



OAKLAND UNIFIED SCHOOL DISTRICT



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FACILITIES MASTER PLAN 2012







Produced by Facilities Planning & Management Oakland Unified School District 955 High Street Oakland, CA, 94601 (510) 535-2730

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Oakland Unified School District Facilities Master Plan





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The 2012 Facilities Master Plan will direct capital projects in the Oakland Unified School District for the next 5-10 years. Written together by Facilities staff, education planning experts, and the OUSD community, the plan charts a path of ongoing improvement to support the district's strategic vision for a Full Service Community School District that serves children, youth, and their families.

Building on the success of the 2004 Master Plan and the Measure B bond that funded it, the 2012 Facilities Master Plan will direct sustainable and efficient use of resources in support of Full Service Community Schools, facility modernizations, and seismic safety upgrades.

Projects proposed in the 2012 Facilities Master Plan will be financed principally by a general obligation bond. The financing from this bond will be augmented by additional funds from State programs and initiatives wherever possible so that voter-supported debt is leveraged to make the greatest possible impact.



Board of Education Priorities

Spaces for Educational Innovation

OUSD facilities must support forward-looking educational models — hands on learning, Science, Technology, Engineering and Math (STEM), and other innovative methods.

Safety

Students at and around school sites must be safe from risk, including earthquakes, crime, and automobile accidents.

Sustainability

School sites should be high performing buildings that use energy and water efficiently while contributing to the quality of Oakland's built environment.

Effective Use of Underutilized Resources

Underutilized OUSD assets should be used to support the district's educational mission through leveraged partnerships, community use and the application of consistent guidelines for leases and co-location.

Resource Equity

OUSD must bring an equity centered strategy to facility investments. Improvements should support quality school options in every Oakland neighborhood.

Preparing Well Rounded Community Citizens



School facilities should support the entire student: schools must have space for arts and music so that students can embrace culture and creativity, as well as athletic facilities for students to develop teamwork and leadership skills.











Executive Summary

OUSD FACILITIES BY THE NUMBERS ٠

SITES



Facilities Master Plan Goals

Support Full Service Community Schools

The district's Strategic Vision: *Community Schools*, *Thriving Students* provides a framework for the creation of a "Full Service Community District that serves the whole child, eliminates inequity, and provides each child with excellent teachers for every day." For facility planners, this means working closely with networks of administrators, teachers, and community partners to identify and prioritize projects that support educational programs. This means supporting innovative educational programs like STEM (Science, Technology, Engineering and Math) and creating places like campus-based health centers to provide "wrap-around" services to students and their families.

Modernize & Upgrade Facilities

Modernization projects address the kinds of "bricks & mortar" needs that are required to keep old buildings functioning at a high level of performance. These needs include building system upgrades to heating, roofing, and plumbing systems, as well as sustainability upgrades that reduce energy and water consumption. The prioritization of these kinds of projects draws on demographic analyses to anticipate projected capacity needs and align with Oakland's population of school-age children.

Enhance Seismic Safety

Although all OUSD school facilities meet California building codes, the ever-evolving understanding of structural performance in earthquakes means that there are opportunities to reinforce and improve the seismic safety of OUSD buildings. Accordingly, the 2012 Facilities Master Plan lays out a framework by which buildings with a higher vulnerability can be upgraded in conjunction with other projects to support Full Service Community Schools or modernizations.

























Sustainability

A guiding principle for all projects will be to minimize the district's consumption of resources. To achieve this goal for sustainability, the Facilities Master Plan will include strategies to improve energy efficiency, produce energy where possible, and conserve water.

Projects may include insulation improvements, solar panel installation, and rainwater catchments. Projects will follow best practices recommended by the Collaborative for High Performance Schools (CHPS). Sustainable design and construction offer the opportunity to not only improve the environment and protect the earth, but also to reduce costs and make the district more self-sufficient.

Efficient Use of Resources

All resources will be used in service of Oakland's children, youth and families. School sites will be highly used by school programs, community partners, and the neighborhoods around them. Other sites will be creatively utilized to generate maximum benefit for the district and its students.

Community Input

Stakeholder input from students, parents, teachers and administrators is critical to the Facilities Master Plan and the project prioritization process. Individuals may contribute their input via an online survey available at the Facilities Master Plan website (www.ousd.k12.ca.us/facilitiesplan), or participate in public engagement meetings.

Demographics & Enrollment Projections

Facilities Planning and Management is working closely with the district's Research, Assessment and Data division (RAD) and Oakland planners to project and anticipate future facility needs. Census, enrollment, and development project data are incorporated into this analysis.

Key Demographics



Historic Annual Population Growth Rate **2000-2010**



Source: ESRI Community Analyst, http://communityanalyst.esri.com

Estimated Annual Population Growth Rate

PROPOSED PROJECTS

total estimated cost: \$1.5 B



Full Service Community Schools Support

Projects to support Full Service Community Schools include the creation of new health centers, improving the quality of classrooms for students with special needs, making specialty classrooms for innovative school programs, and initiatives for school transformations from the Quality School Development Group. Examples of potential projects:

- Grade expansion from 6-8 to 6-12 at Madison Middle Schools (A Quality School Development Initiative)
- West Oakland STEM Corridor
- Sustainable Fremont High School Plan
- CDC's at various campuses



