

Rio Vista Elementary School

Items	Description	
Project Name	Rio Vista Elementary School	
Property Type	Academic	
Full Address	611 Pacifica Avenue Bay Point, CA 94565	
Year Built	1954	
Gross Building Area (GSF)	46,200	
Current Replacement Value (CRV)	\$34,650,000	
CRV/GSF (\$/Sq Ft)	\$750	
Number of Classrooms	X	
Number of Portables	0	
Student population (2018/2019)	500	
Site Acreage	10.0	
Building Name	Gross Square Footage	Built/Renovated
Building 1 - Office	5,000	1954
Building 2 - A2-A5	4,800	1954
Building 3 - A1	1,600	1954
Building 4 - B1	2,000	1954
Building 5 - B2-B5	4,800	1954
Building 6 - B6-B9	5,000	1954
Building 7 - C1	1,000	2002
Building 8 - C2	1,000	2002
Building 9 - C3-C6	5,200	2003
Building 10 - C7-C11	5,000	1954
Building 11 - C12-13	5,000	1954
Building 12 - Multi Use Building	5,800	1954

All 46,200 square feet of the property are occupied by Mount Diablo Unified School District. The spaces are mostly a combination of offices, classrooms, and multi-purpose room with supporting restrooms and mechanical and other utility spaces.

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OVERVIEW

Property Executive Summary

Rio Vista Elementary School is a fully-occupied elementary school campus. It consists of a single-story main structure with multiple classroom wings and additional classroom buildings built around 2003. The roofs have been replaced within the last year. Broken conduit and conduit fittings were observed on the roof, which should be repaired immediately. The gutters are leaking in several areas. The gutters appear to be in fair condition, but the seams are problematic throughout the site. Some of the site drains were filled in with mud and debris.

Site Executive Summary

The building and adjacent finished surfaces covers approximately half of the site. Landscaping consists of trees, shrubs, a student garden, and lawn areas. Landscaped areas are irrigated by an in-ground sprinkler system near the main office.

Fencing is located at the perimeter of the site and around the buildings with lockable gates at multiple locations around the classroom buildings. There is one dead tree between the classrooms that should be removed. Parking is provided in for 53 vehicles in two asphalt paved lots. There are three ADA accessible parking spaces, two of which are designated van accessible. Service vehicle access is provided adjacent to Classroom C13. The pedestrian pavement throughout the property is constructed of cast-in-place concrete and asphalt. Building perimeter lighting is provided by wall-mounted sodium vapor HID fixtures and metal halide flood lights. Pedestrian areas and walkways along the buildings are lit by recessed LED or CFL fixtures.

Architectural Structural Executive Summary

The foundation system was not able to be directly observed. However, based on similar structures and drawings of the original school, it consists of concrete piers supporting reinforced concrete slab-on-grade. The newer additions were constructed of concrete slab-on-grade. There appears to be minor settling in the north side of C1, evident through a small gap in the floor trim along the north side of the classroom. Although the size of the gap does not appear to present an actionable issue, the area should be monitored for further settling. The building structural systems consist of wood framing with wood truss roofs. The original building roofs are flat and replaced with a Garland roofing system in 2018. The majority of the additions have gabled roofs finished with metal. Classrooms C1 and C2 have flat roofs finished with modified bitumen. The exterior walls are painted stucco and painted plaster. Windows are single-glazed, metal-framed units in punched openings. The original buildings have steel-framed windows, and the additions have aluminum-framed windows. The building interiors generally include painted plaster with some areas of tack board and acoustical panels. The floor finishes consist primarily of vinyl composition tile (VCT) with small areas of carpet. Classrooms B2, B3, and B9 have original 9"x9" tile, which may contain asbestos. The interior ceilings are finished primarily with adhered tiles with small areas of finished drywall and plaster.

