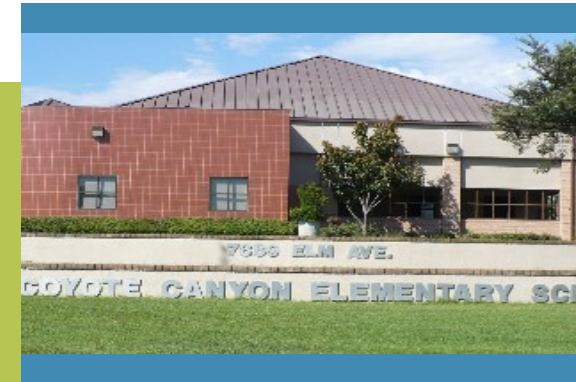


BEAR GULCH ELEMENTARY**CENTRAL ELEMENTARY****COYOTE CANYON ELEMENTARY****DOÑA MERCED ELEMENTARY****VALLE VISTA ELEMENTARY****CUCAMONGA MIDDLE****RUTH MUSSER MIDDLE****DISTRICT SUPPORT FACILITIES**

Central School District

Re: 2014 Facilities Master Plan

Dear Community:

We are very pleased to present this Facilities Master Plan to the Central School District. This master plan includes detailed campus facility assessments that GO Architects, Inc. conducted in conjunction with the District's Facilities and Maintenance and Operations staff. Site visits and assessments took place between April 23, 2014 and August 14, 2014. Meetings with Technology and Maintenance & Operations were conducted between April 23, 2014 and August 18, 2014. Detailed project scope and Rough Order of Magnitude (ROM) cost lists have been developed. The scope and Rough Order of Magnitude (ROM) estimates have been summarized into the Master Plan to allow the District to begin sequencing the work when they are ready to start.

Facilities Master Plans such as this should be considered living documents that will continue to be updated and adjusted as needs and conditions change over time. California Financial Services and GO Architects Inc. were brought on to assist the District in developing this plan through steering committees and facility assessments. Steering committees were made up of teachers, staff, community members, parents, students and administration. Each committee meeting was a focused discussion that centered around the important issues of:

- A. Code (Health, Safety and Access needs),
- B. Housekeeping (Maintenance & Operations needs), and
- C. Transformation (Educational needs).

The result of the committee meetings and surveys, in conjunction with several months of campuses assessments by GO Architects Inc and various analysis done by California Financial Services., is this Facility Master Plan. *The projects identified in this document are recommendations, the actual implementation process and timeline for completion of the projects are contingent on current and projected funding availability.*

Through the participation of the District administration we were reminded of the Central School District mission statement of being *"committed to the success of each student. Learning will always be our top priority. We will strive for excellence while maintaining the family atmosphere, passion and integrity that make us unique."* With that reminder, we started with the interests of the children and families of the District by first acknowledging that they are the reason why these transformation efforts are so necessary.

It is with great pride that we are able to assist Central School District in this important and meaningful endeavor.

Sincerely,



Betty Hanson, Ed.D.
Vice President Educational &
Facility Planning
California Financial Services



Liliana Sheridan
Project Director
GO Architects, Inc.



Godwin S. Osifeso, AIA, LEED AP
Principal
GO Architects, Inc.

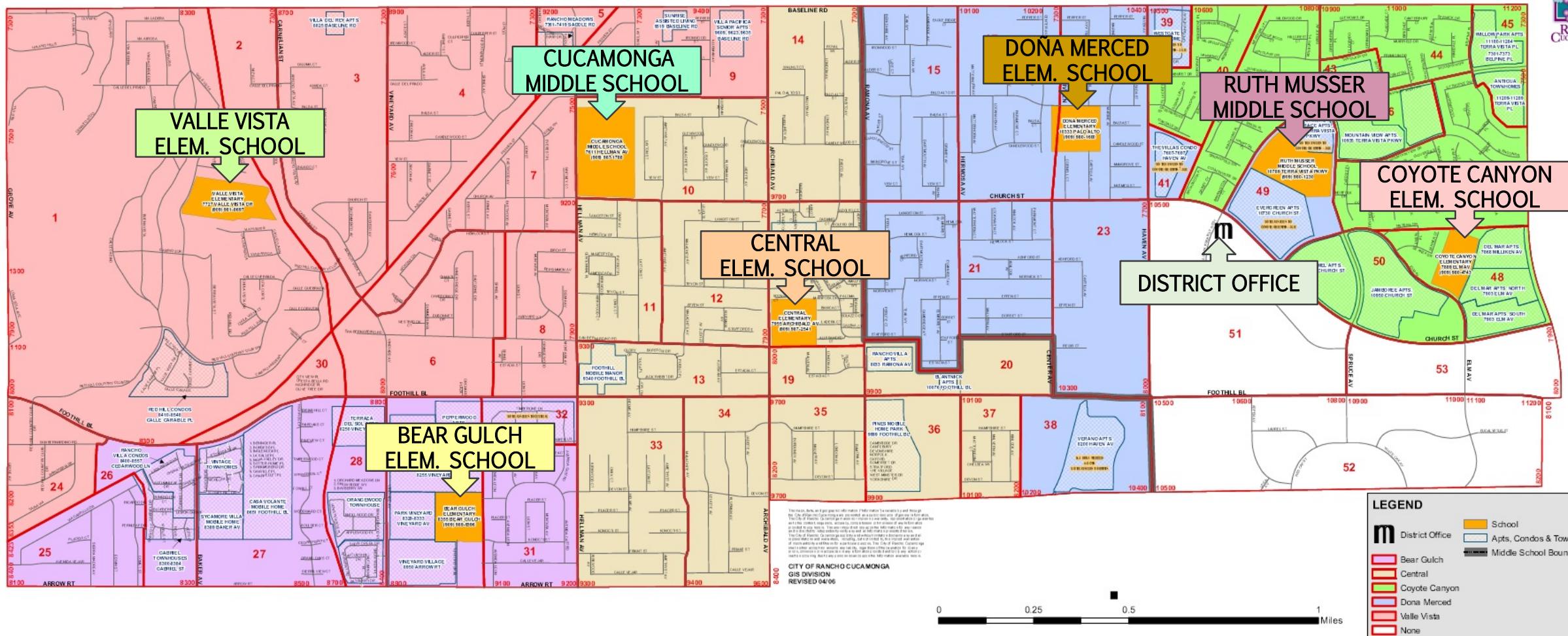
A Living Document...



The Facilities Master Plan is the result of a collaborative effort and intended to be a living document that will periodically be revised and updated to remain current and to continue to accurately reflect the needs and desires of the entire school community.



CENTRAL SCHOOL DISTRICT



- A. Introduction
- B. Acknowledgments
- C. Background, Principles and Purpose
- D. Mission and Goals
- E. Technology Mission and Goals
- F. Process
 - a. Transformation Committee
- G. Demographics
- H. Capacity Analysis
- I. Summary of Facilities Assessment
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 - I. Bear Gulch Elementary School
 - II. Central Elementary School
 - III. Coyote Canyon Elementary School
 - IV. Doña Merced Elementary School
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Appendix A: Electrical Power and Low Voltage Systems Assessment

The 2014 Facilities Master Plan (FMP) provides direction for the strategic use of facilities in response to the curricular changes brought on by the 21st Century learning movement being implemented by all the districts in the State of California.

These curricular changes embrace **accountability** for student success in learning. Accountability is measured through several components of the school's operation. These components include providing highly qualified staff, continual professional development, providing the resources for implementation of a strong curriculum, teacher/student access to technology, providing educational opportunity for parents to support their child in the home, increased educational opportunities in core curriculum, language arts, and technology.

The purpose of the FMP is to provide a roadmap for maintaining and upgrading facilities to support these accountability components. Schools facilities must be responsive to these changes in order for the Central School District (District) to successfully provide a learning environment for the 21st Century learning efforts.

This FMP was developed under the direction of the School Board of the Central School District to establish a framework to guide the District in an orderly implementation of improvements, repairs, and upgrades that were identified through the process of the FMP development.

The long-term facility needs have been identified at each school based on a facility assessment as it relates to the condition of the buildings and how facilities are responsive to the District's educational goals.

The FMP determines how these needs can be met through a strategic financial plan, which is essential to its implementation.

The FMP captures the District's vision of excellence in education and incorporates sound principles that are intended to guide the facilities planning for the District. The FMP identifies improvements needed to enhance the educational environment and to upgrade the building infrastructure and grounds with a commitment to school security, school connectedness, energy efficiencies and cost savings that are important to accommodate the students and staff to meet a high level of excellence in the educational program.



It has been a great pleasure to assist the District in developing this FMP. California Financial Services and GO Architects Inc. have had the honor of meeting many outstanding educators, support, staff, community, and parents who make this District an excellent place for students to learn and grow into responsible adults. The welcome reception from the principals, staffs, students, parents, and community members at each school and the willingness to share their thoughts through surveys, interviews and site walks were very helpful in identifying the facility needs to improve the environment for students and staff. Since input was received from several personnel, it is impossible to name all who contributed to the process.

However, recognition should be given to the Board of Education and District staff who supported the effort of developing this FMP and who helped coordinate the schedule and leadership to allow all school staff an opportunity to give input to the process. These leaders are as follows:

Board of Education

Barbara M. Rich, President
 Hugh Jackson, District Clerk
 Kristie R. Sepulveda-Burkitt, Trustee
 Kathy A. Thompson, Trustee
 Joan R. Weiss, Trustee

District Administration

Donna L. Libutti, Superintendent
 Lori L. Isom, Assistant Superintendent Business Services
 Eileen Galarze, Assistant Superintendent Educational Services
 Barbara Mikolasko, Assistant Superintendent Human Resources and Safety Preparedness
 Jeffrey D. Christensen, Director of Maintenance and Operations
 Rusty Mineer, Technology Coordinator
 Keri Applegate, Bear Gulch Elementary School Principal
 Jill Hammond, Central Elementary School Principal
 Dr. Troy Knechtel, Coyote Canyon Elementary School Principal
 Pam Schlappi, Doña Merced Elementary School Principal
 Luanne Weaver, Valle Vista Elementary School Principal
 Jeff Koenig, Cucamonga Middle School Principal
 Mary Kate Perez, Ruth Musser Middle School Principal

Consultant Team

Godwin Osifeso, AIA, LEED AP Principal Architect - GO Architects, Inc.
 Larry Buoncristiani, President, Principal Architect - GO Architects Inc.
 Liliana Sheridan, Project Director - GO Architects, Inc.
 Betty Hanson, Ed.D. Vice President Educational Services - California Financial Services
 Michael Ogburn, Managing Director - California Financial Services
 Kris Meyer, President - Ledesma & Meyer Construction Company, Inc.
 Brian Smith, Senior Associate - OMB Electrical Engineers, Inc.



Background

The Central School District is located in the city of Rancho Cucamonga, San Bernardino County and encompasses a geographical area of six square miles of mostly residential homes and commercial development. The District has five elementary schools and two middle schools.

The District offers an excellent and diverse educational program to their students. The District enrolls approximately 4,700 students serving Kindergarten through eighth grade.

In 1991, the District passed a \$25 million bond to construct a new state-of-the-art elementary school (Coyote Canyon) and a new middle school (Ruth Musser) in the eastern portion of the District to accommodate the students generated from new housing development. The bond funds were also used to construct multipurpose rooms, libraries, media centers, and replaced deteriorating portable classrooms with permanent classrooms and provided upgrades to all sites.

These projects have fulfilled the need for new school facilities to accommodate enrollment growth. In the past few years, enrollment has stabilized with slight decreases allowing the District to focus on upgrades to existing facilities. Additionally, with the recent emphasis on 21st Century learning, the District's facility needs focus on security and safety. Other high priority facility issues that have been identified through the needs analysis are electrical and communication upgrades, technology, upgrades to classrooms, restrooms, playfields, parking, replacement of portable classrooms, and replacement of furniture and equipment.

Principles

As the District continues to progress, it is poised to meet the challenge of providing the finest quality education possible for every student in the District. The District is also committed to excellence in its facilities by providing parity of the basic amenities among the campuses, maintaining the core structures for longevity of the schools, and equipping the facilities with the classrooms and technology needed for students to engage in meaningful learning that will help them become lifelong contributing members of society.

Key to the District's Strategic Plan, is the commitment to the success of each student.

Learning will always be the top priority. The District strives for excellence while maintaining a family atmosphere, passion, and integrity that makes the District unique. Among its principles that guide the District, is one for facilities. The District takes pride in well-maintained facilities, providing clean, safe, and secure sites for the well-being of its students and staff.

The District's principles and goals in its Strategic Plan helped guide the assessment of facilities at each school. They include the following:

Student Performance – The District is committed to maintaining an excellent academic environment that provides quality instruction to all students, which meet federal, state, and local standards. Students will demonstrate continuous improvement in core content standards.

Parental Involvement/Character Education - Parents are key partners in the success of students. The District is committed to working together to promote academic, social, and civic values. Parents are supportive of school programs and student learning in a variety of ways.

Fiscal Solvency – The District is committed to remaining fiscally solvent by effectively managing current resources and pursuing new revenue sources. The District remains fiscally solvent by developing budgets that meet their strategic goals. Each school has a vast list of facility needs that far exceed the financial resources available to the District now and in the future. The District must maintain the public's trust by prioritizing the identified needs and prudently, efficiently, and equitably utilizing its financial resources to maintain the long term viability of the District's limited resources.

Personnel Development/Staff Development – The District is committed to hiring and retaining the best employees. The District believes that all employees benefit from building on their strengths and identifying area in which to grow. Staff will demonstrate continuous improvement in job performance and effectiveness.

Technology – The District believes that students and staff must demonstrate technological competence to support academic progress, communication and learning. Teachers will integrate instructional technology into their daily instruction to increase student engagement and learning.

Purpose

Students deserve a high quality education delivered through sound programs, good teachers and staff with the support of parents and the community. The District recognizes the need to maintain this high level of excellence in every aspect. The FMP stems from the recognition that school facilities are an important component in achieving excellence in education. The purpose of the FMP is to identify what investments are needed at each school to upgrade the aging and deteriorating facilities and provide improvements to the classrooms and ancillary facilities that support the educational needs well into the 21st Century.

The District's school facilities range in age from 20 years to over 60 years old with wide discrepancies in the facility condition, fields, and parking. The FMP strives to identify the facility upgrades needed **to achieve parity** among the schools and provide a vehicle for the District to narrow the gap in these discrepancies.

Learning Today for the Challenges of Tomorrow

Mission

The Central School District's mission, in partnership with students, staff, families and the community, is to provide comprehensive and challenging standards-based instruction within the parameters of the Common Core, and give guidance to all students to achieve knowledge, skills, and character to be successful, contributing, and positive citizens.

The schools and staff in the District are committed to helping **every** student achieve. The objective of the FMP is to create an environment that supports this District's shared vision. The District further supports these goals through identification and strategic planning of the following specific facility goals:

Facility Goal 1:

Address the health, safety, environmental quality, and code compliance items identified in the needs assessment.

- Repair/replace aging fountains to ensure safe drinking water
- Make all campuses accessible from the parking lot to each building and field areas.
- Upgrade parking and improve traffic flow for safety.
- Improve facility environments including temperature control, lighting, and air quality to enhance educational program quality.
- Provide healthful and functional restrooms sufficient to accommodate students and staff at each campus.
- Provide security to all campuses through operable alarms, public address, lockable exits, classroom locks, exterior lighting, cameras, telephone systems, and fencing.

Facility Goal 2:

Provide educational improvements to the classrooms, technology, and the support spaces (multipurpose, library, and other educational support areas).

- Improve classrooms instructional amenities and upgrade the instructional technology resources including infrastructure and equipment throughout the campuses.
- Provide adequate, controlled energy efficient lighting (natural and artificial), heating and cooling, windows and coverings to enhance the learning environment.
- Upgrade/expand facilities to provide support for the ancillary services including libraries, computer labs, and replacement of furniture and equipment.

Facility Goal 3:

Provide improvements to the physical education and community use facilities.

- Upgrade fields, hard courts, access to fields for safety at all schools.
- Upgrade/provide fixed playground equipment and ball walls

Facility Goal 4:

Maintain building preservation, energy efficiency and other green components in buildings, parking, and grounds.

- Repair /replace leaking roofs, windows, window coverings, and upgrade building exteriors as needed for building preservation and energy efficiency.
- Replace/repair water/sewer/drainage lines for health and building preservation and water preservation as needed.
- Remove/replace aging portable classrooms with permanent or modular buildings as needed
- Install lighting, upgrade HVAC, and other inefficient energy systems to minimize energy usage and reduce utility costs as needed.



Technology Mission:

Our ever changing and complex society has unprecedented quantities of information available. To be productive in the 21st Century, students need to develop critical thinking, problem solving, decision making, and communication skills to effectively and meaningfully utilize the multiple sources of information. This knowledge must be made available to them to explore and interact with the global society of which they are a part.

Technology in many forms is a pervasive part of our students' lives and extends far beyond the four walls of their classroom. A networked classroom or virtual classroom allows student access to the knowledge of the world and can fill the environment with incredible potential for learning. Eventually, each student in the District will have internet access through technology devices for use in the classroom.

The District envisions that through access to networked technology, teachers can guide students to develop skills, knowledge, and insight through a technology enriched curriculum necessary to meet the Common Core standards and to make a successful transition to the world as an adult.

Technology Goals:

- Improve and enhance the environment through creative and challenging learning tools made available by technology including such devices as interactive learning boards, laptops or hand held computers and fixed station computers.
- Build closer relationships between teachers, students and parents through immediate and ongoing communication and messaging.
- Provide each students with access to computers throughout the school day.
- Support multiple styles of learning unique to each student and provide networks for students to share their work/group projects.



Development of the FMP utilized a multifaceted process to engender the data to thoroughly evaluate the school facility needs. The following steps were taken in the process of developing the FMP:

- Obtained approval from the School Board to move forward on the FMP;
- Met with district administrators and school principals to explain scope, intent, and establish schedules for online survey and site visitations;
- Established master calendar for conducting online survey and school site visitations;
- Conducted site visits and met with teachers, students, parents, community members, administrators, counselors, health staff, library staff, office assistants, instructional assistants, plant managers, food service staff, and many other staff members;
- Gathered and analyzed data from online survey (Survey Monkey) for each school;
- Gathered and analyzed data from site visitations;
- Compiled a detailed school site list of facility requests and aggregate list of high priority needs based on facility condition and educational and community input;
- Analyzed student demographic data for enrollment projections;
- Prepared construction cost estimates of facility needs;
- Developed a financial plan to implement high priority projects including:
 - Potential revenue sources from State and other outside agencies
 - Potential District revenue sources
 - Proposed strategies to implement FMP
- Surveyed the community to validate facility needs and determined funding options.



In June of 2014 Central School District brought on GO Architects, Inc. and California Financial Services to update a preliminary master plan that was developed in 2001. Data was gathered from an online survey (Survey Monkey) service which was made available to District's staff for input on facilities needs, during the month of June, 2014. Each of the school sites were involved in the transformation process via the formation and participation of stakeholders committee made up of teachers, staff, community members, parents, students and administrators, committee meetings were held as follows:

Bear Gulch Elementary School - April 30, 2014

Donna L. Libutti, Superintendent
Lori Isom, Assistant Superintendent Business Services
Jeff Christensen, Director M&O
Rusty Mineer, Technology Coordinator
Keri Applegate, Principal
Bruce St. Pierre, Custodian
Rebeca McGuigan, 2nd Grade Teacher
Sharon Topf, 5th Grade Teacher
Delfina Scarborough, ELD Aide
Linda Ayala, Computer Lab Aide
Cindy Hurtado, Parent
Oralia Hernandez, PTO
Betty Hanson, California Financial Services
Liliana Sheridan, GO Architects, Inc.
Jens Lerback, GO Architects, Inc.
Godwin Osifeso, GO Architects, Inc.

Central Elementary School – May 21, 2014

Donna L. Libutti, Superintendent
Lori Isom, Assistant Superintendent Business Services
Jill Hammond, Principal
Theresa Richardson, Custodian
Lynne Cofield, Preppy / Transitional Kindergarten
Jennifer Murphy, Intervention Teacher
Theresa Rodriguez, 4th Grade Teacher
Elvia Beauchamp, School Office Manager
Leslie Hoffman, Playground Supervisor
Yoland Schermerhorn, Parent
Patricia Kaufman, Child Care Manager
Betty Hanson, California Financial Services
Liliana Sheridan, GO Architects, Inc.
Jens Lerback, GO Architects, Inc.
Godwin Osifeso, GO Architects, Inc.

Coyote Canyon Elementary School – April 23, 2014

Donna L. Libutti, Superintendent
Lori Isom, Assistant Superintendent Business Services
Jeff Christensen, Director M&O
Dr. Troy Knechtel, Principal
Linda James, School Administrative Manager
David Barry, Custodian
Lisa Perchez, 2nd Grade Teacher
Georgia Wayne, 4th Grade Teacher
June Lindensmith, Paraeducator
Annette Toliver, Child Care Manager
Sarah Herzer, Proctor
Martin Smith, Parent
Betty Hanson, California Financial Services
Liliana Sheridan, GO Architects, Inc.
Jens Lerback, GO Architects, Inc.
Godwin Osifeso, GO Architects, Inc.

Doña Merced Elementary School – May 14, 2014

Donna L. Libutti, Superintendent
Lori Isom, Assistant Superintendent Business Services
Jeff Christensen, Director M&O
Rusty Mineer, Technology Coordinator
Pam Schlappi, Principal
Maria Cordova, Office staff
Lisa Carter, Kid Central Manager
Michelle Ratigan, 1st Grade Teacher
Misty Webb, 2nd Grade Teacher
Chelsea Reyes, 3rd / 4th Grade Teacher
Michelle Caroccia, 5th Grade Teacher
Leigh Anne Jones, Parent
Russell Purcey, Grandparent
Betty Hanson, California Financial Services
Liliana Sheridan, GO Architects, Inc.
Godwin Osifeso, GO Architects, Inc.

Valle Vista Elementary School – May 7, 2014

Donna L. Libutti, Superintendent
Lori Isom, Assistant Superintendent Business Services
Jeff Christensen, Director M&O
Luanne Weaver, Principal
Gaye Vonderohe, Office Manager
Nathan Henderson, Custodian
Jean Hawkins, Child Care Manager
Lucy Campos, Food Service
Heather Miller, Kindergarten Teacher
Lisa Walk, 1st Grade Teacher
Kathryn Wesley, 3rd Grade Teacher
Bobbie Raddan, Parent / Substitute Teacher
Kim Cooke, Parent / Former Student
Shelley Adam, Parent
Betty Hanson, California Financial Services
Liliana Sheridan, GO Architects, Inc.
Jens Lerback, GO Architects, Inc.
Godwin Osifeso, GO Architects, Inc.

Cucamonga Middle School – May 7, 2014

Donna L. Libutti, Superintendent
Lori Isom, Assistant Superintendent Business Services
Jeff Christensen, Director M&O
Rusty Mineer, Technology Coordinator
Jeff Koenig, Principal
Maureen Vass, Assistant Principal
Stefani Henderson, Office Manager
Tiffani Greenlee, Counselor
Amy Trudeau, 6th & 7th Grade Teacher
Cindy Villaescusa, P.E. Aide
Sarah Kuramata, Physical Education Teacher
Gina Loring, Library Media Tech
Tricia Swift Buggle, Parent
Noah Swift, Student
Betty Hanson, California Financial Services
Liliana Sheridan, GO Architects, Inc.
Jens Lerback, GO Architects, Inc.
Godwin Osifeso, GO Architects, Inc.

Ruth Musser Middle School – April 30, 2014

Donna L. Libutti, Superintendent
Lori Isom, Assistant Superintendent Business Services
Jeff Christensen, Director M&O
Rusty Mineer, Technology Coordinator
Mary Kate Perez, Principal
Shirley Lemke, F.O.R.M.
Lynne Beitler, Office Manager
Beth Burright, 5th & 8th Grade Counselor
Julie Parga, 8th Grade Teacher
Theresa Stevens, 7th & 8th Grade Teacher
Sami Chadwick, Student
Sara McClung, Student
Tommie Hernandez, Student
Brisa Gutierrez, Student
Aleczandra Chadwick, Student
Lorena Leon, Cafeteria Lead
Cami Chadwick, Parent helper
Betty Hanson, California Financial Services
Liliana Sheridan, GO Architects, Inc.
Jens Lerback, GO Architects, Inc.
Godwin Osifeso, GO Architects, Inc.

Technology Plan – April 30, 2014 & August 18, 2014

Donna L. Libutti, Superintendent
Barbara Mikolasko, Assist. Sup. Human Resources
Eileen Galarze, Assistant Superint. Educational Services
Lori Isom, Assistant Superintendent Business Services
Rusty Mineer, Technology Coordinator
Betty Hanson, California Financial Services
Liliana Sheridan, GO Architects, Inc.
Godwin Osifeso, GO Architects, Inc.

The District conducted a study of the student population projections for the next seven years. The latest study, using 2013-14 enrollment data and historical data, is used in the FMP for enrollment projections to plan for new facilities. The current and historical K-8 student data, birth rates, housing development, and mobility factors were used to calculate the seven-year student enrollment projections.

The downturn in economic conditions has affected current enrollment and future enrollment projections. The K-8 enrollment has declined an average of .60 percent annually since the 2006-07 school year. The 2013-14 K-8 enrollment of 4,712 decreased by 204 students since 2006-07. Enrollment projections are expected to continue a decline by approximately 194 students from the current level to the 2020-21 school year. Since the District is essentially "built out" for new housing development, it is not expected that enrollment patterns will not change significantly over the next seven years.

Enrollment projections are being closely monitored and adjusted based on the birth rates, economic activity, and other factors in the community that may have an impact on enrollment. Since birthrates can significantly affect the projections, it will be closely monitored to detect potential changes in enrollment patterns.

Maintaining a close relationship with the City to obtain information on changes in business and commercial development are also indicators of enrollment changes. The District continues to communicate with the City for any changes in activity that might affect enrollment.



As part of the needs assessment, it is important to establish the capacity of each school to determine whether the number of classrooms are adequate for current and future enrollment. Capacity can be defined using various methods. The method utilized in this study is known as the operational capacity. It recognizes the use of classrooms for grade level purposes, but also recognizes classrooms to house operational programs that support the educational program. For example a classroom used for capacity has a teacher assigned to a grade level of students. A classroom utilized for the resource specialist program is not considered in the capacity analysis (as a classroom) because the students served by this specialist are also assigned to a grade level classroom. This program supports the educational program, and therefore, is not available as a classroom.

One criterion used to determine capacity that ensures consistency among the schools starts with identifying the number of adequately-sized classrooms (minimum 800 square feet).

A second criterion is based on a student loading standard per classroom. The number of students enrolled in course offerings at middle school grades varies depending on the subject matter, core requirements, availability, and interest level. Also, not all classrooms can be utilized every period of the day due to scheduling logistics. Therefore, a lower loading standard than the loading used for norming is more realistic to establish the operational capacity.

A classroom loading standard is needed for consistency. Therefore, the loading of 25 students per grades K-5 classroom and 27 students per grades 6-8 classroom is used in the FMP per State standards to establish the loading standard. Each classroom is loaded at this level with exception of physical education. These classes are not loaded since many of the teaching stations are outdoors and do not have the flexibility to be used as classrooms for other coursework.

It should be noted that most classes are loaded at a higher level due to budgetary constraints. But a lower loading standard may be used in the event the financial conditions improve in the future and class sizes are reduced.

The FMP for some schools calls for replacement of portable classrooms when capacity appears to be sufficient. However, the type of classroom needed is a consideration. Such classrooms as science, language, and computer laboratories generate the need for specialized classrooms since standard classrooms are not appropriate for that type of instruction. Additionally, because some portable classrooms are aging, energy inefficient, and consume a great deal more space than a permanent building, it was determined that some of the portables should be replaced with permanent buildings even though they do not increase capacity.

After review of the site maps and site visitations of the schools, it has been determined that the following is the operational capacity using the State standard of 25 students per grade K-5 classroom and 27 students per grade 6-8 classroom. Special education classrooms are loaded with 15 students per classroom. The Chart below compares the capacity to the current enrollment for each school.

CAPACITY ANALYSIS
Based on 25/27 Students per Classroom K-8 and 15 Students per Special Education

School	# of Classrooms Regular/ Special Education	Total Classrooms	Capacity Loaded @ 25/ K-5 CR, 27/6- 8 CR & 15/Sp Ed CR*	Current Enrollment	Available Capacity*
Bear Gulch Elementary	24/1	25	615	525	90
Central Elementary	24/0	24	600	478	122
Coyote Canyon Element.	30/2	32	780	774	6
Dona Merced Elementary	25/0	25	625	602	23
Valle Vista Elementary	22/0	22	550	530	20
Cucamonga Middle	36/2	38	1002	836	166
Ruth Musser Middle	38/0	38	1026	963	63
Totals		204	5198	4708	490

The above chart provides a capacity based on class sizes from 25 students in the elementary grades to 27 students per class in the middle grades, and 15 students in special education with a capacity of 5,198 seats. Correspondingly, the available seats in the District total 490.

Based on the capacity analysis, it appears that the capacity is sufficient to accommodate the five year projected enrollment.

Based on the site visitations, surveying and evaluation of facilities at each school the following summary of needs has been identified:

PRIORITIES	A. CODE (Health, Safety & Access)										B. HOUSEKEEPING										C. TRANSFORMATION						SUBTOTAL CONSTRUCTION COST ESTIMATE	2% F,F,&E	10% CONTINGENCY	TOTAL CONSTRUCTION COST ESTIMATE	TOTAL PROJECT COST (Including 25% Soft Cost)		
	1	2	3	4	5	6	7	8	9	SUBTOTAL	1	2	3	4	5	6	7	8	9	10	11	12	SUBTOTAL	1	2	3	4	5	6	7	8	SUBTOTAL	
1 - High Priority																																	
2 - Second High Priority																																	
3 - Third High Priority																																	
4 - Fourth High Priority																																	
5 - Lowest Priority																																	
I. Bear Gulch Elementary School	X									\$ 337,460.00	X	X		X																			
II. Central Elementary School	X			X	X	X				\$ 285,000.00	X	X	X	X	X																		
III. Coyote Canyon Elementary School	X	X	X	X	X			X	X	\$ 531,500.00	X	X		X			X	X															
IV. Doña Merced Elementary School	X	X		X	X	X	X	X		\$ 1,042,760.00	X	X		X	X	X	X	X															
V. Valle Vista Elementary School	X	X	X		X	X	X		X	\$ 542,500.00	X	X		X	X	X	X	X															
VI. Cucamonga Middle School	X	X		X	X	X	X	X	X	\$ 925,900.00	X	X		X	X	X	X	X															
VII. Ruth Musser Middle School	X			X	X	X		X		\$ 177,800.00	X	X	X	X	X	X	X	X	X														
TOTAL										\$ 3,842,920.00																							
VIII. District Support Facilities - Option #1A / Administration stays at Church St. & M&O relocates to Cucamonga MS						X				\$ 55,000.00																							
VIII. District Support Facilities - Option #1B / Administration relocates to Coyote Canyon ES & M&O relocates to Cucamonga MS																																	
VIII. District Support Facilities - Option #2 / Consolidate Administration & M&O at Historical Building on Hellman Avenue & San Bernardino Rd.																																	
VIII. District Support Facilities - Option #3 / Consolidate Administration & M&O at a site to be determined																																	
Notes:	1. Total Construction Cost Estimates shown above are current 2014 construction hard-cost estimates, based on a Design-Bid-Build method 2. Total Project Cost includes 25% soft cost inclusive of Agency, Permits, Inspection, Testing, Design and Administrative Costs 3. Future costs can be estimated using a 3% annual escalation rate after January, 2015																																

The following lists standards the District would like to achieve in their facilities to create 21st Century school environments:

Classroom Standards

Classroom upgrades are needed to be responsive to curricular and instructional changes for now and the future. Because the schools vary widely in age, some classrooms need more improvements than others. To ensure equity among all classrooms in the District, a basic standard needs to be met for each classroom. All classrooms have some of these standards, but other classrooms are lacking in some of the standards. Equipping classrooms with these standards is a District goal, but if funds are not available, not all can be provided. These basic standards are defined as follows:

- Adequate lighting with separate zone switches to provide partial lighting for students to take notes while teacher is presenting video presentations
- Comfortable temperature levels and adequate ventilation that do not deter student's ability to concentrate on instructional program
- Energy efficient windows with durable window blinds to darken for video presentations
- Accessible entrance and counters for students/staff with disabilities
- One tackable wall surface to display student work
- Marker/white board on one wall
- Floor surface with either vinyl tile or carpet
- Suspended acoustical ceiling or gypsum board ceiling
- Lockable storage for instructional supplies, valuables
- Electrical upgrades – sufficient to accommodate technology equipment and a ceiling outlet if ceiling mounted projector is used
- Wireless internet connection to support one-to-one band with need
- Up-to-date computers, laptops or handhelds for students and staff
- Voice Over Internet Protocol (VOIP) with intercom capability
- Four wired data drops in each classroom
- Interactive white board
- Printer/scanner
- Wall mounted clock synchronized with master clock
- Amplification sound system in classrooms
- Audible master bell system
- Strobe light/sound alarm
- Durable student/teacher desks and chairs

Additional needs are identified for science laboratories, art, and career technology laboratories. Most of these teaching stations need wet areas, laboratory stations with durable countertops,

specialized storage areas for chemicals (if used) and working supplies, separate ventilation, and specialized furniture and equipment. These features are unique to the subject taught at the middle schools and will need further refinement as plans for upgrades are developed.

Technology and Electrical Upgrades

Students in the 21st century face a rapidly changing and increasingly complex society with unprecedented quantities of information. Much of the information comes via technology through multiple media, especially the internet. Technology is changing how instruction and the curricula are presented to our students and how students interact to develop the skills and knowledge necessary to productively live as adults. Instead of classrooms with four walls, it is expanding into a "digital environment" that is networked and augments how and what teachers teach and how students learn. Technology, with appropriate application, can be a powerful tool for improving instruction and student learning. The District technology goals for students and staff embrace the following:

- Ensure that all students will have equitable access to technological equipment / infrastructure sufficient to improve student achievement.
- Ensure that the wi-fi internet connectivity is capable of accommodating the high demand usage for both online learning and Common Core testing requirements.
- Students will achieve technology and information literacy integrated within the instructional program and content standards.
- Technology will be utilized as a tool for managing student records, assessment and data analysis.
- Technology will be accessible to the school community to promote improved communication among teachers, parents, students, administrators, and the community.
- Technology will augment plant security and safety.

In order to achieve these goals, the District will need provide schools with such technological equipment as the following:

- Desktop/ laptop computers and hand held devices as per District policy
- Portable audio devices for teacher instruction
- Routers and servers for Inter and intra District Wireless and hard wired networking
- Interactive white boards or projection system
- Security and fire alarm systems
- Telephone System with local and long distance calling capability
- Video technology for presentations, teleconferencing and broadcasting
- Computer based probeware
- Internet access and email capabilities
- Security camera/monitoring system

Students and staff need the above devices/systems to conduct the following technological engagements:

- Word processing for writing assignments, reports, projects, note taking.
- Research, conduct investigations
- Correspondence
- Analyzing data and solving problems
- Demonstrations, graphics, and simulations
- Presentations such as Power Point, prepare documentaries
- Create podcasts, videos, telecasting
- Email and teacher websites
- Display student projects
- Create movies and animation projects
- Tracking and analyzing student progress
- Homework and practice
- Communication with student, staff, and parents
- Security monitoring

Each classroom / school should be equipped with the above basic technology to provide support to the students and staff in the learning process. As well, the applicable technology listed above provides support to the schools to ensure efficient operation and enhance safety on campus.

As part of the technology upgrades, the electrical system also needs to be responsive to the technology equipment. These upgrades include such items as:

- Electrical outlets need to be located to avoid extension cords and overloads on circuits
- Lighting and separate zone switches needs to be added to allow for partial room lighting during AV presentations in classrooms
- Additional exterior lighting is needed for security and evening activities.

Heating, Air Conditioning, and Ventilation (HVAC)

The heating, air conditioning, and ventilation (HVAC) systems at some schools are inefficient with poor temperature controls due to obsolete and aging AC and heating units. Improvements are needed to the indoor environment by equipping schools with energy efficient heating, ventilation, and air conditioning systems. The most frequent complaints at schools indicated the classrooms and other spaces are either too hot or too cold and poorly ventilated with no way to regulate the temperature. Conversely, some classrooms are very warm and lack ventilation.

Portable classrooms sometimes have the heat or air conditioning running over weekends when they are not in use, which unnecessarily raises utility costs.

Many of the HVAC systems have reached their useful life and lack the features to achieve energy efficiency.

Each school should be thoroughly evaluated to determine the cause of the deficiencies and to establish healthy environmental conditions for students and staff. These HVAC improvements should be made to demonstrate significant energy efficiency and create more productive facilities to ease the costs imposed on the general fund. As these systems are evaluated, it is also important to incorporate the human factors such as environmental comfort in the analysis of the improvement measures that result in greater long-term success.

Library Media Centers

The library media center (LMC) is considered the “heart” of the campus where information and learning is disseminated and supported. LMC’s are undergoing challenges in their method of information delivery due to the advances in technology. Technology is providing new ways of searching for data via online digital access, reading books electronically, and is making multimedia study material available to students to expand their learning options. These technological advances warrant a review of the existing design of the school libraries to ensure that the spaces within the LMCs are responsive to the technological changes that enhance the importance of libraries in school curriculum and programs and provide enrichment for the community.

As the District engages in school renovation projects, there is a rare opportunity to review LMC designs and incorporate emerging technologies to better serve students and the community. Attracting students and parents to the LMCs by offering high interest programs in a cheerful, inviting environment that incorporates input from the users can become the “hub” for learning and reading enjoyment during and after school hours.

Restrooms and Drinking Fountains

The condition of restrooms and drinking fountains poses one of the major concerns among students. Aging plumbing fixtures are a contributing factor to the condition of restrooms. The continual leaks and pipe failures place frequent demands on staff to maintain restroom facilities. Additionally, drinking fountains are far away from the play fields and students are unable to use them during recess because teachers cannot supervise the play fields and drinking fountains located in the buildings. Locating drinking fountains in locations that are closer to the play fields should be studied to find a solution to the need for them to be located closer to the playfields.