Modernizations and Facility Upgrades	5
Portable Reduction The district's long-term goal is to use permanent facilities to accommodate district enrollment goals and provide students with healthier learning environments.	 Examples of potential projects: Replace old portables at Whittier Campus (Greenleaf Elementary) with new permanent building Replace old portables at Glenview Elementary School with new permanent building Substantially reduce number of portables district-wide
Building System Upgrades Building system upgrades include improvements to mechanical and structural elements of permanent buildings that require periodic maintenance and replacement over time.	 Examples of potential projects: Roofing replacements and upgrades district-wide to protect facilities and improve comfort Automation controls, security systems, and alarm upgrades district-wide to improve efficiency of operation and maintenance
Nutrition Services Master Plan The Nutrition Services Master Plan will "create a road map for comprehensive reform of school food in the District we have reached the point where change can't continue without drastic change in our facilities." From "Rethinking School Lunch Oakland" study by Nutrition Services and the Center for Ecoliterarcy (www.ecoliteracy.org).	 Examples of potential projects: New Central Kitchen facility at Foster Campus Renovation of School Cooking Kitchens at 17 sites district-wide New community kitchens at 14 sites district-wide
Site and Grounds Upgrades Upgrades to grounds will focus on improving the playgrounds, fields, and other outdoor elements of campuses.	Examples of potential projects: • Replace Turf fields at OUSD High Schools • Schoolyard Initiative Projects at Sobrante Park Elementary School and other campuses district-wide • Educational garden upgrades district-wide
Solar and Energy Efficiency Programs These projects would enable the district to cut down on utility gas and electric operating costs through reduction in energy use and generation of electricity. These projects include enhanced insulation and the installation of photovoltaic systems on appropriate sites.	 Examples of potential projects: Photovoltaic panel installation at as many as 17 sites district-wide with support of the California Solar Initiative Energy efficiency enhancements district-wide Stormwater remediation

Improve Utilization of Underused Assets

Facilities Planning & Management will also pursue projects that increase asset utilization to generate revenue or reduce costs.

Examples of potential projects:

- Administrative facility redevelopment
- *Re-configuration of inactive school sites for training, teacher housing, or special academies*
- Optimization of active school sites to support community partner hosting

Executive Summary









Assets





The 2012 Facilities Master Plan addresses all OUSD site grounds, permanent buildings, and portable classrooms. From a real estate perspective, this portfolio of assets is an enormously valuable resource of remarkable geographic breadth and architectural diversity. With over 500 acres in holdings, the district is among the largest land-owners in the City of Oakland.

Managing these assets in support of children, youth, and their families requires a strategy rigorous enough to efficiently direct long term planning yet flexible enough to accommodate changing needs as the district continues to evolve and flourish. This Facilities Master Plan considers sites, buildings, and rooms as distinct levels of analysis and planning.

Sites are the properties owned by the district. They have a fixed geographic location and consist of grounds, buildings and portables. Each site is found in one of three Regions for administrative purposes: Region 1 in West Oakland, Region 2 in Central Oakland, and Region 3 in East Oakland.



Asset Inventory

As of 2011-2012 School Year

	TOTAL	Region 1	Region 2	Region 3
PK-5*	1,532 classrooms 2,770,612 building s.f. 264 acres	489 classrooms 913,220 building s.f. 89 acres	557 classrooms 962,153 building s.f. 77 acres	486 classrooms 895,239 building s.f. 98 acres
6-8**	569 classrooms 1,274,146 building s.f. 130 acres	239 classrooms 461,998 building s.f. 42 acres	136 classrooms 384,982 building s.f. 21 acres	194 classrooms 482,429 building s.f. 67 acres
9-12	13 classrooms 1,318,619 building s.f. 110 acres			
	110 acres			

Admin +	251,654 building s.f.
Adult	10 acres

* Includes facilities being used by K-8 programs

** Includes facilities being used by 6-12 programs

Grounds

The grounds of any particular site are critical to the effective performance of a school; there are several specific uses considered for master planning.

Playgrounds

Playgrounds, gardens and sports fields make up a central component of daily life for students. For younger grades, quality playgrounds are not only structures for physical exercise, but also places where students explore social interactions and exercise their imaginations. OUSD schools should have safe, modern playground environments.

Gardens

Many OUSD schools — at all levels — are embracing gardens as a central component of their educational pedagogy. Additionally, many of these teaching gardens serve as hubs for partnerships with community based organizations and neighborhood groups.

Athletic Fields and Courts

Oakland schools have athletic fields and courts for baseball, basketball, football, soccer, track and field, and other sports. Maintaining these site amenities requires work with a variety of surfaces and materials such as grass, paving, and turf to ensure that they provide quality environments for competition and play.

Transportation

Students, teachers and administrators use a variety of methods to get to school. For drivers, parking lots provide convenient access to the campus. These spaces must be organized with the safety of children and emergency vehicle access in mind.

For those that walk, bike, or take public transit to school, paths and sidewalks create a comfortable pedestrian experience. Additionally, infrastructure











Source: 2004 Facility Master Plan, Title Search

like "bump-outs," bike racks, and traffic calming strategies can dramatically improve the campus experience for those not in cars.

Buildings

Oakland Unified School District owns 328 permanent buildings across the district, totaling 5,251,383 square feet. The majority of these structures are classroom buildings, but there are also gymnasiums, theaters, multi-use spaces, cafeterias, kitchens, and administration buildings. OUSD's portfolio of buildings spans a century, starting with Oakland Tech's main building, built in 1913, and continuing to the Downtown Educational Complex, due to complete construction in 2013.

Each building's construction method, materials, location, and age contribute to specific building performance characteristics. These characteristics can impact the building's function as an educational environment, such as when modern electrical systems enable new computer systems or poor acoustics disrupt classes. These characteristics also impact the district's annual operating costs, as buildings with better insulation and automatic indoor climate controls will generally have a lower cost to heat and cool.





Oakland Unified School District Facilities Master Plan

Due to fluctuating enrollment and desired growth, OUSD also has 680 portable classroom buildings in addition to its permanent structures. Some of these portable classrooms have issues such as poor air ventilation and light quality due to a fewer number of windows. Portables also take up space on sites that could be used for other amenities such as play structures. Nonetheless, many teachers have adapted to their portables and use them for effective teaching. Their relatively low cost and rapid installation also gives the district greater flexibility regarding capacity at specific sites.

