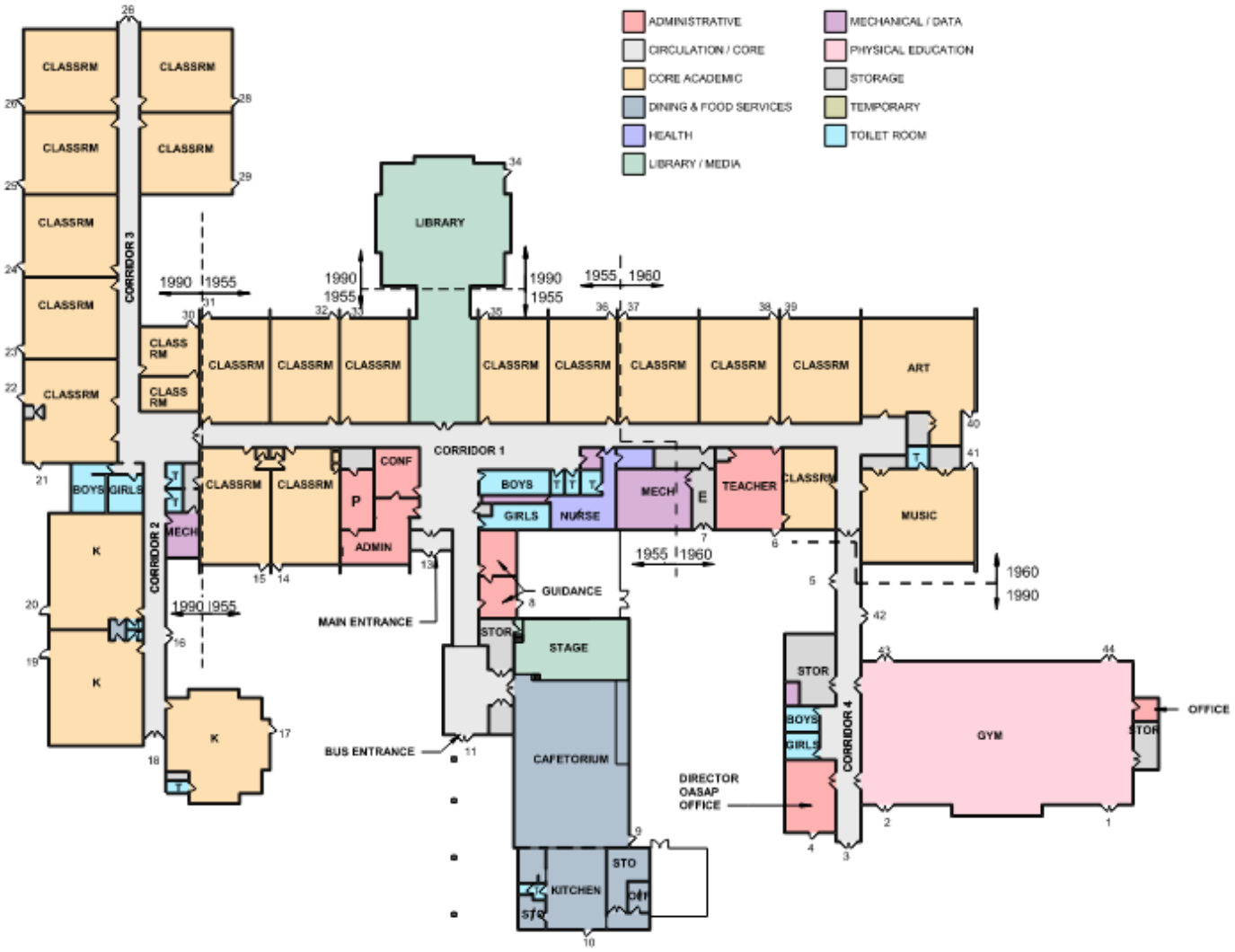
Drawbacks of Renovation of the Existing Facility

This assessment explored going beyond code-only projects to include addressing upgrades to the educational spaces based on current and anticipated future educational needs. While the overall cost of the renovation project may be slightly less than new construction, that has not always proven to be true. Drawbacks for renovation would be:

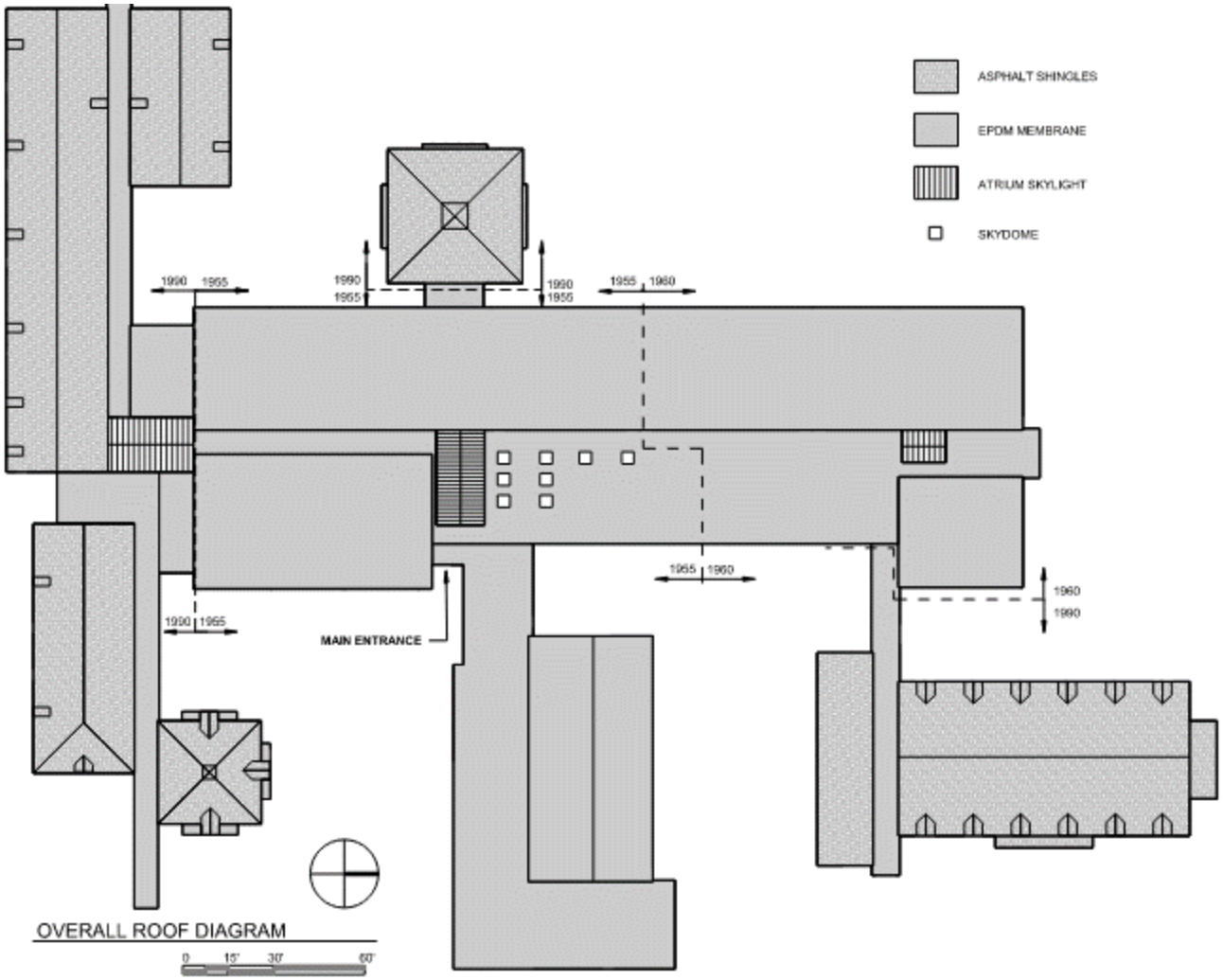
- Extensive disruption to students during the course of projects, spanning numerous years.
- Renovations undertaken while school is in use would require phased construction schedules, separation of construction from occupied areas.
- Short-term solutions to the problem by renovating as opposed to the 50+ year solution of building new.
- Learning environment would remain constrained by circulation flow inefficiency, less than ideal classroom adjacencies to ancillary spaces, i.e. gym, cafeteria and limited flexibility due to existing layout of spaces. A new facility would allow for more efficient use of space and circulation allowing flexibility to accommodate 21st Century learning.
- Should the structural renovations not be undertaken, the existing building would not be equal in code compliance with the current building code for wind load, snow drift, and seismic. The renovated building would not be structurally comparable to a new facility constructed under today's building code regulations with respect to natural disasters.

- Unforeseen or concealed conditions such as sub-surface water and drainage systems that would not be uncovered and addressed until a system failure occurs.
- Increased maintenance and energy costs associated with heating/cooling the building.
- The inability to control mold is a realistic threat to effective school operation commensurate to any of the major drawbacks faced when considering a renovation. Similarly to other educational facilities built in the same era, Orleans Elementary does not include air conditioning for cooling or dehumidification. This results in high humidity, which can foster mold growth, and poor indoor air quality.

Orleans Elementary School Overall Floor Plan



Orleans Elementary School Roof Diagram



OPTION 2: REPLACEMENT OF THE EXISTING FACILITY

Option 2 creates one new school facility to support the education program for students, kindergarten through grade five, by replacing the existing building and enhancing the campus to correct deficiencies as well as complying with accessibility code requirements and the most up-to-date building code requirements. Based upon MSBA Educational Program & Space Standard Guidelines for K-5 facility requirements, the square footage for a new facility would be 48,678 sf with a maximum enrollment capacity of 232 students. (See Appendix A).

Considering general access from Eldredge Park Way, existing topography and utility infrastructure, it has been assumed that a new building would be constructed in the location of the existing school requiring the expense of modular classrooms. A concept-level preliminary project budget for the new facility is estimated at $53.6M when escalated based on the completion of the project improvements within the next five years when considering historical data of similar schools and evaluation of the existing campus. The chart below highlights the key feasibility level components with estimated cost.

The district should consider the following maximum enrollments for space planning purposes based upon MSBA Educational Program & Space Standard Guidelines:

- Kindergarten: 32 students.
- Grades 1-5: 200 students with 40 students per grade level.

Considering the current enrollment of 145 students versus the calculated maximum of 232 students, a minimum of 2 classrooms per grade has been allotted in order to ensure individual classrooms have less than 30 students consistently as grade sizes change from year to year.

This new facility concept would contain 4 fewer classrooms than the current facility and have smaller Cafetorium, Art and Music rooms. An STE (Science, Technology & Engineering) classroom and a larger gymnasium would be part of the new program. Refer to Appendix A for the Education Program Summary for a proposed new Orleans Elementary School facility.

Category	Projected Budget Total
REPLACEMENT - Orleans Elementary School	
1. NEW BUILDING CONSTRUCTION	29,206,800
2. TEMPORARY CLASSROOM COMPLEX	4,200,000
3. ABATEMENT OF EXISTING HAZARDOUS BUILDING MATERIALS	1,200,000
4. EXISTING BUILDING DEMOLITION	800,000
5. CIVIL ENGINEERING / LANDSCAPING	6,600,000
[1]Total:	42,006,800
[1]Total Inflated @ 5% Compounded Annually over 5 years	53,612,504

[1]Totals include Soft Costs (30%): Contingency, Administration and A/E Fees.

A new building versus renovating the existing will maximize efficiency, optimize future cost savings, and increase building quality. Greater opportunities also exist to comply with the Green Communities initiatives including a reduction of fossil fuel usage and installation of renewable energy systems through green building techniques. LEED certification could be pursued if so desired.