Additionally, restrooms are often located far from the play fields. Students needing to use the restrooms during recess are unable because supervision in both places is not possible. A major design issue is to provide sufficient student restrooms and drinking fountains in strategic locations on campus. Upgrades to existing restrooms with hot water and vandal proof stalls are needed to make them habitable. While upgrading the restrooms, consideration should be given to pipe and fixture replacement.

The location of restrooms and drinking fountains should be carefully evaluated to ensure proper locations that can be supervised to minimize vandalism, maximize supervision, and to be accommodating to student and staffs. Upgrades to existing restrooms and drinking fountains are also a critical part of the facility planning efforts.

Multipurpose Facilities /Food Services

Existing multipurpose facilities and food services can accommodate only a small portion of the student enrollment at most schools since they were designed for much smaller student populations. Therefore, some students must eat lunch outside regardless of weather conditions or adequacy of seating space. Some schools expressed a need for more environmental shelters to protect against heat, cold, rains, and strong winds. Environmental shelters would also provide additional seating at tables for students to eat their lunches. Other schools requested more outdoor seating areas for students to socialize during their lunch period. Many schools expressed a need for more indoor eating area due to the extremely cold conditions in the winter.

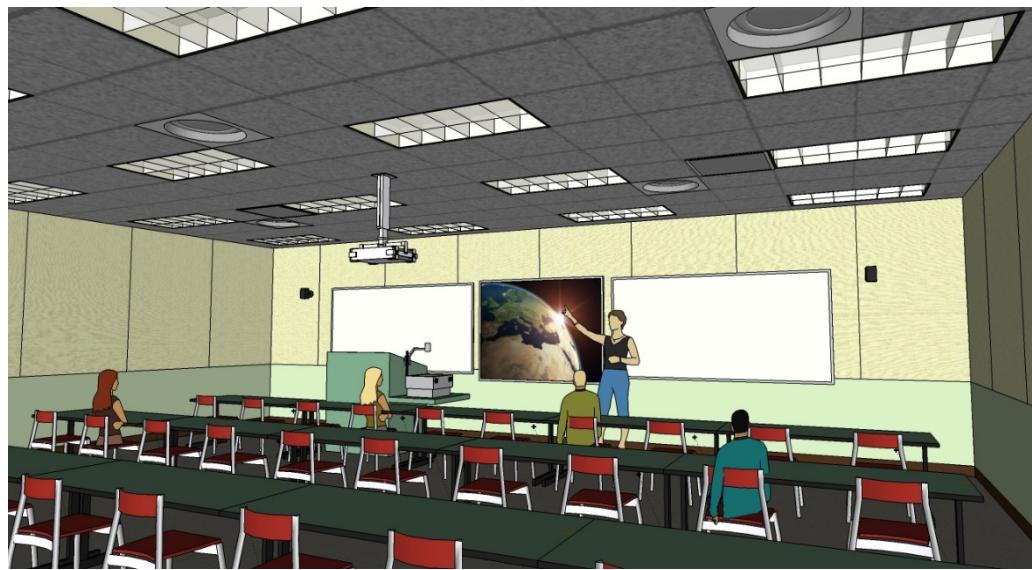
Parking and Drop Off/Pick up Areas

Student drop off and pick up areas are most problematic due to the volume of students arriving and departing within a 30 minute period in the morning and afternoon. This problem was presented more frequently than any other during site visits and in the surveys. Staffs from all schools indicated problems with traffic congestion during drop off and pick up of students. Due to the high volume of vehicles and foot traffic that arrive and depart at each school at the same time, congestion is inevitable. No design presents an ideal situation to eliminate vehicle and foot traffic congestion. However, the following design and operational features should be reviewed at each site to ensure maximum safety for students and staff:

- Student drop off area is adjacent to the school entrance and separate from bus drop off area and parking
- Vehicle traffic pattern does not conflict with foot traffic patterns
- Foot traffic does not pass through entrance/exit driveways to enter school
- Crosswalks are clearly marked to define desired foot path to school entrance

- Parking stalls are located so vehicles do not back into buses or vehicles loading or dropping off students
- Buses do not pass through parking area to enter or exit school site unless a barrier is provided to prevent backing into bus loading area
- Creating more parking spaces is needed at many schools, while others need reconfiguring to improve traffic flow
- Traffic from the street into and out of schools should be managed by stop signs, left turn lanes and one way traffic as feasible
- Signage is clearly located to direct traffic flow and prohibited drop off/pick up areas
- Staff and police monitoring during arrival and departures is important

Review of the possible mitigations will be needed for the redesign of traffic flow at each school to ensure safety and minimize congestion.



The District's school facility needs outnumber the ability to generate the total funds needed to fully implement the Plan, which will require the prioritization of school projects as funds are made available. The following identifies the: a) current revenue/funding sources and amounts that are available for funding the Plan; and b) the potential future revenue/funding sources that could become available as additional funding for the implementation of the Plan.

The total construction cost funding need for full implementation of the Plan at School sites only is estimated to approximate \$45,022,878, plus an additional 25% (soft cost) for a total project cost approximating **\$56,278,598.60**. District support facilities costs could range between \$249,900 and \$4,200,000, plus an additional 25% (soft cost) for total project cost approximating between **\$312,375** and **\$5,250,000**

Current Capital Facility Funds Available

The following are the revenue/funding sources and amounts that are restricted solely for use of funding facility projects that are currently available for funding the implementation of the Plan:

- 2008 General Obligation Bonds:** The District received approval from the community in 2008 for a total of \$31 million principal amount ("2008 Bond Authorization") of general obligation bonds ("Bond Funds") to be issued under the Proposition 39 parameters. To date, the District has issued a total of \$14.5 million principal amount of Bond Funds in two series for funding prior school projects authorized by the voters. The District currently has \$16.5 million of the 2008 Bond Authorization remaining to be issued.

However, the State recently passed AB 182 that amended California school district Bond issuance parameters. The new AB 182 parameters limit the repayment term from 40-years to 25-years for all types of Bonds containing an interest accretion component. The impact of the new issuance parameters under AB 182 for the District is to limit its access of the \$16.5 million amount remaining under the 2008 Bond Authorization to approximately \$6.2 million of Bond Funds that can be generated over the next 15 to 20-years. This \$6.2 million of Bond Funds are planned to be available to the District for funding school projects set forth in the Plan upon issuance under a third Bond series by November of 2014.

- Prior State Matching Grants:** The District has successfully generated approximately \$9 million in State matching modernization grants ("State Funds") for its prior eligible school modernization projects at five of its school campuses. Approximately \$5.6 million of these State Funds were utilized to fund its prior school projects.

The District currently has approximately \$3.4 million of the prior State Funds remaining which represent a "reimbursement" for the prior school projects that were funded directly by the District in advance of the receipt of the State Funds. This \$3.4 million of remaining reimbursement of State Funds is currently on deposit in the District's Capital Facility Fund accounts and is now available for funding school projects set forth in the Plan.

Table 1 below sets forth the revenue/funding sources and amounts that are currently available for funding the school projects set forth in the Plan:

Table 1: CURRENT Funds Available for Plan

PLAN CURRENT FUNDING SOURCES	AMOUNTS
Bond Funds Available In November 2014	\$6,200,000
State Fund Reimbursements Currently Available	<u>3,400,000</u>
TOTAL Funds Currently Available for Plan =	\$9,600,000

Future Potential Capital Facility Funds

The following are the revenue/funding sources and amounts that are restricted solely for use of funding facility projects that may be available in the future as additional funding for the implementation of the Plan:

- 2014 General Obligation Bonds:** The District has placed an additional \$35 Million principal amount of Bond Funds ("2014 Bond Authorization") on the November 4, 2014 ballot. Upon approval by the voters, the 2014 Bond Authorization can be accessed by the District under the Proposition 39 and new AB 182 Bond issuance parameters.

Of the total 2014 Bond Authorization, the District's access of the \$10.3 million of the remaining 2008 Bond Authorization amount can then be "accelerated" to 2015, and the \$24.7 million balance represents "new" funding available for the school projects set forth in the Plan.

Table 2 below represents the estimated number of Bond series, Bond amounts, and issuance years that the District can access the 2014 Bond Authorization under these Bond issuance parameters:

Table 2: 2014 BOND FUNDS – Future Bond Amounts Issued		
BOND SERIES	YEAR	AMOUNTS
Bond Series "1"	2015	\$13,000,000
Bond Series "2"	2018	\$8,000,000
Bond Series "3"	2021	7,000,000
Bond Series "4"	2024	<u>7,000,000</u>
4 Bond Series	10-Years	\$35,000,000

Given the uncertainty of the amounts, timing, and actual receipt of the future State Funds, we recommend that the District consider only proceeding with eligible school projects at such times as the: a) State Funds have already been received; and/or b) the District can advance the State Funds from other Capital Facility Fund revenues and then utilizes the State Funds as a “reimbursement” for future school projects.

Table 3 below sets forth the potential revenue/funding sources and amounts that may be available in the future for funding the school projects set forth in the Plan:

Table 3: FUTURE Potential Funds Available for Plan	
PLAN FUTURE FUNDING SOURCES	AMOUNTS
Bond Funds Available	\$35,000,000
State Funds Available	<u>2,218,000</u>
TOTAL Potential Future Funds Available for Plan =	\$ 37,218,000

- **Future State Matching Grants:** The District currently has eligibility for approximately \$2.218 million in additional modernization State Funds. However, the District's future receipt of these additional State Funds is dependent on the following circumstances:

1. Periodic **future State** School Bond Measures to be **approved** by the State Legislature and **signed** by the Governor;
2. **Approval** of each future State School Bond Measure by the state-wide voters (simple majority vote); and
3. Future State School Facility Program grant amounts will need to be **maintained** at the current State eligible school project budget amounts and funding percentages.

COMBINED Current & Future Capital Facility Funds Available

Table 4 below sets forth the estimated combined CURRENT and FUTURE potential revenue/funding sources and amounts that may be available for funding the school projects set forth in the Plan:

Table 4: COMBINED Current & Future Funds Available for Plan

PLAN FUNDING SOURCES	AMOUNTS
CURRENT Funding Amounts Available	\$9,600,000
FUTURE Funding Amounts Available	<u>37,218,000</u>
COMBINED Potential Funds Available for Plan =	\$46,818,000

Initially, the District will only be able to proceed with the school projects that are set forth in the Plan that are funded solely from the above CURRENT funding amounts available.

Table 5 below highlights the Plan funding shortfall based on only the current funding amounts being available to implement the Plan:

**Table 5: PLAN Funding Shortfall
Based on CURRENT Funds Only**

Plan: TOTAL Funding Amount Needed	\$56,278,598
LESS: CURRENT Funding Amounts Available	<u>(9,600,000)</u>
Plan: TOTAL Funding Shortfall =	\$46,678,598

Upon approval of the District's 2014 Bond Measure by the community in November 4th election, the District will then be in a position to proceed with an additional \$35 million of funding for the school projects set forth in the Plan. However, the 2014 Bond Funds will only be available in the amounts and years set forth in Table 2 above.

Table 6 below compares the resulting Plan funding shortfall with the addition of the future potential 2014 Bond Funds:

**Table 6: Plan Funding Shortfall
Based on CURRENT Funds & 2014 Bond Funds**

Plan: TOTAL Funding Amount Needed =	\$56,278,598
CURRENT Funding Amount Available	\$9,600,000
FUTURE 2014 Bond Fund Total Amount	<u>35,000,000</u>
TOTAL Funds Available for Plan =	\$44,600,000
Plan: TOTAL Funding Shortfall =	\$11,678,598

After approval of the 2014 Bond Measure and receipt of the future eligible modernization State Funds, the District will then be in the position of funding the **GREATEST** amount of school projects set forth in the Plan.

Table 7 below compares the resulting Plan funding shortfall with the addition of both the: a) 2014 Bond Funds; b) future eligible modernization State Funds:

Table 7: Plan Funding Shortfall Based on CURRENT Funds, 2014 Bond Funds & FUTURE State Funds	
Plan: TOTAL Funding Amount Needed =	\$56,278,598
CURRENT Funding Amount Available	\$9,600,000
FUTURE 2014 Bond Fund Total Amount	35,000,000
FUTURE State Funds (Modernization Grants)	<u>2,218,000</u>
TOTAL Funds Available for Plan =	\$46,818,000
Plan: TOTAL Funding Shortfall =	\$9,460,598

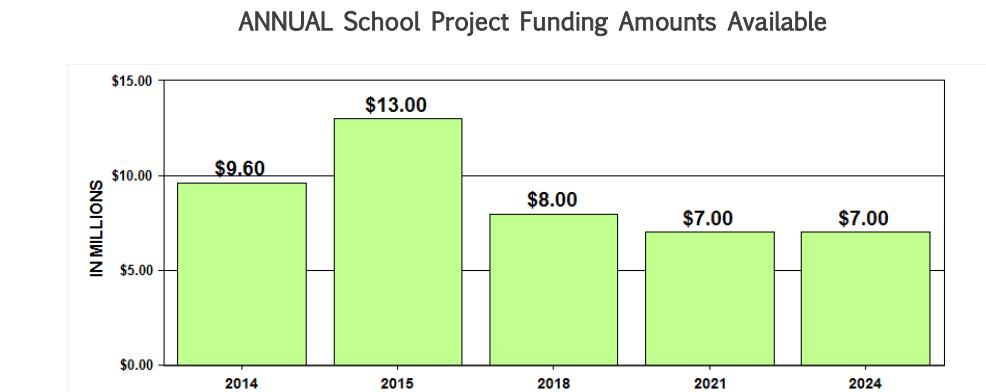
As set forth in Table 7 above, the Plan funding shortfall approximates \$9,460,598 from all of the CURRENT plus FUTURE potential revenue/fund sources and amounts that may be available to the District. The District will therefore need to prioritize the school projects set forth in the Plan in the following order of available funding amounts:

1. **Initial \$9.6 Million of School Projects by February, 2015:** Once the issuance of the third series of the 2008 Bond Authorization is completed by early 2015, the District can then proceed with up to \$9.6 million of the school projects set forth in the Plan.

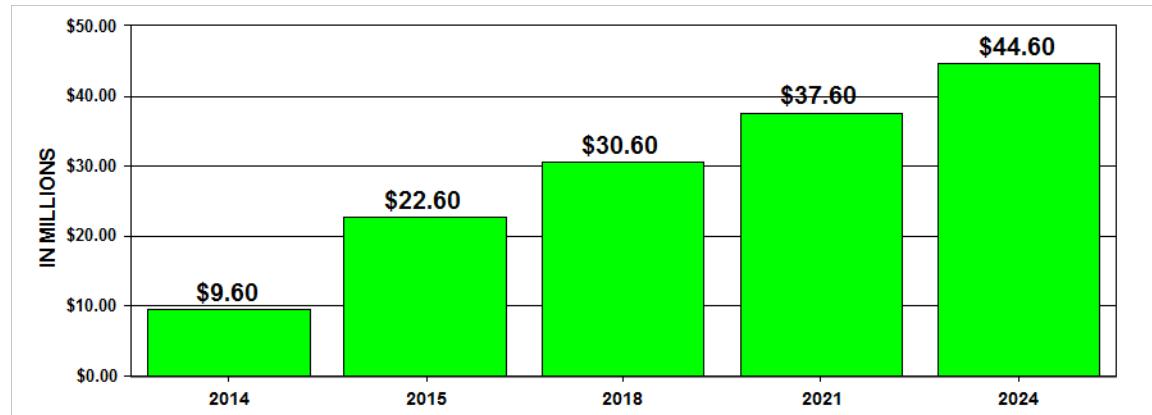
2. **Additional \$13 Million of School Projects by March, 2015:** Upon the approval of the District's 2014 Bond Measure on November 4, 2014, the District will then be positioned to issue the first series of Bond Funds under the 2014 Bond Authorization. The 2015 Series "1" Bond Funds are planned to be issued in an amount approximating \$13 million on or before March 1, 2015.

3. **Periodic Additional School Projects Every Three Years Thereafter:**
As set forth in Table 2 above, the balance of the 2014 Bond Authorization will then be available to the District with the periodic issuance of three additional Bond series in planned three year intervals. Prior to each Bond series issuance, the specific Bond Fund amounts will need to be updated to incorporate the District's ACTUAL assessed value (AV) increases and interest rates then available in the capital markets.

The chart below sets forth the estimated annual and cumulative funding amounts and years that will be available to the District from the current and future potential 2014 Bond Authorization sources ONLY:



CUMULATIVE Funding Amounts Available



4. Additional School Projects From Future State Funds Reimbursements: We recommend that the District wait until such times in the future that it actually receives the eligible future modernization State Funds prior to proceeding with the resulting additional \$2.218 million of school projects set forth in the Plan.

The approximate **\$9,460,598** remaining funding shortfall of the Plan will likely require a future Bond Measure to fund the balance of the school projects set forth in the Plan. An additional Bond Measure under the Proposition 39 parameters is typically set for “even” numbered years. Once many of the school projects have been completed from the above funding sources and amounts, an additional Bond Measure will likely then become a “practical” option commencing in the 2020 to 2024 timeframe.

I. BEAR GULCH ELEMENTARY**II. CENTRAL ELEMENTARY****III. COYOTE CANYON ELEMENTARY****IV. DOÑA MERCED ELEMENTARY**

V. VALLE VISTA ELEMENTARY



VI. CUCAMONGA MIDDLE



VII. RUTH MUSSER MIDDLE



VIII. DISTRICT OFFICE



Overview

Grade Level: K-5
 Mascot: Grizzlies
 Colors:
 Year of Original Construction: 1984
 Year of Recent Transformation: 2013
 Approx. Permanent Building Area: 57,733 SF
 Approx. Portable Building Area: 1,920 SF
 Approx. Total Building Area: 55,813 SF
 Approximate Site Area: 10.45 Acres

**Teaching Stations**

Permanent: 23
 Portable: 2
 Total Teaching Stations: 25
 Proposed Teaching Stations: 26

Capacity*	Current	Proposed
Permanent Capacity:	565	640
Portable Capacity:	50	0
Total Capacity:	615	640
Enrollment:	525	

Available Parking:
 Standard: 81
 Car Accessible: 3
 Van Accessible: 2
 Total Parking: 86



8355 Bear Gulch Place
 Rancho Cucamonga, CA
 Parcel No. 208-251-24

* Capacity based on study by CFS, using current facility usage as of June, 2014

**EXISTING****VISION**

SITE DESCRIPTION

Bear Gulch Elementary School is a K-5 serving approximately 525 students. The school was built in 1984 and consisted of portable and modular buildings arranged in courtyard configurations. The buildings were fitted with gable roof forms to unify the campus and create a more permanent appearance.

PROJECTS COMPLETED WITH MEASURE A BOND FUNDS (2008 THRU 2014)

CAMPUS WIDE (As needed):

Fencing for Safety and Security
 Replacement of playground equipment for safety
 Video surveillance upgrades and other safety and security
 Replacement of inefficient lighting and HVAC units
 21st Century classroom support
 Fiber-optic network for greatly increased capacity
 Student information system upgrade (SASI)

CAMPUS SPECIFIC:

In 2011 a new 14-classroom building (Thompson Building), a restroom building and additional parking were added to the site.

EXISTING



SITE FEATURES

1. Parking / Drop-Off

1A Parking & Drop-off

1B Parking (Completed with Measure A Bond Funds)

2. Buildings / Structures

2A Administration Building

2B Multi-Purpose Building

2C Media Center

2D Lunch Shelter

2E 1-5 Classroom Building (17 CR)

2F 1-5 Classroom Building (Completed with Measure A Bond Funds) (14 CR)

2G K Classroom Building (2 CR)

2H 1-5 Portable Classroom Building (2 CR)

3. Play Areas & Fields

3A Kindergarten playground

3B Primary Playground

3C Grass play fields

3D Asphalt hard court



A. CODE (Health, Safety, Access)

Campus Wide Items:

- A4. Door Hardware upgrades
- A5. Phone system upgrade

Campus Specific Items:

- A1** Safer School – Administration building safety check point

B. HOUSEKEEPING

Campus Wide Items:

- B1. Interior and Exterior Upgrades
 - i. Patch, repair and paint walls where paper towel dispensers were removed.
 - ii. Paint classroom #228 to match school colors.
 - iii. Paint entry doors at computer lab.
 - iv. Lower soap and paper towel dispensers at old building to be at kids' height.
- B4. HVAC System upgrades
- B8. PA – Sound System Upgrades

Campus Specific Items:

- B2** Electrical / Lighting Upgrades
 - i. Electrical and Data systems upgrades at stage.
 - ii. Additional outlets at computer lab
 PA – Sound System Upgrades



EXISTING



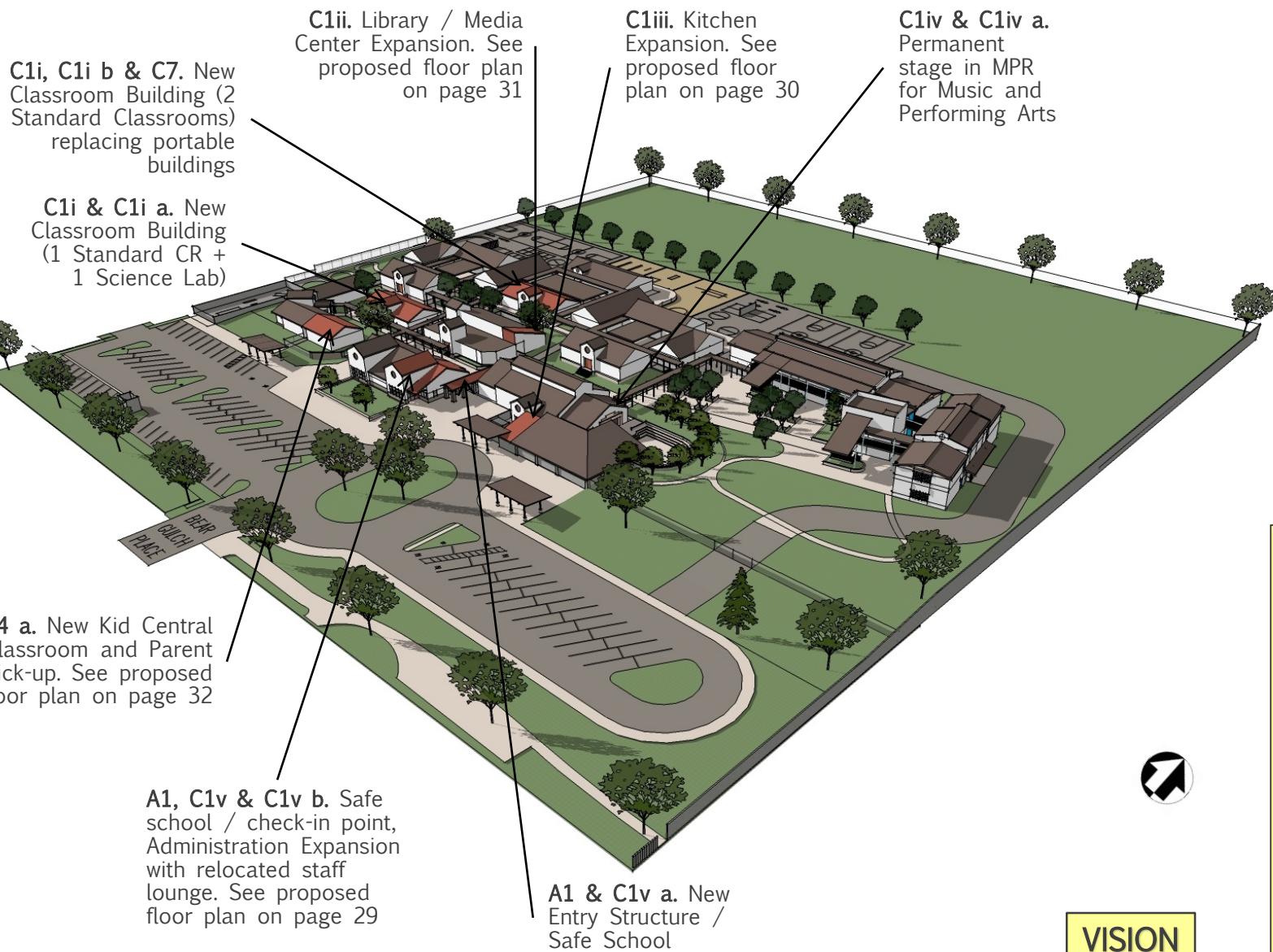
C. TRANSFORMATION

Campus Wide Items:

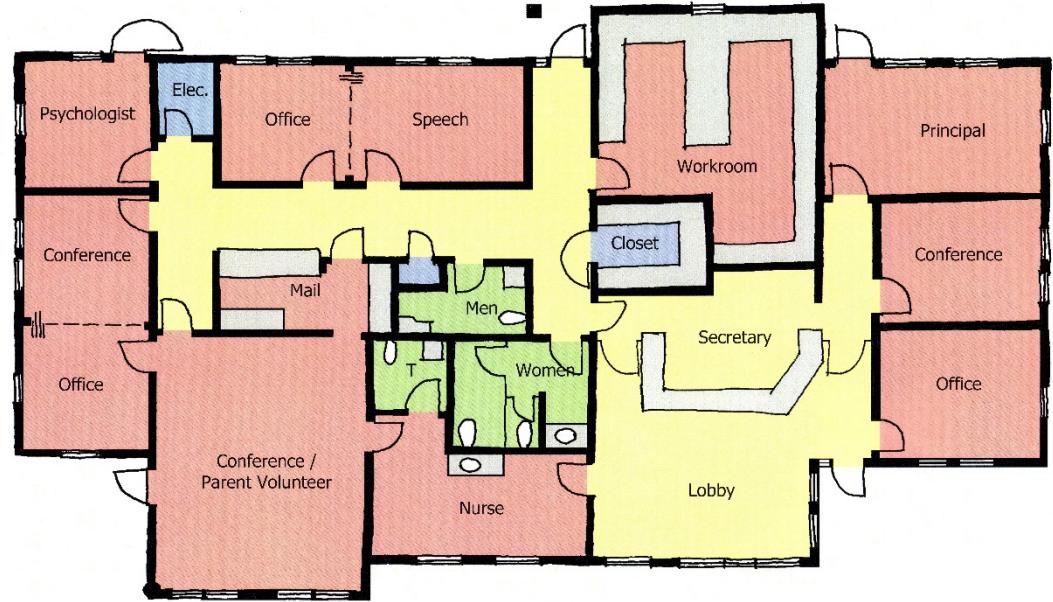
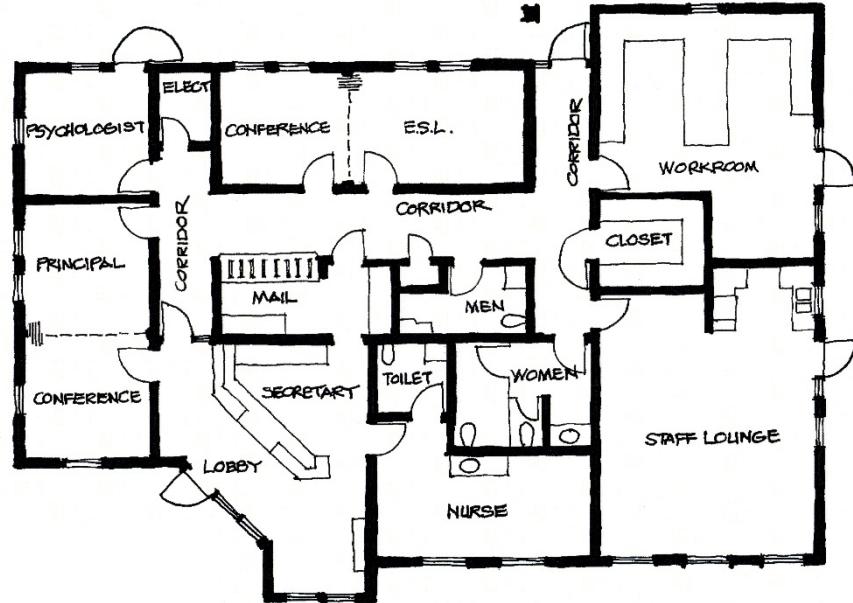
- C3. 21st Century Technology Upgrades
- i. Wired infrastructure to current standards
 - ii. Wireless
 - iii. Airwave Management
 - iv. Mobile Device Management
 - v. Student Devices
 - vi. Computer Lab Upgrades

Campus Specific Items:

- C1** Campus Additions and Transformations
- i. New Classroom Building
 - a. New science lab.
 - b. Replace portable classroom buildings
 - ii. Library / Media Center Expansion
 - iii. Kitchen Expansion
 - iv. Permanent stage in MPR
 - a. Music and Performing Arts area.
 - v. Expand Administration Building
 - a. New entry structure
 - b. Relocate staff lounge
- C4** Kid Central / After School Program Transformation
- a. New Kid Central Classroom Building
- C7** Replace portables with permanent classrooms



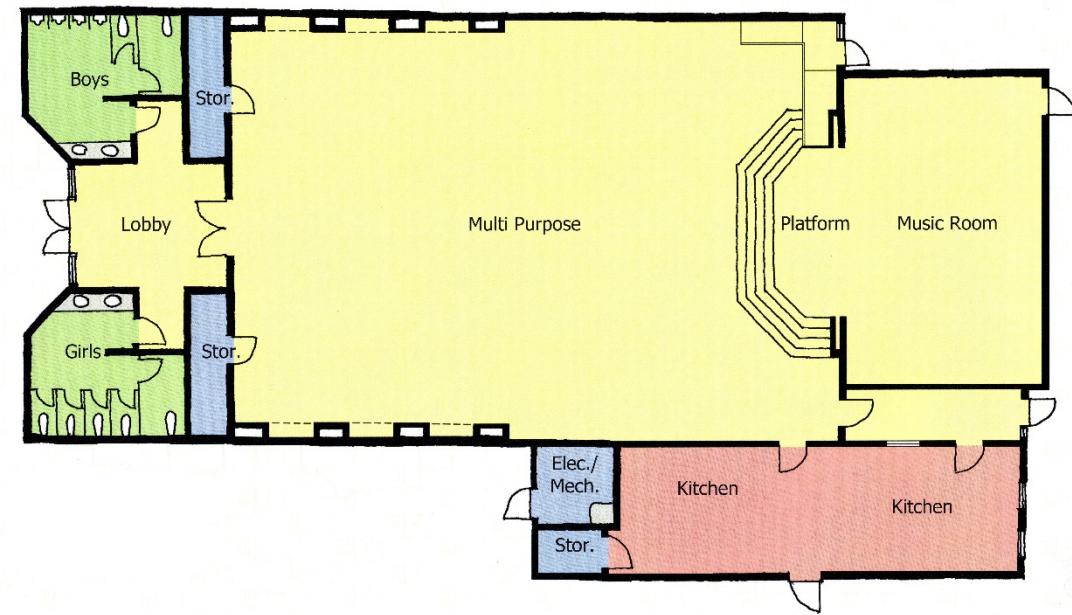
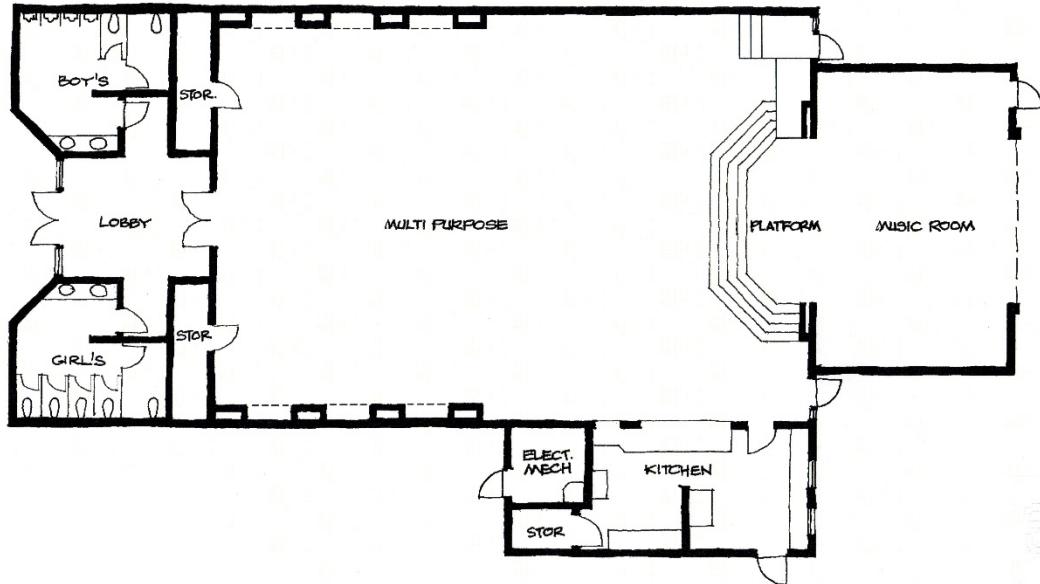
ADMINISTRATION BUILDING



EXISTING

VISION

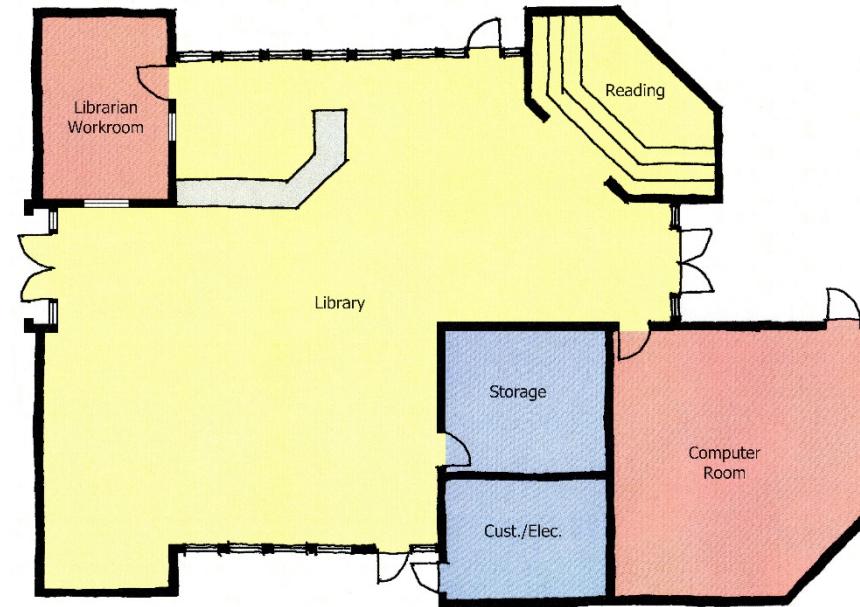
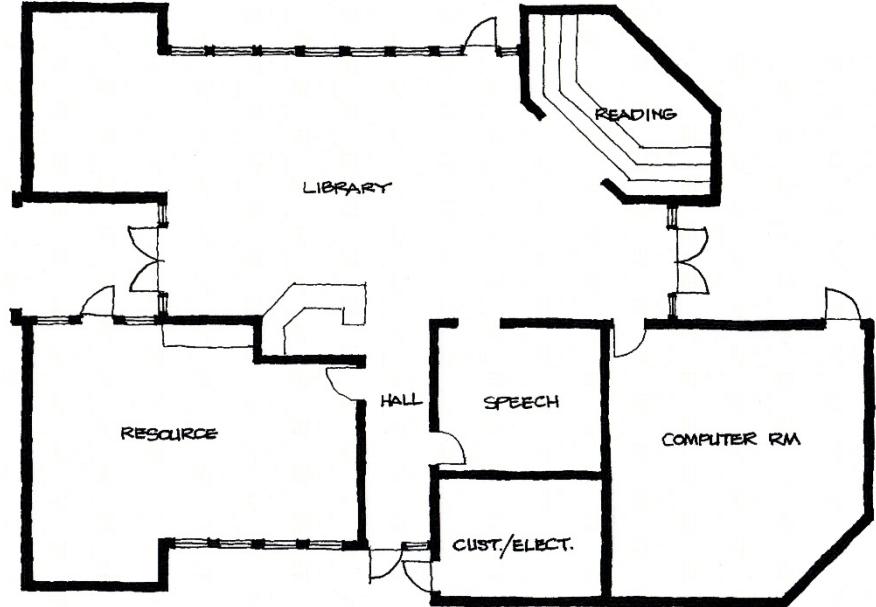
MPR/ KITCHEN BUILDING



EXISTING

VISION

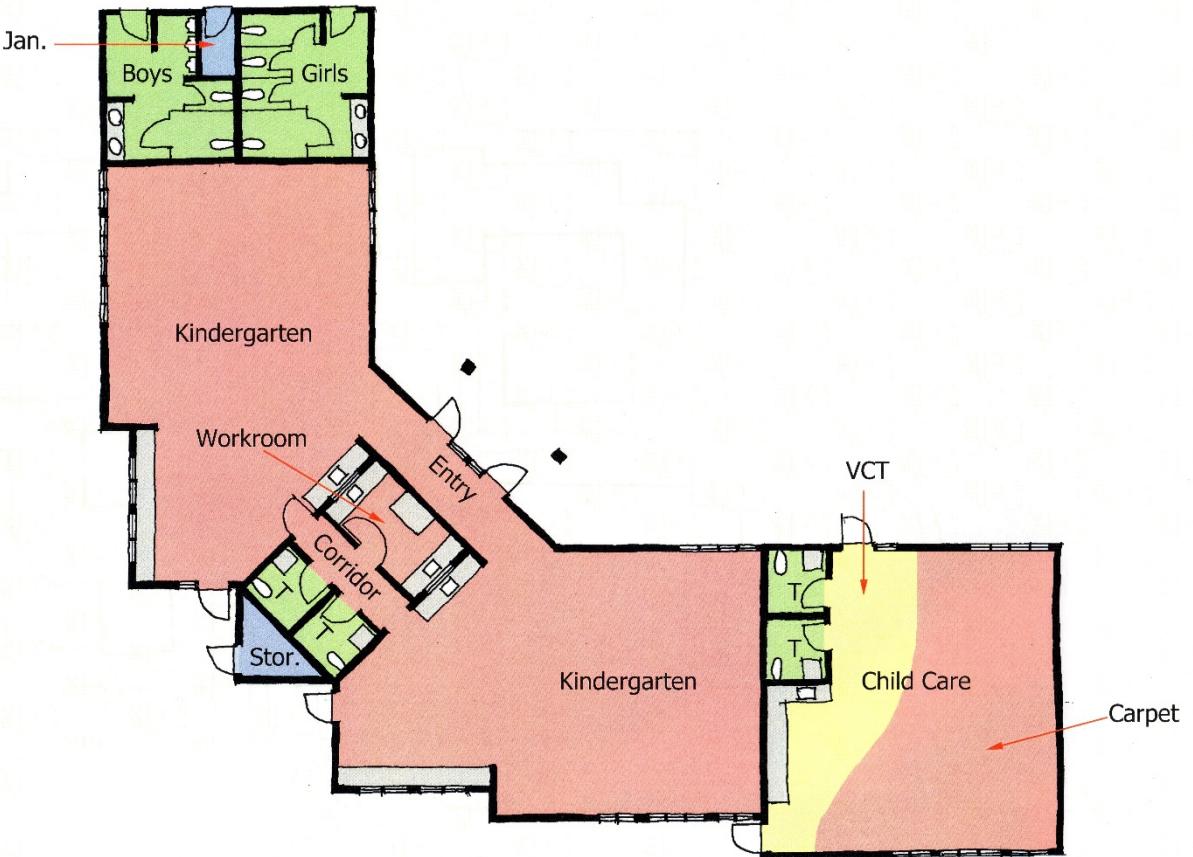
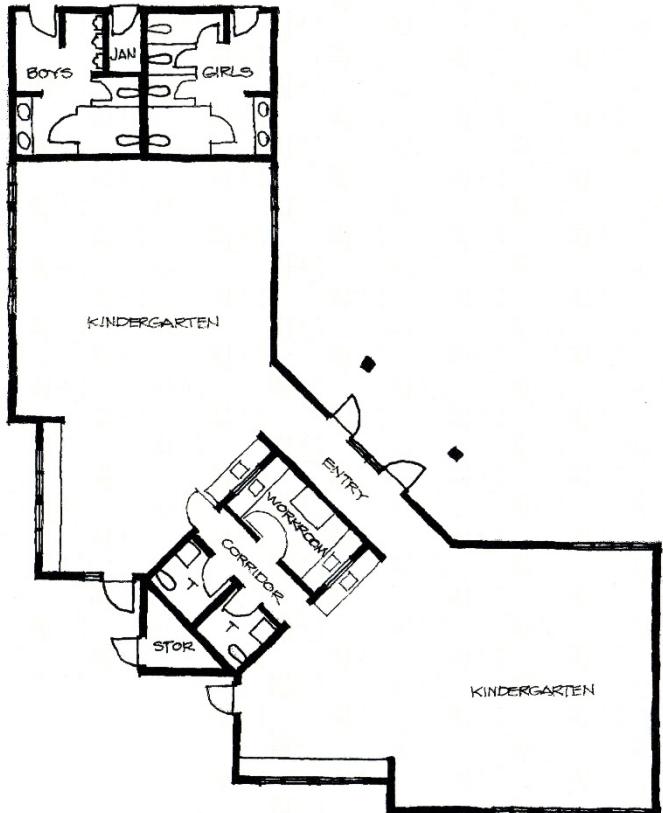
MEDIA / LIBRARY CENTER



EXISTING

VISION

KINDERGARTEN BUILDING / KID CENTRAL



EXISTING



VISION



A1, C1v, C1va, C1vb & C4. Safe school / check-in point, Administration Expansion with relocated staff lounge and New Kid Central Classroom and Parent pick-up area



C1i, C1ib, C1ii & C7. Library / Media Center Expansion and New Classroom Building (2 Standard Classrooms) replacing portable buildings



C1iii, A1, C1v, C1va & C1vb. Kitchen Expansion, Safe school / check-in point, Administration Expansion with relocated staff lounge.