Rooms

Ultimately, classrooms are the key facility component that allow teachers to deliver educational programs to their students. Ensuring that these classrooms are high quality learning environments — of an appropriate size and enhanced with modern amenities — is a primary goal of the 2012 Facilities Master Plan.

Other room types used by students, such as resource rooms, gyms, theaters, and cafeterias, have special characteristics that require attention and updates over time. Opening community access to kitchens, for example, is a new priority addressed in the OUSD Nutrition Services Master Plan, which is discussed in more detail on page 44.

While not as numerous as instructional spaces, quality office and administration spaces are critical to the function and effectiveness of OUSD administrators and staff. Much as a healthy learning environment contributes to the positive performance of students and teachers, optimized working space can help maximize the performance of administrators and staff who organize schools and the district at large.























2004 Master Plan & Measure B

In 2006, Oakland voters approved a \$435 million bond measure, which has funded the majority of OUSD school facilities projects over the past 6 years. The district secured an additional \$55 million by tapping into State and Federal programs that match local funding sources for use on specific types of school improvement projects. Using these resources, OUSD's Board of Education initiated well over 100 projects that would not have been possible without the support of the Oakland community. To ensure that the allocation of funds aligned with the guidelines set forth in the Bond, project implementation has been monitored by an independent Citizens' Bond Oversight, which publishes an annual report on the ongoing process.

Project types include site improvements, modernizations, and new construction. Many of these addressed critical needs at aging facilities by restoring and enhancing physical conditions, thereby improving the quality and safety of learning environments for thousands of Oakland's children. In attempts to incorporate technology into the curriculum, many facilities have also introduced tech support systems and infrastructure. Through the bond, voters also directed OUSD to improve auditoriums and multi-purpose rooms, as well as sports facilities and playground space.

Some examples of projects funded by Measure B include:

- New classroom buildings at Jefferson Elementary, Markham Elementary, Montclair Elementary, Cox Elementary
- New construction at Woodland Elementary, La Escuelita
- Modernization at Prescott Elementary
- Restoring the Performing Arts Center at Castlemont High School
- Gym/classrooms at Urban Promise Academy

Jefferson Elementary School Campus Case Study: **Before & After Modernization**





2008

2011

- Portables replaced with permanent building
- New playgrounds and courts
- Building system upgradesPhotovoltaic panels installed































Oakland Unified School District Facilities Master Plan

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facility projects will impact the education of students in OUSD schools. The Strategic Plan's vision is for an educational framework that supports the whole child through leveraged partnerships with community organizations, philanthropic groups, and city and state authorities. Accordingly, school facilities that enable these partnerships will make it easier to provide these wrap-around services that support educational efforts.

To fully embrace this shift in thinking, it will be critical for Facilities Planning & Management to work closely with regional networks, led by the Regional Executive Officers, to build a continually

Guiding Principles

In order to address the Board's priorities and transform a Needs Assessment into actionable projects, Facilities Planning & Management will be directed by a set of Guiding Principles that will ensure that projects align with the district's strategic vision and support the mission of creating "a Full Service Community District that serves the whole child, eliminates inequity, and provides each child with excellent teachers for every day."

Align with Strategic Vision

At the most basic level, aligning with the district's strategic vision means consistently weighing how











evolving framework for site evaluation and needs assessment projects. A cycle of re-evaluation and project definition will simultaneously provide focus for the facilities division and flexibility to respond to evolving conditions and needs.

Regional Zone Approach

The equity-centered principles that will govern the implementation of the Facilities Master Plan emerge from the work done by the Regional Zone Approach initiative in the course of strategic planning in 2010-2011.

The Regional Zone Approach entails a paradigm shift from looking at facility needs on a short-term, site-by-site basis to the development of a long term strategy that addresses a network of schools within each region. This regional approach helps ensure an equity-centered approach to resource allocation in neighborhoods across the entire district.

Data-Driven Decision Making

Accurate and comprehensive data will inform all decisions about facilities and projects. OUSD's facility information, validated by field surveys in 2011 and 2012, is organized into a dynamic database and shared on the OUSD Facilities Master Plan website. Replacing traditional static binders of paper documents, this digital interface enables the right information to be accessed at the right time to make well-informed decisions.







Oakland Unified School District Facilities Master Plan



www.ousd.k12.ca.us/facilitiesplan

Efficient & Effective Spending

In order to maximize the impact of every dollar spent on facilities in OUSD, projects of various types planned for a single site will be bundled into a project set. When Facilities Planning and Management conducts work on a site, it will make significant, lasting improvements by addressing multiple needs at once rather than addressing them one at time. These project sets will efficiently meet the fundamental needs at the site itself as well as any that region as a whole may have.

Ongoing Community Engagement & Input

Another guiding principle is the importance of continually soliciting and considering the public's input on priorities and projects. Facilities representatives will collaborate with the leaders of regional networks to develop an understanding of regional issues, while also following a set of public engagement protocols (on page 50) to get input from principals, teachers, parents and students at individual sites.

Finally, any member of the Oakland school community may use the online survey at the Facilities Master Plan website (www.ousd.k12.ca.us/ facilitiesplan) to input information that will be directly connected to the digital database of facility information.

Sustainability

Facilities Planning and Management is committed to sustainable buildings and grounds both for their impact on the environment and on OUSD's budget. Reducing energy consumption and waste offers an opportunity to leverage capital spending to lower operating expenses while improving Oakland's urban environment for future generations.

Collaborative of High Performance Schools (CHPS)

To guide the district's sustainability efforts, Facilities Planning and Management will follow CHPS guidelines. Using CHPS's criteria for High Performance Schools, the district is able to benchmark systems to achieve healthy, green campuses. These guideline also include maintenance and operations benchmarks.