Mechanical/Electrical/Plumbing Executive Summary

Domestic hot water is provided to the M-U building kitchen and restrooms by a commercial-grade, gas-fired water heater located in a small mechanical room. A second commercial-grade, gas-fired water heater was in classroom building C12-C13. Heating and cooling are provided by rooftop package units and gas-fired furnaces with remote condensing units. Heating and cooling is provided to the office building by a multi-zone ductless split system. Supplemental cooling for IT-related loads is provided by ductless mini-splits. A natural gas-fired boiler in the M-U Building provides heating to cabinet unit heaters. Fire protection systems include a fire alarm system, smoke detectors, alarms with strobes, pull stations,

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extinguishers, and appropriate egress signage. A sprinkler system has been added to classrooms C3-C6. The kitchen hood in the M-U Building kitchen does have a wet chemical fire suppression system. General interior lighting is provided by T-8 fluorescent fixtures. Classrooms C12 and C13 have T-12 fluorescent fixtures. Electrical service is provided by a single 1,600-amp panel served from a pad-mounted transformer.

SCHOOL SITE ENGAGEMENT

Principal Priorities:

1. Multi-Use Room
2. Playground / Field
3. C12 and C13 are spaces for kids but don't currently work well as classrooms.

ASSESSMENT OF SITE

Historical Summary

Rio Vista Elementary School was built in 1954. The Multi-Use (M-U) Building lies to the west of the office building and includes the cafeteria, kitchen and stage. Around 2002 and 2003, classroom buildings were added to accommodate growing enrollment.

Site

The site parking lot is in fair condition with minimal surface cracking in several areas. Parking spaces are well marked. Sidewalk concrete and asphalt are in fair condition with no major deficiencies. There are areas of asphalt buckling and cracking within the kindergarten play area. Trees, shrubs, and grass are generally well maintained, however one mature tree between the classrooms has died. Site lighting is mostly limited to building exteriors with only two pole-mounted lights. All pedestrian paths are well lit by recessed or wall-mounted lighting fixtures. *Originally constructed in 1954, Maintenance indicates deteriorating site utility infrastructure in need of replacement.*

Architectural

Roofs on the original buildings are finished with liquified rubber over modified bituminous, which were installed in 2018. The floors in the original buildings have been upgraded to vinyl tile over time and have been well maintained. However, there are still three classrooms that have the original 9"x9" tile, which may contain asbestos. The newer classrooms have a combination of vinyl tile and carpet, both of which are in fair condition. Interior wall finishes include concrete or plaster that has been repainted periodically over the years. Other wall finishes include acoustic tiles or tack board with some remaining areas of painted gypsum board. Interior finishes have been repainted periodically as needed over the years. Lifecycle interior finish, exterior finish, and roof replacements are budgeted and anticipated.

Mechanical, Electrical, Plumbing & Fire (MEPF)

A major mechanical upgrade to the original buildings was completed around 2007. Hydronic boiler systems were replaced with packaged rooftop units, split systems, and ductless split systems. The M-U Building has a remaining hydronic boiler feeding four cabinet unit heaters. The MEPF infrastructure itself is generally in good working condition with no major expenditures anticipated in the short term.