C1i & C1ia New Classroom Building (1 Standard Classroom + 1 Science Lab)

I. Bear Gulch Elementary School – CONSTRUCTION COST ESTIMATE

Key Item	Item Description (Unit)	Quantity	Unit	Cost / Unit	Comments	Total Cost
A. CODE (HEALTH, SAFETY, ACCESS)						
A1.	Safer School - Admin. Building Safety check point	716	sf	\$185.00		\$132,460.00
A4.	Door Hardware Upgrades	100	ea	\$1,500.00		\$150,000.00
A5.	Phone System Upgrades	1	LS	\$55,000.00	* Provided by District - See Technology Appendix	\$55,000.00
					SUBTOTAL	\$337,460.00
B. HOUSEKEEPING						
B1.	Interior and Exterior Upgrades					
B1.i.	Patch, repair and paint walls where paper towel dispensers were removed	25	ea	\$200.00		\$5,000.00
B1.ii.	Paint Classroom #228 to match school colors	1200	sf	\$2.00		\$2,400.00
B1.iii.	Paint entry doors at computer lab	2	ea	\$250.00		\$500.00
B1.iv.	Lower soap and paper towel dispensers at old buildings to be at "kids" height	25	ea	\$100.00		\$2,500.00
B2.	Electrical / Lighting Upgrades					
B2.i.	Electrical and Data system upgrades at Stage	1	LS	\$75,000.00		\$75,000.00
B2.ii.	Additional outlets at computer lab	1	LS	\$50,000.00		\$50,000.00
B4.	HVAC System Upgrades	38	units	\$15,000.00		\$570,000.00
B8.	PA - Sound System Upgrades	1	LS	\$55,000.00	* Provided by District - See Technology Appendix	\$55,000.00
					SUBTOTAL	\$760,400.00
C. TRANSFORMATION						
C1.	Campus Additions and Transformations					
C1.i.	New Classroom Building (1 Science room and 1 Standard Classroom)	1920	sf	\$300.00	new building	\$576,000.00
C1.ii.	Library / Media Center Expansion	3450	sf	\$100.00	150 sf addition + modernization of int. spaces	\$345,000.00
C1.iii.	Kitchen Expansion	1000	sf	\$280.00	includes modernization of existing kitchen	\$280,000.00
C1.iv.	Permanent Stage in MPR - Music and Performing Arts Area	1200	sf	\$60.00		\$72,000.00
C1.v.	Expand Administration Building				See A1	
C1.v.a.	New Entry Structure	850	sf	\$300.00	new building addition	\$255,000.00
C1.v.b.	Reroute Staff Lounge	2000	sf	\$150.00	modernization of space	\$300,000.00
C3.	21st Century Technology Upgrades					
C3.i.	Wired infrastructure to current standards (LANs)	1	LS	\$80,000.00	* Provided by District - See Technology Appendix	\$80,000.00
C3.ii.	Wireless	1	LS	\$72,000.00	* Provided by District - See Technology Appendix	\$72,000.00
C3.iii.	Airwave Management	1	LS	\$19,375.00	* Provided by District - See Technology Appendix	\$19,375.00
C3.iv.	Mobile Device Management	1	LS	\$93,750.00	* Provided by District - See Technology Appendix	\$93,750.00
C3.v.	Student Devices			\$0.00	T.B.D.	\$0.00
C3.vi.	Computer Lab Upgrades	1	LS	\$42,000.00	* Provided by District - See Technology Appendix	\$42,000.00
C4.	Kid Central / After School Program Transformation					
C4.a.	New Kid Central Classroom Building	1100	sf	\$250.00	new building	\$275,000.00
C7.	Replace Portables with Permanent Classrooms (2 Standard Classrooms)	1920	sf	\$250.00	includes removal of existing portables	\$480,000.00
					SUBTOTAL	\$2,890,125.00
					SUBTOTAL CONSTRUCTION COST ESTIMATE	\$3,987,985.00
				Furniture, Fixtures & Equipment (FF&E) 2%		\$79,759.70
				Contingency 10%		\$398,798.50
					TOTAL CONSTRUCTION COST ESTIMATE	\$4,466,543.20
Notes:						
1. Costs shown above are current 2014 construction hard-cost estimates, based on a Design-Bid-Build method						
2. Add 25% for soft cost to arrive at TOTAL PROJECT COST (inclusive of Agency, Permits, Inspection, Testing, Design and Administrative Costs)						
3. Future costs can be estimated using a 3% annual escalation rate after January, 2015						

Overview

Grade Level: K-5
 Mascot: Cougar Cubs
 Colors: Navy / Kelly Green
 Year of Original Construction: 1949
 Year of Recent Transformation: 2012
 Approx. Permanent Building Area: 49,547 SF
 Approx. Portable Building Area: 11,488 SF
 Approx. Total Building Area: 61,035 SF
 Approximate Site Area: 9.85 AC

**Teaching Stations**

Permanent: 16
 Portable: 8
 Total Teaching Stations: 24
 Proposed Teaching Stations: 26

Capacity*	Current	Proposed
Permanent Capacity:	400	450
Portable Capacity:	200	200
Total Capacity:	600	650
Enrollment:	478	

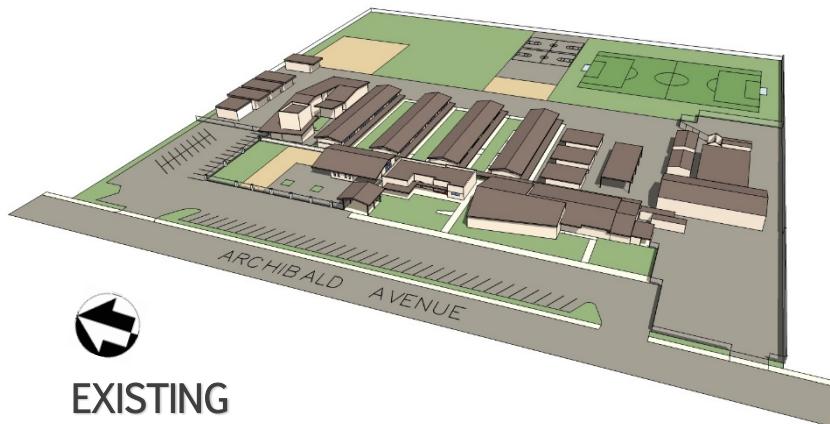


7955 Archibald Avenue
 Rancho Cucamonga, CA
 Parcel No. 1077-634-01/02

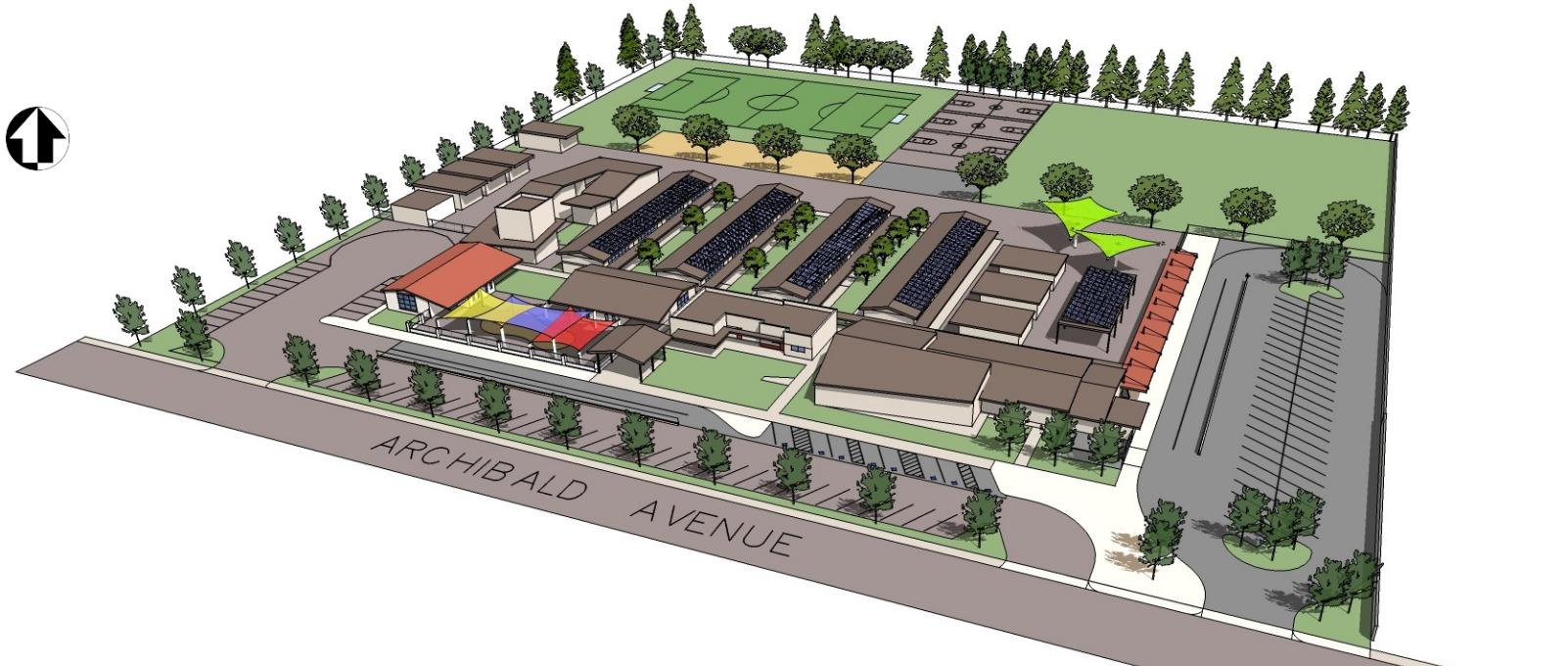
Available Parking:

Standard: 76
 Car Accessible: 2
 Van Accessible: 2
 Total Parking: 80

* Capacity based on study by CFS, using current facility usage as of June, 2014



EXISTING



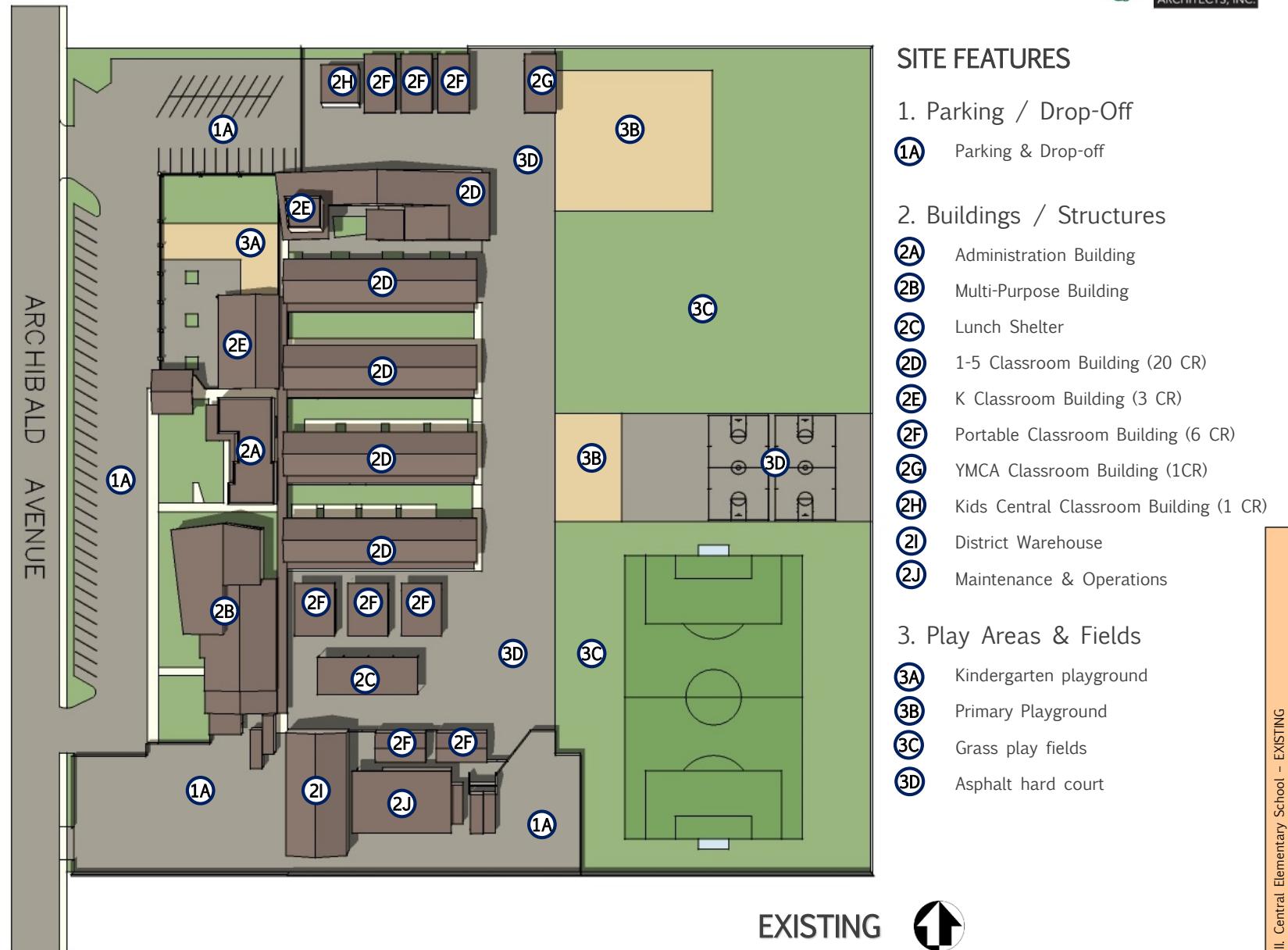
VISION

SITE DESCRIPTION

Central Elementary School is the oldest school facility in Central School District. Construction of the current school facilities was initiated in 1949. The facility was expanded in three more phases in 1953, 1955, and 1957. Over the years, portable classrooms were also added to the site to accommodate student population growth, special programs, and the Class Size Reduction program. In 2000 a major modernization and new construction project was completed which resulted in the addition of a new Library, Computer Lab, Special Education rooms, a Research Lab, modernized staff and administration facilities, and a county Special Education facility. Located adjacent to the site are both the District Warehouse and the District Maintenance and Operations facilities.

PROJECTS COMPLETED WITH MEASURE A BOND FUNDS (2008 THRU 2014):**CAMPUS WIDE (As needed):**

Fencing for Safety and Security
 Replacement of playground equipment for safety
 Video surveillance upgrades and other safety and security
 Replacement of inefficient lighting and HVAC units
 21st Century classroom support
 Fiber-optic network for greatly increased capacity
 Student information system upgrade (SASI)



A. CODE (Health, Safety, Access)

Campus Wide Items:

- A4. Door hardware upgrades
 - i. Replace old doors and hardware
- A5. Phone system upgrade

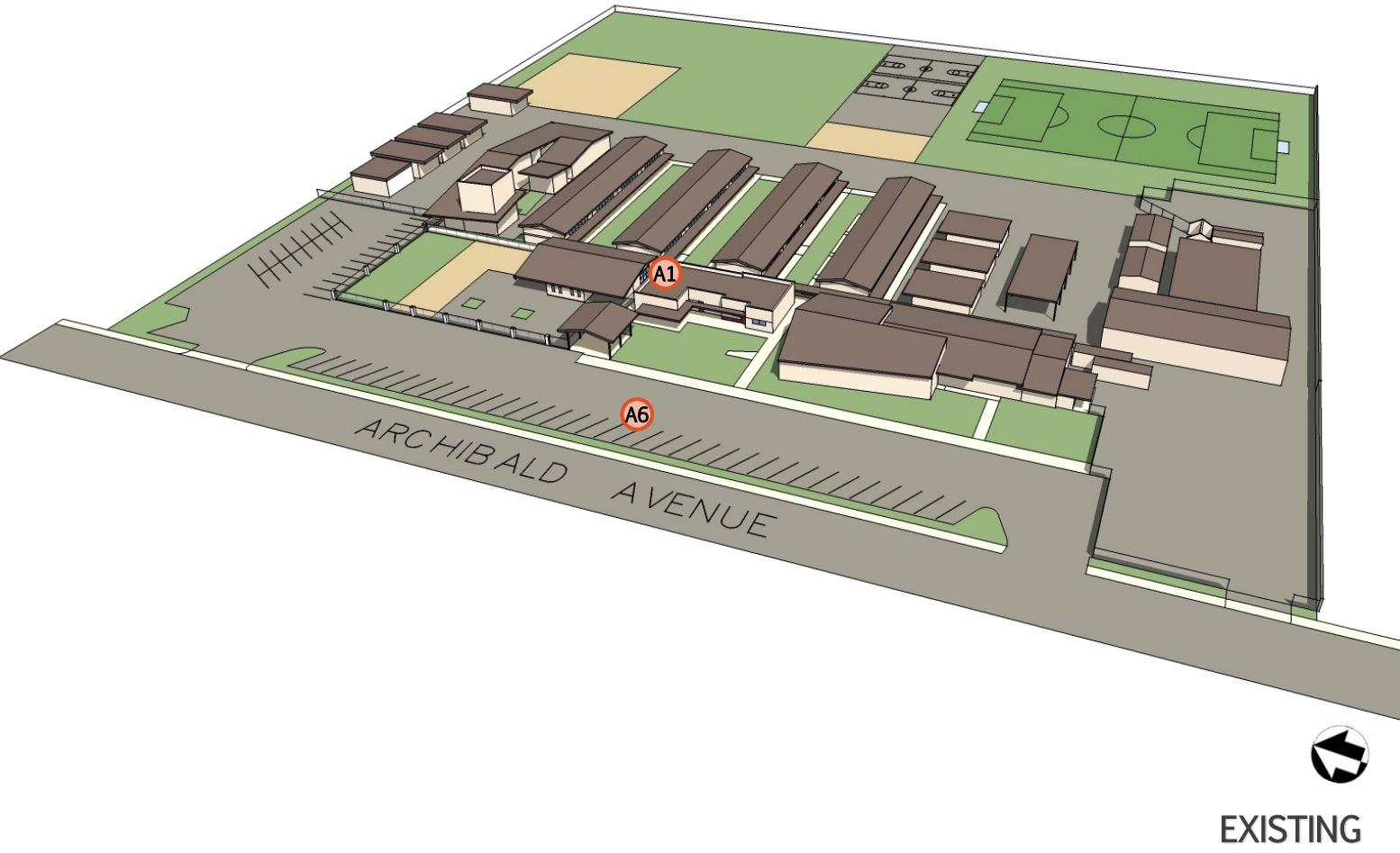
Campus Specific Items:

- A1** Safer School – Administration building safety check point
- A6** Parking and drop-off Upgrades

B. HOUSEKEEPING

Campus Wide Items:

- B1. Interior and Exterior Upgrades
 - i. Entire campus interior and exterior finishes upgrade (paint / ceilings)
 - ii. Entire campus carpet replacement
 - iii. Mildew issues in Classroom #37
 - iv. Replace all single pane wooden framed windows
 - v. Projector and projection screen at MPR
 - vi. Replace concrete slabs outside classrooms
 - vii. Replace 12"x12" ceiling tiles with dropped T-Bar Ceilings
- B2. Electrical / Lighting Upgrades
 - i. Entire campus electrical system upgrade
 - ii. Lighting upgrades in portable classroom #37
 - iii. Lighting in hallways and lunch shelter
 - iv. Replace site lighting with LED fixtures
 - v. Additional outlets and circuitry in classrooms
- B3. Sewer System Upgrades
 - i. Entire campus sewer system upgrade
- B4. HVAC System Upgrades
 - i. AC unit replacements at rooms #1 #2 #14 #15 #19
 - ii. Air balance issues @ rooms #3 #4 #6 #28 #29 #30
- B5. AC Paving Upgrades
 - i. Remove and replace AC paving at back of school
- B6. Drainage / Plumbing Upgrades
 - i. Replace main and laterals to correct yellow water
 - ii. Address water leaks between office and #20's wing at walkway
 - iii. Address drainage issues at north side of #20's wing and at field where old septic tank used to be
 - iv. Install rain gutters
 - v. Repair non-working drinking fountains
- B8. PA – Sound System Upgrades



C. TRANSFORMATION

Campus Wide Items:

- C3. 21st Century Technology Upgrades
- i. Wired infrastructure to current standards
 - ii. Wireless
 - iii. Airwave Management
 - iv. Mobile Device Management
 - v. Student Devices
 - vi. Computer Lab Upgrades

Campus Specific Items:

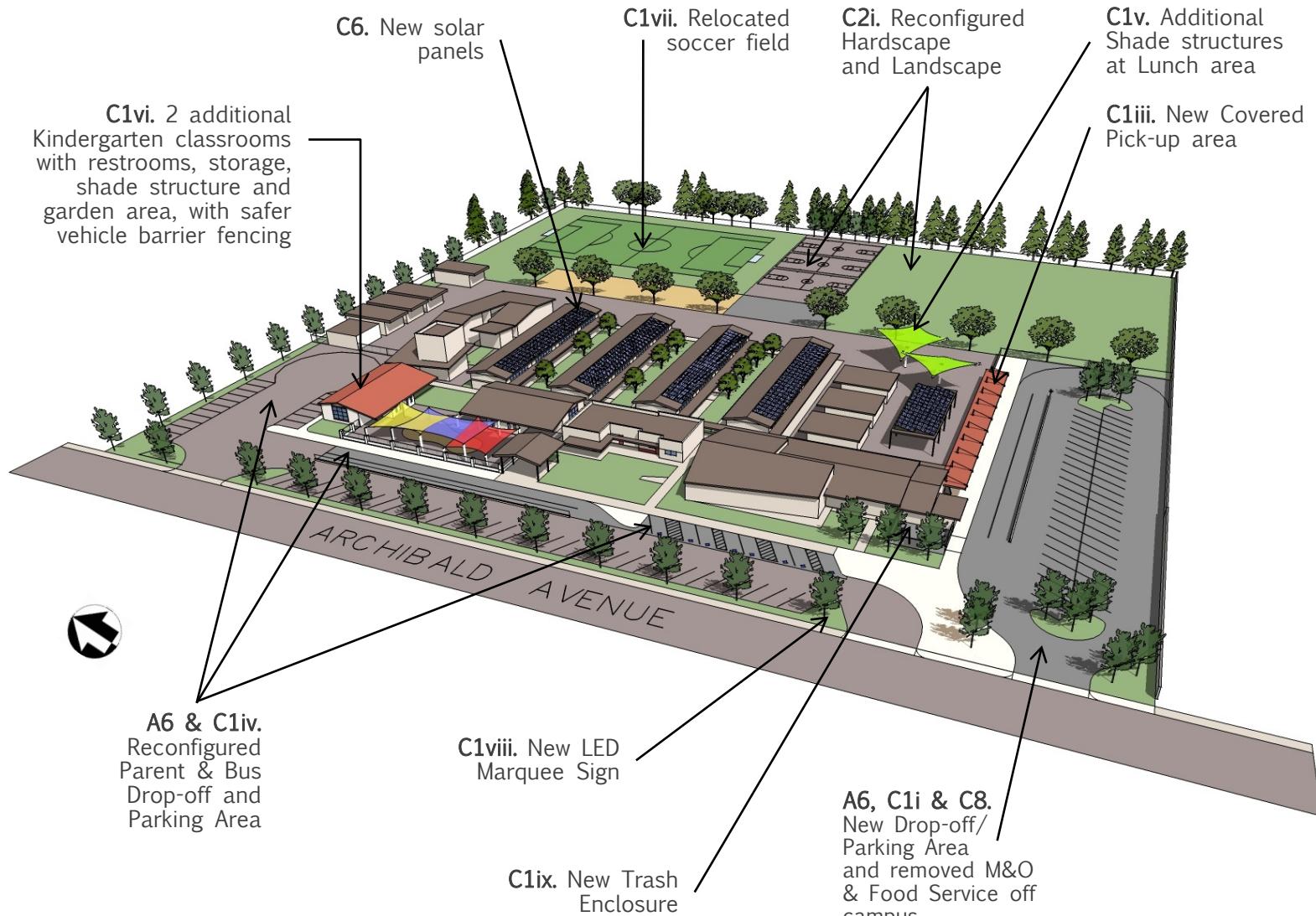
- C1** Campus Additions and Transformations
- i. Remove Maintenance & Operations / Warehouse / Food Service facilities off campus
 - ii. New drop-off / parking area
 - iii. New covered pick-up area
 - iv. Parking expansion and reconfiguration
 - v. Additional shade structures at lunch area.
 - vi. Expand Kindergarten area, add shade structure and planter / garden area, with safer vehicle barrier fencing, walkway at playground area and add play equipment storage.
 - vii. Relocate soccer field from North to South for supervision purposes.
 - viii. Provide LED marquee sign
 - ix. New Trash Enclosure

- C2** Play Areas Upgrades
- i. Additional hardscape and landscape

- C6** Solar Panel

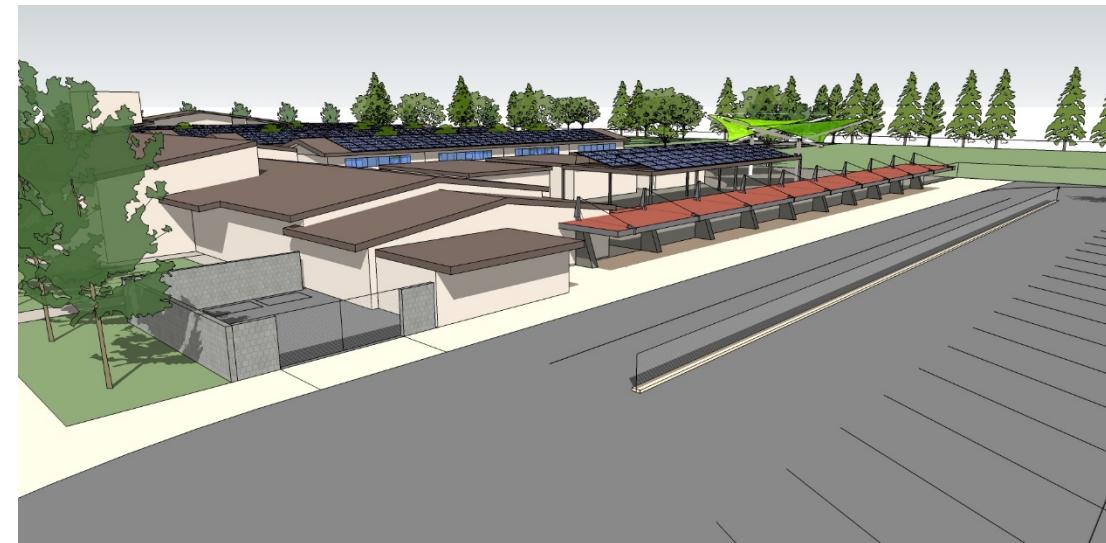
- C8** District Support Facilities Transformations

- i. Maintenance & Operations and Food Services to relocate from Central Elementary School site to Cucamonga Middle School or other proposed site – New Facility per District Support Facilities Options #1A, #1B, #2 or #3.
- ii. New access driveway to M&O and Food Service Facility at Cucamonga MS – Per District Support Facilities Option #1A or #1B only.
- iii. Reconfigure play fields at Cucamonga MS – Per District Support Facilities Option #1A or #1B only.


VISION



A6, C1iv & C1vi. Reconfigured Drop-Off and Parking Area, 2 additional Kindergarten classrooms with restrooms, storage, shade structure and garden area, with safer vehicle barrier fencing.



A6, C1i, C1iii, C1ix & C8. New Drop-off and Parking Area, Removed M&O and Food Service off campus, New Covered Pick-up area and New Trash Enclosure.



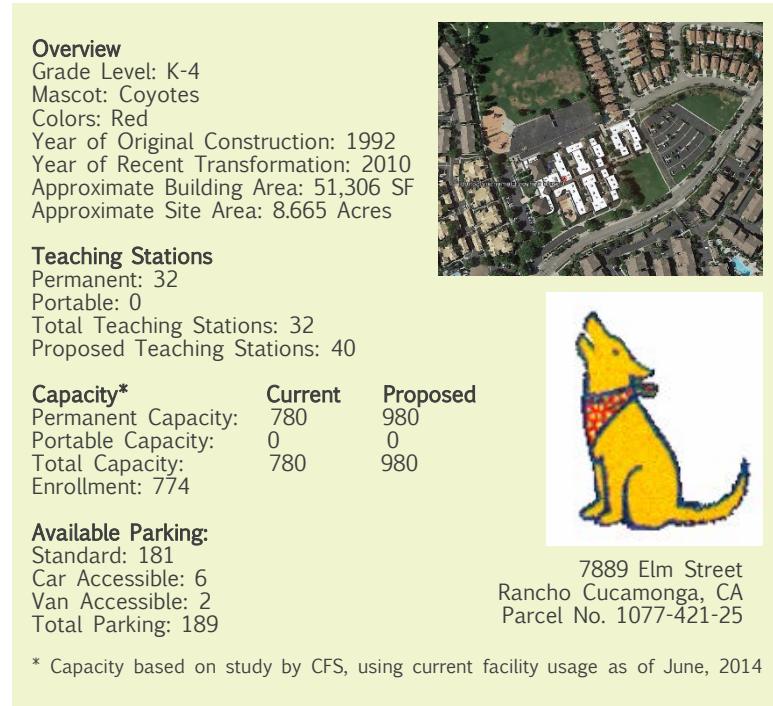
C1iii, C1iv & C6. New Covered Pick-up area, Additional Shade structures at Lunch area and New solar panels



A6, C1iv & C1vi. Reconfigured Drop-off and Parking Area, 2 additional Kindergarten classrooms with restrooms, storage, shade structure and garden area, with safer vehicle barrier fencing.

Key Item	Item Description (Unit)	Quantity	Unit	Cost / Unit	Comments	Total Cost
A. CODE (HEALTH, SAFETY, ACCESS)						
A1.	Safer School - Admin. Building Safety check point	1	LS	\$20,000.00		\$20,000.00
A4.	Door Hardware Upgrades					
A4.i.	Replace old doors and hardware	100	ea	\$2,000.00		\$200,000.00
A5.	Phone System Upgrades	1	LS	\$65,000.00	* Provided by District - See Technology Appendix	\$65,000.00
A6.	Parking and Drop-off Upgrades				See C1.ii and C1.iv	
					SUBTOTAL	\$285,000.00
B. HOUSEKEEPING						
B1.	Interior and Exterior Upgrades					
B1.i.	Entire campus interior and exterior finishes upgrade (paint / ceilings)	49547	sf	\$2.00		\$99,094.00
B1.ii.	Entire campus carpet replacement	47000	sf	\$5.50	includes VCT and Rubber base	\$258,500.00
B1.iii.	Mildew issues in Classroom #37	1	LS	\$10,000.00		\$10,000.00
B1.iv.	Replace all single pane wooden framed windows	2500	sf	\$70.00		\$175,000.00
B1.v.	Projector and projection screen at MPR	1		\$10,500.00		\$10,500.00
B1.vi.	Replace concrete slabs outside of classrooms	4500	sf	\$16.00	demo and replace	\$72,000.00
B1.vii.	Replace 12"x12" tiles with dropped T-Bar ceilings	30000	sf	\$13.00	includes new 2x4 light fixtures & HVAC grilles	\$390,000.00
B2.	Electrical / Lighting Upgrades					
B2.i.	Entire campus electrical system upgrade	1	LS	\$150,000.00	Allowance	\$150,000.00
B2.ii.	Lighting upgrades in portable classroom #37	15	ea	\$400.00		\$6,000.00
B2.iii.	Lighting in hallways and lunch shelter	1	LS	\$50,000.00		\$50,000.00
B2.iv.	Replace site lighting with LED fixtures	1	LS	\$50,000.00		\$50,000.00
B2.v.	Additional outlets and circuitry in classrooms	18	CR	\$7,500.00		\$135,000.00
B3.	Sewer System Upgrades					
B3.i.	Entire campus sewer system upgrade	1	LS	\$100,000.00	Allowance	\$100,000.00
B4.	HVAC System Upgrades					
B4.i.	AC unit replacements at rooms #1 #2 #14 #15 #19	5	ea	\$15,000.00		\$75,000.00
B4.ii.	Air balance issues @ rooms #3 #4 #6 #28 #29 #30	5	ea	\$1,000.00		\$5,000.00
B5.	AC Paving Upgrades					
B5.i.	Entire campus remove and replace AC paving	64000	sf	\$5.00		\$320,000.00
B6.	Drainage / Plumbing Upgrades					
B6.i.	Replace main and laterals to correct yellow water	1	LS	\$100,000.00		\$100,000.00
B6.ii.	Address water leaks between office and #20's wing at walkway	1	LS	\$3,500.00		\$3,500.00
B6.iii.	Address drainage issues at north side of #20's wing and at field where old septic tank used to be	1	LS	\$5,000.00		\$5,000.00
B6.iv.	Install rain gutters	6	Bldg	\$10,000.00		\$60,000.00
B6.v.	Repair non-working drinking fountains	5	ea	\$5,000.00		\$25,000.00
B8.	PA - Sound System Upgrades	1	LS	\$55,000.00	* Provided by District - See Technology Appendix	\$55,000.00
					SUBTOTAL	\$2,154,594.00

Key Item	Item Description (Unit)	Quantity	Unit	Cost / Unit	Comments	Total Cost
C. TRANSFORMATION						
C1.	Campus Additions and Transformations					
C1.i.	Remove Maintenance & Operations / Warehouse / Food Service facilities	5000	sf	\$10.00		\$50,000.00
C1.ii.	New drop-off / parking area	35500	sf	\$10.00		\$355,000.00
C1.iii.	New Covered Pick-up Area	3000	sf	\$45.00	new covered structure	\$135,000.00
C1.iv.	Parking expansion and reconfiguration	12400	sf	\$13.00	includes slurry and striping of remaining asphalt	\$161,200.00
C1.v.	Additional shade structures at lunch area (2 ea @ 1200 sf)	2400	sf	\$75.00		\$180,000.00
C1.vi.	Expand Kindergarten area (2 added Kindergarten classrooms with restrooms)	2560	sf	\$250.00		\$640,000.00
C1.vi.	add shade structure at Kindergarten area (3 ea @ 1200 sf)	3600	sf	\$75.00		\$270,000.00
C1.vi.	Walkway at Kindergarten playground area and add play equipment storage	5000	sf	\$20.00		\$100,000.00
C1.vii.	Relocate soccer field from North to South for supervision purposes	71960	sf	\$4.00		\$287,840.00
C1.viii.	Provide LED marquee sign	1	LS	\$20,000.00	* Provided by District - M&O Estimate	\$20,000.00
C1.ix.	New Trash Enclosure	880	sf	\$42.00		\$36,960.00
C2.	Play Area Upgrades					
C2.i.	Additional hardscape and landscape	73530	sf	\$4.00		\$294,120.00
C3.	21st Century Technology Upgrades					
C3.i.	Wired infrastructure to current standards (LANs)	1	LS	\$80,000.00	* Provided by District - See Technology Appendix	\$80,000.00
C3.ii.	Wireless	1	LS	\$75,000.00	* Provided by District - See Technology Appendix	\$75,000.00
C3.iii.	Airwave Management	1	LS	\$19,375.00	* Provided by District - See Technology Appendix	\$19,375.00
C3.iv.	Mobile Device Management	1	LS	\$93,750.00	* Provided by District - See Technology Appendix	\$93,750.00
C3.v.	Student Devices			\$0.00	T.B.D.	\$0.00
C3.vi.	Computer Lab Upgrades	1	LS	\$42,000.00	* Provided by District - See Technology Appendix	\$42,000.00
C6.	Solar Panels				PROP. 39	\$0.00
C8.	District Support Facilities Transformations					
C8.i.	Maintenance & Operations and Food Services to relocate from Central Elementary School site to Cucamonga MS or other proposed site - New Facility per District Support Facilities Options #1A, #1B, #2 or #3	15000	sf	\$150.00	Allowance - (Economical NON DSA Facility)	\$2,250,000.00
C8.ii.	New access driveway to M&O and Food Service Facility at Cucamonga MS - per District Support Facilities Option #1A or #1B only	13130	sf	\$10.00		\$131,300.00
C8.iii.	Reconfigure play fields at Cucamonga MS - per District Support Facilities Option #1A or #1B only	309000	sf	\$5.00		\$1,545,000.00
					SUBTOTAL	\$6,766,545.00
					SUBTOTAL CONSTRUCTION COST ESTIMATE	\$9,206,139.00
					Furniture, Fixtures & Equipment (FF&E) 2%	\$184,122.78
					Contingency 10%	\$920,613.90
					TOTAL CONSTRUCTION COST ESTIMATE	\$10,310,875.68
Notes:						
1. Costs shown above are current 2014 construction hard-cost estimates, based on a Design-Bid-Build method						
2. Add 25% for soft cost to arrive at TOTAL PROJECT COST (inclusive of Agency, Permits, Inspection, Testing, Design and Administrative Costs)						
3. Future costs can be estimated using a 3% annual escalation rate after January, 2015						



SITE DESCRIPTION

Coyote Canyon Elementary School first opened its doors as a temporary facility in 1987 to the newly developed and expanding Terra Vista community. In 1992 the current permanent site was officially opened.

