

UC DAVIS

PHYSICAL DESIGN FRAMEWORK



This cover is manufactured from 100% recycled fiberboard.

The contents of this booklet is printed on NEW LEAF Reincarnation™ paper, which is 100% Recycled, 50% Post-Consumer Waste, Processed Chlorine Free and manufactured with electricity that is offset with Green-e® certified renewable energy certificates.



2008 / 2009

UC DAVIS

PHYSICAL DESIGN FRAMEWORK

TABLE OF CONTENTS

1	Planning and Design Principles		
	Create supportive places	1.4	<i>What are our aspirations?</i>
	Create connected places	1.5	
	Create sustainable places	1.6	
2	Campus Context		
	Geography and climate	2.3	<i>What is unique about the Davis campus?</i>
	Development history	2.5	
	Campus Plan	2.7	
	Planning and design challenges and opportunities	2.9	
3	Campus Framework		
	Strengthen the civic core	3.1	
	Amplify the bus/bike boulevard	3.2	
	Connect to the arboretum	3.3	
	Create identity for district centers	3.4	
	Connect campus entries to the greater community	3.5	
4	Campus Fabric		
	Building Elements	4.3	<i>What makes the campus cohesive?</i>
	Colors and Material Palette	4.7	
	Site Elements	4.9	
5	Campus Systems		
	Building capacity	5.3	
	Circulation	5.5	
	Utilities	5.6	
	Trees and landscape	5.7	
	Stormwater	5.8	
	Wayfinding and signage	5.9	
	Views and sight lines	5.10	
	Public outdoor spaces	5.11	
6	Process: Design Review and Approval	6.2	<i>How do we ensure quality?</i>

ACKNOWLEDGEMENTS

Principal Authors

Robert Segar, Campus Planner
 Clayton Halliday, Campus Architect
 Camille Kirk, Planner
 William Starr, Senior Architect

Advisory Group

Kathleen Socolofsky, Arboretum
 Alexander Achimore, Architects & Engineers
 Ardavan Deghani, Architects & Engineers
 Salvatore Genito, Facilities Management
 Maurice Hollman, Facilities Management
 Stephen Mezger, Facilities Management
 David Phillips, Facilities Management
 Allen Tollefson, Facilities Management
 Matthew Dulcich, Physical, Environmental and Capital Planning
 A. Sidney England, Physical, Environmental and Capital Planning
 Andrew Fulks, Physical, Environmental and Capital Planning
 Karl Mohr, Physical, Environmental and Capital Planning
 Joseph Perry, Safety Services: Fire
 Annette Spicuzza, Safety Services: Police
 Matthew Fucile, Student Affairs
 Janet Gong, Student Affairs
 Michael Sheehan, Student Affairs
 Clifford Contreras, Transportation and Parking Services
 Anthony Palmere, Unitrans
 Geoff Straw, Unitrans

Graphics Assistance

Christopher Adamson, Architects & Engineers
 Chris DiDio, Physical, Environmental & Capital Planning
 Mark Hernandez, Student, Landscape Architecture
 Roy Pitts, Architects & Engineers
 Landscape Architecture LDA181 Students
 BAR Architects

Appendices

- West Village Neighborhood Master Plan
www.ormp.ucdavis.edu/environreview/lrdp.html#NMP
- Bike and Transit Network Study
- GATEways Concept Plan
- Campus Standards and Design Guide
- 100 Year Tree Plan
- Landscape Standards

Related Documents

- 2003 Long Range Development Plan
www.ormp.ucdavis.edu/environreview/lrdp.html
- Ten Year Capital Plan

1 PLANNING AND DESIGN PRINCIPLES

The UC Davis Physical Design Framework describes a vision for creating a physical environment at UC Davis that supports the academic mission, enhances personal and environmental health, and brings meaning and enjoyment to all who participate in the campus community.

The Framework establishes the criteria the campus will use to judge the success of proposed projects with regard to planning and design. The plan will be used regularly by campus planners, architects and others to guide the effective incorporation of these goals into all projects that modify the built environment. With that in mind, the plan defines how the planning goals can be met by using best practices in design, incorporating built environment research, and following successful models from the campus or other places with similar functions or climate.

This document describes the principles underlying the framework (Part 1); sets the context of the campus, including geography, climate, development history, key challenges, and recent successes (Part 2); demonstrates development opportunities for the unique, distinct character of the Davis campus (Part 3); catalogues the design elements and campus-wide systems that create campus coherence (Parts 4 and 5); and delineates the design review and approval process (Part 6).

Visual evidence is often reproduced in miniature (thumbnail maps) with the intent of demonstrating availability of such information rather than having this document be the source of that information.

Relationship to Other Documents

The 2003 Long Range Development Plan (LRDP) lays out development goals, principles and objectives at a land-use planning scale for the Davis campus through 2015-2016. This framework addresses these same goals, principles and objectives at an intermediate scale that provides more specific direction for site planning, landscape design and architecture.

This framework is in turn supported by the system master plans and studies, and architectural and landscape standards included in the Campus Design Standards and in the project programs. All of these planning documents have the common goal of insuring that the campus planning and design goals are ultimately manifested in the projects themselves.

Sustainability

In the years since the publication of the LRDP, the campus has moved to expand the LRDP's second goal dealing with "stewardship" into a broader goal of overall sustainability. Sustainability in this context includes not just sustainability in the built and natural environment but in our campus community and culture.

Mission, Vision and Values

UC Davis is committed to the tradition of a land-grant University, the basis of its founding. This tradition is built on the premise that the broad purpose of a university is service to people and society.

UC Davis remains committed to its human values: caring and personal relationships, collaborative and thoughtful work, all within a human scale environment

UC Davis offers an unparalleled breadth of superior academic and extracurricular programs within a supportive campus community promoting collaboration and excellence.

Goals and Principles of the 2003 LRDP

1 Create a physical framework to support the teaching, research and public service mission of the campus.

Associated Planning Principles

- Flexibility
- Longevity
- Dynamic Teaching Environment
- Accessible Research Environment
- Interactive and welcoming public service environment

2 Manage campus lands and resources in a spirit of stewardship for the future.

Associated Planning Principles

- Healthy and interconnected natural and built environment
- Conserve natural resources

3 Provide an environment to enrich campus life and serve the greater community.

Associated Planning Principles

- Meaningful and diverse connections
- A safe and welcoming place to grow
- An environment “worthy of our affection”
- A residential character

We shape the built environment and it shapes us, then we shape it again and so on. “Function reforms form, perpetually.” Stewart Brand, *How Buildings Learn*, 1994.

Clark Kerr study of institutional longevity: universities 66 of 70 institutions still in existence since the Reformation 500 years ago.

PRINCIPLES

Three main principles are derived from the 2003 LRDP goals. This section describes these three principles and why they are important to the Davis campus.

■ **MISSION: Create Supportive Places** that advance learning and discovery, interdisciplinary collaboration, and innovative research.

To support the academic efforts of today’s and future generations, our buildings and landscapes need to be founded on a solid basis of design, be safe, healthy and physically comfortable, and be flexible and adaptable.

■ **CAMPUS LIFE: Create Connected Places** that enrich people’s campus experience, help them interpret the world around them, and build a sense of community.

Finding meaning and delight around us helps us make sense of our world and creates a sense of belonging to a community. Building dynamic and effective campus community relationships between individuals and groups increases our ability to learn, discover, engage and serve our world.

■ **ENVIRONMENT: Create Sustainable Places** that preserve health and well-being, use resources wisely, and assist people in future generations in their work to achieve the first two principles.

Our quest for sustainability values people of the campus community and people in our regional and world community impacted by the choices we make. This view also values the generations to come and creates a stewardship responsibility. Stewardship challenges us to look for ways to satisfy current needs without limiting future generations or transferring negative impacts to others.

These principles apply to both the places inside and outside buildings. All three principles must be deployed together to make a functional, and potentially great, environment. The principles are more specifically defined within this section. The framework and systems that support these principles are described in the following sections.

MISSION: CREATE SUPPORTIVE PLACES

To fulfill the academic mission, we need campus buildings and landscapes that advance learning and discovery, promote interdisciplinary collaboration, and enable innovative research. The characteristics of such buildings and landscapes are:

Longevity

Design to last based on long term values, not fashion, and actively demonstrate commitment to long-term vision. Invest in things that we value, and address needs that are most likely to be constant (site/solar orientation and control, climate, basic human comfort needs, and building structure). Investments in these constants can provide cohesiveness across multiple building types and time periods. Good siting (central, close to transportation and other amenities) and thoughtful placement of infrastructure are fundamental to the longevity of a building or landscape.

Interactivity

Today’s UC Davis is built on a foundation of collaboration and interdisciplinary strength. The physical environment should support academic and social interaction from the smallest scale to the largest. The recent Robert Mondavi Institute for Wine and Food Science provides a model for promoting interaction at every scale:

- Individual labs are ‘open’, not subdivided, to facilitate collaboration
- Common spaces are created between floors to bring people together
- Three building wings are arranged around a shared courtyard
- The building complex ties to other buildings in the district through shared walkways and a new campus quad
- The district links to the historic core of campus via pedestrian malls
- The vineyard in the foreground of the building creates a teaching landscape that benefits students and welcomes the greater public

By enhancing interaction among people engaged in similar pursuits and among people who otherwise might not meet, the shape of the Davis campus supports the collaborative spirit.

Flexibility

Provide space easily adapted by occupants for today’s programs and for the future. Landscapes and buildings that are designed to meet program without being overly ‘tailored’ can achieve a “loose fit” that is more adaptable over the long term. Some key attributes of an adaptable built environment include:

- A campus organized around public outdoor spaces that can last, even as building needs change
- A robust building structure with regular simple designs
- Interstitial spaces within buildings that allow upgrades and changes to building technologies without major new investment.





Academic program inspires ornament:
Robbins Hall mosaic column covers



Functional expression of natural system:
Valley Hall stormwater feature



Delight based in common values: humor

CAMPUS LIFE: CREATE CONNECTED PLACES

To enrich the campus experience and build community, our buildings and landscapes need to provide meaning and delight, which help us interpret our world and enhance our sense of belonging.

Meaning

The more layers of meaning that are accessible in an environment, the greater the potential for rich experiences and memories. When the built and natural environment is understandable and infused with meaning, learning, discovery and engagement are natural results. A meaningful environment has “coherence.” In order to make the campus coherent, the environment needs orientation, identity, and connectivity.

Orientation includes knowing where we are, in location and direction, as well as understanding our relationship to the world, how and where we fit. We find identity in our environment by gaining a sense of orientation. Continuity in landscape and architectural elements and materials reinforce that individual places are part of a larger, connected whole. A cohesive network of public indoor and outdoor spaces and circulation systems knit together separate places, helping people understand their place in the campus environment.

- Reinforce our connection to the natural environment by physically expressing the workings of natural systems
- Use consistent and hierarchically appropriate signs, landscapes, and architectural elements to establish clear wayfinding
- Provide clear connections from buildings to the circulation system
- Design to a ‘human scale’ to communicate that places are made for and by people
- Make public spaces and circulation systems accessible, open, visible, and active (give people a reason to be there)
- Shape meaningful places by creating districts and neighborhoods with distinct identities based on program.
- Provide spaces of different scales and characters to allow for many types of uses.

Delight

Delight is inspired in us when we see additional meaning or attention to detail in an area typically unaccustomed to attention. When derived from sources such as the natural environment, common values, or heritage, the environment provides a shared experience of delight and builds community.

- Innovation intended to delight should find inspiration from programmatic goals and the unique qualities of the Davis campus.
- Seek to be inclusive and thoughtfully plan sensory experiences for the whole campus community, including differently abled people.
- Create a range of places to support the breadth of campus experiences, with attention to such elements as views, noise levels, breezes, sun/shade movement, daily and seasonal change, smells and even tastes, to build active, layered, complex, memorable, experience-based places.
- Maintain our campus places at a level that demonstrates to people that we care about how people experience our campus.

ENVIRONMENT: CREATE SUSTAINABLE PLACES

To create a sustainable campus, we need to foster healthy conditions for social, economic, environmental, and educational pursuits. Buildings and landscapes should promote these healthy conditions, in order to care for people today and ensure that future generations are able to thrive.

Health and Well-Being

We spend 90% of our time indoors, yet we have strong physiological and psychological connections to the natural world and its rhythms. To promote human health and well-being, the campus standards call for increased access to daylight, views, outside air and decreased use of toxic materials indoors. Human comfort (air temperature, drafts, lighting level and glare, ergonomics and noise levels and privacy) are important to address because of their impact on productivity and learning outcomes, as well as creating environments people cherish and want to take care of. Such environments:

- Allow people to modify their environment to control physical comfort (e.g. access to daylight, views, operable windows), because people vary significantly in their sense of physical comfort.
- Create comfortable outdoor places through variety in seating, sun exposure, night-time lighting levels, and basic weather protection such as covered entries, walkways, and tree canopy.
- Give attention to transportation-related hazards (e.g. pedestrian and bike conflicts) and night time visibility on the Davis campus because of our high bicycle volume and our dark-sky protection.

Wise Resource Use

We start with a presumption that existing buildings and landscapes can be reused, driven by awareness of the environmental burden associated with demolition and construction. Renovation and new construction alike should

- Design to minimize operating costs (utilities and maintenance), reducing our financial and resource-use burdens.
- Reduce maintenance needs by choosing durable, long lasting building materials in neutral colors, and landscape design and plant palettes that require minimal inputs (water, fertilizer, pesticide).
- Reinforce connections between the past, the present, and the future through re-use of valued buildings and landscapes.

Thriving Future

UC Davis chooses to be a leader in demonstrating paths to a sustainable campus. Characteristics of great, sustainable places for the future are:

- Develop compactly to concentrate capital improvements, effectively use existing infrastructure, preserve land, and promote bicycle and pedestrian transportation as the primary modes.
- Balance density with the relief provided by natural open space.
- Integrate energy generation into the landscape and buildings, and use passive solar controls and building ventilation.
- Use stormwater and tertiary-treated wastewater as resources.
- Increase the opportunities for people to live near campus.



Sun control on windows (Storer Hall)



Connected systems: drainage and open space



Density: Segundo Infill Housing



West Village housing on campus

2 CAMPUS CONTEXT

This section describes the unique physical setting of UC Davis, briefly recounts the development history of the campus, and offers an analysis of current planning challenges and opportunities.

Geography and Climate

Located in one of the largest, flattest valleys in the world, between two mountain ranges and adjacent to the immense and complex Sacramento-San Joaquin Delta system, the Davis campus is profoundly influenced by its regional and local geography.

The local climate is perhaps the key driving force of the form of the campus built environment. The rainfall pattern and annual and daily temperature variations demand thoughtful and responsive building and landscape designs.

Subsequent chapters outline sustainable planning and design principles that help adapt our landscapes and buildings to the benefits and opportunities our geography and climate provide.

Development History

The brief description in this section focuses on the 100 year history of the campus, setting the context for future development and providing an understanding of the events and forces that shaped today's buildings and landscape.

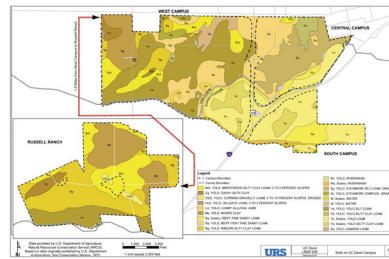
Buildings and landscapes that represent specific historical periods and design styles influence future buildings and landscapes. A critical look at the existing buildings and landscapes on campus is fundamental to planning future changes to the environment.

Planning and Design Challenges and Opportunities

The development of the campus built environment over time has been irregular and is a work perpetually in progress. This section introduces some fundamental challenges that the campus faces in making the built environment coherent to the people who occupy it. Some of these challenges are common to many university campuses and others are unique to our campus.

Recent Successes

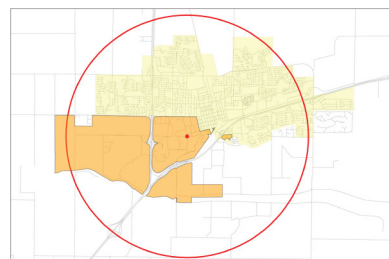
After identifying the fundamental challenges, examples of recent successes in addressing challenges previously identified in the 2003 LRDP are shown.



Soils: Generally campus soils are fine clay loams; this soils map is 2003 LRDP Environmental Impact Report Figure 4.6-1.



10 minute walk: a ½ mile radius from the center of campus



20 minute bike ride: a 3 mile radius from center of campus

GEOGRAPHY

Regional geography richly influences the campus built environment through topography, water resources, vegetation, and settlement patterns.



Situated in the Sacramento Valley plain, west of the Sacramento River and east of the Vaca Hills in the Coast Range, the campus topography is largely flat, and the regional soils tend to be clayey, so the area frequently experiences sheet flow after soils are saturated during heavy winter rains.

The region has large aquifers that provide groundwater for both campus drinking and irrigation water. Putah Creek runs south of the campus, a human artifact of the 1880s when local farmers decided to relocate the northern fork, which ran through what are now UC Davis campus lands. The campus currently utilizes the northern fork remnant (the Arboretum Waterway) as part of its stormwater management system.

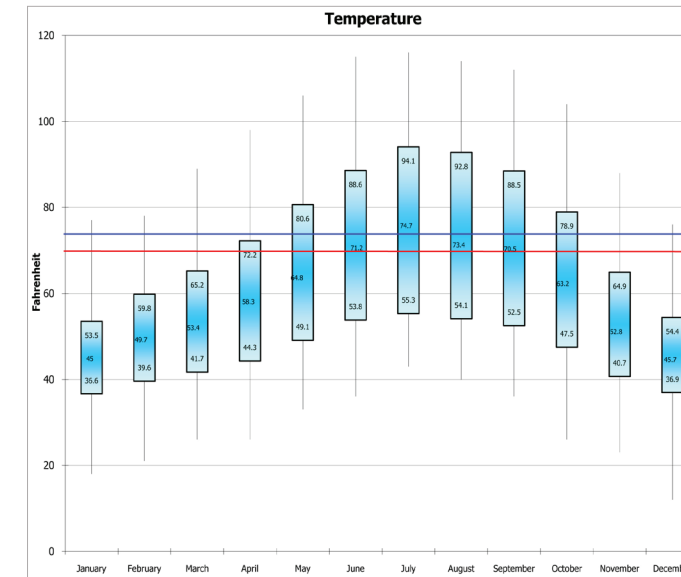
Native vegetation found before campus development would have been predominantly bunch grasses interspersed with flowering plants and sparse, but immense, Valley oaks. Near the creek channel, riparian vegetation would have dominated. Native fauna, including Swainson’s hawks and burrowing owls are still found on campus lands.

The first people living on and near the campus were the Patwin-Wintun. They had a semi-permanent settlement near what is now the campus Arboretum. Spanish contact occurred around 1806-08 and in 1849, the Gold Rush resulted in considerable farming and ranching settlement in the area. The region has been and continues to be an important source of agricultural products, especially renowned for stone fruits and nuts due to the climate and soils. UC Davis originated as an agricultural campus and is still acclaimed for its agricultural programs. There is a dairy on campus, as well as other animal facilities.

CLIMATE

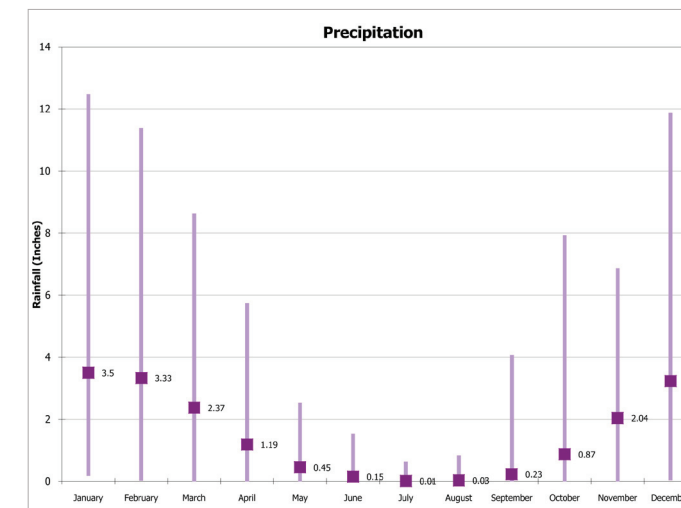
Davis has a Mediterranean climate. Summer days can be very hot (95-105°F), with a few days peaking as high as 110°, though most summer evenings the “Delta Breeze” blows from the south, bringing cool Pacific air across the Sacramento Delta and cooling ambient temperatures considerably. Normal summer diurnal cycle differentials are 40-45°F. Winter temperature differentials are much smaller, and there are more heating degree days in Davis than cooling degree days.

Average monthly temperatures with indoor design temperature indicated (blue line = cooling target temperature; red line - heating target temperature).



Precipitation patterns are classic Mediterranean: winter rains, summer drought. Precipitation averages 17.4” annually, nearly all falling between November and March.

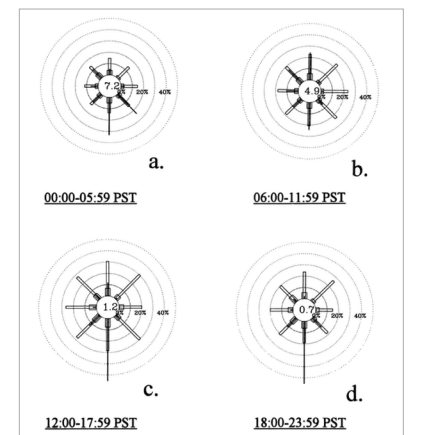
Average monthly precipitation with range indicated.



