



# **Future State 2035**

## San Francisco State University Campus Vision Plan



Illustrative Plan of Future State 2035

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## San Francisco State University Campus Vision Plan



14 September 2018



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# Aspirations

*The San Francisco State University Campus Vision plan is a transformative vision and practical guide to support the University's academic mission and its inclusive community. The plan offers an implementable way toward a beautiful residential campus that is socially, environmentally, and financially sustainable. This is the FUTURE STATE of the University.*

**San Francisco State University stands at a critical point.** Capital needs are escalating just as state funding for higher education declines. The University upholds inclusion even as the City of San Francisco becomes less diverse. Students experience high rates of homelessness and food insecurity in one of the wealthiest regions in the country, with Bay Area cities some of the least affordable in the US. The University's four-year graduation rate of 22 percent in 2013 is blunt evidence of difficulties our students face.

The impact of climate change on the region is well documented, with higher temperatures and drought becoming more common. San Francisco faces real threats from rising seas, including flooding and land subsidence, which could have devastating socioeconomic impacts.

Yet at San Francisco State University (SF State), we recognize that as our needs become more troublesome, our social responsibilities become greater. We know we must take meaningful steps to bolster our financial, social, and environmental standing — and do so courageously.

## OUR RESPONSE

The California State University (CSU) system is the largest four-year public institution in the country, with nearly a half million students enrolled annually. CSU educates the most ethnically, economically, and academically diverse student body anywhere, and it is working to ensure these students can complete their degrees on time by eliminating gaps in opportunity and achievement. Doing so demands that SF State<sup>3</sup> modernize, expand, and enhance the campus environment.

In response, SF State is preparing for transformative change. Future State 2035 San Francisco State University Campus Vision plan (Future State 2035) shows how to reshape the physical assets of the University to better support students, because attending SF State is more than an academic experience; it prepares students to live more successfully in a complex world. The campus setting should foster this process, address inequities, and exemplify the heart of the University. By building on its unique character and culture, SF State can shape the campus into one of inclusive access, systemic health, and strong community connection. This is the path to Future State 2035.

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## OUR AIMS

**Future State 2035** captures our dreams and aspirations and brings them to life in the campus setting. With intention, this plan sets forth four primary goals:

- Promote modern learning, teaching, and research strategies by addressing deficiencies in building conditions and academic space through renovation and new construction
- Dramatically increase the amount of on-campus housing to improve student success, retention, and graduation rates
- Reclaim the most notable natural feature, the historic valley, integrating recreation with a dynamic, working ecosystem
- Become a university district, a destination for the city and region, participating in the Bay Area economy and engaging with our urban neighbors



# Summary

Future State 2035 is organized in four themes:

**Theme 1:** Creating Places for Living and Learning

**Theme 2:** Making Connections

**Theme 3:** Fostering Conservation and Resiliency

**Theme 4:** Implementing Strategically

The appendix, accessible on the web, contains studies supporting Future State 2035.

Two important changes drive the need to substantially update the campus environment at San Francisco State University (SF State):

- One, after many years as a primarily commuter campus, the University recognizes that to enrich student experience and improve graduation rates, it must become a residential campus as well as continuing to serve commuters
- Two, the student population is growing.

In response, Future State 2035 San Francisco State University Campus Vision plan (Future State 2035) proposes comprehensive physical improvements to the campus — its unique landscape, buildings, open spaces, infrastructure, internal circulation patterns, and external connections to neighbors, the City of San Francisco, and the region.

Future State 2035 recommends improving the entire physical environment of the University to enhance the school's mission and distinctive culture as well as to enable the University to expand its influence as an intellectual, cultural, and economic engine for the region. At the same time, campus neighbors — Parkmerced, and Stonestown Galleria — are pursuing plans to increase density. Therefore, Future State 2035 also envisions creating an SF State university district offering a vibrant, resource-rich setting for the campus community and its neighbors.

## Primary Goals

Future State 2035's primary goals are to:

- Promote modern learning, teaching, and research strategies by addressing deficiencies in building conditions and academic space through renovation and new construction
- Dramatically increase the amount of on-campus housing to foster student success, retention, and graduation rates
- Reclaim the most noteworthy natural feature of the campus, the historic valley, integrating recreation with a dynamic, working ecosystem
- Become a destination for the city and region, participating in the Bay Area economy and interacting with University neighbors

## Program

The community engagement process for the Future State 2035 solicited input from students, faculty, staff, and alumni, as well as from University neighbors, City of San Francisco departments, and elected officials. The effort garnered nearly 30,000 interactions with 5,000 individuals helping define the program for Future State 2035. Key targets are:

- 160 percent increase in capacity for academic uses, student life and support, shared uses, administration, and service centers
- 360 percent increase in student housing
- 250 percent increase in apartments
- 220 percent increase in student outdoor recreation space
- 17 percent decrease in athletics outdoor space on campus due to relocating the baseball field off campus
- 17 percent decrease in parking

# Theme 1 Creating

Future State 2035 proposes an updated composition of buildings, open spaces, and movement corridors to create a unified, vibrant setting for university life. The plan prepares the University to carry out its mission in future years by guiding campus development that best fosters living, learning, and social engagement.

Key aspects of Future State 2035 are to:

## Strengthen the Academic Core

- Continue to concentrate academic uses in the campus core, along with shared uses that serve students, faculty, and staff
- Improve pedestrian, bicycle, and transit connections to the academic core and improve connections to campus recreation, athletics, housing, Parkmerced, and Stonestown Galleria

## Build a Residential Campus

The expensive, highly competitive housing market in San Francisco poses serious financial and logistical challenges for SF State students, faculty, and staff. To capture the academic benefits obtained by students who live on campus, the University will dramatically change the SF State campus from one primarily for commuters to one that offers a range housing options.

Specific objectives are to:

- Foster student success by significantly expanding housing, with the goal of housing 40 percent of students and up to 15 percent of employees and their families by 2035
- Provide a full array of housing projects over time by adding more than 9,000 student beds and 850 apartment units
- Prioritize construction of housing for lower-division students in a new residential village with on-site dining and study spaces, oriented toward the valley landscape with recreation, gathering spaces, and pedestrian connections
- Establish additional student services to match the expansion of housing, including student support facilities, activities, destinations, and resources that are connected, engaging, and vibrant

# Places for Living and Learning

## Promote the Unique Character of SF State

SF State occupies an exceptional landscape of uplands and plateaus surrounding a valley stretching from Lake Merced to 19th Avenue. These distinctive natural features within the urban fabric create a memorable “campus in the park” experience.

Recommendations to reinforce a strong campus identity and increase visibility from surrounding streets are to:

- Use a site-sensitive design approach that respects and restores existing landscape, creates a strong sense of place, and emphasizes green infrastructure and natural systems
- Create a stronger campus identity with a consistent streetscape design along the campus perimeter and at campus entries
- Improve pedestrian connections and orientation within the campus and from the campus to the surrounding urban area

## Become San Francisco’s University District

SF State is the only four-year public university in San Francisco, a city renowned as a global hub of innovation and economic vitality. This position offers the University enormous opportunities to participate in the regional economy and connect with urban neighbors.

Objectives are to:

- Confirm the role of SF State as a leading educational institution in the region with contemporary academic facilities
- Establish healthy, diverse University programs that engage the urban community
- Create a university district with physical and programmatic connections to neighboring destinations and the dynamic urban scene in San Francisco
- Maximize opportunities to share investments and resources with Stonestown Galleria, Parkmerced, and other campus neighbors

# Theme 2 Making

San Francisco State University is a public university well known for valuing diversity and equity. To better serve the diverse student body, the University plans to increase student enrollment and to increase campus housing substantially, without compromising its ability to serve commuter students. These changes will require improvements for mobility on campus as well as high-quality transportation connections to the campus from surrounding areas.

Future State 2035 addresses mobility within the growing campus as well as access from areas surrounding the campus. On-campus connectivity issues include pedestrian and bicycle mobility as well as wayfinding signage to orient students and visitors. Off-campus connectivity issues area access and safety on streets adjacent to SF State and regional travel to campus. By focusing on transit and transportation demand management (TDM) strategies can reduce the negative impacts of single-occupant vehicles.

Future State 2035 addresses current and projected transportation needs in alignment with core values set out in the *San Francisco State University Strategic Plan* with a focus on equitable access and mobility:

- Affordable, safe, comfortable, and sustainable transportation
- Community creation, also known as placemaking
- Connectivity within the campus and to outside destinations
- Innovative, affordable approaches
- Optimal campus experiences for commuters and the growing number of campus residents

## Mobility Goals

The existing campus environment is characterized by infrequent, restrictive, and challenging pedestrian crossings, especially along Lake Merced Boulevard and 19th Avenue, a lack of clear and safe orientation on campus, low bike use, and sub-standard transit access and infrastructure. These conditions do not adequately support the current campus population and will not enable the University to achieve the future it envisions.

Mobility goals are to:

- Provide universal access
- Increase safety and security
- Make the most of the challenging topography in and around the campus
- Create clear, intuitive lines of travel
- Build a people-centered campus transportation system with pedestrians receiving highest priority and private cars lowest
- Reduce conflicts between people traveling at different speeds
- Provide seamless integration of transit, bike, and pedestrian access to campus

# Connections

## Wayfinding Goals

The campus currently lacks a cohesive wayfinding system, which, given the circuitous routes and limited sight lines, makes navigation challenging.

