

Foothill-De Anza Community College District

2016 FACILITIES MASTER PLAN





Foothill-De Anza Community College District



CHANCELLOR Judy C. Miner, Ed.D.

PRESIDENTS

M. Brian Murphy, Ph.D., De Anza College Thuy Thi Nguyen, J.D., Foothill College

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MASTER PLANNING TEAM

Gensler, Facilities Planning

2016 Facilities Master Plan

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DE ANZA COLLEGE

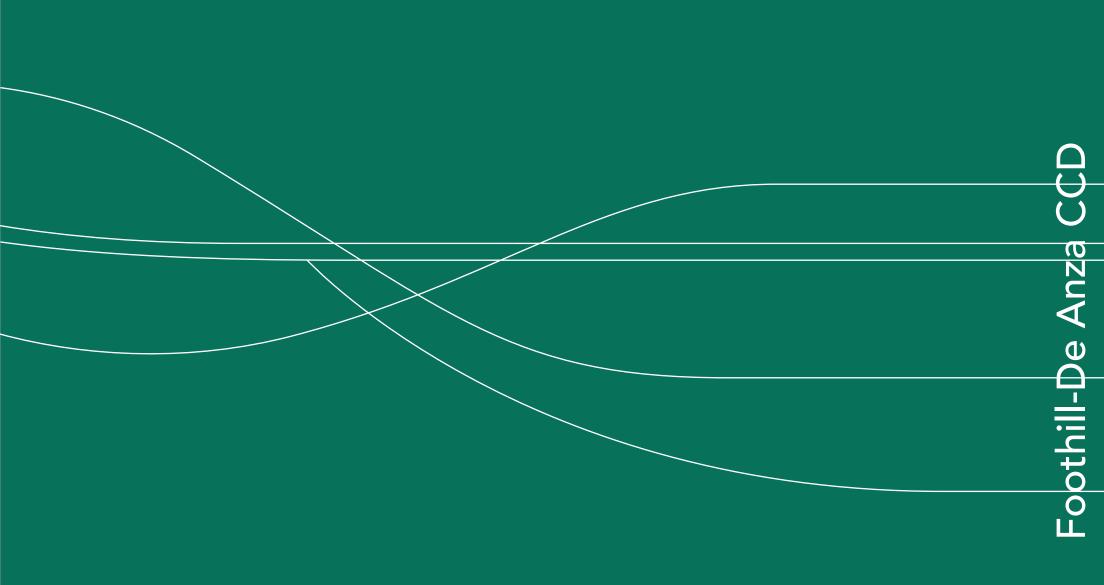
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Foothill-De Anza CCD

Message from the Chancellor



The innovative facilities that are De Anza's Media and Learning Center and Foothill's Sunnyvale Center represent a promise that the Foothill-De Anza Community College District will continue to provide the community it serves with exceptional educational opportunities long into the future.

The community showed that it values that promise with approval of Measure C, a \$490.8 million bond measure in 2006. That support allowed the district to renovate and construct new facilities featuring flexible and energy efficient design, water wise landscaping, improved access, and advanced technology. But most importantly, that community support is a vital resource to achieving our mission:

The mission of the Foothill-De Anza Community College District is student success. We are driven by an equity agenda and guided by core values of excellence, inclusion, and sustainability. Every member of our district contributes to a dynamic learning environment that fosters student engagement, equal opportunity, and innovation in meeting the various educational and career goals of our diverse students. We are committed to providing an accessible, quality undergraduate education dedicated to developing a broadly educated and socially responsible community that supports an equitable and just future for California.

Designed to look beyond the requirements of today to the learning spaces of tomorrow, this Master Plan envisions facilities and technology that reach beyond the confines of time and space. A key assumption of this plan is that such a bold vision requires strategic partnerships with a regional focus to enhance opportunities for all students to thrive in Silicon Valley's highly competitive environment.

As we prepare to celebrate the 50th anniversary of De Anza College and the 60th anniversary of the district in 2017-2018, the Board of Trustees and I sincerely thank the community for its continuing support. We look forward to building upon our legacy of educational excellence and providing life-changing opportunities to our diverse student population for many years to come.

Judy C. Miner, Ed.D., Foothill-De Anza Chancellor

MISSION

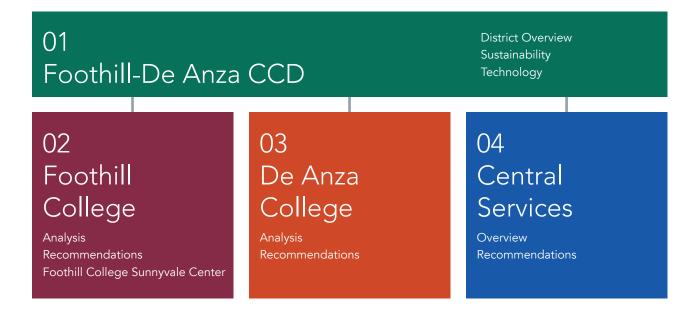
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DOCUMENT ORGANIZATION

The Foothill-De Anza Facilities Master Plan is organized into four chapters: an initial chapter on FH-DA CCD facilities planning considerations that includes sections on sustainability and technology; then, three organizationspecific chapters, one for each of the two colleges and one for Central Services. Each organization-specific chapter is further broken down into two sections. These chapter sections include Analysis and Recommendations. The Analysis sections document the discussions regarding existing conditions, while the *Recommendations* sections document the planning solutions and development concepts. The *Recommendations* sections include a summary of projects for the campus categorized under new facilities, renovation and repurposing of facilities, and site improvements. Foothill College contains a third section, which discusses the Foothill College Sunnyvale Center.

2016 Facilities Master Plan

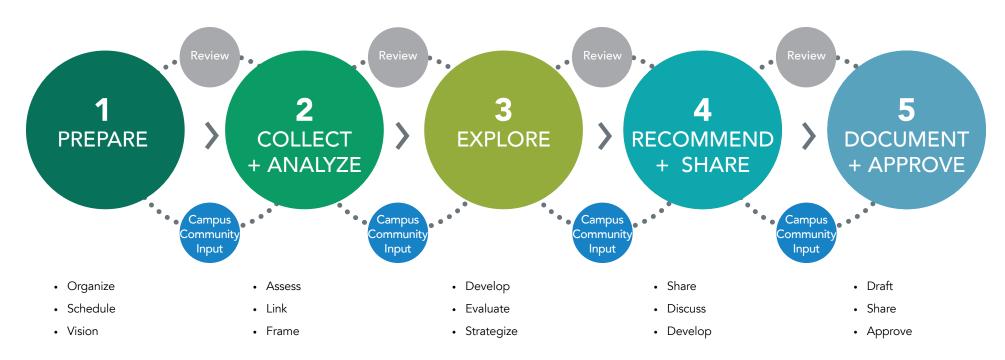


Process

PLANNING PROCESS

The planning process to develop this 2016 Facilities Master Plan was a participatory one involving the many voices of the colleges and the district. The planning team worked closely with the designated planning committees to define planning goals, discuss the analysis of existing conditions, review planning data, evaluate a series of development options, and make recommendations for site and facilities development. In addition to the planning meetings, additional presentations and meetings were conducted to broaden the planning perspective and maximize participation.

The diagram below is a graphic description of the five-step planning process that was followed:



PARTICIPANTS FOOTHILL COLLEGE

Facilities Planning Committee

- Judy Baker, Dean, Online Learning
- Kai Chang, Senior EOPS Specialist, Extended Opportunity Program and Services
- Neil Chang, Mobility Assistant, Disability Resource Center
- Brenda Davis-Visas, Director, Facilities and Special Projects
- Dolores Davison, Instructor, History
- Dawn Giradelli, Dean, Middlefield Campus
- Art Heinrich, Director, District Bond Program
- Kurt Hueg, Interim Vice President, Instruction and Institutional Research
- Steven Kitchen, District Executive Director, Facilities, Operations & Construction Management
- Andrew Lamanque, Associate Vice President, Instruction and Institutional Research
- Crystal Lee, Student
- Kimberlee Messina, Interim President
- Jose Nava, Instructor, Business
- Bernata Slater, Vice President, Finance
 and Administrative Services
- Daphne Small, Director, Student Activities
- Denise Swett, Vice President, Student Services
- David Ulate, District Executive Director, Institutional Research and Planning

DE ANZA COLLEGE

Facilities Planning Committee

- Donna Jones-Dulin, Associate Vice President, College Operations, Administrator and Chair
- Paul Buxton, Custodian, Classified Professional
- Susan Cheu, Vice President, Finance and College Operations, Administrator
- Pam Grey, Director, Foothill-De Anza Purchasing, Administrator
- Lester Lyons, Associate Director, Foothill-De Anza Facilities and Operations, Administrator and District Representative
- Lisa Markus, Mathematics Instructor, Faculty Association Representative
- Dianna Martinez, Environmental Studies Technician, Classified Professional
- Alex Swanner, Librarian, Faculty
- Chi Tran, Student

Additional Planning Participants

- Daniel Acosta, Assistant Chief of Police, Administrator
- Joe Cooke, Supervisor, Grounds
- Manny DaSilva, Manager, Custodial Operations
- Moaty Fayek, Dean, Business, Computer Science and Applied Technologies
- Patrick Gannon, Director, Campus Center

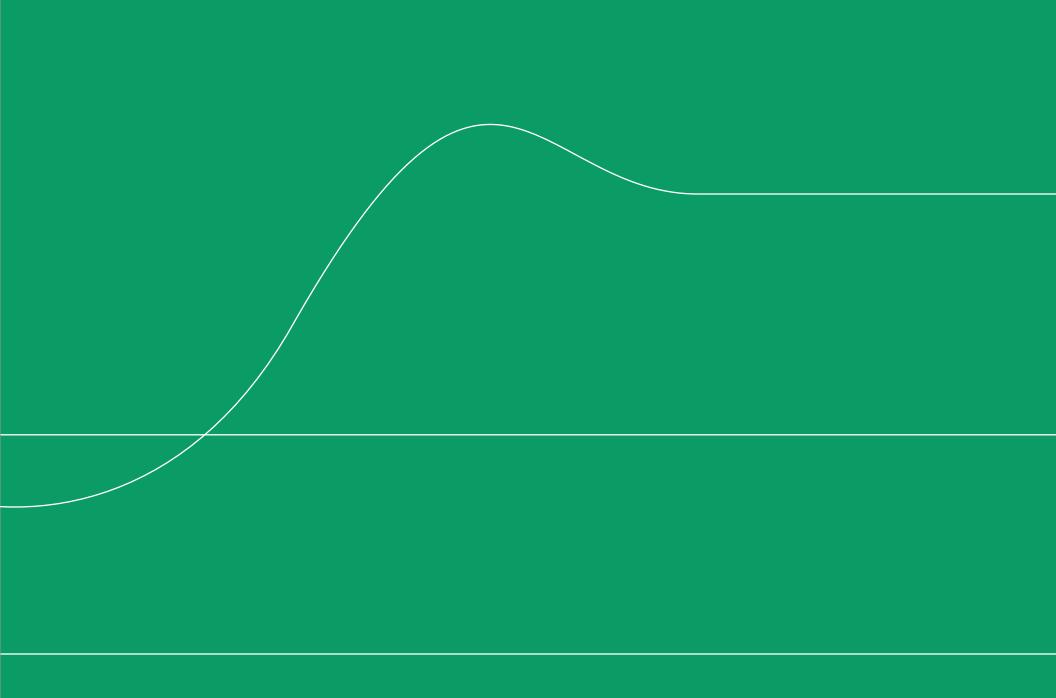
- Coleen Lee-Wheat, Dean, Physical Education and Athletics
- Stacey Shears, Dean, Disabled Student Programs and Services
- Mary Sullivan, Faculty Director, Health
 Education and Wellness
- John Walton, Instructor, Automotive Technology

CENTRAL SERVICES

Facilities Planning Taskforce

- Art Heinrich, Director, District Bond Program
- Steven Kitchen, Executive Director, Facilities, Operations & Construction Management
- Ron Levine, Chief, District Police
- Kevin McElroy, Vice Chancellor, Business Services
- Joseph Moreau, Vice Chancellor, Technology and Chief Technology Officer
- David Ulate, District Executive Director, Institutional Research and Planning

District Overview



District Overview

The Foothill-De Anza Community College District (CCD) encompasses the northwest region of Santa Clara County. Located in the heart of Silicon Valley, the CCD serves the communities of Cupertino, Los Altos, Los Altos Hills, Mountain View, Palo Alto, Stanford, Sunnyvale, and parts of Saratoga and San Jose.

The CCD includes:

- FOOTHILL COLLEGE
 122 Acres
- DE ANZA COLLEGE
 112 Acres
- FOOTHILL COLLEGE SUNNYVALE CENTER
 9.15 Acres
- TOTAL
 243.15 Acres



Foothill College Established in 1957 Located in Los Altos Hills



De Anza College Established in 1967 Located in Cupertino



District Access

Foothill College, De Anza College, and the Foothill College Sunnyvale Center are easily accessed from major highways. Less than 10 miles from each other, there is approximately 10-20 minutes of driving time between any two locations.





Linkages

A number of district planning documents served as the basis for this 2016 Facilities Master Plan. Key goals and initiatives from each of these plans are linked to recommendations for site and facilities recommendations.

FACILITIES MASTER PLAN, 2007

Building on the 1999 Facilities Master Plan that provided the direction for new construction and renovations under Measure E, the 2007 Facilities Master Plan provided direction to implement Measure C. A list of proposed projects were identified through the process.

SUSTAINABILITY PLAN, 2010

Long-term goals and short-term actions were identified in the Sustainability Plan.

STRATEGIC PLAN, 2016-2023

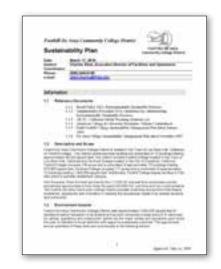
Three district commitments were designed to represent the highest-level strategies the District seeks to achieve:

- Student success and achievement improve student success, equity and retention
- Student access engage with our communities to build bridges between us and those we serve
- Stewardship of resources increase effectiveness in use of district and college resources

TECHNOLOGY PLAN, 2016-2019

The Technology Plan was put together to provide a roadmap for Educational Technology Services (ETS) to efficiently and effectively implement, support, and promote technology systems that enhance instructional delivery, student learning, and all associated district/ college automated information technology systems to enable Foothill and De Anza Colleges to perform their missions and achieve strategic objectives.

2007 Facilities Maste	munity College District
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PROCESS

- Inclusive
- Shared vision/collaborative
- Efficient/productive
- Good use of time
- Recorded/accurate
- Well-documented

• Good and clear communication

- Use of Website
- Forward-thinking
- Student input
- Informative
- Sense of ownership

Measures of Success

In the initial meetings with the Foothill and De Anza Colleges Facilities Master Plan Committees, measures of success were discussed for both the process and the product.

PRODUCT

- Data-driven decisions
- Links with educational plan
- Cost savings/maintainability
- Detailed/thorough
- Comprehensive
- Innovative/forward-looking
- Flexible/adaptable
- Integrated technology
- Improved accessibility (Physically)
- Signage & wayfinding

- Security (Hardware/Software/CCTV)
- Lighting
- Safety
- Support student learning
- Efficient/maximized space/land use
- Improved transportation/transit/alternative (Bus/Bike)
- Open/green space (gathering)
- Sustainability (environmental/economic/water-wise)

Facilities Planning Principles

An overarching set of facilities planning principles were developed during the planning process and served as the basis for detailed recommendations for Foothill College, De Anza College and Central Services. Enhance **student success**

Improve campus **connectivity**

Improve **efficiency** of facilities

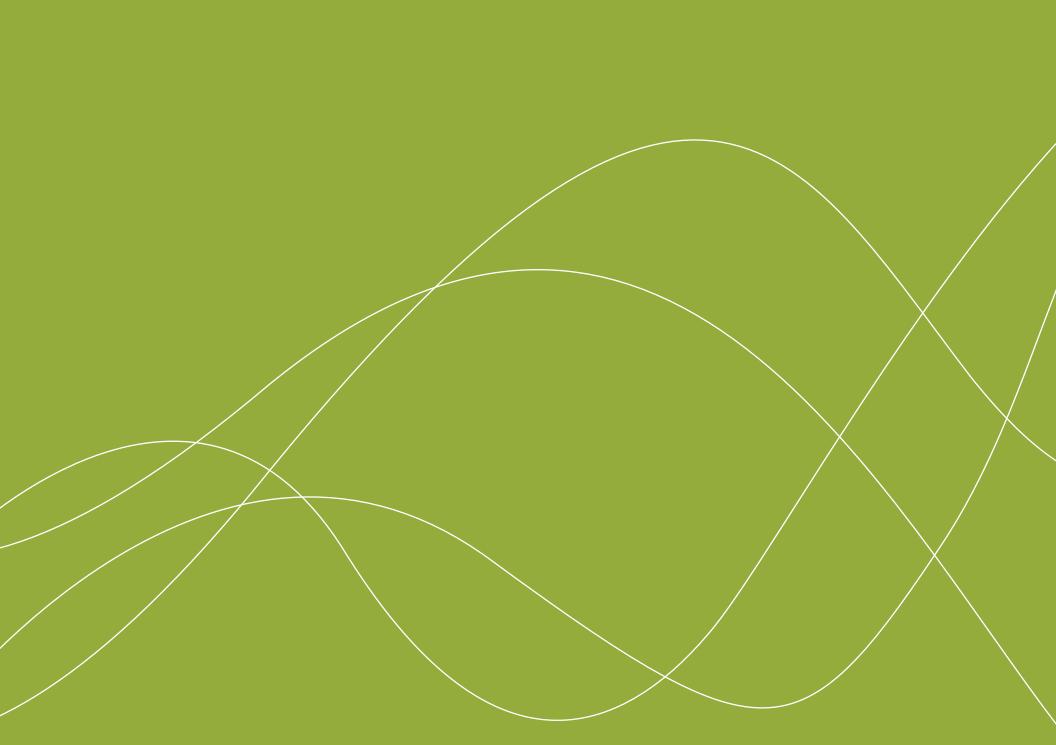
Right-size facilities to address program needs

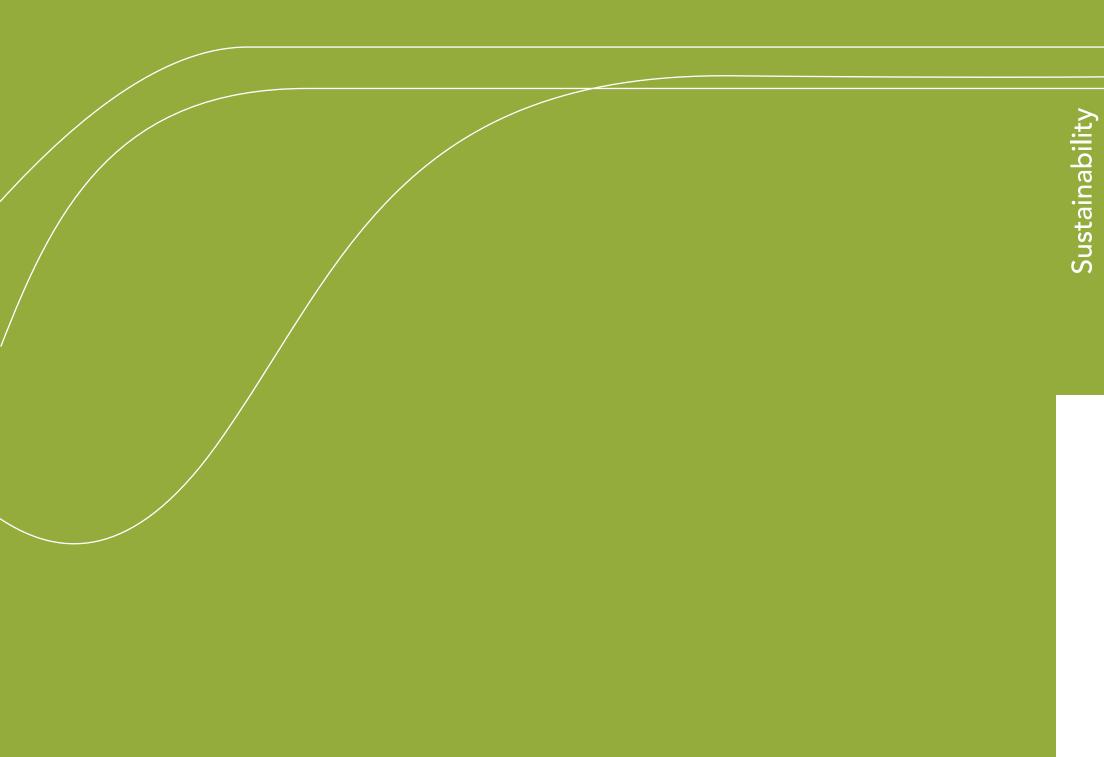
Enhance community engagement

Enhance **security + safety**

Support stewardship of resources

Excellence and Innovation in Academic Programs and **Student Services**





Sustainability

Planning for Sustainability

Foothill-De Anza Community College District is a recognized regional leader in the responsible and accountable stewardship of resources. Over the years, sustainability initiatives at each of the colleges have guided the development of site and facility improvements.

The 2016 Facilities Master Plan process provided an opportunity to establish a districtwide set of sustainability goals to serve as the basis for development recommendations at each campus. This chapter provides an overview of the sustainability planning process.

The Foothill-De Anza Community College District Sustainability Workshop was held on March 8th, 2016. Thirty-six student, faculty and staff representatives from Foothill College, De Anza College, and Central Services attended the workshop.

Workshop Process and Participation

WORKSHOP PARTICIPANTS

Name	Affl	Department
Danny Acosta	Dis.	Police
Judy Baker	FH	Online Learning
Emily Katsuta*	DA	Environmental Studies
Neil Chang	FH	Disability Resource Center
Susan Cheu	DA	Finance + College Operations
Joe Cooke	DA	Grounds
Brenda Davis-Visas	FH	Finance + Admin
Alicia DeToro**	DA	Environmental Studies
Moaty Fayek	DA	Business/CS/AT Division
Pippa Gibson	DA	Finance + College Operations
Pam Grey	Dis.	Purchasing
Donna Jones-Dulin	DA	College Operations
Anita Kandula	DA	Biological, Health + Env. Sciences
Stephan Kanga*	DA	Env. Sust. Committee DASB
Steve Kitchen	Dis.	Facilities + Operations
Jonathan Klanto*	FH	ASFC Student Rep
Coleen Lee-Wheat	DA	Physical Education + Athletics
Gabriela Lopez*	DA	Environmental Studies
* Student ** Faculty	Dis.=I	District DA=De Anza FH=Foothill

Name	Affl	Department
Sharon Luciw	Dis.	Educational Technology Services
Lester Lyons	DA	Facilities + Operations
Jennifer Mahato	FH	Facilities + Operations
Lisa Markus**	DA	Mathematics
Diana Martinez	DA	Environmental Studies
Kate Matthews*	DA	Environmental Studies
Kevin McElroy	Dis.	Business Services
Joe Moreau	Dis.	Educational Technology Services
Richa Nanavita*	DA	Sustainability Alliance
Mary Rasooli*	DA	Env. Sust. Committee DASB
Jorge Rodriguez	FH	Facilities + Operations
Bernata Slater	FH	Finance + Admin
Dara Streit*	DA	Env. Sust. Committee DASB
Ryan Thomas*	DA	Env. Sust. Committee DASB
Chi Tran*	DA	Student Senator
John Walton**	DA	Automotive Technology
Howard Wen*	DA	Sustainability Alliance
Claire Wilhelm-Safian*	DA	Environmental Studies





FOOTHILL - DE ANZA COMMUNITY COLLEGE DISTRICT | Sustainability



Prior Goals and Achievements

SUSTAINABILITY AT FOOTHILL COLLEGE

Established in 2008, the Foothill College Sustainability Committee focuses on six categories:

- Community & Civic Engagement
- Hazardous & Solid Waste Reduction & Control
- Water Use & Conservation
- Transportation, Energy Conservation, Efficiency and CO2 Reduction
- Green Procurement
- Green Building Design Construction & Renovation

Foothill College is proud to have the following LEED Certified Buildings:

- GOLD
- Foothill College Sunnyvale Center GOLD
- CERTIFIED
 - Physical Science & Engineering Center (PSEC)

The Environmental Sustainability Management Plan (December 2015) focuses on the following goals:

- Engage more students in all phases of sustainability
- Monitor/measure energy consumption
- Engage campus community in sustainability awareness Sustainability report card
- Installation of EV charging stations (in process)
- Green building construction & renovation
- Community & civic engagement
- Hazardous & solid waste reduction and control
- Energy conservation, efficiency & CO2 reduction
- Water use reduction and control
- Award winning water capture system
- Green purchasing & procurement controls in the college supply chain
- Ecologically responsible landscaping installation and maintenance

Foothill College's sustainability achievements include the following:

- Sustainability report card low water use
- Installation of EV charging stations (in process)
- Green building materials in renovations
- LEED constructed buildings
- Active student involvement in sustainability initiatives
- Environmentally sound practices
- Non-smoking policy on campus
- Single-source recycling
- Photovoltaic installations
- Safe and healthy indoor air quality
- Drought-tolerant, drought resistant native species
- Computerized irrigation system
- Energy efficient lighting products
- Green procurement
- Community engagement



SUSTAINABILITY AT DE ANZA COLLEGE

The seven areas of focus of the Sustainability Management Plan (November 2007) include these:

- Green Building Construction and Renovation
- Community and Civic Engagement
- Hazardous and Solid Waste Reduction and Control
- Energy Conservation, Efficiency and CO2 Reduction
- Water Use Reduction and Control
- Green Purchasing and Procurement Controls in the College Supply Chain
- Ecologically Responsible Landscaping, Installation and Maintenance

De Anza College is proud to have the following LEED Certified Buildings:

- PLATINUM Kirsch Center for Environmental Studies; Media Learning Center
- SILVER Visual and Performing Arts Center; Baldwin Winery
- CERTIFIED
 Science Center; Student and Community
 Services Building; East Cottage;
 Multicultural Center; Seminar Building

De Anza College's sustainability accomplishments include the following:

- Green building materials in renovations
- LEED constructed buildings
- Active student involvement in sustainability initiatives
- Environmentally sound practices
- Non-smoking policy on campus
- Single-source recycling
- Photovoltaic installations
- Safe and healthy indoor air quality
- Preventing pollution
- Drought-tolerant, drought resistant native species
- Computerized irrigation system
- Energy efficient products and night-sky friendly lighting
- Green procurement
- Community advocacy







KPI Analysis

An analysis was conducted of Foothill-De Anza Community College District's energy, carbon, and water usage/output to generate the district's Key Performance Indicators (KPI's), a measurable value that indicates how effectively an institution is achieving its objectives related to sustainability.