"High performance school' refers to the physical facility — the school building and its grounds. Good teachers and motivated students can overcome inadequate facilities and perform at a high level almost anywhere, but a well-designed facility can truly enhance performance and make education a more enjoyable and rewarding experience.

Because schools are complicated structures, high performance design covers a broad and diverse range of disciplines and choices. Building a high performance school does not mean buying and installing the latest, most expensive equipment. Rather, it is a design philosophy focused on choices that improve the learning environment and save resources. Some choices are essential and others are discretionary; it's important to keep the range of choices in perspective and focus on the key design issues.

Schools are unique buildings that every day house one-fifth of the population [of California]: almost 6 million children and more than 200,000 teachers and support staff. There are few other settings in which 20-30 people occupy such a small space or work on such a wide range of activities as in a school classroom. Occupant density is approximately four times as great as a typical office building, and schools include many 'special use' areas all within the same facility, such as laboratories, art studios, industrial shops, duplication facilities, and gymnasiums.

Creating a high performance school is not difficult, but it requires an integrated, 'whole building,' team approach to the design process. Key systems and technologies must be considered together, from the beginning of the design process, and optimized based on their combined impact on the comfort and productivity of students and teachers."

Source: CHPS Best Practices Manual Volume 1: Planning, 2006 Edition, http://chps.net

Features of a High Performance School

- · Healthy
- · Energy, material, and water efficient
- · Thermally, visually, and acoustically comfortable
- Easy to maintain and operate
- · Commissioned to ensure building performance
- Safe and secure
- Effective as a tool for learning about environmental responsibility
- Architecturally stimulating and flexible for multiple school and community uses



Source: CHPS, http://chps.net





Criteria Summary

CATEGORY	CHPS SECTION	NUMBER	TITLE	POINTS	PAG
Leadership,	1. Leadership (4)	LEI1.1	CHPS Registered District TM	1.2	11
Education, and nnovation (13)		LEI1.2	Integrated Design	1-2	13
nnovation (13)	2. Schools as Learning Tools (1)	LEI2.0	Education Display	P	15
	3. Innovation (8)	LEI2.1	Demonstration Areas	1	16
	3. innovation (8)	LEI3.1	Innovation	14	17
		LEI3.2	Design for Adaptability, Durability and Disessembly	2-4	19
Sustainable Sites	1. Site Selection (5)	SS1.0	Code Compliance	P	22
14)		331.1	Environmenally Sensitive Lond	1	25
		\$\$1.2	Central Location	1	27
		SS1.3	Joint-Use of Facilities	t (29
		\$\$1.4	Joint-Use of Parks	1	30
		GG1.5	Reduced Footprint	1	31
	2. Transportation (3)	\$\$2.1	Public Transportation	1	32
		\$\$2.2	Human Powered Transportation	. t	33
	6	\$\$2.3	Parking Minimization	1	35
	3. Stormwater Management (2)	\$\$3.0	Construction Site Runoff Control	P	36
		SS3.1	Limit Stormwater Runo#	- t	37
		\$\$3.2	Treat Stormwater Runoff	1	41
	4. Outdoor Gurfaces & Opaces (3)	554.1	Reduce Heat Islands - Landscaping	ť	43
		SS4.2	Reduce Heat Islands - Cool Roofs	1	45
		SS4.3	School Garden	- t	47
	5. Outdoor Lighting (1)	\$\$5.1	Light Pollution Reduction	1	49
Nater (9)	1. Outdoor Systems (4)	WE1.0	Cieate Water Use Budget	*	51
		WE1.1	Reduce Potable Water for Use for Non-	1-2	50
			Recreational Landscaping Areas Reduce Potable Water for Recreational Area		
		WE1.2	Landscaping	1	56
		WE1.2	Ingetion System Lesting and Training	1	58
	2. Indoor Systems (4)	WENE	Reduce Sevage Conveyance from Toilets and	2	60
		WE2.1	Urinals	2	00
		WE2.2	Reduce Indoor Potable Water Use	1-2	63
	3. Water Efficiency (1)	WE3.1	Water Management System	1	65
Energy (29)	1. Energy Efficiency (22)	EE1.0	Minimum Energy Performance	P	67
		EE1.1	Superior Energy Performance	1-15	69
		EE1.2	Energy Conservation Interlocks	1	71
		EE1.3	Natural Ventilation	3-4	72
	Participant and the	EE1.4	Energy Management Systems	1-2	74
	2. Alternate Energy Sources (3)	EE2.1	On-site Renewable Energy	1-5	76
	3. Commissioning & Training (2)	EE3.0	Fundamental Commissioning	P	78
Climate (8)	1. Greenhouse Gas Emission	EE3.1	Enhanced Commissioning	1-2	82
enniare (e)	Reduction (3)	CL1.1	Climate Change Action	1-3	84
	2. Greenhouse Gas Emission	CL2.1	Grid Neutral	2	86
	Reduction (5)	CL2.2	Zero Net Energy	5	88
Aaterials & Waste	1. Recycling (0)	ME1.0	Storage and Collection of Recyclables	P	90
lanagement (18)	2. Construction Waste Management (2)	ME2.0	Minimum Construction Site Waste	Р	92
			Management		
		ME2.1	Construction Site Waste Management	1-2	94
	3. Building Reuse (3)	ME3.1	Building Reuse - Structure and Shell	1-2	95
		ME3.2	Building Reuse - Interior Norrestructural Elements	1	97
	4. Sustainable Materials - Single	ME4.1	Recycled Content	1-2	98
	Attribute (7)	_	Repidly Renewable and Organically Grown		_
		ME4.2	Materials	1-2	101
		ME4.3	Certified Wood	1	104
		ME4.4	Salvaged Materials	1-2	105
	5 Sustainable Materials - Multi	ME5.1	Environmentally Prefereable Products	1-2	107
	Attribute (2) 6. Sustainable Materials - LCIA (4)				_
ndoor	1. Lighting and Daylighting (6)	ME6.1	Environmental Performance Reporting	1-4	109
		EQ1.1	Daylighting	1-4	113
		EQ1.2	View Windows	1	119
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Source: CHPS Best Practices Manual Volume 3: California Criteria, 2009 Edition, http://chps.net



Oakland Unified School District Facilities Master Plan











Planning Context



History & Culture

The city of Oakland lies on the eastern bank of the San Francisco Bay, covering 78 square miles. Incorporated in 1852, it grew rapidly as the terminus of the first transcontinental railroad and as a major port city on the west coast of the United States. At first, the town was primarily farmland, but in the years following the 1906 San Francisco earthquake, the city blossomed into a regional center in its own right.