Davis is at 38.55N latitude, 121.74W longitude and average sun hours (sh) per day for Davis are 5.1 (the low is 3.31 sh/day and the high is 6.09 sh/day). Sun hours are the measure of solar radiation (insolation) in kilowatt-hours per square meter per day. Our climate and sun hours show the value of orienting buildings to maximize passive solar design.



Trees create shade over paths and streets on hot summer days, while winter days can be blanketed with thick “tule” fog, so deciduous trees are particularly appropriate.



Summer wind patterns show the possibility of using the cooling Delta breeze for building climate control. The wind rose time sequence shows that the cooling summer wind is strongest from noon to midnight, which permits building flushing. In general, prevailing winds are from the south in the summer, and the north in the winter. The figure above is from Zaremba, Laura L. and John J. Carroll. 1999. Summer wind flow regimes over the Sacramento Valley. *Journal of Applied Meteorology* 38(10): 1463-73.



Shingle buildings such as North Hall exemplify the human-scale, highly articulated buildings of the original campus



Agricultural landscapes with open horizons still appear at the south and west perimeter



Mission style buildings such as Hart Hall begin to move towards more institutionally scaled architecture



Formal landscapes with axial symmetry were associated with the 1922 Plan era

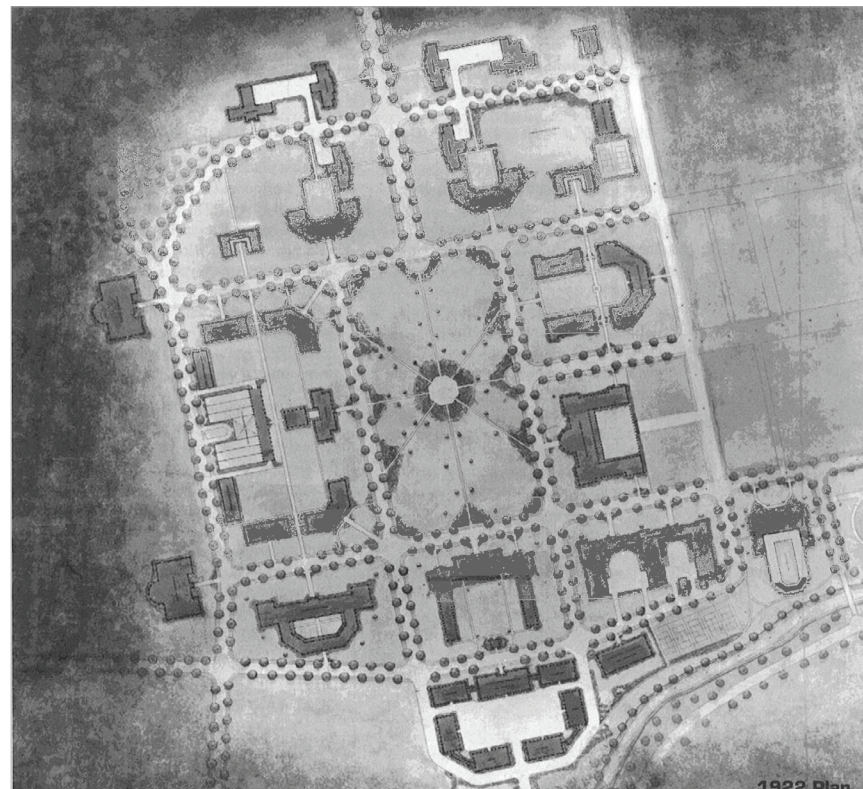
DEVELOPMENT HISTORY

In 2008-09, the Davis campus celebrated its centennial year since its founding as the "University Farm." The physical expression of campus history can be read upon its lands in a number of ways: development patterns, original buildings, remnant agricultural plantings, and archaeological finds, among other elements. Of note, the campus has repeatedly reused original buildings in dramatically altered ways from initial building program. Examples include North and South Halls, once dormitories, now used as student services office space; and the Silo, once a barn and storage building, now used as a food court and meeting space. In some cases, repurposed old buildings have been relocated as well; examples include the Wyatt Theater, once a livestock judging pavilion, now a theater relocated near the Arboretum, and the Hog Barn, now the Hubert Heitman Staff Learning Center, relocated north of its original location.

From its inception, the campus has taken a fairly pragmatic view to development, from siting and circulation to building design and reuse. However, several master plans and physical plans have also guided campus development over the years.

1906 and 1922 Plan Eras

The first buildings on campus were shingle buildings of a residential or agricultural nature. These were followed in the 1920s by more substantial institutional buildings in Mission Revival style. The buildings sat in a predominantly agricultural landscape beyond the formal planning of the central quad. Some buildings from this period survive today and have been embraced as key connections to our early history.



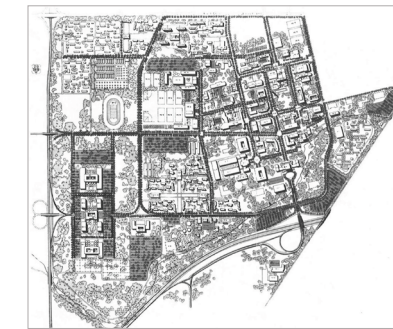
1922 Plan

Post War and 1963 Plan Eras

Post war plans generally kept an axial organization pattern, while creating automobile-dominated circulation and taking a more organic form approach to pedestrian circulation. Davis became a general campus in 1959 and campus development boomed in the decade following, resulting in a large number of modernist buildings and landscapes. Growth slowed during the mid-1970s to the mid-1990s.



1956 Plan



1963 Plan

Contemporary Plans

Recent plans have tended toward more complex, detailed landscapes, focusing on shared open spaces framed by buildings rather than large landscape setbacks and broad streets. The campus saw another rapid growth period from 1999-2009.



At 5,300 acres, Davis is the largest campus in the UC system. It has the greatest number of professional schools among the UCs, including the only veterinary school in the UC system. The role of service to the public was a key part of the establishment of the campus and continues to heavily shape the physical campus through such attributes as an arboretum with extensive public training and outreach, a regional arts center, and veterinary teaching hospital, among other elements.

Accommodation of such a wide variety of programs, many of which are land-intensive, and creation of specific responses to the environment have resulted in a particular "Davis" character, as seen in this section and in Section 3. This Davis campus heritage is ours to honor and extend as the campus has done throughout its existence.



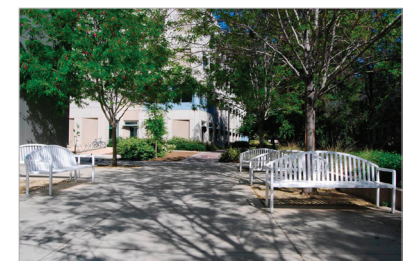
1950s and '60s era buildings predominated on the Davis campus until recently and tend to have simpler articulation and heavier massing than buildings of the founding era



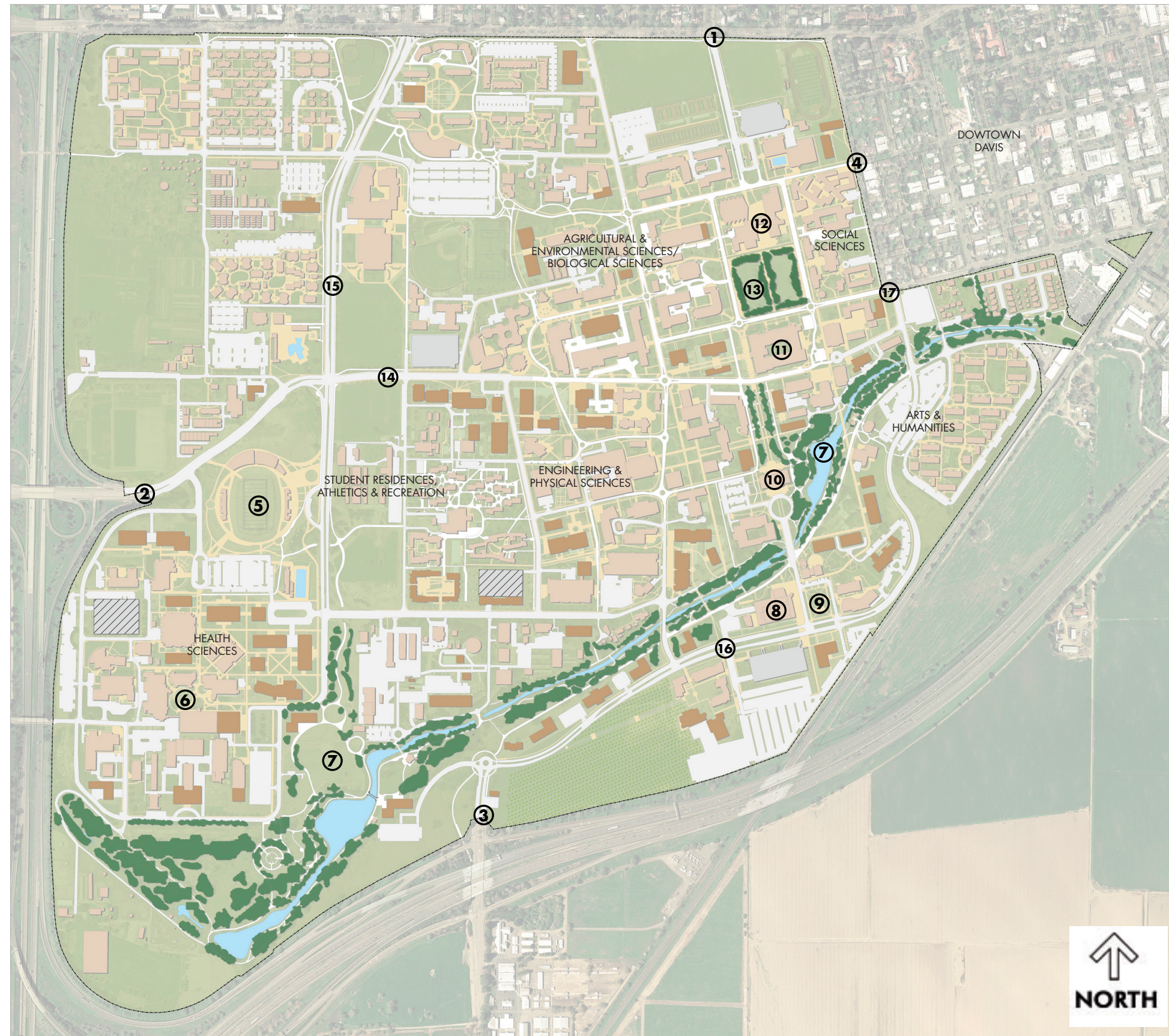
1950s and '60s era landscapes often have an informal, park-like character



Brutalist buildings such as Briggs Hall (shown) may not be appreciated yet, but often show considerable environmental responsiveness



Garden landscapes often unique and associated with individual building projects, have dominated since the 1980s



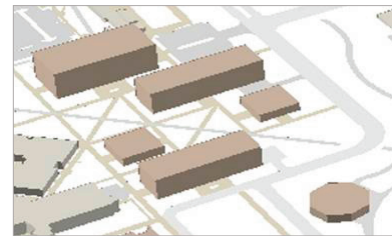
CAMPUS PLAN

- 1 HOWARD WAY ENTRANCE
- 2 HIGHWAY 113 ENTRANCE
- 3 I - 80 ENTRANCE
- 4 3RD & A ST. ENTRANCE
- 5 AGGIE STADIUM
- 6 HEALTH SCIENCES QUAD
- 7 ARBORETUM
- 8 MONDAVI CENTER FOR THE PERFORMING ARTS
- 9 SOUTH ENTRY QUAD
- 10 MRAK HALL
- 11 SHIELDS LIBRARY
- 12 MEMORIAL UNION
- 13 THE QUAD
- 14 HUTCHISON BLVD.
- 15 LA RUE RD.
- 16 OLD DAVIS RD.
- 17 1ST & A ST. ENTRANCE

HIGHLIGHTED CHALLENGES

Land Area:
5,300 acres, Davis Campus
900 acres, Central Campus only

Number of Buildings:
949, Davis Campus
559, Central Campus only



Optimized building orientation for solar control that provides a long east-west axis requires creative efforts to frame public spaces without extensive east and west facing elevations

Fragmented circulation where parts of the pedestrian and bike circulation systems are missing key connections to make them functional and coherent



Variation in density, for example, the one-story Cross Cultural Center sits in a residential landscape between larger buildings on three sides



Variation in architectural expression from rustic shingle buildings to modern institutional buildings, often side-by-side

Multiple campus entry points and excessive variation in paving, lighting, site furniture and signage types create challenges of hierarchy and orientation

PLANNING AND DESIGN CHALLENGES AND OPPORTUNITIES

The rapid pace of growth, physical and academic, has left the campus with several core challenges. The following actions are essential to address the fundamental challenges we face as a campus.

Use Architectural and Landscape Elements to Establish Commonality

Variation in architectural expression and in landscapes diminishes the coherence of the campus without common elements to provide structure. The Davis campus seeks coherence across the campus through the use of common architectural and landscape elements, deployed creatively, yet consistently.

Bring the Quality of Older Buildings, Landscapes, and Circulation Elements Up to the New Standard

Dramatic changes in the function of the campus and the need to keep pace with rapid increases in campus population have driven several bursts of development followed by periods of limited growth, resulting in an uneven campus environment. Furthermore, the expanse and diversity of the campus have made a comprehensive renovation or improvement program, which would strengthen landscaping and architectural coherence, difficult to achieve.

Reinvest in the Heart of the Campus

The abundance of campus land has allowed development at the edges in addition to infill development on more constrained sites. This has resulted in capital investment being directed to new site and utility development, away from consolidation and refinement of existing areas.

The campus is engaged in an ongoing effort to review the large stock of existing buildings, evaluate them under the latest seismic standards and address the issues identified by these evaluations.

Intensify Building Development and Public Outdoor Spaces in Lower Density Areas

The edge development pattern describe above has left many generally high-density areas with pockets of low-density uses that make it difficult to create active, vital places (courtyards and plazas, connecting covered walkways, bridges, etc.)

Match Landscape Character with Functional Needs

The park-like landscape style that is prevalent on campus becomes difficult to maintain when subject to intense pedestrian, bike and recreational use.

Optimize Investments in Infrastructure

The campus maintains its own utilities systems. Control of these systems adds flexibility and considerable value, but the campus must use more of its capital financing on infrastructure than other campuses.

RECENT SUCCESSES

Over the past decade, districts such as Health Sciences and South Entry have been improved with shared public spaces and more consistent landscape and architectural features, which help define their identity.



Health Sciences District, southern end of Tupper Corridor, in new open space framed by a research lab building, a teaching hospital, and a classroom building

In 2001, the Health Sciences District had open edges with no clear entry access point; the district now has a clearly defined entry from the north via Hutchison Drive, and a strong north-south spine on Tupper Corridor linking the entry court to the front of the Vet Med Teaching Hospital.

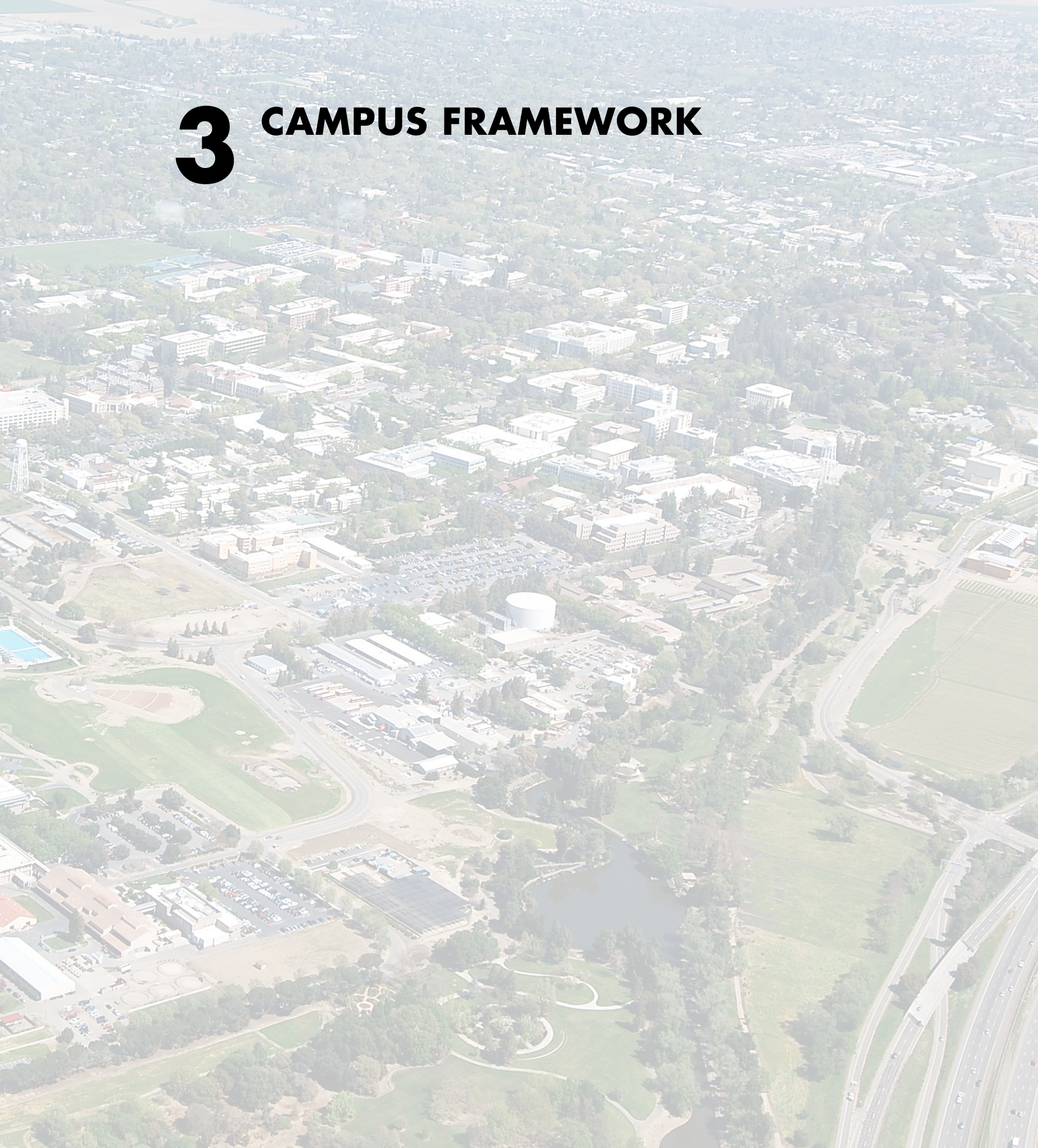


South Entry District, looking northwest into new open space, visible from Interstate 80

In 2001, the South Entry District had surface parking as the primary view, and a stand-alone building (Alumni Center); it now has a defined public open space framed by the Mondavi Center, the Alumni Center, and the Graduate School of Management (under construction).

District plans have guided recent development – using buildings to shape public space, embracing sustainable transportation, connecting the natural and built environment, creating district identity, and connecting campus to the greater community.

3 CAMPUS FRAMEWORK



Five main organizing ideas create the framework for the central campus. This chapter illustrates how the five organizing ideas add up to a cohesive campus, integrating buildings, public outdoor spaces, and circulation. Within each main idea, planning concepts, architectural guidelines, and sustainability values are identified to guide development.

STRENGTHEN THE CIVIC CORE

The main Quad is at the heart of a sequence of spaces that connects the historic north entry with the new regional south entry.



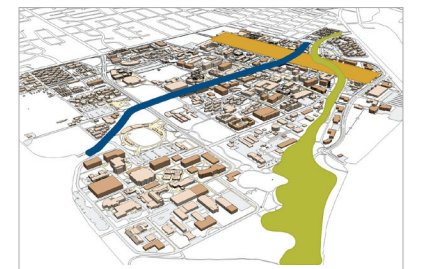
AMPLIFY THE BUS/BIKE BOULEVARD

Hutchison Drive is the east/west spine that intersects the civic core and is dedicated to bus and bike transportation, both symbols of the Davis campus.



CONNECT TO THE ARBORETUM

The Arboretum is a public garden and waterway environment along the banks of a former creek, a source of natural beauty in the midst of the central campus.



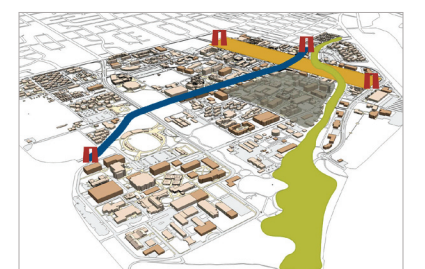
CREATE IDENTITY FOR DISTRICT CENTERS

Districts are home to classrooms, labs, offices and housing with their own identities, each linked to the civic core for social and cultural life, the bus/bike boulevard for transportation, and the Arboretum for natural beauty, outdoor education, and recreation.

