

Wren Elementary School

EXISTING SITE INFORMATION

Items		Description
Project Name		Wren Avenue Elementary School
Property Type		Academic
Full Address		3339 Wren Avenue Concord, CA 94519
Year Built		1951
Gross Building Area (GSF)		38,792
Current Replacement Value (CRV)		\$29,094,000
CRV/GSF (\$/Sq Ft)		\$750
Number of Classrooms		X
Number of Portables		0
Student population (2018/2019)		355
Site Acreage		10.4
Building Name	Gross Square Footage	Built/Renovated
Library 1-10	10,500	1955-2012
Administration	2,900	1955-2012
K1-K2	4,400	1955-2012
K3	1,400	2012
11-17	4,200	1955-2012
18-21	3,893	1955-2012
22-24	4,400	1955-2012
25	1000	2012
26	1,100	2012
M-U	5,700	1955-2012
P1-P2	1,900	1955-2012
Total SF	41,393	

All 41,393 square feet of the property are occupied by Mount Diablo Unified School District. The spaces are mostly a combination of offices, classrooms spaces with supporting restrooms, administrative offices, and mechanical and other utility spaces.

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OVERVIEW

Property Executive Summary

Wren Avenue Elementary School is a partially-occupied academic campus. It consists of ten single-story structures. There were several isolated instances of casework in poor condition. There is an older steam boiler and heating system in the M- U portion of the A Wing/M-U building (AMU). Approximately 50% of windows are older, single-pane units that are thermally inefficient and beyond their useful lives.

Site Executive Summary

The buildings cover approximately 8.5% of the overall site. Landscaping consists of trees, shrubs, lawn areas, and a small garden for kindergarten curriculum. Landscaped areas are irrigated by an in-ground sprinkler system. Fencing is located at the perimeter of the campus and separating the kindergarten areas from the remainder of the campus. There are multiple play areas including two with play structures on poured-in-place rubber surfaces. Parking is provided in one asphalt paved lot with solar carports. Service vehicle access is provided at the M-U with a concrete loading dock. The pedestrian pavement throughout the property is constructed of asphalt and cast-in-place concrete. Concrete and metal steps are located at the loading dock, and a cast-in-place concrete ramp provides access to the rear of CR 24. General site lighting is provided by building-mounted metal halide fixtures. The covered sidewalk is lit by LED soffit fixtures.

Architectural Structural Executive Summary

The foundation system was able to be partially observed. It appears to be a concrete slab-on-grade with integral perimeter footings. The building structural systems consist of conventional wood framing with steel-supported roof structures. B and C Wing, CR 24, and CR 23 roofs are flat and finished with a modified bitumen. The A Wing/M-U roof is shallow-pitched and finished with modified bitumen. CR 16-18, CR 20, CR 21, CR 22, and CR 25-27 (Emily Buildings) roofs are gabled and finished with painted metal. The exterior walls for A, B, and C Wings are painted concrete with A Wing/M-U also having brick veneer accents. The remaining buildings are finished with stucco. Older windows are single-glazed, metal-framed units in ribbons, and newer windows are double-glazed, aluminum-framed units in ribbons and punched openings. Doors are glazed steel and steel utility units. The building interiors generally include painted and wallpapered gypsum board walls, painted concrete walls in utility areas, and ceramic tile walls in the restrooms. The floor finishes consist of vinyl composition tile (VCT), carpet, and ceramic tile with terrazzo in the kitchen. The interior ceilings are finished with acoustic ceiling tile and gypsum board in some restrooms and utility spaces. There is a covered sidewalk connecting the M-U to A, B, and C Wings, and a loading dock serving the M-U.