ENERGY CONSERVATION AND GENERATION

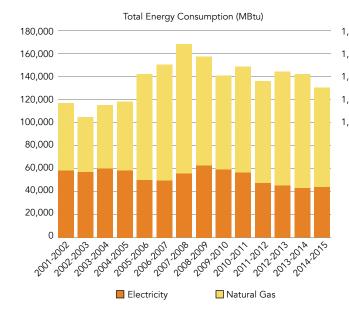
ENERGY CONSUMPTION

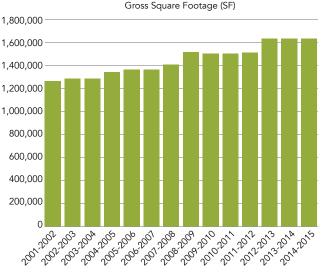
The total imported energy consumption has increased 11.7% from the 2001-2002 baseline, to 130,472 MBtu* in 2016.

* The British thermal unit (BTU or Btu) is a traditional unit of work equal to about 1055 joules. It is the amount of work needed to raise the temperature of one pound of water by one degree Fahrenheit

GROWTH IN GSF

The Foothill-De Anza Community College District has grown 29.5% in square footage from the 2001-2002 baseline to 2016.





ENERGY USE INTENSITY (EUI)

Energy Use Intensity* decreased by 13.6% from the 2001-2002 baseline. In 2016, the EUI is 80 — slightly higher than the California Energy Commission Average California Higher Education (CEC Avg CA Higher Education) EUI of 76.1.

* Energy Use Intensity (EUI) expresses a building's energy use as a function of its size or other characteristics. For most property the EUI is expressed as energy per square foot per year. It's calculated by dividing the total energy consumed by the building in one year (measured in kBtu) by the total gross floor area of the building.

EUI (kBtu/gsf/yr) and % Change from 2001/2 Baseline

ONSITE GENERATION

The District has utilized both Photovoltaic arrays and micro-turbines to generate energy onsite.

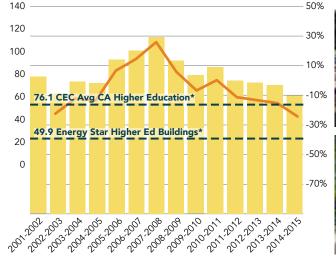
FOOTHILL COLLEGE

- 1.5 mW PV installation
- 8 60 kW Capstone Micro-turbines with heat recovery

DE ANZA COLLEGE

- 201 kW PV installation
- 8 60 kW Capstone Micro-turbines with heat recovery

PV at Foothill College and De Anza College



EUI (kBtu/gsf/yr) — % change from 2001/2 baseline



2014-2015 FACTS

- Energy Consumption: 130,472 MBtu 11.7% increase from 2001-2002 baseline
- Energy Use Intensity: 80 kBtu/gsf/yr 13.6% reduction from 2001-2002 baseline

KPI Analysis

CARBON AND CLIMATE ACTION

TYPICAL GREENHOUSE GAS (GHG) SOURCES

Scope 1: Greenhouse gas emissions from sources that are owned or controlled by a Federal agency.

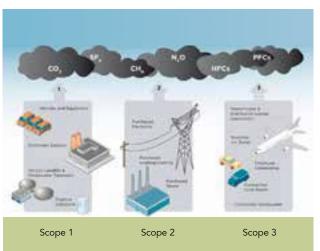
Scope 2: Greenhouse gas emissions resulting from the generation of electricity, heat, or steam purchased by a Federal agency.

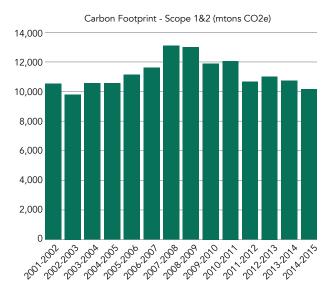
Scope 3: Greenhouse gas emissions from sources not owned or directly controlled by a Federal agency but related to agency activities.

Common Sources of Federal Greenhouse Gas Emissions

GREENHOUSE GAS SCOPE 1 & 2

The District has reduced 3.5% greenhouse gas emissions from 2001-2002 baseline. Current emission is 10,158 mtons CO2e for Scope 1 & 2 emissions..





GREENHOUSE GAS EMISSION

Foothill-De Anza Community College District reported an emission of 13.3 lbs CO2e/gsf between 2013 and 2015. It is slightly higher than California Energy Commission's 12.6 Average California Higher Education Emission during the same period.

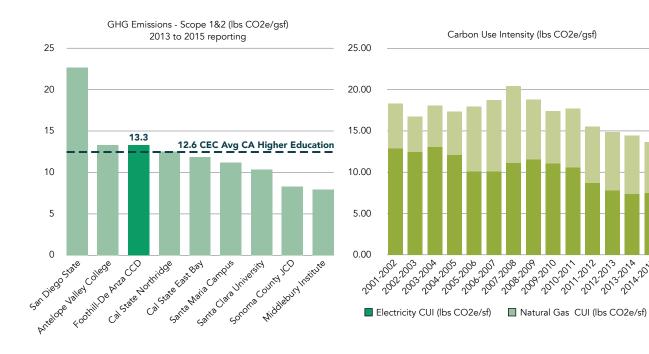
CARBON USE INTENSITY SCOPE1&2

Carbon Use Intensity has reduced 25.4% from 2001-2002 baseline. Current Carbon Use Intensity is 13.66 lbs CO2e/ gsf for Scope 1 & 2 emissions.

> 2012:2013 2013-2014 2014-2015

2014-2015 FACTS

- Greenhouse Gas Scope 1 & 2: 10,158 mtons CO2e 3.5% reduction from 2001-2002 baseline
- Carbon Use Intensity: 13.66 lbs CO2e/gsf 13.6% reduction from 2001-2002 baseline



KPI Analysis

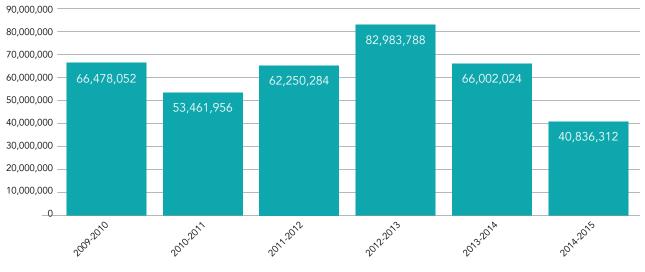
WATER USE AND REUSE

WATER USE

This District has experienced a significant decrease in water usage -a 50% reduction in the past two years.



Water Use - District Wide (gallons)



Sustainability Themes

During the Sustainability Workshop, Resource Stewardship and Social Equity themes were presented and discussed. Additionally, six topics were shown for each theme:

Resource Stewardship Themes

MATERIAL PROCUREMENT & WASTE MANAGEMENT

- Sustainable Purchasing Guidelines
- Local Sourcing
- Lifecycle Costing/Total Cost of Ownership
- Integrated Waste Management Plan
- Make Recycling Easy
- Other

GREENHOUSE GASES & CLIMATE ACTION

- Climate Action Plan
- Adaptation and Resiliency Planning
- Carbon Accounting for Materials
- Outdoor Air Quality Monitoring Program
- Get to Carbon Neutral
- Other

WATER & WASTEWATER

- Water Use Planning and Water Map
- Low Flow Everything
- Smart Irrigation
- Low Impact Development
- Non-Potable Water Opportunities
- Other

SITE & HABIT

- Biodiversity
- Climate-Appropriate Planting Palette
- Green Landscape Protocols
- Edible Landscape
- Impervious Surface and Heat Island
- \bullet Other

ENERGY CONSERVATION & GENERATION

- Energy Efficiency
- Renewable Energy
- Commissioning and Retro-commissioning
- Establish District Energy Manager Position
- Integrated Building Management/Control Systems
- Other

Social Equity Themes

TRANSPORTATION & ACCESS

- Transportation Commute Study
- Public Transit Access
- Bicycle Network & Storage
- Pedestrian Network & Safety
- Smart Parking
- Other

EDUCATION & CULTURE

- Sustainability in Curriculum
- Incentivized Behavioral Changes
- Engaging Diversity Faculty, Staff & Students
- Sustainability Focused Lectures & Events
- Greentech Workforce Development/Credentialing
- Other

MONITORING & REPORTING

- Sustainability Action Plan Development
- Annual Sustainability Performance Report
- Green Building Certification (LEED, Energy Star)
- Continuous Monitoring & Online Reporting (Digital Dashboard)
- Sustainability and Social Media
- Other

HEALTH & WELLNESS

- Access to Daylight & Views
- Healthy Indoor Air Quality
- Ergonomic Furnishings (Classroom & Office)
- Healthy Food & Beverages
- Universal Design
- Other

STUDENT & COMMUNITY ENGAGEMENT

- Student & Employee Orientation
- Outreach Materials, Publications and Social Media
- Community Service & Partnerships
- Inter-Campus Collaboration
- Integrated Design Process
- Other



SETTING PRIORITIES

Participants were given post-its to write down notes and post to the corresponding themes and topics. High, medium, and low priorities were indicated by different colors. The themes that garnered the most support as the highest priorities were Energy Conservation & Generation (23%) and Education & Culture (13%).

PRIORITIZING INVESTMENTS

Following the initial priority setting exercise, participants were asked to "invest" in topics with a set dollar value. Topics that received the most investments were Energy Conservation & Generation (44%) and Water & Wastewater (17%).

COMMON PRIORITIZED TOPICS

When comparing topics that received the highest priorities and the highest investments, six topics are aligned; those are:

- 1. Energy Efficiency
- 2. Healthy Food & Beverages
- 3. Integrated Building Management/Control Systems
- 4. Renewable Energy
- 5. Smart Irrigation
- 6. Public Transit Access.

Workshop Analysis



Workshop Boards

RESOURCE STEWARDSHIP

- Material Procurement & Waste Management
- Greenhouse Gases & Climate Action
- Site & Habit
- Water & Wastewater
- Energy Conservation & Generation















SOCIAL EQUITY

- Transportation & Access
- Health & Wellness
- Education & Culture
- Student & Community Engagement
- Monitoring & Reporting



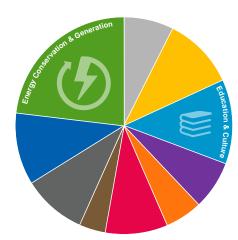




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Setting Priorities

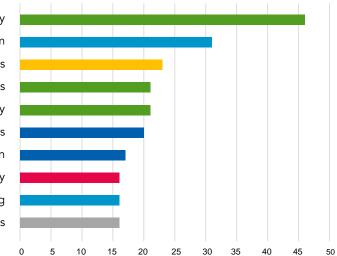




PRIORITIES BY THEMES

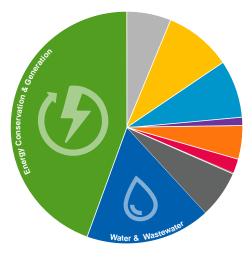
- Energy Conservation & Generation (23%)
- Education & Culture (13%)
- Water & Wastewater (11%)
- Health & Wellness (11%)
- Site & Habitat (9%)
- Material Procurement & Waste Management (9%)
- Transportation & Access (7%)
- Student & Community Engagement (7%)
- Monitoring & Reporting (6%)
- Greenhouse Gases & Climate Action (4%)

PRIORITIES BY TOPICS (TOP 10)



Energy Efficiency Sustainability in Curriculum Healthy Food & Beverages Integrated Building Management/Control Systems Renewable Energy Non-Potable Water Opportunities Smart Irrigation Make Recycling Easy Greentech Workforce Development/Credentialing Public Transit Access

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INVESTMENTS BY THEMES

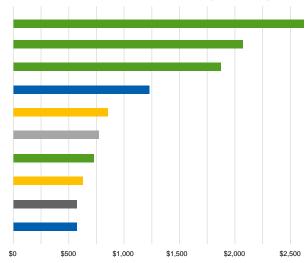
- Energy Conservation & Generation (\$7,512)
- Water & Wastewater (\$2,942)
- Health & Wellness (\$1,583)
- Education & Culture (\$1,359)
- Site & Habitat (\$1,214)
- Transportation & Access (\$1,101)
- Monitoring & Reporting (\$783)
- Material Procurement & Waste Management (\$338)
- Student & Community Engagement (\$193)
- Greenhouse Gases & Climate Action (\$25)

Prioritizing Investments



Energy Efficiency Renewable Energy Integrated Building Management/Control Systems Smart Irrigation Healthy Indoor Air Quality Public Transit Access Establish District Energy Manager Position Healthy Food & Beverages Biodiversity Water Use Planning & Water Map

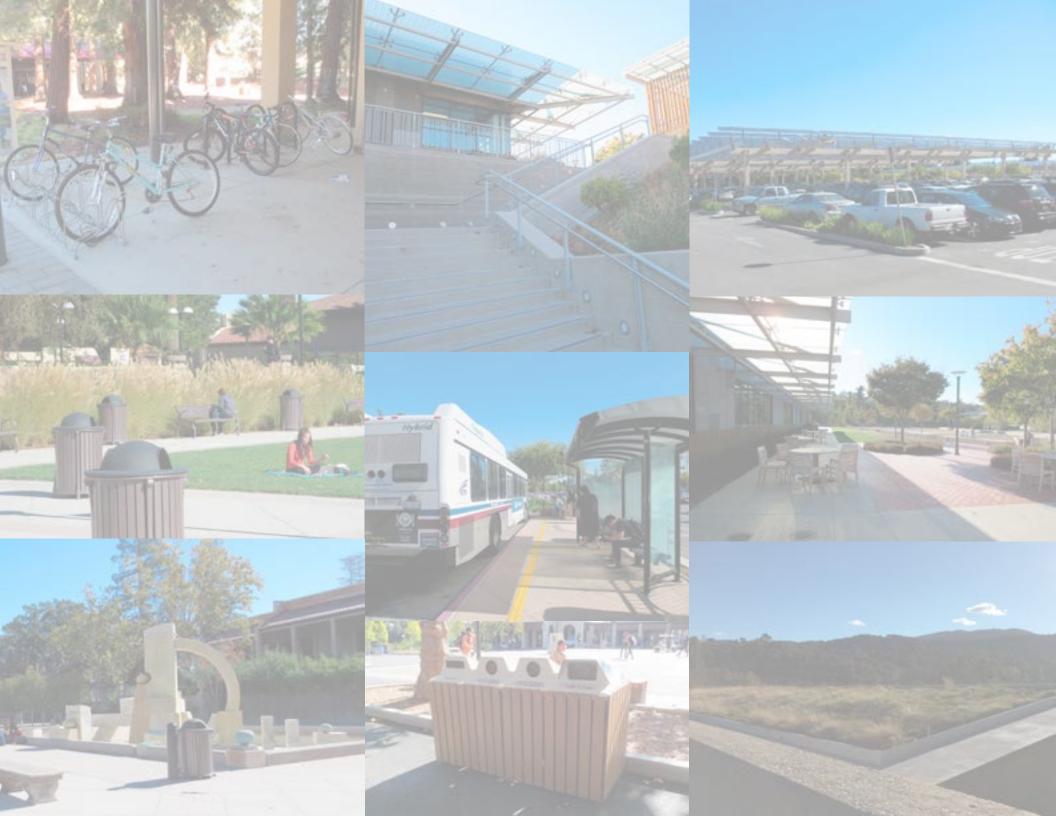
INVESTMENTS BY TOPICS (TOP 10)



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FOOTHILL - DE ANZA COMMUNITY COLLEGE DISTRICT | Sustainability





Goals () ENERGY

Continue as a leader in energy efficiency, manage energy use at district level

REDUCE ENERGY CONSUMPTION/INCREASE ENERGY EFFICIENCY

- Use efficient appliances, equipment and computers
- Encourage change of behavior in lighting and HVAC use

INCREASE SELF-GENERATED ENERGY CAPACITY

• Incorporate renewable energy at appropriate locations

DISTRICT-WIDE ENERGY MANAGEMENT

- Establish new Building Management System for entire district
- Establish District Energy Manager Position
- Establish District-wide guidelines for heating and cooling of facilities



Manage building and landscape water use to conserve water

WATER USE REDUCTION AND CONTROL/ WATER USE PLANNING & WATER MAP

Optimize building water efficiency

INCORPORATE SMART IRRIGATION/NON-POTABLE WATER OPPORTUNITIES

- Incorporate xeriscape/drought-tolerant plants
- Convert current irrigation system to smart system
- Encourage rainwater harvesting

HEALTH

Promote healthy living culture, and provide a safe and healthy environment

PROVIDE HEALTHY FOOD & BEVERAGES

• Provide natural/organic food at cafeteria

IMPROVE INDOOR/OUTDOOR AIR QUALITY

- Provide access to natural ventilation through operable windows
- Commit to initiate tangible actions to reduce greenhouse gases

PROVIDE PUBLIC TRANSIT ACCESS

• Create Foothill-De Anza bus line and/or carpool system

BE RESPONSIBLE FOR ENVIRONMENTAL HEALTH AND BIODIVERSITY

• Commit to ecologically responsible landscaping, installation and maintenance

EDUCATE

Nurture environmental stewardship and literacy across the campus, educate and prepare students for the green workforce

ENGAGE CAMPUS COMMUNITY IN SUSTAINABILITY AWARENESS

• Develop themes and messages to encourage and promote sustainability practices across the campus

PROMOTE SUSTAINABILITY IN CURRICULUM

- Create additional curriculum and program on sustainability and green workforce,
 e.g., environmental education, renewable energy and energy management, and organic agriculture
- Broaden on-site green-collar workforce training program

Set high bars for building performance goals, with consistent monitoring and routinely report

PROMOTE GREEN BUILDING CONSTRUCTION AND RENOVATION

- Outperform Title 24 Standards for all new buildings
- Target for LEED Certification or equivalent for all new buildings

MONITOR AND REPORT

• Develop methods to monitor consumption activity and routinely report

Promote a culture of reduce, reuse and recycle

HAZARDOUS AND SOLID WASTE REDUCTION AND CONTROL/MINIMIZE WASTE GENERATION

- Maximize use of recyclable materials
- Make recycling easy by providing paper recycling receptacles in classrooms

GREEN PURCHASING AND PROCUREMENT CONTROLS IN THE COLLEGE SUPPLY CHAIN

- Strongly encourage the use of vendors that demonstrate their commitment to sustainability
- Implement managed print service





Technology





Technology Overview

FOOTHILL-DE ANZA COMMUNITY COLLEGE DISTRICT TECHNOLOGY PLAN 2016–2018

The objective of the district's technology plan is to provide a roadmap for addressing project prioritization and key issues facing technology deployment and use at Foothill-De Anza Community College District.

This plan is a guide for the efficient and effective development, implementation, and support of technology systems to enhance instructional delivery, student learning, and all associated district/college support systems enabling departments and programs to perform their missions and achieve their strategic objectives.

The plan was developed and vetted through the Educational Technology Advisory Committee (ETAC), a participatory governance committee dedicated to ensuring the effective use of technology across the district and associated colleges. The outcomes of this plan are the result of incorporating strategic guidance from the Board of Trustees and the chancellor, the strategic plans and technology plans of both colleges, an environmental analysis of future technology trends, several infrastructure analyses and audits, and surveys with other input from staff and faculty. This technology plan follows and builds upon the previous Foothill-De Anza Community College District Technology Plan entitled Information Technology Strategic Plan 2011-2016.

The development of this plan followed traditional strategic technology planning efforts by:

- Defining the mission of the Educational Technology Advisory Committee (ETAC)
- Creating a vision for ETAC
- Determining the district's mission critical projects
- Identifying key issues and solutions affecting technology deployment
- Developing a performance measurement system to assess progress

Key outcomes of the plans are provided and discussed in the following pages.



Vision and Mission

ETAC VISION STATEMENT

The Education Technology Advisory Committee (ETAC) inspires and leads the Foothill-De Anza community in technology innovation.

ETAC MISSION STATEMENT

ETAC enhances the strategic capabilities of the colleges and the district by facilitating input from stakeholders district-wide. ETAC coordinates technology-related planning and decision-making and advises Educational Technology Services. ETAC makes specific recommendations to the Chancellor's Advisory Council on the use of technology for ongoing and future activities and directions.

ROLES AND RESPONSIBILITIES OF ETAC MEMBERS

- ETAC is a participatory governance committee at the district level designed to be as inclusive as possible of all stakeholder groups (students, faculty, staff, and administrators) from both colleges and central services
- ETAC has primary responsibility for developing an overall technology strategic plan and monitors the ongoing implementation effort aimed at achieving the goals of this plan
- ETAC reports back to stakeholders regularly, and gathers additional input
- ETAC advises and advocates for strategic investments in technology
- ETAC develops and recommends policies on matters including, but not limited to, copyright and fair use, appropriate use of technology, information security, accessibility, and hardware/software standards

Technology support at the Foothill-De Anza Community College District is provided primarily through a central district organization, but each college also has limited local IT assets assigned to support technical systems for instruction as defined below.

DISTRICT CENTRAL IT

The management, maintenance, and operation of the college's technological infrastructure and equipment are primarily handled through the district's central technology organization, Educational Technology Services (ETS). ETS is organized to support the development, improvement, and support of IT systems including software applications, networks, instructional computer labs, smart classrooms, personal computing, and telephony for the district's two colleges. In addition to providing direct technical support through staff, ETS manages some of its systems through outsourcing contracts.

FOOTHILL COLLEGE IT

Foothill College provides a limited number of IT staff to directly assist with instruction in computer labs and support a few other instructionally related systems. The college has a webmaster who coordinates and maintains the college's website (http://www.foothill.fhda.edu/index. php) and the curriculum management system (C3MS) (http://www.foothill.edu/cms/). The Director of Marketing and Public Relations is responsible for the oversight of technology and co-leads a shared governance committee, called the Technology Committee.

The Technology Committee is an auxiliary shared governance group that reports to the college's Planning and Resource Council (PaRC) and includes membership from the Academic Senate, Classified Senate, District ETS organization, administration, distance education representatives, faculty and staff technology, and specialists. Under the authority of PaRC and with support of the

District Technology Organization

District ETS, the Technology Committee provides a forum for informing overall district technology planning and is responsible for the college's technology plan, technology decision-making, and technology goals. The Technology Committee creates a forum for college decision making, planning, and vetting issues for technology. The Technology Committee addresses the following issues and tasks on an ongoing basis:

- Classroom technology needs including instructor computing and audio visual hardware standards, priorities and planning
- College website and web technology needs; requests for new technology implementations and purchases beyond regular classroom and individual computing needs
- College priorities related to district-wide technology projects and implementations



DE ANZA COLLEGE IT

The college also provides a limited number of IT staff (primarily at the instructional associate level) to directly assist with instruction in computer labs. The Associate Vice President of Communications and Marketing is responsible for the oversight of technology and leads a user committee, called the Technology Committee (TC) to discuss technology issues, make recommendations for setting technology project priorities, and create a campus technology plan. Refer to http://www.deanza.edu/gov/ techcommittee/. The membership of this committee is listed at http://www.deanza.edu/gov/techcommittee/ members.html. The Technology Committee reports to College Council.