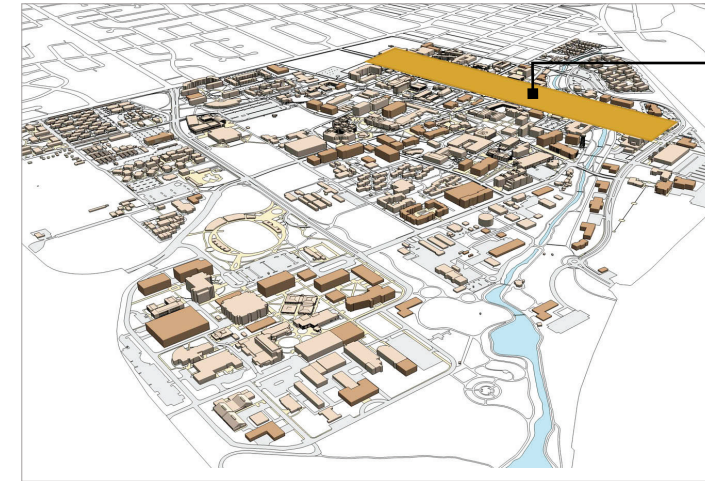
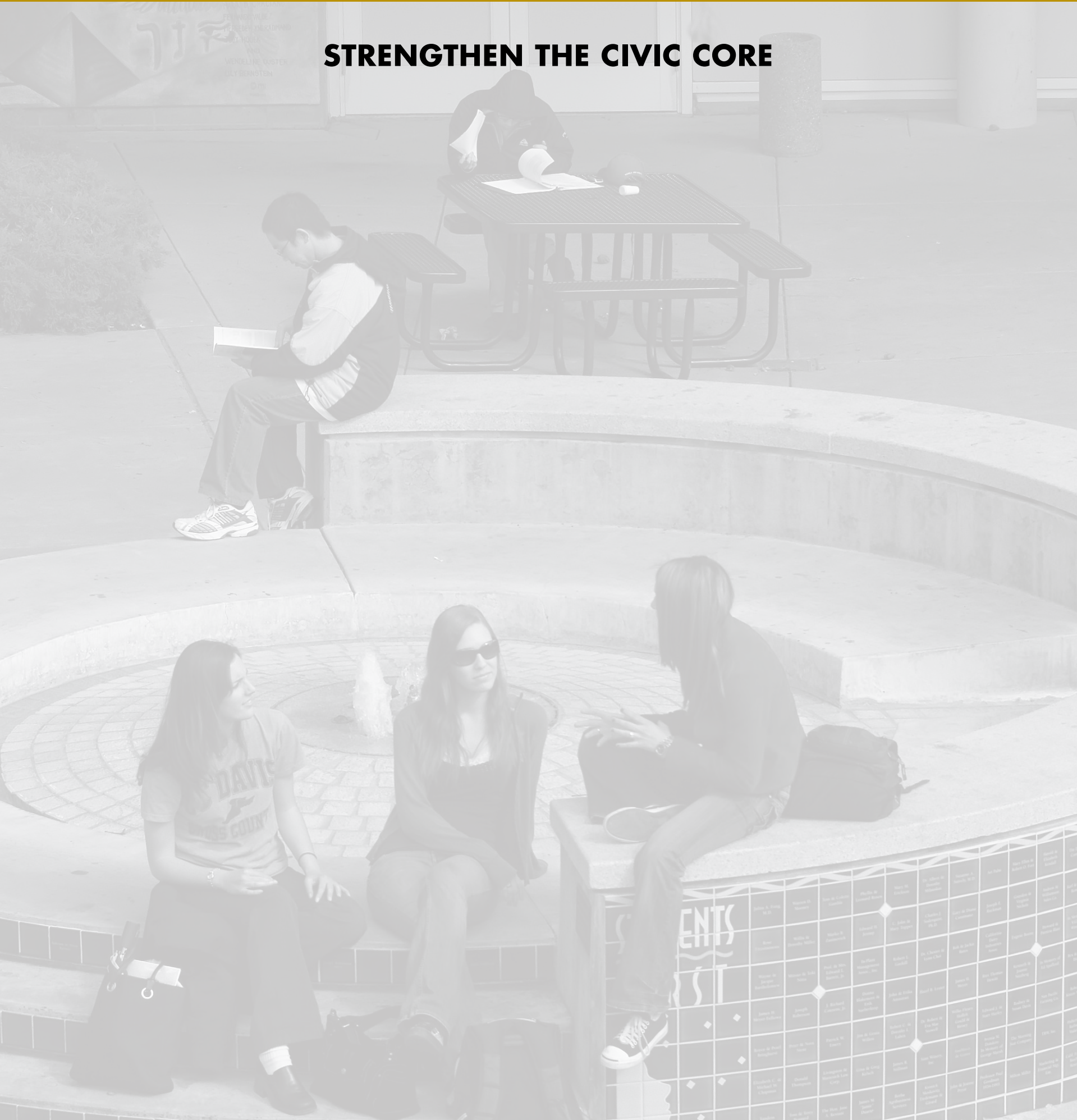


CONNECT CAMPUS ENTRIES TO THE GREATER COMMUNITY

The Davis campus shares edges and entries with the local and regional communities that are open and welcoming—emblematic of the strong link between the campus and greater society it serves.



STRENGTHEN THE CIVIC CORE



CIVIC CORE
BIKE/BUS BOULEVARD
ARBORETUM
DISTRICTS
ENTRIES

One hundred years after the formation of the University Farm, the central quadrangle is still the heart of the Davis campus. This 5 acre campus green, surrounded by majestic trees, is the campus 'public square'. The Quad is bordered by Shields Library, the Memorial Union, student services and classrooms. The historic entrances to the campus—Howard Way from the north and 2nd Street from the east—converge on the Quad from the city of Davis. Additional pedestrian paths and bike streets lead to and from the Quad, forming the civic core of the campus. Over the years, the core has expanded past Shields Library, along pedestrian paths such as the Mrak Mall. The Framework Plan proposes to strengthen this civic core by clearly connecting the Quad framework with the Arboretum and the new South Entry Quad (by the Mondavi Center), using new plazas, tree-lined pedestrian promenades and infill building sites to stitch the framework together. The Civic Core forms the north/south spine of the central campus.

SUSTAINABILITY VALUE

Civic Pride and Community Participation

As the campus 'public square', the Quad is the place where the campus community comes together, for festivals and demonstrations, for cultural celebrations and student activities, for food and music, for opportunities to participate in the life of the campus and the community. A sustainable campus requires more than best practices in environmental design. A sustainable campus requires an involved community willing to work together to achieve a positive future. The campus plan can reinforce this value by intentionally preserving and arranging buildings and public spaces to make public life possible, visible, and celebrated.



The main Quad is the historic and social heart of the campus, a main gathering place, and an icon of the spaciousness of the Davis campus.

STRENGTHEN THE CIVIC CORE

1 THE HISTORIC OAK-LINED ENTRY from the City of Davis brings people to the Union and Quad.

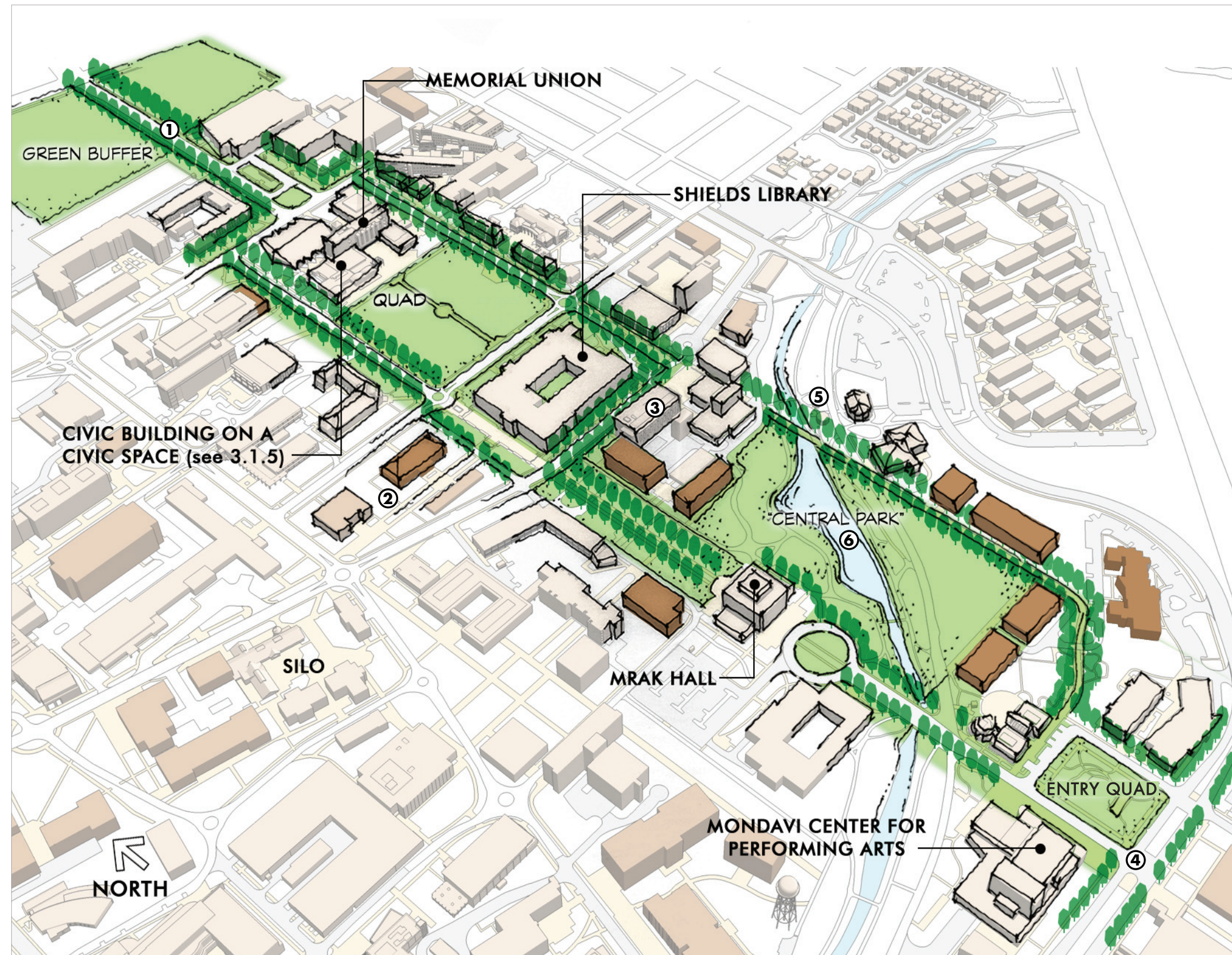
2 THE CIVIC CORE EXTENDS WEST with the redevelopment of the Walker Block, connecting the front door of Shields Library with points west. Redevelopment of low-rise building sites in this block create a 'student street' lined with activities showcasing the diverse academic and cultural offerings available to the community.

3 NEW ART BUILDINGS add people and activity to the Mrak mall.

4 THE SOUTH ENTRY QUAD is visible and accessible from Interstate 80, bringing the university to the public via the Mondavi Center for Performing Arts, the Buehler Alumni and Visitors Center, the Graduate School of Management, a hotel and conference center, the Mondavi Institute for Wine and Food Science, and a planned art museum. Each use creates a stronger connection between UC Davis and the public it serves.

5 TREE-LINED PEDESTRIAN PROMENADES AND A NEW PEDESTRIAN BRIDGE connect the Quad with the south side of the Arboretum Waterway and the new South Entry Quad.

6 THE ARBORETUM is captured within the civic core, providing spaces for outdoor performance, art, and education.



SUPPORTING ACTIONS:

- Relocate temporary art studios and Grounds service yard
- Locate new art buildings on east side of Mrak Mall
- Maintain service access to back of existing and new buildings via Cushing Lane
- Reconfigure the Shields Plaza to open up views and pedestrian circulation from Mrak Mall to West Quad
- Relocate bike path to the west of Shields Plaza
- Expand existing bike parking to the west of the Plaza
- Create a new 'high bridge' connection from the Music Building to the south side of the Arboretum Waterway.
- Connect to new building sites for the arts south of the Arboretum
- Establish sight lines all the way from the Quad to the Arboretum and points south.

CIVIC BUILDING ON A CIVIC SPACE



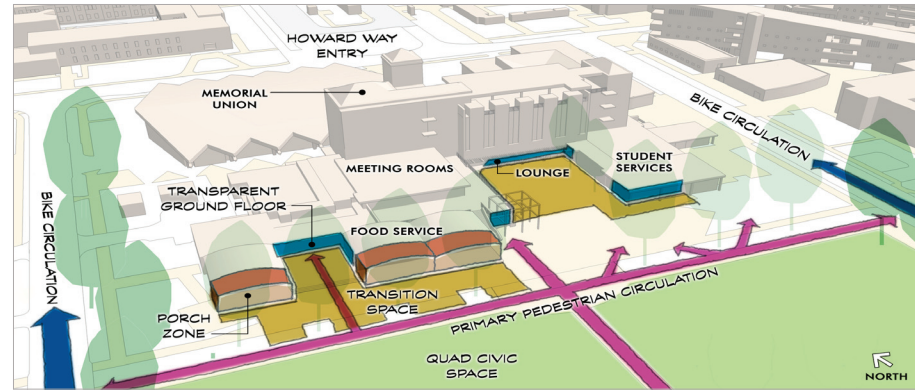
Mondavi Performing Arts Center



Shields Library has a largely unshaded plaza which also functions as a key pedestrian circulation element, resulting in a compromised open space at the entry of one of the most frequented buildings on campus.



Activities and Recreation Center



Civic buildings are key destinations for large numbers of people and command a significant amount of open space at their front door. Buildings of this type on the campus are shown to the left. The south elevation of the Memorial Union houses the Coffeehouse, a food service and meeting venue, exemplifying many of the key patterns for this building type.

PLANNING PATTERNS

Functional compatibility with civic space. Public functions support the civic use of adjacent open space.

Active, transparent ground floor. Well-used destinations support high levels of activity and allow visibility of the functions within.

LANDSCAPE PATTERNS

Comfortable transitional space from entry to civic space. The porches of the Coffeehouse provide semi-public space while the tables along the east-west circulation spine provide a market place ambience. This also supports the blurring of the boundary between building and landscape, allowing people to choose the position between indoor and outdoor space that is comfortable to them.

Landscape design to accommodate high traffic and activity levels. Extensive hardscape with landscape furniture and tree canopy provide room for circulation and event space.

Clear circulation hierarchy stepping down from bike pathways on the east and west edges of the quad, to primary high flow pedestrian pathways across the north side and middle of the Quad, all the way down to the circulation space between tables on the porch. This hierarchy not only supports efficient flow but allows people to comfortably choose the level of privacy/interaction they need at any particular time.

BUILDING PATTERNS

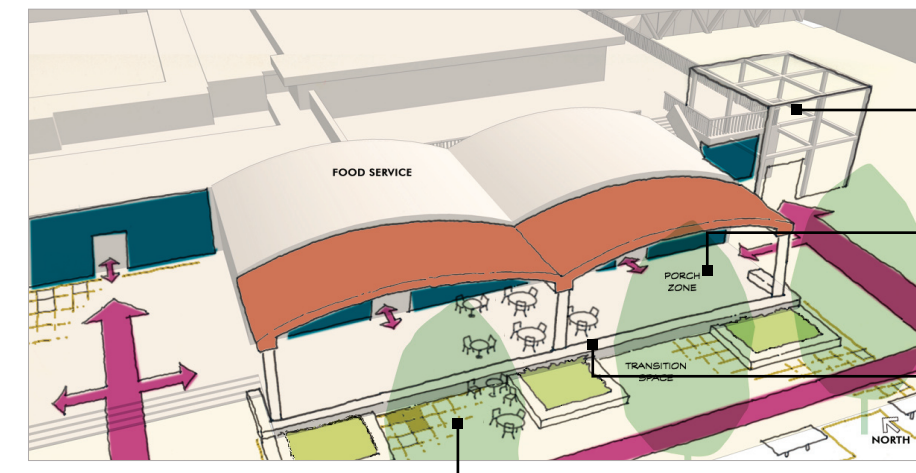
Transparency of the ground floor. Provides a sense of openness and accessibility to visitors.

Calm materials and color palette for the majority of the building to support the constancy of the academic mission with an introduction of material and color variety for particular elements that celebrate the function of the building.

Clearly identified entrances with porches and transition zones that are marked by changes in light, materials or view to prepare for entry or wait for others.

Light-filled entry lobbies that display and celebrate the civic activity make indoor activity visible from the outside.

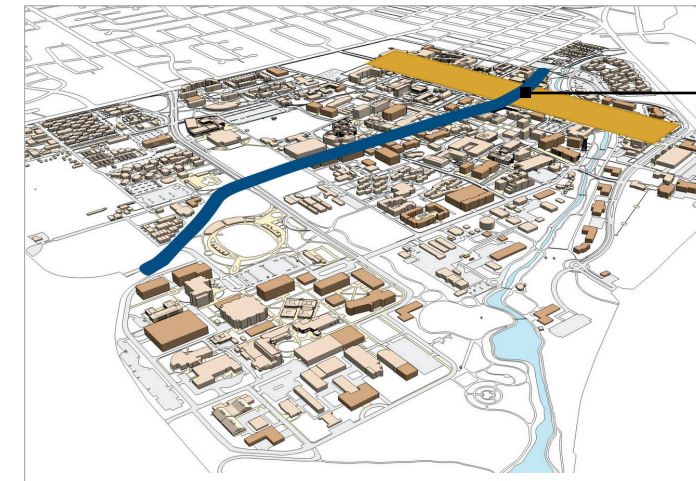
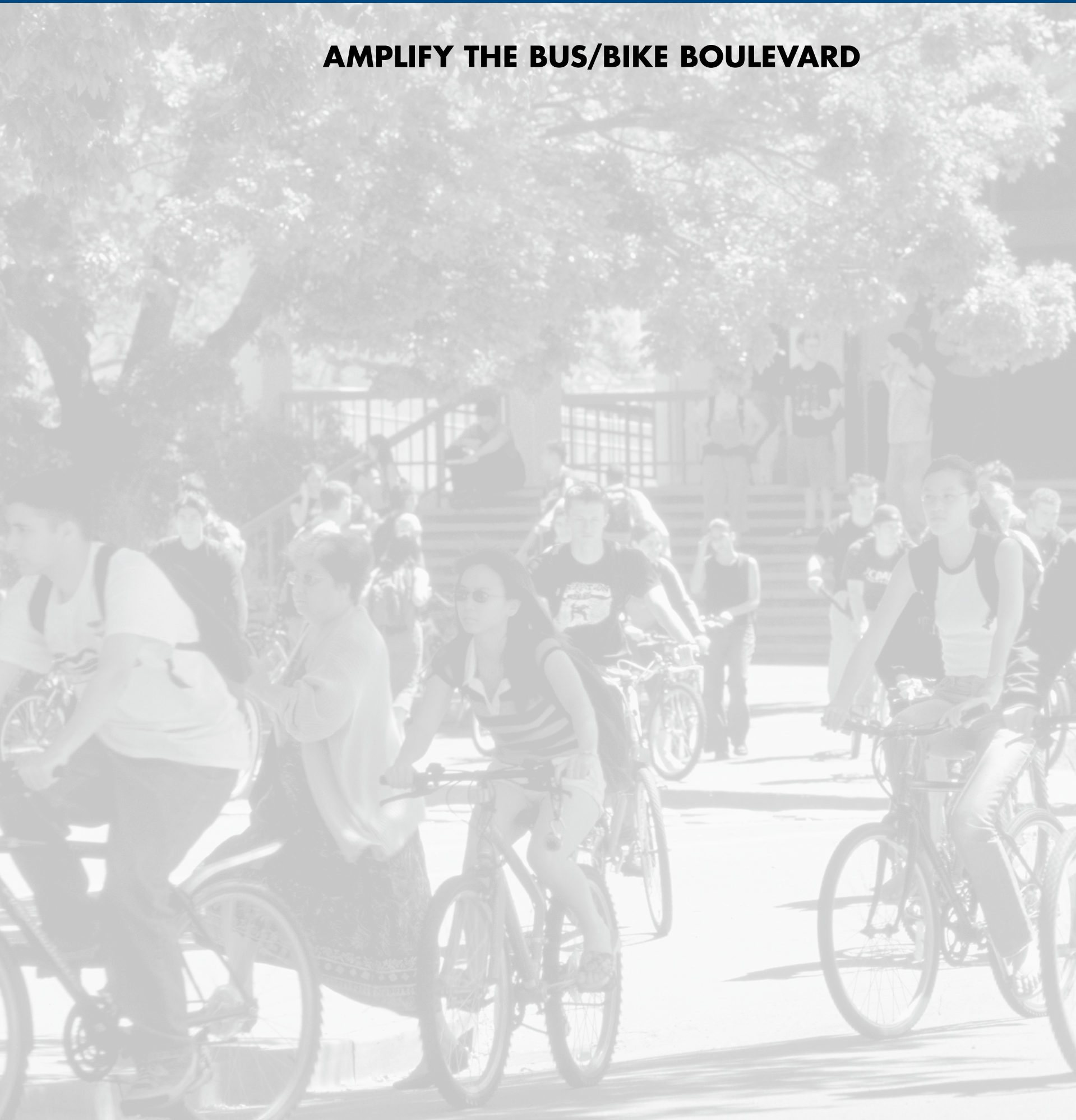
For typical building elements (entries, porches, sun shades, lobbies, stairs, etc.), colors, materials and site elements see Part 4.