Mechanical/Electrical/Plumbing Executive Summary

Vertical conveyance in the M-U is provided by a wheel chair lift that serves the stage. Domestic hot water is provided to the kitchen by a gas-fired water heater in the M-U boiler room and to the front office area by an electric water heater located in the copy room. Heating is provided to the M-U by a steam boiler. Heating and cooling is provided to A, B, and C Wings by multi-zone ductless split systems and to the remaining buildings by individual furnaces with remote condensing units. Fire protection systems include a fire alarm system, smoke detectors, alarms with strobes, pull stations, extinguishers, emergency lighting, and appropriate egress signage. General interior lighting is provided by T-8

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fluorescent fixtures with light emitting diode (LED) fixtures in accent locations. There is soffit lighting throughout the covered sidewalk. Electrical service is provided by a single 1600-amp switchboard served from a pad mounted transformer. There is a solar system with an inverter rated at 100 kW. A well serves the irrigation system, but all other domestic supply and sanitary is connected to the municipal system.

SCHOOL SITE ENGAGEMENT

Principal Priorities:

1. Security push-out gates and surveillance upgrades (more cameras)
2. Repainting of the entire school
3. Modernized play structures and flexible classrooms

ASSESSMENT OF SITE

Historical Summary

The property is an elementary school campus which was originally developed in 1951, adding buildings in 1990, 2002, and 2004. The original buildings largely had their HVAC overhauled in 2014 with the exclusion of the M-U, which still has a steam boiler last replaced in 1994.

Site

Site parking appears adequate, but the POC expressed concern with parking capacity during school events that garner high attendance from parents. The play equipment and surfaces are adequate. Site lighting appears adequate.

Architectural

The utility spaces have significant damage to their walls and ceilings, which will require replacement. The original structures' exteriors are largely original and have been retouched on an as-needed basis. Interior finishes are mostly replaced on an as-needed basis, but the casework in the original buildings appears mostly original. This casework is dated but functional. The roofs appear to have last been replaced in 2002. They do not exhibit leaks, but the scuppers lack drain baskets.

Mechanical, Electrical, Plumbing & Fire (MEPF)

The newer buildings' HVAC systems are aging yet functional, and the main buildings' HVAC systems were recently replaced with variable refrigerant flow systems. The M-U uses a steam boiler with some components original to the 1951 construction. The site lacks a fire sprinkler system, and a full retrofit is recommended. Electrical systems were renovated in 2002. The classroom lavatories have uninsulated drain pipes.

Recommended Additional Studies

No additional studies are recommended.

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Facility Condition Index

In this report we have calculated the Facility Condition Index (FCI) which is used in Facilities Management to provide a benchmark to compare the relative condition of a group of facilities. The FCI is primarily used to support asset management initiatives of federal, state, and local government facilities organizations.

The FCI is the ratio of accumulated Total Cost (TC) (Deferred Maintenance, Capital Renewal and Plant Adaptation) to the Current Replacement Value (CRV) for a constructed asset calculated by dividing the TC by the CRV. The range is from zero for a newly constructed asset, to one for a constructed asset with a TC value equal to its CRV. Acceptable ranges vary by "Asset Type", but as a general guideline the FCI scoring system is as follows:

Condition	Definition	Percentage Value
GOOD	In a new or well-maintained condition, with no visual evidence of wear, soiling or other deficiencies.	0% to 5%
FAIR	Subject to wear and soiling but is still in a serviceable and functioning condition.	5% to 10%
POOR	Subjected to hard or long-term wear. Nearing the end of its useful or serviceable life.	Greater than 10%
V-POOR	Subjected to hard or long-term wear. Has reached the end of its useful or serviceable life. Renewal now necessary.	Greater than 60%