The wayfinding goals presented in this plan are to:

- Increase legibility of the full extent of the SF State campus
- Provide a rational, user-friendly wayfinding system with a clear information hierarchy
- Offer a sense of welcome and orientation to the campus for students, faculty, staff, and visitors
- Assist first-time visitors in navigation and encourage students, faculty, and staff to explore the campus
- Enhance the visual environment
- Inform visitors of mobility options
- Consider all users in wayfinding design

## Transportation Demand Management Goals

SF State has opportunities to reduce the time and cost of commutes and to encourage sustainable commute modes.

Transportation demand management (TDM) goals are to:

- Empower people to make informed, sustainable commute choices
- Provide no net additional parking
- Work with Bay Area transit agencies to ensure adequate capacity for increased use
- Work with San Francisco transit agencies to make transit more convenient with high-quality service
- Discourage parking for those with other options, but for those who need it, make parking affordable and usable
- Make bike commuting feasible by ensuring it is safe, easy, convenient, and fun



# Theme 3 Fostering

SF State has set ambitious water and energy goals as part of its commitment to a sustainable future. To achieve these goals, Future State 2035 lays out improvements to campus infrastructure that can be carried out efficiently and economically. Specific strategic objectives and performance targets for each infrastructure system follow SF State's *Sustainable Development Framework* and *Climate Action Plan (CAP)*.

Infrastructure systems include mechanical, electrical, information technology, integrated water/waste water/nonpotable water/storm water/potable water/fire water, as well as waste management. All of these systems require changes to accommodate the planned growth of the campus.

## Resilience

Resilience refers to creating adaptable infrastructure that enables students, faculty, staff, and visitors to remain on campus safely under stressed conditions. Resilient infrastructure allows the campus to minimize day-to-day disruptions caused by utility maintenance, to adjust to climate change, to meet evolving campus needs, and to minimize risk during emergencies. The proposed improvements create systems that are flexible and adaptable.

## Green Scholars

In the past, campus infrastructure was considered only ancillary to the primary role of the University as a place for scholarship. However, the sustainable infrastructure solutions contained in Future State 2035 offer opportunities to integrate academic research and infrastructure design. For example, the central and district utility plants, wastewater treatment facility, and centralized storm water facility can be living laboratories for SF State departments such as engineering and environmental studies.

# Conservation and Resiliency

## Energy Model and Zero Energy Approach

SF State's commitment to climate-neutral operations is specified in the following goals:

- By 2020, reduce greenhouse gas (GHG) emissions to 25 percent below the 1990 baseline
- By 2040, reduce GHG emissions to 40 percent below the 1990 baseline

To accomplish these goals, SF State has targeted Zero Energy for the campus and for all new buildings. Existing buildings will undergo energy-efficiency retrofits to reduce energy consumption. In addition, the University plans to eliminate fossil fuel combustion, switching from natural gas to all-electric building systems.

## Energy Model — Future State 2035

At full buildout in 2035, the total floor area of the campus will nearly double. To minimize the increase in energy use, Future State 2035 proposes deep-green building retrofits, upgrades to the central plant infrastructure, and employing highly efficient mechanical systems for new development.

## Path to Zero Energy

Generating renewable energy on site is the key step to achieving the University's Zero Energy and carbon neutrality goals. After SF State maximizes energy efficiency and develops on-site renewable energy, it can explore carbon offsets to achieve carbon neutrality. The University can explore renewable energy power purchase agreements (PPAs) and purchase carbon offsets to account for the carbon emissions associated with electricity provided under the contract with Shell Energy North America, and purchase 100 percent renewable energy from PG&E Solar Choice.

## Theme 4 Implementing

Future State 2035 supports the University's strategic and academic goals through physical planning and design and in daily decision-making about the campus environment at every level. Its implementation-oriented approach is both visionary and pragmatic. Each project on the campus must build on the core values of the University, addressing program needs and contributing to the entirety of the campus environment.

### Living Document

Future State 2035 is a living document, and some aspects will evolve over time. However, the overall vision, principles, and frameworks will continue to guide development and design for the campus following these implementation principles:

- Encourage opportunities for creative learning practices and innovative research
- Introduce new, high-quality green spaces and expand existing ones
- Organize growth strategically consistent with campus neighborhoods and design guidelines
- Promote the development of a university district integrated with the surrounding community
- Address deferred maintenance of infrastructure
- Reduce life-cycle costs of operation, maintenance, and housekeeping
- Develop flexible buildings that are less costly to modify during their lifetimes



# Strategically

## Initiatives

Future State 2035 proposes implementation of projects within four initiatives over a 15-year time period (2020 to 2035). Each initiative includes a program of specific campus projects and related infrastructure improvements. The initiatives prioritize critical projects and the progression of land use and program relocations to allow construction of new and infill projects and site restorations. Each initiative requires upgrades to campus infrastructure that maximize benefits to the campus immediately while maintaining the continuity and resilience of campus operation and constructibility over time.

## Implementation Strategy

The implementation strategy responds to vision plan objectives as it:

- Ranks lower-division housing, identified as the greatest housing need, early in the sequencing of projects
- Identifies critical academic projects that advance the University curriculum, including those identified in the *Capital Improvement Plan*
- Creates a balanced residential campus through incremental development of a variety of housing options
- Provides a balanced program of student services and support areas in tandem with the phased increases in the on-campus residential population
- Coordinates phasing of projects with system-wide and project-specific infrastructure improvements to maximize opportunities for efficiencies and achieve sustainability objectives
- Includes campus-wide improvements — in open space, circulation and parking, and services — in coordination with building projects when feasible
- Encourages partnering with the private sector and/or public institutions in the implementation of projects such as housing
- Favors power purchase agreements with energy service providers to fund, install, own, and operate needed infrastructure
- Integrates opportunities for revenue-producing projects, such as a hotel and conference center, to support academic and other critical university activities



# Context

The ideas of students, faculty, staff, and campus neighbors helped to shape the San Francisco State University Campus Vision plan Future State 2035 (Future State 2035). Participants most often requested additional housing, high-quality classrooms and laboratories, upgraded student-life facilities, communal study spaces indoors and out, and safe and convenient pathways for pedestrians. Overall, these strengthen the distinctive identity and culture of San Francisco State University (SF State).

The most notable recommendation in the 2035 plan is to transform the University setting from a commuter campus to a residential campus, without compromising its ability to serve commuter students.. In addition, the plan outlines steps to expand the campus beyond the academic core with a mix of residential, commercial, and semipublic uses, establishing a university district for the city.

## **SETTING**

The campus is located in the southwest corner of San Francisco, the most suburban part of the city. The campus, a product of 1950s-era development, has no direct connections to the adjoining Stonestown Galleria or the Parkmerced residential community, both, like San Francisco State University, built as large-scale, self-contained developments.

Between 2000 and 2005, the University, originally at 95 acres, acquired a further 46 acres of developed land north and south of the campus. With the addition of a 2.5-acre site on Font Boulevard in 2012, the campus grew to 144 acres. These acquisitions of the former Stonestown apartments and the

northern blocks of Parkmerced added 960 units of housing and considerable land for future development.

The Stonestone apartments are cut off from the academic core by a valley and high bluff that impede universal access and a fully unified campus. To cut across this valley, pedestrians coming from the campus core must now use the top story of the parking garage, which is a utilitarian, challenging route. Once across the valley, there is no direct connection to the University housing on the bluff.

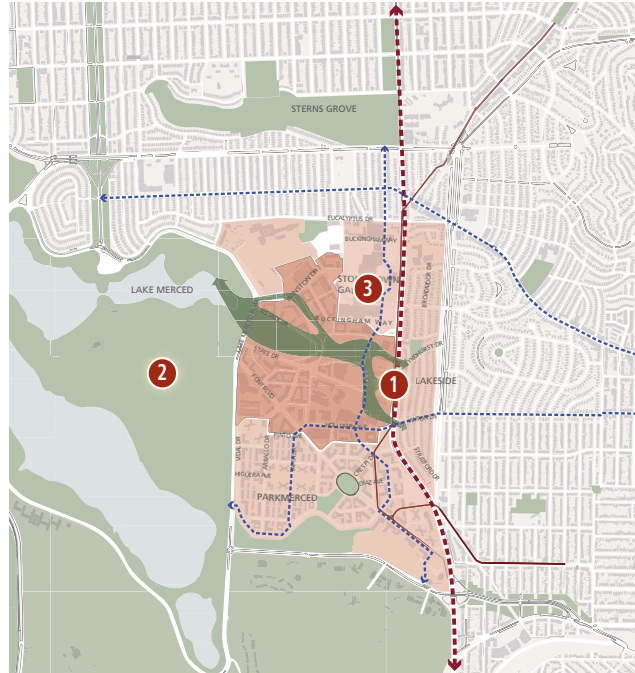
Holloway Avenue, historically the southern boundary of the campus, is a faceless, car-centric roadway that divides the campus from the residential Parkmerced parcels acquired in the early 2000s. The new Holloway student housing and mixed-use development beginning construction in 2018 will be a major step in activating Holloway and connecting the main campus to the south campus. The Mashouf Wellness Center, which opened in 2017, and the Creative Arts replacement building, which begins construction in 2018, similarly enliven Font Boulevard. These new developments begin the transformation of the Holloway-Font corridor.