KEY ELEMENTS FOR THIS BUILDING TYPE

- Pronounced primary entry
- Articulated building edge provides a variety of spaces along its perimeter
- Porch (12' minimum depth) provides enclosure with roof and vertical supports
- Multiple entry points provides more opportunity for interaction
- Seat walls partially enclose seating areas and in combination with movable seating provide many seating options
- Transition zone between primary circulation and building edge identified by paving and planters
- Clear circulation hierarchy supported by path width, lighting, and paving types

AMPLIFY THE BUS/BIKE BOULEVARD



CIVIC CORE
BIKE/BUS BOULEVARD
ARBORETUM
DISTRICTS
ENTRIES

Hutchison Drive intersects the north-south civic core of campus at Shields Library. With a core campus closed to private vehicles, the only through traffic allowed on Hutchison is Unitrans buses and bicycles. The bus, bicycle, and pedestrian traffic create a level of activity on the street that contributes an urban feel to the campus. Unitrans bus ridership on lines travelling Hutchison now outranks bus ridership to the Howard Way/Memorial Union terminal. With the new Hutchison Bus Terminal across the street from the Silo Student Complex, bus and pedestrian traffic will be even heavier.



Historically, a very large number of campus community members have commuted to, from, and on campus by bicycle. Built upon the endorsement for bicycling by then-Chancellor Mrak, and the pioneering contributions to cycling by campus and community members, it is nearly impossible to think of the campus without thinking about the bike.

SUSTAINABILITY VALUE

Clean Transportation

A temperate climate, a flat terrain, a compact city, an active population interested in fitness and the environment—Davis is an ideal place for bicycling to flourish. On any given day there are more bikes than cars on the Davis campus, and Davis is the first platinum-level bicycle community in the United States. As the bike is an emblem for the campus, the bus system is emblematic of the way that UC Davis students participate in the running of the university. Created by students in the 1960's, Unitrans operates with student bus drivers, and now serves as the primary bus system in the entire city of Davis. The Hutchison bus/bike corridor is where the bus and the bike share the road, otherwise closed to private vehicles. Buses travel on Hutchison through the gates into the closed core, providing access to Shields Library at the heart of the campus. Last year, Unitrans served over 3 million riders.



Students planned, funded and implemented the Unitrans bus service in the late 1960s, as the city began growing and students found they wanted mass transit options. Starting with old double-decker buses from London, students learned to be the bus drivers, mechanics, dispatchers and all-around managers. An example of the UC Davis do-it-yourself attitude, Unitrans embodies an underlying campus ethic of solving problems in a pragmatic way.

AMPLIFY THE BUS/BIKE BOULEVARD

1 THE SILO HUB is the place where thousands of students board and disembark from the Hutchison Bus Terminal every day. The 'Hub' concept takes advantage of the large influx of pedestrian activity, lining the frontage of buildings facing the Hub with active student destinations: classrooms, places to eat, student amenities and services.

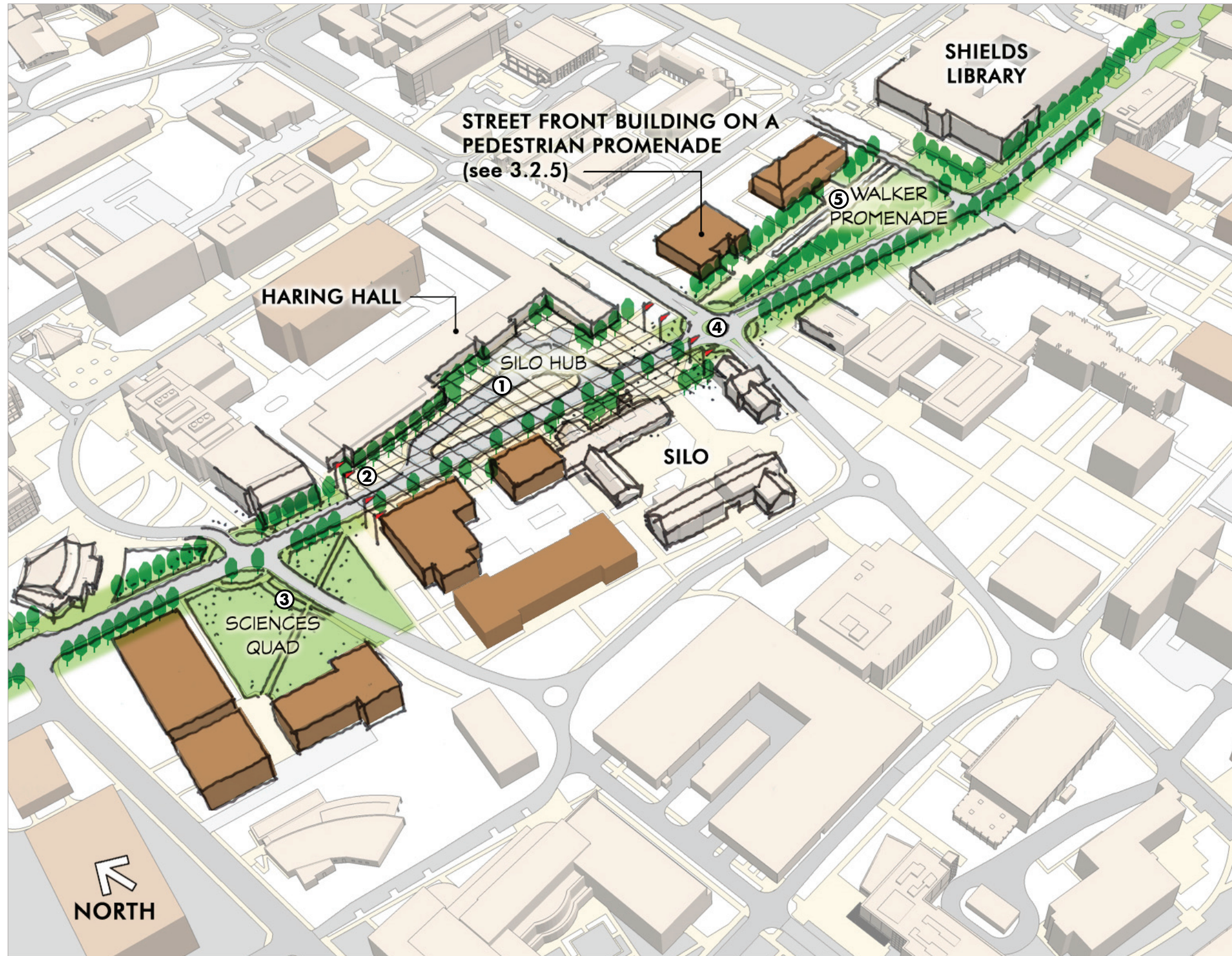
2 SILO HUB MONUMENTS mark the entrance and exit to the Silo Hub

3 THE SCIENCES QUAD is a new civic space that connects:

- Engineering and Physical Sciences with Biological Sciences, Agricultural and Environmental Sciences
- Civic uses with academic uses at a new gathering space
- The Silo Hub and a new quad, along the Bus/Bike Boulevard
- North of Hutchison to south of Hutchison with a new pedestrian/bikeway

4 CALIFORNIA/HUTCHISON CIRCLE connects the Silo Hub and the Walker Promenade.

5 THE WALKER PROMENADE connects the Civic Core of campus with new growth to the west. The new Shields Library plaza will recapture the strong axis formed by West Quad Street and the Mrak Mall, pivoting west into a new pedestrian promenade. The new Walker Promenade will be an active 'student street', a pedestrian mall lined with the new student community center, and other student-focused activities and functions.



SUPPORTING ACTIONS:

- Demolition of existing temporary buildings at Hutchison/California
- Preservation of the existing redwood grove at the Sciences Quad
- Development of new building sites to reinforce open spaces
- Completion of N/S bike/ped way south of Sciences Lab
- Plan student serving uses along the south face of Haring Hall to activate the Hub
- Improve connections and street-front uses from the north side of the Silo to the Hub
- Mark the transition from the Hub to the Sciences Quad and the Walker Promenade with sign monuments
- Expand the main Silo building to the west, shielding the service parking lot from Hutchison
- Reconfigure the Shields Plaza to open up views and pedestrian circulation from Mrak Mall to West Quad
- Connect the Shields entrance with the Cal/Hutch intersection via a new pedestrian promenade
- Connect pedestrians and views from the Silo Hub to the Shields entrance



Sciences Lab on Storer Mall



Sciences Lab Lecture Hall



Coffeeshouse on the Quad North Pathway

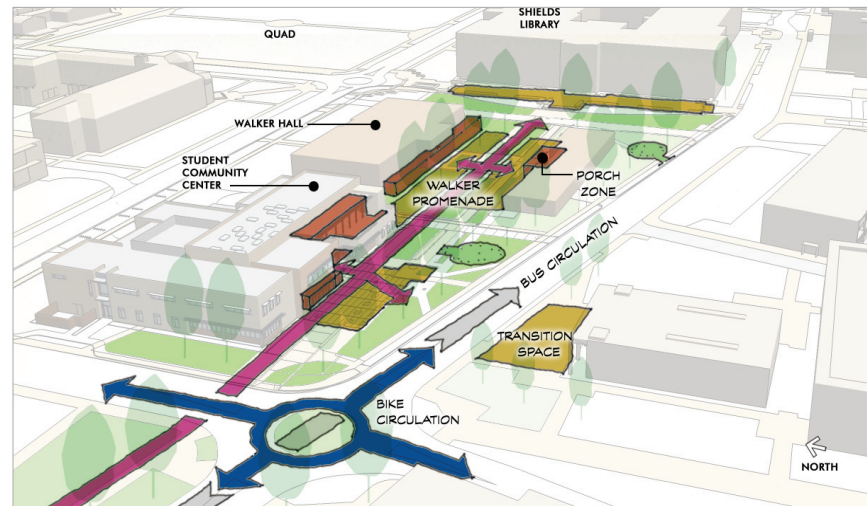


Tercero Dining Commons



Valley Hall

STREET FRONT BUILDING ON A PEDESTRIAN PROMENADE



Student Community Center at Walker Promenade

Street front buildings create active edges to a street or promenade. For example, the Student Community Center will serve this function for Hutchison Drive and for a future pedestrian mall leading from the Silo Hub to the Shields Plaza.

PLANNING PATTERNS

Functional compatibility with public street. Similar to an active downtown street front, campus buildings on pedestrian malls create an opportunity to display the diversity of activity to the passerby. The first floor uses in these buildings should include multiple destinations that benefit from each other's activity.

LANDSCAPE PATTERNS

Comfortable transitional space from entry to civic space. Porches, trellises and balconies provide multiple semi-public spaces adjacent to the primary east-west circulation.

Landscape design to accommodate high traffic and activity levels. Extensive hardscape with landscape furniture and tree canopy provide room for circulation and event space.

Landscape should be more developed and complex to provide opportunities for exploration at pedestrian pace. Smaller garden or patio spaces adjacent to the primary pedestrian space can enrich the primary space.

BUILDING PATTERNS

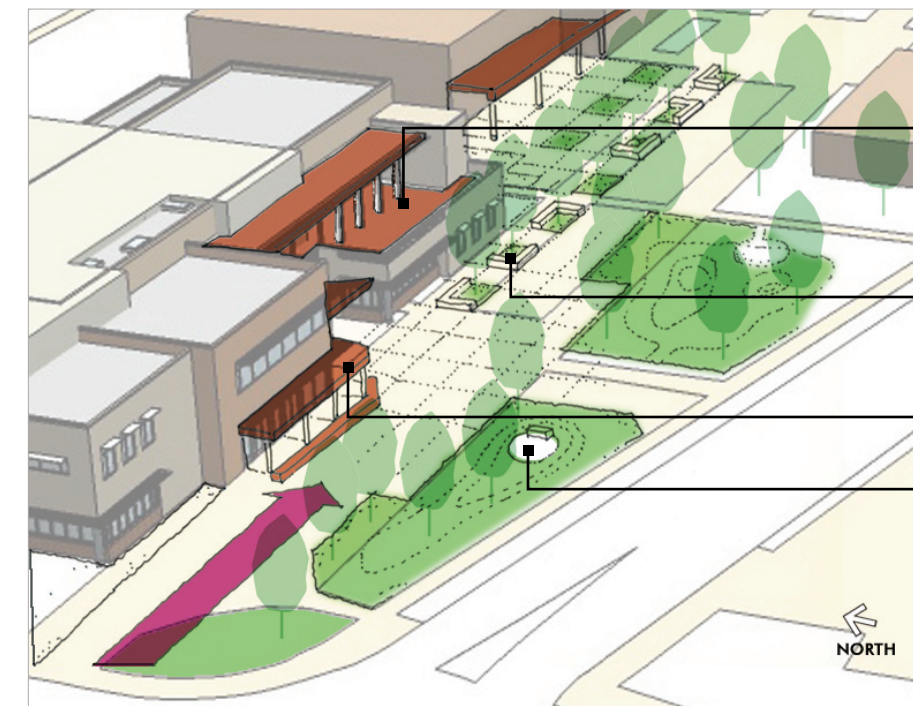
Transparency of the ground floor and visible rich interior colors. Provides a sense of openness and accessibility to visitors.

Active, transparent ground floor with multiple doors. Similar to a commercial storefront, this building invites the passerby to stop in. Multiple destinations should be articulated with multiple entries, unlike the typical single entrance to an institutional building.

The porch zone is a third place where indoors meets outdoors. Building arcades, trellis-covered outdoor space, shade structures extending from building facades create a zone for comfort and watching passersby.

Upper floors take on their own character to reflect their use, with decks and outdoor spaces to provide prospects of activity on the pedestrian mall below.

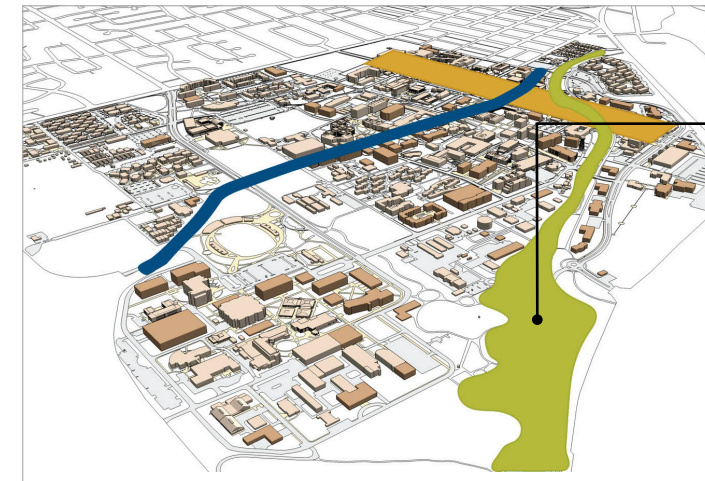
Introduce accent materials and color to highlight activity on the ground floor for these active campus buildings.



KEY ELEMENTS FOR THIS BUILDING TYPE

- Upper level porch activates promenade edge and connects upper floors to public space
- Arcade at ground level provides continuity along edge of promenade
- Transition zone between boulevard and building edge identified by paving and planters
- Café porch (12' minimum depth) provides enclosure with roof and vertical supports
- Quiet seating areas off of the boulevard provide choices in level of interaction desired
- Clear circulation hierarchy supported by path width, lighting, and paving types

CONNECT TO THE ARBORETUM



CIVIC CORE
BIKE/BUS BOULEVARD
ARBORETUM
DISTRICTS
ENTRIES

The arboretum's informal, naturalized landscape contrasts with the formal tree-lined streets, bike paths and walks that comprise much of the Davis campus. In recent years, as the South Entry District has expanded, the Arboretum has shifted from a peripheral landscape on the southern border of the campus to a landscape in the center of a growing campus. It is UC Davis' linear 'central park', fulfilling many functions for the UC Davis and regional community.

Future development in the Arboretum will be guided by the Arboretum GATEways program (Gardens, Art, and the Environment). As the Arboretum and its waterway pass by a wide variety of campus buildings and programs, new gardens will be created that celebrate the intersection of those programs with the natural environment.

SUSTAINABILITY VALUE

Integrating the Built Environment and the Natural Environment

The framework plan calls for visitor centers, interpretive centers, multi-use educational spaces, offices and teaching gardens to be constructed within the Arboretum. Buildings will sit within a dominant naturalized landscape. In this unique context, Arboretum buildings and landscapes will 'push the envelope' of environmental design, testing new strategies for fully integrating sun, wind, water, and energy into building and landscape design. Projects in the Arboretum will provide the campus with the opportunity to implement distributed energy systems and integrated landscape and stormwater systems. Garden plantings will use the 'Arboretum All-Stars'—plants that have been tested at the UC Davis Arboretum and proven to work in Davis soils, climate, and water.



The Arboretum is:
 A place of natural beauty
 A place for rest and recreation--a respite from the demands of school and work life
 A wildlife corridor
 A teaching resource, and
 A place for volunteer-rich activities that connect people to UC Davis.



Arboretum
 The Arboretum, like many other cherished campus icons, arose from the determination of faculty, staff and students. Developed along a remnant stream channel that holds campus stormwater, the banks have been richly landscaped.

CONNECT TO THE ARBORETUM

1 CALIFORNIA CENTER FOR URBAN HORTICULTURE

spearheads research on sustainable nursery practices, climate appropriate planting strategies, and soil, water and nutrient health.

2 EXISTING ARBORETUM PLANT COLLECTIONS

are nationally significant. They anchor the west end of the Arboretum Discovery GATEway, and will become accessible to visitors from the new Interstate 80 access.

3 THE ARBORETUM WATERWAY

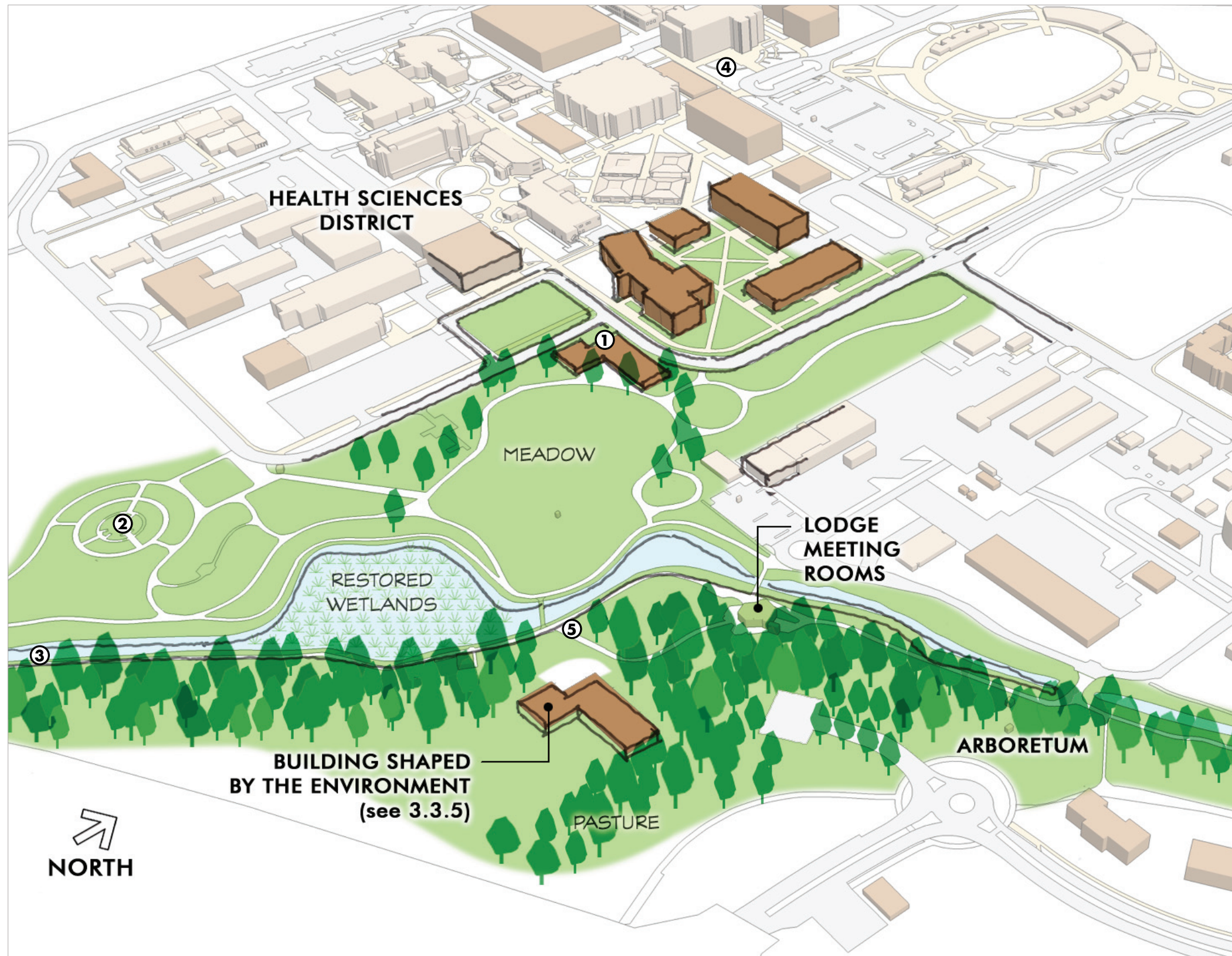
is an essential link in the campus stormwater system. The Arboretum Discovery GATEway will be an evolving showcase for best practices for the interaction of water with the built environment.

4 NEW HEALTH SCIENCES ENTRY

links the School of Veterinary Medicine and School of Medicine with the Arboretum Discovery GATEway, creating a platform for experiential learning in health and the environment.

5 THE GATEways INSTITUTE FOR ENVIRONMENTAL LEARNING AND LEADERSHIP

will be accessible from a new campus entrance at Interstate 80, bringing the core campus values of environmental stewardship and sustainability to the front.