The city's area expanded over the ensuing years as the municipality absorbed surrounding towns, and its population grew in step with the booming industrialization of the East Bay. Oakland emerged as a destination for immigrants from around world, and the influx of Asian, Latin American, and African American populations transformed the city into a culturally heterogeneous metropolis.

The resulting ethnic and economic diversity set the stage for a tumultuous political atmosphere, which has brought Oakland to the forefront of issues relating to civil rights, immigration, and most recently, corporate accountability. This same melting pot has fostered a rich culture of music, the arts, cuisine and innovation.



Today, the city of Oakland hosts over 50 distinct neighborhoods and its population, now over 390,000, is among the most diverse of all the major cities in the nation. Monthly events such as the Oakland Art Murmur and an outcrop of galleries and studios contribute to Oakland's growing reputation as a destination for artists. With recent redevelopments happening throughout the city and the revitalization of historical landmarks such as the Fox Theater, Oakland was named by the New York Times as one of the "Top 45 Places to Go in 2012".

Geology & Climate

Oakland's location on the east bank of San Francisco Bay lends the city a unique set of environmental conditions. Geologically, Oakland consists of hills in the east, alluvial plains in the west, and foothills in between. The Hayward fault lies directly beneath the city, and the Calaveras and San Andreas are in the immediate area — all possess the potential for seismic activity.

Meteorologically, Oakland's Mediterranean climate features mild, wet winters and dry, warm summers tempered with fog along the coast. Accordingly, the outdoor environment is comfortable much of the year, especially when protected from rain.

Demographics

Of Oakland's 390,724 residents reported in the 2010 US Census, 57,021 are considered student-aged children (within the age range of 5 and 17). This count is a significant decrease from the Census conducted in 2000, which reported a student-aged population of 71,467. Based on recent birth rates, Oakland's student-aged population is projected to steadily increase, although slowly over the next several years.

In terms of the racial makeup of Oakland, the population remains very diverse, with no single group accounting for over 30% of the total.

Oakland Unified School District Facilities Master Plan



Source: USGS, http://usgs.gov

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Source: California Department of Fish & Game, http://dfg.ca.gov

Historic Annual Population Growth Rate 2000-2010



+5% or more increase

+1% to +5% increase

Estimated Annual Population Growth Rate **2010-2015 (projected)**



 +1% to o% increase
 -.01% to -1% decrease

 Source: ESRI Community Analyst, http://communityanalyst.esri.com



Safety

Over the past five years, both property and violent crime in Oakland have dramatically decreased; however, the numbers have started to rise again as of last year.

At the largest elementary schools, about 75% of the students enrolled walk to school. Because of this, there is a high risk of pedestrian/vehicle injury among children. On average, a pedestrian and vehicle collision occurs every day in Oakland; of these collisions, 37% involved children.

Pedestrian and Auto Access

Establishing safe routes to schools encourages students to walk or bike rather than be driven to school each day. This entails addressing hazards in the vicinity of school sites, including inadequate traffic controls, unsafe infrastructure, and poor signage, as well as creating programs that promote walking and bicycling through educational & encouragement programs aimed at children, parents, and the community.

Public Transportation

Due to budget shortfalls, AC Transit began implementing cutbacks to a number of service areas in 2010, including routes to and from OUSD schools. The region has seen continued service reductions as well as a fare increase in the months since, making public transit a less accessible option for many students traveling to school. The issue has been the lack of outside funding for transportation programs compared with past years, which results in a heavier reliance on direct revenue and taxes.



















Enrollment Projections

OUSD's long term enrollment projections (opposite page) were generated by demographers with the district's Research, Assessment and Data division using the Cohort Survival Ratio (CSR) analysis method.

The forecasts "were calculated using Cohort Survival Ratio (CSR) analysis that compares the number of students in one grade to the number of students in the previous grade during the previous year. This grade progression method depends initially on the actual births and enrollments for previous years, and carries these cohorts through the model to determine the ratio of change from one year to the next. This ratio is then extended out to forecast future enrollments over time."





OUSD All Students Projections

OUSD K-5 Projections



OUSD 6-8 Projections







Source: Susan Radke, Demographer - Research, Assessment & Data
































Needs Assessment



The assessment of facility needs requires evaluation from multiple perspectives on an ongoing basis over time. For this Facilities Master Plan, detailed assessments have been conducted by experts in structural engineering, green design, and institutional portfolio management. These evaluations establish a baseline from which OUSD can measure the potential of future projects to make sites and buildings safer, code compliant, and sustainable.

Other assessments come from building users, teaching specialists, and community partners. Ongoing communication and collaboration with regional networks, school communities, and partner organizations are critical to the long term success of this Facilities Master Plan. Part of this plan is to introduce a cycle of ongoing assessment so that decisions about project scope meet the evolving needs of all involved with the district.