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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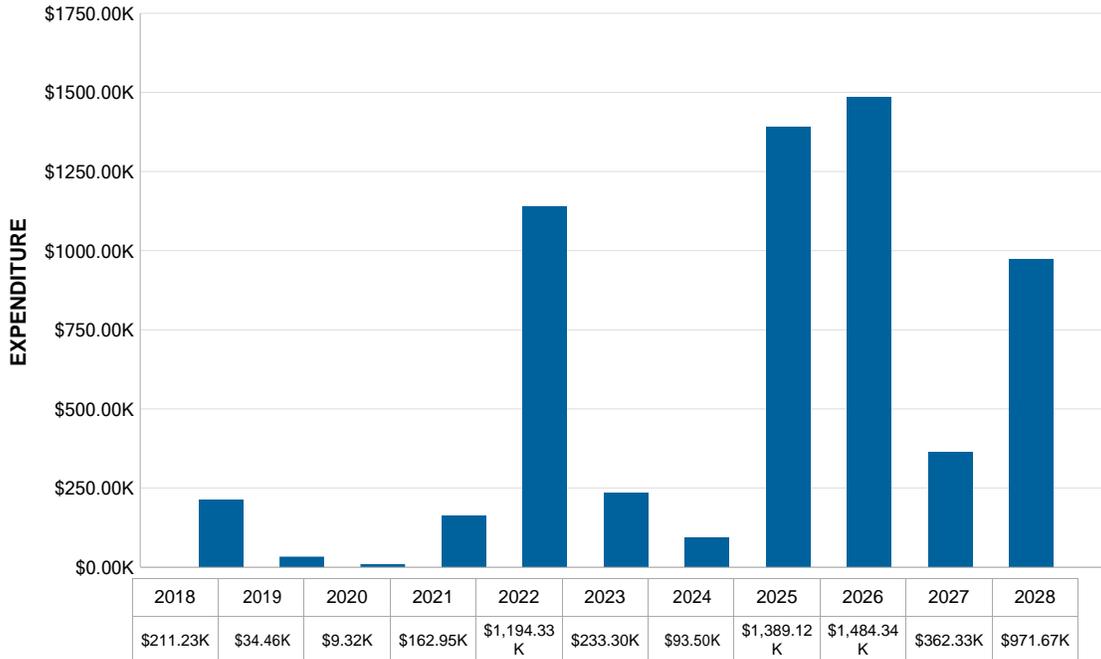
Summary of Findings

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)	0.61 %
Current Replacement Value (CRV)	\$34,650,000
Immediate Capital Needs (Current Year or Year 0)	\$211,232
Short Term Capital Needs (Year 1 to 5)	\$1,634,355
Long Term Capital Needs (Year 6 to 10)	\$4,300,948
TOTAL Capital Needs (Year 0 to Year 10)	\$6,146,535
Average Capital Needs Per Year	\$614,654

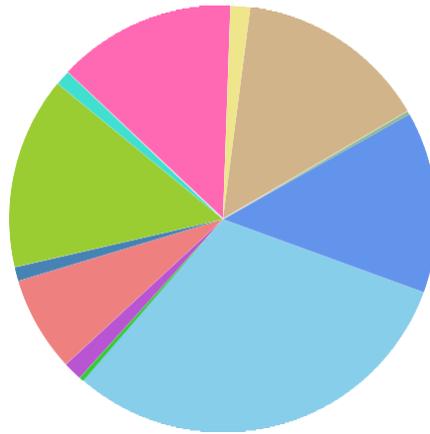
The building expenditure summary section provides an executive overview of the findings from the assessment. The chart below provides a summary of yearly anticipated expenditures over the study period for the Rio Vista Elementary School building. In addition, we have scheduled key findings highlighting 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 \$6,146,535.

Expenditure Forecast Over Study Period



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Distribution of Future (Year 1-Year 10) Needs by Building System



Building System	Estimated Cost	Percentage of Total Cost
B20 Exterior Enclosure	\$1,828,649	30.81 %
B30 Roofing	\$19,822	0.33 %
C10 Interior Construction	\$85,150	1.43 %
C30 Interior Finishes	\$428,185	7.21 %
D20 Plumbing	\$62,641	1.06 %
D30 HVAC	\$863,049	14.54 %
D40 Fire Protection	\$67,447	1.14 %
D50 Electrical	\$799,923	13.48 %
E10 Equipment	\$88,309	1.49 %
E20 Furnishings	\$861,900	14.52 %
F10 Special Construction	\$15,000	0.25 %
G20 Site Improvements	\$815,228	13.74 %
Total	\$5,935,303	100 %