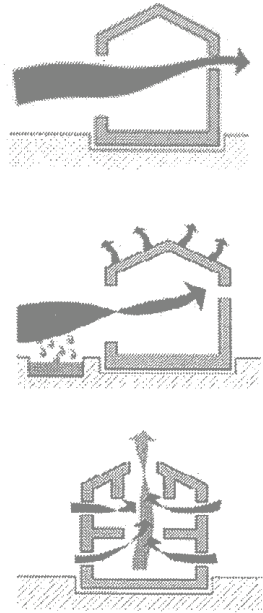


At the west end of the Arboretum, the linear creekside space opens up into a broad, level area on the top stream terrace, with vistas of the waterway and the coast range fifteen miles to the west. This area (110 acres) will be developed as a major regional destination with a world class botanical garden and discovery center. The focus will be on the environment, featuring UC Davis expertise and innovative work in the environmental and plant sciences, urban horticulture, restoration biology, sustainable development technologies, the landwater interface, and science education.

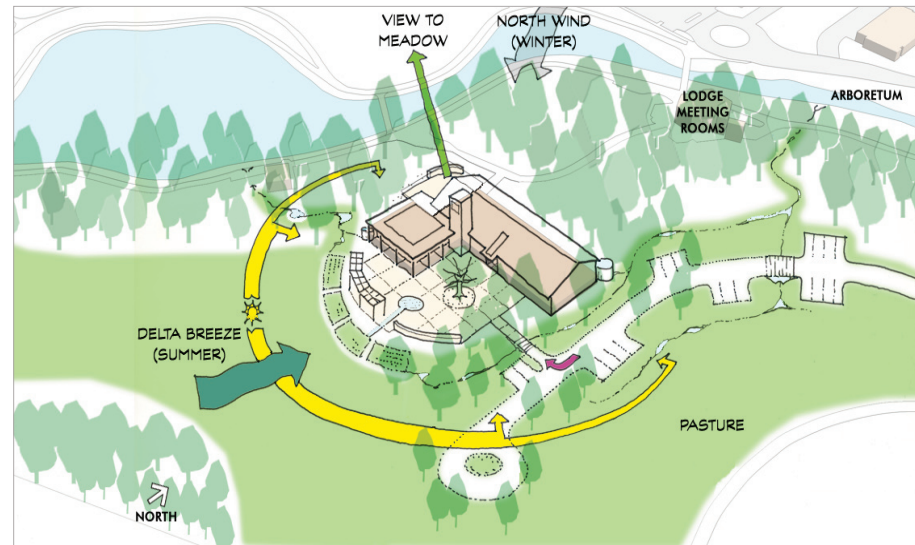
SUPPORTING ACTIONS:

- Build traffic roundabout at interstate entry to the campus to provide roadway access to the Arboretum from the freeway
- Locate visitor center and Institute on south side of waterway
- Build pedestrian bridge linking Institute complex with north side of the waterway
- Regrade the slope on the north side of the Arboretum to create a physical and visual connection to the waterway.
- Locate building sites around the main Garden for programs focused on experiential learning in sustainable systems for the natural and built environments.
- Relocate the Health Sciences entry drive to improve access and orientation to the Vet Med Teaching Hospital
- Provide for over 1 million square feet of building capacity in the Health Sciences District, organized around two main pedestrian malls that link buildings from north to south.

VENTILATION



BUILDINGS SHAPED BY THE ENVIRONMENT



Comfort is a fundamental goal of good design. Using the natural processes that are unique to the site to provide comfort and environmental health is the goal of good sustainable design. The location of the Davis campus in the southern Sacramento valley presents specific conditions for the integration of sun, wind, and water into building and landscape design.

PLANNING PATTERNS:

SITE AND ORIENTATION

Siting and orienting the building to provide ventilation, shade and direct sun as needed. Orient buildings with the long axis in the east/west direction when possible to optimize solar access and solar control, and to take advantage of the summer cooling breezes from the southwest.

Utilize stormwater systems to integrate buildings and landscapes.

Hold back site development from the waterway to respect the riparian zone.

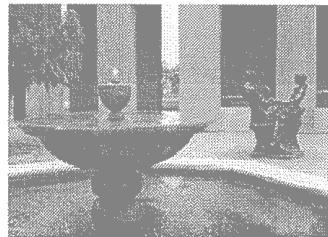
LANDSCAPE PATTERNS:

Use **trees** in the area surrounding the building to focus cooling breezes, provide shade and protect outdoor areas from excessive wind.

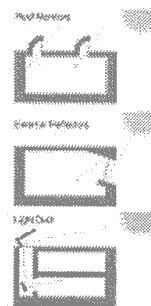
Develop the area surrounding the building to **extend the interior space** into useful, comfortable exterior space.

Develop car parking as tree-shaded **parking garden** with pervious pavement to clean and infiltrate stormwater.

EVAPORATIVE COOLING



DAYLIGHTING



BUILDING PATTERNS:

Extensive roof eaves, covered porches and trellises to modulate sunlight and provide weather protection. Provides a sense of openness and accessibility to visitors.

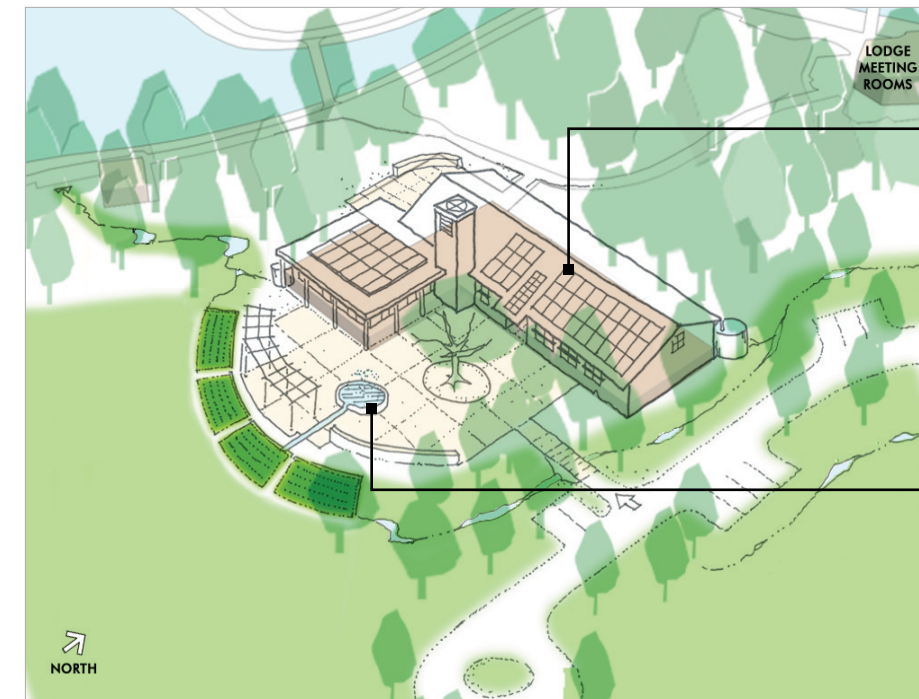
Provide a loose fit structure with interstitial space and pathways for layering in new technologies as they arise.

Maximize on-site passive energy strategies to minimize energy demand and demonstrate environmentally effective building strategies.

Utilize distributed energy systems to take maximum advantage of on-site generated power for buildings with appropriate programs and settings.

Optimize daylighting to provide optimum working conditions and to limit artificial lighting requirements.

For typical building elements (entries, porches, sun shades, lobbies, stairs, etc.), colors, materials and site elements see Part 4.



KEY ELEMENTS FOR THIS BUILDING TYPE

Narrow building width supports daylighting and natural ventilation

Deep overhangs protect walls from solar gain and extend the buildings and

Porch (8' minimum depth) provides solar control

Un-shaded roof area provides on-site power generation

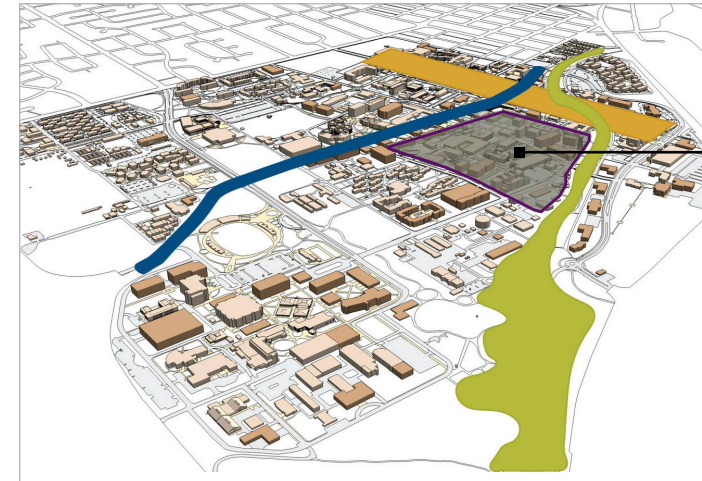
Roof water collection and redirection to irrigate landscape.

Water feature in outdoor space provide evaporative cooling effect

Outdoor spaces are partially protected by the building and located to provide different options for outdoor seating depending on the season

Deciduous trees shade patio area for summer use but open up for passive solar heating of the building for winter months.

CREATE IDENTITY FOR DISTRICT CENTERS



CIVIC CORE
BIKE/BUS BOULEVARD
ARBORETUM
DISTRICTS
ENTRIES

Within each academic district, the planning framework identifies a series of actions to better connect public spaces, to create spaces for interaction, and to create a distinct identity for that district. Typically, each district has a public space that acts as a primary gathering space for people working and studying in those disciplines. Each district, depending on its character and location, also has a set of unique 'connectors' back to the Civic Core (the campus social center), the Bus/Bike Boulevard (the campus transportation spine), and the Arboretum (the campus outdoor museum and recreation resource). Within each district, the framework plan identifies buildings to preserve and new building sites to assure academic disciplines have the room to grow. The district illustrated in this chapter is the Physical Sciences and Engineering district, located in the southwest quadrant of the central campus. Residential districts have their own community buildings and open space.

SUSTAINABILITY VALUE

Compact Land Use

The framework plan calls for current low-rise buildings to be removed and replaced with taller buildings and public outdoor spaces for gathering and interaction. Large sites that are covered today with one-story buildings or parking lots will be replaced by taller buildings and active outdoor spaces. This strategy keeps the overall footprint of the campus compact, enhances interaction, conserves land, and utilizes existing utility corridors.

Within a district, building footprints are located to create beneficial adjacencies among related disciplines, while physically shaping shared public outdoor spaces that link the campus together.



The Plant and Environmental Sciences Courtyard serves as a district center for people in neighboring buildings. The court functions as an event space, landscaped as an educational display and planted as an edible garden.



The Bio Science district center features a campus green surrounded by classrooms, class research labs, offices, and a small café.

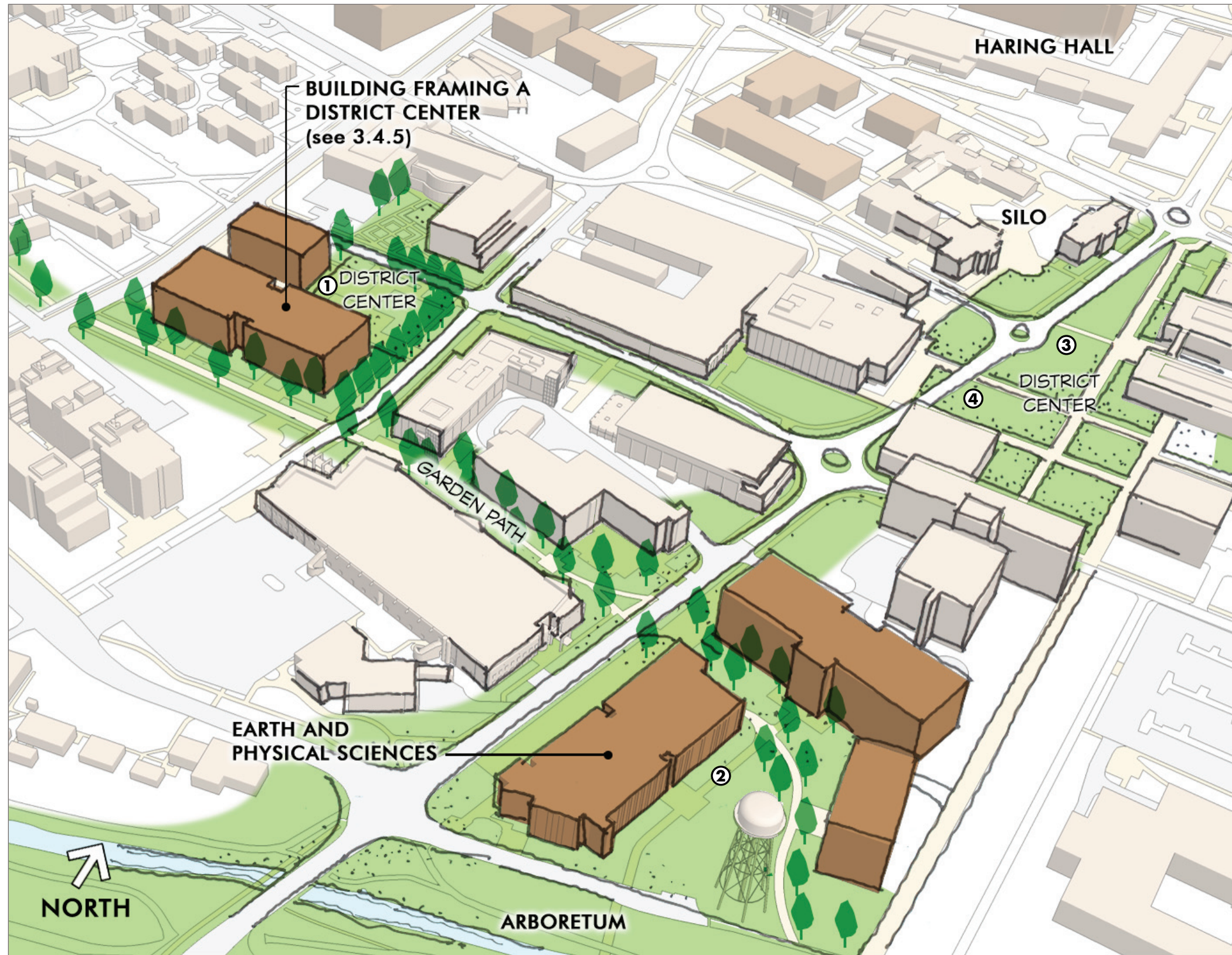
IDENTITY FOR DISTRICT CENTERS

1 THE ENGINEERING DISTRICT CENTER is a new commons surrounded by entries to existing and planned engineering buildings. This district center is linked by a garden walk to the Physical Sciences District Center and the Arboretum

2 THE PHYSICAL SCIENCES/ ARBORETUM GATEWAY is formed by new buildings around a shared public space on the edge of the Arboretum. The space is shared by people in related disciplines: Earth and Physical Sciences, Chemistry programs and classrooms.

3 THE PHYSICAL SCIENCES DISTRICT CENTER is redesigned to create better connections to the civic core, the bus/bike boulevard, and the Arboretum.

4 NEW PLAZA AND WALKWAY CONNECTIONS separate pedestrians from bicyclists, and link the district to the civic core.



SUPPORTING ACTIONS:

- Remove existing mounds to create new bikeway and reclaim sight line between the Chem Annex & Bainer Hall.
- Create new pedestrian plaza connecting the Mrak Mall with the front of Bainer Hall.
- Extend walkway along the east side of the existing Physics/Geology Building to connect district center to Arboretum.
- Relocate facilities units to the Hopkins Service Center west of Highway 113
- Locate new Chemistry building on an east/west alignment at the north end of the space.
- Landscape the GATEway to bring the work of physical scientists to the public and demonstrate environmental best practices.
- Demolish ramp on west side of Roessler Hall
- Extend bike path to connect directly to southern leg of California Ave.
- Development of new building sites
- Completion of N/S bike/ pedestrian way

BUILDINGS FRAMING DISTRICT CENTERS



Vet Med District Center – VM3A and Valley Hall



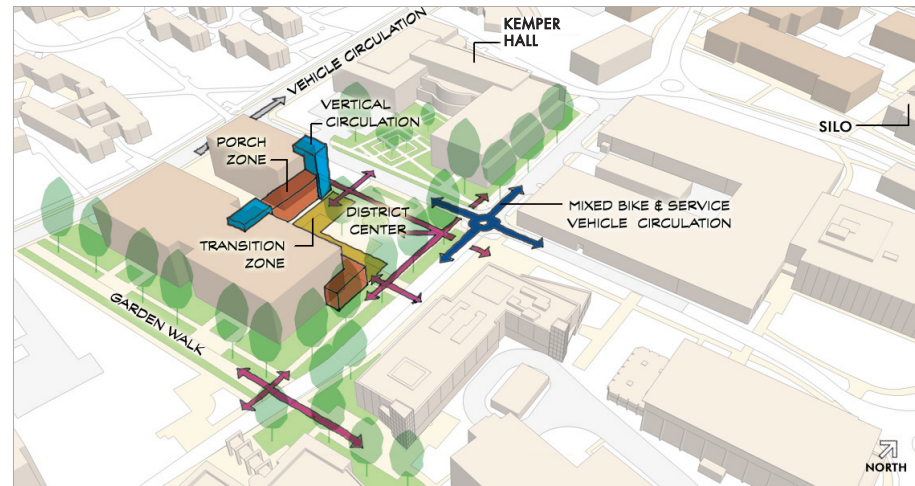
Dutton and South Halls



Segundo Infill Housing – Residential District Center



Silo Courtyard and Engineering Open Space



Within academic districts, district centers are framed by classrooms, labs, and office buildings. For example, Engineering 4 (EU 4) and 5 will frame a courtyard space that will become the heart of the Engineering District.

PLANNING PATTERNS

Functional compatibility with district center. The building program for EU4 does not currently contain a significant amount of general classroom or multi-purpose space. Small student-focused programs that would benefit from a location at a district center should be considered for the portion of the ground floor facing the district's public outdoor space.

Active, transparent lobby. A central commons space on the inside of the building will need to be programmed on the ground floor with a substantial link to the outdoors to avoid the vacant living room feel of the Kemper Hall lobby across the street.

LANDSCAPE PATTERNS

Comfortable transitional space from entry to open space. A district center is ideal for transitional space between the building face and the public outdoor space. This transitional space can be used for studying or gathering during special events. This pattern should be dramatically expressed with shaded porch or covered walk elements on the outside of the building facing the plaza.

Landscape design to accommodate a variety of uses from quiet study to major events. The district's public outdoor space should transition from the quiet, partially enclosed spaces along the building edge to active, flexible hardscape and green space at the center of the space. This will facilitate special events.

ARCHITECTURAL PATTERNS

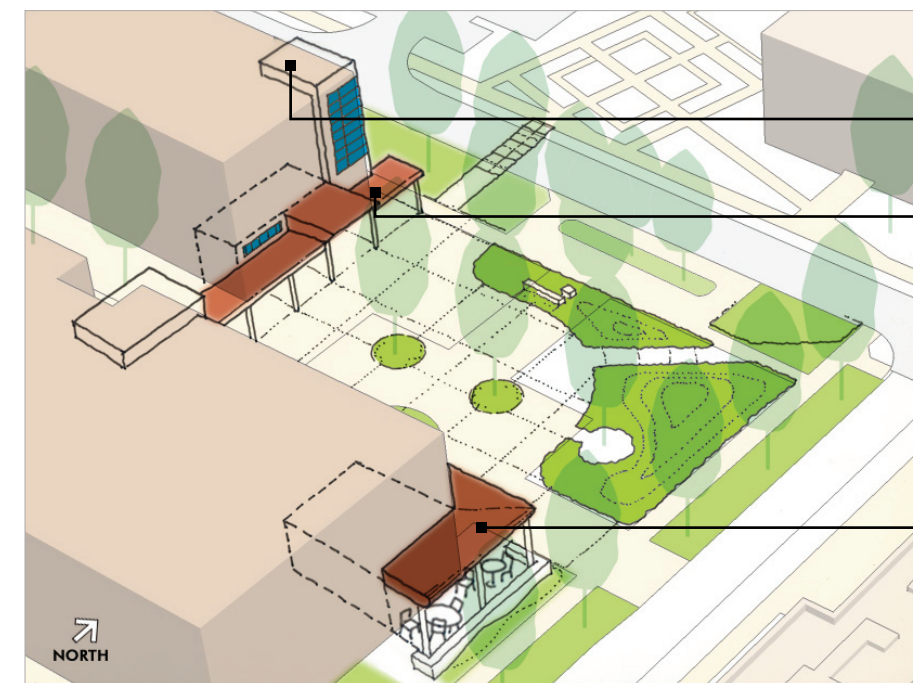
Clear building entries give identity to buildings and open spaces.

Building circulation and common spaces, such as conference rooms and study lounges, are stacked to create interactive spaces within the building and special features for building identity.

Expansive building walls formed by the repetition of labs and offices are punctuated by deep-set windows or shade structures in response to building orientation.

Colors and materials are used to create cohesiveness within a district.

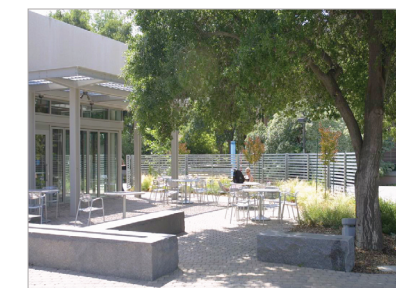
For typical building elements (entries, porches, sun shades, lobbies, stairs, etc.), colors, materials and site elements see Part 4.