For this Facilities Master Plan, facility needs have been broken into three primary categories:

- Full Service Community School Support
- Seismic Safety Enhancements
- Modernizations & Facility Upgrades

Full Service Community Schools Support

The strategy for the 2012 Facilities Master Plan is directed by the district's strategic vision: *Community Schools, Thriving Students: A Five Year Strategic Plan.* The district's vision is that "All students will graduate from high school. As a result, they are caring, competent, and critical thinkers, fully-informed, engaged, and contributing citizens, and prepared to succeed in college and career." To support this vision, the mission of the district is thus "To create a Full Service Community District that serves the whole child, eliminates inequity, and provides each child with excellent teachers for every day."

From a facilities perspective, supporting this vision means supporting community access to sites, preparing school facilities for non-traditional uses, and supporting educational programs with reconfigurations and renovations.

Wrap-Around Services & Community Partnerships

As Oakland Unified transitions into a Full Service Community District, each school will increasingly collaborate with community based organizations, city services, and other partners. These collaborations require some changes from facilities, including extended open hours, allowing access to certain rooms and buildings while the rest of a campus is secured, and designing spaces with special attributes and amenities. These spaces include:

- Dedicated space for Early Childhood Education (Pre-K & Transitional-K)
- Extra storage for after school programs
- Private rooms for family counseling
- Clinics for school health centers
- Evening access to sports and athletics fields































Food & Nutrition

Access to nutritious, healthy food is critical for the success of students at school. The Facilities Master Plan supports the "Rethinking School Lunch" Nutrition Services Master Plan as well as the creation of gardens where students can learn about and grow nutritious foods.

The Nutrition Services Master Plan, discussed in more detail on page 44, focuses on "Nutrition Services facilities, since inadequate facilities [are] a primary obstacle to realizing the District's vision for school food in Oakland." These facility upgrades include a new green central kitchen, upgrade to existing school kitchens, and creation of community kitchens around the district.

Educational Programs Support

Support for educational programs comes in different forms, depending on the specific needs of each school. Understanding program needs and responding to those needs appropriately requires ongoing dialogue between school administrators, teachers, and facility planners.

Science Technology Engineering & Math (STEM)

STEM programs integrate disciplines that have previously been taught separately into a unified, technology-leveraged curriculum. These classes work best in innovative classrooms that can serve a variety of functions. In some cases, conversion of traditional classrooms to STEM classrooms may require architectural renovations, but in many cases, alternate furniture and fixtures are enough to transform a classroom. STEM may also be taught in specialized facilities shared by multiple schools. This regional approach offers a chance for facility improvements to improve the educational opportunities for students at multiple schools.

All STEM facilities should have infrastructure to accommodate evolving technologies — rather than simply what is new today — so that they can remain effective for many years.

Special Education

As special education classes increasingly mesh with general education classes, there is a growing need for classrooms that are universally accessible to those with special needs. The district must also ensure that accessible restrooms, dining, and computing resources are readily available. Beyond the physical adjustments needed for students with limited mobility, universal access includes provision of power and electronics infrastructure for modern support technologies.

Information Technology

All OUSD facilities need the digital infrastructure to support state-of-the-art technology in the classroom. Depending on the school, this may mean supporting computer labs, computers in each classroom, or storage for mobile computing carts. Each school's pedagogical approach will dictate the most appropriate IT set-up.

With input from teachers, computing specialists, and OUSD Information Technology services, Facilities Planning & Management has developed a set of protocols, on page 48, to ensure that campus facilities are supporting computing and information technology for education.







Oakland Unified School District Facilities Master Plan











Quality Community School Development

As part of the district's ongoing review of School Quality Review, the Quality Community School Development (QCSD) group can recommend adjustments to school programs. Facilities Planning & Management is committed to these efforts to support quality schools.

Grade Expansions

When a school program expands from K-5 to K-8, or 6-8 to 6-12, there is a corresponding increase in capacity requirements as well a need for ageappropriate amenities. For example, most middle schools need larger-scale athletic facilities for sports, and high schools need science labs with more sophisticated equipment.

Transformations

Other transformations, such as the consolidation of multiple schools onto a single site or the relocation of a school from one site to another, have associated facility adjustments. Facilities Planning & Management will coordinate closely with QCSD to anticipate and manage facility concerns associated with these transformations.

Seismic Safety Enhancement

No OUSD building, in the as-is condition, poses an imminent hazard condition. All buildings in the Oakland Unified School District conform to state building codes and have been approved by the California Division of the State Architect (DSA). Nonetheless, advances in structural engineering since the construction of many OUSD buildings (most buildings were built before the 1980's) means that the District is evaluating and implementing seismic safety enhancements of OUSD buildings.

California Building Code Compliance

All buildings meet the regulatory (code) requirements. However, due to the improved understanding of building performance in earthquakes over the last two decades and lessons learned from major seismic events, California's engineers and DSA — the body responsible for reviewing school construction — have continually improved the seismic design methods and requirements. Thus, while all OUSD buildings meet code requirements, all buildings are being evaluated and selective buildings are identified for seismic retrofit work.

AB300

In 2002, the DSA released the AB300 report which shared the results of a "paper" analysis of the State's K-12 facilities and identified buildings that are potential risks based on geographic location and building age. Inclusion in this report did not mean that a building was an imminent hazard but that further detailed evaluation should be performed. The report highlights that there is a significant statewide building portfolio which is vulnerable to seismic events. OUSD currently has 71 buildings included on this list after updating for accuracy.

Vulnerability Assessment

In 2011, ZFA Structural Engineers conducted a districtwide survey of all permanent OUSD structures to



validate AB300 findings and assess overall seismic vulnerability. The findings suggested that the majority of OUSD's buildings had a low seismic vulnerability. Unfortunately, some of the buildings determined to have a higher seismic vulnerability are larger structures.