Drawbacks of Replacement of the Existing Facility

While replacement will provide an overall improved facility and better quality educational environment, the drawbacks for replacement would be:

- Extensive disruption to students during the course of construction and demolition that would take place onsite.
- Project cost could be slightly higher. However, a new building would be constructed to current building code requirements, which are in place to ensure safe and resilient structures, and have improved significantly since the original facility and its additions were built.
- Unforeseen or concealed conditions such as sub-surface water and drainage systems could be uncovered during the beginning phases of construction.
- Replacement of the facility does not take advantage of the existing embedded carbon in the current facility.

Appendix A: **Education Program Summary**

Appendix B: **Facility Condition Assessment**

Appendix C: **Accessibility**

Accessibility Audit, Orleans Elementary School

KMA, April 21, 2023 revised

Appendix D: **Town of Orleans Assessor's Field Card**

Proposed Space Summary - Orleans Elementary School

Orleans Elementary School	Existing Conditions			PROPOSED								
				Existing to Remain / Renovated			New			Total		
ROOM TYPE	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals
CORE ACADEMIC SPACES			**17,380**			**0**			**13,100**			**13,100**
Pre-Kindergarten w/ toilet	1,200	1	1,200			0		0	0		0	0
Kindergarten w/ toilet	1,280	2	2,560			0	1,200	2	2,400		2	2,400
General Classrooms - Grade 1-5	900	14	12,600			0	950	10	9,500		10	9,500
STE Room- Grade 3-5	1,020	1	1,020			0	1,080	1	1,080		1	1,080
STE Storage		0	0			0	120	1	120		1	120
Total Core Academic Spaces		**18**						**14**				
SPECIAL EDUCATION			**2,610**			**0**			**2,010**			**2,010**
Self-Contained SPED	2,020	1	2,020			0	950	1	950		1	950
Self-Contained SPED - toilet		0	0			0	60	1	60		1	60
Resource Room	350	1	350			0	500	1	500		1	500
Small Group Room / Reading	240	1	240			0	500	1	500		1	500
Total Special Education Spaces		**3**						**4**				
ART & MUSIC			**3,040**			**0**			**2,425**			**2,425**
Art Classroom - 25 seats	1,440	1	1,440			0	1,000	1	1,000		1	1,000
Art Workroom w/ Storage & kiln	150	1	150			0	150	1	150		1	150
Music Classroom / Large Group - 25-50 seats	1,450	1	1,450			0	1,200	1	1,200		1	1,200
Music Practice / Ensemble			0			0	75	1	75		1	75
HEALTH & PHYSICAL EDUCATION			**5,922**			**0**			**6,300**			**6,300**
Gymnasium	4,880	1	4,880			0	6,000	1	6,000		1	6,000
Gym Storeroom	600	1	600			0	150	1	150		1	150
Health Instructor's Office	442	1	442			0	150	1	150		1	150
MEDIA CENTER			**3,040**			**0**			**2,020**			**2,020**
Media Center / Reading Room	3,040	1	3,040			0	2,020	1	2,020		1	2,020
DINING & FOOD SERVICE			**5,480**			**0**			**4,740**			**4,740**
Cafeteria / Dining	2,260	1	2,260			0	1,740	1	1,740		1	1,740
Stage	980	1	980			0	1,000	1	1,000		1	1,000
Chair / Table / Equipment Storage	250	1	250			0	200	1	200		1	200
Kitchen	1,350	1	1,350			0	1,600	1	1,600		1	1,600
Staff Lunch Room	640	1	640			0	200	1	200		1	200

Orleans Elementary School	Existing Conditions			PROPOSED								
				Existing to Remain / Renovated			New			Total		
ROOM TYPE	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals
MEDICAL			**518**			**0**			**410**			**410**
Medical Suite Toilet	60	1	60			0	60	1	60		1	60
Nurses' Office / Waiting Room	288	1	288			0	250	1	250		1	250
Examination Room / Resting	170	1	170			0	100	1	100		1	100
ADMINISTRATION & GUIDANCE			**1,930**			**0**			**1,865**			**1,865**
General Office / Waiting Room / Toilet	530	1	530			0	300	1	300		1	300
Teachers' Mail and Time Room			0			0	100	1	100		1	100
Duplicating Room			0			0	150	1	150		1	150
Records Room		0	0			0	110	1	110		1	110
Principal's Office w/ Conference Area	230	1	230			0	375	1	375		1	375
Principal's Secretary / Waiting			0			0	125	1	125		1	125
Assistant Principal's Office			0			0		0	0		0	0
Supervisory / Spare Office			0			0	120	1	120		1	120
Conference Room	270	1	270			0	250	1	250		1	250
Guidance Office	190	2	380			0		0	0		0	0
Guidance Storeroom						0	35	1	35		1	35
Teachers' Work Room	520	1	520			0	300	1	300		1	300
CUSTODIAL & MAINTENANCE			**350**			**0**			**1,900**			**1,900**
Custodian's Office	150	1	150			0	150	1	150		1	150
Custodian's Workshop			0			0	375	1	375		1	375
Custodian's Storage	200	1	200			0	375	1	375		1	375
Recycling Room / Trash						0	400	1	400		1	400
Receiving and General Supply						0	200	1	200		1	200
Storeroom						0	200	1	200		1	200
Network / Telecom Room						0	200	1	200		1	200

Orleans Elementary School	Existing Conditions			PROPOSED								
				Existing to Remain / Renovated			New			Total		
ROOM TYPE	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals
OTHER			**0**			**0**			**0**			**0**
Other *(specify)*						0			0		0	0
Total Building Net Floor Area (NFA)			**40,270**			**0**			**34,770**			**34,770**
Proposed Student Capacity / Enrollment			145						232			232
NON-PROGRAMMED SPACES					% of GFA	**0**		% of GFA	**13,908**		% of GFA	**13,908**
Other Occupied Rooms (list separately)					0%			0%			0%	
Unoccupied MEP/FP Spaces					0%			0%			0%	
Unoccupied Closets, Supply Rooms & Storage Rooms					0%			0%			0%	
Toilet Rooms					0%			0%			0%	
Circulation (corridors, stairs, ramps & elevators)					0%			0%			0%	
Remaining[3]					0%	**0**		29%	**13,908**		29%	**13,908**
Total Building Gross Floor Area (GFA)[2]			**53,000**						**48,678**			**48,678**
Grossing factor (GFA/NFA)			**1.32**			**0.00**			**1.40**			**1.40**

[1] **Individual Room Net Floor Area (NFA)** Includes the net square footage measured from the inside face of the perimeter walls and includes all specific spaces assigned to a particular program area including such spaces as non-communal toilets and storage rooms.

[2] **Total Building Gross Floor Area (GFA)** Includes the entire building gross square footage measured from the outside face of exterior walls

[3] **Remaining** Includes exterior walls, interior partitions, chases, and other areas not listed above. Do not calculate this area, it is assumed to equal the difference between the Total Building Gross Floor Area and area not accounted for above.

FACILITY CONDITION ASSESSMENT

TOWN OF ORLEANS

Orleans Elementary School

46 Eldredge Park Way, Orleans, MA 02653

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02061-1647
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WORCESTER MA
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774-206-3360

habeebarch.com

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EXECUTIVE SUMMARY

The *Executive Summary* recaps the *Total Inflated* row from the bottom of the Building Summary sheets. These costs are then totaled at the bottom to indicate a combined proposed capital expenditure per scope. This is intended to make it easier for the reader to review and compare the overall costs for each of the scopes.

SUMMARY

The *Summary* recaps the *Total* row from the bottom of each category for the subject building, separated into scopes. This is intended to make it easier for the reader to review and compare the overall costs for each of the categories together with the scopes for the subject building.

FACILITY CONDITION ASSESSMENT

The following is a list and brief description of the column and row headings of the Facility Condition Assessment sheets.

Description

The *Descriptions* are the work items identified during our inspection. They usually consist of the building component and its deficiencies; and a recommendation for correcting the deficiency.

Quantity

The number of items: (For example, if the work item is for ”unit ventilators replacement” the building in question may have a *Quantity* of 4 unit ventilators to be replaced).

Unit

The *Units* are identified by a two-letter code. The unit codes are as follows:

SF – Square Foot
SY – Square Yard
LF – Linear Foot
LS – Lump Sum
EA – Each

Unit Cost

The *Unit Cost* is the cost of one *Quantity* of a work item. Unit costs are preliminary construction cost estimates only and are generally based on the following references: *Means Square Foot Cost Data; Means Construction Costs Data*; in house cost data; professional experience; and information provided by various contractors and suppliers.

Total

The *Total* column is determined by the following equation: QUANTITY x UNIT = TOTAL.

Total with Soft Costs

This assessment provides preliminary construction costs associated with *Soft Costs*. Owner's Development Costs, also known as *Soft Costs,* generally include a contingency, (typically 10% to 15%) for unforeseen conditions; indirect administrative expenses such as legal costs, printing and advertising (typically 5% to 10%); and architectural, engineering and State required Owner's Project Management fees (typically 10% to 15%) for a total soft cost estimate. We used a *Soft Cost* of 30% of the *total* cost in this assessment. The *Total with Soft Costs* is determined by the following equation: TOTAL x 1.30 = TOTAL W/ SOFT COST.

Some projects may require higher or lower *Soft Costs* depending on the type and extent of project selected. Work items listed are provided as a guide to develop repair and renovation projects with preliminary construction cost estimates. The actual scope of a project could include a combination of work items, i.e. new ceilings and new lighting. Some other projects may require finishes, e.g. painting, which may not necessarily be broken out for that project.

Priority 1 – Necessary to Meet Current Building Accessibility Codes

- Immediate improvements required to support the basic function of the facility
- Prevent additional damage or higher costs if repairs deferred further

Priority 2 – Recommended

- Sensible improvements to existing conditions that are not required for the basic function of the facility
- Overall usability improvement
- Long term maintenance cost reduction

Priority 3 – Deferred

- No immediate disruption to facility function
- Predictable future failure/replacement will be required

Totals Column (work items)

The *Totals* column is the sum of the Priority columns *1, 2,* and *3,* for each work item. The *Totals* column also shares the sum of the *Total* row and *Total Inflated* rows at the lower right corner.

Total Row (scopes)

The *Total* row is the sum of the Priority columns *1, 2, 3,* and *Totals* column, for each category. The *Total* row and *Total Inflated* rows are totaled at the lower right corner.

Total Inflated Row

The *Total Inflated* row is the sum of the Priority columns *1, 2, 3,* and *Totals* column for each category multiplied by a coefficient to determine the inflated cost at a rate of 5% and compounded annually.

Priority 1 is shown with an inflation factor for work to be performed within a 2 yr period.
Priority 2 is shown with an inflation factor for work to be performed within a 5 yr period.
Priority 3 is shown with an inflation factor for work to be performed within a 10 yr period.

The *Total* row and *Total Inflated* rows are totaled at the lower right corner.