KEY ELEMENTS FOR THIS BUILDING TYPE

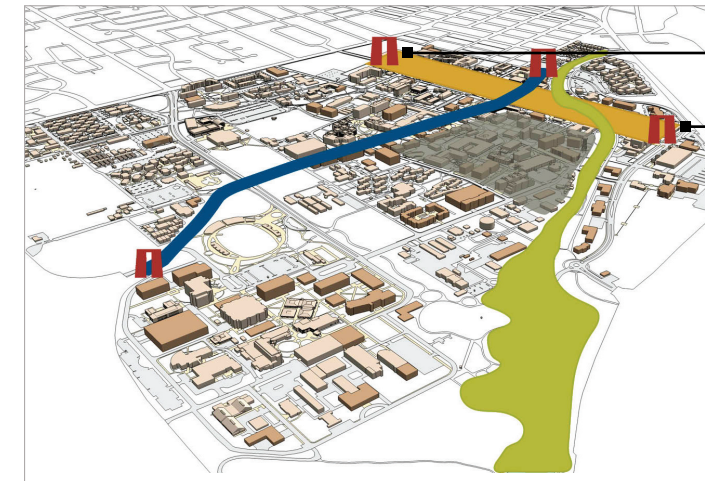
- Stair tower with views out and connection to lobby acts as wayfinding element for the open space to the north
- Pronounced primary building entries with associated light-filled lobbies
- Covered arcade provides human scale and transition to outside space
- District Center open space with activity gradient from high to low intensity use from west to east
- Shaded plaza with deciduous tree canopy
- Public spaces on the ground floor enhanced with corner porch raised above sidewalk level with views of the bike street
- Lobby with pass-through circulation to the Garden Walk

The Health Sciences District, anchored by new buildings for the School of Veterinary Medicine, uses three new buildings, linked by interior circulation, front on a common courtyard, framing the new district center.



The space is designed with architectural continuity to support quiet contemplation, with large events on the west side and high levels of activity on the east.

CONNECT CAMPUS ENTRIES TO THE GREATER COMMUNITY



CIVIC CORE
BIKE/BUS BOULEVARD
ARBORETUM
DISTRICTS
ENTRIES

"With few exceptions, the American college was to turn outward rather than inward, directing itself to the community or to nature. And its physical plan was to be the clearest evidence of this orientation."

-Paul Venable Turner,
Campus, And American Planning Tradition

SUSTAINABILITY VALUE

Integrate the Physical Campus with the Fabric of Society

Just as the mission of the academic campus is to contribute knowledge and solutions to society, the entries to the Davis campus embrace this principle of connectedness with society and nature. Each of the campus entries captures this openness with different treatments that reflect the unique setting. The eastern edge of the central campus, along A Street, is shared with downtown Davis. This is the most pedestrian-oriented edge to campus. Existing and planned campus entries on this edge consist of monuments and gateways appropriately scaled for pedestrians moving across the edge from city to campus.

The north edge of campus, along Russell Blvd., is fronted by residential buildings on the city side of the street. This edge of campus consists of tree lined streets and large recreation fields with open views that present a green, open face to the community, not a closed, inward-oriented relationship. The western edge of the central campus is bordered by Highway 113, a regional freeway, with open views of campus agricultural fields and the coast range.

The southern edge of the central campus is located along Interstate 80. This entry has been developed over the last 15 years as a complex of buildings, public spaces, and vineyards that welcome the public onto the UC Davis campus. The programs located in this entry are all visitor-oriented activities with a high degree of public attraction, including the campus visitor and information center, a performing arts center, the wine and food institute, a hotel and conference center, a new Graduate School of Management, and a planned art museum. Each of these programs moves academic-related activities to the regional front door of the campus, serving as amenities for the campus, the region and the state. The vineyard landscape supplements the academic program as a teaching resource, reflecting the agricultural heritage of the campus, embodying the intersection of art and science.



Visible Agriculture The new south entry creates identity for UC Davis at Interstate 80—capturing views across a teaching vineyard—honoring the agricultural heritage of the campus.



City Connections The campus has had a close relationship with the city of Davis, having both grown together, and the campus community has been very active in the city community. The campus shares open, green spaces along its borders with the city.

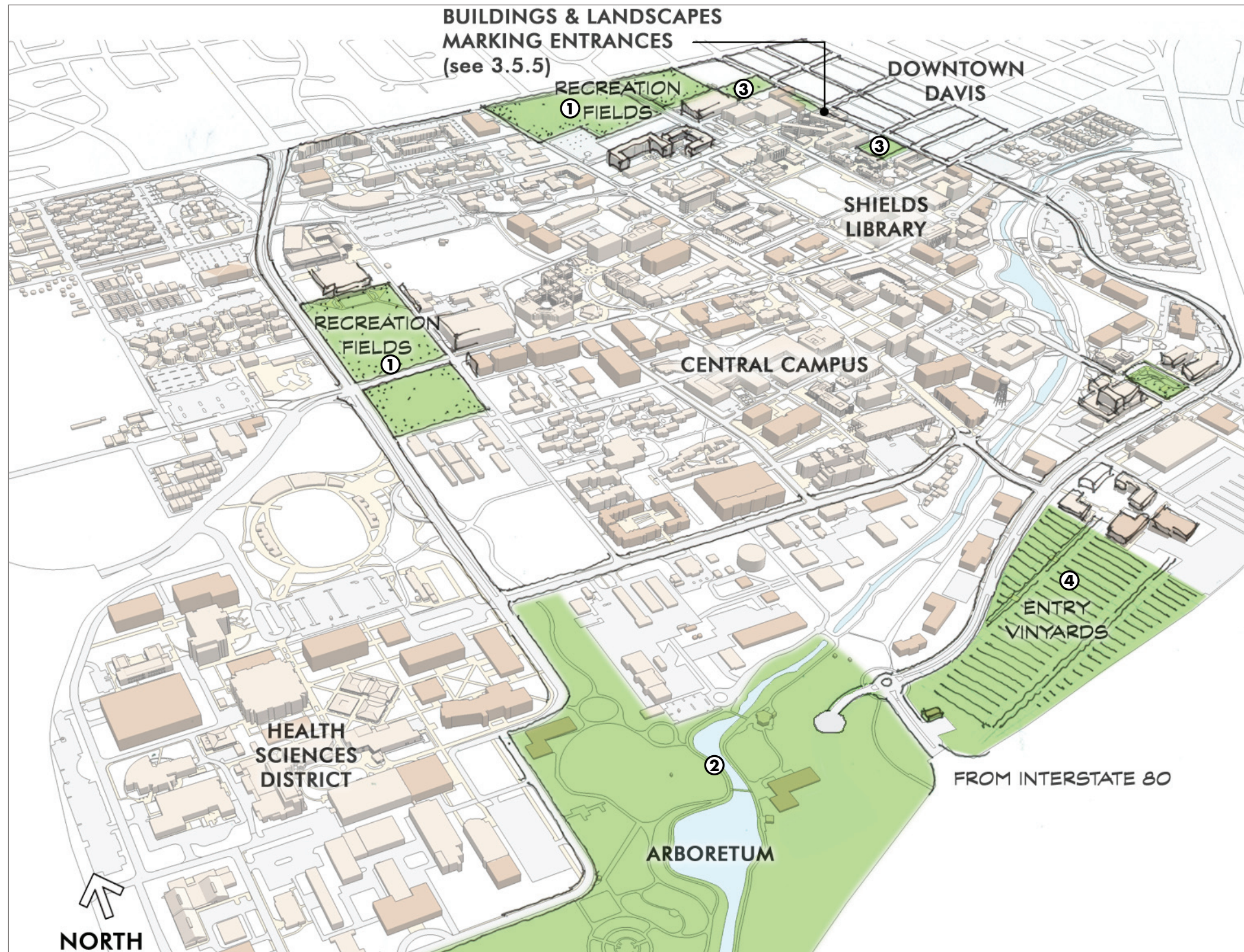
CONNECT CAMPUS ENTRIES TO THE GREATER COMMUNITY

1 EXPANSIVE RECREATION FIELDS and tree-lined streets create an open, welcoming edge to the local residential community to the north and at the Highway 113 entrance to the west.

2 THE ARBORETUM, currently inaccessible from Interstate 80, gains a major access road and becomes a visitor destination from the freeway.

3 PEDESTRIAN-SCALED MONUMENTS mark the transition from the historic core of campus to downtown Davis.

4 THE FINE ART OF AGRICULTURE The new teaching vineyard at the Interstate 80 entrance celebrates the agricultural heritage of the campus, and introduces a rich array of visitor destinations at the new 'front door' to the campus.



SUPPORTING ACTIONS:

- Landscape entry road to introduce Arboretum-tested plants as a model for the valley landscape.
- Locate the Brewery, Winery and Food Pilot Facilities to enclose the Mondavi Institute Courtyard and frame views across the vineyard to the coast range.
- Remove vehicle access gate at First and A Street
- Introduce entry monuments as visual transition from First Street to campus
- Replace existing entry walls with entry towers and pedestrian gateways reminiscent of the original 1920's structures on the site.



Live oak trees line the Howard Way entrance from city of Davis



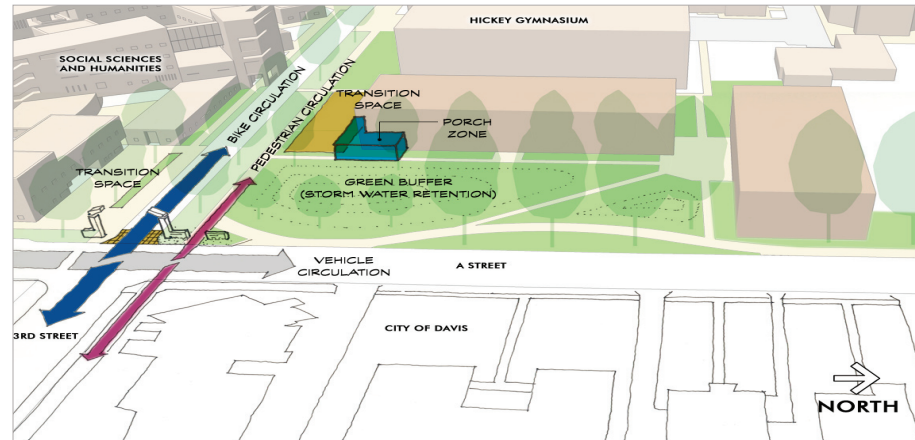
The Howard Way entrance is the historical entrance to the campus and now serves as the city-side vehicular and bus entrance. This entrance should be reinforced with gateway structures, signs, paving treatments, and lights.



I-80 Entrance, looking across pasture towards Arboretum

BUILDINGS AND LANDSCAPES MARKING ENTRANCES

There are unique conditions at each entrance point to the main campus due to the edge conditions that the campus shares with the surrounding community.



The east side of the central campus shares an edge with downtown Davis. Gateway monuments celebrating the transition from town to gown are appropriate for 3rd and A Street and 1st and A Street.

PLANNING PATTERN

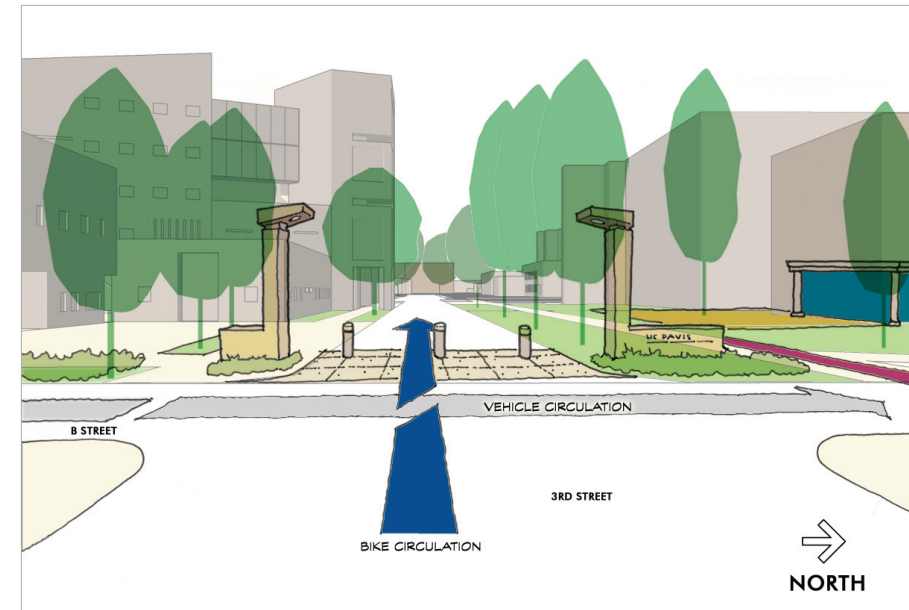
The historic core of the campus shares the same street grid as downtown Davis. Each of the east/west streets in downtown Davis between 1st Street and 5th Street crosses A Street onto campus. Only one of these locations is currently marked with a campus gateway, a low brick wall commemorating the location of the original farm gate as an extension of 2nd Street. Both 1st Street and 3rd Street are candidates for

Third and A Street includes a campus 'green' that will remain in the future, preserving the open boundary between the city and campus. Future buildings will have entrances on this green, focusing student activity on this shared open space.

Parking is concentrated on the northern entrances to the campus from Russell Blvd., preserving the A Street edge as a low-traffic street more easily navigated by bicyclists and pedestrians.

LANDSCAPE PATTERN

Maintain street trees and campus greens with open, park-like planting along the A Street edge of campus.



The 3rd Street entry needs strengthening with the following actions:

PLANNING PATTERN

Support more campus related uses along the 3rd Street corridor.

LANDSCAPE PATTERN

Use pedestrian paving, street planters, and lighting fixtures along the 3rd Street all the way to B Street to connect the campus to the downtown.

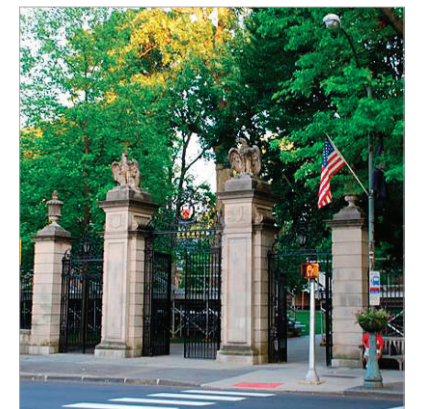
Provide planting, signage and an architectural gateway structure at the east side of A Street.



UC Berkeley North Campus



Northwestern University



Princeton University
Formal pedestrian entry gateways



UC Davis original Howard Way Gate

4 CAMPUS FABRIC



The previous section focused on the key framework concepts that are unique to the campus, fundamental to our mission and that create an integrated framework for the full range of activities that make up campus life. This framework is overlaid and extended with a fabric of common building and site elements and campus-wide systems that make the campus a cohesive environment. The common elements are identified and briefly described in this section and the campus-wide systems are described in Part 5.



BUILDING ELEMENTS

- Entries
- Arcades
- Porches
- Trellises
- Sun Shades
- Indoor/Outdoor Rooms
- Lobbies
- Stairs

COLOR & MATERIAL PALETTE

SITE ELEMENTS

- Exterior Lighting
- Paving
- Site Furniture
- Fencing
- Special
- Public art
- Monuments
- Interpretive Signs

These common building and landscape elements apply to all new building and landscape types across the campus. The following pages describe the elements that support campus continuity. The most successful examples on campus illustrate some of the variety available within these limits.



A recessed entry at the corner is marked with a dramatically different window pattern and is visible from many directions



The seat walls at this entry provide a welcoming place to meet or wait



This porch roof is a trellis that offers over 50% shading and is furnished with movable seating

BUILDING ELEMENTS

Entries

Clear, welcoming primary building entries are critical to effective orientation on the campus.



The most successful entries on campus share the following attributes:

- Offer shelter from the rain, wind, and most importantly, the sun
- Can be identified as an entry from different vantage points. This often requires some vertical expression at the entry location
- Contain entry elements that visually bring the scale of the building down to the human scale of the doorway
- Provide a small gathering space in front of the doorway out of the way of circulation for waiting or continuing a conversation

Arcades

In the Mediterranean climate, arcades extend the building space into the landscape to provide “stage backdrop” or “storefront” space in addition to shelter for circulation. They connect buildings perceptually into a larger whole. While employed infrequently on the Davis campus, they are heavily used by people where they have been constructed.

Porches

Porches act as outdoor rooms providing sheltered interaction areas and provide a human-scaled connection for larger buildings. The most successful entries on campus share the following attributes:

- Offer shelter from the rain, wind and most importantly the sun.
- Extend from the building a minimum of 8’ and are defined by supporting columns at the corners.
- Provide a smaller scale with a roof height no more than 16’ above the ground plane.
- Accommodate a variety of group sizes with movable seating.

Trellises

Trellises are used on campus to provide protection from the sun along building edges and walkways. They are also used on some buildings as sun shades for windows.



The most successful trellises share the following attributes:

- Offer shelter from the sun with over 50% shading.
- Are used in conjunction with solid porch roofs to create a transition to the building interior from partial shade (trellis) to full shade (porch) to the building interior.
- Use material with a recognizable dimension that illustrates the building was made by people for people.

Sun Shades

While sun shades for windows are probably the most common façade element on the campus buildings, there is a tremendous variety of construction and detailing.



The most successful sun shades share the following attributes:

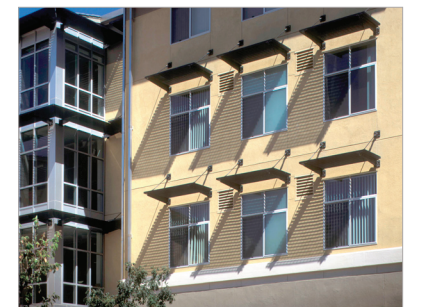
- Offer shelter from the direct sun with over 50% shading .
- Protect windows from direct solar exposure from May through October (for windows on the south, somewhat less protection is acceptable on the east and west).
- Double up as light shelves to bounce daylight into the interior through high windows.



The masonry columns on this trellis provide a strong sense of enclosure and human scale.



The openness and height of this trellis together make it unable to offer adequate shelter from the strong Central Valley sun.



When sunshades are not extended adequately past the edges of the windows or are set too high above the window head, the windows receive many hours of undesirable direct sun before and after solar noon.



A glazed corridor continues around the Vet Med central open space, providing a gradual transition between the building and landscape and assisting with orientation



Second story interaction area has a balcony and views into a tree canopy.



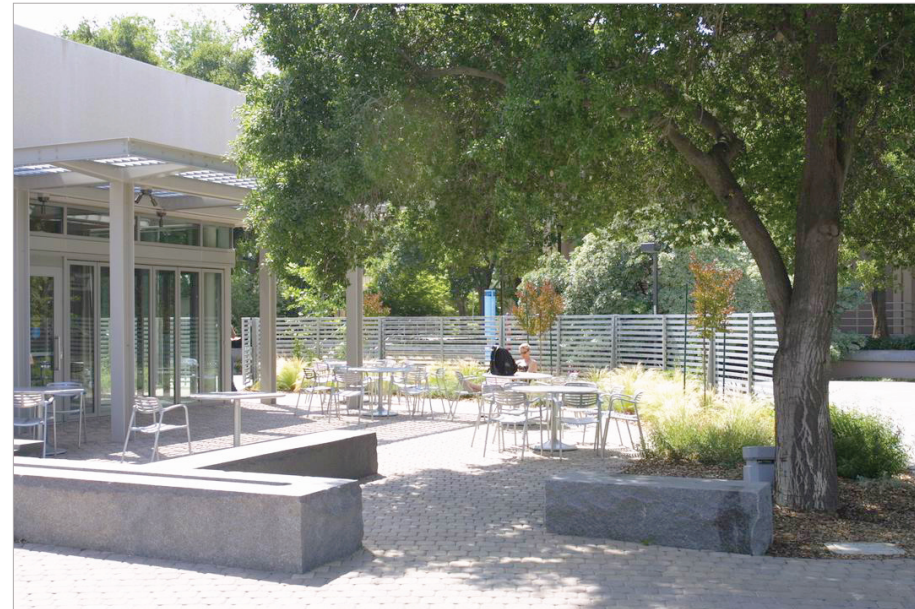
This reading room looks into a landscaped courtyard and connects to the primary stair.

BUILDING ELEMENTS (continued)

Indoor/Outdoor Rooms

Partially enclosed exterior spaces on the building edge function as outdoor rooms that allow people to extend the activity of the building into the campus open space network and provide enhanced opportunities for interaction.

Rooms with patios, porches or balconies that provide the opportunity for people to occupy transition space between indoors and outdoors are highly prized in our climate with its extended spring and fall seasons.



Generous view windows from public rooms continue this pattern on upper floors. The most successful indoor/outdoor rooms share the following attributes:



A two-story space with north views to the landscape

- Allow the occupants the ability to open or close the doors or windows that mark the building interior.
- Shade the windows or doors from direct sun during the warmer months
- Provide a variety of seating that can be moved and adjusted by the occupants

Lobbies

Lightfilled lobbies that continue the gradual transition from the intense sun and temperature of the outdoors act as the “living room” of the building.



The most successful lobbies share the following attributes:

- Enclose or share a close connection with the building primary stair.
- Extend into at least one other floor
- Provide views that extend out into the adjacent landscape
- Include partially enclosed/defined areas with a reduced human scale for seating.