Based on initial assessments of the structures in the building inventory, buildings have been assigned a ranking which fall in the following categories:

- Low Seismic Vulnerability: poses a lower seismic risk; likely to achieve Life Safety through a structural collapse prevention performance objective
- Moderate Seismic Vulnerability: poses a moderate seismic risk level between low and higher ratings
- Higher Seismic Vulnerability: poses a higher seismic risk; unlikely to achieve Life Safety through a structural collapse prevention performance objective



A building's ranking is generally determined by the following criteria, which includes factors such as structural systems and date of construction, although assignments for buildings have and may be further modified based on more detailed assessment.

Low Seismic Vulnerability:

- 1. Wood-framed buildings, less than 2 stories and no "long span" conditions
- 2. Buildings built after 1984

Moderate Seismic Vulnerability

- 1. Wood-framed buildings over two stories
- 2. Steel-framed buildings two stories and under
- 3. Concrete shear wall buildings with rigid diaphragms, built after 1978

Higher Seismic Vulnerability

- 1. Steel-framed buildings three stories and above
- 2. Concrete shear wall buildings with rigid diaphragms, built before 1978

- 3. Concrete shear wall buildings with flexible diaphragms
- 4. Concrete moment-resisting (de facto or not) frame buildings
- 5. Precast concrete buildings
- 6. Masonry buildings

Seismic Retrofit Implementation

The District has begun seismic retrofit projects on five buildings at three campuses with the work expected to be completed during the summer of 2012. The projects are eligible for Proposition 1D funding, and the construction cost to the District is offset by matching funds from the State.

Modernizations & Facility Upgrades

More than half of OUSD's buildings are older than 50 years, and all buildings require periodic modernization to continue to operate at a high level of performance.







Building System Upgrades

The 2004 Facilities Master Plan and Measure B helped repair most schools with the most critical needs, but many schools require additional projects to sustain high performance for coming years. Some of the simplest types of upgrades are the most critical to school facility performance. These kinds of projects include:

- Heating/ventilation/air conditioning systems (HVAC)
- Roofing/waterproofing
- Plumbing
- Electrical
- Accessibility upgrades
- Technology infrastructure

Portable Reductions

OUSD has 582 portable classrooms, 21% of the total number of classrooms in the district. Although many teachers have adapted portables into effective learning environments, permanent buildings generally offer more efficient operation from an energy-use perspective, and classrooms in permanent buildings usually have superior air, light and acoustic qualities.

A long term goal of the district is to reduce its dependence on portables and focus investment into permanent buildings to support higher quality classrooms. Accordingly, portable reductions are a key need — one that can be addressed by removing them entirely or replacing them with permanent structures.

Site & Grounds Upgrades

Landscaping, paving and the installation of site amenities like sun shades and have traditionally been part of site and ground upgrades, and where needed, these types of needs will be addressed.

Over the last 10 years, however, educators have increasingly embraced gardens at schoolyards as educational tools for a variety of subjects. Additionally, gardens can be centers for community

Oakland Unified School District Facilities Master Plan

partnerships, and the management of many gardens is shared between partner organizations and the schools themselves.

Site and grounds upgrades will also address issues of community access. As Full Service Community Schools increasingly collaborate with partner organizations and neighborhood users, site improvements can address access and security concerns that emerge from evolving patterns of facility use.

Responding to evolving site needs in collaboration with administrators, teachers and parents will produce a set of needs — for all project types — that Facilities can respond to on site-specific basis.

Solar & Energy Efficiency

Solar and energy efficiency projects reduce resource consumption and help make Oakland a greener district. They also help reduce operational costs. Projects that address this need therefore provide an opportunity to use capital spending to reduce annual spending.

In partnership with the HELiOS Project, which assesses solar suitability for school districts with support from the US Department of Energy, OUSD has developed a Solar Master Plan that identifies sites ideal for solar projects based on environmental conditions, school energy use patterns, and eligibility for state funding through the California Solar Initiative.

Energy efficiency projects also include projects that reduce energy consumption, such as window shades, insulation, and automated control systems that modulate heating and cooling to reduce waste.

Light Pollution Reduction

Facilities projects will also strive to reduce light pollution by utilizing designs and technologies that minimize light trespass beyond the building site. Implementing sustainable lighting design reduces energy use, limits the negative impact on school site neighbors, and contributes to improved night skies.













Nutrition Services Master Plan

Together with the Center for Ecoliteracy, OUSD Nutrition Services has produced a report, *Rethinking School Lunch Oakland*, that charts a new future for school food in the district. The plan addresses "ten interrelated dimensions of school food operations, including facilities, finances, food and health, wellness policy, teaching and learning, the dining experience, procurement, waste management, professional development, and marketing and communications."

Regarding facilities, the biggest needs of the Nutrition Services Master Plan are a new central kitchen, improved on-site kitchens, and community kitchens with public access to school facilities.

The largest single project would be the creation of a new Central Commissary. Currently, three Central Kitchens prepare 73% of the district's meals — a total of 6.6 million meals a year; they cook and package lunches and breakfasts that are then transported and reheated in cabinets at other sites. As stated in the *Rethinking School Lunch Oakland* report, "the chief Central Kitchen, at Prescott Elementary School, was designed to serve 8,000 meals a day [and] is currently preparing 20,000." In addition to handling a larger volume of meals than they were equipped for, many of the Central Kitchens have old and nonfunctional equipment that are in need of replacement.

The construction of a new Central Commissary would eliminate the need to renovate a large number of existing kitchen facilities and cut operational costs by enabling food deliveries to be made to a single location.

The *Rethinking School Lunch Oakland* Nutrition Services Master Plan also recommends transforming 17 warm-up kitchens into cooking kitchens to facilitate on-site preparation, the creation of 14 community kitchens where the public can use school cooking facilities, and the upgrade of 58 finishing kitchens to higher standards than they currently meet.