## RELATIONSHIP TO REGION

SF State occupies 144 acres in the San Francisco southwestern Twin Peaks-Lake Merced district, adjacent to 19th Avenue (State Route 1) (1) and close to Golden Gate Park and Ocean Beach State Park. Nearby urban destinations include Lake Merced Park (2) and Stonestown Galleria (3).

### LEGEND

- SF State Campus
- University District
- Green Campus Connection
- Nearby Green Areas
- State Route 1
- Muni M Line
- Regional Bike Routes
- Campus Boundary



## BACKGROUND

Founded in 1899 as a teacher-training school on Nob Hill, San Francisco State University acquired its present site in the late 1930s. The school planned to build a campus on the agricultural land, but World War II delayed construction, so the new campus did not open until the fall of 1954. It had 4,500 students and nine buildings around the Quad.

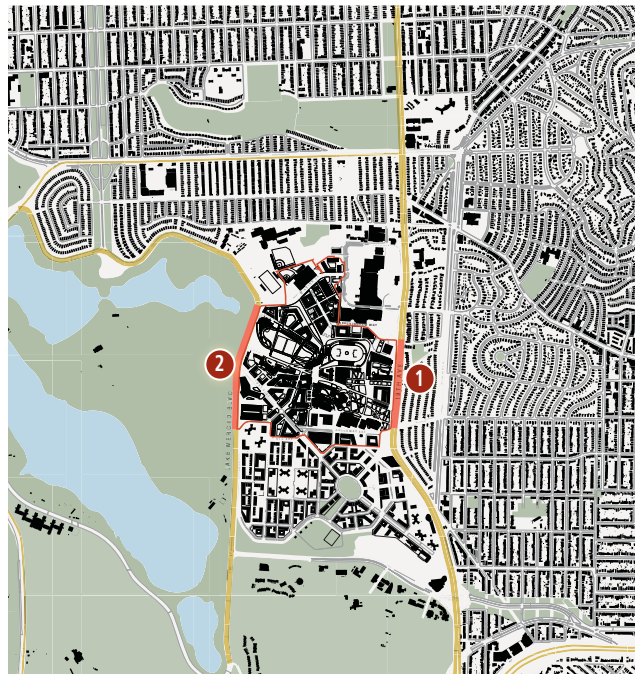
The campus grew steadily over the decades, and the most recent new academic building was completed in 1994, almost 25 years ago. Several of the original academic buildings dating back to the 1950s — Science, HSS, and Business — remain the workhorses, with tens of thousands of students taking lecture and lab courses in them daily.

The average age of the University academic buildings is 56 years, and they need substantial upgrades. The ISES 2014 *Facility Condition Assessment* identified \$400M in deferred maintenance, which escalates to \$650M in ten years. The enormity of this cost emphasizes the need to find innovative ways to fund capital projects, which include total building renovations, additions, and new construction.

By contrast, the maturing of the campus landscape has resulted in a striking setting. With towering Monterey cypress, groves of eucalyptus, and rugged topography, the campus is a parklike haven. The students, faculty, and staff feel that the lush informality of the landscape mirrors the University's open and inclusive community. The beauty of the campus lingers in people's minds.

Although the outmoded buildings hamper the latest teaching and research practices, San Francisco State has a notable influence on the City of San Francisco and plays an integral part in Bay Area cultural, social, and economic life.

San Francisco State attracts an extremely diverse student community. As of fall 2017, 46 percent of undergraduates were eligible for federal Pell Grants, which are based on need; 49 percent of seniors worked off campus for more than 11 hours a week; and 38 percent of freshmen were the first in their families to attend college.



## PHYSICAL SETTING

Two major roadways bound the campus: 19th Avenue (State Route 1) **(1)** separates the campus from residential neighbors to the east, and Lake Merced Boulevard **(2)** separates it from Lake Merced to the west.

### LEGEND

- Major Arterial Roads
- Lake Merced
- City Green

## SCOPE

The University's focus is to encourage as many students as possible to graduate and contribute to the region and the world. In the 2017-18 academic year, 8,400 students graduated.

The University helps educate the workforce of the city and the Bay Area, and it is an incubator of talent for the region and the nation. SF State is a top provider of employees to Bay Area industry and the public sector. Alumni fill more than 23,000 jobs in San Francisco alone.

SF State alumni and faculty have made their marks as scientists, teachers, poets, engineers, entrepreneurs, musicians, writers, actors, nurses, chefs, broadcasters, and filmmakers, to name a few professions. SF State graduates and faculty do well — and do good.

Recommendations compiled in Future State 2035 will make the campus environment better for students, faculty, and staff, and provide a setting that enables the University community to take its accomplishments to a higher level.

Future State 2035 identifies recommended improvements to the 144-acre campus to support an increase in enrollment from 25,000 to 30,000 full-time equivalent (FTE) students. Future State 2035 defines the organization of the campus, including land use, development sites, public gathering and open space, urban design criteria and guidelines, mobility and wayfinding, and infrastructure.

Future State 2035 builds on the analysis and guiding principles in the previous 2007 campus master plan. The focus of Future State 2035 is on housing and new initiatives. These are in response to substantial changes in financial opportunities and constraints, along with a heightened awareness of climate change and sea level rise since the last plan was adopted. Future State 2035 also takes into account new information about proposed development at Parkmerced, expansion of Stonestown Galleria, and improvements to the Muni M Line station.

## EVOLUTION OF THE CAMPUS

### 2007 Campus Master Plan

The *Campus Master Plan San Francisco State University 2007-2020 (2007 Campus Master Plan)* anticipated significant campus redevelopment to accompany an increase in student enrollment from 20,000 to 25,000 FTE by the year 2020. The 2007 plan called for an additional 800,000 gross square feet of academic and academic support space by 2020.

Enrollment reached the target earlier than projected, with 24,888 FTE in the fall of 2017. However, with the exception of the library renovation and expansion (planned prior to the master plan) and the Mashouf Wellness Center, no new academic buildings or total building renovations were completed during the same period.

### 2015 Strategic Plan

The *San Francisco State University Strategic Plan* was published in 2015. Emerging from the University's long-standing commitments to teaching, learning, and social justice, the strategic plan is anchored by the five core values: Courage, Life of the Mind, Equity, Community, and Resilience. The plan highlights aspirations and objectives within each, and offers initiatives to meet the objectives.

Under the core value of Resilience, the plan sets forth initiatives to "Update the physical master plan to maximize affordable student and employee housing" and to "Open a new, state-of-the-art Academic (Science) Building on the main campus that provides the high-quality teaching, research, laboratory and collaborative space that 21st century students, faculty and staff need."

Under the value of Community, it poses this question: "As the physical master plan is reconsidered, is the University willing to, despite cost, ensure that future renovations and building on campus will include informal community gathering spaces that are intentional by design?"



## EVOLUTION OF CAMPUS NEIGHBORS

An increase in development is on the horizon for the Westside of San Francisco. Parkmerced, the campus neighbor to the south, has begun implementing the first phase of its long-range vision plan, approved by the city in 2011, and will evolve over the next 20 to 25 years. The plan calls for increasing the total number of units on site from approximately 3,200 to 8,900 at buildout. The towers will remain. The two-story townhouses will be replaced with diverse housing types along with open space and neighborhood retail and services. Construction of five residential projects, ranging from 4 to 17 stories, begins in 2018.

The City of San Francisco and owners of Parkmerced are partnering to realign the Muni Metro M Line at grade. As approved in the Parkmerced development agreement, from 19th Avenue, the tracks will enter Parkmerced at Holloway and exit at Felix Avenue and Junipero Serra Boulevard, where it will conform to the existing alignment.

The SF State M Line stop will move from the 19th Avenue median to the southwest corner of 19th and Holloway. Relocating the station eliminates the challenging overcrowded platform and the need for pedestrians to cross three lanes of traffic on 19th Avenue to reach the campus and Parkmerced. In addition, the SF State Holloway student housing and mixed-use development, beginning in 2018, benefits from proximity to the new stop.

Other options for the M Line studied in the past, including a subway from West Portal to Parkmerced and a west-side track alignment, are too costly to be feasible in the mid-range, but SFMTA continues to study alternatives for the long-range.

There is the potential to transform Stonestown Galleria into more than a shopping destination, making it a community of mixed uses.

These neighborhood changes, bringing greater density and life to the area, align with SF State's aspirations to be a residential campus, and they contribute to a vital university district.

## WHAT HAS CHANGED SINCE 2007

The *2007 Campus Master Plan* was ambitious, and, although the student enrollment goals were met within just ten years, the new academic and residential construction outlined in the plan was never fully realized.

As envisioned in the *2007 Campus Master Plan*, the Mashouf Wellness Center, a major resource for student life and the community, opened in 2017, funded by student fees and a donor gift. The 2007 plan identified two additional projects — the first phase of a Creative Arts replacement building and a residential mixed-use development on Holloway Avenue — that will begin construction in 2018.