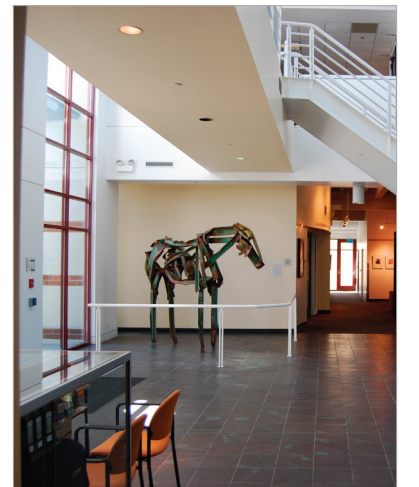


Stairs

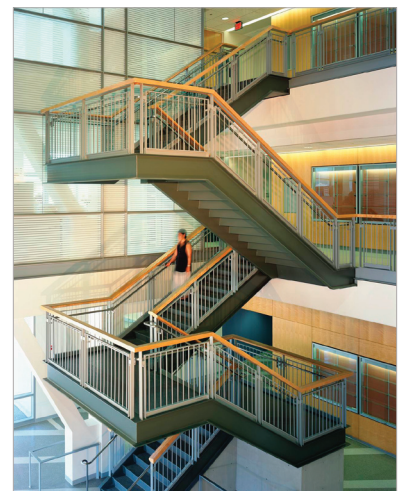
Welcoming, comfortable stairways that are part of, or connected to, the building lobby are important interaction zones in the building and extend the living room of the lobby into the upper floors. By encouraging people to use the stairs in lieu of elevators it supports human health and saves energy.

The most successful stairways share the following attributes:

- 5’ minimum width
- Views to the outdoors or across a multi-story space
- Widened intermediate landings for seating or merely a conversation out of the flow of traffic.
- Integrate with elevators to engage people in social interaction and orientation who cannot physically use the stairs



Two story lobby with view to outside plaza provides a gradual transition from outdoors to indoors.



An inviting open stairway assists with casual interaction among the people in the building and strongly supports orientation



Buildings in the academic range of the color and materials palette



The colors for the academic palette are typically colors from nature with more vibrant colors used on the interior but visible through the exterior glazing. This allows these interior colors to provide delight yet change with fashion over time.

COLOR AND MATERIAL PALETTE

The palette of materials and colors used on the campus roughly breaks down into two ranges: academic and residential. The academic range includes buildings of a civic, academic, administrative or major service function and are typical in the campus core and in the Health Sciences District. The residential range is typical in the residential districts, the Arboretum and in the west and south campus.

PRIMARY FAÇADE MATERIALS



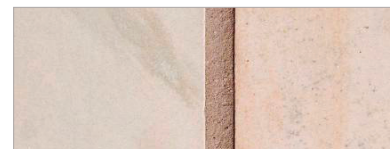
Precast Concrete
Light to middle earth tones



Thincast Concrete
Glass Fiber Reinforced Concrete



Ground or Split Face Concrete Block



Stone/Tile Veneer



Cementitious Siding
Brick Veneer (Special Districts at Core of Campus)

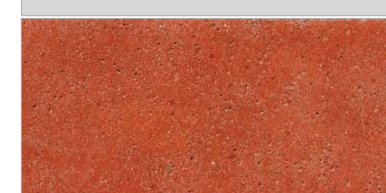
PRIMARY FAÇADE MATERIALS (continued)



Cement Plaster
Light to middle earth tones with more intense accent colors on special elements



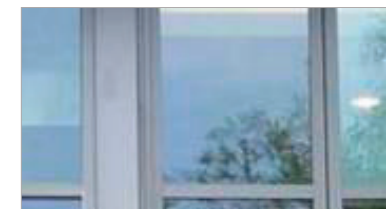
Cementitious Siding



SECONDARY FAÇADE MATERIALS



Flat and Profiled Metal Panels
Painted or anodized



Aluminum Windows and Curtain Walls
Painted or anodized

Glazing
Clear to lightly tinted blue/green

Metal Column Covers
Painted or anodized



Metal Siding
Painted

Wood Shingle Siding (Special District in Core Campus Only)



Wood Trim
Painted or stained



An example of the residential range of the color and material palette.



An example of the range of colors and materials for the agricultural vernacular buildings on the south and west campus.

SITE ELEMENTS

Standards for new exterior lighting, paving, site furniture, and fences are included in the Campus Standards and Design Guide, establishing a clear hierarchy of types and associated applications.

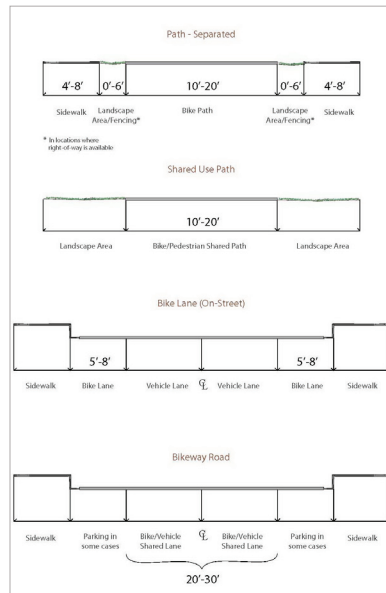
Exterior Lighting



Standard Street, Parking and Pathway Light



Central Quad Light



Paving



Standard Pathway with Emergency Access Function



Standard Pathway



Special Plaza Paving

Site Furniture



Standard Bench



Standard Bike Rack



Standard Container

Fences



Standard Public Facility



Standard Service



Light-colored benches avoid the problem of excessive heat build-up in direct sunlight

SPECIAL SITE ELEMENTS

By their very nature, special elements are not common enough to provide continuity within the campus fabric but are considered in light of their ability to add delight and re-awaken wonder in the landscape.

Art and memorial monuments in the landscape are placed under the direction of the campus Art in Public Places committee. The committee reviews projects for appropriate site placement that enhances the campus fabric. The scale of the typical public art on campus is large-scale and varies from the humorous to the sublime.



The green lawn that is home to the monumental sculpture "Stone Poem" is a favorite seating area.



Arneson's egg heads appear frequently enough around the campus to support both continuity and delight



Historical monuments, because they reflect the design sensibility of their time, are by nature stand-alone elements in the campus landscape.



The Arboretum's current interpretive signage will influence future interpretive signage outside of the Arboretum

Interpretive signage is used extensively as a system within the bounds of the Arboretum but appears infrequently throughout the campus landscape so that it functions more as special element.

5 CAMPUS SYSTEMS

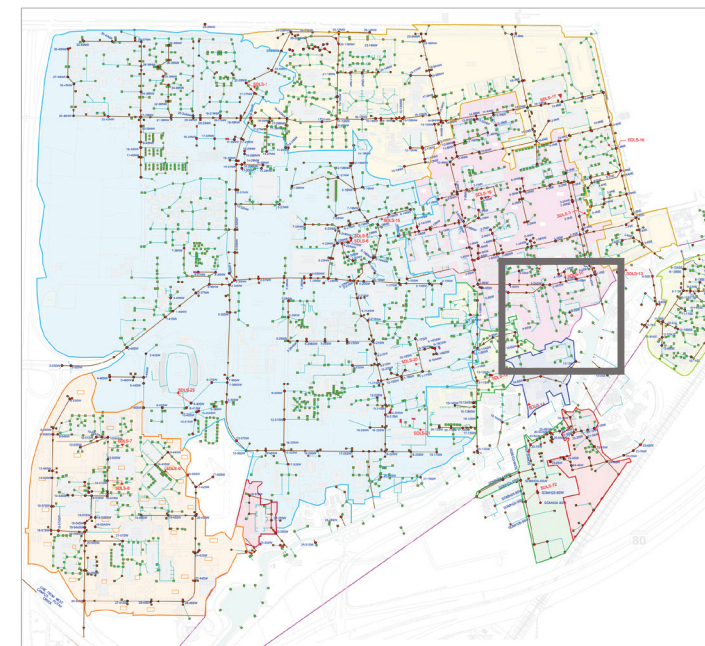


Large-scale campus systems are more fundamental to the campus fabric than the building and landscape elements but are often less visible. These systems are identified and briefly described in this section.

The campus-wide plans for the various systems are large-format, information-intense maps that are reproduced here in miniature with an enlarged excerpt to provide a sense of how extensive the systems and the associated mapping and management are.



The extensive tree canopy of the Central Campus defines the circulation systems and serves as the primary element of the landscape system.



Stormwater system plan with catchment areas mapped

BUILDING CAPACITY

CIRCULATION

- Bicycle
- Pedestrian
- Transit
- Roadway
- Service

UTILITIES

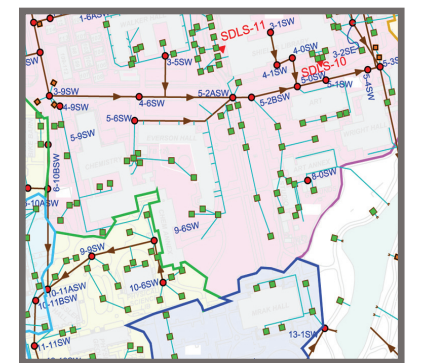
TREES AND LANDSCAPE

STORMWATER

VIEWS AND SIGHT LINES

WAYFINDING & SIGNAGE

PUBLIC OUTDOOR SPACES

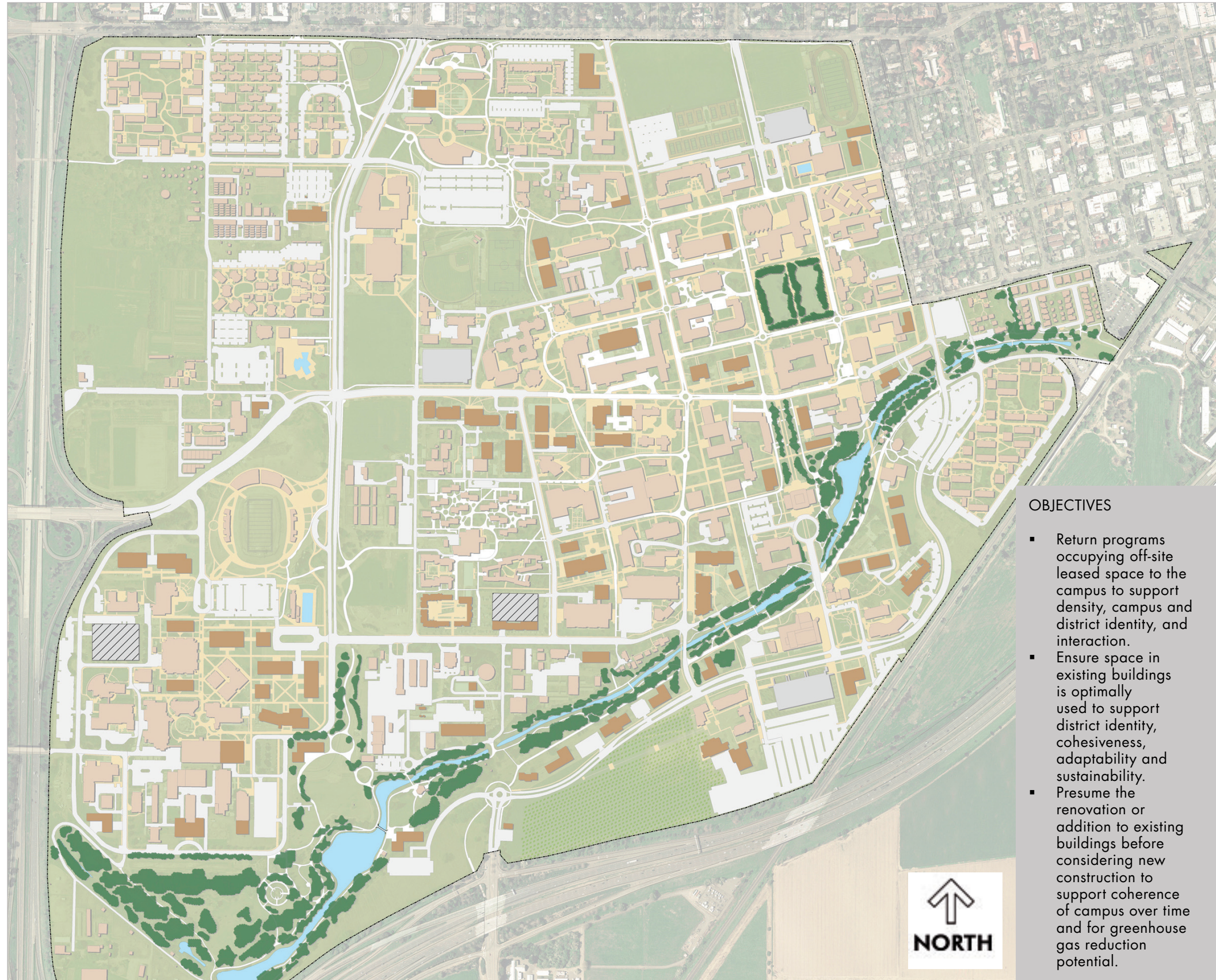


BUILDING CAPACITY

The plan to the right sites new buildings and public spaces on locations currently occupied by surface parking lots or one-story buildings (mainly temporary buildings). The development pattern is designed to achieve a denser campus and more effective land use, and to replace facilities that are less desirable with newer, more efficient facilities. There are additional buildings, including some two-story buildings, which may be considered desirable to replace in the future. However, this plan only documents new building footprints that replace surface parking lots and temporary buildings with multi-story buildings and shared public outdoor spaces. This strategy is consistent with the 2003 LRDP, preserving walkable distances and times across the core campus (see sidebar on Page 2.4).



Existing Conditions, 2009
The Existing Conditions figure shows current building placement on the central campus. FacilitiesLink is the space/facilities management database for existing buildings available to authorized UC Davis staff and is accessed at: <http://facilitieslink.ucdavis.edu/>.



OBJECTIVES

- Return programs occupying off-site leased space to the campus to support density, campus and district identity, and interaction.
- Ensure space in existing buildings is optimally used to support district identity, cohesiveness, adaptability and sustainability.
- Presume the renovation or addition to existing buildings before considering new construction to support coherence of campus over time and for greenhouse gas reduction potential.

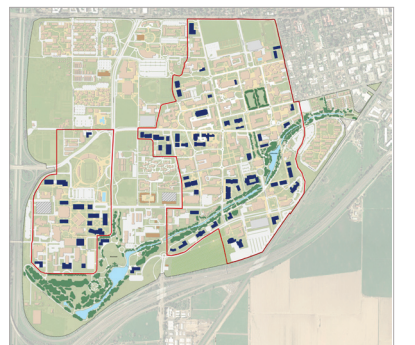


Temporary Buildings. The Student Community Center will replace temporary buildings on Hutchison.



View from surface lot to Mrak Mall

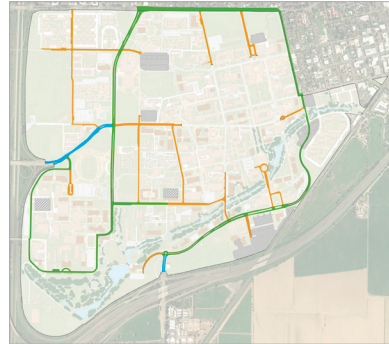
Surface Parking Lots. A future building would replace the surface lot on Mrak Mall, further shaping and enlivening the Mall.



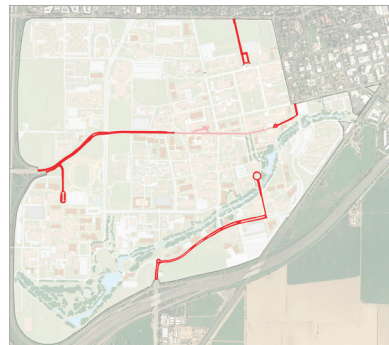
Capacity Study
Demonstrates that the future building sites and prospective building heights fit within the square footage planned in the 2003 Long Range Development Plan and analyzed in the 2003 Long Range Development Plan Environmental Impact Report.

CIRCULATION

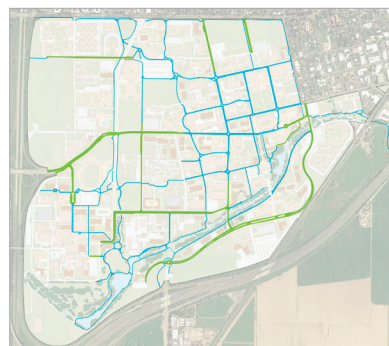
The following diagrams delineate vehicular circulation and parking, transit circulation and key transit stops, bicycle circulation, and key pedestrian circulation. Key patterns to observe from the diagrams are: 1) the campus has a core area closed to public vehicles; 2) transit circulation uses a hub system with bus access to the restricted campus core; 3) bicycle and pedestrian circulation have major, separated path systems and minor, shared path systems.



Vehicular Circulation & Parking
The campus has two freeway exits (blue lines), a perimeter loop (green line) and internal streets leading to parking lots (orange lines).



Transit Circulation
Five bus lines and shuttles provide transit service to the UC Davis campus.



Bicycle Circulation
Bicycle circulation has shared streets (green lines) and bicycle paths (blue lines).



Separate and Shared Bicycle and Pedestrian Facilities Plan from the 2009 Bike and Transit Network Study shows proposed separated sidewalks along high traffic bike paths.

The figures above are updated and maintained by ORMP GIS staff and campus planning staff. For in-depth data, please consult the 2009 Bike and Transit Network Study, the 2003 Long Range Development Plan, the 2003 LRDP Environmental Impact Report, and the GIS Section in Office of Resource Management & Planning.

The redevelopment of Solano Park Housing would permit a realignment of Old Davis Road to capture more land inside the Perimeter Loop Road.

OBJECTIVES

Improve the bicycle and pedestrian systems through establishing a clear hierarchy between major and minor path systems with path widths, paving types and signs

Separate pedestrians and cyclists on major paths

Improve key crossings to avoid conflicts among travel modes.

Improve pedestrian walks and bicycle parking at transit centers to facilitate mixed-mode travel.

UTILITIES

The Davis campus provides all of its own municipal services. Infrastructure built, owned and maintained by the campus includes: groundwater wells for domestic and irrigation water, tertiary-level wastewater treatment plant, electrical substation, central heating and cooling plant (steam and chilled water), thermal energy storage facility, telecommunications, and a storm drain system. Utilities maps are produced by the Facilities Management GIS unit. Utility planning is conducted by the Campus Engineer in the Architects & Engineers Office.



OBJECTIVES

Plan utilities in concert with open space, trees and circulation systems.

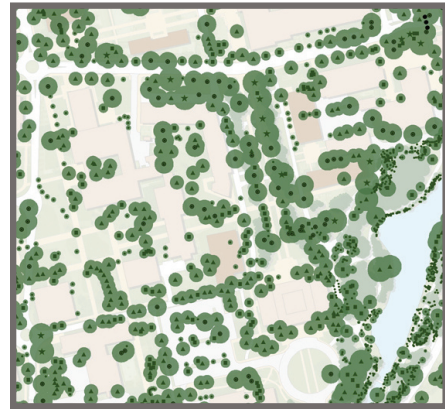
Leave flexibility in utility corridor runs for building sites. The building footprint held in the plan immediately northeast of Mrak Hall is an example of the importance of routing corridors to preserve building footprints that shape key public outdoor spaces.

Continue investing in centralized systems, but allow for distributed systems where they would have cost savings or planning benefits.

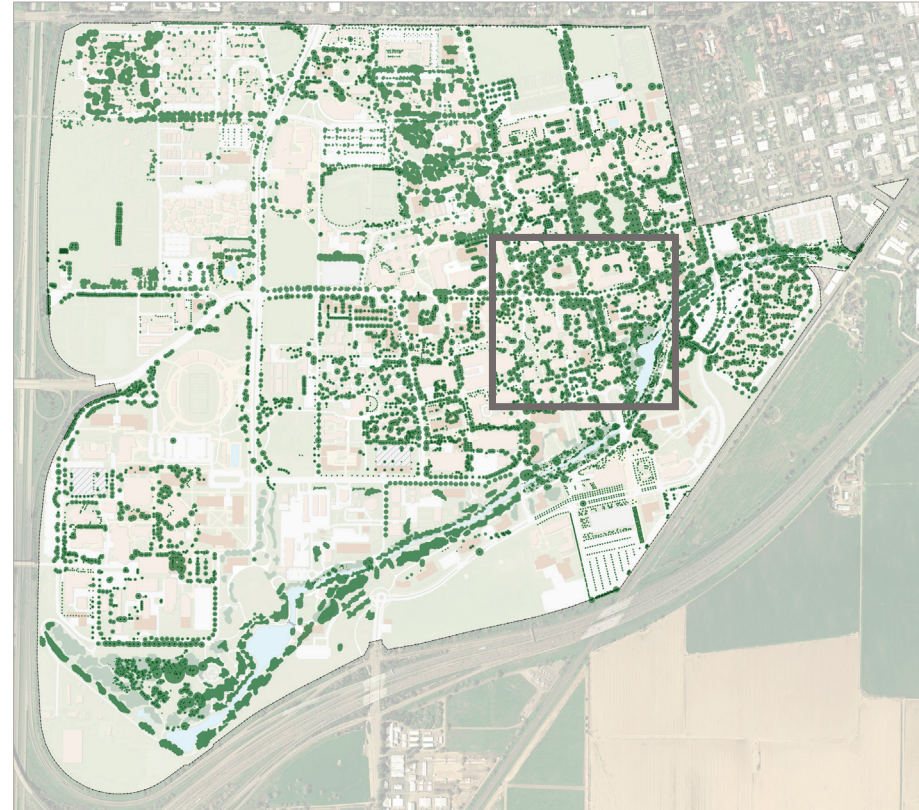
Plan for the long term by retaining campus-owned infrastructure and employing solutions at different scales, taking advantage of the campus' large land holdings (permitting strategies such as the Thermal Energy Storage system).