The Assessment is broken into five categories with specific evaluation concerns in each:

1. Site
- Storm Drainage
- Drives and Walks
- Landscaping
- Site Improvements
- Play Areas
- Sanitary System
- Accessible Parking and Entrance Approach

2. Building Envelope
- Roofs
- Exterior Walls
- Windows
- Exterior Entrances and Doors
- Thermal Insulation
- Accessible Egress and Ingress
- Building Structural System

3. Building Interiors
- Floor Finishes
- Wall Finishes
- Ceiling Finishes
- Interior Doors and Exitways
- Code Compliance Issues
- Accessibility for the Disabled
- Hazardous Material Remediation

4. Mechanical
- Domestic Hot Water Generation
- Cold Water Services
- Gas Services
- Piping for Plumbing Systems
- Plumbing Fixtures
- Heat Generation
- Cooling System
- Piping for Heating Systems
- Temperature Controls
- Ventilation
- Accessible Plumbing Fixtures

5. Electrical
- Main Services and Distribution
- Renewable Energy
- Convenience Power
- Fire Alarm Systems
- Lighting Systems
- Emergency Lighting Systems
- Communications Systems
- Computer Network & Technology Systems
- Site Lighting
- Electrical Features for the Disabled
- Security System

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BUILDING DATA

ORLEANS ELEMENTARY SCHOOL

GENERAL INFORMATION:	
Building:	Orleans Elementary School
Address:	46 Eldredge Park Way, Orleans, MA 02653
Building & Facilities Manager:	Ron Collins
CODE CLASSIFICATION:	
Occupancy:	E - Educational
Construction Type:	IIB Unprotected with Sprinkler System
BUILDING HISTORY:	
Original Building:	1956 – 19,200 SF
Addition:	1960 – 9,200 SF
Addition:	1990 – 24,700 SF
SITE / BUILDING AREA:	
Site Area:	23 acres
Total Building Area:	53,100 SF

SITE COMPONENTS:		MECHANICAL / ELECTRICAL COMPONENTS:	
Parking/Driveways:	Bituminous paving with a small amount of parking on compacted soil.	Water Service:	Town Water.
Walkways:	Bituminous, concrete, and small amounts of brick paving with some granite cobblestone curbs.	Domestic Hot Water:	(2) Domestic gas fired water heater storage tanks.
Lighting:	Exterior surface mounted and bollard exterior lighting.	Fire Suppression:	Dry and wet automatic systems.
Storm Drainage	External gutter and downspouts; water discharges directly onto splash blocks on grade with natural stormwater percolation into earth and catch basins.	Heating Systems:	(2) Separate Boiler Rooms; The main gas fired water boiler serves two thirds of the building, Unit Ventilators for Classrooms with Fin Tube in Corridors. RTUs serve the Gymnasium and Library.
Sanitary System:	Onsite septic system with 11,000 Gallon Tank installed in 1990.		
Play Areas:	Natural grass playfields, Orleans Community Playground and bituminous play areas.	Cooling Systems:	RTUs serve the Main Office for cooling with ductless mini-split systems serving Nurse, Computer Lab and Offices in Administration.
		Electric Service:	120/208 volt (3) phase (4) wire rated at 400 amperes.

BUILDING DATA (CONTINUED)

ARCHITECTURAL COMPONENTS:			
Foundation:	Reinforced concrete.	Window Systems:	Aluminum frames with insulated glazing.
Super Structure:	Steel and wood framing and concrete masonry units.	Exterior Doors	Aluminum storefront entries, hollow metal at classrooms, gym, and cafeteria.
Floor Structure:	Reinforced Concrete Slab.		
Floor Finish:	VCT in corridors and some classrooms. Carpet in offices and some classrooms. Quarry tile in kitchens. Ceramic tiles in most toilet rooms and janitor closets. Exposed concrete in mechanical spaces. Hardwood in cafetorium. Resilient vinyl in gym. Rubber floor in main atrium, stage ramp, and some entries.	Interior Doors	Hollow metal and hollow metal with glass with hollow metal frames.
		Wall Finishes:	Paint over concrete masonry units, brick, vertical board and batten, gypsum wall board and metal panels in gym.
Roof Structure:	Wood rafters and steel beams in Gym and Cafeteria.	Ceiling Finishes:	Suspended ACT typical with exposed painted deck in Gym and Cafeteria, Glass at Atriums, Painted GWB at classrooms in 1990 wing and in Library.
Exterior Walls:	1956 original and 1960 addition: CMU & brick walls and CMU & shingle walls. 1990 addition: Shingles on batt insulated, wood studs.		
Roofing:	EPDM membrane and asphalt shingles.	Conveying Systems:	Not applicable as single floor level with some concrete exterior ramps with metal handrails.

Category	Priority 1	Priority 2	Priority 3	**Total**
RENOVATION - Building Summary				**Orleans Elementary School**
1. SITE	7,105,267	0	275,990	7,381,257
2. BUILDING ENVELOPE	7,342,595	2,696,928	257,725	10,297,248
3. BUILDING INTERIORS	4,500,795	169,000	1,600,820	6,270,615
4. MECHANICAL	1,777,880	173,212	5,344,300	7,295,392
5. ELECTRICAL	620,100	2,596,100	1,049,776	4,265,976
[1, 2] **Total:**	21,346,637	5,635,240	8,528,611	35,510,488
Total Inflated @ 5% Compounded Annually	23,534,667	7,192,153	13,892,209	44,619,029

[1] Totals include Soft Costs (30%): Contingency, Administration and A/E Fees.

[2] Excludes approx. $8M-11M Structural Modifications as described in the Executive Summary.

Work Item Description	Year Inst.	Qty	Unit	Unit Cost	Total	[1]Total w/ Soft Costs	Priority 1	Priority 2	Priority 3	Totals
1. SITE										**ORLEANS ELEMENTARY SCHOOL**
1.1 Damaged Bituminous: Paving is cracked, heavily deteriorated and has areas of ponding. Replace bituminous paving and base. Regrade to eliminate ponding, provide accessible slopes and provide subsurface drainage.		3,600	SY	80.00	288,000	374,400	374,400			374,400
1.2 Inadequate width at Driveway: The main driveway is too narrow at location of fire hydrant and utility pole. This causes vehicle back ups as two vehicles are unable to pass through this area. Relocate the fire hydrant and utility pole and provide additional paved area.		1	LS	75,000.00	75,000	97,500			97,500	97,500
1.3 Parking Spaces at Front Parking Lot: Create accessible parking spaces located on the shortest route to the front entrance. Provide van accessible space(s) as required. For a parking lot with five accessible spaces, one must be van accessible. **(Accessibility)**		5	EA	7,500.00	37,500	48,750	48,750			48,750
1.4 Parking Lot serving Tennis Courts: Provide accessible spaces. **(Accessibility)**		1	EA	7,500.00	7,500	9,750	9,750			9,750
1.5 Signage at Accessible Parking Space serving Baseball Fields: Provide signage at one of the accessible parking spaces. **(Accessibility)**		1	EA	500.00	500	650	650			650
1.6 Curb Ramps at Front Parking Lot: Regrade curb ramps as they exceed the allowable slope. **(Accessibility)**		2	EA	4,500.00	9,000	11,700	11,700			11,700

Work Item Description	Year Inst.	Qty	Unit	Unit Cost	Total	[1]Total w/ Soft Costs	Priority 1	Priority 2	Priority 3	Totals
1. SITE									**ORLEANS ELEMENTARY SCHOOL**	
1.7 Curb Cut at Baseball Fields: Regrade curb ramp as it exceeds the allowable slope. **(Accessibility)**		1	EA	4,500.00	4,500	5,850	5,850			5,850
1.8 Bituminous Play Area: Provide new painted mural on play area.		1,500	SF	4.00	6,000	7,800			7,800	7,800
1.9 Concrete sidewalks: Replace cracked concrete sidewalks at miscellaneous areas. **(Accessibility)**		100	SY	130.00	13,000	16,900	16,900			16,900
1.10 Storm Drainage: Storm drainage at rear of building drains directly onto paved areas and creates potential ice hazards during freezing temperatures. Install drywells for stormwater retention and controlled infiltration into ground and provide native plant materials in the landscape swales.		1	LS	80,000.00	80,000	104,000			104,000	104,000
1.11 Inadequate Front Sidewalk: Provide a 6' wide sidewalk with curb from Eldredge Parkway to school drop-off.		200	SY	130.00	26,000	33,800			33,800	33,800
1.12 Inadequate Front Sidewalk: Provide a 6' wide sidewalk with curb from school drop off to end of parking lot at Gymnasium. **(Accessibility)**		300	SY	130.00	39,000	50,700	50,700			50,700
1.13 Accessible Route from Classrooms: Create a paved walkway to connect classroom doors to site components. **(Accessibility)**		933	SY	130.00	121,290	157,677	157,677			157,677

Work Item Description	Year Inst.	Qty	Unit	Unit Cost	Total	[1]Total w/ Soft Costs	Priority 1	Priority 2	Priority 3	Totals
1. SITE										**ORLEANS ELEMENTARY SCHOOL**
1.14 Accessible Route to Tennis Courts, Basketball Courts, Baseball Fields, and Bleachers: Due to gravel paths and grass there are no accessible routes to these areas. Provide accessible paved pathways. **(Accessibility)**		250	SY	130.00	32,500	42,250	42,250			42,250
1.15 Access to Tennis Courts, Basketball Courts, Baseball Fields: Provide concrete ramps, landings, and metal railings to create access to ball fields, tennis and basketball courts. **(Accessibility)**		3	EA	100,000	300,000	390,000	390,000			390,000
1.16 Tennis Courts Gate & Landing: There is inadequate landing and too high threshold to gate. Provide a smooth, level, concrete landing and threshold to these courts. **(Accessibility)**		1	LS	2,500.00	2,500	3,250	3,250			3,250
1.17 Baseball Field Bleachers: Provide a level 30" x 48" concrete landing for clear floor space adjacent to the bleachers. **(Accessibility)**		1	LS	2,000.00	2,000	2,600	2,600			2,600
1.18 Fencing at Cafeteria Loading area: Replace 6' high wood stockade portion of fence and gate in this area as it is showing signs of rot and is approaching its expected end of useful life.	2010 +/-	44	LF	75.00	3,300	4,290			4,290	4,290

Work Item Description	Year Inst.	Qty	Unit	Unit Cost	Total	[1]Total w/ Soft Costs	Priority 1	Priority 2	Priority 3	Totals
1. SITE									**ORLEANS ELEMENTARY SCHOOL**	
1.19 Fencing near Fields: Split rail fence at north of gym and above steep grade change is in reasonable condition, but is anticipated to require maintenance in 10 years.	2010 +/-	1	LS	4,500.00	4,500	5,850			5,850	5,850
1.20 Lawns: Provide 4" of loam and seed areas that have exposed, bare and sandy soils.		500	SY	20.00	10,000	13,000			13,000	13,000
1.21 Shrubs and Groundcovers: Many existing shrubs and groundcovers are growing too close to exterior walls causing scratching of shingles and preventing proper air movement. Prune to allow at least 12" clear from shingles.		1	LS	7,500.00	7,500	9,750			9,750	9,750
1.22 Step down at Egress Doors: Many egress doors have a step or two to get to grade. Provide a landing that connects to accessible route for doors 1, 2, 5 ,6, 7, 8, 16, 17, 19, 20, 21, 22, 23, 24, 25, 26, 28, 29, 30, 31, 32, 33, 34, 40, 41, and 45. **(Accessibility)**		26	EA	3,500	91,000	118,300	118,300			118,300
1.23 Accessible Egress from Doors: Some egress doors have a small difference in elevation from threshold to grade or do not have adequate maneuvering space at pull side of door handle. These will require regrading to create an accessible landing with a slope not to exceed 2%. These doors include #9,14,15, 35, 36, 37, 38, 39, 40, 41, 42, and 43. **(Accessibility)**		12	EA	1,500	18,000	23,400	23,400			23,400

Work Item Description	Year Inst.	Qty	Unit	Unit Cost	Total	[1]Total w/ Soft Costs	Priority 1	Priority 2	Priority 3	Totals
1. SITE									**ORLEANS ELEMENTARY SCHOOL**	
1.24 Non-compliant Ramp at Entrance near Gym Door 3: Replace with accessible ramp with level landings at top and bottom, as well as edge protection and handrails continuous throughout the total length of the ramp run. **(Accessibility)**	1990	1	LS	150,000	150,000	195,000	195,000			195,000
1.25 Picnic Tables: Picnic tables do not have the required knee and toe clearance for a forward approach. Replace with ones that have include accessible seating. **(Accessibility)**		24	EA	1,200.00	28,800	37,440	37,440			37,440
1.26 Picnic Tables Substrate: Tables are located on bare soil and grass. Provide concrete or bituminous patios located along the accessible route. **(Accessibility)**		350	SY	130.00	45,500	59,150	59,150			59,150
1.27 Playground: Provide additional ground-level play components and an accessible route between elements. **(Accessibility)**		1	LS	75,000.00	75,000	97,500	97,500			97,500
1.28 Modular Classrooms: Provide 12 leased modular classrooms to enable phased construction of new school. This cost includes estimates for installation and removal at end of project construction.		12	EA	350,000	4,200,000	5,460,000	5,460,000			5,460,000
Total							7,105,267	0	275,990	7,381,257
Total Inflated @ 5% Compounded Annually							7,833,557	0	449,559	8,283,115

[1]Total includes Soft Costs (30%): Contingency, Administration and A/E Fees.