Through the years new additions have included the third grade annex (the Millennium courtyard), a ball wall, beautiful outdoor garden areas and safety/backpack hooks in all courtyards.

PROJECTS COMPLETED WITH MEASURE A BOND FUNDS (2008 THRU 2014):**CAMPUS WIDE (As needed):**

Fencing for Safety and Security

Replacement of playground equipment for safety

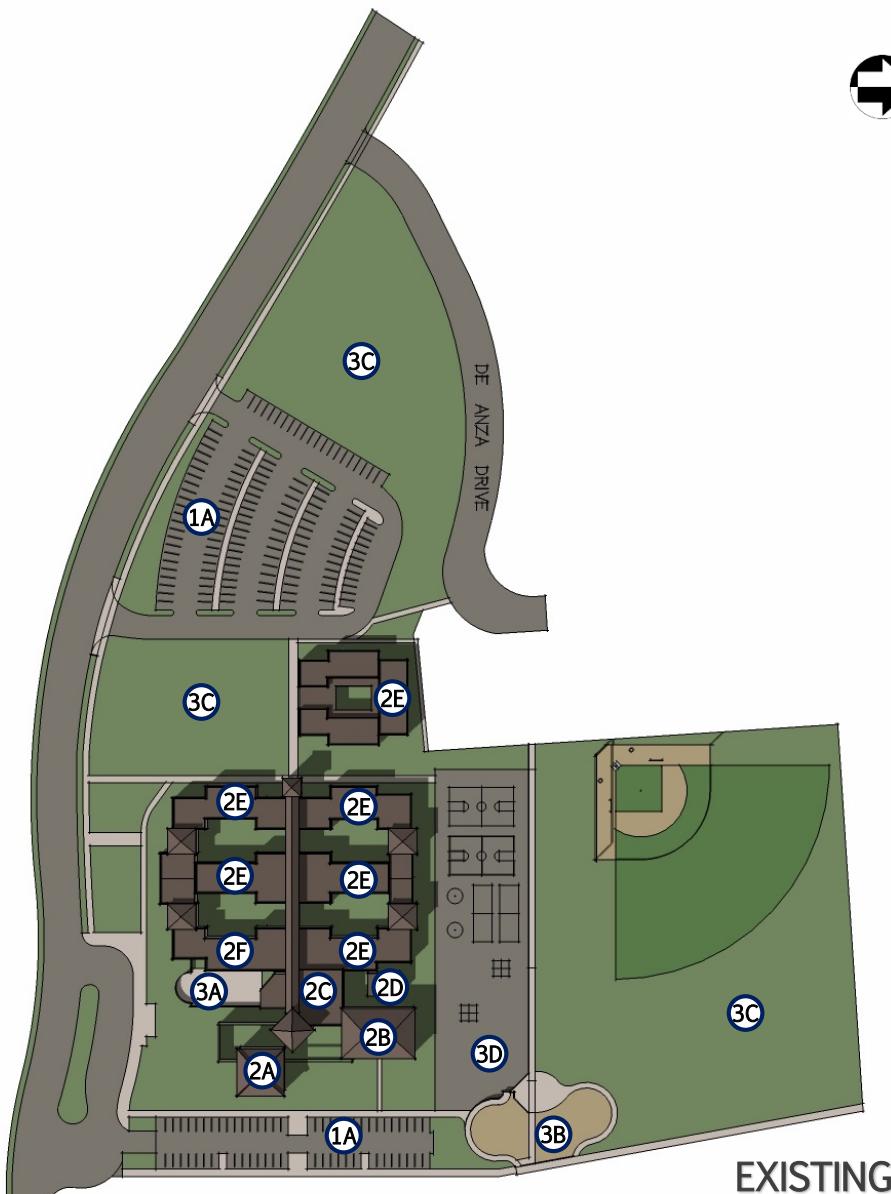
Video surveillance upgrades and other safety and security

Replacement of inefficient lighting and HVAC units

21st Century classroom support

Fiber-optic network for greatly increased capacity

Student information system upgrade (SASI)

**SITE FEATURES****1. Parking / Drop-Off**

- 1A** Parking & Drop-off

2. Buildings / Structures

- 2A** Administration Building
- 2B** Multi-Purpose Building
- 2C** Media Center Building
- 2D** Lunch Shelter
- 2E** 1-5 Classroom Building (40 CR)
- 2F** K Classroom Building (3 CR)

3. Play Areas & Fields

- 3A** Kindergarten playground
- 3B** Primary Playground
- 3C** Grass play fields
- 3D** Asphalt hard court

A. CODE (Health, Safety, Access)

Campus Wide Items:

- A2. Student and Staff Restroom Upgrades
- A4. Door hardware upgrades
- A5. Phone system upgrade
- A8. Signage Upgrades – Replace faded signage
- A9. ADA / Path of Travel - Seal & Re-stripe

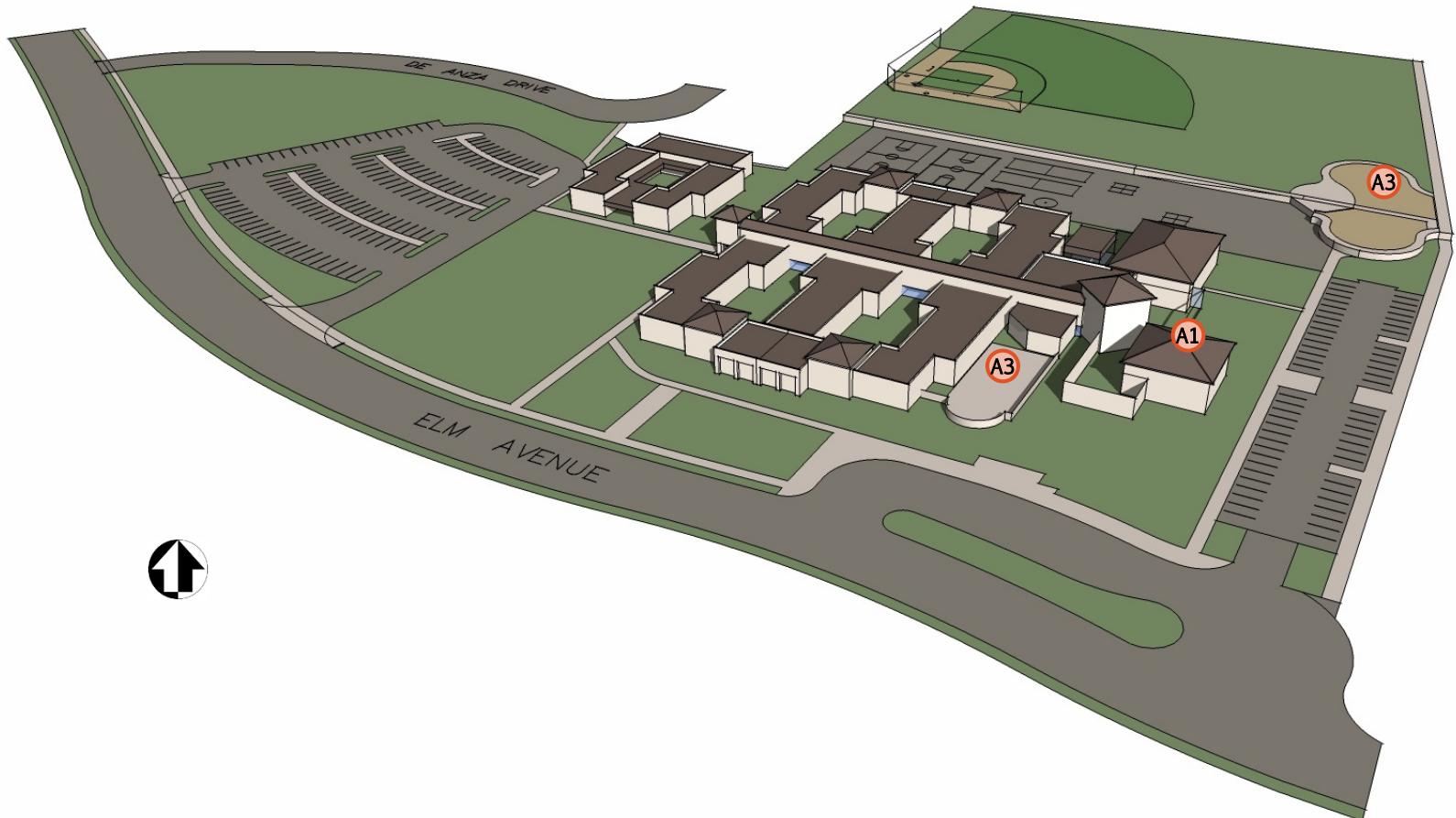
Campus Specific Items:

- A1** Safer School – Administration building safety check point
- A3** Play Structure Upgrades

B. HOUSEKEEPING

Campus Wide Items:

- B1. Interior and Exterior Upgrades
 - i. Replace wood chips at playgrounds
 - ii. Replace flooring as needed
- B2. Electrical / Lighting Upgrades
 - i. Provide power / electrical outlets at fields
 - ii. Provide more power outlets at classrooms
 - iii. Replace site lighting with LED fixtures
- B4. HVAC System Upgrades
 - i. Replace all package units (exceeding life span)
- B6. Drainage / Plumbing Upgrades
 - i. Replace angle stops at plumbing fixtures
- B8. PA – Sound System Upgrades
- B9. Irrigation System Upgrades
 - i. Remote irrigation controls, master valve control, ball valve at each valve.



EXISTING

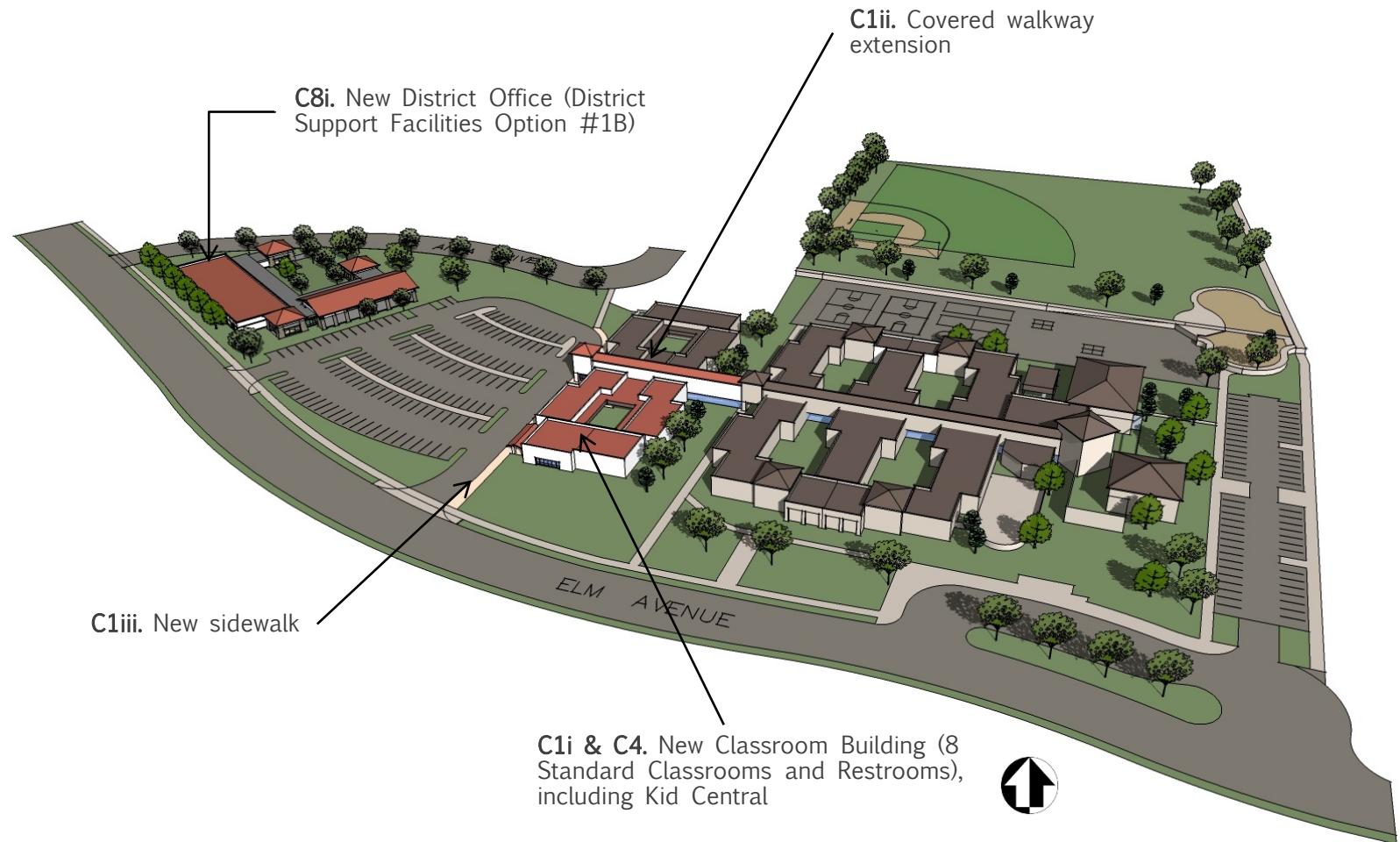
C. TRANSFORMATION

Campus Wide Items:

- C3. 21st Century Technology Upgrades
- i. Wired infrastructure to current standards
 - ii. Wireless
 - iii. Airwave Management
 - iv. Mobile Device Management
 - v. Student Devices
 - vi. Computer Lab Upgrades

Campus Specific Items:

- C1** Campus Additions and Transformations
- i. New Classroom Building (8 Standard Classrooms and Restrooms)
 - ii. Covered walkway extension
 - iii. New sidewalk
- C4** Kid Central Transformation – Located in new Classroom Building
- C8** District Support Facilities Transformation
- i. New District Office – relocated from leased building / New Facility – District Support Facilities Option #1B



VISION





C1i., C1ii & C1iii. New Classroom Building (8 CR and Restrooms including Kid Central), covered walkway extension and new sidewalk



C1i., C1ii & C1iii. New Classroom Building (8 CR and Restrooms including Kid Central), covered walkway extension and new sidewalk



C1i., C1ii & C1iii. New Classroom Building (8 CR and Restrooms including Kid Central), covered walkway extension and new sidewalk



C8i. New District Office (relocated from original leased building)

III. Coyote Canyon Elementary School – CONSTRUCTION COST ESTIMATE

Key Item	Item Description (Unit)	Quantity	Unit	Cost / Unit	Comments	Total Cost
A. CODE (HEALTH, SAFETY, ACCESS)						
A1.	Safer School - Admin. Building Safety check point	1	LS	\$20,000.00		\$20,000.00
A2.	Student and Staff Restroom Upgrades	10	ea	\$20,000.00		\$200,000.00
A3.	Play Structures Upgrades	1	LS	\$120,000.00		\$120,000.00
A4.	Door Hardware Upgrades	80	ea	\$1,500.00		\$120,000.00
A5.	Phone System Upgrades	1	LS	\$65,000.00	* Provided by District - See Technology Appendix	\$65,000.00
A8.	Signage Upgrades - replace faded signage	1	LS	\$1,500.00	* Provided by District - M&O Estimate	\$1,500.00
A9.	ADA / Path of Travel - Seal & Re-stripe	1	LS	\$5,000.00	Allowance	\$5,000.00
					SUBTOTAL	\$531,500.00
B. HOUSEKEEPING						
B1.	Interior and Exterior Upgrades					
B1.i.	Replace wood chips at playgrounds	4500	sf	\$6.00		\$27,000.00
B1.ii.	Replace flooring as needed	1	LS	\$75,000.00	Allowance	\$75,000.00
B2.	Electrical / Lighting Upgrades					
B2.i.	Provide power / electrical outlets at fields	1	LS	\$15,000.00	Allowance	\$15,000.00
B2.ii.	Provide more power outlets at classrooms	1	LS	\$100,000.00	Allowance	\$100,000.00
B2.iii.	Replace site lighting with LED fixtures	1	LS	\$50,000.00		\$50,000.00
B4.	HVAC Systems Upgrades - Replace all package units (exceeding lif span)	30	LS	\$15,000.00		\$450,000.00
B6.	Drainage/Plumbing Upgrades - Replace angle stops at plumbing fixtures	50	ea	\$1,000.00		\$50,000.00
B8.	PA - Sound System Upgrades	1	LS	\$55,000.00	* Provided by District - See Technology Appendix	\$55,000.00
B9.	Irrigation System Upgrades - remote irr. controls, master valve, ball valves	1	LS	\$60,000.00		\$60,000.00
					SUBTOTAL	\$882,000.00
C. TRANSFORMATION						
C1.	Campus Additions and Transformations					
C1i & C4.	New Classroom Building/Kid Central (8 standard classrooms & restrooms kid central)	10900	sf	\$250.00		\$2,725,000.00
C1.ii.	Covered Walkway Extension	3665	sf	\$75.00		\$274,875.00
C1.iii.	New Sidewalk	6230	sf	\$10.00		\$62,300.00
C3.	21st Century Technology Upgrades					
C3.i.	Wired infrastructure to current standards (LANs)	1	LS	\$100,000.00	* Provided by District - See Technology Appendix	\$100,000.00
C3.ii.	Wireless	1	LS	\$85,000.00	* Provided by District - See Technology Appendix	\$85,000.00
C3.iii.	Airwave Management	1	LS	\$19,375.00	* Provided by District - See Technology Appendix	\$19,375.00
C3.iv.	Mobile Device Management	1	LS	\$93,750.00	* Provided by District - See Technology Appendix	\$93,750.00
C3.v.	Student Devices			\$0.00	T.B.D.	\$0.00
C3.vi.	Computer Lab Upgrades	1	LS	\$42,000.00	* Provided by District - See Technology Appendix	\$42,000.00
C8.	District Support Facilities Transformations					
C8.i.	New District Office - relocated from leased building to Coyote Canyon Elementary Site / New Facility - District Support Facilities Option #1B	15000	sf	\$0.00	See District Support Facilities Option #1B / C8.i.	\$0.00
					SUBTOTAL	\$3,402,300.00
					SUBTOTAL CONSTRUCTION COST ESTIMATE	\$4,815,800.00
					Furniture, Fixtures & Equipment (FF&E) 2%	\$96,316.00
					Contingency 10%	\$481,580.00
					TOTAL CONSTRUCTION COST ESTIMATE	\$5,393,696.00
Notes:	1. Costs shown above are current 2014 construction hard-cost estimates, based on a Design-Bid-Build method 2. Add 25% for soft cost to arrive at TOTAL PROJECT COST (inclusive of Agency, Permits, Inspection, Testing, Design and Administrative Costs) 3. Future costs can be estimated using a 3% annual escalation rate after January, 2015					

Overview

Grade Level: K-5
 Mascot: Jaguars
 Colors: Red with black & white accent
 Year of Original Construction: 1979
 Year of Recent Transformation: 2006
 Approx. Permanent Bldg. Area: 46,327 SF
 Approx. Portable Building Area: 7,200 SF
 Approx. Total Building Area: 53,527 SF
 Approximate Site Area: 9.85 Acres

**Teaching Stations**

Permanent: 18
 Portable: 7
 Total Teaching Stations: 25
 Proposed Teaching Stations: 21

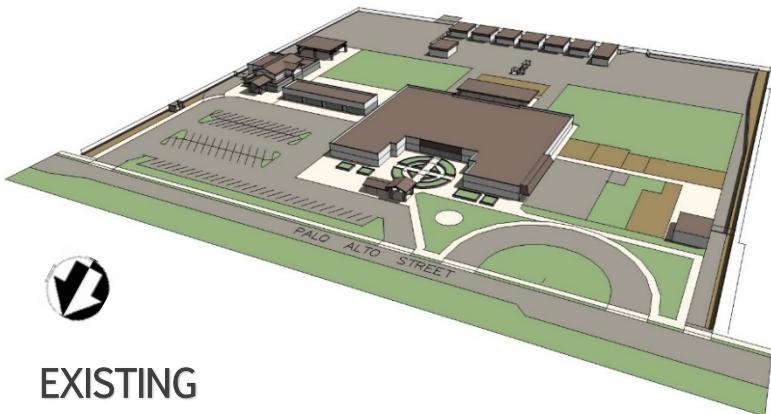
Capacity*	Current	Proposed
Permanent Capacity:	450	525
Portable Capacity:	175	0
Total Capacity:	625	525
Enrollment:	602	

Available Parking:
 Standard: 71
 Car Accessible: 1
 Van Accessible: 2
 Total Parking: 74



10333 Palo Alto Street
 Rancho Cucamonga, CA
 Parcel No. 1077-261-41

* Capacity based on study by CFS, using current facility usage as of June, 2014



EXISTING



VISION

SITE DESCRIPTION

Doña Merced Elementary School is a K-5 school serving over 550 students in the Central School District. First opened in 1979, and named after an historical ranchera who made it her mission to educate local children along with her own in the 1860s,

PROJECTS COMPLETED WITH MEASURE A BOND FUNDS (2008 THRU 2014):**CAMPUS WIDE (As needed):**

Fencing for Safety and Security
 Replacement of playground equipment for safety
 Video surveillance upgrades and other safety and security
 Replacement of inefficient lighting and HVAC units
 21st Century classroom support
 Fiber-optic network for greatly increased capacity
 Student information system upgrade (SASI)

**SITE FEATURES****1. Parking / Drop-Off**

- 1A** Parking & Drop-off

2. Buildings / Structures

- 2A** Administration
- 2B** Multi-Purpose
- 2C** Library
- 2D** Lunch Shelter
- 2E** 1-5 Classroom Building (21 CR)
- 2F** K Classrooms (2 CR)
- 2G** Portable Classroom Building (5 CR)
- 2H** Kids Central Portable Classroom Building (2 CR)

3. Play Areas & Fields

- 3A** Kindergarten playground
- 3B** Primary Playground
- 3C** Grass play fields
- 3D** Asphalt hard court

EXISTING

A. CODE (Health, Safety, Access)**Campus Wide Items:**

- A2. Student and Staff Restroom Upgrades
- A5. Phone system upgrade
- A8. Signage Upgrades – Replace faded signage

Campus Specific Items:

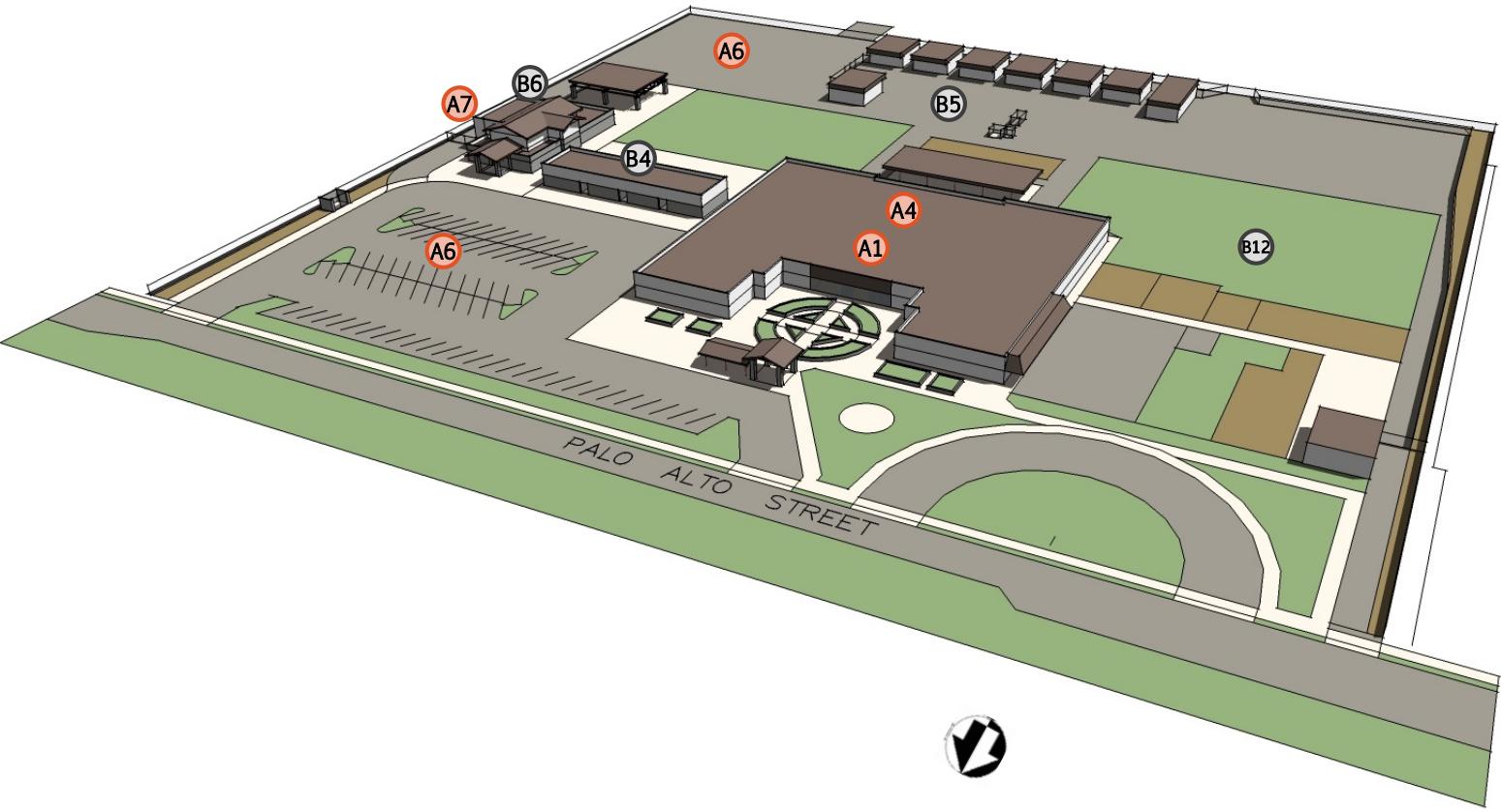
- A1** Safer School – Administration building safety check point
- A4** Door Hardware Upgrades
 - i. At Building "A"
- A6** Parking and Drop-off Upgrades
 - i. Remove and replace south parking lot
 - ii. Seal and re-stripe north parking lot & fire lane
- A7** Fencing Upgrades
 - i. Provide panic hardware on gates by MPR

B. HOUSEKEEPING**Campus Wide Items:**

- B1. Interior and Exterior Upgrades
 - i. Interior painting in Building "A"
 - ii. Replace carpet at main building
 - iii. New finishes, additional cabinetry and new drinking fountain at staff workroom
 - iv. Roof restoration at Garner wing
- B2. Electrical / Lighting Upgrades
 - i. Implement daylighting in Building "A"
 - ii. Exterior site lighting – EMS controlled
 - iii. Additional outlets at classrooms in Building "A"
- B8. PA – Sound System Upgrades
- B9. Irrigation Upgrades
 - i. Remote irrigation controls, master valve control, ball valve at each valve

Campus Specific Items:

- B4** HVAC System Upgrades
 - i. Replace all HVAC units in Garner Building
- B5** AC Paving Upgrades
 - i. Remove and replace hardscape south of campus
- B6** Drainage / Plumbing Upgrades
 - i. Main lines & laterals reaching life span, replace all angle stops
- B12** Landscape Upgrades
 - i. Replace grass in west field area

**EXISTING**

C. TRANSFORMATION

Campus Wide Items:

- C3. 21st Century Technology Upgrades
- i. Wired infrastructure to current standards
 - ii. Wireless
 - iii. Airwave Management
 - iv. Mobile Device Management
 - v. Student Devices
 - vi. Computer Lab Upgrades

Campus Specific Items:

C1 Campus Additions and Transformations

- i. New Classroom Building
 - a. Include storage room for P.E.
 - b. New Science Lab
 - c. Additional Restrooms
 - d. Extend covered walkway
- ii. New Kindergarten classroom Building / entry and fencing
- iii. New covered waiting area outside Garner Building
- iv. New parking lot for Kid Central area
- v. New shade structures
- vi. Administration Area
 - a. Expand Administration Area / Bigger health office and health restroom
 - b. New centralized entrance to school
 - c. Protected entry from wind
 - d. More welcoming waiting area
 - e. Better staff work room and volunteer room
- vii. Replace partition for permanent walls with electrical, data, whiteboards and cabinets at classrooms in Building "A"
- viii. Provide LED marquee sign

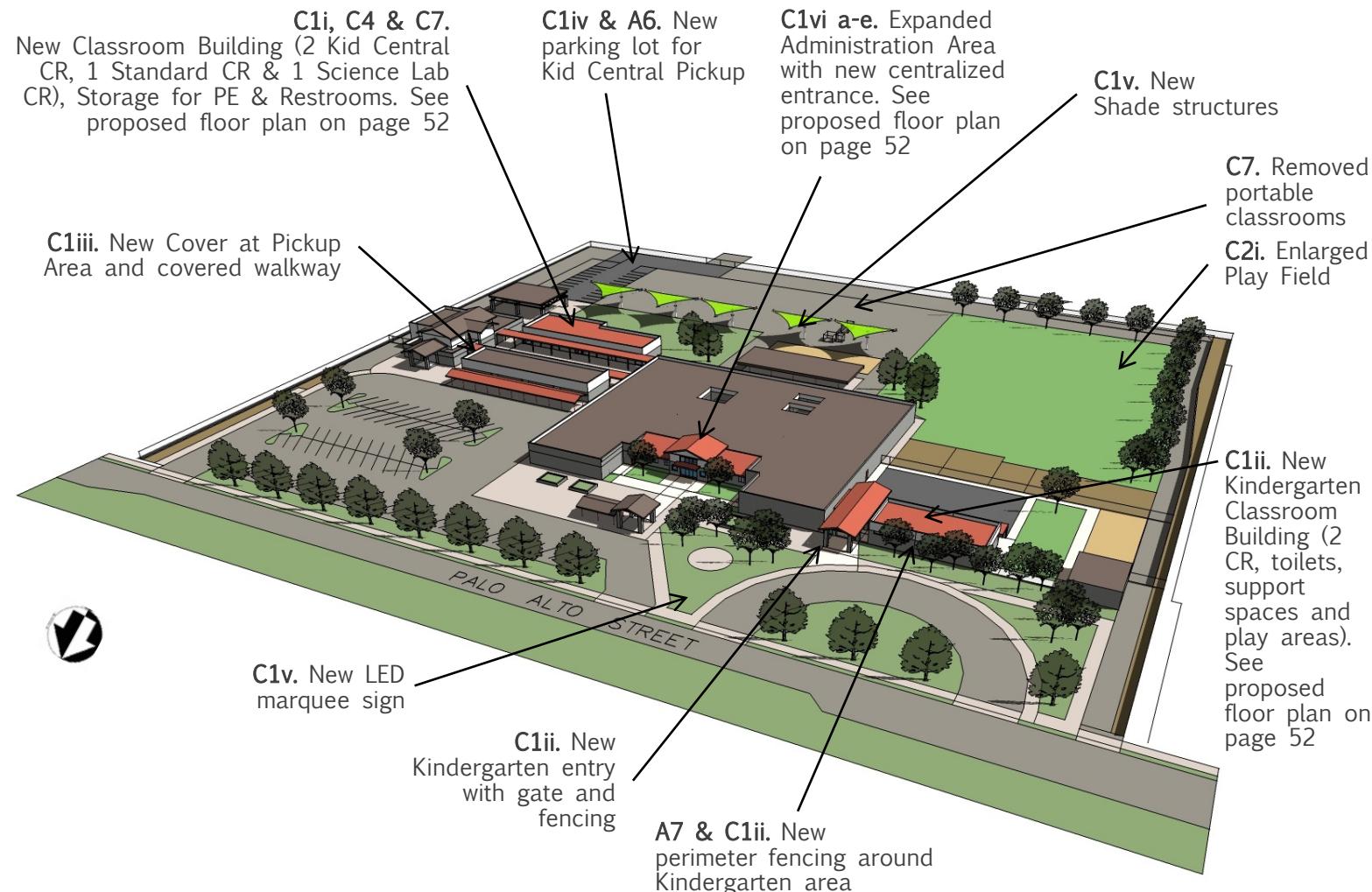
C2 Play Areas Upgrades

- i. Additional play fields

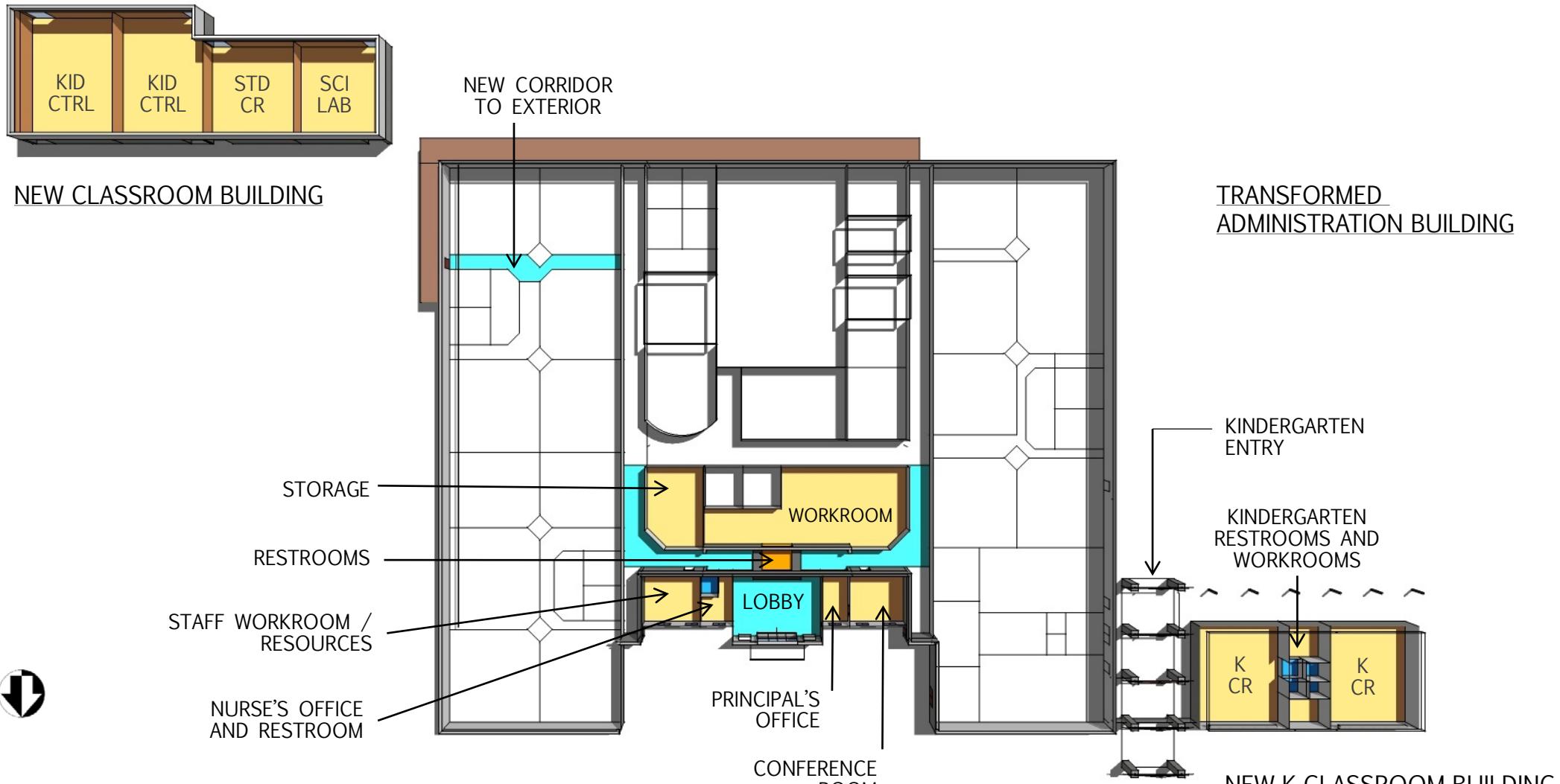
C4 Kid Central Transformation

- i. Relocate to new classroom building with restrooms close to drop-off / pick-up area

C7 Replace portable with permanent classrooms



VISION



PROPOSED FLOOR PLANS - TRANSFORMATION

VISION



C1i, a-c, C1iii, C1v, C4 & C7. New Classroom Building (2 Kid Central CR, 1 standard CR & 1 Science Lab), Storage for P.E. & Restrooms; New covered waiting area outside Garner Bldg. and New Shade Structures., Removed portable classrooms.