The Creative Arts replacement building is funded by a combination of state and campus dollars; the Holloway student housing project is a public private partnership (P3). Notably, the Creative Arts replacement building is the first new academic building constructed in almost 25 years. The 500 student-bed Holloway student housing project adds initiates a denser development approach to use campus land efficiently. Active uses on the ground floor of the housing launch the transformation of Holloway into a campus retail street as envisioned in the 2007 plan.

Other changes since the 2007 plan was completed include a new University president and cabinet, a new strategic plan, a new climate action plan, and a deepening housing shortage. The policy context has shifted as San Francisco's booming economic growth has resulted in a stressed and expensive housing market. Colleges and universities in the City of San Francisco are being called on to house more students and affiliates in order to free up rental units for the general population.

The CSU capital outlay process has also changed with a new economic model for funding capital projects. Throughout the CSU system, universities are looking for innovative approaches to finance and deliver housing and academic buildings.

**WHAT HAS CHANGED SINCE 2007**

SF State has completed these projects since the most recent campus plan was finished in 2007:

**New Construction**

- Mashouf Wellness Center, 2017 **(1)**
- Children’s Campus, 2009 **(2)**
- Annex I & II, 2008 **(3)**
- Green house II, 2008 **(4)**

**Renovations**

- Complete renovation, seismic retrofit and expansion of J. Paul Leonard Library, 2012 **(5)**

**Under Construction**

- Creative Arts Replacement Building, 2018 **(6)**
- Holloway student housing and mixed use, 2018 **(7)**

**Land Acquisition**

- West Campus Green, 2012 **(8)**

**LEGEND**

- New Construction
- Renovations
- Under Construction
- Land Acquisition
- Campus Boundary



**PROCESS**

**Overview**

Future State 2035 represents 14 months of interactive planning, shaped by feedback from more than 5,000 individual students, faculty, staff, neighbors, and staff from government agencies, and supported by professionals in master planning, architecture, transportation, and green infrastructure.

Representatives from throughout the University met with the planning team throughout. From April 2017 through the summer of 2018, the planning team met with campus stakeholders. Nearly 30 thousand interactions with the online surveys and website ([www.futuresfstate.com](http://www.futuresfstate.com)) provided additional opportunities for dialogue with internal and external stakeholders about issues critical to the University’s long-term academic and student success.



Presentations to each college and the library enabled informal coordination and information exchange. The President's Cabinet met with the planning team to review work at key milestones.

Ideas Week, an open house in May 2017, engaged in person and on line more than 2,700 students, faculty, staff, and administrators in brainstorming about the future of the campus and ways to translate University core values into physical terms. More than 1,000 persons completed the on-line survey.

Ideas Week launched the planning process. The initial visual survey resulted in a collective vision for the campus that guided the themes underlying Future State 2035:

- Improve academic spaces to inspire teaching and learning
- Improve housing choices and access
- Improve connections to and from the campus and within (walking, biking and transit)
- Create a safe and welcoming campus
- Enhance gateways and identity of the campus
- Enhance gathering spaces throughout the campus
- Focus on green landscape features and placemaking — tree groves and natural areas
- Continue to invest in environmental stewardship and sustainability

The planning team studied a range of options for organizing the campus and locating new development before arriving at two alternatives — Campus in the Park and University District — that optimized and combined input from the University community. Of potential future projects, housing options were most strongly desired. In response, each alternative included an emphasis on housing.

### **High-Tech/High-Touch Engagement**

The interactive “high-tech/high-touch” outreach strategy engaged community members who provided ideas and feedback through all phases of the planning process, setting the foundation for the physical plan and associated mobility and sustainable infrastructure elements. The team maintained a robust digital presence throughout, keeping contact with stakeholders and the public with online

updates, social media posts, and email blasts, including meeting notices and copies of meeting presentations about the refined alternatives.

Interactive “explore maps” of the alternative conceptual plans and campus districts, posted to the website, also highlighted existing and proposed destinations, and showed how community input shaped the proposed gathering places, campus housing, and academic concepts.

### **Concepts**

A series of outreach activities engaged the campus community and SF State neighbors to confirm the campus vision and design approach. The planning team presented an analysis of online survey results and initial design concepts at an open house in July 2017, held additional interactive presentations during four Future State 2035 meetings in August 2017; and introduced preferred vision plan concepts at two open houses in September 2017 — one in the morning for the campus community and one in the evening for SF State neighbors. Drivers for the planning concept — campus entry and identity, student success, sustainability, and community partnerships — reflect the input.

### **Planning Concept**

The SF State planning team met early with the City and County of San Francisco staff, inviting feedback from the San Francisco Planning Department, San Francisco Municipal Transportation Agency, and the San Francisco Municipal Public Utilities Commission in the fall of 2017 and the winter of 2018. The team briefed the staff of elected officials in the fall of 2017 and conducted an early scoping meeting with multiple city departments in the spring of 2018 in before issuing a notice of preparation (NOP) for the environmental impact report (EIR).

At an on-campus open house in May 2018, the community reviewed the planning concept. The project team reached out to friends and neighbors surrounding the University and met with neighborhood associations.

**PROGRAM**

Future State 2035 sets forth an ambitious program of building uses to provide a balance of modern academic space, increased housing options, and student-life activities essential to a thriving University community. Its program calls for nearly doubling facilities with a 160 percent capacity increase in academic, student life and support, shared uses, administration, and service centers from 2.5 million to more than 4.0 million gross square feet; a 360 percent increase in student housing from 3,500 to 12,600 beds; a 250 percent increase in apartments from 570 to 1,440 units; a 220 percent increase in outdoor recreation from 5.0 to 11.1 acres; and a modest 2.5-acre 17 percent decrease in athletics outdoor space. Notably, the plan calls for a 17 percent decrease in the amount of parking space on campus.

The most significant growth is in housing, with a proposed increase of almost four times the number of student beds and two and one-half times the number of apartment units currently available. The program also calls for a nearly 30 percent net increase in academic space, taking into account that several outmoded buildings will be demolished and replaced with new construction.

**Definition of Program Uses**

*Academic*

Instructional and research space assigned to Academic Resources (interdisciplinary classrooms) and the colleges. This includes classrooms, teaching and research labs, studios, faculty and staff offices, college administrative offices, and libraries. Also includes performance venues associated with academic departments.

**PROGRAM SUMMARY**

The table identifies the amount of space for each land use, the change proposed, and the target for 2035. The measures vary depending on the use: gross square footage (GSF) is used for new buildings other than housing; apartment units or student beds for residential buildings; and acreage for outdoor space.

The apartment program is calculated per unit, in contrast to the student bed space program. The program assumes 55-60 percent studios and one-bedroom units and 40-45 percent two- and three-bedroom units, with an average size of 1,000 gsf per unit. This breakdown is informed by initial real estate advisory studies and a housing strategic plan prepared for SF State. One target is to house 15 percent of employees and families in the apartments, with the remainder open to both University affiliates and non-University affiliates.

Future State 2035 fits all of the program on the campus with the exception of the baseball field for which SF State will identify a new location and partner.

The University is open to other opportunities to house students off campus with or without private and public partners.

		<b>2018</b>	<b>Change</b>	<b>Future State 2035</b> (rounded)
<b>Student Enrollment</b>	FTE <sup>1</sup>	25,000	5,000	30,000
<b>Uses</b>				
Academic	GSF <sup>2</sup>	1,500,000	410,000	1,910,000
Student Life and Support	GSF	645,000	645,000	1,290,000
Student Housing	Beds	3,500	9,100	12,600
Apartments	Units <sup>3</sup>	570	870	1,440
Shared Uses	GSF	35,000	555,000	590,000
Administration	GSF	200,000	(5,000)	195,000
Service Centers	GSF	155,000	(85,000)	70,000
Student Recreation	GSF	120,000	0	120,000
Student Recreation (Outdoor)	Acres	5.0	6.1	11.1
Athletics	GSF	160,000	0	160,000
Athletics (Outdoor)	Acres	15.0	(2.5)	12.5
Parking	Spaces	3,550	(650)	2,900

SOURCE SF State Planning and Design, 2018

NOTES 1 Full time equivalent student: Undergraduate FTE = 15 credit units per semester; graduate FTE = 12 student credit units per semester

2 Gross square feet

3 55-60 percent studios and one-bedroom units and 40-45 percent two- and three-bedroom units, with an average size of 1000 gsf per unit.

### ***Student Life and Support***

Space for a range of student activities, including support functions and various aspects of student life. This includes lounge and study spaces, tutoring and advising spaces, career services, student organizations and clubs, dining, retail, and related uses. Includes the student center, student union, and health center. Also includes administrative offices providing student services (student affairs and enrollment management, residential life, bursar, registrar, etc.).

### ***Student Housing***

On-campus student residence halls (dormitories), suites, and apartments, owned and managed by the University or through a public/private partnership, rented by the bed.

### ***Apartments***

Employee and family housing, owned and managed by the university or through a public/private partnership, rented by the unit. Apartments may house University affiliates and non-University affiliates.