TREES AND LANDSCAPE

The Davis campus has an extensive urban forest of about 9,000 trees, offering a total tree cover of about 21% (189 acres) (Maco, et al. 2004). Particular effort is made to shade impervious surfaces by planting trees, especially along streets, parking lots, and walking or bicycling paths. The Buildings and Grounds unit budgets for replacement of all trees lost each year, plus planting an additional 100 trees per year, based on the 100 Year Tree Plan developed for the campus. The plans cited are developed and maintained by ORMP Grounds staff.



Tree symbols identify canopy diameter



Campus Tree Canopy 2006

KEY REFERENCES

Landscape Standards guide the design and installation of campus landscapes.

The 100 Year Tree Plan defines a plan of cultivation, preservation and restoration for the campus urban forest.

Getty Landscape Heritage Plan catalogues campus landscapes and their designers



OBJECTIVES

Increase cohesiveness in landscape plantings to create campus and district identity.

Replace and add heritage shade trees and understory shade trees to shade paving and buildings, in order to support campus identity, habitat improvement, comfort, energy conservation, coherent landscape, pedestrian and bike use, and reduce heat island effect.

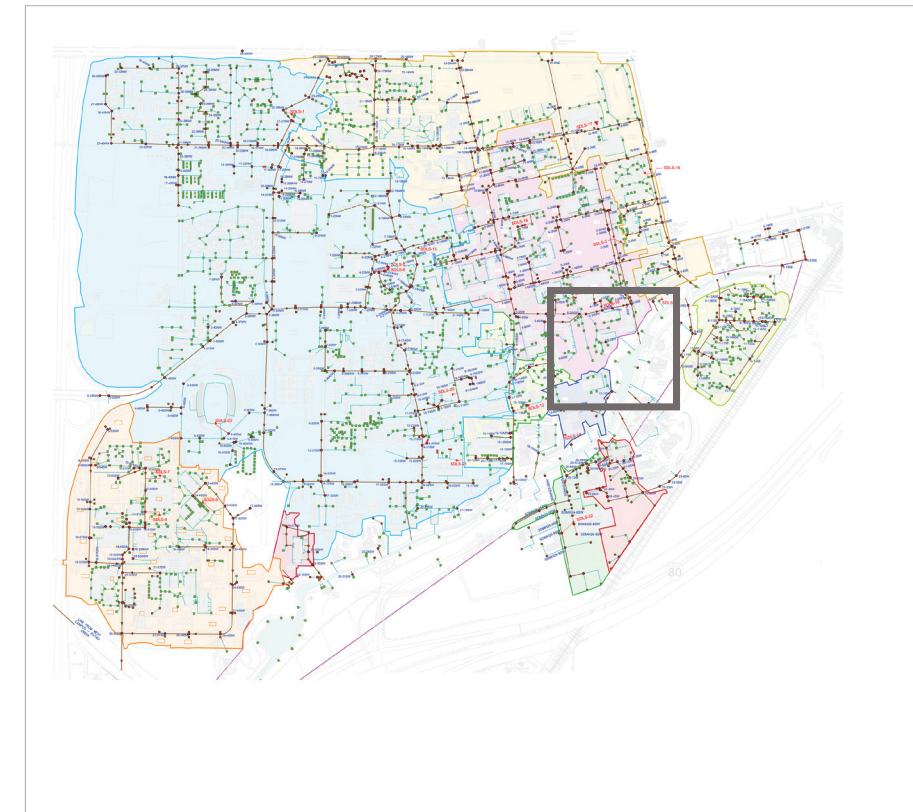
Utilize a landscape planting palette of well-adapted species that thrive with minimal supplemental inputs to support campus identity, sustainability and a coherent landscape (Arboretum All-Stars).



Only use turf in areas where the function requires it. Where not needed for active use, convert existing turf areas to more water-conserving plants. Provide landscape screening of service areas to support visually coherent and aesthetically pleasing landscape.

STORMWATER

The “watersheds” of the central campus storm drain system collect runoff from drop inlets and drain to outlets in the Arboretum Waterway. The waterway is a remnant stream channel that is now managed as a pond for stormwater catchment, habitat, and passive recreation. The Waterway holds approximately 13 million gallons of runoff, and overflow is pumped to Putah Creek during heavy storms. The campus is now extending the consideration of stormwater as a resource, instead of a nuisance, from the larger scale of the Waterway to smaller distributed catchment and infiltration basins to improve water quality before it reaches the Waterway.



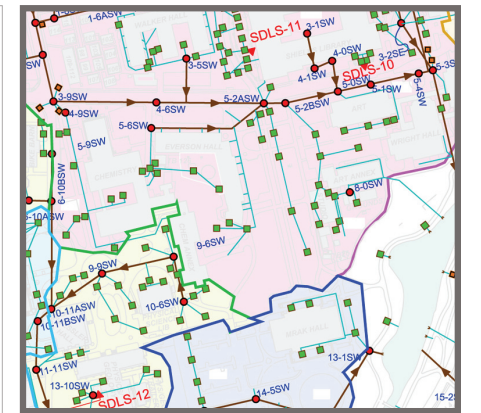
Stormwater system plan with catchment areas mapped

OBJECTIVES

Integrate landscape and surface stormwater management strategies in support of sustainability, coherent landscape and creation of campus identity. Replace drainage outfall pipes that discharge directly into the Arboretum Waterway with overland strategies that remove sediments and nutrients.

Express the stormwater system with open downspouts from buildings, catchment structures, grassy swales, shallow detention structures and infiltration basins to support sustainability, coherent landscape and creation of campus identity.

Increase the stormwater management and habitat value of the green spaces between the campus and the city of Davis. These spaces provide valuable space buffers and recreation space and can provide additional value, as well as support a healthy community.



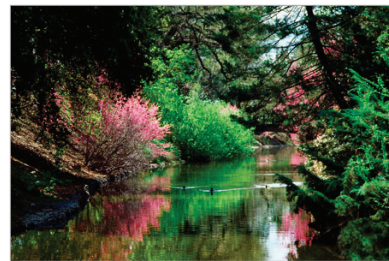
Local On-site Infiltration Basin: Small-scale site solutions offer the opportunity to educate as well as manage runoff of small sites. The size of the Davis campus makes larger overland surface solutions possible as well.

VIEWS AND SIGHT LINES

Rare views can still be found that reveal the campus' place in the broad expanse of the Sacramento Valley. Vistas to the Coast Range can be found from the western edge of the central campus and at the new vineyard entry.

Intermediate views across larger expanses of campus landscape can be found at Lake Spafford in the Arboretum, near Mrak Hall, along with views from atop a handful of buildings that rise above the tree canopy on campus.

There are also axial views internal to the campus that run for several blocks, but most views have a short visible horizon because of the tree canopy over sidewalks, paths and streets.



Arboretum views along the length of the waterway



The open space along the bike paths near Silo has one of the more expansive central campus views, though still dominated by trees.



The tree canopy provides a sheltering experience, creating dappled light on paths and welcome shade in the hot months. Most of the campus' older buildings are shorter than the mature trees around them, and exterior views predominantly look into the tree canopy.

OBJECTIVES

Extend the views along the axis of West Quad, currently disrupted by the Shields Library plaza. Reconfiguring the Shields Library plaza would recreate the axial relationship between the cork oak-lined west edge of the historic Quad and Mrak Mall.

Create thin buildings as appropriate to the program to allow access to daylight and views, which supports occupant health and comfort, energy conservation, and reduces heat island effect.

Facilitate long-horizon views where appropriate, otherwise, design for mature trees as part of the views out from buildings and along streets, paths and sidewalks.

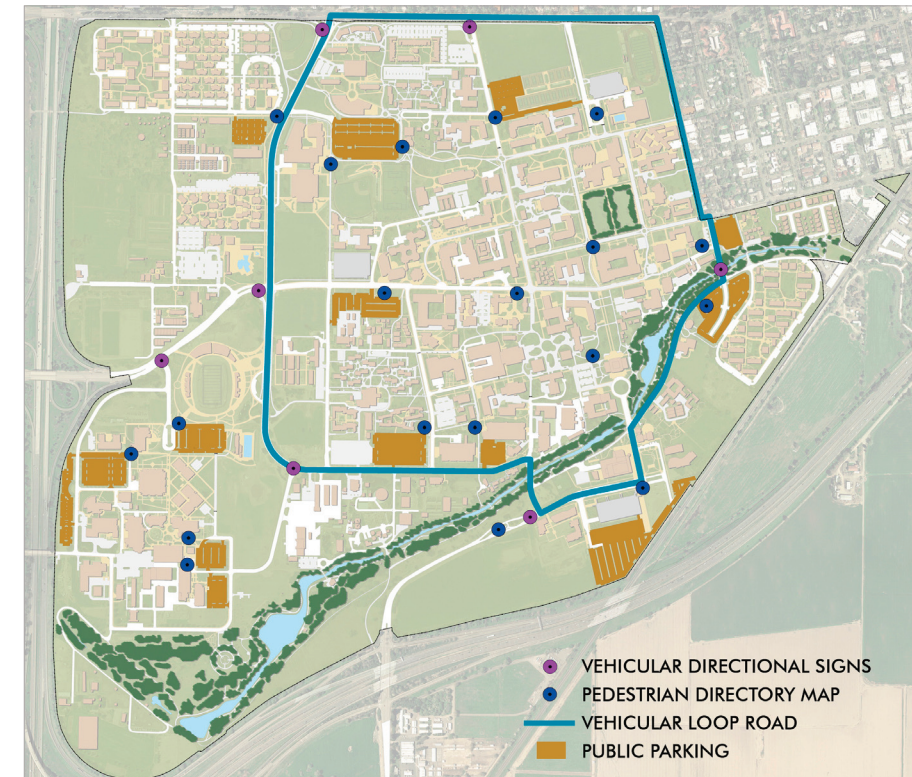
Preserve views of the Coast Range from the southern and western edges of campus, and where possible, provide glimpses from inside the building to create a sense of connection and delight.



Study room at Sciences Lab has views from upper floors that look out into the tree canopy and yet are useful to re-orient occupants

WAYFINDING AND SIGNAGE

Wayfinding is a process of maintaining orientation while in motion and is one of the most useful and valued aspects of coherency in the campus environment. It is supported not only by the general campus organizational framework but by a fine-grained system of signage and markers and is also reinforced by site lighting hierarchy at night.



- VEHICULAR DIRECTIONAL SIGNS
- PEDESTRIAN DIRECTORY MAP
- VEHICULAR LOOP ROAD
- PUBLIC PARKING

The campus loop road defines the break between vehicle-oriented directional signage and pedestrian/bike scale signage.

Many site elements can support the wayfinding system including paving, site furnishings, and lightly, among others.

SIGNAGE



Standard Roadway and Pathway



Special Building

OBJECTIVES

Identify key circulation nodes and establish directional signposts

Enforce the consistency and continuity of the directional signage system at key intersection and circulation nodes.

Develop the exterior lighting systems to reinforce the hierarchy of the circulation system.

Identify key areas for replacement of existing mixed types.



The gateway at Segundo Infill Housing Provides an intermediate directional focal point in a residential cluster with multiple entries.



Campus sign standards cover every signage type from roadway directional signs to interior room signs.

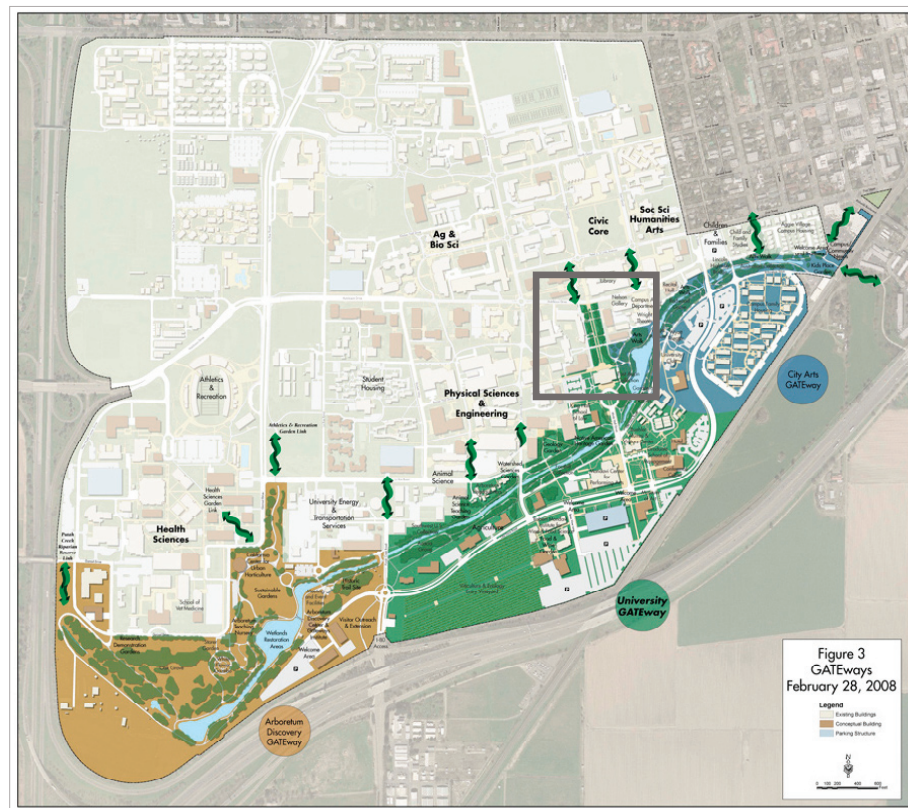
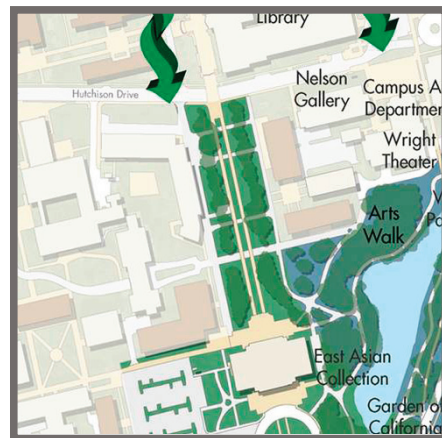


Large, heavily used public spaces are ringed with public buildings

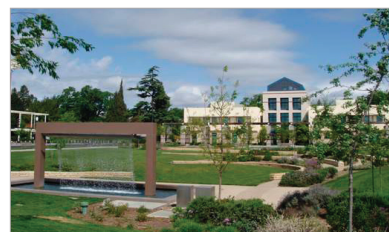
PUBLIC OUTDOOR SPACES

The Davis campus has a comprehensive network of open spaces, ranging from the very large (e.g. the Arboretum) to very small-scale building courtyards. Many of these spaces are formed by buildings, with some exceptions along the perimeter of campus where open fields are bounded by the road network. Public outdoor spaces in the core campus are very heavily used, especially during major public events like Picnic Day and Whole Earth Festival.

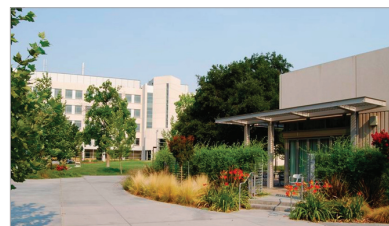
GATEways (Gardens, Art and the Environment) is a project in the Arboretum that interprets academic programs and advances student learning by providing opportunities for interaction with the visiting public. The Geology garden is an early example of this effort.



GATEways map (arboretum.ucdavis.edu/gateways_project.aspx)



South Entry Park framed by buildings



District green and plaza formed and framed by Veterinary Medicine facilities

OBJECTIVES

- **Plan buildings to give form** to and create hierarchy in the public outdoor space network so that there are scaled spaces from large, highly public spaces, to medium-scaled district centers, to intimately-scaled spaces.
- **Activate public spaces** in key high use areas with the right program mix – active uses on ground floors, quieter uses on upper floors.
- **Increase density** with taller buildings (up to 4 stories) while still encouraging 'stair culture' and maintaining intimate connection with building and landscape.

See Page 4.5 for information on indoor/outdoor building elements that define space.



The west addition to Shields Library fully enclosed the original courtyard which includes a heritage oak tree that provides shading.



The plaza between Dutton and North and South Halls is an active circulation area adjacent to key building entries.



The Life Sciences courtyard provides an intimate outdoor space for this research building.



The Good Life Garden provides a program specific landscape in the courtyard of the Robert Mondavi Institute of Food and Wine.

6 PROCESS: Design Review and Approval



Each new capital improvement project is formally reviewed and approved on campus during three separate phases in its development: Definition, Programming, and Design. This section describes the nature of the reviews and approvals that occur at these three phases of each project.

PROJECT DEFINITION

This is the phase of a project when its scope, program, planning and design objectives are initially defined. The product of this effort is a *Project Brief*. Management responsibility for developing the Project Brief is assigned to the Capital Planning unit within the Office of Resource Management and Planning. The Project Brief is reviewed and approved by the Provost, allowing the project to proceed into the subsequent programming phase.

PROJECT PROGRAMMING

This is the phase of the project when its scope, program, planning and design objectives and cost model becomes fully developed. The product of this effort is the *Project Program*, which provides the pertinent information needed to efficiently and effectively begin the subsequent design process.

Oversight of this programming effort is the responsibility of the *Project Advisory Committee*, whose task is to assure that the program is developed in accordance with the previously issued Project Brief. This committee is appointed by the Provost. Management responsibility for developing the Project Program is assigned to Architects & Engineers, a unit within the Office of Resource Management and Planning.

The Project Program is reviewed and approved by the *Chancellor's Committee on Planning & Design*. Upon approval by the committee, a separate executive summary document titled the Project Planning Guide is issued. Approval of the Project Program and issuance of the Project Planning Guide allows the project to proceed into the subsequent design phase.



A **Project Brief** typically includes the following elements:

- Programmatic objectives
- Planning & design objectives – in accordance with this Framework
- Site selection
- Funding sources
- Conceptual cost model
- Conceptual project schedule

The **Project Program** typically includes the following elements:

- Programmatic and functional requirements
- Planning & design objectives in accordance with this Framework
- Area requirements and space tabulations
- Sustainable design objectives
- Building systems requirements
- Cost model
- Project schedule

The **Project Advisory Committee** typically consists of the following individuals:

- Vice Chancellor of Resource Management & Planning, Co-chair
- Program Representative: a Vice Chancellor or Dean/Co-chair
- Key program representatives: faculty & staff
- Students
- Representatives from Architects & Engineers, Capital Planning and Campus Planning
- Other key stakeholders from the campus community

Chancellor's Committee on Planning & Design is comprised as follows:

- Chancellor, Committee Chair
- Provost and Executive Vice Chancellor
- Vice Chancellor, Resource Management & Planning
- Vice Chancellor, Administration
- Vice Chancellor, Student Affairs
- Vice Chancellor, University Relations

PROJECT DESIGN

The design of capital improvement projects typically takes place in three stages: Schematic Design, Design Development and Working Drawings. The primary design approvals occur on the campus during the Schematic Design phase. This is when the overall design of a given project is substantially completed including its site plan, layout, massing, scale, character, material choices and color palette.

Oversight of this design effort is the responsibility of the Project Advisory Committee, whose task is to assure that the design is developed in accordance with the previously issued Project Program. Management of the design phases is the responsibility of Architects & Engineers, a unit within the Office of Resource Management and Planning.

The Chancellor's Committee on Planning & Design has authority to approve the design of projects with a value up to \$60M. Design approval for projects in excess of \$60M requires design approval from the Regents' Committee on Grounds and Buildings. Approval of the environmental review as required by the California Environmental Quality Act (CEQA) will occur when design approval is considered.

An "eco-charette" is held in early schematic design to fully integrate the campus sustainability goals into the project.

When the schematic design is approximately 75% complete, it is reviewed by the *Planning & Design Advisory Work Group*. The work group is charged with reviewing and critiquing the project design relative to the programmatic and functional goals stated in the Project Program, and the planning and design objectives as set forth in this Design Framework.

When the schematic design is approximately 90% complete, it is presented for review and comment to the *Coordinating Committee on Planning & Design*. This committee is appointed by the Provost and represents stakeholders from across the campus whose responsibilities in the areas of budget, environmental stewardship, governmental relations, health & safety, operations & maintenance, security, and sustainability intersect with the delivery of new space.

The completed schematic design solution is presented for review and approval to the Chancellor's Committee on Planning & Design. The Committee is briefed on the comments and critiques generated by the Planning and Design Advisory Work Group as well as any design revisions that were made as a result of those comments. The Committee is also briefed on how the proposed design solution responds to the project requirements as described in the Project Program as well as its conformance with the goals and objectives as set forth in this Design Framework.

Planning and Design Advisory

Work Group: standing membership on the work group includes the following individuals:

- Campus Architect, Chair
- Campus Planner
- Campus Landscape Architect
- Independent design professionals from the private sector
- Faculty representative
- Student representative

Coordinating Committee on Planning & Design is comprised as follows:

- Vice Chancellor, Resource Management & Planning, Chair
- Vice Chancellor, Administration
- Associate Vice Chancellor, Student Affairs
- Representatives from the Arboretum, Architects & Engineers, Campus Planning, Capital Resource Management, Environmental Health & Safety, Environmental Stewardship and Sustainability, Fire, Information Systems, Operations & Maintenance, Police and University Relations.