A7 & C1ii. New kindergarten entry with gate and perimeter fencing and Kindergarten Classroom Building (2 CR, toilets, support spaces and play areas)



C1v a-e. Expanded Administration Area with bigger health office and restroom, centralized entrance to school, protected from wind, more welcoming waiting area and better staff workroom and volunteer room.



A7 & C1ii. New kindergarten entry with gate and perimeter fencing and Kindergarten Classroom Building (2 CR, toilets, support spaces and play areas)

Key Item	Item Description (Unit)	Quantity	Unit	Cost / Unit	Comments	Total Cost
A. CODE (HEALTH, SAFETY, ACCESS)						
A1.	Safer School - Admin. Building Safety check point				See C1.vi	
A2.	Student and Staff Restroom Upgrades	10	ea	\$20,000.00		\$200,000.00
A4.	Door Hardware Upgrades					\$0.00
A4.i.	At Building "A"	54	ea	\$1,500.00		\$81,000.00
A5.	Phone System Upgrades	1	LS	\$55,000.00	* Provided by District - See Technology Appendix	\$55,000.00
A6.	Parking and Drop-Off Upgrades	14400	sf	\$10.00		\$144,000.00
A6.i.	Remove and replace south parking lot	42904	sf	\$10.00		\$429,040.00
A6.ii.	Seal and re-stripe north parking lot & fire lane	51688	sf	\$2.50		\$129,220.00
A7.	Fencing Upgrades					
A7.i.	Provide panic hardware on gates by MPR	2	ea	\$1,500.00		\$3,000.00
A8.	Signage Upgrades - Replace faded signage	1	LS	\$1,500.00	* Provided by District - M&O Estimate	\$1,500.00
					SUBTOTAL	\$1,042,760.00
B. HOUSEKEEPING						
B1.	Interior and Exterior Upgrades					
B1.i.	Interior painting in Building "A"	35356	sf	\$1.25		\$44,195.00
B1.ii.	Replace carpet at main building	35400	sf	\$5.50		\$194,700.00
B1.iii.	New finishes, additional cabinetry and new drinking fountain at staff workroom	1	LS	\$20,000.00	Allowance	\$20,000.00
B1.iv.	Roof restoration at Garner wing	18000	sf	\$8.00		\$144,000.00
B2.	Electrical / Lighting Upgrades					
B2.i.	Implement daylighting	66	ea	\$6,500.00	SOLARTUBES	\$429,000.00
B2.ii.	Exterior site lighting - EMS controlled	1	LS	\$25,000.00		\$25,000.00
B2.iii.	Additional outlets in classrooms at Building "A"	20	ea	\$6,000.00		\$120,000.00
B5.i.	AC Paving Upgrades					
B5.i.	Remove and replace hardscape south of campus	53000	sf	\$10.00		\$530,000.00
B6.	Drainage / Plumbing Upgrades					
B6.i.	Main lines and laterals reaching life span, replace all angle stops	60	ea	\$1,000.00		\$60,000.00
B8.	PA - Sound System Upgrades	1	LS	\$55,000.00	* Provided by District - See Technology Appendix	\$55,000.00
B9.	Irrigation System Upgrades					
B9.i.	Remote irrigation controls, master valve, ball valve at each valve	1	LS	\$60,000.00		\$60,000.00
B12.	Landscape Upgrades					
B12.i.	Replace grass in west field area	35000	sf	\$4.00		\$140,000.00
					SUBTOTAL	\$1,821,895.00

Key Item	Item Description (Unit)	Quantity	Unit	Cost / Unit	Comments	Total Cost
C. TRANSFORMATION						
C1.	Campus Additions and Transformations					
C1.i.	New Classroom Building	4400	sf	\$275.00		\$1,210,000.00
C1.ii.a.	Include storage room for P.E.				Included in C1.i.	
C1.ii.b.	New science Lab				Included in C1.i.	
C1.ii.c.	Additional Restrooms				Included in C1.i.	
C1.ii.d.	Extend covered walkway	2000	sf	\$65.00		\$130,000.00
C1.ii.e.	New Kindergarten Building, entry with gate & fencing					
C1.ii.e.a.	New Kindergarten Building	2350	sf	\$250.00		\$587,500.00
C1.ii.e.b.	New Kindergarten Entry	1750	sf	\$85.00		\$148,750.00
C1.ii.e.c.	Kindergarten Fencing	300	lf	\$175.00		\$52,500.00
C1.ii.f.	New covered waiting area outside Gamer Building	2400	sf	\$65.00		\$156,000.00
C1.ii.g.	New parking lot for Kid Central area				See A6.l.	
C1.ii.h.	Shade structures (5 ea @ 1200 sf)	6000	sf	\$75.00		\$450,000.00
C1.ii.i.	Expanded Administration Area w/ new centralized entry	2100	sf	\$250.00		\$525,000.00
C1.ii.i.a.	Expand Administration Area / Bigger health office and health restroom				Included in C1.ii.i.	
C1.ii.i.b.	New centralized entrance to school				Included in C1.ii.i.	
C1.ii.i.c.	Protected entry from wind				Included in C1.ii.i.	
C1.ii.i.d.	More welcoming waiting area				Included in C1.ii.i.	
C1.ii.i.e.	Better staff work room and volunteer room				Included in C1.ii.i.	
C1.ii.j.	Replace partition for permanent walls with electrical, data,whiteboards and cabinets at classrooms in Building "A"	1	LS	\$800,000.00	Allowance \$40,000 per CR x 20 locations	\$800,000.00
C1.ii.k.	Provide LED Marquee sign	1	LS	\$20,000.00	* Provided by District - M&O Estimate	\$20,000.00
C2.	Play Area Upgrades					
C2.i.	Additional play fields	40000	sf	\$4.00		\$160,000.00
C3.	21st Century Technology Upgrades					
C3.i.	Wired infrastructure to current standards (LANs)	1	LS	\$80,000.00	* Provided by District - See Technology Appendix	\$80,000.00
C3.ii.	Wireless	1	LS	\$72,000.00	* Provided by District - See Technology Appendix	\$72,000.00
C3.iii.	Airwave Management	1	LS	\$19,375.00	* Provided by District - See Technology Appendix	\$19,375.00
C3.iv.	Mobile Device Management	1	LS	\$93,750.00	* Provided by District - See Technology Appendix	\$93,750.00
C3.v.	Student Devices			\$0.00	T.B.D.	\$0.00
C3.vi.	Computer Lab Upgrades	1	LS	\$42,000.00	* Provided by District - See Technology Appendix	\$42,000.00
C4.	Kid Central / After School Program Transformation					
C4.i.	Relocate to new classroom building with restroom close to drop-off / pick-up area				Included in C1.i.	
C7.	Replace portable with permanent classrooms	8	ea	\$6,500.00	Portables disconnect - MOVED BY DISTRICT	\$52,000.00
					SUBTOTAL	\$4,598,875.00
					SUBTOTAL CONSTRUCTION COST ESTIMATE	\$7,463,530.00
					Furniture, Fixtures & Equipment (FF&E) 2%	\$149,270.60
					Contingency 10%	\$746,353.00
					TOTAL CONSTRUCTION COST ESTIMATE	\$8,359,153.60
Notes:	1. Costs shown above are current 2014 construction hard-cost estimates, based on a Design-Bid-Build method 2. Add 25% for soft cost to arrive at TOTAL PROJECT COST (inclusive of Agency, Permits, Inspection, Testing, Design and Administrative Costs) 3. Future costs can be estimated using a 3% annual escalation rate after January, 2015					

Overview

Grade Level: K-5
 Mascot: Hawks
 Colors: Red and Black
 Year of Original Construction: 1958
 Year of Recent Transformation: 2012
 Approx. Permanent Bldg.: 42,117 SF
 Approx. Portable Area: 2,880 SF
 Approx. Total Building Area: 44,997 SF
 Approximate Site Area: 10.5 Acres

**Teaching Stations**

Permanent: 19
 Portable: 3
 Total Teaching Stations: 22
 Proposed Teaching Stations: 22

Capacity*	Current	Proposed
Permanent Capacity:	475	550
Portable Capacity:	75	0
Total Capacity:	550	550
Enrollment:	530	

Available Parking:
 Standard: 55
 Car Accessible: 3
 Van Accessible: 1
 Total Parking: 59

* Capacity based on study by CFS, using current facility usage as of June, 2014



7727 Valle Vista Dr.
 Rancho Cucamonga, CA
 Parcel No. 207-022-69



EXISTING



VISION

SITE DESCRIPTION

Valle Vista Elementary School is a K-5 school serving approximately 530 students. Valle Vista first opened its doors to students in 1958. The campus is located on historic Red Hill in the city of Rancho Cucamonga.

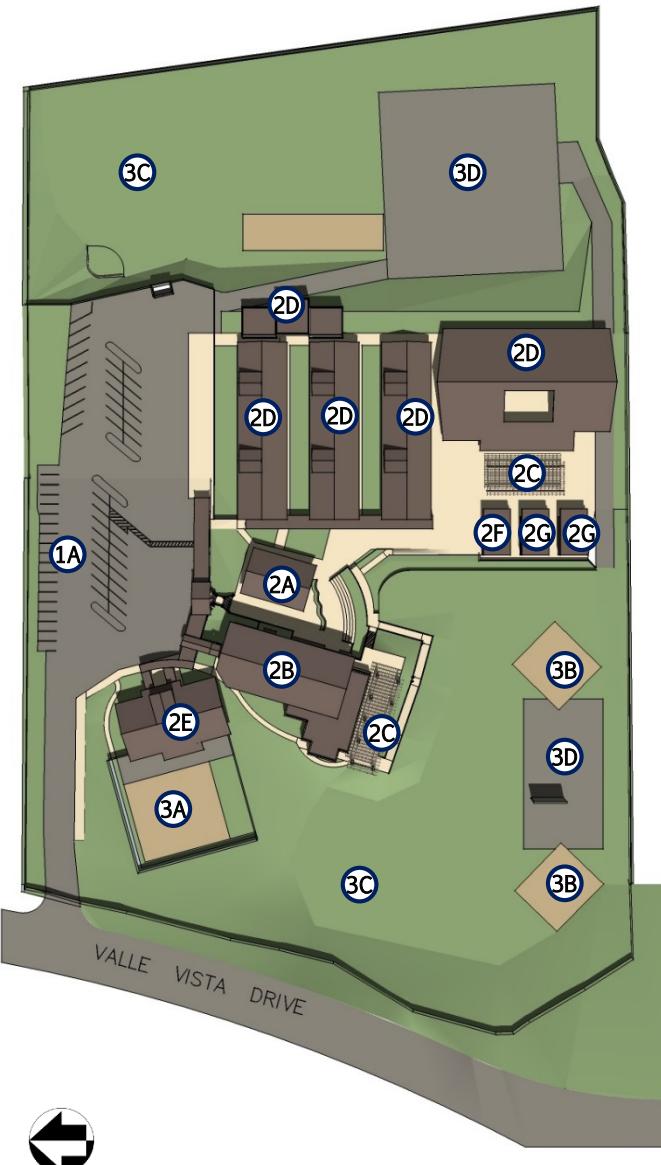
PROJECTS COMPLETED WITH MEASURE A BOND FUNDS (2008 THRU 2013)

CAMPUS WIDE (As needed):

Fencing for Safety and Security
 Replacement of playground equipment for safety
 Video surveillance upgrades and other safety and security
 Replacement of inefficient lighting and HVAC units
 21st Century classroom support
 Fiber-optic network for greatly increased capacity
 Student information system upgrade (SASI)

CAMPUS SPECIFIC:

HVAC Replacement to rooftop units



SITE FEATURES

1. Parking / Drop-Off

- 1A** Parking & Drop-off

2. Buildings / Structures

- 2A** Administration Building
- 2B** Multi-Purpose / Library Building
- 2C** Lunch Shelter
- 2D** 1-5 Classroom Building (20 CR)
- 2E** K Classroom Building (2 CR)
- 2F** Portable Classroom Building (1 CR)
- 2G** Kids Central Portable Classroom Building (2 CR)

3. Play Areas & Fields

- 3A** Kindergarten playground
- 3B** Primary Playground
- 3C** Grass play fields
- 3D** Asphalt hard court

EXISTING

A. CODE (Health, Safety, Access)**Campus Wide Items:**

- A2. Students and Staff Restrooms Upgrades
- A5. Phone System Upgrades
- A7. Fencing Upgrades
 - i. Existing fencing extension at gates
 - ii. Add fencing and gates to Kindergarten Area

Campus Specific Items:

- A1** Safer School – Administration building safety check point
 - i. Solution to dirt hill going into Kindergarten area
- A3** Play Structure Upgrades
 - i. Replace plastic equipment at Kindergarten
 - ii. Replace composite structure at upper field
- A6** Parking and Drop-off Upgrades
- A9** ADA / Path of Travel
 - i. Provide accessible ramp to lower field

B. HOUSEKEEPING**Campus Wide Items:**

- B1. Interior and Exterior Upgrades
 - i. Paving of dirt area in front of school
 - ii. Windows replacement – frames and glass. (asbestos present in glazing)
 - iii. Replace garbage disposal at Cafeteria
 - iv. Provide teaching wall at computer lab
 - v. Additional storage cabinets in all classrooms
 - vi. Flooring replacement
 - vii. Replace wooden doors with hollow metal core, reinforced fire rated doors
 - viii. Add tackable wall surface over old plaster finish
 - ix. Replace 12"x12" ceiling tiles with dropped T-Bar Ceilings
- B2. Electrical / Lighting Upgrades
 - i. Lighting at back of campus behind building #21
 - ii. LED lighting under covered walkways – EMS controlled
 - iii. Additional outlets and circuitry for electrical demand
- B4. HVAC System Upgrades
 - i. Air balance issues at Classrooms #26, #27 & #28
 - ii. Replace HVAC package units at MPR, Portables and Quad 17-21
- B6. Drainage / Plumbing Upgrades
 - i. Drainage issues by Classroom #10 due to tree roots
 - ii. Relocate drinking fountain at the end of wing #1
 - iii. Drainage issues at Kindergarten playground, clay soil – no drains
 - iv. Replace main lines, laterals and all angle stops
 - v. Install isolation shut-off valves



- B8. PA – Sound System Upgrades
- B9. Irrigation Upgrades
 - i. Remote irrigation controls, master valve control, ball valve at each valve

- B10. Bell System Upgrades
 - i. New Bell System

Campus Specific Items:

- B5** AC Paving Upgrades
 - i. Remove and replace AC paving at parking lot

EXISTING

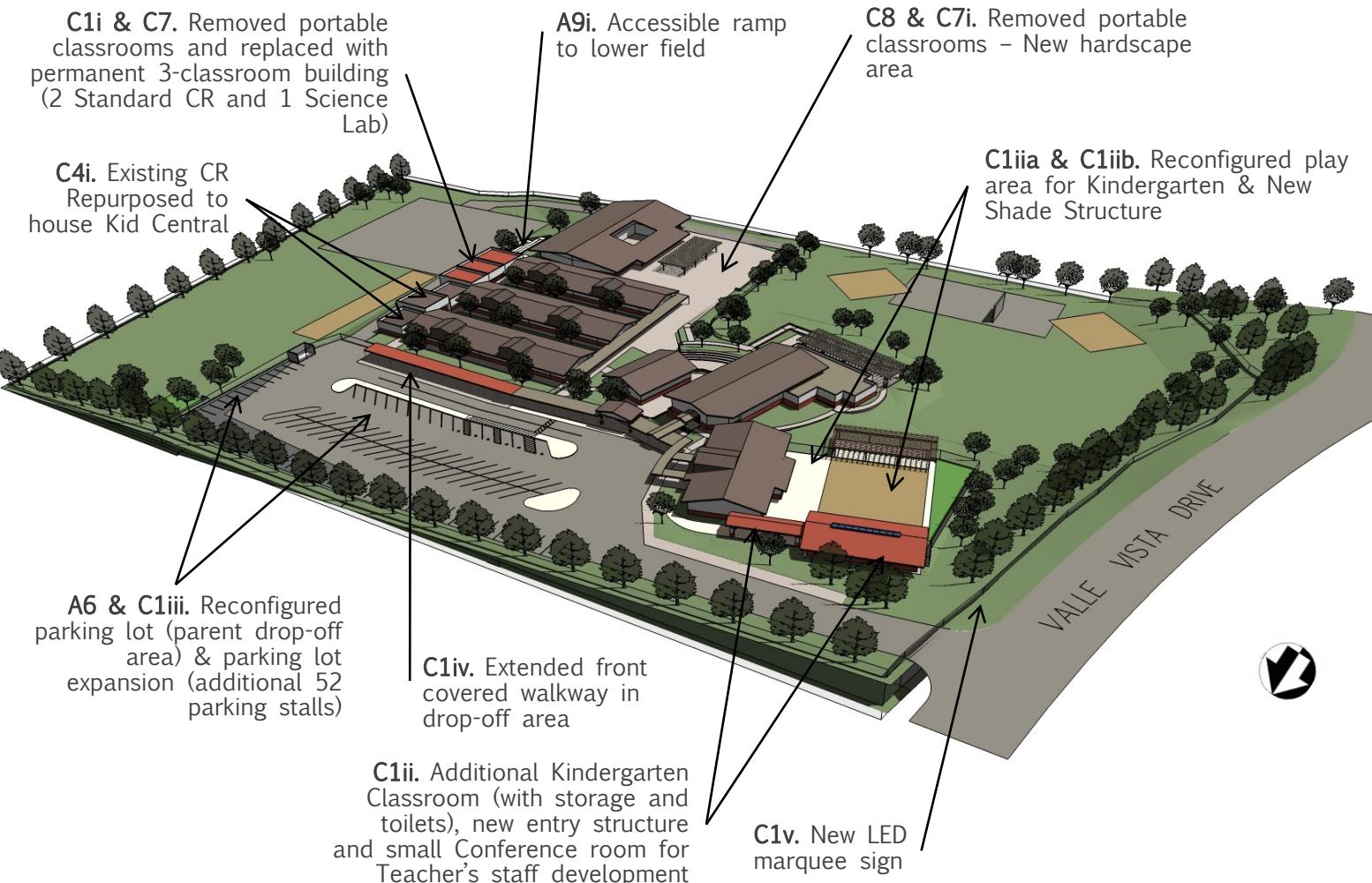
C. TRANSFORMATION

Campus Wide Items:

- C3. 21st Century Technology Upgrades
- i. Wired infrastructure to current standards
 - ii. Wireless
 - iii. Airwave Management
 - iv. Mobile Device Management
 - v. Student Devices
 - vi. Computer Lab Upgrades

Campus Specific Items:

- C1** Campus Additions and Transformations
- i. New Classroom Building
 - a. Science Lab
 - b. Replace portable classroom buildings
 - ii. New Kindergarten Classroom Building
 - a. Reconfigured play area
 - b. New Shade Structure
 - c. Teacher's staff development room
 - iii. Reconfigure parking, drop-off and expand parking lot
 - iv. Extend front covered walkway in drop-off area
 - v. Provide LED marquee sign
- C4** Kid Central Transformation
- i. Repurpose 2 existing classrooms to house Kid Central, closer to pickup area
- C7** Replace portable with permanent classrooms
- i. New hardscape area



VISION



A6 & C1iii & C1iv. Reconfigured parking lot (parent drop-off area) & parking lot expansion (additional 52 parking stalls); Extended front covered walkway (waiting area).



C1i a-b, C1v & C7. New classroom building (standard CR and 1 Science Lab) replacing removed portable classrooms and Accessible ramp to lower field.



C1ii a-c. Additional Kindergarten Classroom (with storage and toilets), new entry structure and small conference room for teacher's staff development.



C1ii a-c. Additional Kindergarten Classroom (with storage and toilets), new entry structure and small conference room for teacher's staff development.

Key Item	Item Description (Unit)	Quantity	Unit	Cost / Unit	Comments	Total Cost
A. CODE (HEALTH, SAFETY, ACCESS)						
A1.	Safer School - Admin. Building Safety check point	1	ea	\$20,000.00		\$20,000.00
A2.	Student and Staff Restroom Upgrades	10	ea	\$20,000.00		\$200,000.00
A3.	Play Structure Upgrades					
A3.i.	Replace play equipment at Kindergarten	1	LS	\$7,500.00	* Provided by District - M&O Estimate	\$7,500.00
A3.ii.	Replace composite structure at upper field	1	LS	\$40,000.00	* Provided by District - M&O Estimate	\$40,000.00
A5.	Phone System Upgrades	1	LS	\$55,000.00	* Provided by District - See Technology Appendix	\$55,000.00
A6.	Parking and Drop-Off Upgrades				See C1.iii.	
A7.	Fencing Upgrades					
A7.i.	Existing fencing extension	1	LS	\$15,000.00	Allowance	\$15,000.00
A7.ii.	Add fencing and gates to Kindergarten Area	150	lf	\$200.00		\$30,000.00
A9.	ADA / Path of Travel					
A9.i.	Provide accessible ramp to lower field (switch back with guard rails)	1	LS	\$175,000.00		\$175,000.00
					SUBTOTAL	\$542,500.00
B. HOUSEKEEPING						
B1.	Interior and Exterior Upgrades					
B1.i.	Paving of dirt area in front of school				See C1.iii.	
B1.ii.	Windows replacement - frames and glass (asbestos present in glazing)	3500	sf	\$70.00		\$245,000.00
B1.iii.	Replace garbage disposal at Cafeteria	1		\$6,500.00		\$6,500.00
B1.iv.	Provide teaching wall at computer lab	1		\$12,500.00		\$12,500.00
B1.v.	Additional storage cabinets at all classrooms	21	ea	\$2,500.00		\$52,500.00
B1.vi.	Flooring replacement	1	LS	\$60,000.00	* Provided by District - M&O Estimate	\$60,000.00
B1.vii.	Replace wooden doors with hollow metal core, reinforced fire rated doors	83	ea	\$2,000.00		\$166,000.00
B1.viii.	Add tackable wall surface over old plaster finish	11500	sf	\$8.00		\$92,000.00
B1.ix.	replace 12"x12" ceiling tiles with dropped T-bar Ceilings	20000	sf	\$13.00	includes new 2x4 light fixtures and HVAC grilles	\$260,000.00
B2.	Electrical / Lighting Upgrades					
B2.i.	Lighting at back of campus behind building #21	1	LS	\$15,000.00		\$15,000.00
B2.ii.	LED lighting under covered walkways - EMS controlled	1	LS	\$150,000.00		\$150,000.00
B2.iii.	Additional outlets and circuitry for electrical demand	21	ea	\$10,000.00		\$210,000.00
B4.	HVAC Upgrades					
B4.i.	Air balance issues at Classrooms #26, #27 & #28	3	ea	\$1,000.00		\$3,000.00
B4.ii.	Replace HVAC package units at MPR, Portables, and Quad 17-21	14	ea	\$15,000.00		\$210,000.00
B5.i.	AC Paving Upgrades					
B5.i.	Remove and Replace AC paving at parking lot				See in C1.iii.	
B6.	Drainage / Plumbing Upgrades					
B6.i.	Drainage issues by Classroom #10 due to tree roots	1	LS	\$15,000.00	Allowance	\$15,000.00
B6.ii.	Relocate drinking fountain at the end of wing #1	1	ea	\$8,500.00		\$8,500.00
B6.iii.	Drainage issues at Kindergarten playground, clay soils - no drains	1	LS	\$10,000.00	Allowance	\$10,000.00
B6.iv.	Replace main lines, laterals, and all angle stops	1	LS	\$150,000.00		\$150,000.00
B6.v.	Install isolated shut-off valves	8	ea	\$3,000.00		\$24,000.00
B8.	PA - Sound System Upgrades	1	LS	\$55,000.00	* Provided by District - See Technology Appendix	\$55,000.00
B10.	Bell System Upgrades					
B10.i.	New Bell System	1	LS	\$0.00	See PA System	\$0.00
					SUBTOTAL	\$1,745,000.00

Key Item	Item Description (Unit)	Quantity	Unit	Cost / Unit	Comments	Total Cost
C. TRANSFORMATION						
C1.	Campus Additions and Transformations					
C1.i.	New Classroom Building	3075	sf	\$275.00		\$845,625.00
C1.i.a.	Science Lab				Included in item C1.i.	
C1.i.b.	Replace portable classroom buildings	3	ea	\$6,500.00	Portables disconnect - MOVED BY DISTRICT	\$19,500.00
C1.ii.	New kindergarten Classroom Building	2850	sf	\$250.00		\$712,500.00
C1.ii.a.	Reconfigured play area	6630	sf	\$20.00		\$132,600.00
C1.ii.b.	New Shade Structure	1000	sf	\$75.00		\$75,000.00
C1.ii.c.	Teacher's staff development room				Included in Item C1.ii.	
C1.iii.	Reconfigured parking lot, drop-off area and expanded parking	65900	sf	\$10.00		\$659,000.00
C1.iv.	Extend front covered walkway in drop-off area	2670	sf	\$65.00		\$173,550.00
C1.v.	Provide LED Marquee sign	1	LS	\$20,000.00	* Provided by District - M&O Estimate	\$20,000.00
C3.	21st Century Technology Upgrades					
C3.i.	Wired infrastructure to current standards (LANs)	1	LS	\$80,000.00	* Provided by District - See Technology Appendix	\$80,000.00
C3.ii.	Wireless	1	LS	\$72,000.00	* Provided by District - See Technology Appendix	\$72,000.00
C3.iii.	Airwave Management	1	LS	\$19,375.00	* Provided by District - See Technology Appendix	\$19,375.00
C3.iv.	Mobile Device Management	1	LS	\$93,750.00	* Provided by District - See Technology Appendix	\$93,750.00
C3.v.	Student Devices			\$0.00	T.B.D.	\$0.00
C3.vi.	Computer Lab Upgrades	1	LS	\$42,000.00	* Provided by District - See Technology Appendix	\$42,000.00
C4.	Kid Central Transformation					
C4.i.	Repurpose 2 existing classrooms to house Kid Central, closer to pick-up area	2000	sf	\$125.00		\$250,000.00
C7.	Replace portable with permanent classrooms					
C7.i.	New hardscape area	550	sf	\$10.00		\$5,500.00
					SUBTOTAL	\$3,200,400.00
					SUBTOTAL CONSTRUCTION COST ESTIMATE	\$5,487,900.00
					Furniture, Fixtures & Equipment (FF&E) 2%	\$109,758.00
					Contingency 10%	\$548,790.00
					TOTAL CONSTRUCTION COST ESTIMATE	\$6,146,448.00
Notes:						
1. Costs shown above are current 2014 construction hard-cost estimates, based on a Design-Bid-Build method						
2. Add 25% for soft cost to arrive at TOTAL PROJECT COST (inclusive of Agency, Permits, Inspection, Testing, Design and Administrative Costs)						
3. Future costs can be estimated using a 3% annual escalation rate after January, 2015						

Overview

Grade Level: 6-8
 Mascot: Cougars
 Colors: Blue & Gold (Yellow)
 Year of Original Construction: 1961
 Year of Recent Transformation: 2011
 Approximate Building Area: 90,569 sf
 Approximate Site Area: 22.5 Acres

**Teaching Stations**

Permanent: 38
 Portable: 0
 Total Teaching Stations: 38
 Proposed Teaching Stations: 38

Capacity*	Current	Proposed
Permanent Capacity:	1002	1002
Portable Capacity:	0	0
Total Capacity:	1002	1002
Enrollment:	836	

Available Parking:
 Standard: 129
 Car Accessible: 3
 Van Accessible: 4
 Total Parking: 136



7611 Hellman Avenue
 Rancho Cucamonga, CA
 Parcel No. 208-041-19/20

* Capacity based on study by CFS, using current facility usage as of June, 2014



EXISTING



VISION

SITE DESCRIPTION

In 1961 a Junior High School (Cucamonga Middle School) was constructed, which was inadequate in size even before it was occupied. In 1964 an eight-room wing, in 1972 a Library / Media Building, in 1979 a music / art building, and administration building and a shower and locker facility were added to the site. In 1993 a lunch shelter was built; in 1994 a Multi-Purpose Building was built, the Administration building renovated and the parking lots expanded. In 1996 a 22-classroom building “Vogel Building” was constructed to replace all deteriorated portable classrooms.

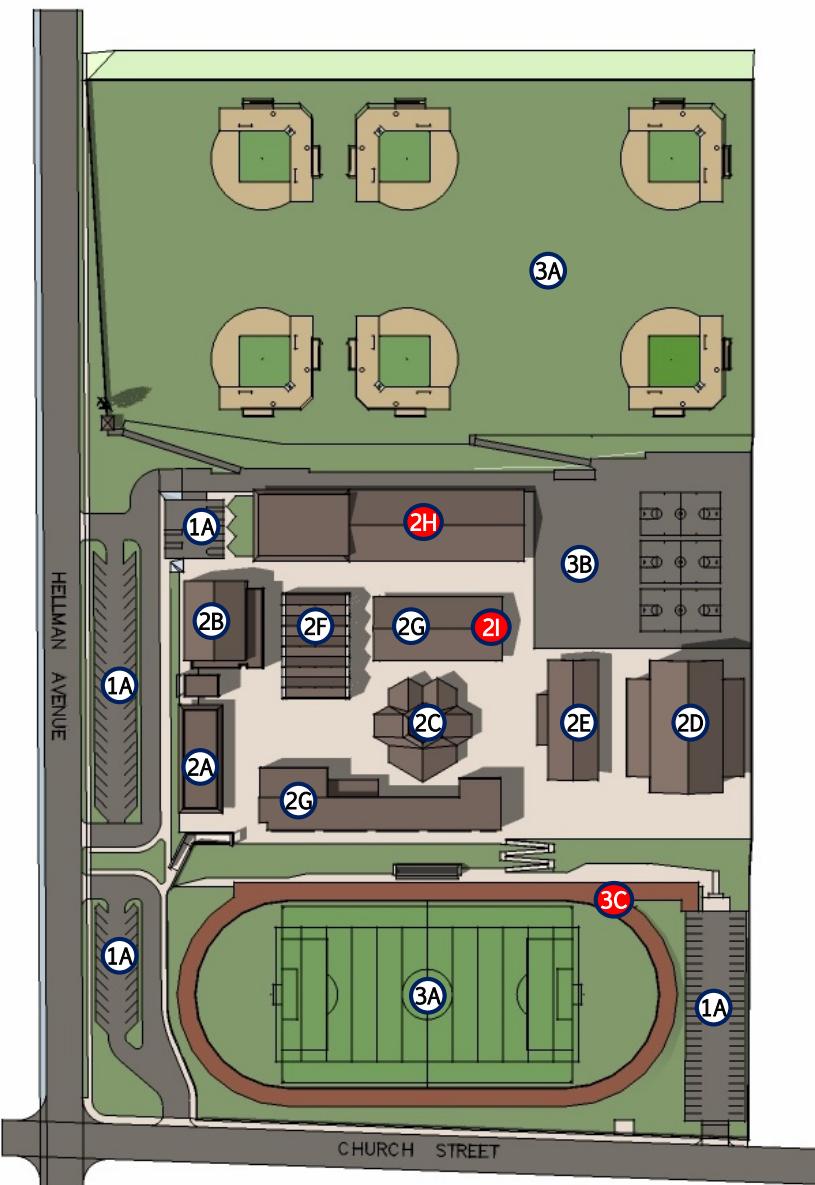
PROJECTS COMPLETED WITH MEASURE A BOND FUNDS (2008 THRU 2014):

CAMPUS WIDE (As needed):

Fencing for Safety and Security
 Replacement of playground equipment for safety
 Video surveillance upgrades and other safety and security
 Replacement of inefficient lighting and HVAC units
 21st Century classroom support
 Fiber-optic network for greatly increased capacity
 Student information system upgrade (SASI)

CAMPUS SPECIFIC:

In 2011 a new track and field was added to the site.
 In 2014 Classroom Buildings “D” and “G” and restrooms in Classroom Building “F” are being renovated.



SITE FEATURES

1. Parking / Drop-Off

- 1A** Parking & Drop-off

2. Buildings / Structures

- 2A** Administration Building
- 2B** Multi-Purpose Building
- 2C** Library Building
- 2D** Gymnasium Building
- 2E** Physical Education Building
- 2F** Lunch Shelter
- 2G** Classroom Building
- 2H** Classroom Building being renovated (with Measure A Bond Funds)
- 2I** Restrooms being currently renovated (with Measure A Bond Funds)

3. Play Areas & Fields

- 3A** Grass play fields
- 3B** Asphalt hard court
- 3C** Track and Field (Completed with Measure A Bond Funds)



EXISTING

A. CODE (Health, Safety, Access)

Campus Wide Items:

- A2. Students and Staff Restrooms Upgrades
- A4. Door Hardware Upgrades
- A5. Phone System Upgrades
- A7. Fencing Upgrades
 - i. Upgrade fire lane gate
 - ii. Lower gym parking lot gate
- A8. Signage Upgrades – replace faded signage

Campus Specific Items:

- A1** Safer School – Administration building safety check point
- A6** Parking and Drop-off Upgrades
 - i. Seal and re-stripe
- A9** ADA / Path of Travel
 - i. Provide accessible ramp to upper field

B. HOUSEKEEPING

Campus Wide Items:

- B1. Interior and Exterior Upgrades
 - i. Upgrade elevator
 - ii. Restore roof at Vogel Building
 - iii. Repair spalling on old brick surfaces
 - iv. Replace flooring as needed
 - v. Provide tackable wall surface in older rooms
 - vi. Overhang at Gym exterior doors
 - vii. Stanchions at Cafeteria
- B2. Electrical / Lighting Upgrades
 - i. LED lighting under covered walkways – EMS controlled
- B6. Drainage / Plumbing Upgrades
 - i. Replace main lines, laterals and all angle stops
- B7. Fire Alarm System Upgrades
- B9. Irrigation System Upgrades
 - i. Remote irrigation controls
- B10. Bell System Upgrades

Campus Specific Items:

- B4** HVAC System Upgrades
 - i. At Vogel Building
 - ii. Old Exterior Restrooms
- B5** AC Paving Upgrades
 - i. Remove and replace AC paving at Play Areas



EXISTING

C. TRANSFORMATION

Campus Wide Items:

- C3. 21st Century Technology Upgrades
- i. Wired infrastructure to current standards
 - ii. Wireless
 - iii. Airwave Management
 - iv. Mobile Device Management
 - v. Student Devices
 - vi. Computer Lab Upgrades

- C5. New Surveillance System

Campus Specific Items:

- C1** Campus Additions and Transformations
- i. New shade structures at hardscape area
 - ii. Interior Library Building Transformation
 - iii. Remove and replace roof at Library Building
- C8** District Support Facilities Transformation
- i. Reconfigured play fields
 - ii. Relocated - New M&O / Food Service Facility
 - iii. New access driveway to M&O / Food Service Facility



VISION

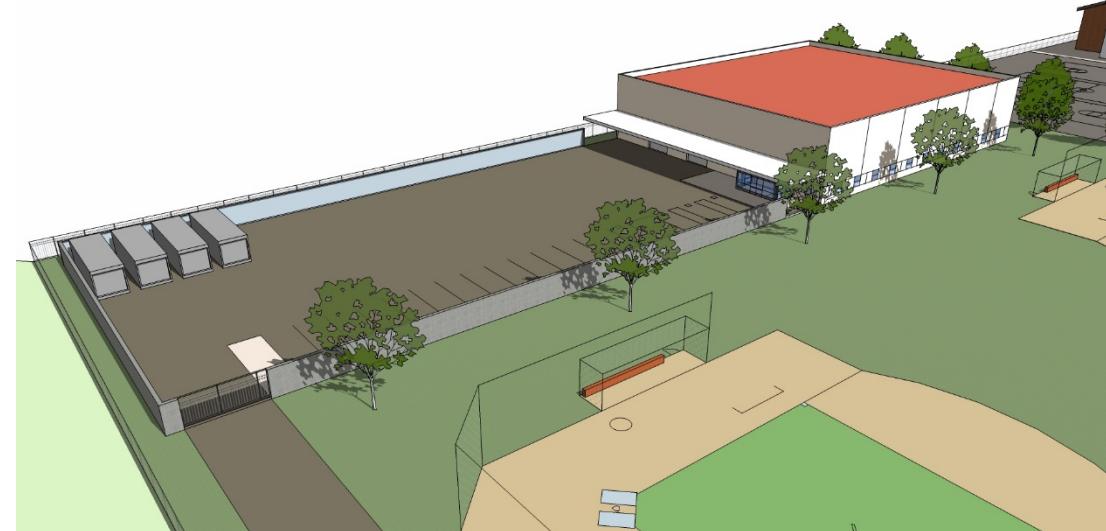




C1i, C1ii & C1iii. New Shade Structures at hardscape area and Transformed Library Building.



C8i & C8ii. Reconfigured play fields and Relocated – New M&O / Food Service Facility



C8i, C8ii & C8iii. Reconfigured play fields, Relocated – New M&O / Food Service Facility and New Access Driveway.