The De Anza College Technology Committee advises on technology proposals and training needs in support of equity and student success. TC serves as the clearinghouse for technology-related projects and initiatives, disseminating information through representative, expert membership, and serving as both the technology planning and relevant accreditation committees. (http://www. deanza.edu/gov/techcommittee/about.html) The primary functions of this group are:

- 1. Develop the college Technology Plan
- 2. Serve as the Accreditation Standard III.C Subcommittee
- 3. Advise and provide feedback on proposed technology projects, centralizing awareness of Planning and Budget Team (PBT) actions
- 4. Working through a subcommittee, prioritize implementation of bond measure technology projects for the college (former role of the informal Technology Prioritization Committee)
- 5. Provide feedback on training needs to the Technology Training Specialist and manager, and learn of updates regarding scheduled technology training
- 6. Provide a venue for the centralizing of all technology information, including regular report-out regarding:
 - ETAC; Banner Student and Core committees; Online Education and Catalyst advisory groups
 - Smaller tech projects (by ETS) (standing OEI updates remain)

EDUCATIONAL TECHNOLOGY ADVISORY COMMITTEE (ETAC)

ETAC is a district wide committee that is tasked with technology planning at the district level. It also reviews and makes recommendations regarding deployment of technology, the development of policy, and the resolution of issues impacting the delivery of services to students and staff. Information regarding membership, charter, meeting minutes, etc. can be viewed at http://ets.fhda. edu/etac/. The ETAC committee is designed to be as inclusive as possible of all constituency groups (administration, faculty, staff, and students) from both college campuses and district Central Services.

Leading the Foothill-De Anza community in technology innovation.









Message from the President



It is with a great sense of excitement and pride that Foothill College presents its 2016 Facilities Master Plan. Guided by site design concepts adopted in 2009 and 2014 and the current Educational Master Plan, the key themes of the work herein are:

Flexibility: Provide modern, flexible facilities to support current and emerging models of instructional and service delivery.

Sustainability: Seize opportunities for sustainable design practices.

Aesthetics: Maintain the award-winning physical beauty of the campus.

Stewardship: Prioritize the best use of funding.

The philosophy that guided this plan involves connecting the Facilities Master Plan and the Educational Master Plan (EMP), specifically their respective goals/principles:

Educational Master Plan Goals:

- 1. Equity
- 2. Community
- 3. Resources

The 2016 Facilities Master Plan is the product of an inclusive process that has evolved with a broad spectrum of campus leaders. Implementation of the plan will require continued discussion and financial support.

Foothill College was founded in 1957 with the motto: Educational Opportunity for All.

Our Facilities Master Plan is one of the tools by which we will make good on that promise. I am thankful to everyone who has devoted their time to create a future vision for Foothill College and the surrounding community.

Thuy Thi Nguyen, J.D., Foothill College President

tilt

Purpose of the Facilities Master Plan

The purpose of the 2016 Foothill College Facilities Master Plan (FMP) is to provide a guide for future physical campus development and identify potential projects that align with the development on the Foothill College campus in Los Altos Hills, California, and at the new Foothill College Sunnyvale Center at the site of the former Onizuka Air Force Station in Sunnyvale, California. The FMP describes how the college's planning strategy was developed to support the goals identified in the Educational Master Plan, while being responsive to changing needs and projected enrollment. Additionally, the FMP reviews projects whose timelines extended beyond what was presented in the 2014 FMP Update.

The offices of the Foothill-De Anza Community College District are located on the Foothill College campus. The district facilities are accounted for separately from the college on the district space inventory and are not included in the Foothill College Facilities Master Plan.



Planning Process

The planning process was a participatory one that involved a core group of individuals representing all areas of the college. The Gensler planning team worked closely with the Facilities Master Plan Committee with augmented participation from non-team member administration, faculty, staff, and students. The group reviewed and evaluated information, explored options, and made recommendations for site and facilities improvements. The following five-step process was followed:

1. Prepare

- Organize existing relevant planning information
- Work with the college to develop the FMP schedule
- Understand the vision and mission of the college

2. Collect and Analyze

- Assess existing conditions to validate key issues
- Link to measures of success, current and previous Educational Master Plans, and other relevant planning documents
- Develop framework for the Facilities Master Plan

3. Explore

- Develop and evaluate preliminary options
- Strategize priority of projects

4. Recommend and Share

- · Share preliminary options with the college community
- Discuss preliminary options
- Develop preferred options and identify FMP projects

5. Document and Approve

- Develop draft document
- Share with the college community
- Develop final document for approval





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Linkages

Mission Statement

Believing a well-educated population is essential to sustaining and enhancing a democratic society, Foothill College offers programs and services that empower students to achieve their goals as members of the workforce, as future students and as global citizens. We work to obtain equity in achievement of student outcomes for all California student populations, and are guided by our core values of honesty, integrity, trust, openness, transparency, forgiveness, and sustainability.

Educational Master Plan

The Foothill College Educational Master Plan 2016–2022 serves as the foundation for this 2016 Facilities Master Plan. Key elements of the FMP are highlighted here and support the integration of educational and facilities planning discussions.

Goals

These goals are approached in a way that exemplifies Foothill College's culture of innovation and problem solving, with emphasis on eliminating disproportionate impact among student groups:

EQUITY

Create a culture of equity that promotes student success, particularly for underserved students. From the facilities perspective, the equity goal prioritizes college discussion about how physical space can be designed to enhance teaching and learning, and considers the reduction of physical barriers to facilitate equitable access to programs and support services.

COMMUNITY

Strengthen a sense of community and commitment to the college's mission; expand participation from all constituencies in shared governance. When considering physical campus development, efforts focus on improving campus connectivity and promote space-use planning that increases opportunities for students to congregate and collaborate.

RESOURCES

Recognize and support a campus culture that values ongoing improvement and stewardship of resources. The FMP considers the responsible management of physical, financial, and human resources in developing, implementing, and maintaining the physical campus, including monitoring energy consumption and emphasizing the well-being, health, and comfort in facilities design.

2014 Facilities Master Plan Update

The plan update addressed the following goals based on the college's educational planning:

- Manage enrollment to accommodate the growth in online learning opportunities, at the Foothill College Sunnyvale Center, and at other off-campus locations
- Provide modern, flexible facilities to support emerging models of instructional and service delivery
- Renew the useful life of existing facilities through modernization and renovation to support current and future instruction and support functions
- Replace portable buildings with permanent space to provide state-of-the-art facilities and to distribute campus functions in appropriate locations
- Upgrade and expand infrastructure to support campus development

• Maintain campus award-winning aesthetics

- Maintain sustainable landscape through use of drought-tolerant plants and water-wise technology, and energy conservation systems
- Implement design principles that will result in a LEED Gold certification for the Foothill College Sunnyvale Center that will then evolve into teaching and learning strategies for building occupants
- Use technology as a tool to support equitable learning outcomes across modalities and locations
- Create learning environments that support student equity strategies

2009 Site Design Concepts

The concept design addressed the following goals:

- Protect, renew, and enhance the integrity of the original campus
- Program and prioritize the best use of Measure C funding
- Provide appropriate concept designs and standards for future site improvements
- Promote a sense of security through attentiveness to public safety
- Provide code-compliant accessibility between buildings and landscaped areas
- Clarify the separation of vehicular and pedestrian modes of transit
- Seize opportunities for sustainable design practices where possible











Analysis

Analysis

This section documents the analyses of existing conditions that shape the use of the Foothill College campus. The analyses are based on observations and information gathered during campus tours, interviews with faculty, staff, and students, and discussions with the Foothill College Facilities Master Plan Committee. The graphic and narrative descriptions focus on the following:

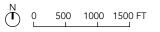
- Campus Context
- Campus Access
- Existing Facilities
- Campus Development History
- Campus Zoning
- Campus Circulation and Parking
- Parking Access
- Emergency Vehicle Access
- Pedestrian Access
- Open Space

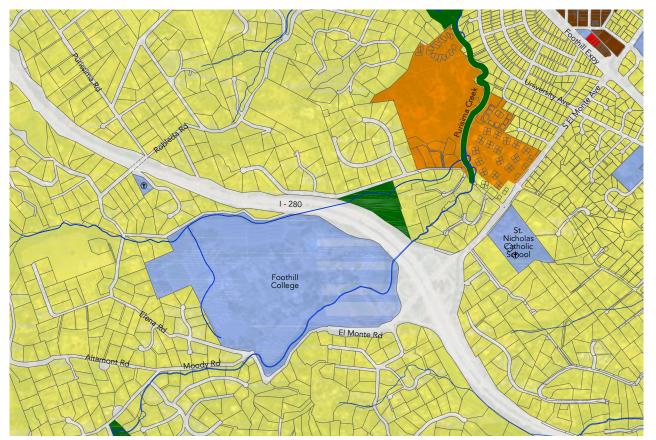
Campus Context

Foothill College is located in Los Altos Hills, California, just off Interstate 280 in the northwest corner of Silicon Valley. The campus encompasses 122 acres of land.









Land Use Adjacencies

The campus is surrounded by low-density, large-lot residential neighborhoods and is two miles south of downtown Los Altos.



Legend

 $\mathbf{\hat{T}}$ 0

Residential (low density) Residential (mid-density) Industrial Commercial

500 1000 1500 FT

InstitutionalOpen SpaceWaterway

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Campus Access

Vehicular Access

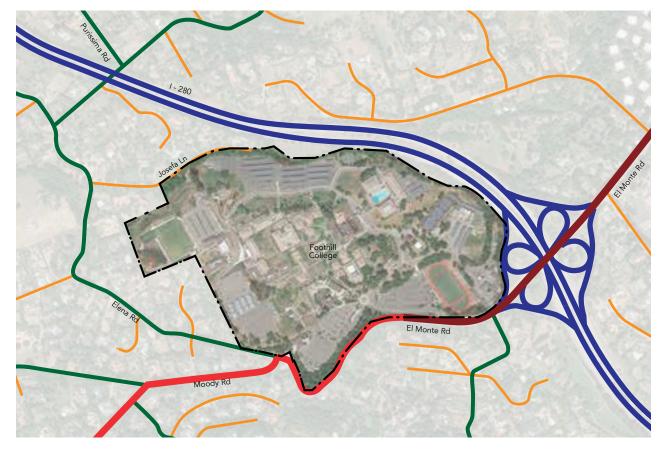
Main access to the Foothill College campus is via I-280 and El Monte Road. Other roads in the vicinity are much smaller in scale. A secondary entrance on Moody Road offerrs additional egress.

Bike Access

The campus is connected to regional and local bikeway systems that are accessible to the public. Bike access to campus is from westbound El Monte Road, south of the stadium into Lot 1. There are no designated bike lanes or paths on campus, though there are multiple locations for bike parking.

Public Transit Access

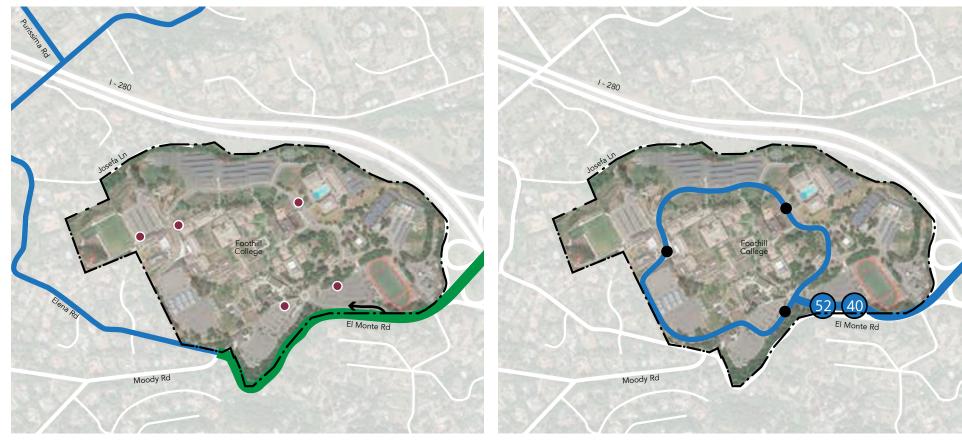
The campus is served by two VTA bus routes–40 and 52. Both bus routes include three on-campus stops.



VEHICULAR ACCESS







1000 FT

500

0 ______

BIKE ACCESS

Legend

- 💻 Regional Public Bikeway
- 💻 Local Public Bikeway
- \rightarrow Campus Bike Access
- Bike Parking

PUBLIC TRANSIT ACCESS

Legend 💻 VTA Bus Routes

- Transit Stops on Campus

500 1000 FT

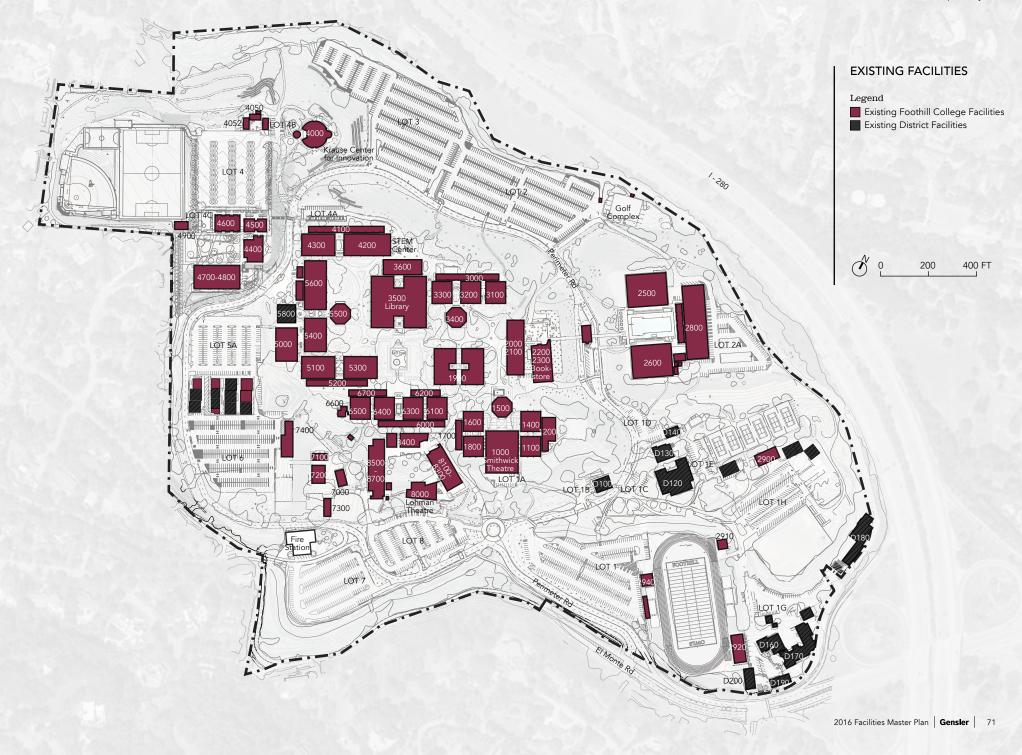
Existing Facilities

Foothill College, originally designed by renowned architect Ernest Kump and landscape architects Sasaki Walker and Associates, received the top American Institute of Architectus (AIA) Honor Award in 1962. In 1980, the campus received a special commendation from the AIA for "excellence in design that has stood the test of time."

Built on a hill, the campus has a dramatic change in elevation. Most campus buildings are located on the upper campus and are connected to the lower campus complex mainly by stairs and slopes. Currently, Foothill College has 64 buildings in total. It has a total outside gross square footage of 624,772. On the Foothill College campus, there are 13 buildings used by the Foothill-De Anza Community College District, totaling 63,286 GSF. (Source: FUSION)







Development History

1900s-1950s

Foothill-De Anza Community College District acquired the Lohman and Griffin estates in 1961, which included two houses (the Lohman and Griffin residences), carriage house, barn, and gazebo, all built before 1960.

1960s

The original campus began construction in the 1960s. Campus core instructional buildings and the physical education complex were built, connected by a bridge over the campus loop road.

1970s-1990s

During this period, small facilities were built to house support programs, including construction of the Japanese Cultural Center. In 1999, Foothill College embarked on an important period of renewal, modernization, and expansion of its physical environment. In that year, voters approved a \$248 million bond (Measure E) to finance construction and maintenance of campus facilities in the district.

2000s

In the 2000s, Foothill College had a major expansion to meet the needs of its fast-growing student population. In 2006, voters approved a \$490.8 million bond (Measure C) to improve facilities at both colleges and to acquire property for an education center. Foothill College carefully planned facilities development to support its educational vision and enrollment by establishing policies for buildings and site improvements, technology, and sustainability. The new Campus Center, Lower Campus Complex, Central Plant, and Temporary Village were built as a reult.

2010s

The Physical Sciences and Engineering Center (PSEC) was built as a Measure C project that includes a lab building, a classroom building, and commons area. New athletic fields, restrooms, and team rooms were also built on the northwest corner of the campus.









Campus Zoning

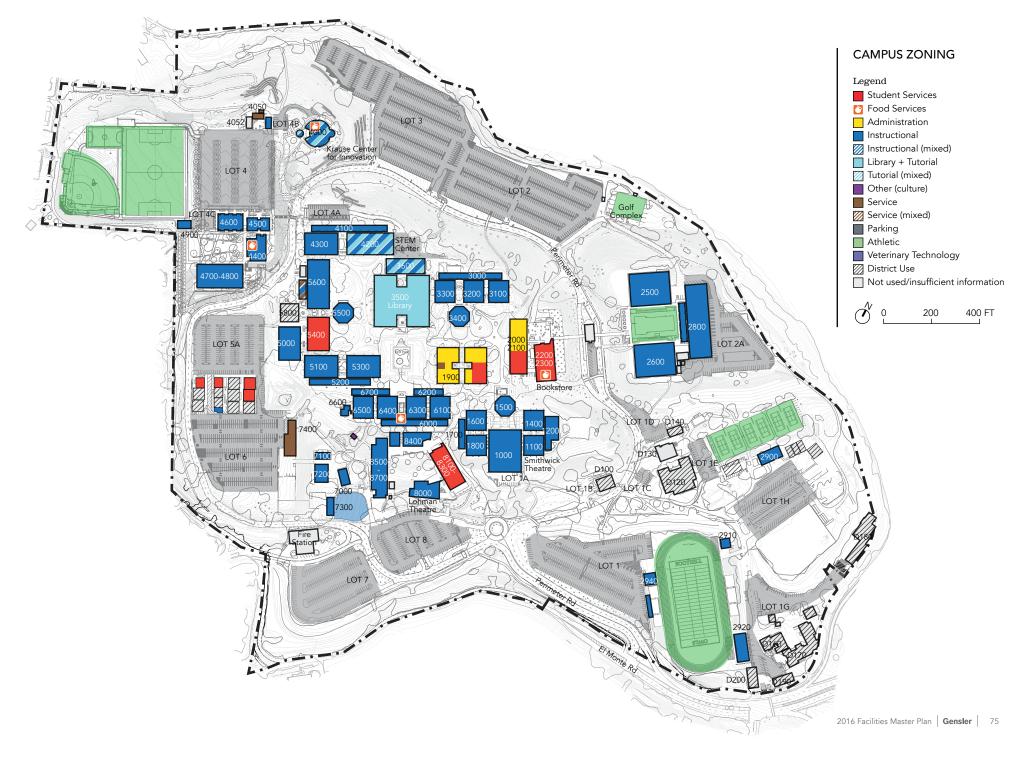
The existing campus zoning plan shown on the next page uses colors to indicate functional zoning of the campus. Buildings that house more than one major use are indicated with multiple colors.

Currently, the campus is organized with administration at the center of campus, and student services in multiple locations on upper campus and lower campus. Supplemental instruction and tutorial support programs are located throughout campus at various locations, including the Teaching & Learning Center (Building 3600). Food service is dispersed throughout the campus. Instructional programs are clustered by program: Physical Sciences, Mathematics & Engineering in the northwest; Kinesiology & Athletics in the east; a lower-campus cluster of Environmental Horticulture & Design and Veterinary Technology; and the centrally located clusters of Fine Arts & Communication, Language Arts, Biological & Health Sciences, and Business & Social Services.

Athletic fields are located at multiple locations: the northwest corner of campus, near or in the Kinesiology cluster, and the southeast corner of campus.







Campus Circulation

The campus has two entrances: The main entrance on El Monte Road, and the Moody Road entrance on Moody and Elena roads. Most people enter campus through the main entrance, creating traffic congestion at the front of the campus.

Circulation on campus is via a one-way loop. Nine pedestrian crossings intersect this loop. All pedestrian crossings have a flashing system, and four of them are signalized crossings. However, blind curves and speeding vehicles create a perception of unsafe conditions for pedestrians crossing the loop road.

Regarding public transit, there are three bus drop-off areas on campus: at the base of the footbridge, near PSEC, and in Lot 8.









Parking Access

Parking is located at the periphery of the campus. Foothill College and the district share all parking spaces. There are currently 3,079 parking spaces on campus, with designated accessible, visitor and staff spaces. Parking lot numbers correspond with campus entry numbers.

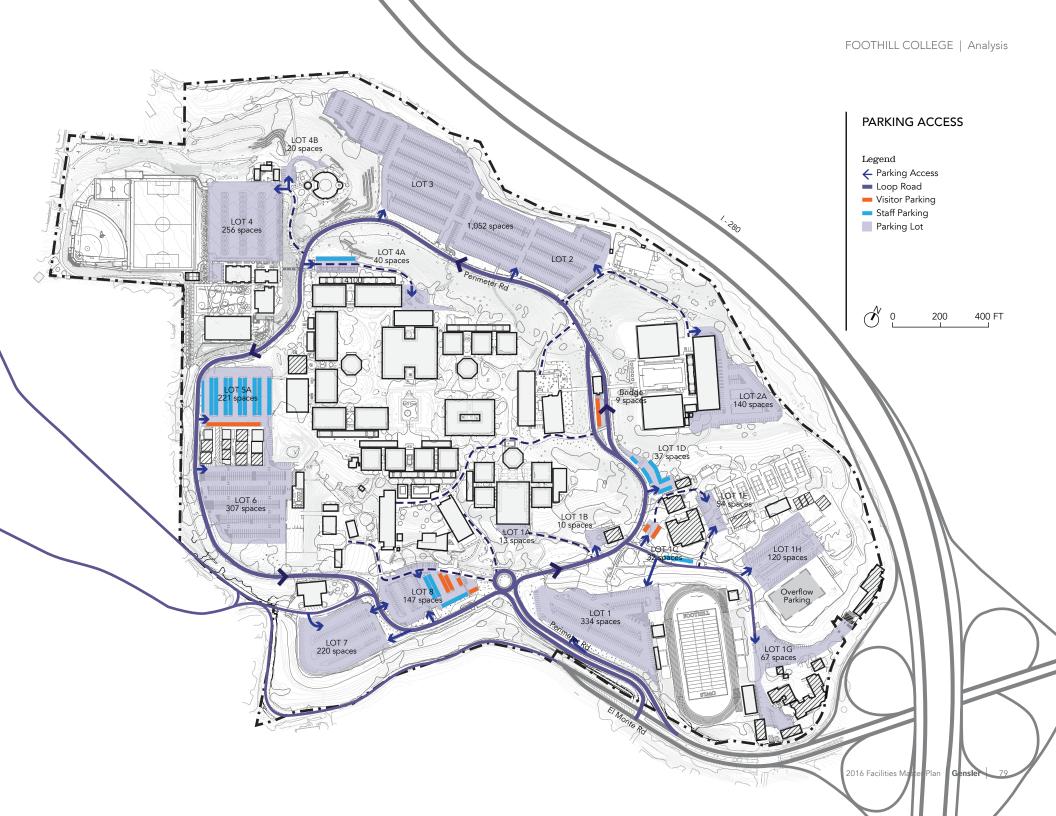
During peak demand, such as the first few weeks of each academic quarter, students are encouraged to use an overflow parking lot south of Lot 1H.





Parking Lot	Spaces		
Lot 1	334		
Lot 1A	13		
Lot 1B	10		
Lot 1C	32		
Lot 1D	37		
Lot 1E	54		
Lot 1G	67		
Lot 1H	120		
Bridge	9		
Lot 2A	140		
Lots 2 & 3	1,052		
Lot 4	256		
Lot 4A	40		
Lot 4B	20		
Lot 5A	221		
Lot 6	307		
Lot 7	220		
Lot 8	147		
TOTAL	3,079		





Emergency Vehicle Access

Safety is a priority at Foothill College. To support this, and in accordance with state mandates, a comprehensive network of paths provide access to all emergency vehicles. Fire hydrants, fire department connections, and post indicator valves are well dispersed on fire access routes.