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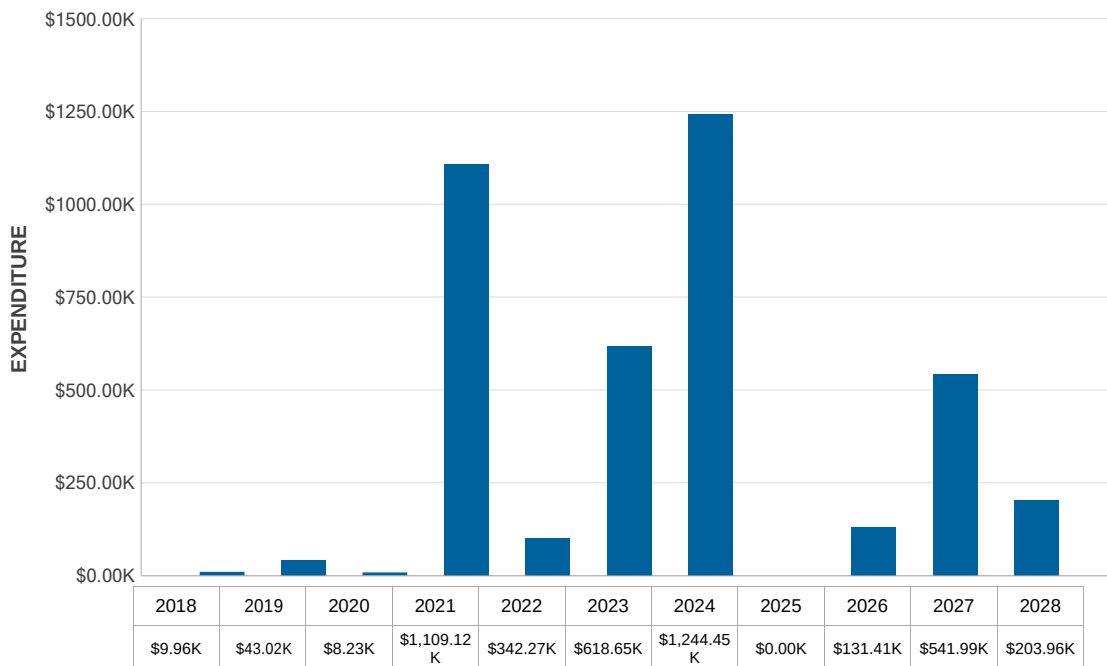
Property Condition

This report represents summary-level findings for the Property Condition Assessment. The deficiencies identified in this assessment can be combined with potential new construction requirements to develop an overall Long Term Capital Needs Plan that can be the basis for a facility wide capital improvement funding strategy. Key findings from the Assessment include:

Key Findings	Metric
Facility Condition Index (FCI)	0.03 %
Current Replacement Value (CRV)	\$29,094,000
Immediate Capital Needs (Current Year or Year 0)	\$9,960
Short Term Capital Needs (Year 1 to 5)	\$2,121,283
Long Term Capital Needs (Year 6 to 10)	\$2,121,809
TOTAL Capital Needs (Year 0 to Year 10)	\$4,253,052
Average Capital Needs Per Year	\$425,305

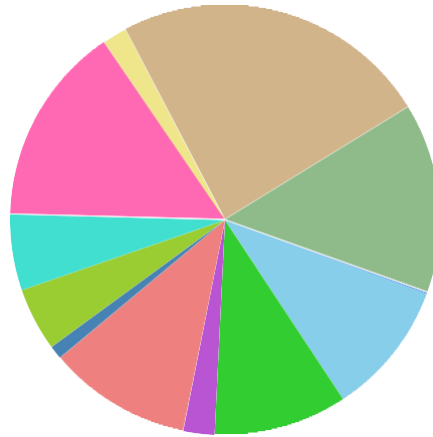
The building expenditure summary section provides an executive overview of the findings from the assessment. The chart below provides a summary of yearly anticipated expenditures over the study period for the Wren Avenue Elementary School building. In addition, we have scheduled key findings highlighting key items of greater than \$5,000 and their anticipated failure year. Further details of these expenditures are included within each respective report section and within the expenditure forecast, in Appendix A of this report. The results illustrate a total anticipated expenditure over the study period of approximately \$4,253,052.