Work Item Description	Year Inst.	Qty	Unit	Unit Cost	Total	[1]Total w/ Soft Costs	Priority 1	Priority 2	Priority 3	Totals
2. BUILDING ENVELOPE									**ORLEANS ELEMENTARY SCHOOL**	
2.1 Create Vestibules: At Door Entries # 3, 11, 18, and 27 provide additional doors and insulated storefront to create air lock vestibules to bring building up to current energy efficiency codes.		4	EA	40,000.00	160,000	208,000			208,000	208,000
2.2 Downspout Roof Drainage: Provide splash blocks at base of downspouts throughout.		35	EA	1,200.00	42,000	54,600		54,600		54,600
2.3 Dirty Brick Walls: Clean walls of efflorescence, algae, and mold.		1,250	SF	15.00	18,750	24,375			24,375	24,375
2.4 Damaged grout at Brick Walls: Clean and **r**epoint miscellaneous areas of brick walls.		300	SF	45.00	13,500	17,550			17,550	17,550
2.5 Stained Painted Concrete Masonry Walls: Prep and paint stained and painted CMU pier walls.		300	SF	20.00	6,000	7,800			7,800	7,800
2.6 Exterior Hollow Metal Doors, Frames & Hardware: Replace rusted exterior metal doors, frames and hardware located at the K through 2 Wing.		12	EA	10,000.00	120,000	156,000	156,000			156,000
2.7 Windows in 1990 Additions: Replace windows and trim in 1990 additions. Most of the operable window sashes have damaged seals and sealants are heavily degraded and peeling away from aluminum frames. Window sills are sloped in toward building.	1990	2,400	SF	400.00	960,000	1,248,000	1,248,000			1,248,000

Work Item Description	Year Inst.	Qty	Unit	Unit Cost	Total	[1]Total w/ Soft Costs	Priority 1	Priority 2	Priority 3	Totals
2. BUILDING ENVELOPE										**ORLEANS ELEMENTARY SCHOOL**
2.8 Wall damage in 1990 Additions: Replace damaged studs, insulation, sheathing, shingles and interior gypsum wall board at areas that have been damaged from failed Classroom and Library windows.		1,275	SF	32.00	40,800	53,040	53,040			53,040
2.9 Shingle Siding: The existing shingle siding shows signs of mold and mildew in some areas, and rot in other areas. It is the inherent nature of this material to weather unevenly and decompose. Consider replacing with a cementitious siding or a natural cedar siding with a bleaching stain.		14,000	SF	40.00	560,000	728,000		728,000		728,000
2.10 Mastic at Shingle Siding is an asbestos containing material: Abate mastic on exterior cmu walls.		23,070	SF	40.00	922,800	1,199,640		1,199,640		1,199,640
2.11 Shingles too close to finish grade: Remove cedar shingles that are within 12" of finished grade. Replace with 1x composite lumber and provide flashing.		2,300	LF	45.00	103,500	134,550		134,550		134,550
2.12 Rotted wood at base of Columns: Remove trim at bottom 12" of columns and replace with 1x composite lumber.		24	LF	45.00	1,080	1,404		1,404		1,404
2.13 Columns at Kindergarten Wing: Prep and paint worn columns.		240	SF	12.00	2,880	3,744		3,744		3,744
2.14 Damaged Soffit: Repair or replace damaged areas of soffits**.**		300	SF	25.00	7,500	9,750		9,750		9,750

Work Item Description	Year Inst.	Qty	Unit	Unit Cost	Total	[1]Total w/ Soft Costs	Priority 1	Priority 2	Priority 3	Totals
2. BUILDING ENVELOPE									**ORLEANS ELEMENTARY SCHOOL**	
2.15 Soffits: Prep and paint discolored soffits throughout.		3,300	SF	12.00	39,600	51,480	51,480			51,480
2.16 Damaged trim at roof fascia, vent fascia, column covers: Remove damaged trim and replace with composite material.		1,000	LF	25.00	25,000	32,500	32,500			32,500
2.17 Non-compliant Thresholds: Provide new accessible door thresholds at doors # 3, 9, 10, 11, and 13. **(Accessibility)**		5	EA	1,500.00	7,500	9,750	9,750			9,750
2.18 Automatic Door Opener at Entry 1 and Entry near Gym: Replace or make existing door opener operational. **(Accessibility)**		2	EA	5,000.00	10,000	13,000	13,000			13,000
2.19 Atriums are inefficient and uncomfortable: The three existing glazed atriums are either very cold or too hot as they are inadequately insulated. The structures may not be compliant with modern snow and wind loads. Replace with new energy efficient glazing and adequate structure.	1990	1,250	SF	400.00	500,000	650,000	650,000			650,000
2.20 Window shading devices: Replace window shades at all exterior classroom and office conditions, provide dual light filtering and blackout shades for security purposes.		2,900	SF	12.00	34,800	45,240		45,240		45,240
2.21 Create Eave Overhangs: Provide new 12" eave extensions to 1990 additions to bring drip edge away from existing exterior walls and therefore minimize water damage.		1,080	LF	350.00	378,000	491,400	491,400			491,400

Work Item Description	Year Inst.	Qty	Unit	Unit Cost	Total	[1]Total w/ Soft Costs	Priority 1	Priority 2	Priority 3	Totals
2. BUILDING ENVELOPE									**ORLEANS ELEMENTARY SCHOOL**	
2.22 EPDM Roofs: The existing EPDM roofing membrane of the 1955 and 1960 portions of the building has been leaking and is at the end of its life expectancy. Replace with a new light colored roofing membrane (thermoplastic Polyolefin-TPO) over recovery board, insulation and vapor barrier. Provide new roof to wall flashings. Provide new PT blocking and fascia to allow for thicker roof assembly. Replace fascia panels that provide transition from roof to existing building.	2004	32,350	SF	70.00	2,264,500	2,943,850	2,943,850			2,943,850
2.23 Roof Drains: Roof drains on EPDM roof may need repair or replacement.		12	EA	4,000.00	48,000	62,400	62,400			62,400
2.24 Asphalt Shingle Roofs: The shingle roof systems on the 1990 additions are at the end of their life expectancy. Replace with new asphalt shingles, insulation and vapor barrier. Provide new PT blocking and fascia to allow for thicker roof assembly. Provide new roof to wall flashings. Replace all wood trim with composite trim. Replace gutters and downspouts.	1990	21,650	SF	55.00	1,190,750	1,547,975	1,547,975			1,547,975
2.25 Sky domes: Replace sky domes which are reaching their anticipated end of useful lifespan.		8	EA	8,000.00	64,000	83,200	83,200			83,200

Work Item Description	Year Inst.	Qty	Unit	Unit Cost	Total	[1]Total w/ Soft Costs	Priority 1	Priority 2	Priority 3	Totals
2. BUILDING ENVELOPE										**ORLEANS ELEMENTARY SCHOOL**
2.26 Security Upgrades: Upgrade current building security. This could include replacing glass at strategic areas with impact resistant glazing and providing surveillance cameras and door alarms.		1	LS	400,000	400,000	520,000		520,000		520,000
Total							7,342,595	2,696,928	257,725	10,297,248
Total Inflated @ 5% Compounded Annually							8,095,211	3,442,039	419,807	11,957,057

[1]Total includes Soft Costs (30%): Contingency, Administration and A/E Fees.

Work Item Description	Year Inst.	Qty	Unit	Unit Cost	Total	[1]Total w/ Soft Costs	Priority 1	Priority 2	Priority 3	Totals
3. BUILDING INTERIORS									**ORLEANS ELEMENTARY SCHOOL**	
3.1 VCT Flooring: VCT flooring is worn and beyond its useful life. Remove and install new VCT.		23,000	SF	14.00	322,000	418,600			418,600	418,600
3.2 Vinyl base at VCT: The existing vinyl base at VCT will be replaced when VCT is replaced.		2,100	LF	15.00	31,500	40,950			40,950	40,950
3.3 Worn Carpet in Library: Replace carpet which is showing signs of wear with frayed seams and dingy appearance.		320	SY	100.00	32,000	41,600			41,600	41,600
3.4 Vinyl Base at Library: Vinyl base will be replaced when carpet is replaced.		280	LF	15.00	4,200	5,460			5,460	5,460
3.5 Carpet in Classrooms and Offices: Carpets have recently been installed, but will reach their expected useful end of life and will need to be replaced.		105	SY	100.00	10,500	13,650			13,650	13,650
3.6 Rubber Floor at Atrium and some entrances: Replace rubber floors which are showing signs of wear and tear.		2,000	SF	20.00	40,000	52,000			52,000	52,000
3.7 Vinyl Base at Carpeted Classrooms and Offices: Vinyl Base will be replaced when these carpets are replaced.		2,100	LF	15.00	31,500	40,950			40,950	40,950
3.8 Wood Floor: Strip, sand, and refinish wood floor at Cafetorium.		3,000	SF	7.50	22,500	29,250			29,250	29,250
3.9 Vinyl Gym Wood Floor: Replace original vinyl floor and provide striping as it is approaching it's end of useful life.	1990	5,000	SF	22.00	110,000	143,000			143,000	143,000

Work Item Description	Year Inst.	Qty	Unit	Unit Cost	Total	[1]Total w/ Soft Costs	Priority 1	Priority 2	Priority 3	Totals
3. BUILDING INTERIORS									**ORLEANS ELEMENTARY SCHOOL**	
3.10 Damaged Gable Walls in Gym: Replace damaged perforated metal panels with heavier gauge metal panels.		1,000	SF	25.00	25,000	32,500			32,500	32,500
3.11 Non-compliant Signage: Install accessibility compliant signage throughout. **(Accessibility)**		130	EA	75.00	9,750	12,675	12,675			12,675
3.12 Hazardous Material Remediation: Abate miscellaneous interior asbestos per AHERA Report**.**		1	LS	120,000	120,000	156,000		156,000		156,000
3.12 Hazardous Material Study: Assessment of underground utility trenches within the 1956 classrooms to determine if Asbestos Containing Material (ACM) is present.		1	LS	10,000.00	10,000	13,000		13,000		13,000
3.13 Kitchen Renovation: Completely renovate kitchen with new floors, ceilings, doors, etc. **(Accessibility)**		1,260	SF	250.00	315,000	409,500	409,500			409,500
3.14 2' x 4' ACT Ceilings: Replace all 2' x 4' acoustic ceiling tiles with new 2' x 2' ACT. The ACT in corridors, media center and other areas is sagging and stained. There are classrooms with newer 2' x 4' ACT, but these areas will need new LED light fixtures and will require new ceilings.		26,000	SF	10.00	260,000	338,000			338,000	338,000
3.15 Paint Walls: Interior walls are dated and require patching and repainting throughout.		72,000	SF	4.00	288,000	374,400			374,400	374,400
3.16 Intercom at Entry 2: Lower intercom so highest operable part does not exceed 48" AFF. **(Accessibility)**		1	EA	750.00	750	975	975			975