### ***Shared Uses***

Facilities that serve the campus and its academic mission and that also provide amenities for the urban community. They are owned and managed by the University or through a public/private partnership. These include event spaces not assigned to academic departments, conference centers, restaurants, and neighborhood-serving retail. Proposed buildings include the hotel and conference center, innovation and leadership center, and welcome center.

### ***Administration***

Offices overseeing administration of the entire University, including the president, provost, vice presidents, and their staff. Also including administrative and public safety functions, such as university police, parking and transportation, procurement, facilities services, and capital planning, design and construction.

### ***Service Centers***

These non-administrative campus services include trades shops, waste management, the recycling center, and central and district utility plants.

### ***Student Recreation (Indoor)***

Facilities providing recreation and fitness activities for students include the Mashouf Wellness Center.

### ***Student Recreation (Outdoor)***

Outdoor playing fields and open space for student recreation and intramural sports and play, both passive and active, are included. This does not include playing fields dedicated to University athletics programs.

### ***Athletics (Indoor)***

Training, practice, and sports venues for student-athletes participating in intercollegiate athletics programs. This includes field houses, press boxes, and fan amenities. Proposed in this category is the Events Center that will house the basketball program. Not included are outdoor venues.

### ***Athletics (Outdoor)***

Training, practice, and sports venues for student-athletes participating in intercollegiate athletics programs. This includes Cox Stadium (soccer, track and field) and Maloney Field (baseball).

### ***Parking***

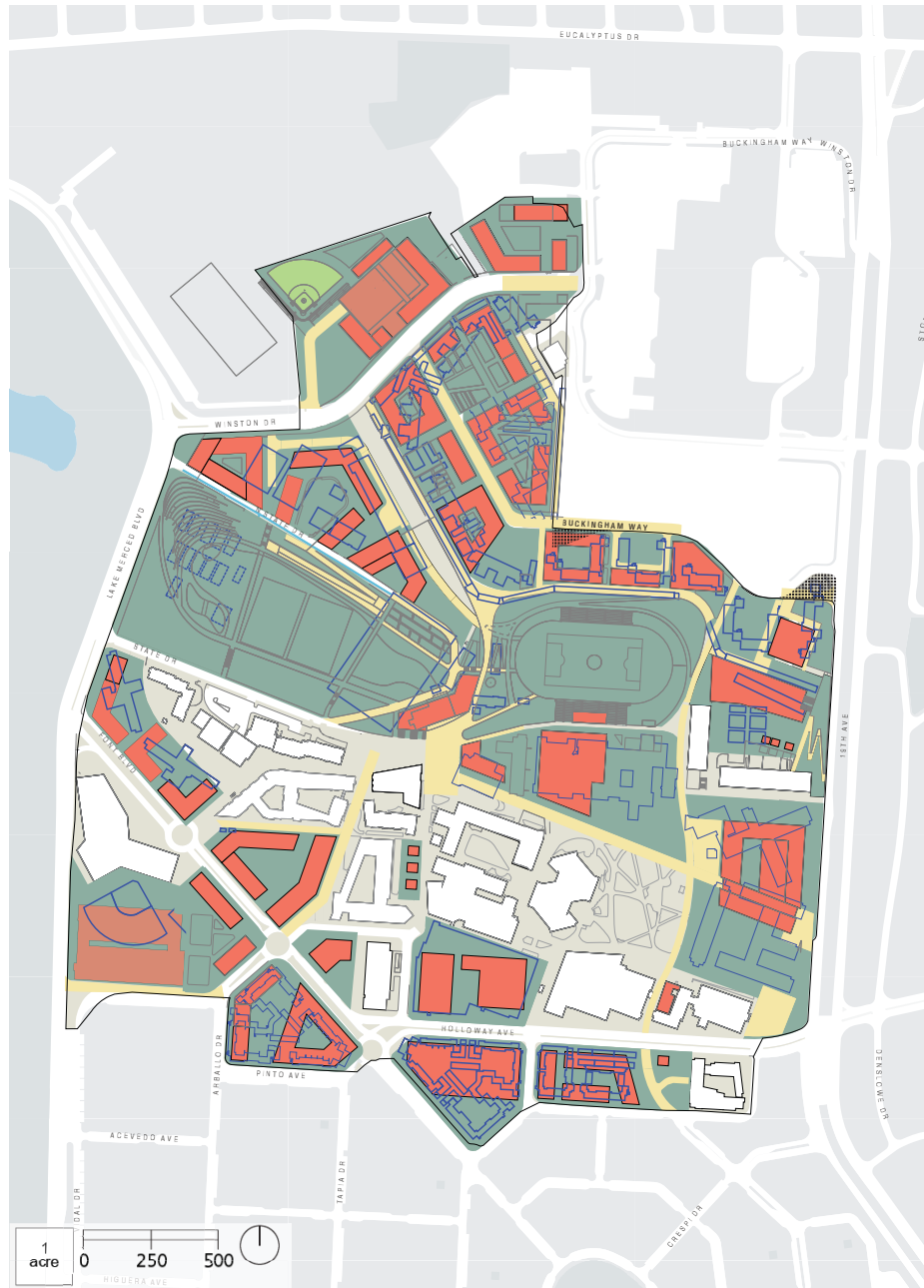
Automobile parking includes surface lots and structured garages, which may contain electric-vehicle charging stations or other amenities.

## FULL BUILDOUT

The Future State 2035 program will result in significant improvements to the campus.

### LEGEND

- Building projects
- Landscape projects
- Major pathways
- Demolitions
- Infrastructure Projects
- Land Swap
- Athletics
- Campus Boundary



# Theme 1 Creating Places for Living and Learning

The students, faculty, and staff of San Francisco State University (SF State) participated in a 14-month planning process to express many specific ideas about how to improve the campus environment, making it a better place for living and learning.

To fulfill their aspirations, Future State 2035 San Francisco State University Campus Vision plan (Future State 2035) proposes a newly designed composition of buildings, open spaces, and movement corridors. This plan will guide SF State in creating an updated, unified, and vibrant setting for university life. Key aspects of Future State 2035 are:

## **Strengthen the Academic Core**

- Continue to concentrate academic uses in the campus core, along with shared uses that serve students, faculty, staff, and visitors
- Improve pedestrian, bicycle, and transit connections to the academic core and improve connections to campus housing, Parkmerced, and Stonestown Galleria

## **Build a Residential Campus**

The expensive, highly competitive housing market in San Francisco poses serious financial and logistical challenges for SF State students, faculty, and staff. At the same time, the CSU system acknowledges the academic benefits to students who live on campus. This situation calls for the

University to evolve from an institution primarily for commuters to one that offers a range of housing choices.

Specific objectives are to:

- Foster student success by significantly expanding housing with the goal of housing 40 percent of students and up to 15 percent of employees and their families by 2035
- Provide a full array of housing types over time, with options for lower- and upper-division students located closest to the academic core, and options for graduate students, faculty, and staff located on perimeter parcels adjacent to city neighborhoods
- Prioritize construction of housing for lower-division students in a new residential village with dining and study spaces, oriented toward a restored valley landscape with recreation, gathering spaces, and pedestrian connections
- Establish additional student services to match the expansion of housing, including student support facilities, activities, destinations, and resources that are connected and engaging; consider the programming and location of student gathering spaces, both indoors and outdoors, at each stage of campus development



Illustrative view from 19th Avenue of the new entry plaza, the expanded Quad, and proposed facilities.