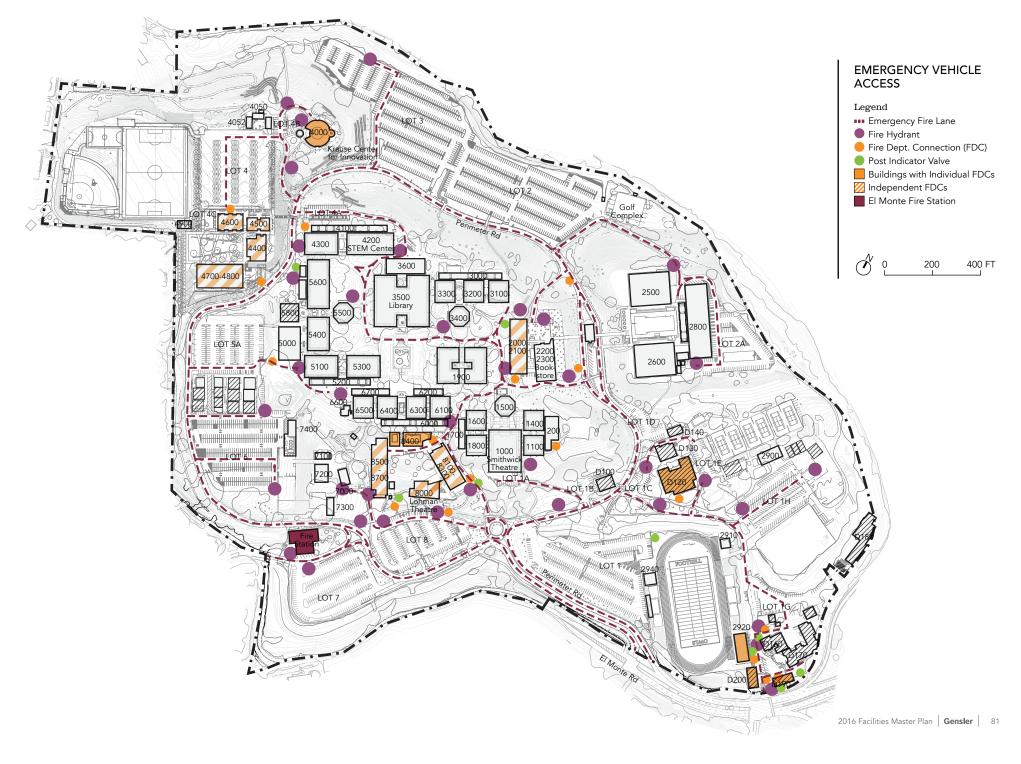
Emergency vehicle access is via the loop road and major shared pathways throughout campus.







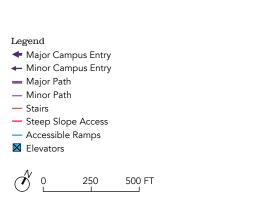
FDCs Served by Main Loop					
1000	2200	3000	4100	5000	6000
1100	2300	3100	4200	5100	6100
1400	2400	3200	4300	5200	6200
1500	2500	3300		5300	6300
1600	2600	3400		5400	6400
1700	2700	3500		5500	6500
1800	2800	3600		5600	6600
1900	2900			5700	
				5800	
PSEC - Independent FDC					
4000	4500	4600	4700	4800	
Campus Center - Independent FDC					
2000	2100				
Buildings with Individual FDcs					
4000 KCI	8400	D120	Service Shop 1	Field House - PE 200	
			Service Shop 2		

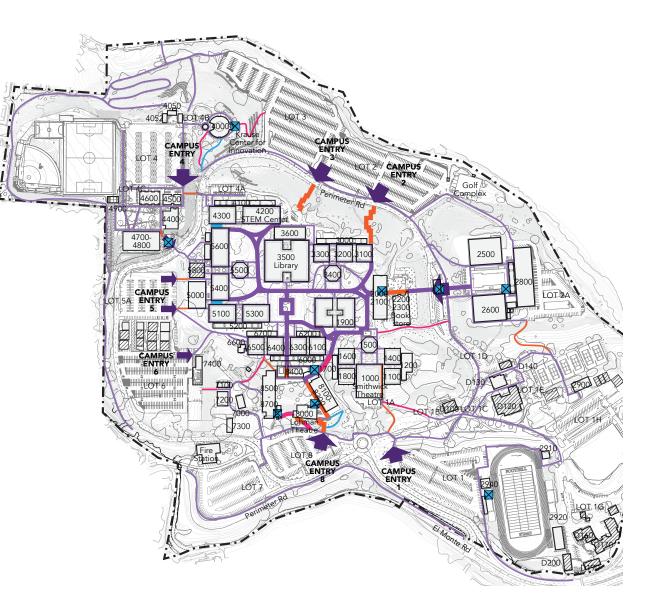


Pedestrian Access

There are nine designated pedestrian entry points from the peripheral parking lots.

A network of major and minor paths connect the campus, sometimes through stairs, ramps, or bridge. Because of the topographic change on the campus, some ramps are not accessible to students with disabilities. Elevators and an on-call shuttle system for students with disabilities help facilitate access throughout campus.





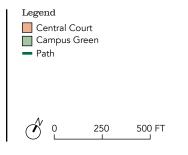


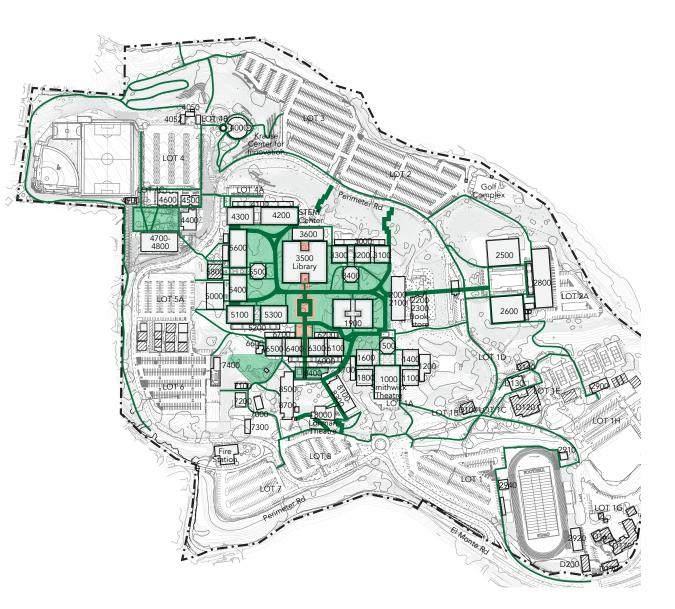
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Open Space

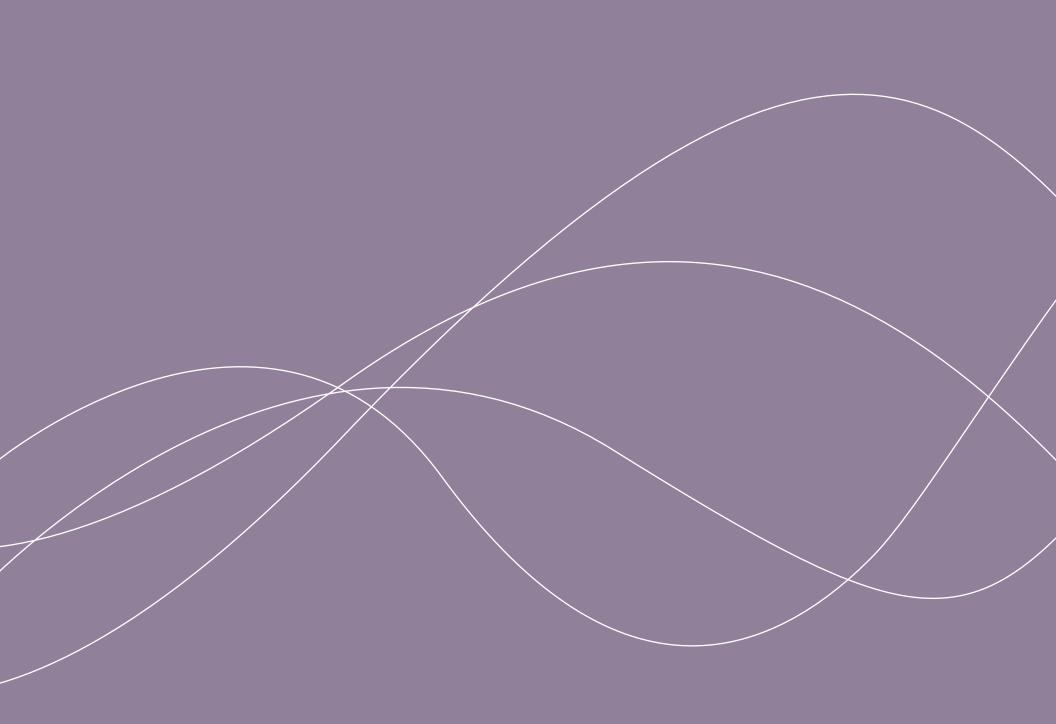
Open space helps frame the campus. Near the edge, open space is used as a threshold that separates vehicular from pedestrian traffic. The central court is the physical and symbolic heart of Foothill College, serving as the main gathering space at the center of campus. It is surrounded by the campus green, one of the most unique and memorable aspects of Foothill College, with trees, turf, and ground cover.

Newer open spaces, such as those at the PSEC and the rooftop of Building 8400, are detached from central campus and create their own quads. Unique open spaces, such as the bamboo garden near the Japanese Cultural Center, lend an air of variety and surprise to the open space plan.











Recommendations

Recommendations

The Foothill College campus is imbued with a strong sense of place. It displays an aesthetic sensitivity established more than five decades ago. Foothill has always reflected its community beginning in 1958, continuing through present time. The college conveys an atmosphere of being, personalized, and informal. The existing overall design is an integral part of the natural element that fosters an environment conducive to academic study. Building structures are linked by a system of outdoor spaces ranging from intimate patios to large assembly areas. The final touch of unity is brought about by a landscape plan which included retaining the basic foothill nature of the site and repeating it with rolling lawns and meandering paths. The following recommendations build upon the campus' many advantages, and endeavor to eliminate barriers to student success. The recommendations for the future development of the campus are described in the following sections:

- Facilities Planning Principles
- Planning Data Analysis
- Facilities Recommendations
- Facilities Projects
- Site Recommendations
- Foothill College Sunnyvale Center Recommendations

Facilities Planning Principles

A set of facilities planning principles was developed during the process that supports the Educational Master Plan goals and addresses identified issues into a series of facilities and site recommendations.

EQUITY

Promote Student Success

- Reduce barriers and facilitate equitable access to programs and support services
- Develop indoor and outdoor spaces to encourage collaboration and support student engagement
- Develop campus as a welcoming and nurturing environment

COMMUNITY

Improve Campus Connectivity

- Provide safe and universally accessible connections
- Enhance physical connections (pedestrian, bike, vehicular, transit) with the community and other campuses
- Utilize technology to enhance and create more dynamic learning environments, tools, and equity for students, faculty, and staff

Enhance Community Engagement

- Develop programming and improve facilities to enhance a sense of community
- Improve campus environment to welcome the community

Improve Security and Safety

- Develop and implement districtwide standards for security equipment and protocol
- Improve safety and security throughout campus, including lighting, pathways and parking areas

RESOURCES

Right-Size Facilities to Address Program Needs

- Align the projected inventory with state guidelines
- Position Foothill College to maximize
 state and local funding

Support Stewardship of Resources

- Engage campus community in sustainability awareness
- Involve students in all aspects of sustainability
- Monitor/measure energy consumption
- Promote physical activity and other health-related programs
- Prioritize well-being, health and comfort in design of facilities

Improve Efficiency of Facilities

- Improve facilities to support program needs
- Replace temporary and inefficient facilities
- Improve functional zoning and operational efficiencies
- Develop flexible, multipurpose facilities to adapt over time



Planning Data Analysis

Projected Space Needs

Title 5 of the California Code of Regulations prescribes a set of benchmark standards for the utilization and planning of most educational facilities at public community colleges. These standards, when applied to the total number of students served and the related Weekly Student Contact Hours (WSCH), a total number of hours faculty contact students weekly in an academic department or institution, equivalent to the student enrollment multiplied by class hours per week, result in the total capacity requirement expressed in assignable square feet (ASF), available for use.

The benchmark standards are applied to WSCH projections in order to generate the instructional space needs for lecture and lab space at the college. In addition, formulas determine campuswide requirements for office, library, instructional media and all other space use.

The Master Plan Space Program table on the following page summarizes the existing distribution of space on the Foothill College campus and projects future space needs for 2025 using Title 5 standards. The difference represents an approximate target to plan for to be in line with state standards.

Capacity Load Ratios

- The capacity/load ratio is the measure of the space utilization efficiency according to Title 5 standards
- The ratio compares existing space (capacity) to enrollment levels (load)
- A ratio of over 100% indicates that there is additional available capacity; a ratio of under 100% indicates a need for additional space to support enrollment (see illustrations at right)
- Assumed utilization for classrooms is 53 hours per week; utilization for labs varies per discipline
- Capacity/load ratios are rolled up and measured as an aggregate by room-use category for each campus

Program Data

In addition to the analysis of quantitative data, the planning process included the review of qualitative sources of information:

- **Measure E** and **Measure C** project lists were reviewed to determine what facilities requirements still need to be addressed
- Program reviews were checked to identify facilities improvements needed to support instructional and student support program needs

Conclusions

- The Master Plan Space Program indicates a need for additional lab and instructional media space to support the projected program needs (see tables on next page)
- Current library, study, and tutorial spaces address project need
- Lecture and office space categories indicate an excess of space and could be adjusted with renovations and re-purposing of spaces

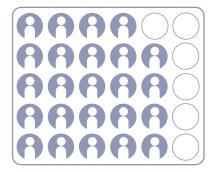
 AAAAAA

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of seats = # of students
100% capacity/load



of seats > # of students
over 100% capacity/load

of seats < # of students
under 100% capacity/load</pre>

Master Plan Forecasts

YEAR	FALL ENROLLMENT	WSCH
2014	12,053	143,950
2025	16,370	195,508

Enrollment projections source: Hanover Research, May 2014 for FHDA CCD



Master Plan Space Program

Space Category	Current Inventory–2015	Master Plan Space Program	Difference	Capacity Load
Lecture	67,381	54,295	-13,086	Over
Lab	119,774	133,135	13,362	Under
Office	71,221	52,136	-19,085	Over
Library	36,332	35,989	-343	
Instructional Media	6,167	12,531	6,364	Under
Other	127,494	121,995	-5,499	
Total ASF	428,369	410,080		

Facilities Recommendations

The recommendations made by the Facilities Master Plan Committee are based on previous facilities planning principles identified in previous pages. The recommendations include facilities projects and site improvement projects. All recommended options are subject to studies, feasibility, and availability of resources.

New Facilities

SHOP

- Provide a theatrical scene shop to support the performing arts program
- Re-purpose Parking Lot 1A to accommodate shop

BUILDING 1900 (OPTION 2)

- Construct new Building 1900
- Relocate all student support services to center of upper campus

FOOTHILL COLLEGE SUNNYVALE CENTER

• Build Phase II parking garage and second building at the Foothill College Sunnyvale Center

Renovation + Repurposing

BUILDINGS 8100-8300

• Re-purpose Buildings 8100–8300 to support firstcontact student services and administrative functions

BUILDING 1900 (OPTION 1)

- Renovate Building 1900
- Relocate select student support services to center of upper campus

AGING BUILDINGS

- Buildings original to the college founding require continual upgrades to meet the highest standards of HVAC, technology, security, access, and safety. Additional study will be required to identify the criteria and extent of renovations necessary.
- Upgrades to roofing replacement, domestic water piping and storm drain system, building automated system (BAS), HVAC systems, golf range turf, soccer turf, as needed.
- Exterior painting of Buildings 2000, 4000, 4400, 4500, 4600, 4700, 4800, and 6000
- Technology upgrade as identified in Foothill College Technology Plan 2016

SAFETY AND SECURITY

• Safety and security upgrades

Circulation

ACCESS

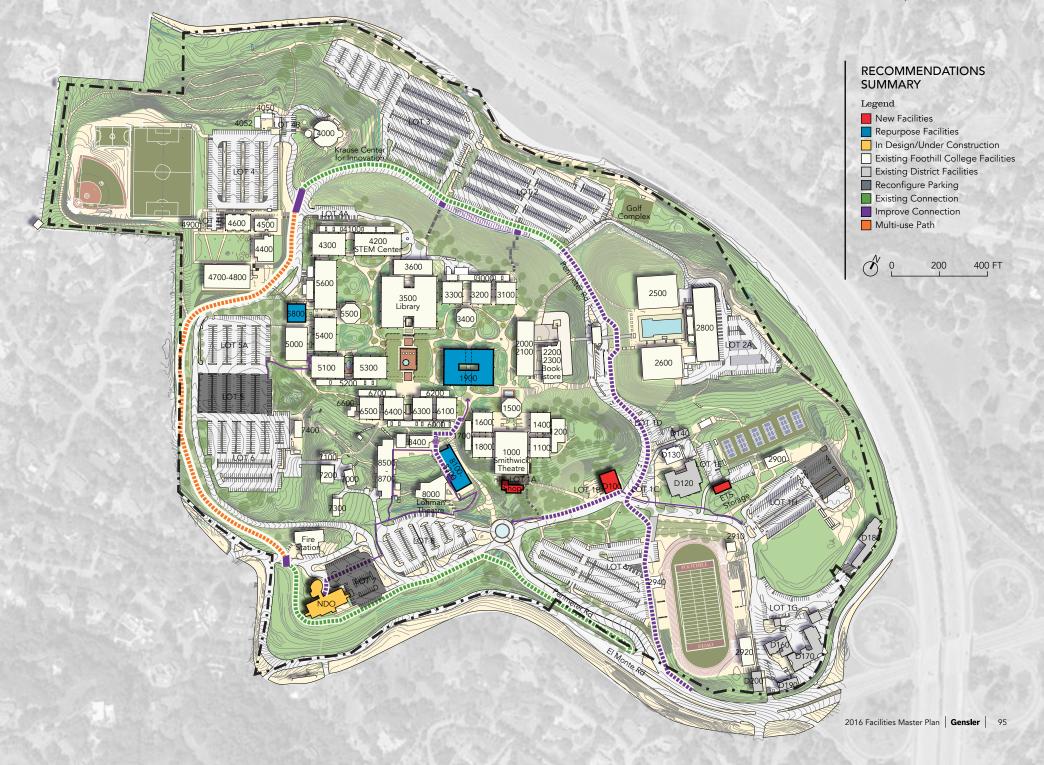
- Improve pedestrian and bike access/pathways
- Develop safe bike/pedestrian crossings
- Clarify vehicle and pedestrian separation
- Continued ADA compliance
- Link all areas of campus
- Maintain access for emergency and service vehicles

PARKING

• Demolish Temporary Village and add parking spaces in Lot 5

Other

- Develop indoor and outdoor spaces to encourage collaboration and support student engagement
- Improve signage and wayfinding



Facilities Projects

Principles

Improve Efficiency of Facilities

• Improve facilities to support program needs

Promote Student Success

• Reduce barriers and facilitate access to programs and support services

Recommendations

SHOP

• Build expansion space to support theatre program needs

FOOTHILL COLLEGE SUNNYVALE CENTER

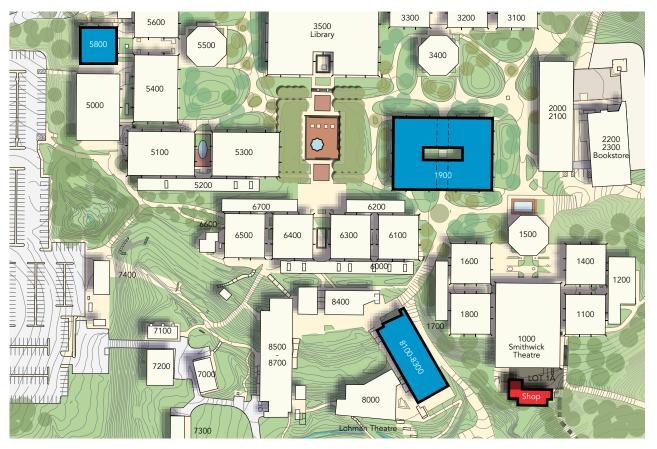
• Build Phase II parking garage and second building at the Foothill College Sunnyvale Center

BUILDINGS 1900 + 8100-8300

- Shift non-student-focused spaces to lower campus
- Relocate core student support services to center of upper campus

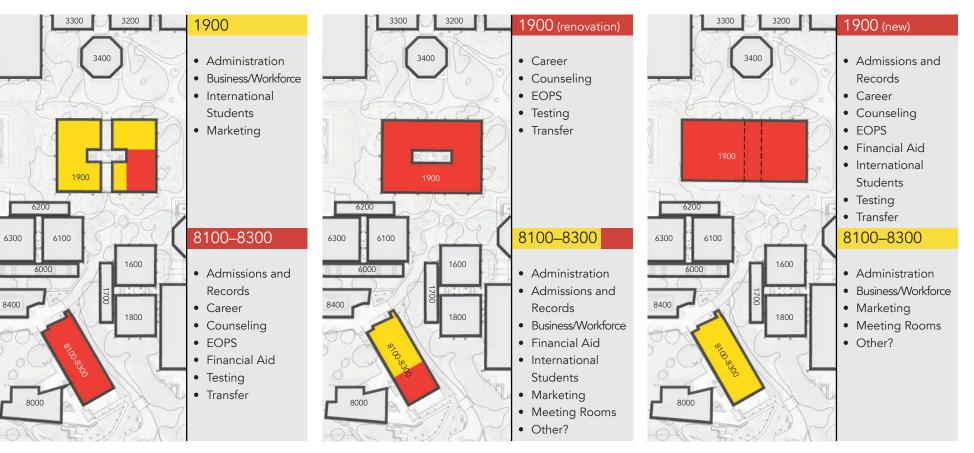
BUILDING 5800

• Following the relocation of ETS, re-purpose building to support college programs and services



FACILITIES RECOMMENDATIONS











- OPTION 1
- Shift administrative functions to lower campus
- Relocate select student support services to center of upper campus
- Integrate student support services with instructional support services
- Re-purpose Building 8100–8300 to support first-contact student services and administrative functions

OPTION 2

- Shift administrative functions to lower campus
- Relocate all student support services to center of upper campus into a new building
- Integrate student support services with instructional support services at campus core
- Re-purpose Building 8100–8300 to support administrative functions and additional meeting room space

Site Recommendations

Principles

Improve Campus Connectivity

• Provide safe and universally accessible connections

Recommendations

UPPER AND LOWER CAMPUS CONNECTION

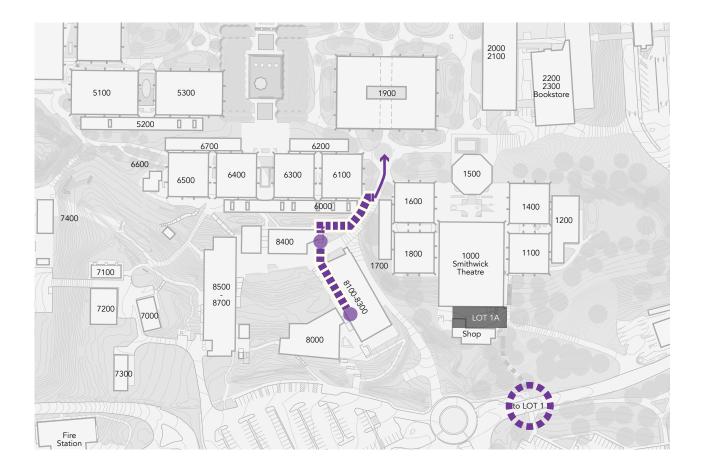
• Improve visibility and usage of the existing connection between upper and lower campus

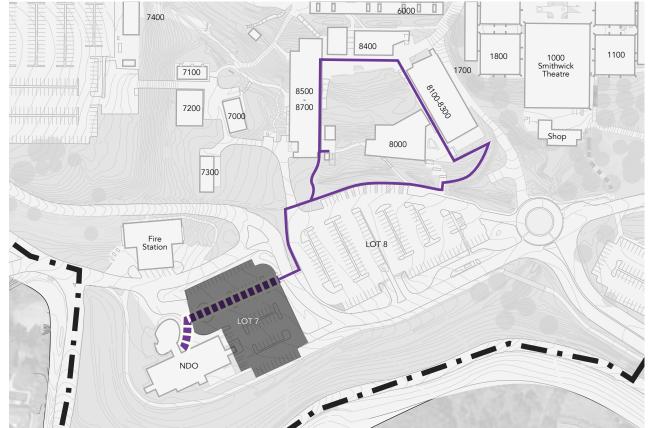
LOT 1 TO CAMPUS

• Improve pedestrian connection from Lot 1, across road to lower campus









Principles

Improve Campus Connectivity

• Provide safe and universally accessible connections

Recommendations

CAMPUS CORE AND NEW DISTRICT OFFICE CONNECTION

• Develop an accessible connection between the campus core and the new district office building (scheduled to break ground Fall 2016)