Work Item Description	Year Inst.	Qty	Unit	Unit Cost	Total	[1]Total w/ Soft Costs	Priority 1	Priority 2	Priority 3	Totals
3. BUILDING INTERIORS									**ORLEANS ELEMENTARY SCHOOL**	
3.17 Door Bell at Entry 1: Lower doorbell so highest operable part does not exceed 48" AFF. **(Accessibility)**		1	EA	750.00	750	975	975			975
3.19 Door Hardware: Some doors have opening hardware requiring tight grasping, pinching, or twisting of the wrists to operated. Replace door knobs at door at Teachers' Lounge and Work Room**. (Accessibility)**		2	EA	750.00	1,500	1,950	1,950			1,950
3.20 Recessed Doorways: Some doors are recessed greater than 6" on the latch push side and/or pull side. Modify frame and adjacent gypsum wall board and stud walls at the affected classroom doors in Corridors 2 and 3. **(Accessibility)**		11	EA	25,000.00	275,000	357,500	357,500			357,500
3.21 Classroom Sinks & Water Fountains: The sinks and water fountains lack the required knee and toe clearances due to the cabinetry**.** Replace sinks and the surrounding casework. **(Accessibility)**		23	EA	3,800.00	87,400	113,620	113,620			113,620
3.22 Restrooms: Existing restrooms are dated, not accessible and contain Asbestos Containing Material (ACM). Replace all floor finishes, wall finishes, fixtures and toilet accessories in all toilet rooms. **(Accessibility)**		9,000	SF	250.00	2,250,000	2,925,000	2,925,000			2,925,000
3.23 Classroom furniture: Provide appropriate accessible furniture. **(Accessibility)**		1	LS	14,000.00	14,000	18,200	18,200			18,200

Work Item Description	Year Inst.	Qty	Unit	Unit Cost	Total	[1]Total w/ Soft Costs	Priority 1	Priority 2	Priority 3	Totals
3. BUILDING INTERIORS									**ORLEANS ELEMENTARY SCHOOL**	
3.24 Classroom furniture: Replace 50% of existing classroom furniture due to existing being beyond useful life.		1	LS	54,200.00	54,200	70,460			70,460	70,460
3.25 Fire Extinguisher: An existing fire extinguisher and cabinet in CMU wall is mounted too high with the highest operable part at 59" above the finish floor. Lower the extinguisher so that the highest operable part does not exceed 48". This operation will require cutting of CMU and the associated work to repair. **(Accessibility)**		1	EA	2,000.00	2,000	2,600	2,600			2,600
3.26 Ramp in Cafeteria: Replace non-compliant ramp. **(Accessibility)**		1	LS	75,000.00	75,000	97,500	97,500			97,500
3.27 Cafeteria Stair Rail: Provide handrail extensions at both top and bottom of stairs. **(Accessibility)**		1	LS	1,000.00	1,000	1,300	1,300			1,300
3.28 Doors with High Vision Panels: Replace doors at Classroom 34 and Nurse's Office due to vision panel exceeding 43" above finish floor. **(Accessibility)**		2	EA	2,500.00	5,000	6,500	6,500			6,500
3.29 Gymnasium Bleachers: Provide full replacement of bleachers with wheelchair spaces for accessibility compliance. **(Accessibility)**	1990	1	LS	175,000	175,000	227,500	227,500			227,500
3.30 Teachers' Lounge Door #6: Remove 24" wide door and frame in Teachers' Lounge, infill and patch. **(Accessibility)**	1960	1	LS	7,500	7,500	9,750	9,750			9,750

Work Item Description	Year Inst.	Qty	Unit	Unit Cost	Total	[1]Total w/ Soft Costs	Priority 1	Priority 2	Priority 3	Totals
3. BUILDING INTERIORS									**ORLEANS ELEMENTARY SCHOOL**	
3.31 Door at Nurse's Office: There is less than 18" of maneuvering clearance on the latch pull side of door. Reconstruct this area to create required space**. (Accessibility)**	1960	1	LS	2,500.00	2,500	3,250	3,250			3,250
3.32 Connecting Entry Corridor Ceiling, adjacent to Rooms 33 and 34: Ceiling height is too low, insufficient space above to update utilities. Reconstruct area by raising the roof to create required space**.**	1956	400	SF	600.00	240,000	312,000	312,000			312,000
Total							4,500,795	169,000	1,600,820	6,270,615
Total Inflated @ 5% Compounded Annually							4,962,126	215,692	2,607,567	7,785,385

[1]Total includes Soft Costs (30%): Contingency, Administration and A/E Fees.

Work Item Description	Year Inst.	Qty	Unit	Unit Cost	Total	[1]Total w/ Soft Costs	Priority 1	Priority 2	Priority 3	Totals
4. MECHANICAL										**ORLEANS ELEMENTARY SCHOOL**
4.1 Sanitary System Connection: Connect building to proposed City sewer system.		680	LF	100.00	68,000	88,400			88,400	88,400
4.2 Sanitary Waste Piping: Replace all existing sanitary waste piping.		53,000	SF	15.00	795,000	1,033,500	1,033,500			1,033,500
4.3 Domestic Water Service Backflow Preventer: Provide backflow preventer at the domestic water service at Kitchen, K-2 Wing and large Mechanical Room.		3	EA	5,000.00	15,000	19,500		19,500		19,500
4.4 Ventilation: Replace exhaust fans at miscellaneous toilet rooms.		4	EA	2,500.00	10,000	13,000	13,000			13,000
4.5 Domestic Waterline Distribution Piping: Replace this system of piping that has surpassed its expected life cycle and has been failing.		53,000	SF	5.00	265,000	344,500	344,500			344,500
4.6 Unit Heaters at Entry Points: Replace ceiling mounted vestibule and entry unit heaters.		6	EA	2,500.00	15,000	19,500			19,500	19,500
4.7 Accessible Drinking Fountains: Replace existing drinking fountains at Corridor 2 and Cafeteria to create ADA compliant bi-level water fountain and bottle filling stations**. (Accessibility)**		2	EA	3,800.00	7,600	9,880	9,880			9,880
4.8 Kitchen Equipment: Replace all Kitchen equipment as it is original to building and past its expected life cycle.		580	SF	500.00	290,000	377,000	377,000			377,000
4.9 Failing Sprinkler system in K-2 Wing: Replace the existing, dry sprinkler system at the K through 2 wing.		14,780	SF	8.00	118,240	153,712		153,712		153,712

Work Item Description	Year Inst.	Qty	Unit	Unit Cost	Total	[1]Total w/ Soft Costs	Priority 1	Priority 2	Priority 3	Totals
4. MECHANICAL										**ORLEANS ELEMENTARY SCHOOL**
4.10 Mechanical System: In order to comply with the Green Communities' objectives, replace existing HVAC equipment with Variable Refrigerant Flow (VRF).		53,000	SF	76.00	4,028,000	5,236,400			5,236,400	5,236,400
Total							1,777,880	173,212	5,344,300	7,295,392
Total Inflated @ 5% Compounded Annually							1,960,113	221,067	8,705,302	10,886,482

[1]Total includes Soft Costs (30%): Contingency, Administration and A/E Fees.

Work Item Description	Year Inst.	Qty	Unit	Unit Cost	Total	[1]Total w/ Soft Costs	Priority 1	Priority 2	Priority 3	Totals
5. ELECTRICAL										**ORLEANS ELEMENTARY SCHOOL**
5.1 Building Electric Service: Replace existing 120/208V, 3 Phase, 4 wire 400 AMP.		1	LS	250,000	250,000	325,000		325,000		325,000
5.2 Building Electric Service Room: Existing Electric Room is too small. Construct a new or enlarge the existing room.		100	SF	1,000.00	100,000	130,000		130,000		130,000
5.3 Fire Alarm Systems: Upgrade fire alarm system including horns, strobes, and pull stations to comply with ADA requirements. FA Strobes in original building need to be upgraded to meet NFPA 72/UL 1971 flash rate standards.		53,000	SF	3.00	159,000	206,700	206,700			206,700
5.4 Backup Generator - 85kW/ 106kVA Generac Generator: Replace outdated generator and its automatic transfer switch as it is reaching the end of its expected life cycle.		1	LS	250,000	250,000	325,000		325,000		325,000
5.5 Lighting Systems: Replace lighting fixtures and incorporate controls to provide light shut off ability, light reduction controls, daylighting controls and occupancy sensors**.**		53,000	SF	10.00	530,000	689,000		689,000		689,000
5.6 Emergency Lighting Systems: Install emergency lighting and exit signage throughout.		53,000	SF	6.00	318,000	413,400	413,400			413,400
5.7 Electric Distribution System: Replace outdated existing system.		53,000	SF	15.00	795,000	1,033,500		1,033,500		1,033,500
5.8 Site Lighting: Add Pole & Bollard mounted site lights for improved night visibility.		12	EA	6,000.00	72,000	93,600		93,600		93,600

Work Item Description	Year Inst.	Qty	Unit	Unit Cost	Total	[1]Total w/ Soft Costs	Priority 1	Priority 2	Priority 3	Totals
5. ELECTRICAL									**ORLEANS ELEMENTARY SCHOOL**	
5.9 Photovoltaic System: In order to complement the Green Communities' objectives, add photovoltaic system and battery backup to roof.		1	SF	800,000	800,000	1,040,000			1,040,000	1,040,000
5.10 Electrical Wiring Support: There is shallow depth from ceiling to deck. Add cable trays in corridors to provide adequate access pathway for cables above ACT ceilings.		940	LF	8.00	7,520	9,776			9,776	9,776
Total							620,100	2,596,100	1,049,776	4,265,976
Total Inflated @ 5% Compounded Annually							683,660	3,313,355	1,709,974	5,706,989

[1]Total includes Soft Costs (30%): Contingency, Administration and A/E Fees.

SITE PHOTOGRAPHS

1. Pavement is patched and cracked.

2. Not enough parking spaces and inadequate lighting.

3. Deep gap between bituminous and concrete walkway.

4. Concrete sidewalk is cracked.

5. Teacher parking area is non-compliant and unpaved.

6. Topsoil in many areas is eroded.

SITE PHOTOGRAPHS

7. Topsoil is eroded and classroom doors are not MAAB accessible to outdoors.

8. More examples of eroded soil and gym exit doors are not MAAB accessible.

9. Drainage area has eroded soils.

10. Inadequate walkway from Eldredge Park Way and driveway is too narrow. Wood timbers are inadequate to delineate parking from sidewalk.

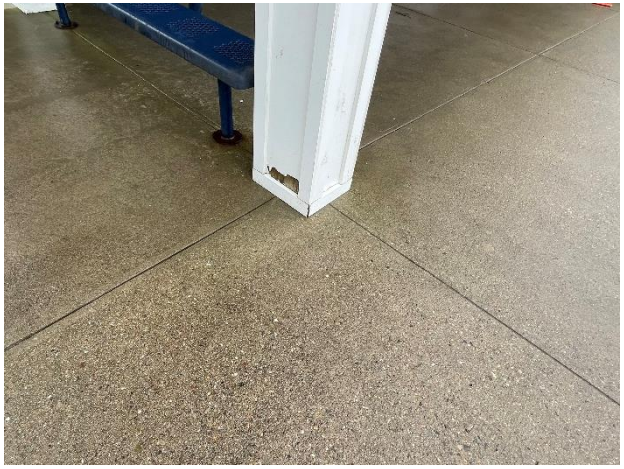
11. Large puddle in driveway.