Draft



Draft

**EXISTING  
CAMPUS FACILITIES  
AND OPEN SPACE**

Includes projects currently  
underway

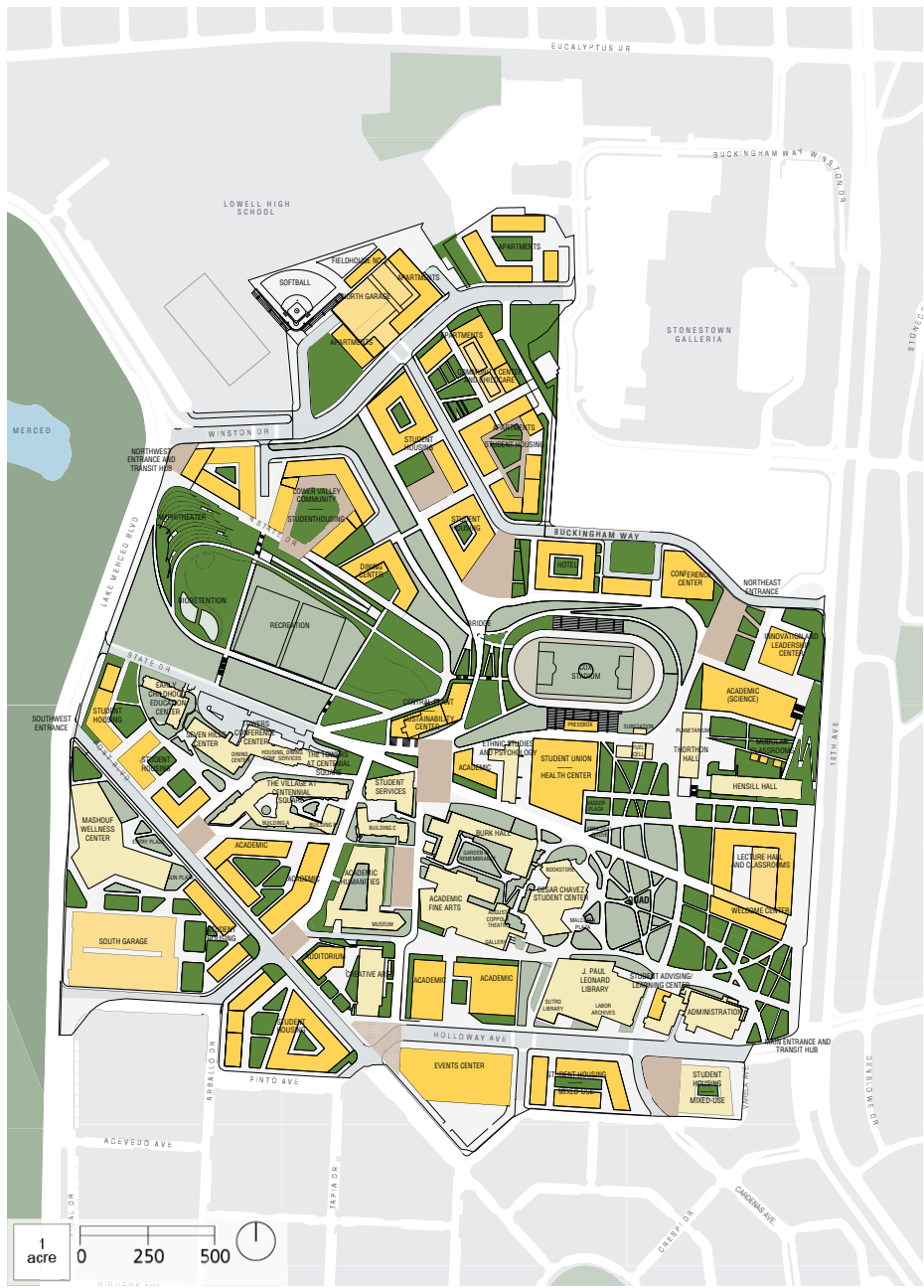
- CA building (Phase 1) **(1)**
- University Park South  
(Building A). **(2)**

**LEGEND**

- Underway Constructions
- Recreational uses
- Athletics
- Existing Buildings
- Existing Landscape
- Campus Boundary







## PROPOSED CAMPUS FACILITIES AND OPEN SPACE

Key elements of the physical plan are:

- A land use arrangement that concentrates academic buildings in the campus core, locates student housing close to destinations and services, and sites employee and family housing at the edges; commercial and shared use activities in perimeter sites contribute to the creation of a university district, integrated with the adjacent city fabric
- A continuous open space system that celebrates the campus landscape and terrain, provides appealing and usable outdoor gathering spaces, and restores the central valley from 19th Avenue to Lake Merced Boulevard
- More clearly defined campus edges, including a “front door” on 19th Avenue, that convey a strong University identity and welcome people to the campus
- A clear network of connections within the campus and out to adjacent neighborhoods

### LEGEND

- Proposed Buildings
- Proposed Plazas
- Proposed Landscape
- Existing Buildings( to Remain)
- Existing Landscape( to Remain)
- Campus Boundary

### **Promote the Unique Character of SF State**

SF State occupies an exceptional landscape of uplands and plateaus surrounding a deep valley stretching from Lake Merced to 19th Avenue. These distinctive natural features within an urban fabric create a memorable “campus in a park” experience. To reinforce a strong campus identity and increase visibility from surrounding streets:

- Use site-sensitive design that respects and restores the existing landscape, creates a strong sense of place, and emphasizes green infrastructure and natural systems. (For example, the design for the lower valley can use existing slopes for informal amphitheater seating and integrate areas for stormwater treatment.) Carefully consider building heights in to avoid shading outdoor spaces and to capture the sun for gatherings
- Create a stronger campus identity along edges and at entries. This includes designing a consistent streetscape along perimeter streets, especially 19th Avenue, Lake Merced Boulevard, and the Font-Holloway corridor. Establish clear campus entries with plazas at 19th Avenue and Holloway Avenue, 19th Avenue and Buckingham Way, Lake Merced Boulevard and Winston Drive, and along Font Boulevard
- Improve pedestrian connections and orientation within the campus and from the campus to the surrounding urban area. In particular, develop new, accessible walkways and bicycle routes to connect North Campus, across the valley, to areas south. Establish promenades and trails for access to hilltop and valley landscapes as well as to campus destinations

### **Become San Francisco’s University District**

SF State is the only public comprehensive university in San Francisco, a city celebrated as a worldwide hub of innovation and economic vitality. This gives the university exceptional opportunities to participate in the regional economy and collaborate meaningfully with its neighbors.

Future State 2035 envisions how the campus can become the City of San Francisco’s university district, in conjunction with the evolving urban geography of the Westside. The increased density planned for the neighboring Parkmerced and Stonestown developments establishes a context for the University’s plans and for the gradual transformation of SF State from primarily a commuter campus to a residential campus, giving expanded access to housing for students, employees, and their families. This increase in housing and the size of the campus community will lead to a natural connection between the University and its urbanizing neighbors.

The City of San Francisco is known for walkable neighborhoods that contain assortments of interesting uses — a configuration that does not currently exist in the suburban development near SF State. A purposeful approach to aligning campus priorities with those of its neighbors will attract a mix of businesses, creating engagement and energy matching other San Francisco neighborhoods. By adding housing, the University helps ease market pressure in the city and region. By providing walkability, the University increases the feasibility of transit improvements. By making the campus more visible, the University raises its profile, and by exploring partnerships, it opens doors of opportunity to new research and education.

Specific objectives are to:

- Confirm the role of SF State as a leading educational institution in the region with contemporary academic facilities for current and future students
- Establish healthy, diverse University programs that engage the urban community, with facilities and places for learning, gathering, and sharing cultural, recreational, and entertainment activities
- Create a university district with physical and programmatic connections to neighboring destinations and the dynamic urban scene in San Francisco
- Maximize opportunities to share investments and resources with Stonestown Galleria, Parkmerced, and other campus neighbors

## EXISTING CAMPUS CHARACTER AND IDENTITY

Context-driven campus planning and design begins with an appreciation of existing conditions, including both the natural and built landscapes.

### Topography and Landscape

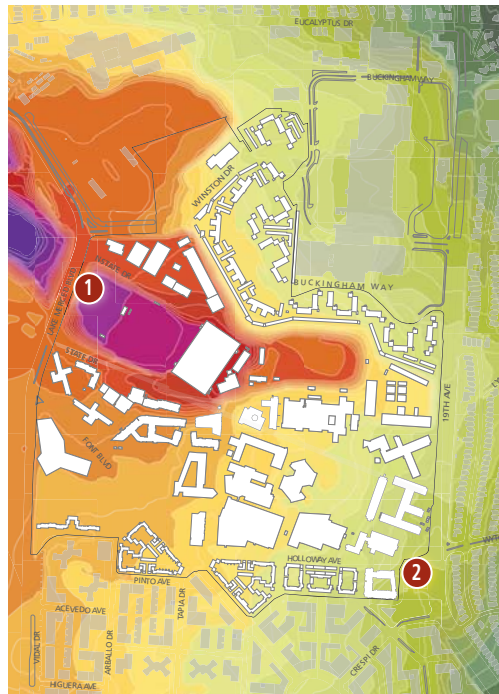
The campus stands at the northeast edge of Lake Merced, a former tidal estuary and arm of the lake that once extended into the lower valley of the campus. The topography offers opportunities for dramatic viewpoints and trails, as well as for restoration of a working coastal valley ecosystem. At the same time, the valley's steep slopes are barriers between the north and south portions of campus, and they will require creative approaches to achieve universal access and a fully connected campus.

The campus contains several open-space treasures, such as the hidden bowl of Cox Stadium surrounded by tall eucalyptus and the lovely Garden of Remembrance, a contemplative space that commemorates Japanese-American students of SF State sent to internment camps during WWII. Such outdoor places provide visual orientation, reinforce a sense of place, complement building functions, and support accessibility along pathways, streets, and promenades.

### Climate: Design for Human Comfort

The San Francisco Bay Area is unusual in having a wide variety of microclimates within a few miles. SF State, close to the ocean, is known for chilly temperatures and wind. The steady onshore flow of cool air brings fog inland to cover the western city neighborhoods.

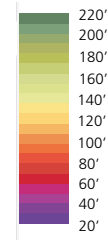
These conditions place a premium on warm, sunny areas on campus for gathering and enjoying campus life. To enable the use of outdoor spaces throughout the year, designs for buildings and landscape should provide shelter from prevailing westerly wind. Buildings should avoid shading outdoor spaces. For example, in the lower valley, a south-facing amphitheater, sloped promenade, and sheltered courtyards can provide a variety of outdoor gathering spaces.



### ELEVATION AND TOPOGRAPHY

Elevations on the campus range from 40 feet in the lower valley near Lake Merced Boulevard (1) to a high point of 165 feet at the intersection of Holloway and 19th avenues (2).