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Building Type 1 Information



Building Type 1 Information		
Building Locations	Office, Library, Original Classrooms, Restrooms	
Constructed/ Renovated	1954	
Total Area	28,200 SF	
Number of Stories	1	
<i>System</i>	<i>Description</i>	<i>Condition</i>
Structure	Conventional wood-framed structure on concrete slabs Wood-framed walls and wood-framed roofs	Good
Façade	Painted plaster with steel-framed operable and fixed windows	Fair
Roof	Primary: Flat construction with liquified rubber over modified bituminous finish	Excellent
Interiors	Walls: Painted plaster, ACT Floors: Carpet, VCT, linoleum Ceilings: Painted plaster, glued-on ACT	Fair
Elevators	None	--
Plumbing	Galvanized supply, cast iron waste and vent No hot water	Fair
HVAC	Individual packaged rooftop units, multi-zone units, split systems Supplemental components: ductless mini split-systems	Fair
Fire Suppression	Fire extinguishers	Good
Electrical	Source & Distribution: Exterior switchboard with copper wiring fed from exterior main distribution panel with copper wiring Interior Lighting: T-8	Fair
Fire Alarm	Alarm panel, smoke detectors, alarms, strobes, pull stations, back-up emergency lights, and exit signs	Fair
Equipment/Special	None	--
Key Issues & Findings	Potential asbestos flooring tile in classrooms B2, B3, and B8. Buildings lack fire suppression.	

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Building Type 2 Information



Building Type 2 Information		
Building Locations	Classroom Building C1	
Constructed/ Renovated	2002	
Building Size	1,000 SF	
Number of Stories	1	
<i>System</i>	<i>Description</i>	<i>Condition</i>
Structure	Conventional wood-framed structure on concrete slabs Wood-framed bearing walls and wood-framed roofs	Good
Façade	Stucco with aluminum-framed operable windows	Fair
Roof	Primary: Flat construction with modified bituminous finish	Fair
Interiors	Walls: Painted gypsum board & Tack-board Floors: VCT Ceilings: ACT	Fair
Elevators	None	--
Plumbing	Copper supply, PVC waste and vent No hot water	Fair
HVAC	Packaged rooftop unit	Fair
Fire Suppression	Fire extinguishers	Good
Electrical	Source & Distribution: Exterior switchboard with copper wiring fed from exterior main distribution panel with copper wiring Interior Lighting: T-8	Fair
Fire Alarm	Alarm panel, smoke detectors, alarms, strobes, pull stations, back-up emergency lights, and exit signs	Fair
Equipment/Special	None	--
Key Issues & Findings	Building lacks fire suppression. Wood fascia has some warping with hardware backing out. Potential foundation settling issue should be investigated further.	

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Building Type 3 Information



Building Type 3 Information		
Building Locations	Classroom Buildings C2-C6	
Constructed/ Renovated	2003	
Building Size	6,200 SF	
Number of Stories	1	
<i>System</i>	<i>Description</i>	<i>Condition</i>
Structure	Conventional wood-framed structure on concrete slabs Wood-framed bearing walls and wood-framed roofs	Good
Façade	Stucco with aluminum-framed operable windows	Fair
Roof	Primary: Flat construction with modified bituminous finish, metal	Fair
Interiors	Walls: Painted gypsum board & tack board Floors: Carpet, VCT Ceilings: ACT	Fair
Elevators	None	--
Plumbing	Copper supply, PVC waste and vent No hot water	Fair
HVAC	Packaged rooftop unit, split systems	Fair
Fire Suppression	Fire extinguishers, sprinkler system	Fair
Electrical	Source & Distribution: Exterior switchboard with copper wiring fed from exterior main distribution panel with copper wiring Interior Lighting: T-8	Fair
Fire Alarm	Alarm panel, smoke detectors, alarms, strobes, pull stations, back-up emergency lights, and exit signs	Fair
Equipment/Special	None	--
Key Issues & Findings	None	

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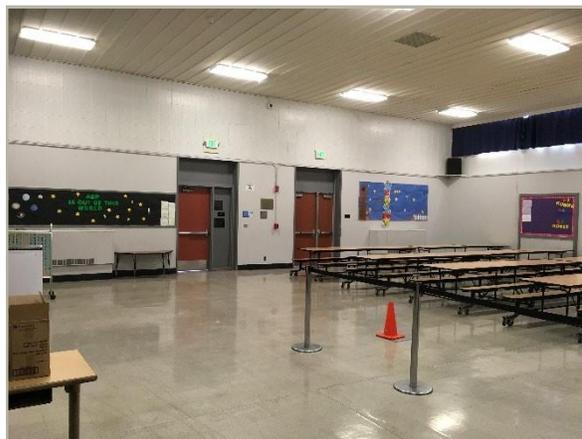
Building Type 4 Information