12. Bituminous play area is heavily cracked.

BUILDING ENVELOPE PHOTOGRAPHS

1. Brick is discolored adjacent to main entry.

2. Brick is discolored on north elevation.



3. Column covers are water damaged.

4. Paint is peeling on soffits.

5. Shingles in some areas are too close to finish grade.

6. Soffits and wood fascia is peeling.

BUILDING ENVELOPE PHOTOGRAPHS

7. Many windows in 1990's addition have failed seals.

8. Sealants at windows have failed and wood trim is damaged.

9. Damaged wall and shingles due to window failure.

10. Window failure has caused damage to shingle siding.

11. Indication of extent of repair required at damaged windows.

12. Eaves are lacking adequate overhang to prevent water damage.

BUILDING ENVELOPE PHOTOGRAPHS

13. Window has failed and lack of adequate overhang at eave has damaged siding.

14. Water damage is evident at vent dormers.

15. Downspout is damaged and water is creating stains on CMU & siding.

16. Door frames are rusted.

17. Wood trim is damaged.

18. Hollow metal door has rust and oxidized paint. Wood fascia is peeling.

Note: Downspouts terminating onto sidewalks and other hard surfaces do not channel stormwater to subsurface or basin retention areas creating a potential for slip hazards during icy conditions.

INTERIORS PHOTOGRAPHS

1. VCT floors are damaged.

2. VCT floors are cracked and mismatched.

3. Rubber floors are worn.

4. Ceramic Tile in Toilet Rooms is damaged.

5. Library carpet has reached its anticipated end of useful life.

6. Quarry Tile and hardwood floor in Cafetorium are worn.

INTERIORS PHOTOGRAPHS

7. Windows have failed and sills water damage is evident.

8. Classroom casework is damaged.

9. Metal Panels in Gym are damaged.

10. Acoustic Ceiling Tiles are damaged.

11. 2x4 Acoustic Ceiling Tiles are stained.

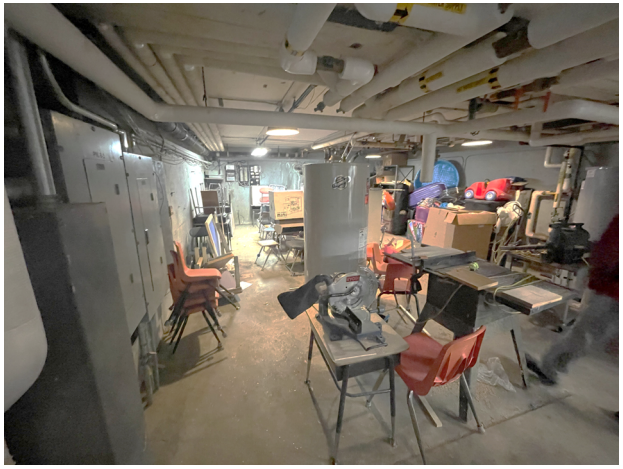
12. 2x4 Acoustic Ceiling Tiles are damaged.

MECHANICAL PHOTOGRAPHS

1. Ceiling unit heaters at entry points are outdated.

2. There is inadequate clearance at drinking fountains.

3. Kitchen equipment is outdated.



4. Piping is outdated.

5. Evidence of repair at failing water pipes.

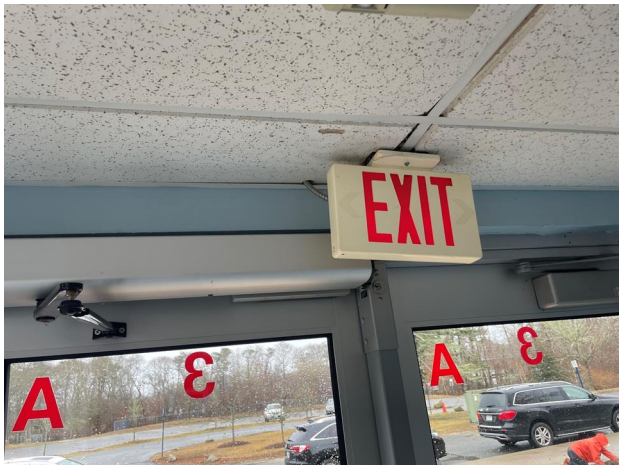
6. Sinks and drinking fountains are not accessible.

ELECTRICAL PHOTOGRAPHS

1. Electric/utility room is undersized for equipment upgrades.

2. Lighting is outdated.

3. Generator is past its anticipated useful lifespan.



4. Exit lights are outdated.

5. Site lighting is inadequate and transformer is unprotected.

6. Fire alarm system is outdated.

ACCESSIBILITY AUDIT REPORT

April 21, 2023

To: Melissa Boynton, Habeeb & Associates Architects
From: Aida Villoria
Cc: J George, Josh Safdie

Re: Orleans Elementary School – Accessibility Audit

KMA

ARCHITECTURE
+ACCESSIBILITY
ONE BRIDGE ST
NEWTON MA
02458-1132
KMACCESS.COM
617.641.2802

On Friday, February 23, 2023, KMA auditors J George and Aida Villoria performed a comprehensive accessibility audit of the immediate site, entrances, and all public and employee spaces at Orleans Elementary School, located at 46 Eldredge Park Way, Orleans, MA. The purpose of this audit was to identify conditions that do not comply with either the Americans with Disabilities Act (ADA) or 521 CMR: the Rules and Regulations of the MA Architectural Access Board (MAAB).

Renovations are planned for this building that are expected to exceed 30% of the full and fair cash value of the building, which will trigger full compliance with 521 CMR. Habeeb & Associates Architects has been hired as the architect of record and understand that any existing architectural barriers within the project area will need to be mitigated, or a variance from the MAAB sought. The architects will use the findings of this report as a basis for their work.

Building Description

Orleans Elementary School was built in 1956 with additions constructed in 1960 and 1990. The one-story building includes various classrooms and offices, a gymnasium, cafeteria, library, nurse's office, and toilet rooms. Exterior elements include a playground area, two baseball fields, three tennis courts, and a basketball court. There are three parking lots serving the building, including five designated accessible parking spaces.

Jurisdictional Overview

Orleans Elementary School is defined under the Americans with Disabilities Act as a *place of public accommodation* and under 521 CMR as a *public building.* As such, it will be subject to certain accessibility requirements when the planned alterations are made to the building.

521 CMR

521 CMR: the Rules and Regulations of the MAAB is a section of 780 CMR: the MA Amendments to the International Building Code 2015. 521 CMR governs the "design, construction, and renovation of public buildings to make them accessible to, functional for, and safe for use by persons with disabilities." The specific scoping provisions for renovations are reproduced in part here:

3.3 EXISTING BUILDINGS

All additions to, reconstruction, remodeling, and alterations or repairs of existing public buildings or facilities, which require a building permit, or which are so defined by a state or local inspector, shall be governed by all applicable subsections in 521 CMR 3.00: JURISDICTION.

3.3.1 If the work being performed amounts to less than 30% of the *full and fair cash value of the building* and

a. if the work costs less than $100,000, then only the work being performed is required to comply with 521 CMR; or

b. if the work costs $100,000 or more, then the work being performed is required to comply with 521 CMR. In addition, an accessible public entrance and an accessible toilet room, telephone, drinking fountain (if toilets, telephones and drinking fountains are provided) shall also be provided in compliance with 521 CMR.

3.3.2 If the work performed, including the exempted work, amounts to 30% or more of the full and fair cash value of the building (see definitions in 521 CMR 5.00), the entire building is required to comply with 521 CMR.

3.3.3 Alterations by a tenant do not trigger the requirements of 521 CMR 3.3.1b and 3.3.2 for other tenants. However, alterations, reconstruction, remodeling, repairs, construction, and changes in use falling within 521 CMR 3.3.1b and 3.3.2, will trigger compliance with 521 CMR in areas of public use, for the owner of the building.

KMA understands that Orleans Elementary School is considering a renovation to the entire building. Because this renovation is expected to cost greater than 30% of the full and fair cash value of the building,

Section 3.3.2 will apply. This means that the Town will have to bring the entire building into compliance with 521 CMR – or request variances not to do so on an issue-by-issue basis, on the basis of *impracticability.*

2010 ADA Standards

Title II of the Americans with Disabilities Act (ADA) prohibits discrimination on the basis of disability in State and Local Government Services. It further requires buildings and facilities providing these services to be designed, constructed, and altered in compliance with the accessibility standards established under the ADA.

There are two requirements under Title II of the ADA that require a public entity, such as the Town, to remove existing barriers to bring an end to and to prevent discrimination against a person or people with disabilities. These two requirements are:

1. Program Access: requires that individuals with disabilities be provided an equally effective opportunity to participate in or benefit from a public entity's programs and services. The ADA requires that public entities provide physical and communication access to each program service or activity. The Town needs to identify and correct policies and practices that have the effect of discriminating against individuals with disabilities.
2. Alterations: Any alterations that are performed must conform to the version of the ADA Standards in force at the time of the alterations. Alterations may trigger an obligation to perform additional barrier removal outside the planned scope of work. The ADA accessible path of travel requirement states: "When alterations are made to a primary function area that affect the usability of that area, alterations to provide an accessible path of travel to the altered area must also be made unless the cost is disproportionate." Further, the Town is required to maintain its existing facilities to ensure continued, unfettered, and uninterrupted access to persons with disabilities.

Program Access: To provide Program Access, the Town's fundamental obligation is to consider who uses their programs and services, and to ensure that individuals with disabilities are afforded an equally effective opportunity to participate in, or benefit from, these programs and services, subject only to the limitations of fundamental alteration and/or undue

burden. Therefore, the Town needs to implement policy changes, if necessary, so that persons with disabilities can have full access. Further, the Town must continue to make changes to prevent discrimination and continually work to increase accessibility.

Alterations: Alterations to a primary function area require an accessible path of travel to (entrance) and through (route) the area. Buildings and elements altered after January 23rd, 1993 were required to comply with the 1991 ADA Accessibility Guidelines ("ADAAG"). Buildings and elements altered after March 15, 2012 are required to comply with the 2010 ADA Standards, with the exception that anything altered prior to March 15, 2012 that complies with the 1991 ADA Standards is not required to proactively be brought into compliance with the 2010 ADA Standards.

The alteration requirements under Section 202.4 state in part that "an alteration that affects or could affect the usability of or access to an area containing a primary function shall be made so as to ensure that, to the maximum extent feasible, the path of travel to the altered area, including the rest rooms, telephones, and drinking fountains serving the altered area, are readily accessible to and usable by individuals with disabilities." This means that the Town will have to establish an accessible entrance to the building and eliminate any instances of non-compliance along the path of travel leading to or within the building.

Summary of Findings

The following table details the barriers noted during our audit that would need to be mitigated in order to satisfy the above requirements under the ADA and 521 CMR. Please note that this was a comprehensive audit, and so any items within the project area that are not mentioned may be assumed to fully comply with 521 CMR and the ADA Standards.

EXTERIOR & ENTRANCE ISSUES		
#	**Barrier**	**Photo**
1.	**Front Parking Lot** Some of the designated accessible spaces are not located on the shortest route to the entrance they serve. Some of the designated accessible spaces and their associated access aisles have slopes >2%, @ up to 4.3%. There are no van accessible spaces provided. For a parking lot with five accessible spaces, one must be van accessible. Curb ramps along the route connecting the accessible parking spaces and the entrance have running slopes >8.3%, @ up to 13%, and cross slopes >2%, @ up to 3.8%.	 
2.	**Parking Lot serving the Tennis Courts** The parking lot serving the tennis courts does not provide any accessible spaces. The parking surface is not uniform, paved, or a hard packed smooth surface that prevents pooling or draining water.	
3.	**Parking Lot serving the Baseball Fields** The designated accessible parking spaces and their associated access aisle have slopes >2%, @ up to 2.5%. One of the accessible parking spaces lacks the required signage. The curb ramp has running slopes >8.3%, @ 11.7%. The curb ramp lacks a level landing at the top of the ramp run, @ 2.3%.	

4.	**Main Entrance** The threshold is >½" high. The intercom is mounted >48" AFF to the highest operable part, @ 58". The doorbell is mounted >48" AFF to the highest operable part, @ 60".	
5.	**Secondary Entrance** The threshold is >½" high. The intercom is mounted >48" AFF to the highest operable part, @ 53". The letter holder is mounted >48" AFF to the highest operable part, @ 53". The reception counter is >36" AFF, @ 41". The automatic door opener was not operational at the time of the audit.	 
6.	**Secondary Entrance near Gymnasium** The automatic door opener was not operational at the time of the audit. The threshold is >½" high. The door lacks a level landing, @ 2.4%. The ramp lacks a level landing at the top, @ 2.4%. The ramp lacks edge protection. The handrails are not continuous throughout the total length of the ramp run.	 