#### LEGEND



### ECOLOGICAL FACTORS

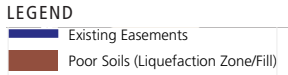
Steep slopes, combined with dense eucalyptus and mixed-growth forests, contribute to the unique landscape of the campus. Prevailing westerly winds flow up the valley. Buildings should avoid shading outdoor spaces.

#### LEGEND



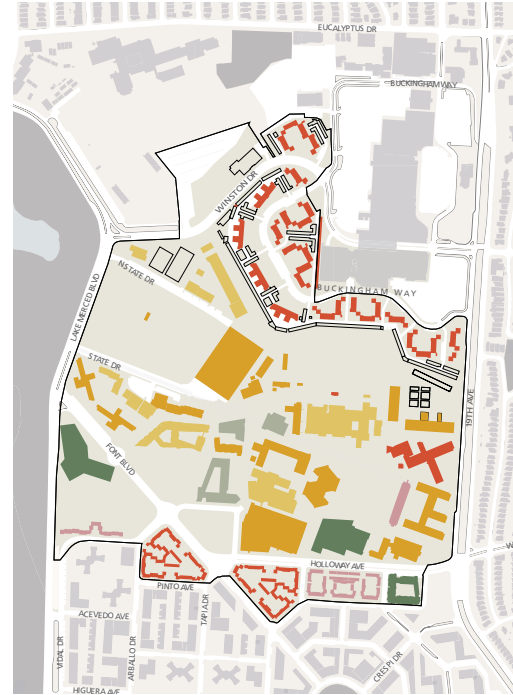
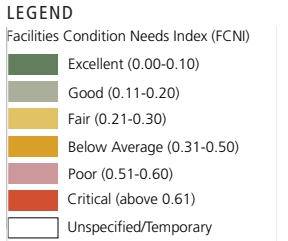
**EXISTING EASEMENTS AND POOR SOILS**

Existing utility easements and liquefaction zones restrict the areas suitable for new buildings and constrain the use of some parcels.



**EXISTING BUILDING CONDITIONS**

The *ISES Facilities Condition Assessment* prepared in 2014 documents the age and condition of buildings.



**Site and Building Conditions: Opportunities for Replacement and Infill**

The campus lacks a consistent grid and building orientation because it has developed intermittently on top of historic agricultural fields and mid-20th century subdivision layouts. Utility easements crisscross the campus. Zones of poor-quality soil limit the possible locations for new buildings.

The conditions of buildings on the campus present challenges but also opportunities. The *ISES 2014 Facility Condition Assessment* identifies concerns about the quality, function, and long-term value of campus buildings. Some buildings have outgrown their original site or purpose (e.g., the gymnasium, Health Center, portables, and HSS). Others are built on unstable soil (e.g., the parking garage) or consist of temporary structures (e.g., annex buildings). Some taller buildings, such as the North Campus residential towers, have inefficient interior layouts or deferred maintenance that would be costly to remediate. Some have accumulated so much deferred maintenance that replacement is more economical.

Removing substandard, inefficient, temporary, and obsolete buildings offers opportunities for new replacement and infill projects. In addition, realigning some street segments and intersections can both improve pedestrian safety and yield better parcels for siting new buildings.

## STRATEGIC INTERVENTIONS

Future State 2035 organizes the campus into neighborhoods that combine complementary uses and respect existing landscape, topography, and built features. Uses transition from academic functions concentrated in the core campus to housing and shared uses adjoining the surrounding city. The sites proposed for new projects have been selected to best use the valley and hilltop sites of the campus.

The plan also establishes major campus entries. These stand at primary roadways, transit hubs, and logical pedestrian and bicycle entry points to the campus.

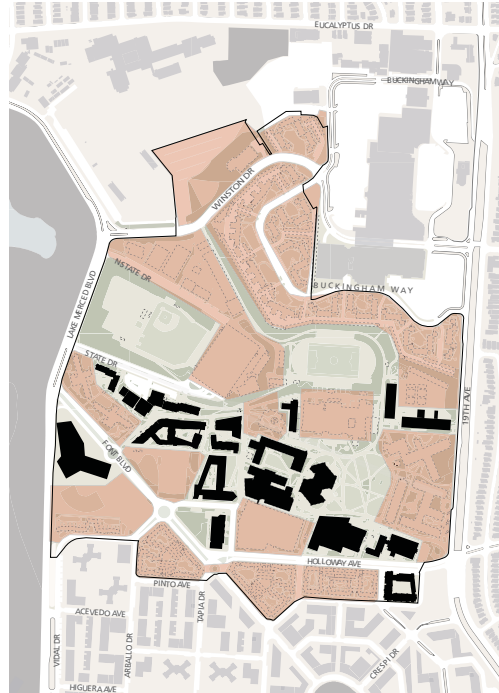
In the plan, parking moves from the valley to perimeter campus areas. By removing the existing parking garage, the University can open the valley and shift activities north. This allows fuller use of the valley and northern campus parcels for housing, hotel and conferencing, science and innovation, support activities, and student recreation and infrastructure.

### Landscape-oriented Neighborhoods (Central Campus Neighborhood and Lower Valley and Upper Valley Neighborhood)

In these areas, building clusters are predominantly south-facing to create sunny open spaces defined by structures. Buildings respond to topography, terracing on the slopes from short to tall. The urban design emphasizes landscape, including open recreation areas, as the predominant element of character.

### Street-oriented Neighborhoods (North Campus Neighborhood and South Campus Neighborhood)

In these districts, buildings align with street edges to create urban corridors that relate to the city grid. Urban design emphasizes sidewalks, plazas, and courtyards as public open space.

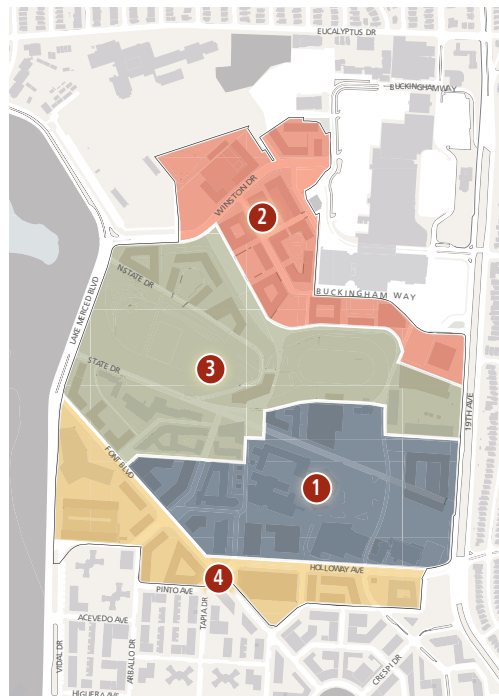


## BUILDING OPPORTUNITIES

Future State 2035 proposes phased removal of low-quality, poorly used buildings. These include structures on liquefaction zones of poor soil, such as the parking garage. The combination of low-quality buildings and under-used land parcels suggests locations for campus upgrades and infill projects.

### LEGEND

<span style="display: inline-block; width: 15px; height: 10px; background-color: #f4a460; border: 1px solid #ccc;"></span>	Potential Building Sites
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<span style="display: inline-block; width: 15px; height: 10px; border: 2px dashed black; border-radius: 3px;"></span>	Buildings to be Removed



## PROPOSED CAMPUS NEIGHBORHOODS

Each neighborhood presents specific opportunities to strengthen the identity and function of the campus.

- Central Campus (1)
- North Campus (2)
- Lower Valley and Upper Valley (3)
- South Campus (4)

## IMPROVED CAMPUS NEIGHBORHOODS: FOSTERING A SENSE OF PLACE

The proposed campus neighborhoods contain complementary buildings, activities, and outdoor spaces. To establish a strong sense of place for each neighborhood, the urban design builds on existing campus characteristics, such as the natural landscape and the urban quality of facilities.

### Central Campus Neighborhood

This area contains the primary academic and student life functions of the University. Organized around the Quad, it is the heart of the campus. The main destinations within it are the library, student center, activity and gathering spaces, and principal classroom spaces. For students, the core experience of university life happens here. Proposed projects will further activate this shared living room.

### CENTRAL CAMPUS NEIGHBORHOOD

Future State 2035 extends the pastoral, collegiate character of the Quad north, linking the academic core to the stadium and upper valley (1). A new student union replaces the gymnasium and offers expanded student dining, activities, and a new health center (2). A lecture hall/classroom building combined with a welcome center defines the east boundary of the Quad and forms a new campus edge along 19th Avenue (3).

A complex of new buildings (4) along Font Boulevard provides space for humanities and other academic needs. It stands west of the Creative Arts buildings. The area between the Humanities Building and Centennial Walk can host a pop-up café allée (5).

A new academic building (6) will occupy the site east of Ethnic Studies and Psychology. Its hub plaza will offer orientation and a sense of arrival at the junction of Centennial Walk, a promenade descending into the valley, and the Sustainability Center with pedestrian bridge.