Building Type 4 Information		
Building Locations	Classrooms C12-C13 (computer lab, special needs classroom)	
Constructed/ Renovated	1954	
Total Area	5,000 SF	
Number of Stories	1	
<i>System</i>	<i>Description</i>	<i>Condition</i>
Structure	Conventional wood-framed structure on concrete slabs Wood-framed bearing walls and wood-framed roofs	Good
Façade	Painted plaster with steel fixed and operable windows	Fair
Roof	Primary: Flat construction with liquified rubber over modified bituminous finish	Excellent
Interiors	Walls: Painted plaster Floors: VCT, polished concrete Ceilings: Painted plaster, ACT	Fair
Elevators	None	--
Plumbing	Galvanized and copper supply, cast iron waste and vent Gas domestic hot water heater	Fair
HVAC	Packaged rooftop units, ductless mini-splits	Fair
Fire Suppression	Fire extinguishers	Fair
Electrical	Source & Distribution: Exterior switchboard with copper wiring fed from exterior main distribution panel with copper wiring Interior Lighting: T-8 and T-12	Fair
Fire Alarm	Alarm panel, smoke detectors, alarms, strobes, pull stations, back-up emergency lights, and exit signs	Fair
Equipment/Special	None	--
Key Issues & Findings	Building lacks fire suppression	

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Building Type 5 Information



Building Type 5 Information		
Building Locations	M-U Building	
Constructed/ Renovated	1954	
Building Size	5,800 SF	
Number of Stories	1	
<i>System</i>	<i>Description</i>	<i>Condition</i>
Structure	Conventional wood-framed structure on concrete slabs Wood-framed bearing walls and wood-framed roofs	Good
Façade	Painted plaster with steel-framed fixed and operable windows	Fair
Roof	Primary: Flat construction with liquified rubber over modified bituminous finish	Excellent
Interiors	Walls: Painted plaster Floors: VCT, quarry tile kitchen, wood floor stage Ceilings: ACT, Painted plaster	Fair
Elevators	Wheelchair lift	Fair
Plumbing	Galvanized and copper supply, cast iron waste and vent Gas domestic hot water heater	Fair
HVAC	Gas-fired boiler serving cabinet and hanging unit heaters	Fair
Fire Suppression	Fire extinguishers, kitchen suppression system	Fair
Electrical	Source & Distribution: Exterior switchboard with copper wiring fed from exterior main distribution panel with copper wiring Interior Lighting: T-8, stage lighting system	Fair
Fire Alarm	Alarm panel, smoke detectors, alarms, strobes, pull stations, back-up emergency lights, and exit signs	Fair
Equipment/Special	Commercial kitchen equipment	Fair
Key Issues & Findings	Building lacks fire suppression	

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Site Summary Information



Site Information		
Lot Size	12 acres (estimated)	
Parking Spaces	53 total spaces all in open lots 3 accessible (included in total above), 2 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 fencing Playgrounds and sports courts Moderately furnished park benches, picnic tables, trash receptacles	Fair
Landscaping & Topography	Moderate landscaping features Irrigation present Slight but steady slope from south to north	Fair
Draining Systems and Erosion Control	Surface flow, pits	Fair
Utilities	Municipal water and sewer Local utility-provided electric and natural gas	Fair
Site Lighting	Building-mounted: HPS, metal halide, recessed LED and CFL bulb fixtures Pole-mounted: HPS flood	Fair
Ancillary Structures	Three steel-framed PV array structures	Good
Key Issues & Findings	Some gutter drains near buildings are filled with mud and debris. Rodents are digging holes under fence on south side.	