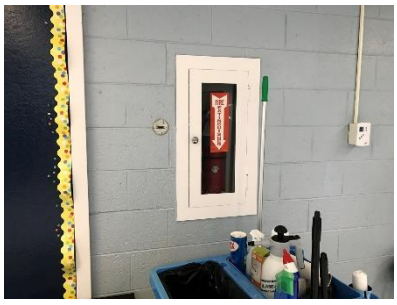
7.	**Egress Doors (Typical)** Some egress doors lack a level landing, @ up to 27.7%. *Observed at egress doors #9, egress door #10, egress door #27, egress door #34, classroom 8 egress door, most egress doors to the rear of the building, and art classroom egress door.* Some egress doors are not accessible due to the step. *Observed at most egress doors to the rear of the building, teacher's lounge egress door, art classroom egress door, gymnasium egress doors, egress door #5, egress door #27, and egress door #42.* The maneuvering clearance is <12" on the latch push side of the door. *Observed at teacher's lounge egress door, and art classroom egress door.* The glass door lacks the required minimum 10" of smooth surface along the bottom of the push side, @ 7" high. *Observed at egress door #5, and egress door #34.*	  
8.	**Egress Door #9** The egress door landing has a change in level >¼" high and not beveled, @ ¾". The egress door lacks the required maneuvering clearance on the latch pull side due to the grass surface.	
9.	**Egress Door #10** The egress door has a threshold >½" high or >¼" high and not beveled @ 1". The vision panel is >43" AFF, @ 46 ½". The doorbell is mounted >48" AFF to the highest operable part, @ 52".	

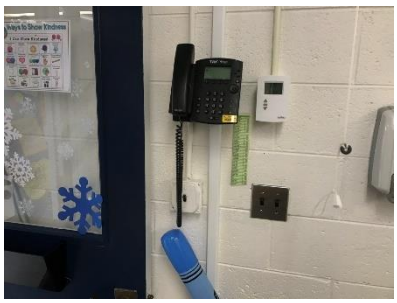
10.	**Teachers' Lounge Egress Door** The door provides <32" of clear width, @ 24".	
11.	**Exterior Ramp at Gymnasium's Egress Door** The ramp lacks level landings at the top and bottom of the ramp run. The ramp has slopes >8.3%, @ 8.9%. The transition between the ramp and the bottom landing is abrupt. The handrails lack the required extensions at the bottom of the ramp.	
12.	**Walkways around the Building** Walkways have cross slopes >2%, @ up to 3.9%, and abrupt changes in level due to material deterioration.	
13.	**Picnic Tables** The picnic tables are not located on an accessible route due to the grass surface/ step. The picnic tables lack the required knee and toe clearance for a forward approach.	
14.	**Trash Cans** The trash cans are not located on an accessible route due to the grass, dirt, and mulch surface.	

15.	**Playgrounds** The playground lacks the required number of ground-level play components and an accessible route between elements due to the woodchips surface. The route leading to the playground area has cross slopes > 2%, @ up to 2.8%.	
16.	**Courtyard** The courtyard has uneven ground surfaces that create water collection and abrupt changes of level, and slopes >2%, @ up to 3.6%.	
17.	**Tennis Courts** There is no accessible route to the tennis courts due to the gravel surface. The gate's threshold is >½" high. The gate lacks the required minimum 10" of smooth surface along the bottom of the push side.	
18.	**Basketball Courts** There is no accessible route provided to the basketball courts due to the grass and excessive slopes.	
19.	**Garden** There is no accessible route provided to the garden due to the grass and mulch surfaces.	

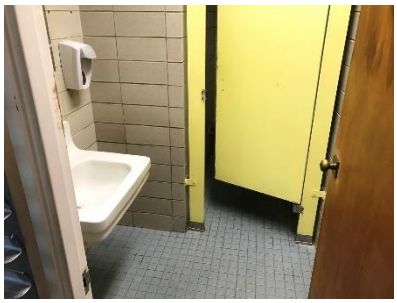
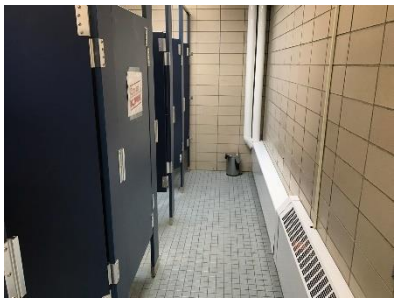
20.	**Baseball Field** There is no accessible route to the baseball field due to the grass surface. The bleachers are not located along an accessible route due to the grass. There is no level 30" x 48" clear floor space adjacent to the bleachers.	
INTERIOR ISSUES		
21.	**Interior Signage (Typical)** All rooms lack the required tactile/Braille signage mounted on the latch side of the door. The headroom below the signs provides <80" of vertical clearance, @ 74 ½" AFF.	
22.	**Door Hardware (Typical)** Some of the door hardware require tight grasping, pinching, or twisting of the wrist to operate. *Observed at both doors leading to the food service at the cafeteria, teachers' lounge, and work room.*	
23.	**Exit Signs (Typical)** The illuminated exit signs at all accessible means of egress are not identified with the International Symbol of Accessibility (ISA).	

24.	**Recessed Doors (Typical)** Several doors are recessed >6" on the latch push-side and/or pull-side, @ up to 9". Note: These doors have both a latch and a closer. *Observed at both doors leading to food service at the cafeteria, most classrooms along corridor 2, and most classrooms along corridor 3.*	
25.	**Tables and Desks (Typical)** Some tables lack the required knee and toe clearances for a forward approach. *Observed at the cafeteria.* The knee/toe clearances at some desks and tables are <30" wide, @ as little as 18". Some of the children's desks and tables lack the required 25" AFF minimum knee/toe clearance, @ as little as 23". *Observed at most classrooms.* Some of the desks and tables lack the required 27" AFF minimum knee/toe clearance, @ as little as 25". *Observed at teachers' lounge.*	  
26.	**Pencils Dispenser** The pencil dispenser protrudes >4" into the circulation path, @ 9 ½".	

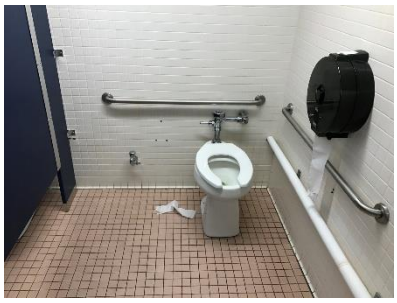
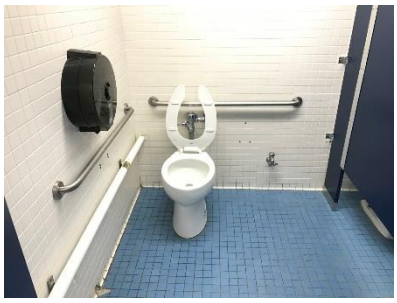
27.	**Classroom Sinks & Bubblers (Typical)** The sink lacks the required knee and toe clearance for a forward approach due to the cabinetry. The drinking fountain lacks the required knee and toe clearance for a forward approach due to the cabinetry, and the spout is >30" AFF, @ 32". The work room sink faucets require tight grasping, pinching, or twisting of the wrist to operate. *Note: ADA 606.2 Exception 4 permits children's sinks to provide 24" AFF minimum knee clearance and Exception 5 permits a parallel approach for sinks primarily used by children 5 years and younger. Similarly, ADA 602.2 Exception permits a parallel approach for drinking fountains primarily used by children when the spout is 30" AFF maximum. However, 521 CMR does not distinguish between adult and children's dimensions for classroom sinks nor drinking fountains.*	 
28.	**Fire Extinguisher** The fire extinguisher is mounted >48" AFF to the highest operable part, @ 59".	
29.	**AED Cabinet** The AED cabinet is mounted >48" AFF to the highest operable part, @ 58".	
30.	**Drinking Fountains** There are no drinking fountains for standing persons provided. The drinking fountain near the light gallery #3 lacks the required knee clearance, @ 24" AFF.	

31.	**Kitchen** The doors leading to the food service provide <32" clear width, @ 29". The doors lack the required 48" pull-side maneuvering clearance perpendicular to the doorway, @ 40" measured to the tray slide. The doors require >5lbs of force to open.	
32.	**Cafeteria** The ramp has slopes >8.3%, @ up to 8.8%. The ramp lacks edge protection. The handrails lack the required extensions at the bottom of the ramp. The stair to the stage lacks the required handrail extensions at the top and bottom. The drinking fountain's spout is mounted >36" AFF, @ 36 ½". There is no drinking fountain for standing persons provided.	 
33.	**Classroom 34** The vision panel is >43" AFF, @ 49".	
34.	**Classroom 8** The phone is mounted >48" AFF to the highest operable part, @ 63", and it protrudes >4" into the circulation path, @ 6". The hand sanitizer is mounted >48" AFF to the highest operable part, @ 49".	

35.	**Library** The soap dispenser is mounted >46" above the counter, @ 50". The routes between book stacks provide <36" of clear width, @ 33".	
36.	**Gymnasium** There are no wheelchair spaces provided at the bleachers. The thermostat cage protrudes >4" into the circulation area, @ 5 ½".	 
37.	**Nurse's Office** The maneuvering clearance is <18" on the latch pull side of the door, @ 8". The vision panel is >43" AFF, @ 45 ½". The letter box is mounted >48" AFF, @ 56". The hand sanitizer is mounted >48" AFF, @ 52".	
38.	**Single-User Toilet Room at Music Room** The door provides <32" of clear width, @ 23". The room lacks the required footprint and elements for an accessible toilet room.	

39.	**Staff Multi-User Toilet Room serving Kitchen** The door provides <32" of clear width, @ 28". The door hardware requires tight grasping, pinching, or twisting of the wrist to operate. The room lacks the required footprint and elements for an accessible toilet room.	
40.	**Girls' & Boys' Toilet Rooms near Cafeteria** The route to the stalls provides <36" of clear width, @ 33 ½" measured from the stall partition to the radiator. *Observed at girls' toilet room.* The urinal flush control is mounted >44" AFF, @ 45". For a toilet room with six or more toilets/ urinals, there is no ambulatory stall provided. *Observed at boys' toilet room.* The door provides <32" of clear width, @ 29". The maneuvering clearance is <18" on the latch pull side of the door, @ as little as 13". The knee clearance at the sink is <25" AFF, @ 19 ½". The pipes underneath the sink are not insulated. The mirror is mounted >31" AFF measured to the bottom of the reflective surface, @ up to 36 ½". The room lacks an accessible stall. The room lacks visual alarm. *Observed at girls' and boys' toilet rooms.* *Note: These toilet rooms appear to be utilized by students of all age groups, therefore KMA audited based on children's dimensional requirements. KMA has received guidance from the MAAB stating that these toilet rooms must meet either adult dimensions or the dimensions for the user group with the highest population using these facilities.*	   

41.	**Girls' & Boys' Toilet Rooms serving Corridors 2 & 3** The rim of the urinal is >17" AFF, @ 18". *Observed at boys' toilet room.* The threshold is >½" high. The door lacks the required maneuvering clearance on the latch pull side due to the paper towel dispenser and to the wall. The knee clearance at the sink is <25" AFF, @ 23". The pipes underneath the sink are not insulated. The mirror is >31" AFF measured to the bottom of the reflective surface, @ 38". The paper towel dispenser protrudes >4" into the circulation area, @ 9". There is no accessible stall provided. The room lacks visual alarm. *Observed at girls' and boys' toilet rooms.* *Note: These toilet rooms appear to be utilized by students of all age groups, therefore KMA audited based on children's dimensional requirements. KMA has received guidance from the MAAB stating that these toilet rooms must meet either adult dimensions or the dimensions for the user group with the highest population using these facilities.*	  
42.	**Girls' & Boys' Multi-User Toilet Rooms near Gym** The stall door is not self-closing. The toilet centerline is not 18" from the side wall, @ 18 ½". *Observed at girls' toilet room.* The accessible stall is not 72"x60", @ 71"x60". The flush control is not located on the open side of the toilet. *Observed at boys' toilet room.* The threshold is >½" high. The maneuvering clearance is < 18" on the latch pull side of the door, @ 12" measured from the door to the sink. The pipes underneath the sink are not insulated.	 