Expenditure Forecast Over Study Period



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Distribution of Capital Needs by Building System



Building System	Estimated Cost	Percentage of Total Cost
B20 Exterior Enclosure	\$431,831	10.18 %
B30 Roofing	\$426,100	10.04 %
C10 Interior Construction	\$99,905	2.35 %
C30 Interior Finishes	\$459,078	10.82 %
D20 Plumbing	\$42,899	1.01 %
D30 HVAC	\$201,977	4.76 %
D40 Fire Protection	\$242,450	5.71 %
D50 Electrical	\$638,961	15.06 %
E10 Equipment	\$78,334	1.85 %
E20 Furnishings	\$1,011,808	23.85 %
G20 Site Improvements	\$605,921	14.28 %
G30 Site Mechanical Utilities	\$3,828	0.09 %
Total	\$4,243,092	100 %

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Building Type 1 Information



Building Type 1 Information		
Building Locations	A Wing/M-U (AMU)	
Constructed/ Renovated	1951/2014	
Building Size	14,473 SF	
Number of Stories	1	
<i>System</i>	<i>Description</i>	<i>Condition</i>
Structure	Conventional wood-framed structure on concrete slab	Good
Façade	Brick and painted concrete with aluminum-framed windows	Good
Roof	Primary: Hip construction with modified bituminous finish Secondary: Gable construction with modified bituminous finish	Fair
Interiors	Walls: Painted gypsum board, Wallpaper Floors: Carpet, VCT, ceramic tile, terrazzo Ceilings: Painted gypsum board, ACT	Fair
Elevators	Wheelchair lift	Fair
Plumbing	Copper supply, cast iron waste and vent Gas-fired water heater	Fair
HVAC	Central system with boiler feeding fan coil terminal units VRV Ductless split-systems	Fair
Fire Suppression	Fire extinguishers	Good
Electrical	Source & Distribution: Main switchboard and panels with copper wiring Interior Lighting: T-8, LED Emergency: None	Good
Fire Alarm	Alarm panel, smoke detectors, alarms, strobes, pull stations, back-up emergency lights, and exit signs	Good
Equipment/Special	Commercial kitchen equipment	Fair
Key Issues & Findings	Possible structural settlement, antiquated HVAC components and infrastructure in M-U portion, building lacks fire suppression, possible ACM flooring	

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Building Type 2 Information



Building Type 2 Information		
Building Locations	B Wing, C Wing	
Constructed/ Renovated	1951/2014	
Building Size	7,556 – 10,000 SF	
Number of Stories	1	
<i>System</i>	<i>Description</i>	<i>Condition</i>
Structure	Conventional wood-framed structure on concrete slab	Good
Façade	Painted CMU with steel windows	Fair
Roof	Primary: Flat construction with modified bituminous finish	Fair
Interiors	Walls: Painted gypsum board, wallpaper Floors: Carpet, VCT, ceramic tile Ceilings: Painted gypsum board, ACT	Fair
Elevators	None	--
Plumbing	Copper supply, cast iron waste and vent Electric water heater for B Wing office area only	Fair
HVAC	VRF Ductless Split Systems Supplemental: Electrical space heaters	Good
Fire Suppression	Fire extinguishers	Good
Electrical	Source & Distribution: Fed from AMU with copper wiring Interior Lighting: T-8, LED Emergency: None	Good
Fire Alarm	Alarm panel, smoke detectors, alarms, strobes, pull stations, back-up emergency lights, and exit signs	Good
Equipment/Special	None	--
Key Issues & Findings	Possible structural settlement, antiquated windows, roof lacks drain baskets, possible ACM flooring	

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Building Type 3 Information



Building Type 3 Information		
Building Locations	CR 23	
Constructed/ Renovated	1990	
Building Size	937 SF	
Number of Stories	1	
<i>System</i>	<i>Description</i>	<i>Condition</i>
Structure	Conventional wood-framed structure on concrete slab	Good
Façade	Painted wood with aluminum-framed windows	Fair
Roof	Primary: Flat construction with modified bituminous finish	Fair
Interiors	Walls: Wallpaper Floors: Carpet Ceilings: ACT	Fair
Elevators	None	--
Plumbing	Copper supply, cast iron waste and vent No hot water	Fair
HVAC	Package unit	Excellent
Fire Suppression	Fire extinguishers	Good
Electrical	Source & Distribution: Fed from AMU with copper wiring Interior Lighting: T-8 Emergency: None	Good
Fire Alarm	Alarm panel, smoke detectors, alarms, strobes, pull stations, back-up emergency lights, and exit signs	Good
Equipment/Special	None	--
Key Issues & Findings	Package unit replaced very recently	