Legend

Site Recommendations

Principles

Improve Campus Connectivity

• Provide safe and universally accessible connections

Recommendations

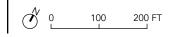
UPPER AND LOWER CAMPUS CONNECTION

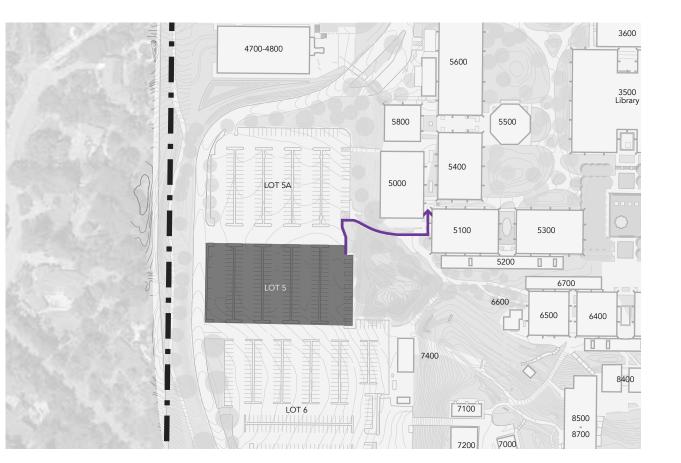
• Improve visibility and usage of the existing connection between upper and lower campus

LOT 5 TO CAMPUS

• Demolish temporary village, to provide additional parking and connection to upper campus

Legend
Reconfigure Parking
Improve Connection









Principles

- Improve Campus Connectivity
- Provide safe and universally accessible connections

Recommendations

LOT 2 AND 3 PEDESTRIAN CROSSINGS

- Improve pedestrian crossings at Lots 2 and 3
- Suggested recommendations include:
 - Textured paving or
 - Speed humps
- Further study needed



Legend Reconfigure Parking Improve Connection

100

200 FT

N

0

Site Recommendations: Open Space

Principles

Promote Student Success

• Develop indoor and outdoor spaces to encourage collaboration and support student engagement

Recommendations

OPEN SPACE

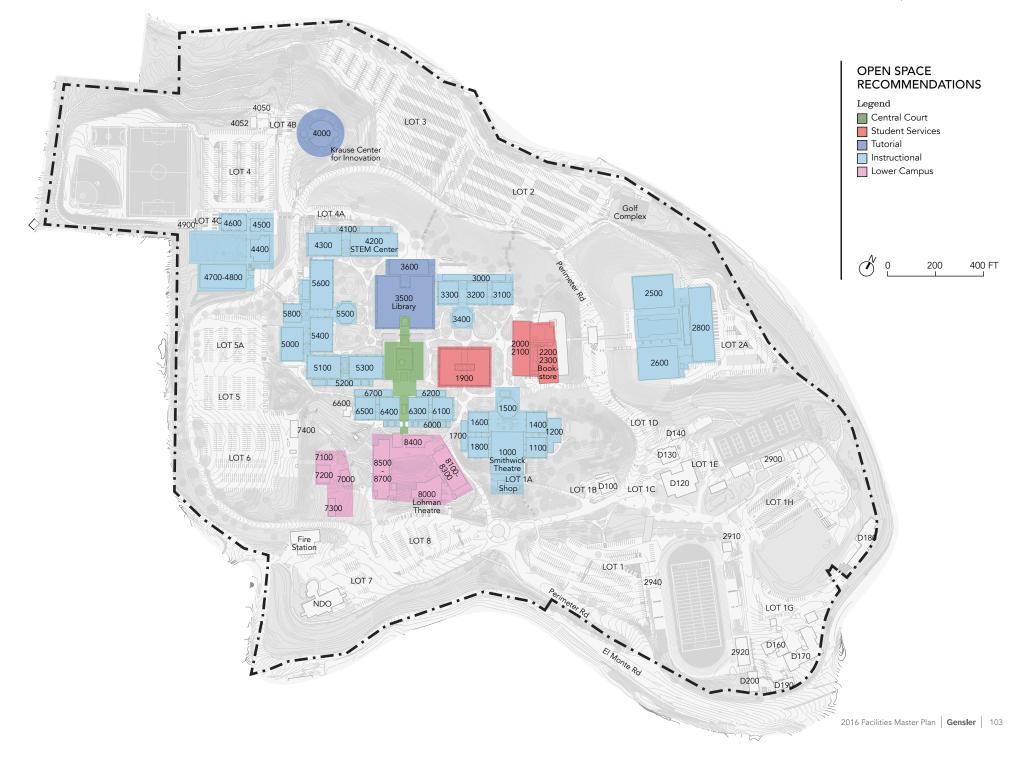
- Create identifiable outdoor courts
- Develop flexible areas for collaboration
- Frame views, where appropriate, due to building siting and adjacencies
- Provide seating and shade
- Utilize raised planters with drought-tolerant, native, and/or climate-appropriate species











Site Recommendations: Campus Connectivity

Principles

Improve Campus Connectivity

• Enhance physical connections (pedestrian, bike, vehicular, transit) with the community

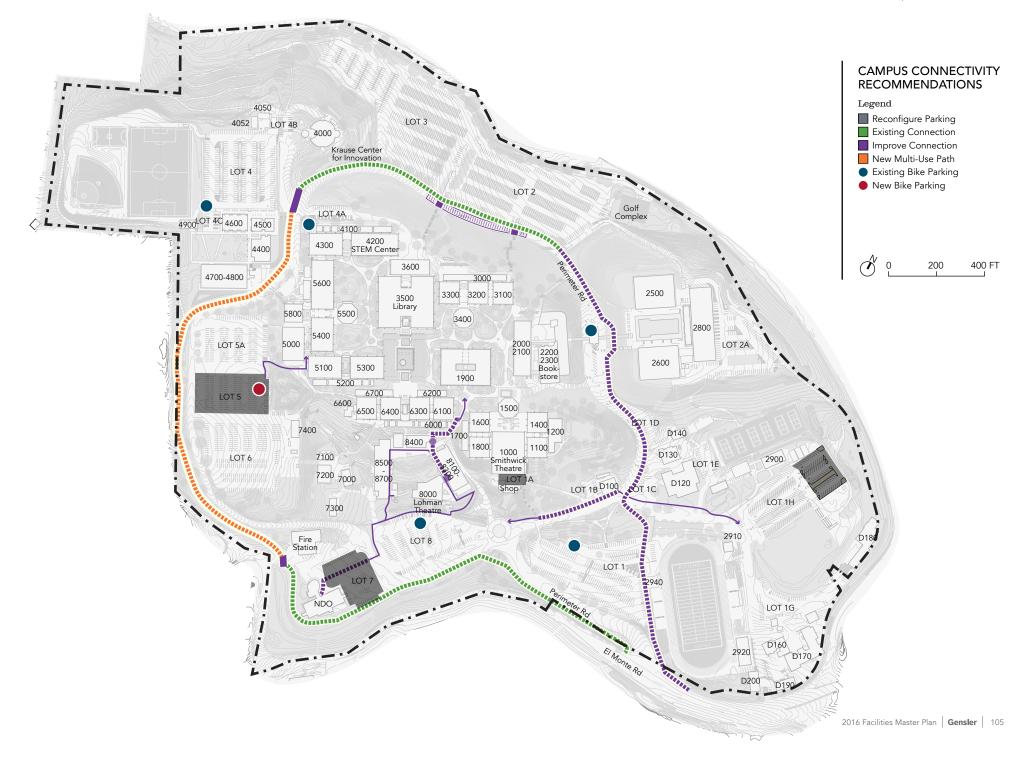
Recommendations

- Improve pedestrian and bike access/pathways, particularly between D130 and the east corner of Lot 2
- Create additional bike parking throughout campus
- Develop safe bike/pedestrian crossings
- Clarify vehicle and pedestrian separation
- Link all areas of campus
- Maintain access for emergency and service vehicles
- Improve signage and wayfinding

Parking Lot	Existing	Change	Proposed
1	334		334
1A	13		13
1B	10		10
1C	32		32
1D	37		37
1E	54		54
1G	67		67
1H	120	+68	188
Bridge	9		9
2A	140		140
2 & 3	1,052		1,052
4	256		256
4A	40		40
4B	20		20
5		+182	182
5A	221		221
6	307		307
7	220	-146	74
8	147		147
TOTAL	3,079	+104	3,183









Foothill College Sunnyvale Center



Campus Context

The Foothill College Sunnyvale Center, located within the Moffett Business Park, is about seven miles from the Foothill College main campus. The 9.15-acre site is at the northwest corner of N. Mathilda Avenue and Highway 237.

The center will focus on career preparation and advancement in Silicon Valley's highly desirable technological fields, as well as career pathways with local high schools, industry partnerships, entrepreneurship, and general education.

It is anticipated that students from Foothill College, De Anza College, Mission College, and possibly other educational institutions will enroll at the Foothill College Sunnyvale Center.

FOOTHILL COLLEGE SUNNYVALE CENTER EXISTING SITE

500 FT

250

Ä



Facilities Master Plan Recommendations

Phase 1

Phase 1 of the Foothill College Sunnyvale Center, a two-story, 46,882-square-foot building designed to house classrooms, computer labs, student services, administration and tutorial space, opens Fall 2016.



FOOTHILL COLLEGE SUNNYVALE CENTER PHASE 1 Legend Existing Facilities

200 FT

110 | 2016 Facilities Master Plan | Gensler

T

100

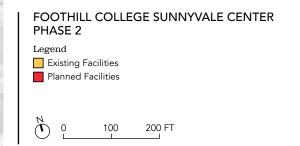






Phase 2

Phase 2 of the Foothill College Sunnyvale Center includes up to 74,400 square feet of maximum development, at three or four stories in height. A parking structure may be constructed over the footprint of the existing surface parking lot to meet anticipated parking needs.







De Ar	le Ahza Co	College	

De Anza College | Analysis

DeAnza College

Message from the President



Every day, I am proud to be part of the De Anza College community. At the heart of this extraordinary college are our wonderful students, who work with dedicated faculty, classified professionals, and administrators. All of our constituencies are active participants in planning for the college's future, and this Facilities Master Plan reflects the thoughtfulness and foresight of an uncommonly engaged campus.

Walk the De Anza campus and it will make you proud: proud to learn here, proud to work here, proud to be part of the wider community that supports us. These are the state-of-the-art facilities in which students attend classes and labs, study collaboratively and individually, hold De Anza Associated Student Body and club meetings, and plan and participate in civic action. The Facilities Master Plan extends our commitment to first-class facilities, and the technology required to sustain them. But, more critically, the plan reflects the campus learning culture we live every day, ensuring flexible spaces, leaving room to grow and change as our pedagogy changes or as technology gives us options we did not have before.

Our surveys show that many students stay on campus hours longer than for their classes; they do not just come and go. This is because of their engagement, and, we believe, enjoyment of our spaces. The Library, renovated. The Media and Learning Center, the last Measure C building created, complete with a student lounge for studying. The steps of the VPAC, a Measure E-funded building, that is the site of casual hip hop dance practice. The grounds that offer environmentally sustainable beauty and respite.

I was fortunate to serve as a mentor in the Puente program, and will always remember the response of a Puente student to my question about what he most enjoyed about being on campus. He answered immediately: The fountains, he told me. The fountains.

He quickly assured me that De Anza's excellent reputation brought him to campus, but the fountains spoke to him in a subtle, powerful way: the campus was welcoming, it had beauty, it represented the lived experience of being here, between classes, after class, when you need to pause. This student was like many of our students, drawn to us for a place to learn and discovering a place that nurtures and respects them, and invites them in. Our region is marked by great wealth and innovation, but also by great inequality and inequity. At De Anza, we work to increase the odds that our students and their communities can grow and prosper and make Silicon Valley a more just and equitable place. We work for equity in student learning, and offering quality and aesthetic educational spaces. The college is a public resource for all communities, and reflects the mutual respect we show each other.

The equity and student learning focus is key when it comes to the facilities recommendations set forth in this plan, such as the construction of a second Student Services building and various renovations and site improvements. Our long-term equity commitments are critically important when the college recommends a longterm facilities decision - on behalf of student learning that would significantly alter the landscape of the college. I refer to our recommendation, in view of the need for an updated, expanded learning environment in the Arts, that the Flint Center site serve as the eventual location. Similar entertainment venues exist in the community, and the Flint Center, as an externally managed business, provides no educational value for De Anza College students. On a blank canvas in that valuable location, however, we envision a revitalized Creative Arts learning environment in which creativity is fostered, the arts studied, critiqued and practiced. We have a vision of the cultural value that lends dimension to our communities and to the world. The art that powers STEM education into STEAM education. All the beauty and power, we might imagine, of our fountains, writ large.

Brian Murphy, Ph.D., De Anza College President

About the Master Plan

De Anza College developed the 2016 Facilities Master Plan (FMP) to serve as a guide for development of the physical campus. It provides both a narrative and graphic description of the college's strategies to support its instructional program through carefully planned development, using the long-range forecast for enrollment as one basis. It is not intended to serve as a literal depiction of the projects to be developed, but rather as a point of reference in a dynamic process of adapting projects — in progress, planning stages, and potential — to meet changing program needs.

While providing a road map for future development, including recommendations for renovation and replacement of facilities, this document also provides a retrospective of past development. Highlighting what has come before demonstrates how the De Anza College campus has grown, and how that growth has supported stated instructional goals.















Mission

De Anza College provides an academically rich, multicultural learning environment that challenges students of every background to develop their intellect, character and abilities; to realize their goals; and to be socially responsible leaders in their communities, the nation and the world. The college engages students in creative work that demonstrates the knowledge, skills and attitudes contained within the college's Institutional Core Competencies:

- Communication and expression
- Information literacy
- Physical/mental wellness and personal responsibility
- Civic capacity for global, cultural, social and environmental justice
- Critical thinking

Institutional Core Competencies (ICCs)

The Institutional Core Competency statements are a promise to the communities that support De Anza College that students graduating with an A.A. or A.S. degree, or who will transfer to a four-year college or university, will be able to demonstrate the knowledge, skills, and attitudes contained within all of the five competency areas, based on general education and discipline-specific courses at the lower division level. Students who earn a certificate, or have taken courses for personal educational development, will be expected to demonstrate the knowledge, skills, and attitudes specified within one (or more) of the five competency areas.

Communication and Expression

Students will communicate clearly, express themselves creatively, interpret thoughtfully and logically, and engage actively in dialogue and discussion, while paying attention to audience, situation, and (inter) cultural context. Communication and expression may be written or oral, verbal or nonverbal, informational or artistic.

Information Literacy

Students will recognize when information is needed and locate, critically evaluate, synthesize, and communicate information in various formats. They will use appropriate resources and technologies while understanding the social, legal, and ethical issues for information and its use.

Physical/Mental Wellness and Personal Responsibility

Students will recognize lifestyles that promote physical and mental well-being, engage in self-reflection and ethical decision-making, explore career choices and life goals, practice effective individual and collaborative work habits, and demonstrate a commitment to ongoing learning.

Civic Capacity for Global, Cultural, Social and Environmental Awareness

Students will recognize their role as local, national, and global citizens. They will participate in a democratic process, respect social and cultural diversity, appreciate the complexity of the physical world, and understand the significance of both environmental sustainability and social justice.

Critical Thinking

Students will analyze arguments, create and test models, solve problems, evaluate ideas, estimate and predict outcomes based on underlying principles relative to a particular discipline, interpret literary, artistic, and scientific works, utilize symbols and symbolic systems, apply qualitative and quantitative analysis, verify the reasonableness of conclusions, explore alternatives, empathize with differing perspectives, and adapt ideas and methods to new situations.

Values

De Anza values and is committed to:

Integrity

We embrace honesty, credibility, clear communication and acting on our stated values. We strive to acknowledge and address issues that may be difficult to broach. The college's ability to fulfill its mission depends on a college community in which everyone feels included, respected and safe.

Innovation

In all of our many roles, we will continuously and purposefully reflect in order to innovate and improve. We work to ensure our physical space is welcoming, conducive to learning and environmentally sustainable. We are committed to being innovative in our daily work, curriculum and use of technology. We work with our students to be creative, flexible, imaginative and inventive, and to prepare to contribute to a world that will demand skills and competencies not yet in view.

Equity

We welcome students of all ages and backgrounds and connect with them, in their range of unique circumstances, to help them fulfill their dreams. We strive to design classes and services to the needs of those we serve. We value and embrace the intellectual contributions of a diverse spectrum of people and cultures. We strive for a diverse workforce that honors the contributions of all who work here.

Developing the Human Capacity of All Students

We will provide support in six key factors of student success. Our students will be:

- Directed, with a goal and the knowledge of how to achieve it.
- Focused, staying on track to achieve that goal.
- Nurtured, feeling that we want to, and do, help them to succeed.
- Engaged, actively participating in class and extracurricular activities.
- Connected, feeling that they are part of the college community.
- Valued, with their skills, talents and abilities recognized, and with opportunities to contribute on campus and feel that their contributions are appreciated.

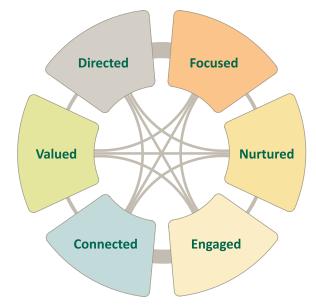
(From "Student Support [Re]defined," a report of the Research & Planning (RP) Group of California Community Colleges, January 2013)

Civic Engagement for Social Justice

We provide students with opportunities to enhance their potential for purposeful and productive lives. As a public institution, we contribute to the development of our local, state, national and global communities. We view our students and ourselves as agents of change, responsible for building the world in which all people are able to realize their dreams in ways that are environmentally sustainable and in alignment with the United Nations' Declaration of Human Rights. (Declaration adopted 1948)



Linkages



The Facilities Master Plan is based on supporting the college's foundational documents: its Mission, Institutional Core Competencies and Values. Almost all instructional activities and student services -- the content and outcome of which are addressed in these foundational documents -- and much student studying and community engagement, occur on the campus, and can be either advanced or hindered by that physical space. The commitment in developing the FMP was to support the work of the college in creating a learning environment that, as stated in the college's Values, is "welcoming, conducive to learning and environmentally sustainable."

Equity is a stated value of the college as well as one of its Strategic Initiatives. The Educational Master Plan (EMP) 2015-2020, also predicated on the college's foundational documents, features equity and the college's equity framework as its central theme.

"Equity is not only a campus commitment; it is a substantive social goal," says the introduction to the EMP. "[T]he college continues its deep commitment to equity by focusing on student success for all, and building a holistic campus culture that reflects the values of equity and engagement for employees as well" (p. 2). Clearly, the building of such a culture can only be enhanced by thoughtful building, renovation and improvement of the campus itself. The EMP makes clear that "Campus facilities play a key role in the student experience at De Anza College." It goes on to describe the integration of educational and facilities planning processes over time:

Deliberate effort has been made in the management of space to encourage dialogue and engagement throughout the campus...The facilities planning process includes input from individuals representing core groups from the college community as well as the incorporation of student surveys and institutional data. When possible, efforts are also made to address special needs as they arise. This collaborative process reinforces the campus commitment to ensuring equity for all users by incorporating sensitivity to the long-term needs of all groups that access the campus. (p. 24)

A recommendation of this Facilities Master Plan responds directly to a concern stated in the Educational Master Plan: "...finding program space to support related Student Services" (p. 24). See page 152 of this document. All FMP recommendations support the college's academic programs.

Planning Process

The planning process was led by the Facilities Planning Committee, composed of faculty, classified professionals and administrators, with the assistance of an external consultant. Additional collegewide representatives participated in the planning. See page 9 of this document. Together, the group reviewed and evaluated information including previous and current Educational Master Plans, the previous Facilities Master Plan, program reviews (which identify instructional facilities needs). The committee then explored options and made recommendations for site and facilities improvements.



The information-gathering and recommendation process followed five steps:

1. Prepare

- Organize existing relevant planning information
- Coordinate the project timeline
- Define the project goals

2. Collect and Analyze

- Assess existing conditions and identify key issues
- Understand college needs from program reviews
- Articulate linkages from the 2015-2020 Educational Master Plan
- Develop framework for exploring options

3. Explore

- Develop and evaluate preliminary options
- Select preferred option

4. Recommend and Share

- Share recommended option with the college
- Develop recommendations and define master plan projects

5. Document and Approve

- Develop draft document
- Share with the college
- Prepare final document for approval

In May and June 2016, Facilities Committee representatives presented the Facilities Master Plan to governance groups – Academic and Classified senates, the Instructional, Student Services, and Finance and College Operations planning and budget teams – for review and comment.



				Analysis
				A

Analysis

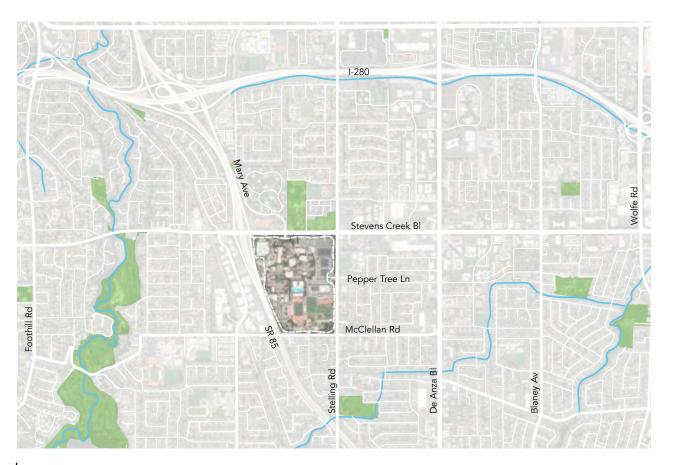
This section documents the analyses of existing conditions that shape the use of the De Anza College campus. The analyses are based on observations and information gathered during campus tours, interviews with faculty, staff, and students, and discussions with the De Anza College Facilities Planning Team. The graphic and narrative descriptions focus on the following:

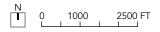
- Campus Context
- Campus Access
- Existing Facilities
- Campus Zoning
- Campus Development History
- Vehicular Circulation and Parking
- Pedestrian Circulation
- Open Space

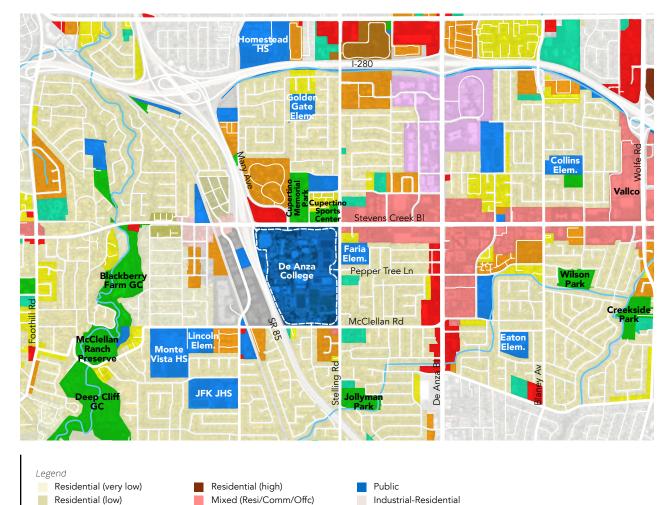
Campus Context

De Anza College is located in Cupertino, California. The 112-acre campus is situated one block from the conjunction of Interstate 280 and State Route 85, across the street from Cupertino Memorial Park.

State Route 85 defines the western border of the campus, and three city streets define the north, east and southern boundaries.







Industrial-Resi-Comm

Open Space

Waterway

Mixed (Resi/Comm)

Mixed (R/C/O/Ind)

Quasi-Public

2500 FT

Residential (low-med)

Residential (med)

Residential (mid-high)

1000

Ν

0

Land Use Adjacencies

The primary frontage for the campus is along Stevens Creek Boulevard, a major commercial corridor. Residential neighborhoods are to the east and south and a diverse mix of uses are nearby in adjacent areas.

Campus Access

Vehicular Access

Major vehicular access to De Anza College is via Interstate 280, State Route 85 and Stevens Creek Boulevard. Access to campus is through major gateways on Stevens Creek Boulevard on the north, Stelling Road on the east, and McClellan Road on the south.

Public Transit Access

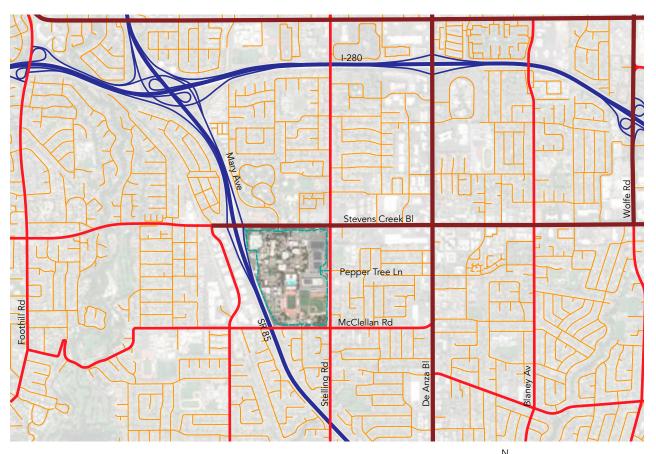
VTA provides transit access to De Anza College along Stevens Creek Boulevard and Stelling Road. One bus stop is located on campus, in front of the Registration and Student Services Building on the north side.

VTA has plans to improve and expand the bus stop at Stelling and Stevens Creek, which will enhance student access to campus.

Bike Access

City bike lanes, recently restriped and highlighted as part of a city initiative, provide public access to campus. There are bike racks throughout the campus, and one enclosed, locked bike corral area, adjacent to Registration and Student Services.