	The knee clearance at the sink is <25" AFF, @ 22". The mirror is >31" AFF measured to the bottom of the reflective surface, @ 41". The stall door lacks a pull device on both sides of the door. The headroom at the stall door provides <80" of vertical clearance, @ 72". The rear and side grab bars are not mounted 20"-25" AFF, @ 31" measured to the top of the gripping surface. The side grab bar extends <54" from the rear wall, @ 49". The toilet paper dispenser is mounted <12" above the side grab bar. The pipe along the side wall is obstructing the toilet clearance. *Observed at girls' and boys' toilet rooms.* *Note: These toilet rooms appear to be utilized by students of all age groups, therefore KMA audited based on children's dimensional requirements. KMA has received guidance from the MAAB stating that these toilet rooms must meet either adult dimensions or the dimensions for the user group with the highest population using these facilities.*	  
43.	**Single-User Toilet Rooms in Classrooms** The knee clearance at the sink is <25" AFF, @ 22". The mirror is >31" AFF measured to the bottom of the reflective surface, @ 38". The radiator obstructs the toilet clearance. The side grab bar extends <54" from the rear wall. *Observed at kindergarten 3.* The sink is >30" AFF, @ 32" measured to the rim. The clearance around the toilet is not 42" measured perpendicular from the rim of the toilet, to the shelf, @ 32". *Observed at kindergarten 1 and kindergarten 2.* The threshold is >½" high. The maneuvering clearance is <18" on the latch pull side of the door, @ as little as 9". The pipes underneath the sink are not insulated.	 

	The flush control is not located on the open side of the toilet. The centerline of the toilet is not 11”-15” from the side wall, @ 17 ½” - 19”. The clearance around the toilet is <60”, @ as little as 58” measured from the side wall to the sink. The paper towel dispenser protrudes into the circulation area. The rear and side grab bars are not mounted 20”-25” AFF, @ 31” measured to the top of the gripping surface. The toilet paper dispenser is mounted <12” above the side grab bar. The room lacks visual alarm. *Observed at kindergarten 1, 2, and 3.* *Note: These toilet rooms appear to be utilized by kindergarten students, therefore KMA audited based on kindergartener dimensional requirements.*	 

44.	**Staff Single-User Toilet Rooms serving Corridors 2 & 3** The threshold is >½" high. The door lacks the required 48" pull-side maneuvering clearance perpendicular to the doorway, @ 41", measured from the door to the sink. The paper towel dispenser protrudes >4" into the circulation area. The flush control at one of the toilet rooms is not located on the open side of the toilet. The rear and side grab bars are not mounted 33"-36" AFF, @ 32 ½" measured to the top of the gripping surface. The side grab bar extends <54" from the rear wall, @ 48". The toilet paper dispenser is mounted <12" above the side grab bar, @ 5". The toilet paper dispenser is not 7"-9" from the rim of the toilet, @ 1". The clearance between the rear grab bar and the flush valve is <1 ½". The coat hook is >48" AFF, @ 54".	  
45.	**Staff Single-User Toilet Rooms near Teachers' Lounge** The knee clearance at the sink is <27" AFF, @ as little as 24". The pipes underneath the sink are not insulated. The mirror is mounted >40" AFF measured to the bottom of the reflective surface, @ up to 51". The flush control is not located on the open side of one of the toilets. The toilet centerline is not 18" from the side wall, @ 15". The toilet seat is not 17"-19" AFF, @ 15". The rear grab bar is <42" long, @ 30". The rear and side grab bars are not mounted 33"-36" AFF, @ 27" measured to the top of the gripping surface.	 

	The toilet paper dispenser is mounted <12" above the rear grab bar, @ as little as 3". The clearance between the rear grab bar and the flush valve is <1 ½".One of the toilet rooms lack the required rear grab bar. The clearance around the toilet is <60", @ as little as 55" measured from wall to wall. The shelf and the paper towel dispenser protrude >4" into the circulation area, @ up to 11". The coat hook is mounted >48" AFF, @ 64".	 
46.	**Single-User Toilet Room at Nurse's Office** The maneuvering clearance is <18" on the latch pull side of the door, @ 8" due to the sink. The door provides <32" of clear width, @ 29". The knee clearance at the sink is <27" AFF, @ 24". The pipes underneath the sink are not insulated. The mirror is mounted >40" AFF measured to the bottom of the reflective surface, @ 47". The centerline of the toilet is not 18" from the side wall, @ 21". The toilet lacks the required rear and side grab bars. The toilet seat is not 17"-19" AFF, @ 15 ½". The clearance around the toilet is <60", @ 42" measured from the side wall to the sink. The clearance in front of the toilet is <42" measured from the rim of the toilet to the front wall, @ 37 ½". The toilet paper dispenser is not 7"-9" from the rim of the toilet, @ 11". The room lacks a 60" minimum turning space. The room lacks visual alarm.	  

End of Report.

Key: 5969 **Town of ORLEANS - Fiscal Year 2023** 12/27/2022 7:54 pm SEQ #: 6,233

LEGAL

CURRENT OWNER	PARCEL ID	LOCATION
TOWN OF ORLEANS **ELEM SCHOOL/FIRE DEPT** **19 SCHOOL RD** **ORLEANS, MA 02653**	**40-65-0**	**46 ELDREDGE PARK WY**

TRANSFER HISTORY	DOS	T	SALE PRICE	BK-PG (Cert)
TOWN OF ORLEANS	06/28/1955	YY		(17974)

CLASS	CLASS%	DESCRIPTION	BN ID	BN	CARD
9340	100	IMP.EDUCATION		1	1 of 2

PMT NO	PMT DT	TY	DESC	AMOUNT	INSP	BY	1st	%
52	02/03/2021	5	REMODELING	300,000	03/09/2021	PJK	0	0
542	12/01/2020	5	REMODELING	5,400	03/09/2021	PJK	0	0
423	08/02/2016	3	MAINTENANCE	3,881	08/01/2017	RJM	100	100
215	04/20/2016	5	REMODELING		08/01/2017	RJM	100	100
369	07/30/2015	5	REMODELING	50,000	03/24/2016	RJM	100	100

LAND

CD	T	AC/SF/UN	Ngh		Loc	View	Infl1		ADJ BASE	SAF	Infl2		LPI		VC	CREDIT AMT	ADJ VALUE
103	S	174,240	CIM	1.00	1	1.00	100	1.00	539,600	1.00	100	1.00	C-2	1.00			2,158,400
203	A	19.000	CIM	1.00	1	1.00	100	1.00	105,400	1.00	100	1.00	C-2	1.00			2,002,600

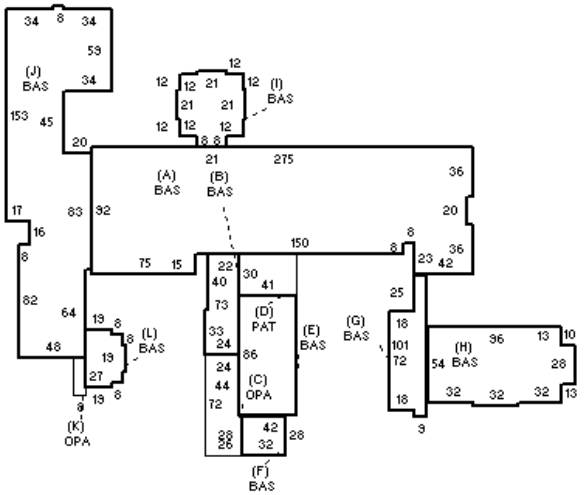
TOTAL	23.000 Acres	ZONING	R	FRNT	0
Ngh	CIM	NOTE			
Loc_View	AVERAGE				
Infl1	NO ADJUST				

ASSESSED	CURRENT	PREVIOUS
LAND	4,161,000	3,782,600
BUILDING	6,822,000	5,796,100
DETACHED	127,700	115,900
OTHER	2,569,900	2,139,500
TOTAL	**13,680,600**	**11,834,100**

DETACHED

TY	QUAL	COND	DIM/NOTE	YB	UNITS	ADJ PRICE	RCNLD
GEN	A 1.00	SV 1.00	OES PROP	2020	1	32,359.90	32,400
SHF	A 1.00	SV 1.00	8X8 PLYGND	2020	64	10.50	700
SHF	A 1.00	SV 1.00	8X8 BLDG A	2020	64	10.50	700
CTA	A 1.00	SV 1.00	3 COURTS		3	23,453.50	70,400
CTA	A 1.00	SV 1.00	BBALL COURT		1	23,453.50	23,500

PHOTO 09/07/2022



BUILDING

BUILDING	CD	ADJ	DESC
MODEL	5		CIM
STYLE	96	2.66	SCHOOLS [100%]
QUALITY	G	1.35	GOOD [100%]
FRAME	1	0.99	WOOD FRAME [100%]

MEASURE	6/8/2020	BRH
LIST	6/8/2020	BRH
REVIEW	6/9/2020	BRH

BLDG COMMENTS

ORLEANS ELEM SCHOOL - 1960 YR BUILT=EST/ ADDITION EST=2000; INSURANCE VALUE $7,399,994 AS OF NOV-13. REMEASURED AND REVALUED FY-15

YEAR BLT	1960	SIZE ADJ	0.813
NET AREA	54,328	DETAIL ADJ	2.645
$NLA(RCN)	$251	OVERALL	1.000

CAPACITY	UNITS	ADJ
STORIES	1	1.00
ROOMS	0	1.00
BEDROOMS	0	1.00
BATHROOMS	0	1.00
UNITS	0	1.00
HALFBATHS	0	1.00
% HEATED	100	1.00
% A/C	10	1.00
% SPRINKLERS	100	1.00

ELEMENT	CD	DESCRIPTION	ADJ
FOUNDATION	2	SLAB	1.00
EXT. COVER	1	WOOD SHINGLES	1.00
ROOF SHAPE	4	FLAT/SHED	0.98
ROOF COVER	1	ASPH/COMP SHIN	1.00
FLOOR COVER	4	TILE	0.98
INT. FINISH	2	DRYWALL	1.02
HEATING/COOLING	2	HOT WATER	1.02
FUEL SOURCE	2	GAS	1.00

S	BAT	T	DESCRIPTION	UNITS	YB	ADJ PRICE	RCN
A	BAS	L	BAS AREA	22,766	1960	248.52	5,657,713
B	BAS	L	BAS AREA	1,672	1960	248.52	415,519
+	OPA	N	OPEN PORCH	2,000		62.42	124,839
D	PAT	N	PATIO	1,230		14.52	17,855
E	BAS	L	BAS AREA	3,612	1960	248.52	897,639
F	BAS	L	BAS AREA	896	1960	248.52	222,670
+	BAS	L	BAS AREA	19,822	2000	248.52	4,926,082
H	BAS	L	BAS AREA	5,560	2000	248.52	1,381,748

TOTAL RCN	13,644,065
CONDITION ELEM	CD
EFF.YR/AGE	1991 / 30
COND	50 50 %
FUNC	0
ECON	0
DEPR	50 % GD 50
RCNLD	$6,822,000