C8i, C8ii, C8iii & A9i. Reconfigured play fields, Relocated – New M&O / Food Service Facility and New Access Driveway. New accessible ramp to upper field

Key Item	Item Description (Unit)	Quantity	Unit	Cost / Unit	Comments	Total Cost
A. CODE (HEALTH, SAFETY, ACCESS)						
A1.	Safer School - Admin. Building Safety check point	1	ea	\$20,000.00		\$20,000.00
A2.	Student and Staff Restroom Upgrades	18	ea	\$20,000.00		\$360,000.00
A4.	Door Hardware Upgrades	102	ea	\$1,500.00		\$153,000.00
A5.	Phone System Upgrades	1	LS	\$65,000.00	* Provided by District - See Technology Appendix	\$65,000.00
A6.	Parking and Drop-off Upgrades					
A6.i.	Seal and Re-stripe	70700	sf	\$2.00		\$141,400.00
A7.	Fencing Upgrades					
A7.i.	Upgrade fire lane gate	1	ea	\$5,000.00		\$5,000.00
A7.ii.	Lower gym parking lot gate	1	ea	\$5,000.00		\$5,000.00
A8.	Signage Upgrades - Replace faded signage	1	LS	\$1,500.00	* Provided by District - M&O Estimate	\$1,500.00
A9.	ADA / Path of Travel					
A9.i.	Provide accessible ramp to upper field (switch back with guard rails)	1	LS	\$175,000.00		\$175,000.00
					SUBTOTAL	\$925,900.00
B. HOUSEKEEPING						
B1.	Interior and Exterior Upgrades					
B1.i.	Upgrade elevator	1	LS	\$25,000.00	Allowance	\$25,000.00
B1.ii.	Restore roof and Vogel Building	9000	sf	\$75.00		\$675,000.00
B1.iii.	Repair spalling on old brick surfaces	1	LS	\$60,000.00		\$60,000.00
B1.iv.	Replace flooring as needed	50000	sf	\$5.50		\$275,000.00
B1.v.	Provide tackable wall surface in older rooms	1	LS	\$45,000.00	Allowance	\$45,000.00
B1.vi.	Overhang at Gym exterior doors	2	ea	\$10,000.00		\$20,000.00
B1.vii.	Stanchions at Cafeteria	1	LS	\$40,000.00		\$40,000.00
B4.	HVAC Upgrades					
B4.i.	At Vogel Building	12	ea	\$15,000.00		\$180,000.00
B4.ii.	Old exterior restrooms	2	ea	\$5,000.00		\$10,000.00
B5.	AC Paving Upgrades					
B5.i.	Remove and replace AC paving at Play Areas	56792	sf	\$10.00		\$567,920.00
B6.	Drainage / Plumbing Upgrades					
B6.i.	Replace main lines, laterals, and all angle stops	1	LS	\$150,000.00		\$150,000.00
B7.	Fire Alarm System Upgrades	1	LS	\$40,000.00	Allowance	\$40,000.00
B9.	Irrigation System Upgrades					
B9.i.	Remote irrigation controls, master valve control, ball valve	1	LS	\$75,000.00		\$75,000.00
B10.	Bell System Upgrades	1	LS	\$0.00	See PA System	\$0.00
					SUBTOTAL	\$2,162,920.00

Key Item	Item Description (Unit)	Quantity	Unit	Cost / Unit	Comments	Total Cost
C. TRANSFORMATION						
C1.	Campus Additions and Transformations					
C1.i.	New shade structures at hardscape area (4 ea @ 1200 sf)	4800	sf	\$115.00		\$552,000.00
C1.ii.	Interior Library Building Transformation	5993	sf	\$75.00		\$449,475.00
C1.iii.	Remove and replace roof at Library Building	6000	sf	\$8.00		\$48,000.00
C3.	21st Century Technology Upgrades					
C3.i.	Wired infrastructure to current standards (LANs)	1	LS	\$100,000.00	* Provided by District - See Technology Appendix	\$100,000.00
C3.ii.	Wireless	1	LS	\$85,000.00	* Provided by District - See Technology Appendix	\$85,000.00
C3.iii.	Airwave Management	1	LS	\$19,375.00	* Provided by District - See Technology Appendix	\$19,375.00
C3.iv.	Mobile Device Management	1	LS	\$93,750.00	* Provided by District - See Technology Appendix	\$93,750.00
C3.v.	Student Devices			\$0.00	T.B.D.	\$0.00
C3.vi.	Computer Lab Upgrades	1	LS	\$45,000.00	* Provided by District - See Technology Appendix	\$45,000.00
C5.	New surveillance system	1	LS	\$25,000.00	Allowance	\$25,000.00
C8. District Support Facilities Transformations						
C8.i.	Reconfigure play fields at Cucamonga MS - per District Support Facilities Option #1A or #1B	309000	sf	\$0.00	See Central Elementary School C8.i thru C8.iii.	\$0.00
C8.ii.	Maintenance & Operations and Food Services to relocate from Central Elementary School site to Cucamonga Middle School site - New Facility per District Support Facilities Options #1A or #1B	15000	sf	\$0.00	See Central Elementary School C8.i thru C8.iii.	\$0.00
C8.iii.	New access driveway to M&O and Food Service Facility at Cucamonga MS - per District Support Facilities Option #1A or #1B	13130	sf	\$0.00	See Central Elementary School C8.i thru C8.iii.	\$0.00
					SUBTOTAL	\$1,417,600.00
					SUBTOTAL CONSTRUCTION COST ESTIMATE	\$4,506,420.00
					Furniture, Fixtures & Equipment (FF&E) 2%	\$90,128.40
					Contingency 10%	\$450,642.00
					TOTAL CONSTRUCTION COST ESTIMATE	\$5,047,190.40
Notes:						
1. Costs shown above are current 2014 construction hard-cost estimates, based on a Design-Bid-Build method						
2. Add 25% for soft cost to arrive at TOTAL PROJECT COST (inclusive of Agency, Permits, Inspection, Testing, Design and Administrative Costs)						
3. Future costs can be estimated using a 3% annual escalation rate after January, 2015						

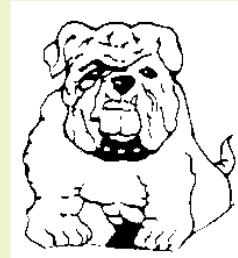
Overview
 Grade Level: 5-8
 Mascot: Bulldogs
 Colors: Teal / Grey / Black
 Year of Original Construction: 1994
 Year of Recent Transformation: 2004
 Approximate Building Area: 83,400 SF
 Approximate Site Area: 13.3 Acres

Teaching Stations

Permanent: 38
 Portable: 0
 Total Teaching Stations: 38
 Proposed Teaching Stations: 41

Capacity*	Current	Proposed
Permanent Capacity:	1026	1107
Portable Capacity:	0	0
Total Capacity:	1026	1107
Enrollment:	963	

Available Parking:
 Standard: 81
 Car Accessible: 3
 Van Accessible: 1
 Total Parking: 85



10789 Terra Vista Parkway
 Rancho Cucamonga, CA
 Parcel No. 1077-091-27/31

* Capacity based on study by CFS, using current facility usage as of June, 2014



EXISTING



VISION

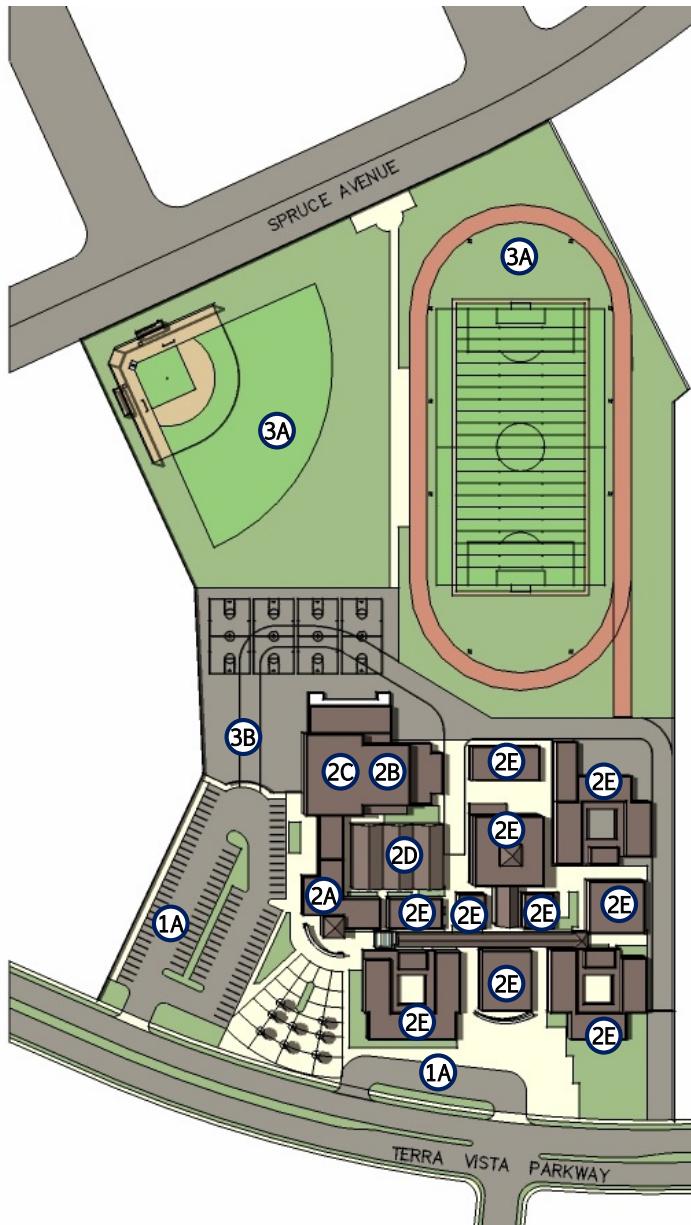
SITE DESCRIPTION

In 1992 the interim Coyote Canyon Elementary School became the interim Ruth Musser Middle School. This middle school was named after a prominent community member, student advocate and former Board Member Mrs. Ruth Musser. In 1994 the middle school was opened and in 2001 a 5-classroom building and courtyard were added to the site.

PROJECTS COMPLETED WITH MEASURE A BOND FUNDS (2008 THRU 2014):

CAMPUS WIDE (As needed):

Fencing for Safety and Security
 Replacement of playground equipment for safety
 Video surveillance upgrades and other safety and security
 Replacement of inefficient lighting and HVAC units
 21st Century classroom support
 Fiber-optic network for greatly increased capacity
 Student information system upgrade (SASI)



SITE FEATURES

1. Parking / Drop-Off

- 1A** Parking & Drop-off

2. Buildings / Structures

- 2A** Administration
- 2B** Multi-Purpose
- 2C** Gymnasium
- 2D** Lunch Shelter
- 2E** Classroom Building

3. Play Areas & Fields

- 3A** Grass play fields
- 3B** Asphalt hard court



EXISTING

A. CODE (Health, Safety, Access)

Campus Wide Items:

- A4. Door Hardware Upgrades
 - i. Install peepholes at remaining 50% of doors
- A5. Phone System Upgrades
- A8. Signage Upgrades – replace faded signs

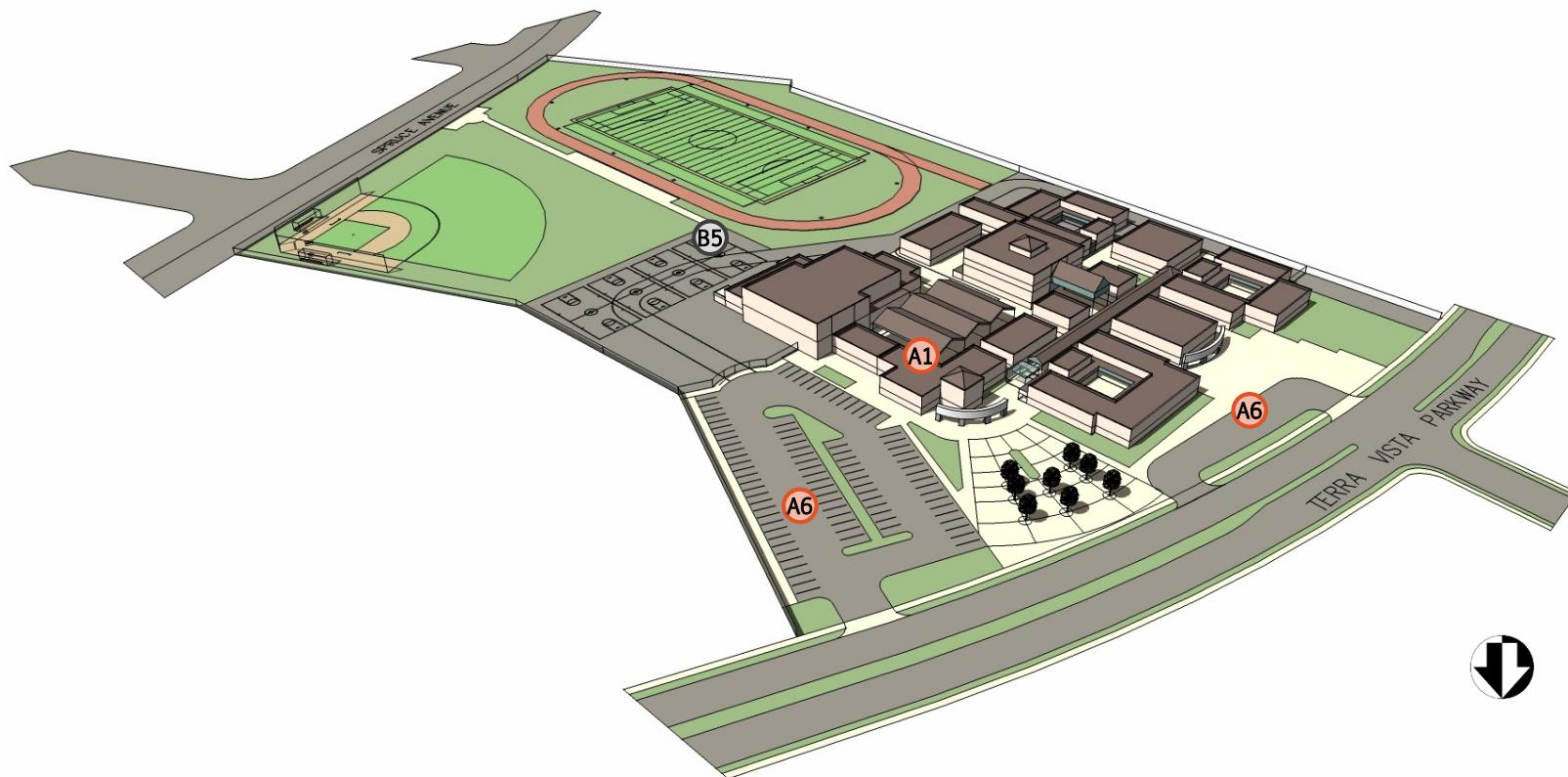
Campus Specific Items:

- A1** Safer School – Administration building safety check point
 - i. Lower curved wall by counselor's office
- A6** Parking and Drop-off Upgrades
 - i. Seal and re-stripe

B. HOUSEKEEPING

Campus Wide Items:

- B1. Interior and Exterior Upgrades
 - i. New carpet except for new building
 - ii. Interior and exterior painting, including structural steel, gutters and downspouts at covered walkways
 - iii. Replace tackable wall surface a moveable acoustic wall and all walls in MPR / Gym.
 - iv. Replace stage curtains
 - v. Repair stage wall
 - vi. Upgrade moveable partition motor
 - vii. Replace faucets and paint kitchen
 - viii. Upgrade elevator
 - ix. Complete phases III and IV of roof restoration project
 - x. Replace VCT flooring for concrete at science labs
 - xi. New ice machine, cold and warm carts and computer at cafeteria
 - xii. Replace acoustical walls at band room
 - xiii. Replace ceiling tiles
 - xiv. Repair Eye Wash Station
 - xv. Bird proof framing at covered walkways
- B2. Electrical / Lighting Upgrades
 - i. Replace site lighting with LED fixtures – EMS controlled
- B3. Sewer System Upgrades
- B4. HVAC System System Upgrades
 - i. Replace all units – all beyond life span
- B6. Drainage / Plumbing Upgrades
 - i. Plumbing issues at restrooms and drinking fountains
 - ii. Drainage issues at back fence next to baseball field
 - iii. Replace all angle stops
 - iv. Replace P.E. boiler with smaller more efficient unit to create more storage space



EXISTING

- B7. Fire Alarm System Upgrades
 - B8. PA – Sound System Upgrades
 - B9. Irrigation System Upgrades
 - i. Remote irrigation controls, master valve control, ball valve at each valve.
 - B10. Bell System Upgrades
 - B11. Burglar Alarm System Upgrades
- Campus Specific Items:**
- B5** AC Paving Upgrades
 - i. Seal and re-stripe play areas

C. TRANSFORMATION

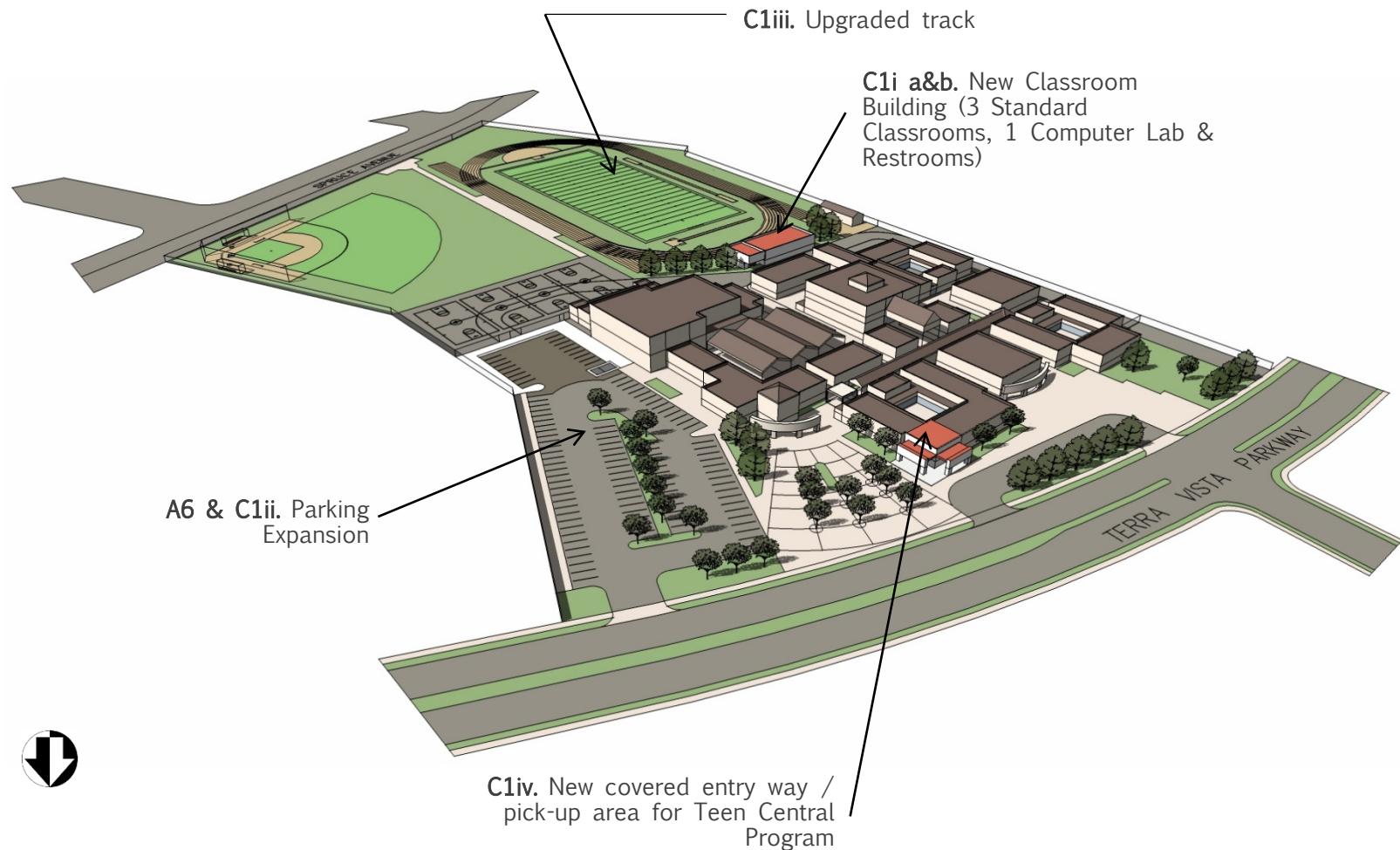
Campus Wide Items:

- C3. 21st Century Technology Upgrades
- i. Wired infrastructure to current standards
 - ii. Wireless
 - iii. Airwave Management
 - iv. Mobile Device Management
 - v. Student Devices
 - vi. Computer Lab Upgrades

Campus Specific Items:

C1 Campus Additions and Transformations

- i. New Classroom Building
 - a. Computer Lab for Fifth Grade
 - b. Additional Restrooms closer to play fields
- ii. Parking Expansion
- iii. Upgraded track
- iv. New covered entry way / pick-up area for Teen Central Program



VISION


 CSD
CENTRAL SCHOOL DISTRICT



C1i a-b & C1iii. New Classroom Building (3 Standard Classrooms, 1 Computer Lab & Additional Restrooms closer to play fields) and Upgraded track.



C1i a-b & C1iii. New Classroom Building (3 Standard Classrooms, 1 Computer Lab & Additional Restrooms closer to play fields) and Upgraded track.



A6. & C1ii Parking Expansion



C1iv. New covered entry way / pick-up area for Teen Central Program

Key Item	Item Description (Unit)	Quantity	Unit	Cost / Unit	Comments	Total Cost
A. CODE (HEALTH, SAFETY, ACCESS)						
A1.	Safer School - Admin. Building Safety check point	1	ea	\$20,000.00		\$20,000.00
A1.ii.	Lower curved wall by counselor's office	1	LS	\$8,500.00		\$8,500.00
A4.	Door Hardware Upgrades					
A4.i.	Install peepholes at remaining 50% of doors	75	ea	\$100.00		\$7,500.00
A5.	Phone System Upgrades	1	LS	\$65,000.00	* Provided by District - See Technology Appendix	\$65,000.00
A6.	Parking and Drop-off Upgrades				See Item C1.ii.	
A6.i.	Seal and Re-stripe	37650	sf	\$2.00		\$75,300.00
A8.	Signage Upgrades - Replace faded signage	1	LS	\$1,500.00	* Provided by District - M&O Estimate	\$1,500.00
					SUBTOTAL	\$177,800.00
B. HOUSEKEEPING						
B1.	Interior and Exterior Upgrades					
B1.i.	New carpet except for new building	75000	sf	\$5.50	includes VCT and Base	\$412,500.00
B1.ii.	Interior and exterior painting, including struct. Stl, gutters and downspouts at walkways	83400	sf	\$3.00		\$250,200.00
B1.iii.	Replace tackable wall surface at moveable acoustic wall and all walls in MPR / Gym	5000	sf	\$8.00		\$40,000.00
B1.iv.	Replace stage curtains	1	LS	\$20,000.00		\$20,000.00
B1.v.	Repair stage wall	1	LS	\$15,000.00		\$15,000.00
B1vi.	Upgrade moveable partition motor	1	ea	\$15,000.00		\$15,000.00
B1vii.	Replace faucets and paint kitchen	1	LS	\$8,500.00		\$8,500.00
B1viii.	Upgrade elevator	1	LS	\$25,000.00	Allowance	\$25,000.00
B1ix.	Complete phases III and IV of roof restoration project	1	LS	\$180,000.00	* Provided by District - See Technology Appendix	\$180,000.00
B1x.	Replace VCT flooring for concrete at science lab	1000	sf	\$15.00		\$15,000.00
B1xi.	New ice machine, cold and warm carts and computer at cafeteria	1	LS	\$35,000.00		\$35,000.00
B1xii.	Replace acoustical walls at band room	3000		\$12.00		\$36,000.00
B1xiii.	Replace ceiling tiles	50000	sf	\$3.00		\$150,000.00
B1xiv.	Repair Eye Wash Station	2	ea	\$7,500.00		\$15,000.00
B2.	Electrical / Lighting Upgrades					
B2.i.	Replace site lighting with LED fixtures - EMS controlled	1	LS	\$75,000.00		\$75,000.00
B3.	Sewer System Upgrades					
B4.	HVAC Upgrades					
B4.i.	Replace all units - all beyond life span	60	ea	\$15,000.00		\$900,000.00
B5.	AC Paving Upgrades					
B5.i.	Seal and re-stripe play areas	55000	sf	\$2.00		\$110,000.00
B6.	Drainage / Plumbing Upgrades					
B6.i.	Plumbing issues at restrooms and drinking fountains	1	LS	\$20,000.00	Allowance	\$20,000.00
B6.ii.	Drainage issues at back fence next to baseball field	1	LS	\$15,000.00	Allowance	\$15,000.00
B6.iii.	Replace all angle stops	85	ea	\$1,000.00		\$85,000.00
B6.iv.	Replace P.E. boiler for a smaller, more efficient unit to create more storage space	1	ea	\$35,000.00		\$35,000.00
B7.	Fire Alarm System Upgrades					
B8.	PA - Sound System Upgrades	1	LS	\$45,000.00	Allowance	\$45,000.00
B9.	Irrigation System Upgrades					
B9.i.	Remote irrigation controls, master valve control, ball valve at each valve	1	LS	\$75,000.00		\$75,000.00
B10.	Bell System Upgrades	1	LS	\$0.00	See PA system	\$0.00
B11.	Burglar Alarm System Upgrades	1	LS	\$25,000.00	Allowance	\$25,000.00
					SUBTOTAL	\$2,757,200.00

Key Item	Item Description (Unit)	Quantity	Unit	Cost / Unit	Comments	Total Cost
C. TRANSFORMATION						
C1.	Campus Additions and Transformations					
C1.i.	New Classroom Building (3 standard & 1 Computer Lab & Restroom)	4300	sf	\$275.00		\$1,182,500.00
C1.i.a.	Computer Lab for Fifth Grade				See Item C1.i.	
C1.i.b.	Additional Restrooms closer to play fields				See Item C1.i.	
C1.ii.	Parking Expansion	9200	sf	\$15.00		\$138,000.00
C1.iii.	Upgrade Track	8700	sf	\$8.00		\$69,600.00
C1.iv.	New covered entry way / pickup area for Teen Central Program	315	sf	\$200.00		\$63,000.00
C3.	21st Century Technology Upgrades					
C3.i.	Wired infrastructure to current standards (LANs)	1	LS	\$100,000.00	* Provided by District - See Technology Appendix	\$100,000.00
C3.ii.	Wireless	1	LS	\$85,000.00	* Provided by District - See Technology Appendix	\$85,000.00
C3.iii.	Airwave Management	1	LS	\$19,375.00	* Provided by District - See Technology Appendix	\$19,375.00
C3.iv.	Mobile Device Management	1	LS	\$93,750.00	* Provided by District - See Technology Appendix	\$93,750.00
C3.v.	Student Devices			\$0.00	T.B.D.	\$0.00
C3.vi.	Computer Lab Upgrades	1	LS	\$45,000.00	* Provided by District - See Technology Appendix	\$45,000.00
					SUBTOTAL	\$1,796,225.00
					SUBTOTAL CONSTRUCTION COST ESTIMATE	\$4,731,225.00
				Furniture, Fixtures & Equipment (FF&E) 2%		\$94,624.50
				Contingency 10%		\$473,122.50
					TOTAL CONSTRUCTION COST ESTIMATE	\$5,298,972.00
Notes:						
1. Costs shown above are current 2014 construction hard-cost estimates, based on a Design-Bid-Build method						
2. Add 25% for soft cost to arrive at TOTAL PROJECT COST (inclusive of Agency, Permits, Inspection, Testing, Design and Administrative Costs)						
3. Future costs can be estimated using a 3% annual escalation rate after January, 2015						

Overview

Year of Lease Start: 1990
Approximate Building Area:

Available Parking:
Standard:
Car Accessible
Van Accessible
Total Parking:



10601 Church St. Suite 112
Rancho Cucamonga, CA
Leased Facility
Parcel No. 1077-421-31



OPTION # 1A: District Office to remain at leased facility. M&O and Food Services relocate to Cucamonga MS site



OPTION # 1B District Office relocates to Coyote Canyon ES site and M&O/Food Services relocate to Cucamonga MS site



OPTION # 2 Consolidated DO/M&O/Food Service at Hellman Ave. & San Bernardino Rd. Historical Building (First actual schoolhouse built in 1890)

OPTION # 3 Consolidated DO/M&O/Food Service at a location to be determined



EXISTING

VISION

A. CODE OPTION #1A (Health, Safety, Access)

- A5. Phone System Upgrades

C. TRANSFORMATION OPTION #1A**Campus Wide Items:**

- C3. 21st Century Technology Upgrades
- i. Wired infrastructure to current standards
 - ii. Wireless
 - iii. Airwave Management
 - iv. Mobile Device Management

Campus Specific Items:**C8** District Support Facilities Transformations

- i. Maintenance & Operations and Food Services to relocate from Central Elementary School site to Cucamonga Middle School site – New Facility.
- ii. New access driveway to M&O and Food Service Facility at Cucamonga MS
- iii. Reconfigure play fields at Cucamonga MS



District Office to remain at Church St.



C8i. Maintenance & Operations and Food Services to relocate from Central Elementary School site to Cucamonga Middle School site – New Facility.

VISION

C. TRANSFORMATION OPTION #1B**Campus Specific Items:****C8** District Support Facilities Transformations

- i. District Office to relocate from leased building to Coyote Canyon Elementary Site – New Facility.
- ii. Maintenance & Operations and Food Services to relocate from Central Elementary School site to Cucamonga Middle School site – New Facility.
- iii. New access driveway to M&O and Food Service Facility at Cucamonga MS
- iv. Reconfigure play fields at Cucamonga MS



C8i. District Office to relocate from leased building to Coyote Canyon Elementary School site – New Facility.



C8ii. Maintenance & Operations and Food Services to relocate from Central Elementary School site to Cucamonga Middle School site – New Facility.

VISION

C. TRANSFORMATION OPTION #2

Campus Specific Items:

C8 District Support Facilities Transformations

- i. Consolidated District Office / M&O / Food Service Facility at Historical Building located on Hellman Avenue and San Bernardino Road.
 - a. Existing building transformation
 - b. Building expansion
 - c. New M&O / Food Service Building



VISION



C. TRANSFORMATION OPTION #3**Campus Specific Items:****C8 District Support Facilities Transformations**

- i. Consolidated District Office / M&O / Food Service Facility at a site to be determined.
 - a. New Administrative Offices
 - b. New M&O / Food Service Building

**VISION**

Key Item	Item Description (Unit)	Quantity	Unit	Cost / Unit	Comments	Total Cost
A. CODE (HEALTH, SAFETY, ACCESS) OPTION #1A - Administration stays at Church St. & M&O relocates to Cucamonga MS						
A5.	Phone System Upgrades	1	LS	\$55,000.00	* Provided by District - See Technology Appendix	\$55,000.00
					SUBTOTAL	\$55,000.00
C. TRANSFORMATION OPTION #1A - Administration stays at Church St. & M&O relocates to Cucamonga MS						
C3.	21st Century Technology Upgrades					
C3.i.	Wired infrastructure to current standards (LANs)	1	LS	\$50,000.00	* Provided by District - See Technology Appendix	\$50,000.00
C3.ii.	Wireless	1	LS	\$5,000.00	* Provided by District - See Technology Appendix	\$5,000.00
C3.iii.	Airwave Management	1	LS	\$19,375.00	* Provided by District - See Technology Appendix	\$19,375.00
C3.iv.	Mobile Device Management	1	LS	\$93,750.00	* Provided by District - See Technology Appendix	\$93,750.00
C8.	District Support Facilities Transformations					
C8.i.	School site to Cucamonga Middle School site - New Facility	15000	sf	\$0.00	See Central Elementary School C8.i thru C8.iii.	\$0.00
C8.ii.	New access driveway to M&O and Food Service Facility at Cucamonga MS	13130	sf	\$0.00	See Central Elementary School C8.i thru C8.iii.	\$0.00
C8.iii.	Reconfigure play fields at Cucamonga MS	309000	sf	\$0.00	See Central Elementary School C8.i thru C8.iii.	\$0.00
					SUBTOTAL	\$168,125.00
					SUBTOTAL CONSTRUCTION COST ESTIMATE	\$223,125.00
				Furniture, Fixtures & Equipment (FF&E) 2%		\$4,462.50
				Contingency 10%		\$22,312.50
					TOTAL CONSTRUCTION COST ESTIMATE	\$249,900.00
C. TRANSFORMATION OPTION #1B - Administration relocates to Coyote Canyon ES & M&O relocates to Cucamonga MS						
C8.	District Support Facilities Transformations					
C8.i.	District Office to relocate from leased building to Coyote Canyon Elementary Site - New Facility	15000	sf	\$225.00		\$3,375,000.00
C8.ii.	Maintenance & Operations and Food Services to relocate from Central Elementary School site to Cucamonga Middle School site - New Facility	15000	sf	\$0.00	See Central Elementary School C8.i thru C8.iii.	\$0.00
C8.iii.	New access driveway to M&O and Food Service Facility at Cucamonga MS	13130	sf	\$0.00	See Central Elementary School C8.i thru C8.iii.	\$0.00
C8.iv.	Reconfigure play fields at Cucamonga MS	309000	sf	\$0.00	See Central Elementary School C8.i thru C8.iii.	\$0.00
					SUBTOTAL CONSTRUCTION COST ESTIMATE	\$3,375,000.00
				Furniture, Fixtures & Equipment (FF&E) 2%		\$67,500.00
				Contingency 10%		\$337,500.00
					TOTAL CONSTRUCTION COST ESTIMATE	\$3,780,000.00

Key Item	Item Description (Unit)	Quantity	Unit	Cost / Unit	Comments	Total Cost
C. TRANSFORMATION OPTION #2 - Consolidate Administration & M&O at Historical Building on Hellman Avenue & San Bernardino Rd.						
C8.	District Support Facilities Transformations					
C8.i.	Consolidate District Office, M&O and Food Service Facility at historical building on Hellman Avenue and San Bernardino Road <i>(Does NOT include purchase price of property)</i>					
C8.i.a.	Existing building transformation	10132	sf	\$175.00		\$1,773,100.00
C8.i.b.	Building expansion	5000	sf	\$250.00		\$1,250,000.00
C8.i.c.	New M&O / Food Service Building	15000	sf	\$0.00	See Central Elementary School C8.i	\$0.00
					SUBTOTAL CONSTRUCTION COST ESTIMATE	\$3,023,100.00
					Furniture, Fixtures & Equipment (FF&E) 2%	\$60,462.00
					Contingency 10%	\$302,310.00
					TOTAL CONSTRUCTION COST ESTIMATE	\$3,385,872.00
C. TRANSFORMATION OPTION #3 - Consolidate Administration & M&O at a site to be determined						
C8.	District Support Facilities Transformations					
C8.i.	Consolidate District Office, M&O and Food Service Facility at a site to be determined <i>(Does NOT include purchase price of land)</i>	30000	sf			
C8.i.a.	Administrative Offices	15000	sf	\$250.00		\$3,750,000.00
C8.i.b.	New M&O / Food Service Building	15000	sf	\$0.00	See Central Elementary School C8.i	\$0.00
					SUBTOTAL CONSTRUCTION COST ESTIMATE	\$3,750,000.00
					Furniture, Fixtures & Equipment (FF&E) 2%	\$75,000.00
					Contingency 10%	\$375,000.00
					TOTAL CONSTRUCTION COST ESTIMATE	\$4,200,000.00
Notes:	1. Costs shown above are current 2014 construction hard-cost estimates, based on a Design-Bid-Build method 2. Add 25% for soft cost to arrive at TOTAL PROJECT COST (inclusive of Agency, Permits, Inspection, Testing, Design and Administrative Costs) 3. Future costs can be estimated using a 3% annual escalation rate after January, 2015					

Report Date: September 3, 2014

Meeting/Observation Date: August 14, 2014

Project Name: **Bear Gulch Elementary School**
Central School District

Electrical System Observations

A. Power Existing Conditions – The facility's main service board (MSB) is located at the trash/service yard at the South exterior of the Library/Multi-purpose building. Electric utility service is provided by Southern California Edison (SCE) via underground conduit to pad mounted transformer housed within the same yard/enclosure, and then underground into the MSB. The MSB contains a single meter (SCE meter #V349N-001274), operating at 277/480 volt, 3-phase, 4-wire and is rated at 1,600 amps, 65k A.I.C. and NEMA 3R. The MSB is manufactured by Siemens. Equipment is operational and is in good condition, approximately 4 years old and installed as part of a 2010 building addition project on campus. When installed, this new equipment was placed to refeed the existing 1,200 amp Federal Pacific (FPE) switchgear (now distribution) housed in the adjacent space. The FPE equipment has had the meter and CTs removed, and remains to feed the existing distribution equipment on site. The FPE equipment is in poor condition, is much older and aged, with a manufacture date of 3-29-1984.

12 month utility demands provided by the SCE indicate a peak demand of 247kw, deriving a calculated demand load on existing equipment of 371 amps (with 25% demand factor) allowing for 1,229 amps of spare capacity at the MSB. This demand load would appear adequate to allow for future campus modernization or building expansions.

Existing buildings contain dedicated branch circuit panel boards (with step down transformer serving existing distribution board) distributed throughout the site providing power for equipment, lighting and convenience power loads. Panels are in fair condition and at, or near, maximum circuit breaker capacity. This equipment does not contain or provide space allocations allowing for system expansions.

The District has expressed interest in solar power generation with a target goal to offset 75% of the yearly utility load for each site. The inclusion of this added power generation capability should be considered into analyzing the electrical switchgear, with the switchgear upgraded appropriately to accommodate additional amperage, with a separate section to include a single point of disconnecting means per utility company.

Power Recommendation - The MSB is in good condition, while corresponding distribution equipment that has been refed is in poor condition. With an average equipment life expectancy of 30 years, the MSB equipment should remain to service the existing site. New added loads for site modernization work or expansions would likely be within the rated capacity of existing MSB equipment ratings. The FPE distribution board and associated equipment on campus is approaching the end of its life cycle. From an age standpoint, it is recommended the existing distribution equipment be replaced with new. Photovoltaic power generation equipment requirements shall be allocated within any new equipment and proposed improvements.

B. Data / LAN System Existing Conditions

a. The campus main demarc facility (MDF) equipment, including the minimum point of entry (MPOE) fiber termination, is located in the computer lab of the Library Building on campus. Housed in floor standing equipment racks, MDF equipment is comprised of the main switch, with equipment, Cat5 cabling and patch panels. Distribution to remote mounted building IDF's are achieved via fiber pairs (62.5μc 1-Gig

fiber) from the MDF. MDF and IDF equipment do not contain UPS systems for provided power backup. Remote building mounted IDFs are wall mounted lockable cabinets, often located in Janitor or Storage Closets, Workrooms, or Classrooms. Electronic equipment is often mounted in non-temperature controlled and "dirty" environments and operating equipment fans poses noise issues to the occupants in the space. Cooling for the entire space off hours (such as a classroom environment over a weekend or summer) needs to be provided to prevent overheating and premature equipment failure. Site LAN system equipment appeared to be in good working order.