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Building Type 4 Information



Building Type 4 Information		
Building Locations	CR 24	
Constructed/ Renovated	2002	
Building Size	957 SF	
Number of Stories	1	
<i>System</i>	<i>Description</i>	<i>Condition</i>
Structure	Conventional wood-framed structure on concrete slab	Good
Façade	Stucco with aluminum-framed windows	Fair
Roof	Primary: Flat construction with modified bituminous finish	Fair
Interiors	Walls: Painted gypsum board and wallpaper Floors: Carpet, VCT, ceramic tile Ceilings: Painted gypsum board, ACT	Fair
Elevators	None	--
Plumbing	Copper supply, cast iron waste and vent No hot water	Fair
HVAC	Individual split-system units	Fair
Fire Suppression	Fire extinguishers	Good
Electrical	Source & Distribution: Fed from AMU with copper wiring Interior Lighting: T-8, LED Emergency: None	Good
Fire Alarm	Alarm panel, smoke detectors, alarms, strobes, pull stations, back-up emergency lights, and exit signs	Good
Equipment/Special	None	--
Key Issues & Findings	No major findings	

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Building Type 5 Information



Building Type 5 Information		
Building Locations	C68, C20, C21, C22, C57	
Constructed/ Renovated	2004	
Building Size	1,290 – 2,930 SF	
Number of Stories	1	
<i>System</i>	<i>Description</i>	<i>Condition</i>
Structure	Conventional wood-framed structure on concrete slab	Good
Façade	Stucco with aluminum-framed windows	Fair
Roof	Primary: Gable construction with metal finish	Fair
Interiors	Walls: Painted gypsum board and wallpaper Floors: Carpet, VCT, ceramic tile Ceilings: Painted gypsum board, ACT	Fair
Elevators	None	--
Plumbing	Copper supply, cast iron waste and vent No hot water	Fair
HVAC	Split systems	Fair
Fire Suppression	Fire extinguishers	Good
Electrical	Source & Distribution: Fed from AMU with copper wiring Interior Lighting: T-8, LED Emergency: None	Good
Fire Alarm	Alarm panel, smoke detectors, alarms, strobes, pull stations, back-up emergency lights, and exit signs	Good
Equipment/Special	None	--
Key Issues & Findings	No major findings	

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Site Summary Information



Site Information		
Lot Size	10.4 acres (estimated)	
Parking Spaces	49 total spaces all in open lots; 4 of which are accessible 4 accessible (included in total above), 1 van-accessible	
<i>System</i>	<i>Description</i>	<i>Condition</i>
Pavement/Flatwork	Asphalt lots with areas of concrete and concrete sidewalks, curbs, ramps, and stairs	Fair
Site Development	Building-mounted signage, chain link and wooden fencing, chain link dumpster enclosures Playgrounds and sports courts with fencing Limited park benches, picnic tables	Fair
Landscaping & Topography	Limited landscaping features Irrigation present No retaining walls Low to moderate site slopes throughout	Fair
Draining Systems and Erosion Control	Surface flow, Underground piping, Municipal system Significant soil erosion not observed Ponding not observed	Fair
Utilities	Municipal water and sewer, on-site well for irrigation Local utility-provided electric and natural gas	Fair
Site Lighting	Building-mounted: metal halide Pedestrian walkway lighting	Fair
Ancillary Structures	Solar carports, pre-fabricated storage sheds, covered sidewalk	Fair
Key Issues & Findings	Minor alligator cracking in parking lots and sidewalks	