Although the city of Cupertino had requested during earlier construction periods that the college provide bike lanes on campus, there is insufficient room. If bike lanes were to be added, the perimeter landscape berms would need to be severely reduced or eliminated, thereby compromising and reducing their effectiveness as buffers.



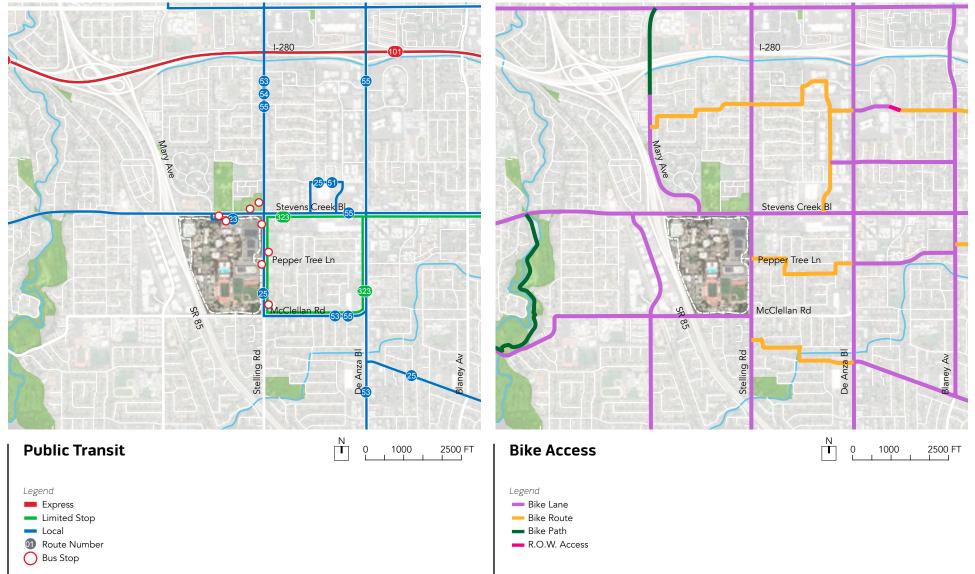
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0

2500 FT

Vehicular Access

- Legend Expressway Arterial Collector Local
 - Private



Existing Facilities

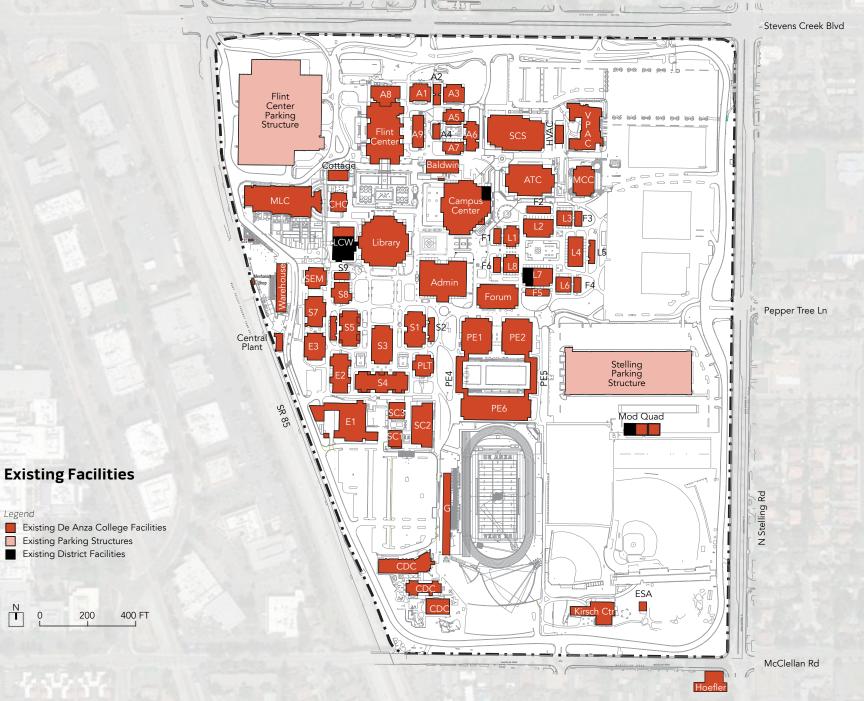
The original De Anza College building are Spanish Revival architecture, blending Spanish and modern architecture with adobe-like walls, red-tile roofs, arches and fountains. The buildings were originally placed in clusters, focusing inward to shared central quads. The newer buildings are of modern architecture. Newer buildings are located on the edges of the campus core and focused outward to support the college's goal to engage with and welcome the community.

Currently De Anza College has 68 buildings on campus. There is a total of 1,478,324 gross square feet of development, including the two parking structures located near major entrances.









Mary Ave

00

Legend

N 0 -



Development History

De Anza College was founded in 1967 on the site of a former winery built at the turn of the last century, called Beaulieu by its owners, Charles and Ella Baldwin. Three original buildings remain from the former winery and have become part of a historical corridor on campus: the California History Center (CHC), East Cottage and Baldwin Winery Building.

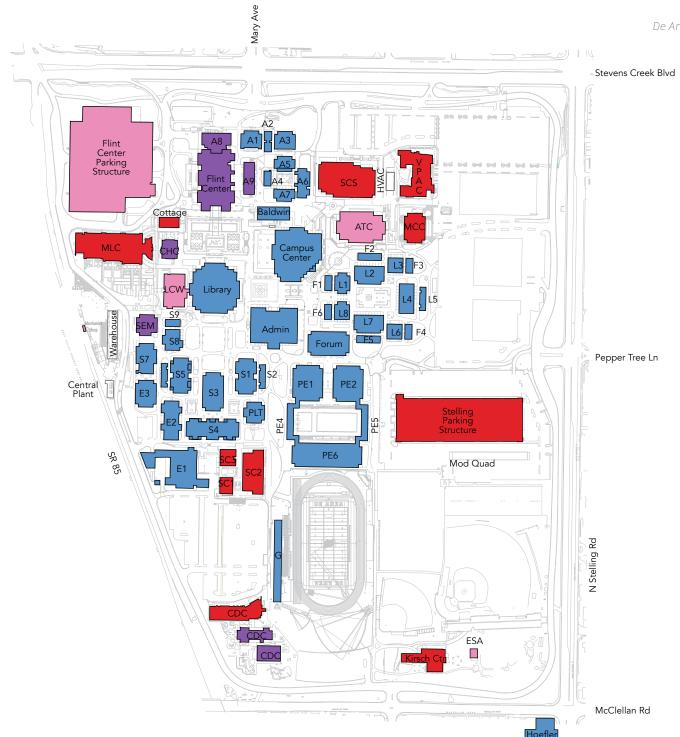
In the 1970s-1990s, several buildings were constructed in Spanish revival style to complete the original campus core. In the 1970s, the first two buildings of the Child Development Center opened at the south end of the campus, and Flint Center was constructed on the northwest side of campus. In the next decade, the Flint Center Parking Structure was built to the west of the Flint Center. The Advanced Technology Center (ATC) was built in the 1990s.

In 1999, voters in the Foothill-De Anza Community College District approved by 71.9 percent the \$248 million Measure E bond to repair and rehabilitate college facilities to meet current health, safety and instruction standards. Approximately \$130 million was earmarked for renovation and construction at De Anza. Projects included modernization of older buildings; renovations of space to address new program needs; the construction of the new Student and Community Services Building (SCS), recently renamed the Registration and Student Services (RSS) Building; the Kirsch Center for Environmental Sciences, and the Science Center Complex. A new main building for the Child Development Center was also built, using state funding rather than Measure E dollars.

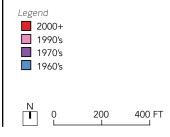
This construction marked the conscious migration away from the original architectural style to one that is more contemporary, while still blending in with the most historical buildings. This change provided the opportunity to explore other built forms and strategies that strengthen the goal of both student and community engagement, as well as to deliberately evolve from architecture with a colonialist history. Unconstrained by a set form or style, this decision also facilitated the move toward another De Anza College goal: to demonstrate environmental stewardship and identify opportunities to educate the students and the community. This is expressed through the newer buildings' solar orientation and use of sunshade devices, larger expanses of glass that bring in more natural daylight, use of solar panels, and use of low-impact building materials that are nontoxic, sustainably produced or recycled.

In 2006, voters approved Measure C, a \$491 million bond for campus, facilities, equipment and technology improvements. This delivered the Visual and Performing Arts Center (VPAC), the Central Plant, a new portion of the Auto Tech Building, and the Media and Learning Center (MLC). In addition, the college completed several facilities renovations and modernizations.









Campus Zoning

Zoning is useful to show the locations of major functions within the campus, illustrating where uses are grouped and where they are dispersed. Services and instructional disciplines that are in close proximity to like services and disciplines are often more operationally efficient and more easily located.

In the diagram on the following page, buildings are colored to show major functions. Facilities with more than one major function are indicated with multiple colors.

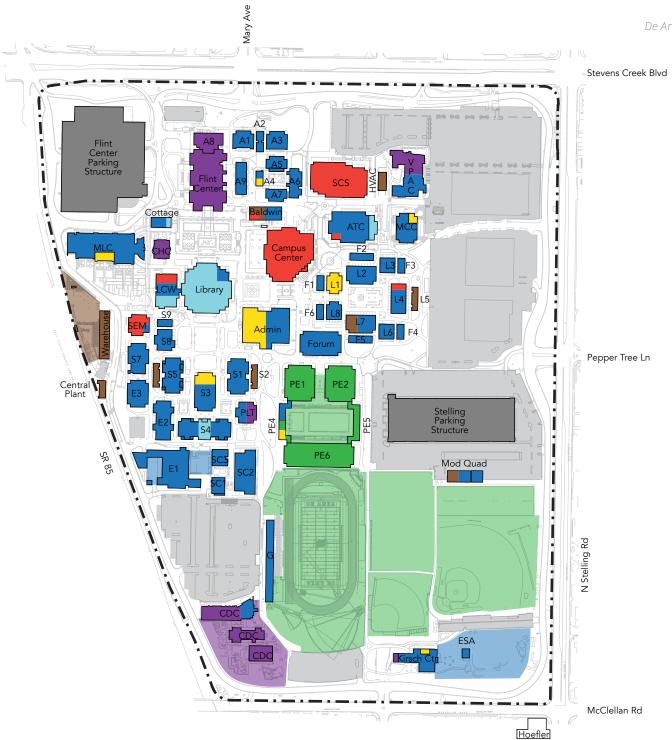
Observations

- Instructional disciplines are generally grouped in clusters and share outdoor learning and gathering spaces, creating recognizable quads with strong identities. They are easily accessed on campus.
- Parking and service are typically located on the perimeter of campus, facilitating use and access.
- Tutorial services are distributed throughout the campus.
- Student services functions are spread out in multiple buildings.

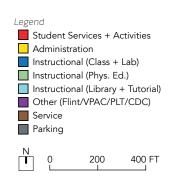








Campus Zoning



Campus Gateways

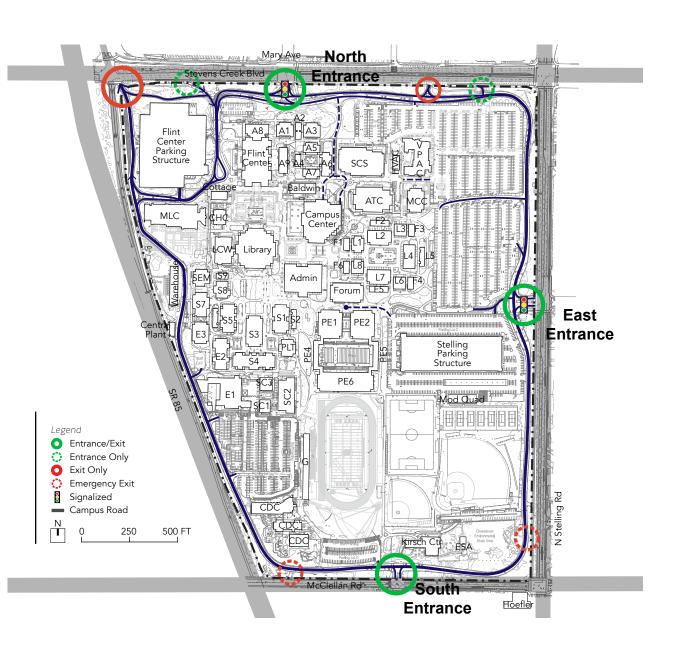
Characteristics of the three main entrances to the campus are:

- North Entrance Mary Ave at Stevens Creek Blvd. This serves as the campus front door for first-time visitors and is located along the most visible side of the campus.
- **East Entrance** Pepper Tree Lane at Stelling Road This entrance is very popular due to its proximity to parking.

• South Entrance - McClellan Road The south entrance provides direct access to the Kirsch Center, the Child Development Center and the Athletic fields. There is no signal at this entry and there may be a need to work with the City to address the traffic load.









Circulation + Parking

Parking structures and lots are located one the edges of the campus and are accessed via the perimeter loop road, Campus Drive. The number of parking spaces totals 5,621 and is predicted to accommodate the current and projected student headcount for the college.

The distribution of parking spaces is listed on the chart below.

			ADA		CDC	Total
Lot A	56	774	14	34	-	878
Lot B	87	814	12	-	-	913
Lot C	82	602	27	11	-	722
Stelling Garage	88	920	21	-	-	1,029
Lot C1	6	41	5	4	-	56
Lot D	15	86	4	4	-	109
Lot E	75	320	10	10	11	426
Staff Lot F	19	-	-	-	-	19
Lot H	-	-	4	-	-	4
Lot J	32	-	2	-	-	34
Flint Garage	107	1,308	13	3	-	1,431
Total	567	4,865	112	66	11	5,621

Pedestrian Access

De Anza College is dedicated to providing equal access to all through universal design, a broad-spectrum view of design meant to produce buildings, products and environments that are inherently accessible and usable by all people, to the greatest extent possible, without the need for adaptation or specialized equipment. Following the framework developed in the Landscape Master plan and Exterior Signage Master Plan, the college has created a welcoming campus that is easy to navigate. Major and minor paths connect people from parking lots to the center of the campus. Color-coded signage identifies campus quads.

Major paths are defined as those used for pedestrian access by most campus visitors, while minor paths are defined as pedestrian access for certain facilities only. The path network connects all buildings and open spaces and provides effective access to the campus community.



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Fire Access

Safety is a priority at De Anza College. To support this, and in accordance with state mandates, a comprehensive network of paths provide access to all emergency vehicles. Fire hydrants, Fire Department connections, post indicator valves, and OS+Y (outside screw & yolk) valves are well dispersed on fire access routes.



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Open Space

Open Space is a valued asset of De Anza College. Buildings are designed in clusters, sharing central quads. Original campus quads are centrally located, with buildings focused inward towards quads. Newer buildings are outward-facing and welcome the community into campus.

The Media and Learning Center (MLC) creates a western campus quad. The Cheeseman Environmental Study Area (ESA) near the Kirsch Center is a natural garden containing more than 400 species of plants representing 12 California natural plant communities. This outdoor learning environment serves both the college and the surrounding communities.



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Recommendations

Recommendations

Recommendations build upon the college's embrace of its physical space as welcoming, conducive to learning and environmentally sustainable. The recommendations for the future development of the campus are described in the following sections:

- Facilities Planning Principles
- Planning Data Analysis
- Summary of Recommendations
- Facilities Projects
- Site Recommendations

Facilities Planning Principles

Support De Anza College's Commitment to an Equity Framework

Meet the unique needs of each student through the development of a welcoming and supportive environment that embodies a sense of value and connectedness.

Enhance Student Achievement

- Consolidate related programs and services to better serve students
- Develop indoor and outdoor spaces to support student engagement
- Develop the campus to support faculty and staff collaboration
- Develop the campus as a welcoming and nurturing community

Improve Campus Connectivity

- Provide a safe and universally accessible campus
- Enhance physical connections (pedestrian, bike, vehicular, transit) within the campus and community
- Improve campus landscape and wayfinding including the addition of voice/audio support
- Create incentives for non-vehicular commutes to campus

Improve Efficiency of Facilities

- Improve facilities to support innovation and equity
- Replace inefficient and under-performing facilities
- Maximize land use with efficient planning
- Improve functional zoning and operational efficiencies
- Develop flexible, multi-purpose facilities to adapt over time

Right-Size Facilities to Address Program Needs

- Align the projected inventory with state guidelines
- Position De Anza College to maximize state and local funding

Improve Security and Safety

- Collaborate in developing and implementing districtwide standards for security equipment and protocol
- Provide sufficient lighting for safety throughout campus, including all pathways and parking areas







Promote Sustainability

- Develop campus as a living lab to increase awareness
- Improve day-to-day behavior to reduce energy and water consumption and encourage recycling and re-use
- Consider more socially, financially and environmentally beneficial product use and procurement
- Support improved landscaping, greenery and water-minimizing solutions

Health and Wellness

• Promote physical activity and other health-related programs

Planning Data Analysis

Projected Space Needs

Title 5 of the California Code of Regulations prescribes a set of benchmark standards for the utilization and planning of most educational facilities at public community colleges. These standards, when applied to the total number of students served and the related Weekly Student Contact Hours (WSCH), a total number of hours faculty contact students weekly in an academic department or institution, equivalent to the student enrollment multiplied by class hours per week, result in the total capacity requirement expressed in assignable square feet (ASF), available for use.

The benchmark standards are applied to WSCH projections in order to generate the instructional space needs for lecture and lab space at the college. In addition, formulas determine campuswide requirements for office, library, instructional media and all other space use.

The Master Plan Space Program table on the following page summarizes the distribution of spaces on the De Anza College campus and projects future space needs for 2025 using Title 5 standards. The difference represents an approximate target to plan for to be in line with state standards.

Capacity Load Ratios

- The capacity/load ratio is the measure of the space utilization efficiency according to Title 5 standards
- The ratio compares existing space (capacity) to enrollment levels (load)
- A ratio of over 100% indicates that there is additional available capacity; a ratio of under 100% indicates a need for additional space to support enrollment (see illustrations at right)
- Assumed utilization for classrooms is 53 hours per week; utilization for labs varies per discipline
- Capacity/load ratios are rolled up and measured as an aggregate by room-use category for each campus

Program Data

In addition to the analysis of quantitative data, the planing process included the review of qualitative sources of information:

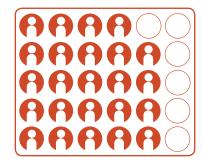
- Measure E and Measure C Project Lists in order to determine what facilities needs still needed to be addressed
- **Program Reviews** to identify facilities improvements needed to support instructional and student support program needs

Conclusions

- Master plan space programming was calculated based on enrollment and WSCH forecasts for 2025 (see tables on next page)
- The Master Plan Space Program indicates no need for additional space through 2025 to support the projected program needs
- The program reviews indicate a need for improved space to enhance learning environments and support program needs.

AAAAAA AAAAAAA AAAAAAA AAAAAAA AAAAAAA

of seats = # of students
100% capacity/load



of seats > # of students
over 100% capacity/load

of seats < # of students
under 100% capacity/load</pre>

Master Plan Forecasts	YEAR	FALL ENROLLMENT	WSCH
	2014	23,212	227,870
	2025	26,000	254,523

Space Inventory Space Types		S					
Room Use	Lecture	Lab	Office	Library	Instructional Media	Other	
Numbers	100s	200s	300s	400s	530s	520, 540-	-800s
Description	Classrooms	Labs	Offices	Library	AV/TV	PE	Bookstore
	Support Spaces	Support Spaces	Support Spaces	Study	Technology	Assembly	Meeting Rooms
		All offices including administrative and student services	Tutorial	Support Spaces	Food Service	Data Processing	
			Support Spaces		Lounge	Physical Plant	
							Health Services

Master Plan Space Program

Space Category	Current Inventory - 2015	Master Plan Space Program	Difference	Capacity Load
Lecture	102,364	87,297	-15,067	Over
Lab	185,131	91,662	-93,469	Over
Office	96,960	67,873	-29,087	Over
Library	56,911	44,086	-12,825	Over
Instructional Media	13,398	13,219	-179	
Other	209,158	163,475	-45,683	
Total ASF	663,922	467,611		

Facilities Recommendations

Though capacity load data does not indicate the need for additional space, the desire to better serve students and facilitate their access to instructional and student support programs and services has led to the facility recommendations which follow. These recommendations, based on the facilities planning principles, support the Educational Master Plan through responding to program needs. The recommendations include a series of facility projects and site improvement projects and are described on the following pages.

New Facilities

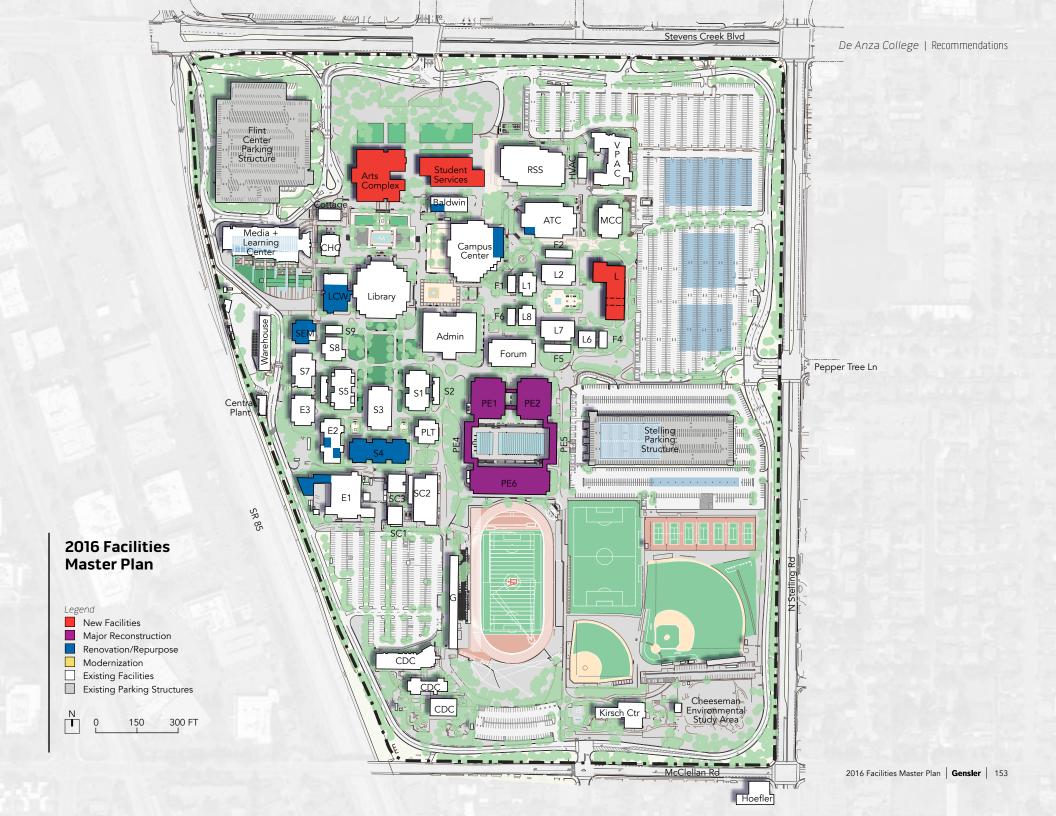
- Arts Complex
- Student Services (consolidated)
- L Building

Renovation + Repurposing

- Physical Education (PE) Facilities
- Learning Center West (LCW)
- S4
- Auto Tech and E2
- Student Services (various locations)

Site Improvements

- Improve ADA pathway
- Improve vehicular circulation and develop new campus entry and drop-off
- Improve landscape and gateway
- Improve signage and wayfinding, including audible signs



New Construction

Arts Complex

The existing A Quad buildings are 50 years old. Though minor renovations were performed under Measure E, major improvements are needed to address program needs and code requirements. Renovation of these aging facilities would require a significant investment.

A new Arts Complex was recommended during the planning process and site options were explored. Building in the current location would require all programs to move out into temporary space while the building was constructed; a costly and disruptive solution. Building the Arts Complex in a new location would eliminate the need for temporary space and multiple moves.

Due to the limited land available for additional buildings, the college evaluated the adjacent Flint Center location as an option. The Flint Center does not support the college's instructional program needs and occupies valuable land at the front of the campus. This site was selected as the preferred location and the demolition of the Flint Center would be required to provide necessary instructional space.

The new Arts Complex will provide improved learning environments to support the Arts programs in a consolidated location. Indoor and outdoor space will be designed to support interdisciplinary collaboration and to showcase programs. A multi-story building is recommended to maximize land use and to create outdoor learning spaces that tie into the campus fabric.

Student Services

Currently, student services programs are dispersed throughout the campus in multiple locations, limiting students' efficient access. The Registration and Student Services, constructed in 2005 and named the Student Services Building, was originally planned to house all services. An ultimately limited budget did not permit this centralization.