LAN / Data System Recommendation – The campus main LAN network MDF equipment, and remote mounted IDF equipment, should be located within a dedicated room (recommended 10'x12' for MDF space and 6'x8' minimum for IDFs) with plywood backboard on all walls (to accommodate other site low voltage systems) and perimeter mounted cable tray for cable/wire management. Spaces should be provided with dedicated cooling to maintain temperature below 77°F and control humidity. Cat5 system copper horizontal cabling should be replaced with new Cat6 copper cable to accommodate future LAN/Data system equipment performance requirements. Existing 62.5μc 1-Gig fiber should be replaced with new 50μc 10-Gig fiber (OM3 or OM4 per District) to accommodate future system needs. The addition of wireless access points (WAP's) are recommended for personal devices and technology where densities would dictate on site. Recommend to provide two data drops per location for wireless access point technology. MDF and each IDFs shall be provided with Cat6 dedicated patch panels and POE switches for the inclusion of recommended VoIP telephone system (dedicated voice) and CCTV networked camera system (dedicated video.) Included in each cabinet, UPSs are to be provided for emergency Data and Telephone network and CCTV network equipment. New cabling and jacks for data, voice and video shall be a separate District selected colors to manage and distinguish between systems.

C. Voice / Telephone System Existing Conditions

a. Telephone service main point of entry (MPOE) is located in the Administration building with voice utility services provided by Verizon. Service is extended to the existing telephone system and to field devices via punch down blocks mounted to the telephone backboard. The existing telephone system is an analog PBX system and is currently linked/tied to the existing paging/intercom system.

Voice / Telephone Recommendation – Recommend the existing analog telephone system be replaced with a new Voice over Internet Protocol (VoIP) system, complete with LAN network interface and new multi-pair cabling (to match District standards) to telephone locations and new VoIP telephones. Telephone voice cabling to be routed in conjunction with site data cables and shall be managed in IDF cabinets/racks on separate patch panels and network POE switches. New VoIP telephone system to be determined by District IT department.

D. CATV System Existing Conditions

a. CATV service is not provided to the campus.

E. Clock

a. Existing clocks throughout the site are 12" analog type with battery powered quartz movements and are provided in locations as necessary. Clocks are localized and operate as stand-alone units. The site does not currently contain a "master clock" type system.

Clock System Recommendations – Recommend the removal of all battery powered clocks and for the installation of an IP based network master clock system, integrated as part of the communication system. New clocks to be digital type and time corrected based on master world clock time.

F. Paging / Intercom System

The campus currently contains a Telecenter ICS integrated communication paging/intercom system manufactured by Rauland located in the Administration building. Utilizing speakers within each

room/space, in conjunction with local handsets and an interface with the existing telephone system, voice communication is enabled to and from rooms. In spaces without handsets requiring communications, speakers contain "talkback" capability. New parts are still made available for system expansions and maintenance. The master clock feature in this equipment is not utilized as part of this system.

Paging System Recommendations – Recommend the existing Telecenter ICS paging/intercom system be expanded to handle new modernization and construction work/devices, including utilizing a VoIP based telephone system (telephone system TBD by District) interface and IP based master clock feature as part of the integrated communication system (ICS) equipment. Additionally, the ICS is recommended to be linked as part of a networked IP based system with a master network controller housed within the District's office or maintenance facility (location to be determined by District.) This networked system would allow the flexibility of remote paging and/or multi campus or multi-zone paging as part of District wide communication and mass notification. Recommend system head end be upgraded, and new field devices within any new scope of work as applicable, for Telecenter ICS VoIP Networked System or replace with Bogen Quantum IP system or District approved equal.

G. Security / Access Control / Closed Circuit Television (CCTV) Existing Conditions

- a. Campus security (intrusion detection) system head end location is located in the Administration building. The existing system is manufactured by Napco Security. The control panel is connected via dialer & telephone line to a district selected monitoring station. The system contains expansion modules and points to cover remote buildings. The campus is covered with a combination of ceiling/wall mounted occupancy sensors, door contacts and remote arm/disarm keypads. The system appeared to be in good condition and is reported to be in fair working order.
- b. No access control systems (card reader / entry/exit type systems) exist on campus.
- c. The campus contains an existing CCTV system with multiple digital video recorders (DVRs, three total). Cameras are the fixed type, operating on analog signals over RG6 cable feeds between camera and DVR. Cameras are located on building exteriors covering high student populated and transition areas. CCTV system and cameras are manufactured by Pelco.

Security / Access / CCTV Recommendations

- a. The intrusion detection system on site is a stand-alone system connected to off-site monitoring. It is recommended the intrusion detection system be upgraded to an addressable, networked intrusion alarm system allowing for central control to be managed from a master network controller housed within the District's office or maintenance facility (location to be determined by District.) The new addressable system shall be scalable and expandable for modernization areas and new construction in order to meet the District's current and future needs. Recommend new system headend, and field devices as applicable, for a DMP Addressable Integrated Network Intrusion Alarm System or District approved equal.
- b. The site does not contain access control systems. Addition of new system not deemed necessary at this time. Access control, as need determined by district, would be integrated as part of DMP system recommendations above.
- c. Recommend the upgrade and replacement of the existing CCTV system and equipment for building perimeter and interior coverage areas as coordinated with District security. Upgraded CCTV headend equipment and system to be IP based, including POE cameras, and shall operate as part of, and within the site LAN network. Equipment locations would be at the recommendation and in close coordination with school District Security and site Principal in order to meet any existing, or future video security needs for the site.

H. Fire Alarm System Existing Conditions

- a. Main fire alarm control panel (FACP) is located in the Administration Building on site and is a Notifier manufactured control panel. Fire alarm terminal cabinets and remote power supplies are located in site buildings to distribute fire alarm initiation device cabling and alarm notification signals. The fire alarm system contains some area specific area smoke coverage with wall mounted visual and audible

notification devices throughout normally occupied spaces. Manual pull stations are located at exit doors. The existing campus fire alarm system is not currently connected (via system dialer) to an outside monitoring company. The fire alarm system appeared to be in good working order.

Fire Alarm Recommendation – The existing system is manufactured by Notifier and does not communicate with District desired Gamewell/FCI system protocols. Recommendation is to upgrade existing control panel, addressable initiation devices and remote annunciator to Gamewell/FCI products based around the FCI-E3 FACP control platform, including the installation of a centralized master network controller housed within the District's office or maintenance facility (location to be determined by District.) This networked system would allow the flexibility of remote monitoring and maintenance of District sites from a central point. Existing notification devices and remote power supplies shall remain and be reprogrammed for trigger from new system. Device locations in areas of modernization and new construction shall be provided with complete coverage area detection as required per current California DSA life safety requirements, including upgrade of life safety system devices for voice evacuation per 2013 CFC 907.2.3.

I. Existing Site Conduit Infrastructure Conditions

Existing site low voltage conduit infrastructure is near or at capacity, allowing for only minimal replacement of and maintenance to, existing low voltage system conductors. It is recommended as part of new site work to master plan new low voltage pathways throughout the site, from equipment head end locations to building exterior, and from building to building. New conduit pathways to be installed underground, removing existing building, roof and/or canopy mounted conduits.

Report Date: September 3, 2014
Meeting/Observation Date: August 14, 2014
Project Name: **Central Elementary School**
Central School District

Electrical System Observations

A. Power Existing Conditions – The facility's main service board (MSB) is located at the exterior of the Administration building on the West side of campus off the parking lot. Electric utility service is provided by Southern California Edison (SCE) via underground conduit to pad mounted transformer housed within a dedicated enclosure, and then underground into the MSB location. The MSB contains a single meter (SCE meter #V349N-017093), operating at 120/208 volt, 3-phase, 4-wire and is rated at 1,600 amps, 65k A.I.C. and NEMA 3R. The MSB is manufactured by General Electric. Equipment is operational and is in fair condition, approximately 15-20 years old.

12 month utility demands provided by the SCE indicate a peak demand of 297kw, deriving a calculated demand load on existing equipment of 1,031 amps (with 25% demand factor) allowing for 569 amps of spare capacity at the MSB. This demand load would appear adequate to allow for some limited future campus modernization or building expansions.

Buildings contain dedicated branch circuit panel boards distributed throughout the site providing power for equipment, lighting and convenience power loads. Panels are in fair condition and at, or near, maximum circuit breaker capacity. This equipment does not contain or provide space allocations allowing for system expansions.

The District has expressed interest in solar power generation with a target goal to offset 75% of the yearly utility load for each site. The inclusion of this added power generation capability should be considered into analyzing the electrical switchgear, with the switchgear upgraded appropriately to accommodate additional amperage, with a separate section to include a single point of disconnecting means per utility company.

Power Recommendation - The MSB and corresponding distribution equipment is in fair condition. With an average equipment life expectancy of 30 years, this equipment is approaching the end of its life cycle. Any new added loads for site modernization work or expansions would approach the rated capacity of the existing equipment. It is recommended the existing MSB equipment be replaced with new, with expansion allocations for remodeling and modernization, including any necessary capacities for photovoltaic power generation allocated within new equipment.

B. Data / LAN System Existing Conditions

a. The campus main demark facility (MDF) equipment, including the minimum point of entry (MPOE) fiber termination, is located in the Administration Building. Housed in floor standing equipment racks, MDF equipment is comprised of the main switch, with equipment, Cat5 cabling and patch panels. Distribution to remote mounted building IDF's are achieved via fiber pairs (62.5 μ c 1-Gig fiber) from the MDF. MDF and IDF equipment do not contain UPS systems for provided power backup. Remote building mounted IDFs are wall mounted lockable cabinets, often located in Janitor or Storage Closets, Workrooms, or Classrooms. Electronic equipment is often mounted in non-temperature controlled and "dirty" environments and operating equipment fans poses noise issues to the occupants in the space. Cooling for the entire space off hours (such as a classroom environment over a weekend or summer) needs to be

provided to prevent overheating and premature equipment failure. Site LAN system equipment appeared to be in good working order.

LAN / Data System Recommendation – The campus main LAN network MDF equipment, and remote mounted IDF equipment, should be located within a dedicated room (recommended 10'x12' for MDF space and 6'x8' minimum for IDFs) with plywood backboard on all walls (to accommodate other site low voltage systems) and perimeter mounted cable tray for cable/wire management. Spaces should be provided with dedicated cooling to maintain temperature below 77°F and control humidity. Cat5 system copper horizontal cabling should be replaced with new Cat6 copper cable to accommodate future LAN/Data system equipment performance requirements. Existing 62.5 μ c 1-Gig fiber should be replaced with new 50 μ c 10-Gig fiber (OM3 or OM4 per District) to accommodate future system needs. The addition of wireless access points (WAP's) are recommended for personal devices and technology where densities would dictate on site. Recommend to provide two data drops per location for wireless access point technology. MDF and each IDFs shall be provided with Cat6 dedicated patch panels and POE switches for the inclusion of recommended VoIP telephone system (dedicated voice) and CCTV networked camera system (dedicated video.) Included in each cabinet, UPSs are to be provided for emergency Data and Telephone network and CCTV network equipment. New cabling and jacks for data, voice and video shall be a separate District selected colors to manage and distinguish between systems.

C. Voice / Telephone System Existing Conditions

a. Telephone service main point of entry (MPOE) is located in the Administration building with voice utility services provided by Verizon. Service is extended to the existing telephone system and to field devices via punch down blocks mounted to the telephone backboard. The existing telephone system is an analog PBX system and is currently linked/tied to the existing paging/intercom system.

Voice / Telephone Recommendation – Recommend the existing analog telephone system be replaced with a new Voice over Internet Protocol (VoIP) system, complete with LAN network interface and new multi-pair cabling (to match District standards) to telephone locations and new VoIP telephones. Telephone voice cabling to be routed in conjunction with site data cables and shall be managed in IDF cabinets/racks on separate patch panels and network POE switches. New VoIP telephone system to be determined by District IT department.

D. CATV System Existing Conditions

a. Campus CATV service is provided by Charter communications with service to the MPOE located in the Administration building. CATV service is not utilized on the campus, to classrooms or other areas, as no distribution cabling is installed to distribute signal.

E. Clock

a. Existing clocks throughout the site are 12" analog type with battery powered quartz movements and are provided in locations as necessary. Clocks are localized and operate as stand-alone units. The site does not currently contain a "master clock" type system.

Clock System Recommendations – Recommend the removal of all battery powered clocks and for the installation of an IP based network master clock system, integrated as part of the communication system. New clocks to be digital type and time corrected based on master world clock time.

F. Paging / Intercom System

a. The campus currently contains a Telecenter V integrated communication paging/intercom system manufactured by Rauland located in the Administration building. Utilizing speakers within each room/space, in conjunction with local handsets and an interface with the existing telephone system, voice communication is enabled to and from rooms. In spaces without handsets requiring communications, speakers contain "talkback" capability. Originally introduced in 1992, the Telecenter V system has been

discontinued since 2011. New parts are still made available for system expansions and maintenance. The master clock feature in this equipment is not utilized as part of this system.

Paging System Recommendations – Recommend the replacement of, or upgrade to, the existing paging/intercom system to an Internet Protocol (IP) based platform, utilizing a VoIP based telephone system (telephone system TBD by District) interface and IP based master clock feature as part of the integrated communication system (ICS) equipment. Additionally, the ICS is recommended to be linked as part of a networked IP based system with a master network controller housed within the District's office or maintenance facility (location to be determined by District.) This networked system would allow the flexibility of remote paging and/or multi campus or multi-zone paging as part of District wide communication and mass notification. Recommend new system headend, and field devices as applicable, for Bogen Quantum IP Networked System or District approved equal.

G. Security / Access Control / Closed Circuit Television (CCTV) Existing Conditions

- a. Campus security (intrusion detection) system head end location is located in the Administration building. The existing system is a 9600 series control panel, manufactured by Gemini. The control panel is connected via dialer & telephone line to a district selected monitoring station. The system contains expansion modules and points to cover remote buildings. The campus is covered with a combination of ceiling/wall mounted occupancy sensors, door contacts and remote arm/disarm keypads. The system appeared to be in good condition and is reported to be in fair working order.
- b. No access control systems (card reader / entry/exit type systems) exist on campus.
- c. The campus contains an existing CCTV system with multiple digital video recorders (DVRs). Cameras styles consist of both Pan-Tilt-Zoom (PTZ) and fixed type operating on analog signals over RG6 cable feeds between camera and DVR. PTZ cameras are programmed/set to pan from side to side to automatically cover a larger area than a traditional fixed lensed camera. Cameras are located on building exteriors covering high student populated and transition areas. CCTV system and cameras are manufactured by Pelco.

Security / Access / CCTV Recommendations

- a. The intrusion detection system on site is a stand-alone system connected to off-site monitoring. It is recommended the intrusion detection system be upgraded to an addressable, networked intrusion alarm system allowing for central control to be managed from a master network controller housed within the District's office or maintenance facility (location to be determined by District.) The new addressable system shall be scalable and expandable for modernization areas and new construction in order to meet the District's current and future needs. Recommend new system headend, and field devices as applicable, for a DMP Addressable Integrated Network Intrusion Alarm System or District approved equal.
- b. The site does not contain access control systems. Addition of new system not deemed necessary at this time. Access control, as need determined by district, would be integrated as part of DMP system recommendations above.
- c. Recommend the upgrade and replacement of the existing CCTV system and equipment for building perimeter and interior coverage areas as coordinated with District security. Upgraded CCTV headend equipment and system to be IP based, including POE cameras, and shall operate as part of, and within the site LAN network. Equipment locations would be at the recommendation and in close coordination with school District Security and site Principal in order to meet any existing, or future video security needs for the site.

H. Fire Alarm System Existing Conditions

- a. Main fire alarm control panel (FACP) is located in the Administration Building on site and is a Simplex 4002. Fire alarm terminal cabinets and remote power supplies are located in site buildings to distribute fire alarm initiation device cabling and alarm notification signals. The fire alarm system is a manual system containing some area specific area smoke coverage with wall mounted visual and audible notification devices throughout normally occupied spaces. Manual pull stations are located at exit doors. The existing

campus fire alarm system is not currently connected (via system dialer) to an outside monitoring company. The fire alarm system appeared to be in good working order.

Fire Alarm Recommendation – The existing system is manufactured by Simplex, and does not communicate with District desired Gamewell/FCI system protocols. Recommendation is to upgrade existing control panel, addressable initiation devices and remote annunciator to Gamewell/FCI products based around the FCI-E3 FACP control platform, including the installation of a centralized master network controller housed within the District's office or maintenance facility (location to be determined by District.) This networked system would allow the flexibility of remote monitoring and maintenance of District sites from a central point. Existing notification devices and remote power supplies shall remain and be reprogrammed for trigger from new system. Device locations in areas of modernization and new construction shall be provided with complete coverage area detection as required per current California DSA life safety requirements, including upgrade of life safety system devices for voice evacuation per 2013 CFC 907.2.3.

I. Existing Site Conduit Infrastructure Conditions

Existing site low voltage conduit infrastructure is near or at capacity, allowing for only minimal replacement of and maintenance to, existing low voltage system conductors. It is recommended as part of new site work to master plan new low voltage pathways throughout the site, from equipment head end locations to building exterior, and from building to building. New conduit pathways to be installed underground, removing existing building, roof and/or canopy mounted conduits.

Report Date: September 3, 2014

Meeting/Observation Date: August 14, 2014

Project Name: **Coyote Canyon Elementary School**
Central School District

Electrical System Observations

A. Power Existing Conditions – The facility's main service board (MSB) is located in the trash/service yard at the North East exterior of the Multi-purpose building, at the end of the east side parking lot. Electric utility service is provided by Southern California Edison (SCE) via underground conduit to pad mounted transformer housed in the same yard/enclosure, and then underground into the MSB. The MSB contains a single meter (SCE meter #V349N-010631), operating at 277/480 volt, 3-phase, 4-wire and is rated at 1,200 amps, 30k A.I.C. and NEMA 3R. The MSB is manufactured by General Electric (AV Line Switchboards). Equipment is operational and is in good condition, approximately 20 years old installed as original equipment on campus in about 1994.

12 month utility demands provided by the SCE indicate a peak demand of 340kw, deriving a calculated demand load on existing equipment of 511 amps (with 25% demand factor) allowing for 689 amps of spare capacity at the MSB. This demand load would appear to be adequate to allow for some future campus modernization or building expansions.

Existing buildings contain dedicated branch circuit panel boards and step down transformers distributed throughout the site providing power for equipment, lighting and convenience power loads. Panels are in good condition and at, or near, maximum circuit breaker capacity. This equipment does not contain or provide space allocations allowing for system expansions.

The District has expressed interest in solar power generation with a target goal to offset 75% of the yearly utility load for each site. The inclusion of this added power generation capability should be considered into analyzing the electrical switchgear, with the switchgear upgraded appropriately to accommodate additional amperage, with a separate section to include a single point of disconnecting means per utility company.

Power Recommendation - The MSB and corresponding distribution equipment is in good condition. With an average equipment life expectancy of 30 years, this equipment is approaching the end of its life cycle. Any new added loads for site modernization work or expansions would likely be within the rated capacity of, or be approaching the capacity of, existing MSB equipment ratings. It is recommended the existing MSB equipment be replaced with new, with expansion allocations for remodeling and modernization, including any necessary capacities for photovoltaic power generation allocated within new equipment and proposed improvements.

B. Data / LAN System Existing Conditions

a. The campus main demark facility (MDF) equipment, including the minimum point of entry (MPOE) fiber termination, is located in the Administration Building in a small "closet" with other low voltage systems. Room is undersized and overcrowded with equipment. Housed in floor standing equipment rack, MDF equipment is comprised of the main switch, with equipment, Cat5 cabling and patch panels. Distribution to remote mounted building IDF's are achieved via fiber pairs (62.5μc 1-Gig fiber) from the MDF. MDF and IDF equipment do not contain UPS systems for provided power backup. Remote building mounted IDF's are wall mounted lockable cabinets, often located in common spaces with line voltage electrical equipment and transformers, in Janitor or Storage Closets, Workrooms, or Classrooms. Electronic equipment is often mounted in non-temperature controlled and "dirty" environments and operating

equipment fans pose noise issues when in occupied spaces. Cooling for the entire space off hours (such as a classroom environment over a weekend or summer) needs to be provided to prevent overheating and premature equipment failure. Site LAN system equipment appeared to be in good working order.

LAN / Data System Recommendation – The campus main LAN network MDF equipment, and remote mounted IDF equipment, should be located within a dedicated room (recommended 10'x12' for MDF space and 6'x8' minimum for IDFs) with plywood backboard on all walls (to accommodate other site low voltage systems) and perimeter mounted cable tray for cable/wire management. Spaces should be provided with dedicated cooling to maintain temperature below 77°F and control humidity. Cat5 system copper horizontal cabling should be replaced with new Cat6 copper cable to accommodate future LAN/Data system equipment performance requirements. Existing 62.5μc 1-Gig fiber should be replaced with new 50μc 10-Gig fiber (OM3 or OM4 per District) to accommodate future system needs. The addition of wireless access points (WAP's) are recommended for personal devices and technology where densities would dictate on site. Recommend to provide two data drops per location for wireless access point technology. MDF and each IDFs shall be provided with Cat6 dedicated patch panels and POE switches for the inclusion of recommended VoIP telephone system (dedicated voice) and CCTV networked camera system (dedicated video.) Included in each cabinet, UPSs are to be provided for emergency Data and Telephone network and CCTV network equipment. New cabling and jacks for data, voice and video shall be a separate District selected colors to manage and distinguish between systems.

C. Voice / Telephone System Existing Conditions

a. Telephone service main point of entry (MPOE) is located in the Administration building with voice utility services provided by Verizon. MPOE space and telephone equipment installed in a small "closet" with other low voltage systems. Service is extended to the existing telephone system and to field devices via punch down blocks mounted to the telephone backboard. The existing telephone system is an analog PBX system and is currently linked/tied to the existing paging/intercom system.

Voice / Telephone Recommendation – Recommend the existing analog telephone system be replaced with a new Voice over Internet Protocol (VoIP) system, complete with LAN network interface and new multi-pair cabling (to match District standards) to telephone locations and new VoIP telephones. Telephone voice cabling to be routed in conjunction with site data cables and shall be managed in IDF cabinets/racks on separate patch panels and network POE switches. New VoIP telephone system to be determined by District IT department.

D. CATV System Existing Conditions

a. Campus CATV service is provided by Charter communications with incoming service to the MPOE located in the Administration building. CATV service is not utilized elsewhere on the campus, to classrooms or other areas, as no distribution cabling is installed to distribute signal.

E. Clock

a. Existing clocks throughout the site are 12" analog type with battery powered quartz movements and are provided in locations as necessary. Clocks are localized and operate as stand-alone units. The site does not currently contain a "master clock" type system.

Clock System Recommendations – Recommend the removal of all battery powered clocks and for the installation of an IP based network master clock system, integrated as part of the communication system. New clocks to be digital type and time corrected based on master world clock time.

F. Paging / Intercom System

a. The campus currently contains a Telecenter V integrated communication paging/intercom system manufactured by Rauland located in the Administration building small storage room. Utilizing speakers within each room/space, in conjunction with local handsets and an interface with the existing telephone

system, voice communication is enabled to and from rooms. In spaces without handsets requiring communications, speakers contain “talkback” capability. Originally introduced in 1992, the Telecenter V system has been discontinued since 2011. New parts are still made available for system expansions and maintenance. The master clock feature in this equipment is not utilized as part of this system.

Paging System Recommendations – Recommend the replacement of, or upgrade to, the existing paging/intercom system to an Internet Protocol (IP) based platform, utilizing a VoIP based telephone system (telephone system TBD by District) interface and IP based master clock feature as part of the integrated communication system (ICS) equipment. Additionally, the ICS is recommended to be linked as part of a networked IP based system with a master network controller housed within the District's office or maintenance facility (location to be determined by District.) This networked system would allow the flexibility of remote paging and/or multi campus or multi-zone paging as part of District wide communication and mass notification. Recommend new system headend, and field devices as applicable, for Bogen Quantum IP Networked System or District approved equal.

G. Security / Access Control / Closed Circuit Television (CCTV) Existing Conditions

- a. Campus security (intrusion detection) system head end location is located in the Administration building. The existing system is based around an Optex Morse 16EXT security control panel. The control panel is connected via dialer & telephone line to a district selected monitoring station. The system contains expansion modules and points to cover remote buildings. The campus is covered with a combination of ceiling/wall mounted occupancy sensors, door contacts and remote arm/disarm keypads. The system appeared to be in good condition and is reported to be in fair working order.
- b. No access control systems (card reader / entry/exit type systems) exist on campus.
- c. The campus contains an existing CCTV system with a single digital video recorder (DVR) located in the common small storage room in Building A. Cameras styles consist of both Pan-Tilt-Zoom (PTZ) and fixed type operating on analog signals over RG6 cable feeds between camera and DVR. PTZ cameras are programmed/set to pan from side to side to automatically cover a larger area than a traditional fixed lensed camera. Cameras are located on building exteriors covering high student populated and transition areas. CCTV system and cameras are manufactured by Pelco.

Security / CCTV Recommendations

- a. The intrusion detection system on site is a stand-alone system connected to off-site monitoring. It is recommended the intrusion detection system be upgraded to an addressable, networked intrusion alarm system allowing for central control to be managed from a master network controller housed within the District's office or maintenance facility (location to be determined by District.) The new addressable system shall be scalable and expandable for modernization areas and new construction in order to meet the District's current and future needs. Recommend new system headend, and field devices as applicable, for a DMP Addressable Integrated Network Intrusion Alarm System or District approved equal.
- b. The site does not contain access control systems. Addition of new system not deemed necessary at this time. Access control, as need determined by district, would be integrated as part of DMP system recommendations above.
- c. Recommend the upgrade and replacement of the existing CCTV system and equipment for building perimeter and interior coverage areas as coordinated with District security. Upgraded CCTV headend equipment and system to be IP based, including POE cameras, and shall operate as part of, and within the site LAN network. Equipment locations would be at the recommendation and in close coordination with school District Security and site Principal in order to meet any existing, or future video security needs for the site.

H. Fire Alarm System Existing Conditions

- a. Main fire alarm control panel (FACP) is located in the Administration Building on site and is a Gamewell FCI E3 system utilizing conventional field devices. Fire alarm terminal cabinets and remote power supplies are located in site buildings to distribute fire alarm initiation device cabling and alarm notification signals. The

fire alarm system contains some area specific area smoke coverage with wall mounted visual and audible notification devices throughout normally occupied spaces. Manual pull stations are located at exit doors. The existing campus fire alarm system is not currently connected (via system dialer) to an outside monitoring company. The fire alarm system appeared to be in good working order.

Fire Alarm Recommendation – The existing system meets the District desired Gamewell/FCI system. Recommendation is to upgrade existing conventional devices to addressable initiation devices including remote annunciator and include the installation of a centralized master network controller housed within the District's office or maintenance facility (location to be determined by District.) This networked system would allow the flexibility of remote monitoring and maintenance of District sites from a central point. Existing notification devices and remote power supplies shall remain and be reprogrammed for trigger from new system. Device locations in areas of modernization and new construction shall be provided with complete coverage area detection as required per current California DSA life safety requirements, including upgrade of life safety system devices for voice evacuation per 2013 CFC 907.2.3.

I. Existing Site Conduit Infrastructure Conditions

Existing site low voltage conduit infrastructure is near or at capacity, allowing for only minimal replacement of and maintenance to, existing low voltage system conductors. It is recommended as part of new site work to master plan new low voltage pathways throughout the site, from equipment head end locations to building exterior, and from building to building. New conduit pathways to be installed underground, removing existing building, roof and/or canopy mounted conduits.

Report Date: September 3, 2014

Meeting/Observation Date: August 14, 2014

Project Name: **Doña Merced Elementary School**
Central School District

Electrical System Observations

A. Power Existing Conditions – The facility contains two main services providing power to buildings on site. Main Service No 1 (MSB1) is located within the Administration building on campus at the North side, adjacent to the main entry. Electric utility service is provided by Southern California Edison (SCE) via underground conduit into the MSB1 location. MSB1 contains a single meter (SCE meter #259000-077838), operating at 277/480 volt, 3-phase, 4-wire and is rated at 800 amps, 65k A.I.C. and NEMA 1. The MSB is manufactured by GTE Sylvania. Equipment is operational and appears to be in fair to good condition.

12 month utility demands provided by the SCE for MSB1 indicate a peak demand of 242kw, deriving a calculated demand load on existing equipment of 364 amps (with 25% demand factor) allowing for 436 amps of spare capacity at the MSB1. This demand load would appear adequate to allow for some limited future campus modernization or building expansions.

Main Service No. 2 (MSB2) is located at the south side of the campus on the asphalt play area north of the portable building row, housed within a chain link enclosure. Electric utility service is provided by Southern California Edison (SCE) via underground conduit to the utility transformer located adjacent to MSB2. Conduit runs underground into the MSB2 location. MSB2 contains a single meter (SCE meter #259000-013167), operating at 277/480 volt, 3-phase, 4-wire and is rated at 400 amps, 30k A.I.C. and NEMA 3R. MSB2 is manufactured by GTE Sylvania and feeds adjacent distribution panel and transformers also housed within chain link enclosures on the asphalt. Equipment is operational and appears to be weathered and aging, however in fair condition.

12 month utility demands provided by the SCE for MSB2 indicate a peak demand of 98kw, deriving a calculated demand load on existing equipment of 147 amps (with 25% demand factor) allowing for 253 amps of spare capacity at the MSB2. This demand load would appear adequate to allow for some limited future campus modernization or building expansions from this equipment.

Buildings contain dedicated branch circuit panel boards and step down transformers distributed throughout the site providing power for equipment, lighting and convenience power loads. Panels are in fair condition and at, or near, maximum circuit breaker capacity. This equipment does not contain or provide space allocations allowing for system expansions.

The District has expressed interest in solar power generation with a target goal to offset 75% of the yearly utility load for each site. The inclusion of this added power generation capability should be considered into analyzing the electrical switchgear, with the switchgear upgraded appropriately to accommodate additional amperage, with a separate section to include a single point of disconnecting means per utility company.

Power Recommendation - The MSB and corresponding distribution equipment is in fair condition. With an average equipment life expectancy of 30 years, this equipment is approaching the end of its life cycle. Any new added loads for site modernization work or expansions would likely exceed the rated capacity of the existing equipment. It is recommended that the existing MSB1 and MSB2 be consolidated onto a single meter

system, and be replaced with new allowing for expansion allocations for remodeling and modernization, including any capacities for photovoltaic power generation allocated within new equipment.

B. Data / LAN System Existing Conditions

a. The fiber service incoming minimum point of entry (MPOE) termination location is in the Administration building sharing a common space/room with MSB1. The fiber then extends to the MDF location within the computer lab near the center of the main building. The campus main demark facility (MDF) equipment is housed in a floor mounted equipment rack. MDF equipment is comprised of the main switch, with equipment, Cat5 cabling and patch panels. Distribution to remote mounted building IDF's are achieved via fiber pairs (62.5 μ c 1-Gig fiber) from the MDF. MDF and IDF equipment do not contain UPS systems for provided power backup. Remote building mounted IDFs are wall mounted lockable cabinets, often located in Janitor or Storage Closets, Workrooms, or Classrooms. Electronic equipment is often mounted in non-temperature controlled and "dirty" environments and operating equipment fans poses noise issues to the occupants in the space. Cooling for the entire space off hours (such as a classroom environment over a weekend or summer) needs to be provided to prevent overheating and premature equipment failure. Site LAN system equipment appeared to be in good working order.

LAN / Data System Recommendation – The campus main LAN network MDF equipment, and remote mounted IDF equipment, should be located within a dedicated room (recommended 10'x12' for MDF space and 6'x8' minimum for IDFs) with plywood backboard on all walls (to accommodate other site low voltage systems) and perimeter mounted cable tray for cable/wire management. Spaces should be provided with dedicated cooling to maintain temperature below 77°F and control humidity. Cat5 system copper horizontal cabling should be replaced with new Cat6 copper cable to accommodate future LAN/Data system equipment performance requirements. Existing 62.5 μ c 1-Gig fiber should be replaced with new 50 μ c 10-Gig fiber (OM3 or OM4 per District) to accommodate future system needs. The addition of wireless access points (WAP's) are recommended for personal devices and technology where densities would dictate on site. Recommend to provide two data drops per location for wireless access point technology. MDF and each IDFs shall be provided with Cat6 dedicated patch panels and POE switches for the inclusion of recommended VoIP telephone system (dedicated voice) and CCTV networked camera system (dedicated video.) Included in each cabinet, UPSs are to be provided for emergency Data and Telephone network and CCTV network equipment. New cabling and jacks for data, voice and video shall be a separate District selected colors to manage and distinguish between systems.

C. Voice / Telephone System Existing Conditions

a. Telephone service main point of entry (MPOE) is located in the Administration building with voice utility services provided by Verizon. Service is extended to the existing telephone system and to field devices via punch down blocks mounted to the telephone backboard. The existing telephone system is an analog PBX system and is currently linked/tied to the existing paging/intercom system.

Voice / Telephone Recommendation – Recommend the existing analog telephone system be replaced with a new Voice over Internet Protocol (VoIP) system, complete with LAN network interface and new multi-pair cabling (to match District standards) to telephone locations and new VoIP telephones. Telephone voice cabling to be routed in conjunction with site data cables and shall be managed in IDF cabinets/racks on separate patch panels and network POE switches. New VoIP telephone system to be determined by District IT department.

D. CATV System Existing Conditions

a. CATV service is not provided to the campus.

E. Clock

- a. Existing clocks throughout the site are 12" analog type with battery powered quartz movements and are provided in locations as necessary. Clocks are localized and operate as stand-alone units. The site does not currently contain a "master clock" type system.

Clock System Recommendations – Recommend the removal of all battery powered clocks and for the installation of an IP based network master clock system, integrated as part of the communication system. New clocks to be digital type and time corrected based on master world clock time.

F. Paging / Intercom System

- a. The campus currently contains a Telecenter V integrated communication paging/intercom system manufactured by Rauland located in the Administration building. Utilizing speakers within each room/space, in conjunction with local handsets and an interface with the existing telephone system, voice communication is enabled to and from rooms. In spaces without handsets requiring communications, speakers contain "talkback" capability. Originally introduced in 1992, the Telecenter V system has been discontinued since 2011. New parts are still made available for system expansions and maintenance. The master clock feature in this equipment is not utilized as part of this system.

Paging System Recommendations – Recommend the replacement of, or upgrade to, the existing paging/intercom system to an Internet Protocol (IP) based platform, utilizing a VoIP based telephone system (telephone system TBD by District) interface and IP based master clock feature as part of the integrated communication system (ICS) equipment. Additionally, the ICS is recommended to be linked as part of a networked IP based system with a master network controller housed within the District's office or maintenance facility (location to be determined by District.) This networked system would allow the flexibility of remote paging and/or multi campus or multi-zone paging as part of District wide communication and mass notification. Recommend new system headend, and field devices as applicable, for Bogen Quantum IP Networked System or District approved equal.

G. Security / Access Control / Closed Circuit Television (CCTV) Existing Conditions

- a. Campus security (intrusion detection) system head end location is located in the Administration building at the South end in a Janitor's closet. The existing system is a 3200 series control panel, manufactured by Napco. The control panel is connected via dialer & telephone line to a district selected monitoring station. The system contains expansion modules and points to cover remote buildings. The campus is covered with a combination of ceiling/wall mounted occupancy sensors, door contacts and remote arm/disarm keypads. The system appeared to be in good condition and is reported to be in fair working order.
- b. No access control systems (card reader / entry/exit type systems) exist on campus.
- c. The campus contains an existing CCTV system with a single digital video recorder (DVR). Cameras styles consist of both Pan-Tilt-Zoom (PTZ) and fixed type operating on analog signals over RG6 cable feeds between camera and DVR. PTZ cameras make up the majority of cameras used on site and are programmed/set to pan from side to side to automatically cover a larger area than a traditional fixed lensed camera. Cameras are located on building exteriors covering high student populated and transition areas. CCTV system and cameras are manufactured by Pelco.

Security / Access / CCTV Recommendations

- a. The intrusion detection system on site is a stand-alone system connected to off-site monitoring. It is recommended the intrusion detection system be upgraded to an addressable, networked intrusion alarm system allowing for central control to be managed from a master network controller housed within the District's office or maintenance facility (location to be determined by District.) The new addressable system shall be scalable and expandable for modernization areas and new construction in order to meet the District's current and future needs. Recommend new system headend, and field devices as applicable, for a DMP Addressable Integrated Network Intrusion Alarm System or District approved equal.

- b. The site does not contain access control systems. Addition of new system not deemed necessary at this time. Access control, as need determined by district, would be integrated as part of DMP system recommendations above.
- c. Recommend the upgrade and replacement of the existing CCTV system and equipment for building perimeter and interior coverage areas as coordinated with District security. Upgraded CCTV headend equipment and system to be IP based, including POE cameras, and shall operate as part of, and within the site LAN network. Equipment locations would be at the recommendation and in close coordination with school District Security and site Principal in order to meet any existing, or future video security needs for the site.

H. Fire Alarm System Existing Conditions

- a. Main fire alarm control panel (FACP) on site is a Notifier manufactured control and is interconnected to a non-CSFM listed Gamewell Flex Alarm 3 panel. Fire alarm terminal cabinets and remote power supplies are located in site buildings to distribute fire alarm initiation device cabling and alarm notification signals. The fire alarm system contains some area specific area smoke coverage with wall mounted visual and audible notification devices throughout normally occupied spaces. Manual pull stations are located at exit doors. The existing campus fire alarm system is not currently connected (via system dialer) to an outside monitoring company. The fire alarm system appeared to be in good working order.

Fire Alarm Recommendation – The existing system is manufactured by Notifier, and does not communicate with District desired Gamewell/FCI system protocols. Recommendation is to upgrade existing control panel, addressable initiation devices and remote annunciator to Gamewell/FCI products based around the FCI-E3 FACP control platform, including the installation of a centralized master network controller housed within the District's office or maintenance facility (location to be determined by District.) This networked system would allow the flexibility of remote monitoring and maintenance of District sites from a central point. Existing notification devices and remote power supplies shall remain and be reprogrammed for trigger from new system. Device locations in areas of modernization and new construction shall be provided with complete coverage area detection as required per current California DSA life safety requirements, including upgrade of life safety system devices for voice evacuation per 2013 CFC 907.2.3.

I. Existing Site Conduit Infrastructure Conditions

Existing site low voltage conduit infrastructure is near or at capacity, allowing for only minimal replacement of and maintenance to, existing low voltage system conductors. It is recommended as part of new site work to master plan new low voltage pathways throughout the site, from equipment head end locations to building exterior, and from building to building. New conduit pathways to be installed underground, removing existing building, roof and/or canopy mounted conduits.