Source: Center for Ecoliteracy, http://ecoliteracy.org

Oakland Unified School District Facilities Master Plan



"School food reform is not separate from school reform; it's part of the basic work we have to do in order to correct systematic injustice, pursue equity, and give our children the best future possible. We are committed to building a school district that provides quality education and equitable outcomes for all children — and to make this goal a reality, we have to create conditions that allow children to grow and to learn at high levels. This starts with taking care of our students' most basic needs, such as nutrition, so they can develop and reach their full potential."

- Superintendent Tony Smith





Source: Center for Ecoliteracy, http://ecoliteracy.org

Summarized Project List

Some project types are defined at specific buildings and sites, such as seismic safety upgrades and photovoltaic panel installations supported by the California Solar Initiative. Other project types, such as roofing, heating, security system upgrades, portable replacements or community kitchens, have a set scope within each region and at each grade level prioritization of specific sites within each region and grade level will take place through a cycle of ongoing evaluation.

This page summarizes all types together to show the potential scope of all projects that would address needs identified throughout the district.



total estimated cost: \$1.5 B

Full Service Community Schools Support

Includes Quality School Developments projects, Childhood Development Center replacements, Health Centers, and specialty classrooms.

Level	# of Projects	Budget	Notes
Elementary School Sites	7	\$116,500,000	# of projects based on number
Middle School Sites	4	\$65,000,000	of schools affected
High School Sites	0	*	* aggregated with HS building
Other (CDCs, Health Clinics, etc)	3	\$76,000,000	system upgrades
TOTAL	26	\$257,500,000	

Seismic Safety Enhancements			
Level	# of Projects	Budget	Notes
Elementary School Buildings	47	\$ 127,200,000	# of projects based on number
Middle School Buildings	31	\$90,800,000	of buildings retrofit
High School Buildings	55	\$114,900,000	
TOTAL	133	\$333,200,000	

Building System Upgrades

Includes modernizations, roofing, heating, security, and automation controls projects.

Level	# of Projects	Budget	Notes
Elementary School Buildings	157	\$127,200,000	Potential projects at all sites
Middle School Buildings	84	\$123,100,000	and buildings
High School Buildings	64	\$119,700,000	
TOTAL	305	\$370,000,000	

Nutrition Services Master Plan

Includes renovation of school kitchens, creation of new community kitchens, and new central commissary.

Level	# of Projects	Budget	Notes
Cooking Kitchen Renovations	18	\$10,500,000	
New Community Kitchens	14	\$14,000,000	
Central Kitchen (at Foster campus)	1	\$19,100,000	
TOTAL	23	\$43,600,000	

Portable Replacement

Level	# of Projects	Budget	Notes
Elementary School Sites	253	\$188,500,000	Projects defined as portables
Middle School Sites	73	\$75,700,000	removed
High School Sites	65	\$72,300,000	
TOTAL	391	\$336,500,000	

Site and Grounds Upgrades

Includes athletic fields, paving, playgrounds, and gardens.

Level	# of Projects	Budget	Notes
Elementary School Sites	35	\$17,000,000	Estimated number of projects
Middle School Sites	9	\$8,000,000	based number of sites requiring
High School Sites	10	\$10,000,000	upgrades
TOTAL	54	\$35,000,000	

Solar & Energy Efficiency			
Level	# of Projects	Budget	Notes
Elementary School Sites	21	\$14,700,000	Projects defined at the site level
Middle School Sites	16	\$19,400,000]
High School Sites	9	\$17,700,000	
TOTAL	46	\$52,000,000	

Improve Utilization of Underused Assets

Туре	Notes
Administrative Sites	Analyze alternate use, utilization increasing, and
Community access to active school sites	resource optimization opportunities. These projects are
Alternate use for inactive school sites	cost-neutral or revenue generating.

I.T. Support Protocol Appendix

General Purpose Room

- 4-5 drops with 2 electrical plugs per drop along 3 walls WITHOUT whiteboard
- 1 drop with 2 electrical plugs along 1 wall WITH whiteboard
- Electrical power for up to 15 computers with LCD screens
- Wireless access for specialty rooms e.g. science labs



General Purpose Room - Outlet placement

Computer Lab

- 4-5 drops with 2 electrical plugs per drop along all 4 walls
- Electrical power for up to 36 computers with LCD screens
- Optional: sub-floor electrical power and jacks throughout room for flexible computer arrangements

Computer Lab - Outlet placement: Option 1

Computer Lab - Outlet placement: Option 2





Oakland Unified School District Facilities Master Plan

Library

- Drops and electrical power for up to 15 computers with LCD screens
- Optional: sub-floor electrical power and jacks for flexible computer arrangements







Office

• Support for VOIP phones

Servers & School-wide I.T. Infrastructure

- Conveniently located wireless access point shelf
- Well-ventilated wiring closet; should support no more than 3 servers

Mobile Laptop Carts

- Built-in charging capabilities
- Wireless access
- Secure, accessible storage room on every floor







Site-Based Outreach & Engagement Protocols Appendix

The Facilities Master Plan will introduce a standard project engagement protocol to guide facilities staff and school communities in effective collaboration on specific projects. By implementing this protocol, community stakeholders will have a clear understanding of project goals, timelines, and opportunities to provide their input.



PROJECT ENGAGEMENT PROTOCOL



OVERVIEW

In order to ensure the safety and welfare of school inhabitants, OUSD facility projects comply with all requirements of the California Division of the State Architect.

Because of the approvals process, input on project scope and design must take place far ahead of actual construction.

Projects such as:

- Modernization and Facility Upgrades
- Portable Replacements
- Solar and Energy Efficiency Projects
- Seismic Safety Enhancements
- Site Optimization for School Program Projects



For more information, updates, and an online survey to provide your input: www.ousd.k12.ca.us/facilitiesplan