A second building is proposed for construction to the west of the existing Registration and Student Service Building, at the site of the current A Quad buildings. This will allow all dispersed services to move to a consolidated location at the front of the campus, where the two student services buildings will form a welcoming gateway to the campus. Services will be visible to first-time visitors such as potential students and parents, students will have increased, convenient access to multiple services. The outdoor spaces and pathways will be developed and link to the campus core, enhancing the overall experience. This recommendation directly responds to the Educational Master Plan point that "...challenges include finding program space to support related Student Services" (p. 24).



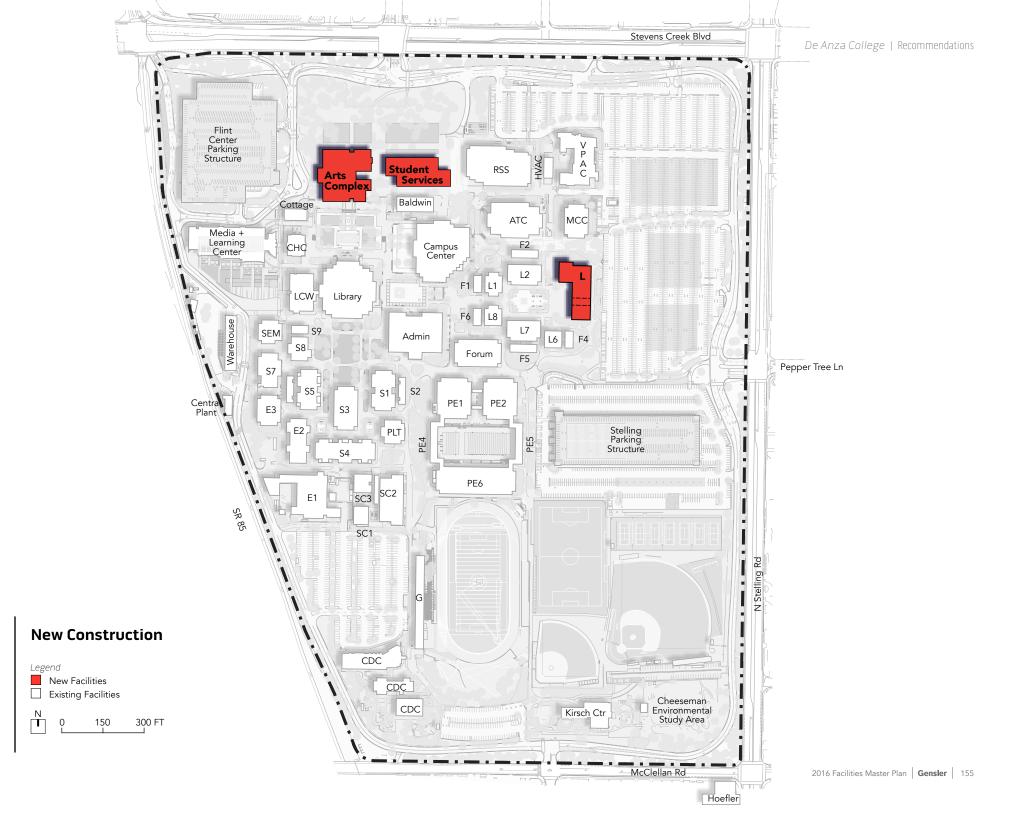
L Building

The new L Building is recommended to replace several aging facilities – L3, 4 and 5 and F3 -- located on the east side of campus. The aging facilities are limiting the college's ability to provide effective learning environments that support collaboration and integrate instructional support.

The new building will provide larger classroom space, and improved classrooms will be designed for collaborative instruction and flexible room arrangements. Faculty offices will be integrated into the new building to enhance the overall learning environment and increase students' access to support. The L Building will also provide space for Campus Police and Educational Technology Support (ETS). These functions are recommended to be located on the south end of the building, with easy access to transport. The small Central Plant that is currently located in L5 will be incorporated in the proposed L Building. Further study will be necessary to optimize the plant to reduce energy consumption and improve efficiencies.

A multi-story building is recommended to maximize land use and improve efficiencies. The reduced footprint allows for the extension of the L Quad and the development of outdoor learning spaces and pathways that tie into the campus fabric. The east side location provides an opportunity to enhance the gateway experience for pedestrians entering from parking lots or from the bus stop.





Renovation and Repurpose

PE Facilities

While improvements were made to the original Physical Education facilities under Measure E, the 50-year old facilities are not meeting the needs of current instructional practices and requirements. In addition to improving the condition of the existing facilities, repurposing sections of the building is recommended to address program needs and meet code requirements. Additional study is required to define the scope of work.

Learning Center West

Educational Technology Services (ETS) currently occupies prime real estate in the campus core. This Facilities Master Plan recommends that ETS be relocated from its current location in the Learning Center West (LCW) to the new L Building and that its former area be repurposed into instructional support space. In addition, renovations are recommended for the computer lab on the lower level of LCW.

S4

Current tutorial space in S4 needs renovation to allow for more collaborative interaction and instruction.

Auto Tech and E2

The addition of a new classroom in Auto Tech and the E2 Building are recommended to support the program needs. Further study is needed to define the scope of work for these renovations.

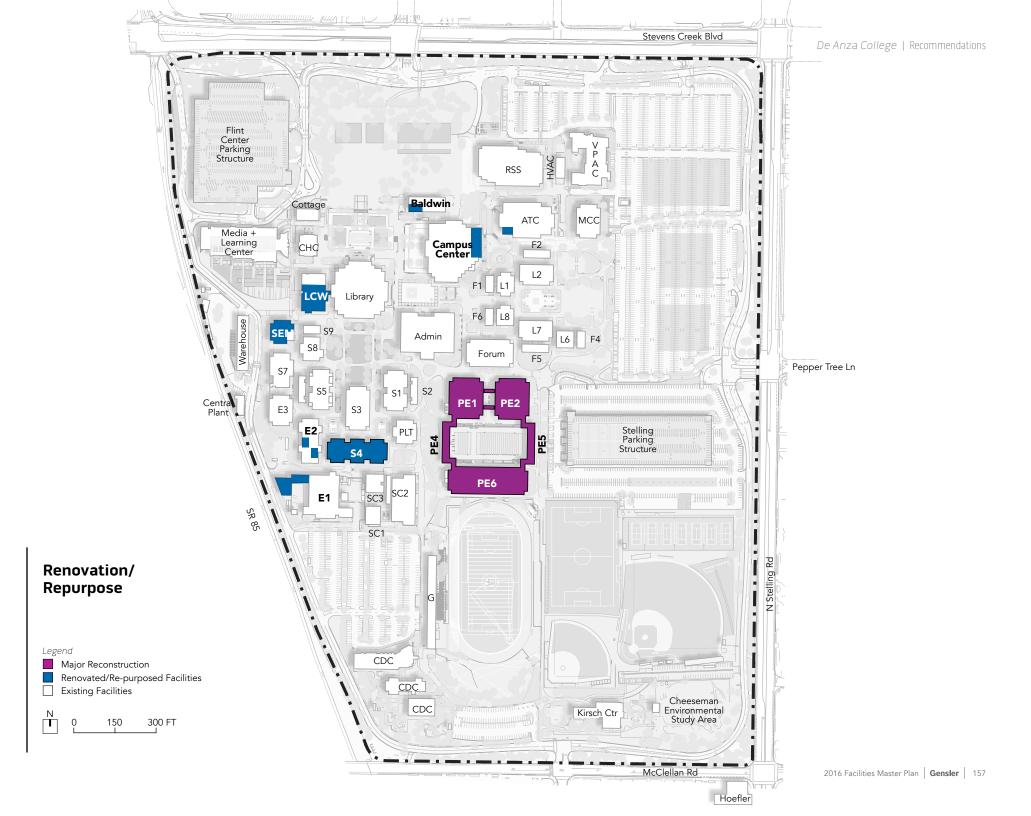
Student Services

Student Service functions located throughout the campus are recommended to be consolidated into a "front door" location into the new Student Services Building. Following the construction of this new building a series of spaces will be vacated in ATC, Baldwin, Campus Center, LCW and SEM. These spaces would be re-purposed to support other college program needs. Additional study is needed to define the new uses.

Facilities Modernization

In addition to the buildings identified for renovation and re-purposing, there are several buildings on campus in need of modernization. In order to meet the highest standards of technology, security, and comfort, modernization is recommended for these facilities. Additional study would be required to identify the criteria and extent of the need.





Site Improvements

The campus should meet the unique needs of each student through the development of a welcoming and supportive environment. Universally accessible outdoor spaces, pathways and signage improve access, enhance achievement and maximize campus connectivity.

Improvements to the main campus entry along Stevens Creek Boulevard are recommended to alleviate congestion, improve access and create a welcoming gateway to De Anza College. Further study is needed to determine the extent of these improvements.

The De Anza College Master Signage Plan, chiefly implemented through Measures E and C, includes a series of recommendations to improve navigation and campus wayfinding, including the use of multiple, assigned colors on signage to establish visual hierarchy, making signs easier to read and representative of the quad areas where they are placed. In addition, this Facilities Master Plan recommends the inclusion of audible signs with voice cues.

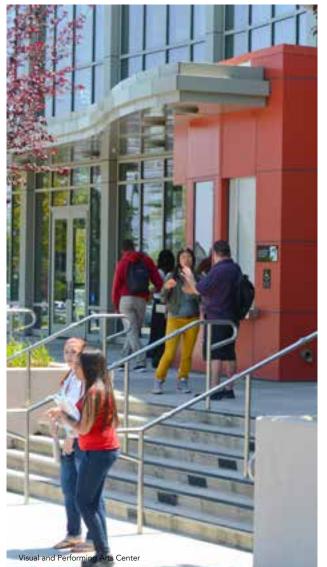
Lighting has been improved through both Measures E and C; however, lighting improvements to Campus Drive are necessary. Another recommendation is to switch to LED lighting on the interior of campus to improve light quality and energy efficiency.

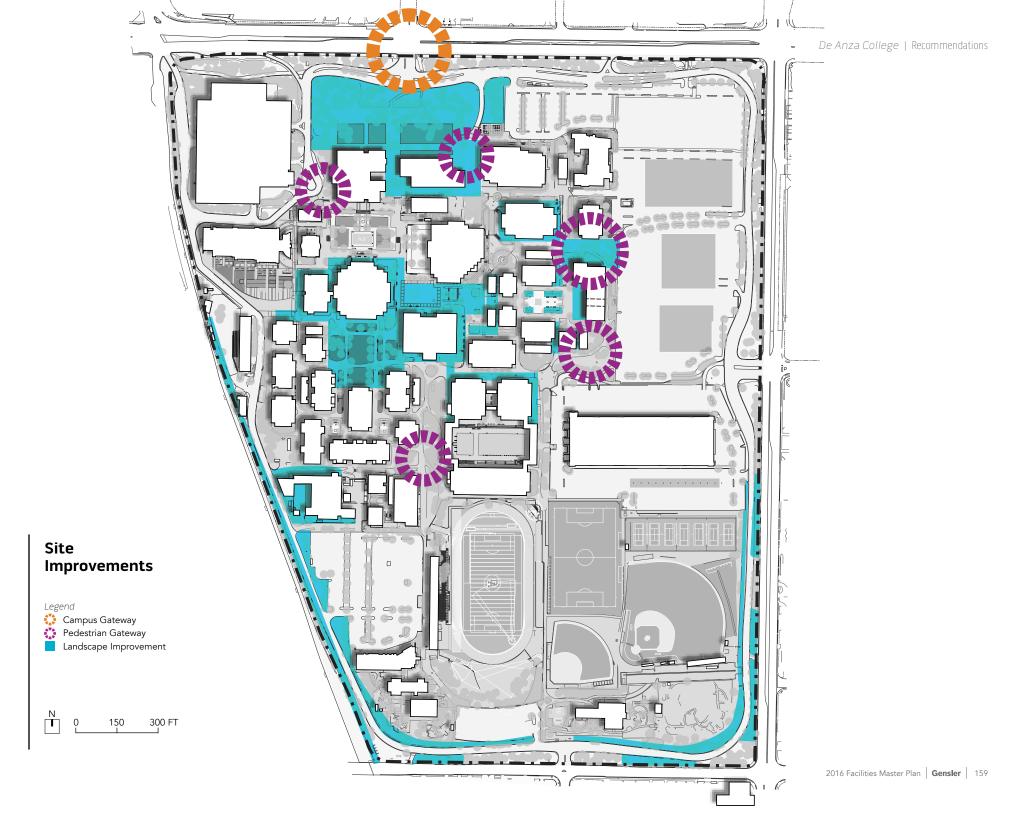
Site planning will at all times include consideration of relevant infrastructure improvements such as HVAC and electrical systems.



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Landscape Plan

The De Anza College Master Landscape Plan, developed in 2010, focused on the Central Campus and S Quad. Improvements included recommendations regarding planting, site furnishings, paving, soil condition and drainage, and the plazas. The use of drought tolerant plants and computer-controlled irrigation systems support the college's low water usage.

Most all of these recommendations have been completed and will serve as the basis for new projects moving forward. Design elements from this plan are shown on the following page.

In this Facilities Master Plan, it is recommended that in addition to the recommendations of the 2010 Master Landscape Plan, the site improvements should include the following areas:

- Main Entry
- Along loop road south of Stelling parking structure to Lot E
- Around E1
- Along western boundary
- Throughout Central Campus







Campus Landscape Improvements

- 1. Drought and shade tolerant plants suitable for under oaks and redwoods include alum root species.
- 2. Grasses planted at edge of planter for erosion control
- 3. Board-form concrete retaining wall for interest at planter edges and campus entries
- 4. Raised walls retain soil at redwood groves
- 5. Native understory planting at redwood groves includes sedges and heuchera species
- 6. Existing successful example of healthy new trees and decomposed granite mulch in paving
- 7. Low wall at planter edges with heavy mulch application
- 8. Accent plantings function as a bio-swale for drainage
- 9. Accent planting at pedestrian entries under redwood groves may include sedges
- 10. Option for seating at redwood groves
- 11. Existing example of successful vine. planting along bare building facades

Source: De Anza College Master Landscape Plan, (2010).

















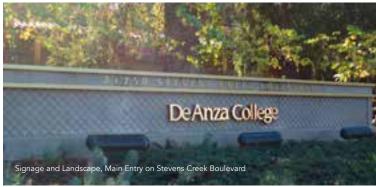


Sign Program

The De Anza College Master Sign Program includes a series of recommendations to improve navigation and campus wayfinding. The program recommends a number of colors to establish visual hierarchy to make signs easier to read and also key signs to the quad areas where they are placed.

In addition to identified improvements, this master plan recommends the inclusion of audible signs with voice cues.

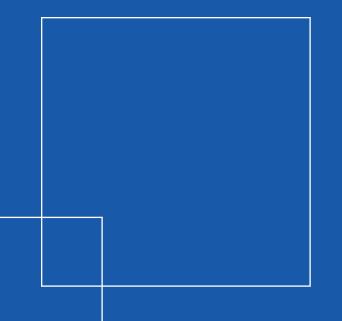


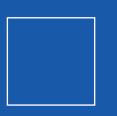


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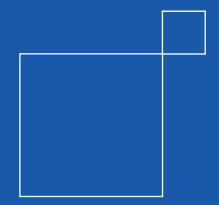


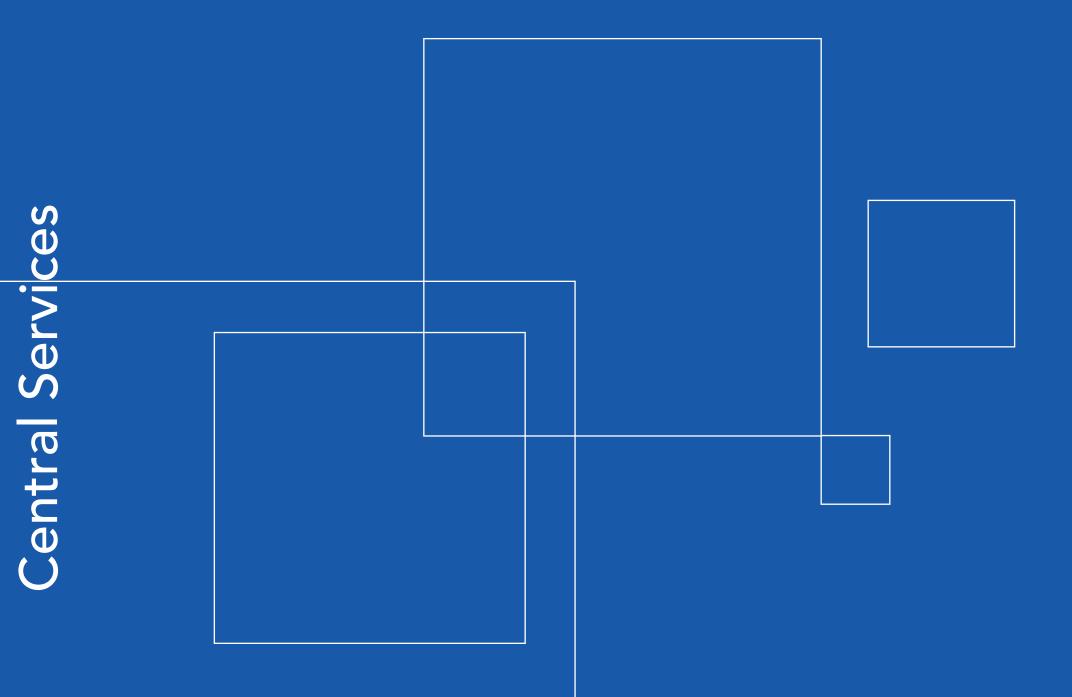






Central Services







Central Services

OVERVIEW

Foothill-De Anza CCD Central Services provides districtwide leadership and support through its operational divisions, which include the following:

- Business Services
 - Facilities and Operations
 - Purchasing
- Chancellor's Office
 - Foundation
- Human Resources
- Technology
 - Research





BUSINESS SERVICES

Business Services conducts the District's day-to-day business activity and transactions, as well as the longrange development of the annual budget, contract development/review, audit oversight, and implementation of policies and procedures.

CHANCELLOR'S OFFICE

The Chancellor is the District's chief executive officer and works with the presidents of the two colleges to further the institutional excellence and innovation of the District.

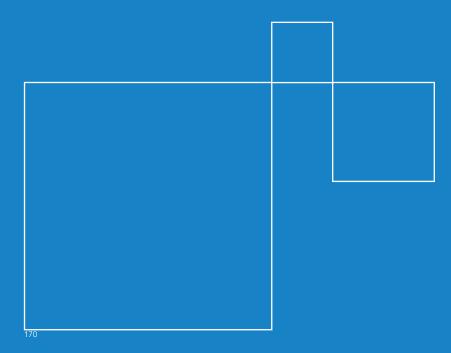
HUMAN RESOURCES

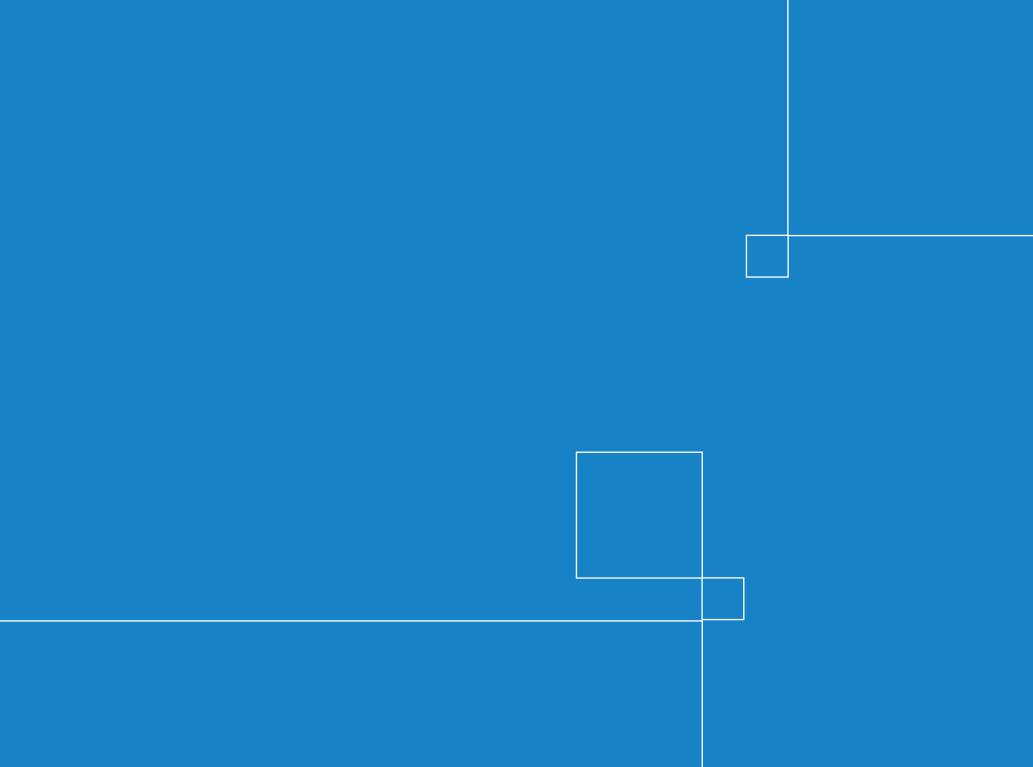
The District Office of Human Resources provides support to a diverse student, faculty and staff community focusing on the core values of customer service, building efficiency and effectiveness, and creative problem solving.

TECHNOLOGY

Educational Technology Services (ETS) is a comprehensive, centralized support organization that serves the academic and administrative technology needs of the students, faculty and staff of the Foothill-De Anza Community College District.

Central Services Overview and Recommendations





Existing Central Services Facilities

EXISTING CONDITIONS OVERVIEW

Central Services has a presence on both the Foothill and De Anza College campuses. Its indoor facilities include office, warehouse, and data center space. Outdoor facilities include receiving and loading yards, equipment yards and maintenance yards.

FOOTHILL COLLEGE

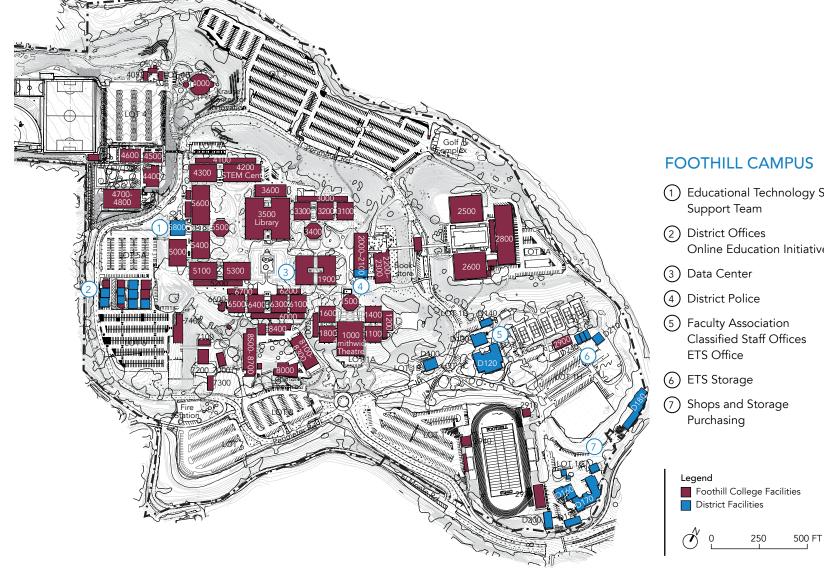
At Foothill College, the District offices are located in the temporary village at Lot 5/6. The new District office facility at Lot 7, scheduled for opening in Winter 2018, will house these current temporary offices, as well as the Chancellor's office. Facilities and Operations occupies much of the college grounds east of the Perimeter Road, south of the Kinesiology facilities with office, storage, receiving, and maintenance facilities and yards. Educational Technology Services (ETS) has its main office in Building D120 and also occupies space in Building 1900 (data center), Building 5800 (support team), and in a temporary building adjacent to Lot 1H (storage). District Police is housed in the lower level of the Campus Center.

Key Issues:

- ETS has multiple locations on campus, which limits functionality and operational efficiency
- District Police has multiple locations on both campuses, which limits functionality and operational efficiency



Architectural rendering of the new district office



- (1) Educational Technology Services (ETS)
 - Online Education Initiative Office

Existing Central Services Facilities

DE ANZA COLLEGE

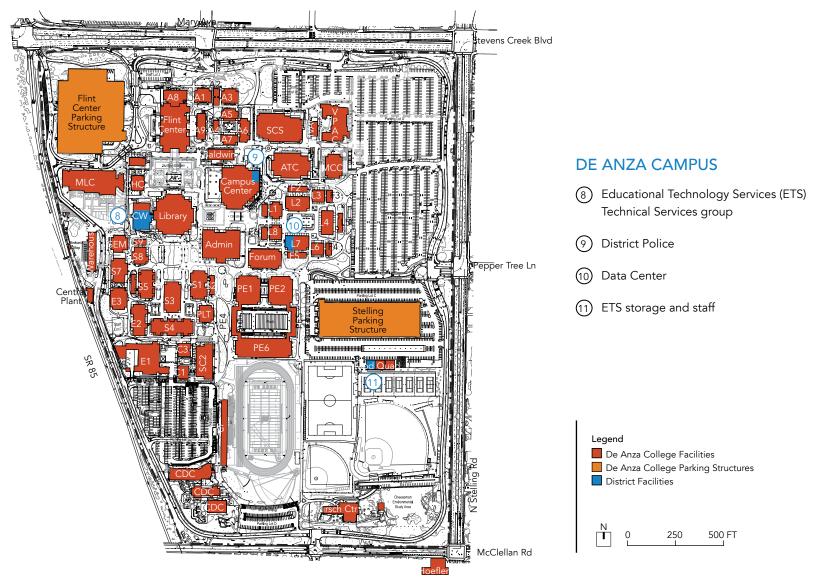
At De Anza College, Central Services has a smaller physical footprint than at Foothill College. Educational Technology Services (ETS) occupies space within Learning Center West (LCW) and L7, housing the Technical Services group and the data center, respectively. The District Police has their campus substation within the lower level of Campus Center.