Report Date: September 3, 2014

Meeting/Observation Date: August 14, 2014

Project Name: **Valle Vista Elementary School**
Central School District

Electrical System Observations

A. Power Existing Conditions – The facility's main service board (MSB) is located at the exterior of the West side of the Library/Multipurpose building. Electric utility service is provided by Southern California Edison (SCE) via underground conduit to a pad mounted transformer housed within the same yard/enclosure, and then underground into the MSB location. The MSB contains a single meter (SCE meter #259000-077757), operating at 120/208 volt, 3-phase, 4-wire and is rated at 1,600 amps, 65k A.I.C. and NEMA 3R. The MSB is manufactured by Siemens, Sentron Switchboard series. Equipment is operational and is in fair condition, approximately 20 years old with a manufacture date of November, 1994.

12 month utility demands provided by the SCE indicate a peak demand of 192kw, deriving a calculated demand load on existing equipment of 666 amps (with 25% demand factor) allowing for 934 amps of spare capacity at the MSB. This demand load would appear adequate to allow for future campus modernization or building expansions.

Buildings contain dedicated branch circuit panel boards distributed throughout the site providing power for equipment, lighting and convenience power loads. Panels are in fair to good condition and are at, or near, maximum circuit breaker capacity. This equipment does not contain or provide space allocations allowing for system expansions.

The District has expressed interest in solar power generation with a target goal to offset 75% of the yearly utility load for each site. The inclusion of this added power generation capability should be considered into analyzing the electrical switchgear, with the switchgear upgraded appropriately to accommodate additional amperage, with a separate section to include a single point of disconnecting means per utility company.

Power Recommendation - The MSB and corresponding distribution equipment is in fair to good condition. With an average equipment life expectancy of 30 years, this equipment is approaching the end of its life cycle. New added loads for site modernization work or expansions would likely be within, but approach, the rated capacity of the existing equipment. From an age standpoint, it is recommended the existing MSB equipment be replaced with new, including expansion allocations for remodeling and modernization, including any capacities for photovoltaic power generation allocated within new equipment.

B. Data / LAN System Existing Conditions

a. The campus main demarc facility (MDF) equipment, including the minimum point of entry (MPOE) fiber termination, is located in the Administration Building within a parent volunteer room. Housed in a wall mounted equipment rack, MDF equipment is comprised of the main switch, with equipment, Cat5 cabling and patch panels. Distribution to remote mounted building IDF's are achieved via fiber pairs (62.5μc 1-Gig fiber) from the MDF. MDF and IDF equipment do not contain UPS systems for provided power backup. Remote building mounted IDFs are wall mounted lockable cabinets, often located in Janitor or Storage Closets, Workrooms, or Classrooms. Electronic equipment is often mounted in non-temperature controlled and "dirty" environments and operating equipment fans poses noise issues to the occupants in the space. Cooling for the entire space off hours (such as a classroom environment over a weekend or

summer) needs to be provided to prevent overheating and premature equipment failure. Site LAN system equipment appeared to be in good working order.

LAN / Data System Recommendation – The campus main LAN network MDF equipment, and remote mounted IDF equipment, should be located within a dedicated room (recommended 10'x12' for MDF space and 6'x8' minimum for IDFs) with plywood backboard on all walls (to accommodate other site low voltage systems) and perimeter mounted cable tray for cable/wire management. Spaces should be provided with dedicated cooling to maintain temperature below 77°F and control humidity. Cat5 system copper horizontal cabling should be replaced with new Cat6 copper cable to accommodate future LAN/Data system equipment performance requirements. Existing 62.5μc 1-Gig fiber should be replaced with new 50μc 10-Gig fiber (OM3 or OM4 per District) to accommodate future system needs. The addition of wireless access points (WAP's) are recommended for personal devices and technology where densities would dictate on site. Recommend to provide two data drops per location for wireless access point technology. MDF and each IDFs shall be provided with Cat6 dedicated patch panels and POE switches for the inclusion of recommended VoIP telephone system (dedicated voice) and CCTV networked camera system (dedicated video.) Included in each cabinet, UPSs are to be provided for emergency Data and Telephone network and CCTV network equipment. New cabling and jacks for data, voice and video shall be a separate District selected colors to manage and distinguish between systems.

C. Voice / Telephone System Existing Conditions

a. Telephone service main point of entry (MPOE) is located in the Administration building with voice utility services provided by Verizon. Service is extended to the existing telephone system and to field devices via punch down blocks mounted to the telephone backboard. The existing telephone system is an analog PBX system and is currently linked/tied to the existing paging/intercom system.

Voice / Telephone Recommendation – Recommend the existing analog telephone system be replaced with a new Voice over Internet Protocol (VoIP) system, complete with LAN network interface and new multi-pair cabling (to match District standards) to telephone locations and new VoIP telephones. Telephone voice cabling to be routed in conjunction with site data cables and shall be managed in IDF cabinets/racks on separate patch panels and network POE switches. New VoIP telephone system to be determined by District IT department.

D. CATV System Existing Conditions

a. CATV service is not provided to the campus.

E. Clock

a. Existing clocks throughout the site are 12" analog type with battery powered quartz movements and are provided in locations as necessary. Clocks are localized and operate as stand-alone units. The site does not currently contain a "master clock" type system.

Clock System Recommendations – Recommend the removal of all battery powered clocks and for the installation of an IP based network master clock system, integrated as part of the communication system. New clocks to be digital type and time corrected based on master world clock time.

F. Paging / Intercom System

a. The campus currently contains a Multicom 2000 integrated communication paging/intercom system manufactured by Bogen located in the Administration building. Utilizing speakers within each room/space, in conjunction with local handsets and an interface with the existing telephone system, voice communication is enabled to and from rooms. In spaces without handsets requiring communications, speakers contain "talkback" capability. New parts are still made available for system expansions and maintenance and the Multicom 2000 system is upgradeable and expandable. The master clock feature in this equipment is not utilized as part of this system.

Paging System Recommendations – Recommend the upgrade of the existing paging/intercom system to an Internet Protocol (IP) based platform, utilizing a VoIP based telephone system (telephone system TBD by District) interface and IP based master clock feature as part of the integrated communication system (ICS) equipment. Additionally, the ICS is recommended to be linked as part of a networked IP based system with a master network controller housed within the District's office or maintenance facility (location to be determined by District.) This networked system would allow the flexibility of remote paging and/or multi campus or multi-zone paging as part of District wide communication and mass notification. Recommend processor upgrade at existing system head end and field devices to remain, for connection to Bogen Quantum IP Networked System or District approved equal. New devices to be included as part of modernization and new expansion scopes of work.

G. Security / Access Control / Closed Circuit Television (CCTV) Existing Conditions

- a. Campus security (intrusion detection) system head end location is located in the Administration building. The existing system is a 16C series control panel, manufactured by Optex Morse. The control panel is connected via dialer & telephone line to a district selected monitoring station. The system contains expansion modules and points to cover remote buildings. The campus is covered with a combination of ceiling/wall mounted occupancy sensors, door contacts and remote arm/disarm keypads. The system appeared to be in good condition and is reported to be in fair working order.
- b. No access control systems (card reader / entry/exit type systems) exist on campus.
- c. The campus contains an existing CCTV system with multiple digital video recorders (DVRs). Cameras styles consist of both Pan-Tilt-Zoom (PTZ) and fixed type operating on analog signals over RG6 cable feeds between camera and DVR. PTZ cameras are programmed/set to pan from side to side to automatically cover a larger area than a traditional fixed lensed camera. Cameras are located on building exteriors covering high student populated and transition areas. CCTV system and cameras are manufactured by Pelco.

Security / Access / CCTV Recommendations

- a. The intrusion detection system on site is a stand-alone system connected to off-site monitoring. It is recommended the intrusion detection system be upgraded to an addressable, networked intrusion alarm system allowing for central control to be managed from a master network controller housed within the District's office or maintenance facility (location to be determined by District.) The new addressable system shall be scalable and expandable for modernization areas and new construction in order to meet the District's current and future needs. Recommend new system headend, and field devices as applicable, for a DMP Addressable Integrated Network Intrusion Alarm System or District approved equal.
- b. The site does not contain access control systems. Addition of new system not deemed necessary at this time. Access control, as need determined by district, would be integrated as part of DMP system recommendations above.
- c. Recommend the upgrade and replacement of the existing CCTV system and equipment for building perimeter and interior coverage areas as coordinated with District security. Upgraded CCTV headend equipment and system to be IP based, including POE cameras, and shall operate as part of, and within the site LAN network. Equipment locations would be at the recommendation and in close coordination with school District Security and site Principal in order to meet any existing, or future video security needs for the site.

H. Fire Alarm System Existing Conditions

- a. Main fire alarm control panel (FACP) is located in the Administration Building on site and is a Gamewell FCI E3 system utilizing conventional field devices. Fire alarm terminal cabinets and remote power supplies are located in site buildings to distribute fire alarm initiation device cabling and alarm notification signals. The fire alarm system contains some area specific area smoke coverage with wall mounted visual and audible notification devices throughout normally occupied spaces. Manual pull stations are located at exit doors.

The existing campus fire alarm system is not currently connected (via system dialer) to an outside monitoring company. The fire alarm system appeared to be in good working order.

Fire Alarm Recommendation – The existing system meets the District desired Gamewell/FCI system. Recommendation is to upgrade existing conventional devices to addressable initiation devices including remote annunciation and include the installation of a centralized master network controller housed within the District's office or maintenance facility (location to be determined by District.) This networked system would allow the flexibility of remote monitoring and maintenance of District sites from a central point. Existing notification devices and remote power supplies shall remain and be reprogrammed for trigger from new system. Device locations in areas of modernization and new construction shall be provided with complete coverage area detection as required per current California DSA life safety requirements, including upgrade of life safety system devices for voice evacuation per 2013 CFC 907.2.3.

I. Existing Site Conduit Infrastructure Conditions

Existing site low voltage conduit infrastructure is near or at capacity, allowing for only minimal replacement of and maintenance to, existing low voltage system conductors. It is recommended as part of new site work to master plan new low voltage pathways throughout the site, from equipment head end locations to building exterior, and from building to building. New conduit pathways to be installed underground, removing existing building, roof and/or canopy mounted conduits.

Report Date: September 3, 2014

Meeting/Observation Date: August 14, 2014

Project Name: **Cucamonga Middle School**
Central School District

Electrical System Observations

A. Power Existing Conditions – The facility's main service board (MSB) is located at the North side of the campus outside the Music/Art building within a dedicated brick enclosure. Electric utility service is provided by Southern California Edison (SCE) via underground conduit to the MSB location. The MSB contains a single meter (SCE meter #V349N-013117), operating at 277/480 volt, 3-phase, 4-wire and is rated at 2,000 amps, 65k A.I.C. and NEMA 3R. The MSB is manufactured by Cutler-Hammer. Equipment is operational and is in fair to good condition, approximately 12 years old with a manufacture date of June, 2002. When installed, this new equipment was placed to refeed the existing 1,200 amp Square D switchgear (now distribution) housed in the adjacent space. The Sq-D equipment has had the meter and CTs disconnected (they still remain installed), and remains to feed the existing distribution equipment on site. The Sq-D gear appears much older and aged and nearing the end of its life.

12 month utility demands provided by the SCE indicate a peak demand of 464kw, deriving a calculated demand load on existing equipment of 697 amps (with 25% demand factor) allowing for 1,303 amps of spare capacity at the MSB. This demand load would appear to be adequate to allow for future campus modernization or building expansions.

Buildings contain dedicated branch circuit panel boards and step down transformers distributed throughout the site providing power for equipment, lighting and convenience power loads. Panels are in fair to good condition and at, or near, maximum circuit breaker capacity. This equipment does not contain or provide space allocations allowing for system expansions.

The District has expressed interest in solar power generation with a target goal to offset 75% of the yearly utility load for each site. The inclusion of this added power generation capability should be considered into analyzing the electrical switchgear, with the switchgear upgraded appropriately to accommodate additional amperage, with a separate section to include a single point of disconnecting means per utility company.

Power Recommendation - The MSB and corresponding distribution equipment is in fair to good condition. With an average equipment life expectancy of 30 years, the MSB equipment should remain to service the existing site. New added loads for site modernization work or expansions would likely be within, but begin to approach, the rated capacity of the existing equipment. The Square-D distribution board and associated equipment on campus is approaching the end of its life cycle. From an age standpoint, it is recommended the existing distribution equipment be replaced with new. Photovoltaic power generation equipment requirements shall be allocated within any new equipment and proposed improvements.

B. Data / LAN System Existing Conditions

a. The fiber service incoming minimum point of entry (MPOE) termination location is located in the administration building. Fiber then extends to the MDF location within the computer lab near the center of campus in the classroom building. The campus main demark facility (MDF) equipment is located in the Computer lab, housed in a floor mounted equipment rack. MDF equipment is comprised of the main switch, with equipment, Cat5 cabling and patch panels. Distribution to remote mounted building IDF's are

achieved via fiber pairs (62.5μc 1-Gig fiber) from the MDF. MDF and IDF equipment do not contain UPS systems for provided power backup. Remote building mounted IDFs are wall mounted lockable cabinets, often located in Janitor or Storage Closets, Workrooms, or Classrooms. Electronic equipment is often mounted in non-temperature controlled and "dirty" environments and operating equipment fans poses noise issues to the occupants in the space. Cooling for the entire space off hours (such as a classroom environment over a weekend or summer) needs to be provided to prevent overheating and premature equipment failure. Site LAN system equipment appeared to be in good working order.

LAN / Data System Recommendation – The campus main LAN network MDF equipment, and remote mounted IDF equipment, should be located within a dedicated room (recommended 10'x12' for MDF space and 6'x8' minimum for IDFs) with plywood backboard on all walls (to accommodate other site low voltage systems) and perimeter mounted cable tray for cable/wire management. Spaces should be provided with dedicated cooling to maintain temperature below 77°F and control humidity. Cat5 system copper horizontal cabling should be replaced with new Cat6 copper cable to accommodate future LAN/Data system equipment performance requirements. Existing 62.5μc 1-Gig fiber should be replaced with new 50μc 10-Gig fiber (OM3 or OM4 per District) to accommodate future system needs. The addition of wireless access points (WAP's) are recommended for personal devices and technology where densities would dictate on site. Recommend to provide two data drops per location for wireless access point technology. MDF and each IDFs shall be provided with Cat6 dedicated patch panels and POE switches for the inclusion of recommended VoIP telephone system (dedicated voice) and CCTV networked camera system (dedicated video.) Included in each cabinet, UPSs are to be provided for emergency Data and Telephone network and CCTV network equipment. New cabling and jacks for data, voice and video shall be a separate District selected colors to manage and distinguish between systems.

C. Voice / Telephone System Existing Conditions

a. Telephone service main point of entry (MPOE) is located in the Administration building with voice utility services provided by Verizon. Service is extended to the existing telephone system and to field devices via punch down blocks mounted to the telephone backboard. The existing telephone system is an analog PBX system and is currently linked/tied to the existing paging/intercom system.

Voice / Telephone Recommendation – Recommend the existing analog telephone system be replaced with a new Voice over Internet Protocol (VoIP) system, complete with LAN network interface and new multi-pair cabling (to match District standards) to telephone locations and new VoIP telephones. Telephone voice cabling to be routed in conjunction with site data cables and shall be managed in IDF cabinets/racks on separate patch panels and network POE switches. New VoIP telephone system to be determined by District IT department.

D. CATV System Existing Conditions

a. CATV service is not provided to the campus.

E. Clock

a. Existing non-modernized buildings contain 12" analog type clocks with battery powered quartz movements and are provided in locations as necessary. Clocks are localized and operate as stand-alone units. The site has been upgraded in existing buildings with a new "master clock" type system as part of the intercom system upgrade. The (2) modernized buildings contain new clocks and are connected to the new system.

Clock System Recommendations – Recommend the removal of all battery powered clocks and for the installation of new IP based clocks connected to the IP based network master clock system. New clocks to be time corrected based on master world clock time and clock type shall match existing clocks as installed as part of the recent classroom modernization project.

F. Paging / Intercom System

- a. The campus currently contains a Quantum IP integrated communication paging/intercom system manufactured by Bogen. This system utilizes speakers within each room/space, in conjunction with local handsets and an interface with the existing telephone system, voice communication is enabled to and from rooms. In spaces without handsets requiring communications, speakers contain “talkback” capability. This system is capable of handling all campus expansions and new work. The master clock feature is included in this equipment.

Paging System Recommendations – Recommend the existing Bogen Quantum IP paging/intercom system be expanded to handle new modernization and construction devices utilizing a VoIP based telephone system (telephone system TBD by District) interface and the IP based master clock feature included as part of the integrated communication system (ICS) equipment. Additionally, the ICS is recommended to be linked as part of a networked IP based system with a master network controller housed within the District's office or maintenance facility (location to be determined by District.) This networked system would allow the flexibility of remote paging and/or multi campus or multi-zone paging as part of District wide communication and mass notification.

G. Security / Access Control / Closed Circuit Television (CCTV) Existing Conditions

- a. Campus security (intrusion detection) system head end location is located in the Administration building. The existing system is a 16ET series control panel, manufactured by Optex Morse. The control panel is connected via dialer & telephone line to a district selected monitoring station. The system contains expansion modules and points to cover remote buildings. The campus is covered with a combination of ceiling/wall mounted occupancy sensors, door contacts and remote arm/disarm keypads. The system appeared to be in good condition and is reported to be in fair working order.
- b. No access control systems (card reader / entry/exit type systems) exist on campus.
- c. The campus contains an existing CCTV system with multiple digital video recorders (DVRs, four total.) Camera styles consist of both Pan-Tilt-Zoom (PTZ) and fixed type operating on analog signals over RG6 cable feeds between camera and DVR. PTZ cameras are programmed/set to pan from side to side to automatically cover a larger area than a traditional fixed lensed camera. Cameras are located on building exteriors covering high student populated and transition areas. CCTV system and cameras are manufactured by Pelco.

Security / Access / CCTV Recommendations

- a. The intrusion detection system on site is a stand-alone system connected to off-site monitoring. It is recommended the intrusion detection system be upgraded to an addressable, networked intrusion alarm system allowing for central control to be managed from a master network controller housed within the District's office or maintenance facility (location to be determined by District.) The new addressable system shall be scalable and expandable for modernization areas and new construction in order to meet the District's current and future needs. Recommend new system headend, and field devices as applicable, for a DMP Addressable Integrated Network Intrusion Alarm System or District approved equal.
- b. The site does not contain access control systems. Addition of new system not deemed necessary at this time. Access control, as need determined by district, would be integrated as part of DMP system recommendations above.
- c. Recommend the upgrade and replacement of the existing CCTV system and equipment for building perimeter and interior coverage areas as coordinated with District security. Upgraded CCTV headend equipment and system to be IP based, including POE cameras, and shall operate as part of, and within the site LAN network. Equipment locations would be at the recommendation and in close coordination with school District Security and site Principal in order to meet any existing, or future video security needs for the site.

H. Fire Alarm System Existing Conditions

- a. Main fire alarm control panel (FACP) is being upgraded to a Gamewell FCI E3 system as part of the current classroom building modernization project. Existing field notification devices and initiation devices are being reconnected to the new FACP platform. Modernized buildings contain fully automatic, addressable, complete coverage smoke fire alarm systems. Fire alarm terminal cabinets and remote power supplies are located in site buildings to distribute fire alarm initiation device cabling and alarm notification signals. The fire alarm system in existing buildings contain some area specific area smoke coverage with wall mounted visual and audible notification devices throughout normally occupied spaces. Manual pull stations are located at exit doors. The existing campus fire alarm system is not currently connected (via system dialer) to an outside monitoring company. The existing building fire alarm system devices appear to be in good working order and are tied to the new campus FACP.

Fire Alarm Recommendation – The existing system meets the District desired Gamewell/FCI system. Recommendation is to upgrade existing conventional devices to addressable initiation devices including remote annulator and include the installation of a centralized master network controller housed within the District's office or maintenance facility (location to be determined by District.) This networked system would allow the flexibility of remote monitoring and maintenance of District sites from a central point. Existing notification devices and remote power supplies shall remain and be reprogrammed for trigger from new system. Device locations in areas of modernization and new construction shall be provided with complete coverage area detection as required per current California DSA life safety requirements, including upgrade of life safety system devices for voice evacuation per 2013 CFC 907.2.3.

I. Existing Site Conduit Infrastructure Conditions

Existing site low voltage conduit infrastructure is near or at capacity, allowing for only minimal replacement of and maintenance to, existing low voltage system conductors. It is recommended as part of new site work to master plan new low voltage pathways throughout the site, from equipment head end locations to building exterior, and from building to building. New conduit pathways to be installed underground, removing existing building, roof and/or canopy mounted conduits.

Report Date: September 3, 2014

Meeting/Observation Date: August 14, 2014

Project Name: **Ruth Musser Middle School**
Central School District

Electrical System Observations

A. Power Existing Conditions – The facility's main service board (MSB) is located in the trash/service yard at the North exterior of the Gym building, at the end of the parking lot. Electric utility service is provided by Southern California Edison (SCE) via underground conduit to pad mounted transformer housed in an individual enclosure, and then underground into the MSB. The MSB contains a single meter (SCE meter #V349N-015711), operating at 277/480 volt, 3-phase, 4-wire and is rated at 2,000 amps, 65k A.I.C. and NEMA 3R. The MSB is manufactured by General Electric (AV Line Switchboards). Equipment is operational and is in good condition, approximately 20 years old installed as original equipment on campus.

12 month utility demands provided by the SCE indicate a peak demand of 401kw, deriving a calculated demand load on existing equipment of 603 amps (with 25% demand factor) allowing for 1,397 amps of spare capacity at the MSB. This demand load would appear adequate to allow for future campus modernization or building expansions.

Existing buildings contain dedicated branch circuit panel boards and step down transformers distributed throughout the site providing power for equipment, lighting and convenience power loads. Panels are in good condition and at, or near, maximum circuit breaker capacity. This equipment does not contain or provide space allocations allowing for system expansions.

The District has expressed interest in solar power generation with a target goal to offset 75% of the yearly utility load for each site. The inclusion of this added power generation capability should be considered into analyzing the electrical switchgear, with the switchgear upgraded appropriately to accommodate additional amperage, with a separate section to include a single point of disconnecting means per utility company.

Power Recommendation - The MSB and corresponding distribution equipment is in good condition. With an average equipment life expectancy of 30 years, the MSB is within its life expectancy and is estimated to last for another 10+ years. New added loads for site modernization work or expansions would likely be within the rated capacity of existing MSB equipment ratings. New building branch circuits are to be added to accommodate added power requirements. Photovoltaic power generation equipment requirements shall be allocated within any new equipment and proposed improvements.

B. Data / LAN System Existing Conditions

a. The campus main demark facility (MDF) equipment, including the minimum point of entry (MPOE) fiber termination, is located in the Administration Building is a dedicated room with cooling. Housed in floor standing equipment racks, MDF equipment is comprised of the main switch, with equipment, Cat5 cabling and patch panels. Distribution to remote mounted building IDF's are achieved via fiber pairs (62.5μc 1-Gig fiber) from the MDF. MDF and IDF equipment do not contain UPS systems for provided power backup. Remote building mounted IDFs are wall mounted lockable cabinets, often located in Janitor or Storage Closets, Workrooms, or Classrooms. Electronic equipment is often mounted in non-temperature controlled and "dirty" environments and operating equipment fans poses noise issues to the occupants in the space. Cooling for the entire space off hours (such as a classroom environment over a weekend or

summer) needs to be provided to prevent overheating and premature equipment failure. Site LAN system equipment appeared to be in good working order.

LAN / Data System Recommendation – The campus main LAN network MDF equipment, and remote mounted IDF equipment, should be located within a dedicated room (recommended 10'x12' for MDF space and 6'x8' minimum for IDFs) with plywood backboard on all walls (to accommodate other site low voltage systems) and perimeter mounted cable tray for cable/wire management. Spaces should be provided with dedicated cooling to maintain temperature below 77°F and control humidity. Cat5 system copper horizontal cabling should be replaced with new Cat6 copper cable to accommodate future LAN/Data system equipment performance requirements. Existing 62.5μc 1-Gig fiber should be replaced with new 50μc 10-Gig fiber (OM3 or OM4 per District) to accommodate future system needs. The addition of wireless access points (WAP's) are recommended for personal devices and technology where densities would dictate on site. Recommend to provide two data drops per location for wireless access point technology. MDF and each IDFs shall be provided with Cat6 dedicated patch panels and POE switches for the inclusion of recommended VoIP telephone system (dedicated voice) and CCTV networked camera system (dedicated video.) Included in each cabinet, UPSs are to be provided for emergency Data and Telephone network and CCTV network equipment. New cabling and jacks for data, voice and video shall be a separate District selected colors to manage and distinguish between systems.

C. Voice / Telephone System Existing Conditions

a. Telephone service main point of entry (MPOE) is located in the Administration building with voice utility services provided by Verizon. Service is extended to the existing telephone system and to field devices via punch down blocks mounted to the telephone backboard. The existing telephone system is an analog PBX system and is currently linked/tied to the existing paging/intercom system.

Voice / Telephone Recommendation – Recommend the existing analog telephone system be replaced with a new Voice over Internet Protocol (VoIP) system, complete with LAN network interface and new multi-pair cabling (to match District standards) to telephone locations and new VoIP telephones. Telephone voice cabling to be routed in conjunction with site data cables and shall be managed in IDF cabinets/racks on separate patch panels and network POE switches. New VoIP telephone system to be determined by District IT department.

D. CATV System Existing Conditions

a. Campus CATV service is provided by Charter communications with incoming service to the MPOE located in the Administration building and distributed only to Room #7 (a county utilized classroom). CATV service is not utilized elsewhere on the campus, to classrooms or other areas, as no distribution cabling is installed to distribute signal.

E. Clock

a. Existing clocks throughout the site are 12" analog type with battery powered quartz movements and are provided in locations as necessary. Clocks are localized and operate as stand-alone units. The site does not currently contain a "master clock" type system.

Clock System Recommendations – Recommend the removal of all battery powered clocks and for the installation of an IP based network master clock system, integrated as part of the communication system. New clocks to be digital type and time corrected based on master world clock time.

F. Paging / Intercom System

a. The campus currently contains a Telecenter V integrated communication paging/intercom system manufactured by Rauland located in the Administration building. Utilizing speakers within each room/space, in conjunction with local handsets and an interface with the existing telephone system, voice communication is enabled to and from rooms. In spaces without handsets requiring communications,

speakers contain “talkback” capability. Originally introduced in 1992, the Telecenter V system has been discontinued since 2011. New parts are still made available for system expansions and maintenance. The master clock feature in this equipment is not utilized as part of this system.

Paging System Recommendations – Recommend the replacement of, or upgrade to, the existing paging/intercom system to an Internet Protocol (IP) based platform, utilizing a VoIP based telephone system (telephone system TBD by District) interface and IP based master clock feature as part of the integrated communication system (ICS) equipment. Additionally, the ICS is recommended to be linked as part of a networked IP based system with a master network controller housed within the District’s office or maintenance facility (location to be determined by District.) This networked system would allow the flexibility of remote paging and/or multi campus or multi-zone paging as part of District wide communication and mass notification. Recommend new system headend, and field devices as applicable, for Bogen Quantum IP Networked System or District approved equal.

G. Security / Access Control / Closed Circuit Television (CCTV) Existing Conditions

- a. Campus security (intrusion detection) system head end location is located in the Administration building. The existing system is based around an Optex Morse 16EXT security control panel. The control panel is connected via dialer & telephone line to a district selected monitoring station. The system contains expansion modules and points to cover remote buildings. The campus is covered with a combination of ceiling/wall mounted occupancy sensors, door contacts and remote arm/disarm keypads. The system appeared to be in good condition and is reported to be in fair working order.
- b. No access control systems (card reader / entry/exit type systems) exist on campus.
- c. The campus contains an existing CCTV system with multiple digital video recorders (DVRs, three total). Cameras styles consist of both Pan-Tilt-Zoom (PTZ) and fixed type operating on analog signals over RG6 cable feeds between camera and DVR. PTZ cameras are programmed/set to pan from side to side to automatically cover a larger area than a traditional fixed lensed camera. Cameras are located on building exteriors covering high student populated and transition areas. CCTV system and cameras are manufactured by Pelco.

Security / Access / CCTV Recommendations

- a. The intrusion detection system on site is a stand-alone system connected to off-site monitoring. It is recommended the intrusion detection system be upgraded to an addressable, networked intrusion alarm system allowing for central control to be managed from a master network controller housed within the District’s office or maintenance facility (location to be determined by District.) The new addressable system shall be scalable and expandable for modernization areas and new construction in order to meet the District’s current and future needs. Recommend new system headend, and field devices as applicable, for a DMP Addressable Integrated Network Intrusion Alarm System or District approved equal.
- b. The site does not contain access control systems. Addition of new system not deemed necessary at this time. Access control, as need determined by district, would be integrated as part of DMP system recommendations above.
- c. Recommend the upgrade and replacement of the existing CCTV system and equipment for building perimeter and interior coverage areas as coordinated with District security. Upgraded CCTV headend equipment and system to be IP based, including POE cameras, and shall operate as part of, and within the site LAN network. Equipment locations would be at the recommendation and in close coordination with school District Security and site Principal in order to meet any existing, or future video security needs for the site.

H. Fire Alarm System Existing Conditions

- a. Main fire alarm control panel (FACP) is located in the Administration Building on site and is a Notifier manufactured AM2020 control panel. Fire alarm terminal cabinets and remote power supplies are located in site buildings to distribute fire alarm initiation device cabling and alarm notification signals. The fire alarm system contains some area specific area smoke coverage with wall mounted visual and audible

notification devices throughout normally occupied spaces. Manual pull stations are located at exit doors. The existing campus fire alarm system is not currently connected (via system dialer) to an outside monitoring company. The fire alarm system appeared to be in good working order.

Fire Alarm Recommendation – The existing system contains overall capacity of 1,000 addressable points and would likely support modernization and new construction work. However, the system is manufactured by Notifier and does not communicate with District desired Gamewell/FCI system protocols. Recommendation is to upgrade existing control panel, addressable initiation devices and remote annunciator to Gamewell/FCI products based around the FCI-E3 FACP control platform, including the installation of a centralized master network controller housed within the District’s office or maintenance facility (location to be determined by District.) This networked system would allow the flexibility of remote monitoring and maintenance of District sites from a central point. Existing notification devices and remote power supplies shall remain and be reprogrammed for trigger from new system. Device locations in areas of modernization and new construction shall be provided with complete coverage area detection as required per current California DSA life safety requirements, including upgrade of life safety system devices for voice evacuation per 2013 CFC 907.2.3.

I. Existing Site Conduit Infrastructure Conditions

Existing site low voltage conduit infrastructure is near or at capacity, allowing for only minimal replacement of and maintenance to, existing low voltage system conductors. It is recommended as part of new site work to master plan new low voltage pathways throughout the site, from equipment head end locations to building exterior, and from building to building. New conduit pathways to be installed underground, removing existing building, roof and/or canopy mounted conduits.

Report Date: September 3, 2014

Meeting/Observation Date: August 14, 2014

Project Name: **District Office**
Central School District

Electrical System Observations

A. Power Existing Conditions – The District Office (DO) building is located in a traditional multi-tenant lease space, concrete tilt up type building. Electrical service is provided by Southern California Edison (SCE) to a multi-meter sectioned service board housed in a dedicated electrical room at the back of the building. The 120/208 volt, 3-phase, 4-wire, 2,000 amp service is NEMA 1 rated and manufactured by Challenger. MSB contains two meters serving power to two suite spaces in the building. SCE meter #1, Suite 110, Meter #256000-060763, and meter #2, Suite #112, Meter #259000-008987). Equipment is in good condition. Branch circuit panel affiliated with each space were not observed specifically.

12 month utility demands provided by the SCE for meter #1 indicate a peak demand of 46kw deriving a calculated demand load on existing equipment of 159 amps (including 25% demand factor). As the District has moved into suite #2 in the past couple months, 12 month demands are not available at this time for this equipment/space. Demand loads require evaluations against existing equipment prior to suite modernization and tenant improvement work.

B. Data / LAN System Existing Conditions

a. The building MPOE is located in the main electrical room, sharing the space with the MSB. Fiber service is extended to the office MDF equipment where the main switch, equipment, patch panels and cabling is housed. Data distribution to office spaces is achieved with two remote IDF locations managing Cat5 and Cat6 data horizontal cabling signal equipment. IDF equipment is mounted to plywood backboards in lockable cabinets with one mounted in an office space, and the other above a doorway in a hall. Both locations are in temperature controlled environments. MDF and IDF equipment do not contain UPS systems for provided power backup. The operating equipment fans pose noise issues where located in occupied spaces. LAN system equipment appeared to be in good working order.

LAN / Data System Recommendation – The DO suite(s) main LAN network MDF equipment, and remote mounted IDF equipment, should be located within a dedicated rooms. Room spaces and locations at the DO should be closely coordinated with District IT department head/director. Rooms and spaces should contain plywood backboards on all walls with cable/wire management for the installation and management of other building/suite low voltage systems. Recommended room temperatures to be at 77°F or below. All copper cabling should be replaced and installed with new Cat6 cable to accommodate future LAN/Data system equipment performance requirements. Wireless access points (WAP's) are recommended for personal devices and technology where densities dictate. Recommend to provide two data drops per location for wireless access point technology. MDF and each IDFs shall be provided with Cat6 dedicated patch panels and POE switches for the inclusion of recommended VoIP telephone system (dedicated voice) and CCTV networked camera system (dedicated video.) Included in each cabinet, UPSs are to be provided for emergency Data and Telephone network and CCTV network equipment. New cabling and jacks for data, voice and video shall be a separate District selected colors to manage and distinguish between systems.

C. Voice / Telephone System Existing Conditions

a. Telephone service main point of entry (MPOE) is located in shared electrical room at the rear of the building with voice utility services provided by Verizon. Service is extended to the existing telephone system and to field devices via punch down blocks mounted to the telephone backboard in the DO suite. The existing telephone system is an analog PBX system.

Voice / Telephone Recommendation – Recommend the existing analog telephone system be replaced with a new Voice over Internet Protocol (VoIP) system, complete with LAN network interface and new multi-pair cabling (to match District standards) to telephone locations and new VoIP telephones. Telephone voice cabling to be routed in conjunction with building data cables and shall be managed in IDF cabinets/racks on separate patch panels and network POE switches. New VoIP telephone system to be determined by District IT department.

D. CATV System Existing Conditions

a. Building CATV service is provided by Charter communications with incoming service to the MPOE located in the main building electrical room and extended to the suite in the lounge rooms. CATV improvements shall be coordinated with tenant improvement plans and extended from existing service feed with new RG6 cable to dedicated CATV drops as required.

E. Clock

a. Existing clocks throughout the building are 12" analog type with battery powered quartz movements and are provided in locations as necessary. Clocks are localized and operate as stand-alone units. The DO does not currently contain a "master clock" type system.

Clock System Recommendations – Recommend the removal of all battery powered clocks and for the installation of an IP based network master clock system, integrated as part of the communication system. New clocks to be digital type and time corrected based on master world clock time.

F. Paging / Intercom System

a. The DO utilizes the existing telephone system as a means of communication paging/intercom. There is no centralized communication system and paging installed within the DO.

Paging System Recommendations – Recommend the installation of an Internet Protocol (IP) based platform, utilizing a VoIP based telephone system (telephone system TBD by District) interface and IP based master clock feature as part of the integrated communication system (ICS) equipment. This equipment should be installed to match ICS systems and upgrades throughout the District. Additionally, the ICS is recommended to be linked as part of a networked IP based system with a master network controller housed within the District's office or maintenance facility (location to be determined by District.) This networked system would allow the flexibility of remote paging and/or multi campus or multi-zone paging as part of District wide communication and mass notification. Recommend new Bogen Quantum IP Networked System or District approved equal.

G. Security / Access Control / Closed Circuit Television (CCTV) Existing Conditions

a. DO security (intrusion detection) system head end location is located in the Administration building. The existing system is based around an Optex Morse 16EXT security control panel. The control panel is connected via dialer & telephone line to a district selected monitoring station. The system contains expansion modules and points to cover devices within the building. Suites are covered with a combination of ceiling/wall mounted occupancy sensors, door contacts and remote arm/disarm keypads. The system appeared to be in good condition and is reported to be in fair working order.

b. No access control systems (card reader / entry/exit type systems) exist on campus.

- c. The DO contains an existing CCTV system with a single digital video recorders (DVR). Cameras styles are fixed type operating on analog signals over RG6 cable feeds between camera and DVR. Cameras are located on building exterior. CCTV system and cameras are manufactured by Pelco.

Security / Access / CCTV Recommendations

- a. The intrusion detection system is a stand-alone system connected to off-site monitoring. It is recommended the intrusion detection system be upgraded to an addressable, networked intrusion alarm system allowing for central control to be managed from a master network controller housed within the District's office or maintenance facility (location to be determined by District.) The new addressable system shall be scalable and expandable for modernization areas and new construction in order to meet the District's current and future needs. Recommend new system head end, and field devices as applicable, for a DMP Addressable Integrated Network Intrusion Alarm System or District approved equal.
- b. The DO does not contain access control systems. Addition of new system not deemed necessary at this time. Access control, as need determined by district, would be integrated as part of DMP system recommendations above.
- c. Recommend the upgrade and replacement of the existing CCTV system and equipment for building perimeter and interior coverage areas as coordinated with District security. Upgraded CCTV head end equipment and system to be IP based, including POE cameras, and shall operate as part of, and within the site LAN network. Equipment locations would be at the recommendation and in close coordination with school District Security in order to meet any existing, or future video security needs for the office area.

H. Fire Alarm System Existing Conditions

- a. Main fire alarm control panel (FACP) is located in the main electrical room at the rear of the building. The fire alarm system control panel is manufactured by DMP and designed to building code requirements and local fire authority and building department standards. As this office building, and the District Office tenant improvement suites will be used for administrative purposes only, the existing system is adequate for building's intended purposes. The fire alarm system contains some area specific area smoke coverage with wall mounted visual and audible notification devices. Manual pull stations are located at exit doors with one installed in the main electrical room. The fire alarm system appeared to be in good working order.

Fire Alarm Recommendation – The existing system meets current building codes. Recommendation is for the installation of a centralized master fire alarm network controller within the District's office or maintenance facility (location to be determined by District) for the monitoring, maintenance and controls of District wide fire alarm control panels and site fire alarm systems. This network controller allows the District the flexibility of these functions from a central point for the District's preferred manufacturer system.