Key Issue:

• Central Services occupies core campus space that could better be used for instructional or student support uses







Central Services Facilities Recommendations

The facilities recommendations for Central Services address the key planning issues identified in the overview of existing conditions. Recommendations for improvements for Central Services facilities on both the Foothill Campus and De Anza campus are based on two core Facilities Planning Principles:

- Improve efficiency of facilities
- Improve safety and security

The recommendations are listed here and described in more detail on the following pages.

FOOTHILL CAMPUS

NEW FACILITIES

- District Office Facility
- District Police Facility
- Storage + Staging Facility

REPURPOSED FACILITIES

- Building 8100-8300
- Space vacated by ETS functions in Building 5800
- Space vacated by District Police in Campus Center

SITE IMPROVEMENTS

• Parking Lot 1H expansion

DE ANZA CAMPUS

NEW FACILITIES

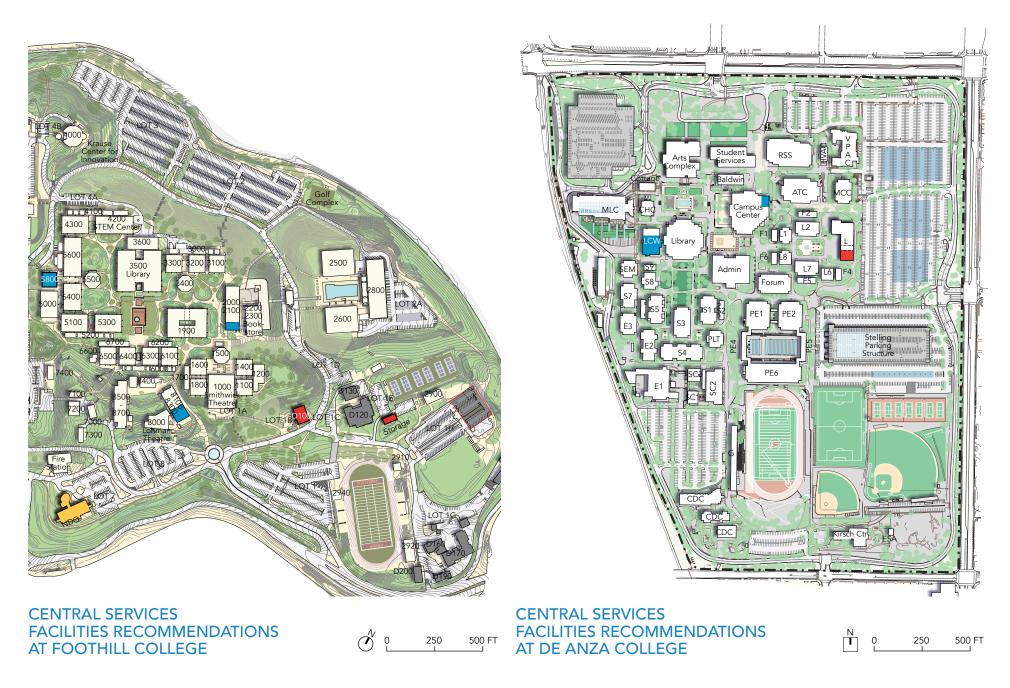
• L Building

REPURPOSED FACILITIES

- Relocate ETS
- Relocate District Police
- Repurpose vacated space in Learning Center West (LCW) and Campus Center

CENTRAL SERVICES FACILITIES RECOMMENDATIONS



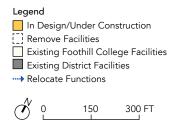


Central Services Facilities Recommendations at Foothill College

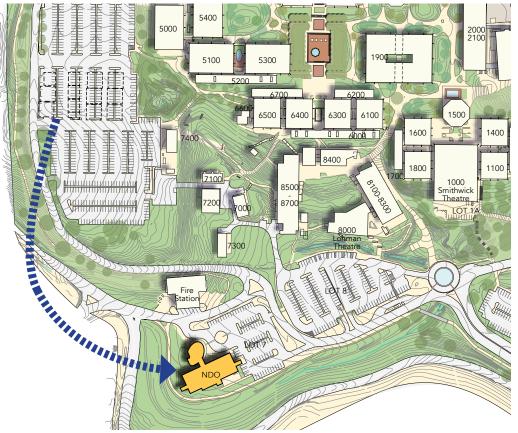
RECOMMENDATIONS

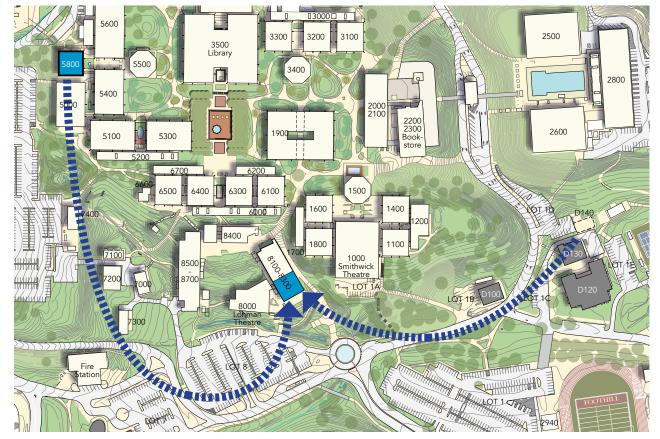
DISTRICT OFFICES

- Relocate offices related to central services in temporary village to the new district office
- Relocate the Purchasing Department from Plant Services to the new district office
- Remove temporary village
- Add parking at Lot 5









RECOMMENDATIONS

Pending results of the Foothill College Building 1900 feasibility study, consider the following:

BUILDING 8100-8300

• Include some central services, e.g. ETS, in the repurposing of Building 8100-8300 to free up space

BUILDING D140

- Relocate offices in the Annex (Building D140) to Building 8100-8300
- Demolish Building D140

ETS SUPPORT TEAM

- Relocate ETS functions from Building 5800 to Building 8100-8300
- Re-purpose Building 5800 for Foothill College needs

300 FT

Legend

 $\bigwedge^{N} 0$

Repurposed Facilities
 Remove Facilities
 Existing Foothill College Facilities
 Existing District Facilities
 Relocate Functions

150

Central Services Facilities Recommendations at Foothill College

RECOMMENDATIONS

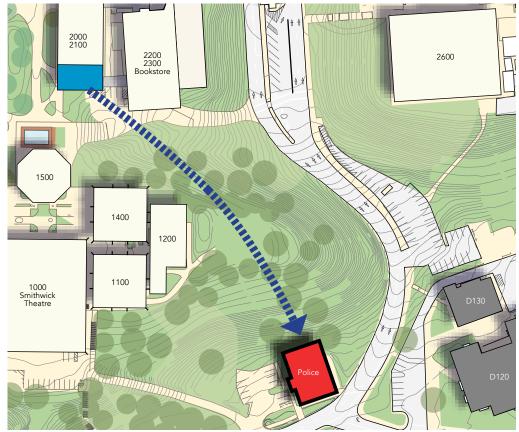
DISTRICT POLICE

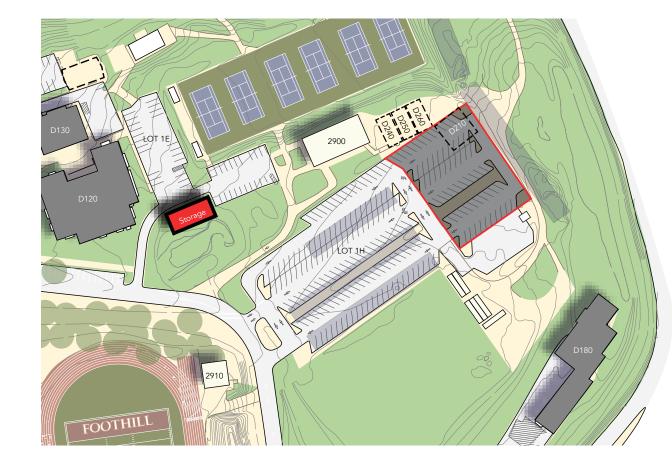
• Relocated police functions currently in Building 2000-2100 to new police facility

CHANGE OF USE

• Repurpose vacated space in Building 2000-2100 for College use







RECOMMENDATIONS

ETS STORAGE

- Construct new storage + staging facility near D120 for ETS and facility operations
- Remove temporary storage units adjacent to Lot 1H – D240, D250, and D260 – and D210 in Lot 1H

LOT 1H

• Extend Lot 1H to provide (68) additional parking spaces



Central Services Facilities Recommendations at De Anza College

RECOMMENDATIONS

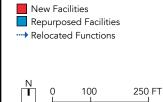
L BUILDING

- Move ETS from LCW to new L Building
- Move ETS from MQ1 to new L Building
- Move Police from Campus Center to new L Building

CHANGE OF USE

- Repurpose vacated space in LCW and Campus Center to support College needs
- Remove Mod Quad

Legend





Library

THEFT

ATC

Structure

Campus Center

Forum

Admin

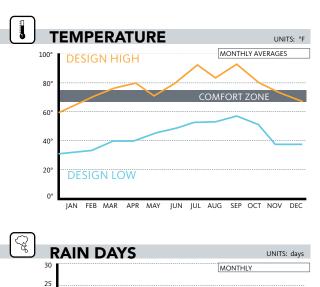
Providing access to a dynamic learning environment that fosters excellence, opportunity and innovation.

Appendix



Appendix

Environmental Mapping

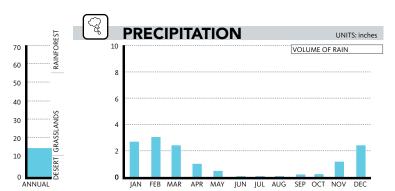


NOV

AUG SEP OCT

Temperature is the primary climatic element that contributes to human comfort. Temperature can be a liability in both hot and cold climates especially if it is consistently too hot or consistently too cold.

There are many reasons to consider the amount of rainfall on a project site including control of storm water runoff, mitigation of urban heat-island effects, and creation of wildlife habitats.



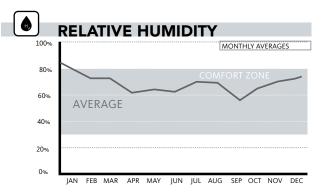
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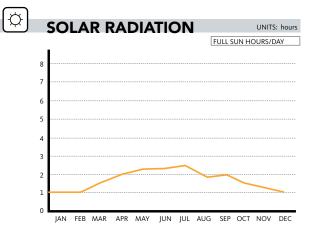
> Looking at the volume and distribution of rainfall on the site, along with temperature and solar radiation, will give a sense of what type of design strategies will be possible, such as a green roof or a rainwater retention system, if appropriate for the site.



To feel comfortable, both the temperature and humidity must be within an individual's comfort zone. Thus, excessively high or low humidity can push otherwise comfortable temperatures to feel uncomfortable.

High humidity is a liability because it reduces the effectiveness of sweating to cool the body by preventing the evaporation of perspiration from the skin, causing people to feel hotter than they would at the same temperature if humidity was low.

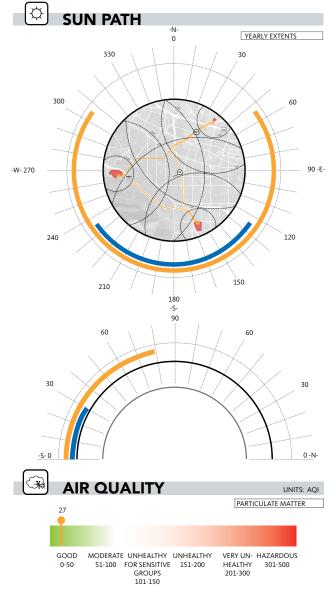
Moisture (humidity) can be an asset by evaporating in hot, dry climates to cool and humidify the air.



Solar radiation can extend the comfort zone by heating cool temperatures.

The sun can be used as an asset in cool and cold climates to provide passive heating to reduce heating loads, but can be a significant liability in hot climates where it can quickly overheat a building.

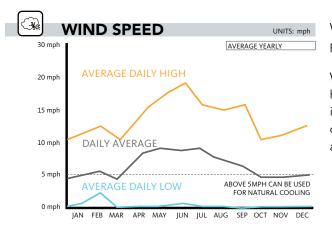
Environmental Mapping



The Sun Path diagram characterizes the movement of the sun through the sky in summer and winter. The orange arc indicates the widest extent of sunrise and sunset in summer. The blue arc indicates the minimum extent of sunrise and sunset in winter. At a macro-level, the diagram at left begins to illuminate where the opportunities are for sun penetration into the site and building groupings.

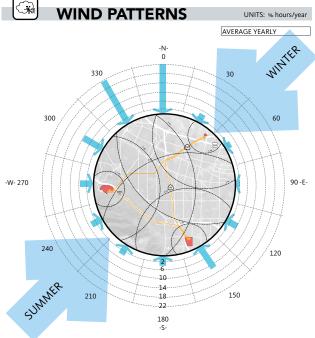
The diagram at left shows the sun's path throughout the year. The highest arc represents the sun's altitude in the summer, while the shortest, lowest arc is the sun's altitude in the winter.

The air quality is considered good, on a scale from good to hazardous, and people with respiratory disease are the group most at risk.





Wind is a liability in cold climates because it carries away heat more quickly than usual. Wind can also be a liability to comfort in hot, dry climates when it causes one to dehydrate and consequently overheat. Wind can be an asset in hot, humid climates to provide natural ventilation.

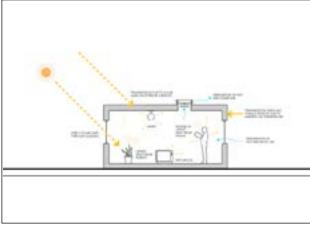


The Wind Patterns diagram characterizes the direction from which the wind enters the site and the percentage of hours per year that the wind is coming from a particular direction. The length of each arrow indicates the percentage of hours per year that wind blows from each direction. This diagram describes orientation opportunities that exist, along with locations where natural ventilation may be incorporated into the design, and the availability of user-accessible comfort strategies.

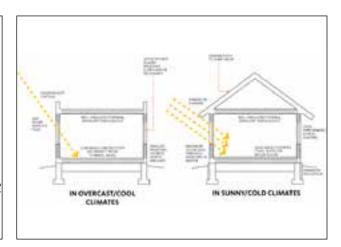
During the summer and fall seasons, winds tend to come in from the north and range between 5–25 miles per hour, with anomalous wind gusts from the south-east as high as 15 miles per hour. The temperature range between 30-70 degrees Fahrenheit.

During the winter months, winds come consistently from the north, north west and south-east, and range between 5-30 miles per hour.

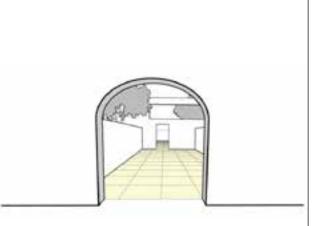
Sustainable Design Strategies



Heat gain from equipment, lights, and occupants will greatly reduce heating needs so keep home tight, well insulated (use ventilation in summer).



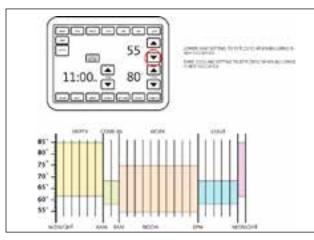
Tiles or slate (even on low mass wood floors) or a stonefaced fireplace can help store winter daytime solar gain and summer nighttime 'coolth'.



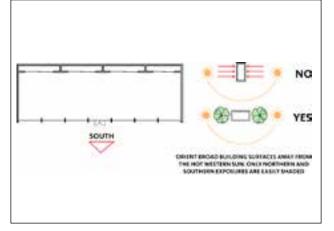
Sunny wind-protected outdoor spaces can extend living areas in cool weather.



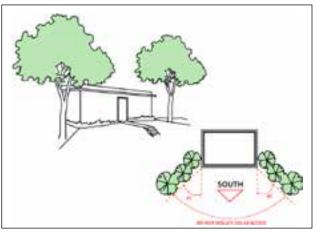
Provide double pane high performance glazing (Low-E) on west, north, and east, but clear on south for maximum passive solar gain.



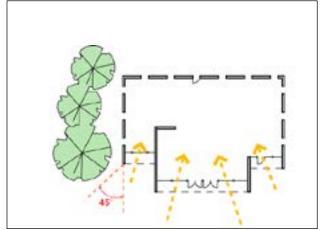
Lower the indoor comfort temperature at night to reduce heating energy consumption (lower thermostat heating setback) (see comfort low criteria).



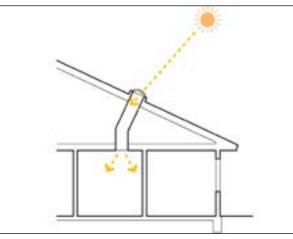
For passive solar heating face most of the glass area south to maximize winter sun exposure, but design overhangs to fully shade in summer.



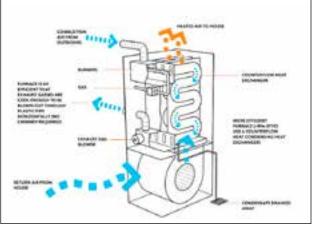
Trees (neither conifer nor deciduous) should not be planted in front of passive solar windows, but rather beyond 45 degrees from each corner.



Organize floorplan so winter sun penetrates into daytime use spaces with specific functions that coincide with solar orientation.

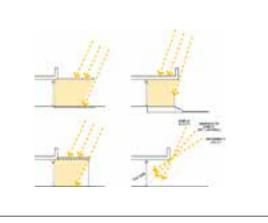


Small well-insulated skylights (less than 3% of floor area in clear climates, 5% in overcast) reduce daytime lighting energy and cooling loads

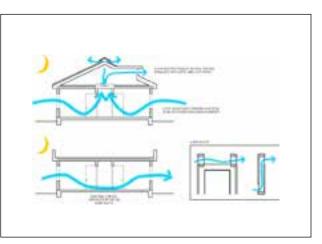


High Efficiency furnace (at least Energy Star) should prove cost effective.

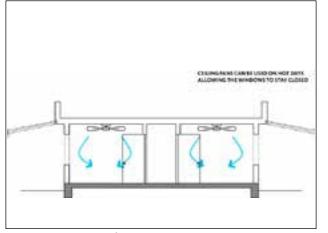
Sustainable Design Strategies



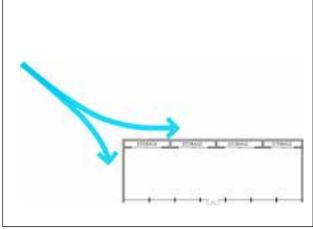
Window overhangs (designed for this latitude) or operable sunshades (extend in summer, retract in winter) can reduce or eliminate air conditioning.



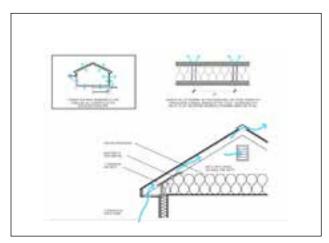
A whole-house fan or natural ventilation can store nighttime 'coolth' in high mass interior surfaces, thus reducing or eliminating air conditioning.



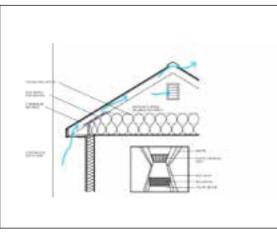
On hot days ceiling fans or indoor air motion can make it seem cooler by at least 5 degrees F (2.8C) thus less air conditioning is needed.



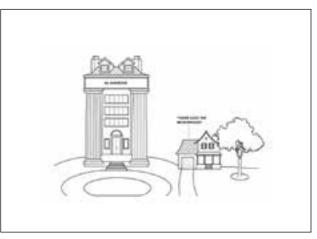
Locate garages or storage areas on the side of the building facing the coldest wind to help insulate.



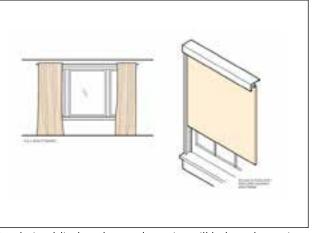
Extra insulation (super insulation) might prove cost effective, and will increase occupant comfort by keeping indoor temperatures more uniform.



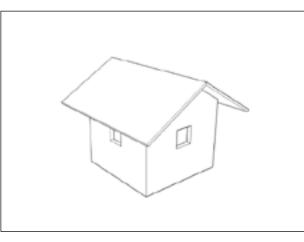
Steep pitched roofs, vented to the exterior with a well insulated ceiling below, work well in cold climates (sheds rain or snow, prevents ice dams).



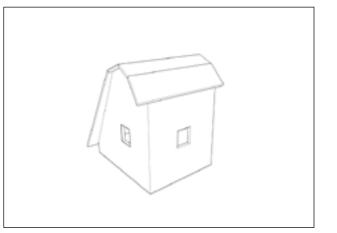
Keep the building small (right-sized) because excessive floor area wastes heating and cooling energy.



Insulating blinds or heavy draperies will help reduce winter night time heat losses.



Traditional homes in cold overcast climates used low mass tightly sealed, well insulated construction to provide rapid heat buildup in morning.



Traditional homes in cold climates had snug floorplan with central heat source, south facing windows, and roof pitched for wind protection.

Sustainability Boards

RESOURCE STEWARDSHIP

- Material Procurement & Waste Management
- Greenhouse Gases & Climate Action
- Site & Habit
- Water & Wastewater
- Energy Conservation & Generation















SOCIAL EQUITY

- Transportation & Access
- Health & Wellness
- Education & Culture
- Student & Community Engagement
- Monitoring & Reporting



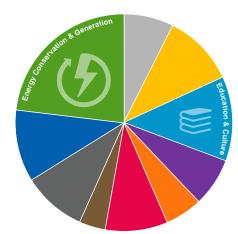




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Setting Priorities

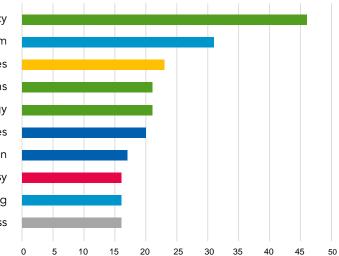




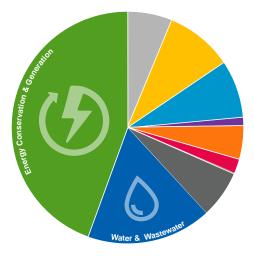
PRIORITIES BY THEMES

- Energy Conservation & Generation (23%)
- Education & Culture (13%)
- Water & Wastewater (11%)
- Health & Wellness (11%)
- Site & Habitat (9%)
- Material Procurement & Waste Management (9%)
- Transportation & Access (7%)
- Student & Community Engagement (7%)
- Monitoring & Reporting (6%)
- Greenhouse Gases & Climate Action (4%)

PRIORITIES BY TOPICS (TOP 10)



Energy Efficiency Sustainability in Curriculum Healthy Food & Beverages Integrated Building Management/Control Systems Renewable Energy Non-Potable Water Opportunities Smart Irrigation Make Recycling Easy Greentech Workforce Development/Credentialing Public Transit Access



INVESTMENTS BY THEMES

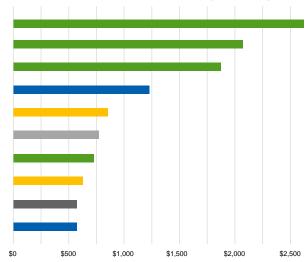
- Energy Conservation & Generation (\$7,512)
- Water & Wastewater (\$2,942)
- Health & Wellness (\$1,583)
- Education & Culture (\$1,359)
- Site & Habitat (\$1,214)
- Transportation & Access (\$1,101)
- Monitoring & Reporting (\$783)
- Material Procurement & Waste Management (\$338)
- Student & Community Engagement (\$193)
- Greenhouse Gases & Climate Action (\$25)

Prioritizing Investments



Energy Efficiency Renewable Energy Integrated Building Management/Control Systems Smart Irrigation Healthy Indoor Air Quality Public Transit Access Establish District Energy Manager Position Healthy Food & Beverages Biodiversity Water Use Planning & Water Map

INVESTMENTS BY TOPICS (TOP 10)



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2016 FACILITIES MASTER PLAN



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