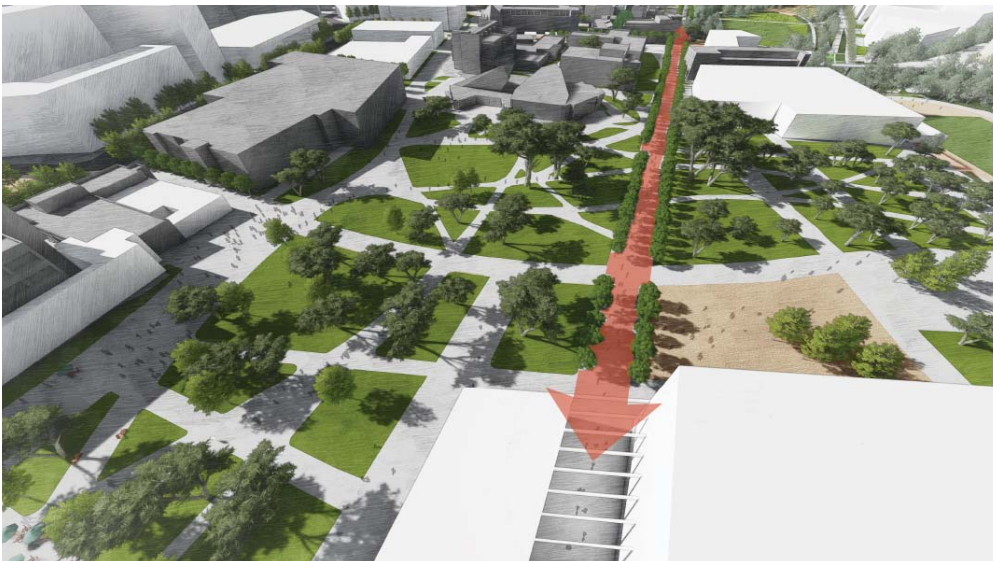
A retrofit of the administration building (7) along Holloway Avenue will improve building access and increase space for student advising services.





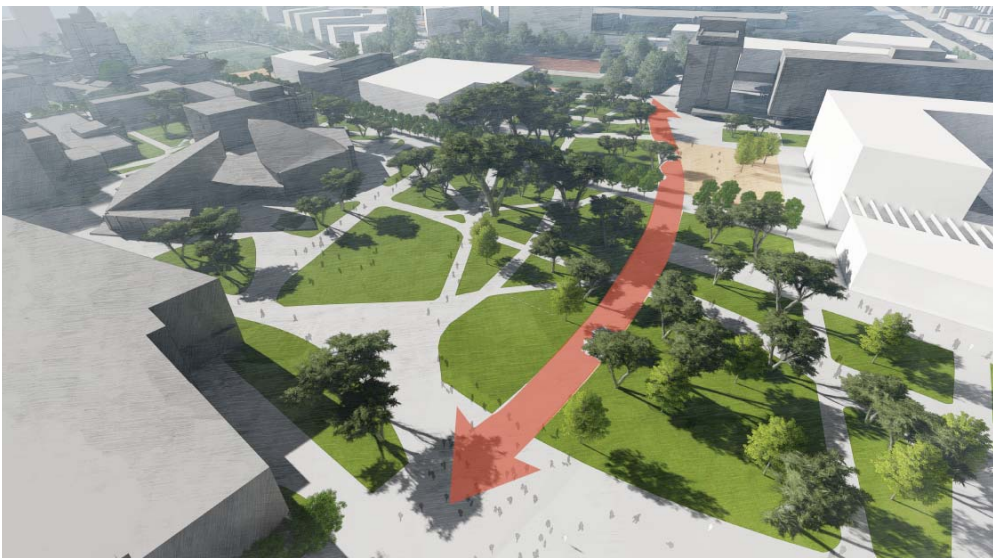
**MAIN CAMPUS  
ENTRY PLAZA**

The main entry plaza, conceived in conjunction with future improvements to the M Line, receives the primary flow of commuters arriving on campus and establishes a visible front door to the campus along 19th Avenue.



**CENTRAL CAMPUS  
NEIGHBORHOOD  
PROMENADE**

A strong east-west promenade provides a clear sense of orientation across campus, while a network of less formal pathways supports pedestrian and bicycle movement in all directions.



**CENTRAL CAMPUS  
NEIGHBORHOOD  
CONNECTIONS**

The extension of the Quad will link the Central Campus Neighborhood to the valley. A new north-south route will extend from the proposed Innovation and Leadership Center at Buckingham Way through the central campus to Holloway Avenue.

### **Lower Valley and Upper Valley Neighborhood**

The steep slopes, forests, and open spaces of the valley pose some of the greatest design challenges on the campus, but this is also the most memorable landscape at the University. Elevations range from +40 feet near the tennis courts in the lower valley (+70 feet along Lake Merced Boulevard) to +150 feet on 19th Avenue. Along the valley edge, elevation differentials of up to 30 feet and slopes of 30 to 40 percent make accessibility difficult. The boundary between the Lower Valley and Upper Valley Neighborhood and the North Campus Neighborhood is even steeper, rising from +80 feet to +120 feet in some locations, with 50 percent grades. These steep, mostly forested slopes border the northern and eastern edges of Cox Stadium. The valley ends in another sharp incline of about 25 feet at 19th Avenue, creating a 38 percent slope from Hensill Hall and the greenhouse up to the street.

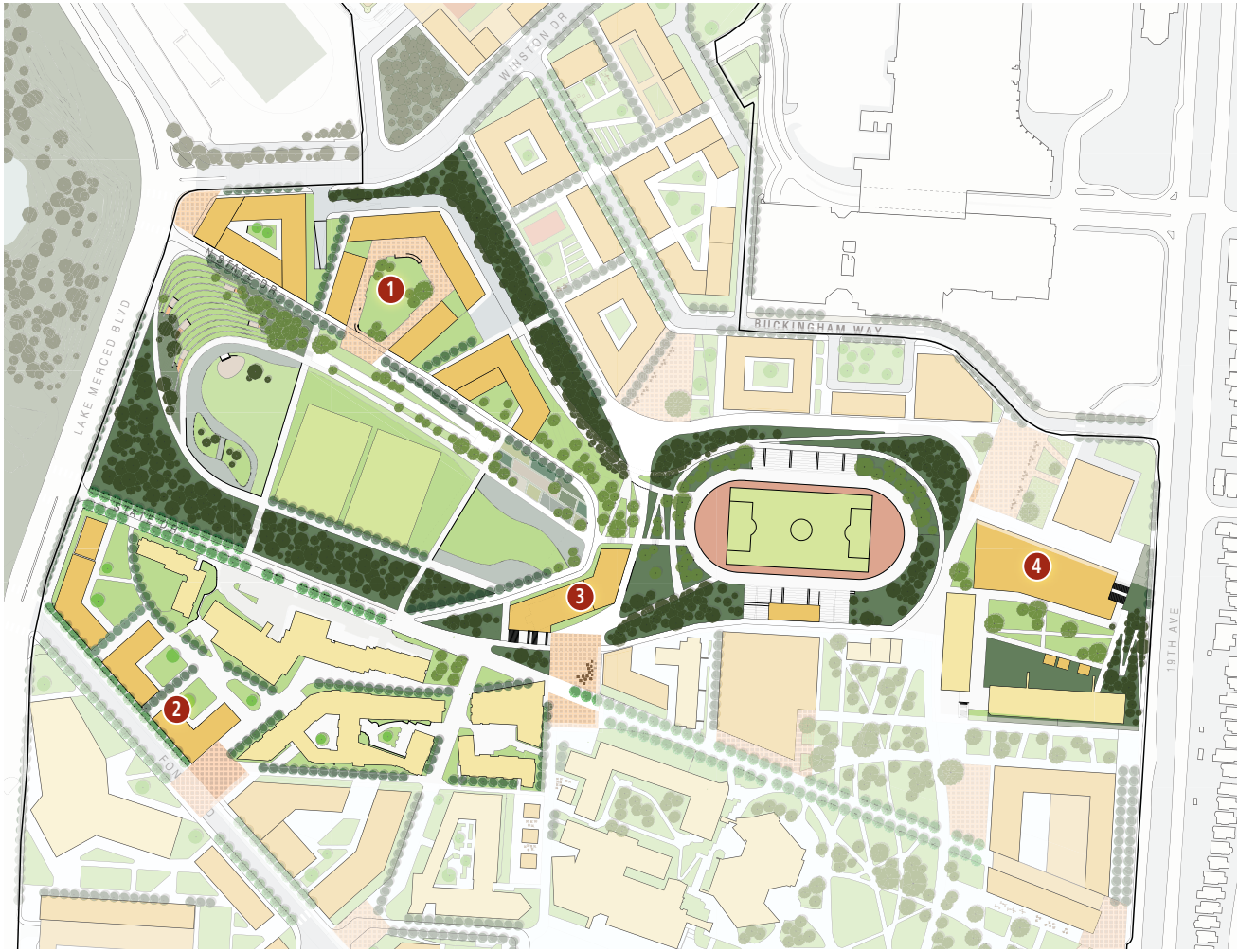
Future State 2035 proposes to unify the lower and upper valley in a single landscape extending from Lake Merced Boulevard to 19th Avenue. This involves removing the parking structure, adding student recreation and opens space and consolidating central plant functions in a new Sustainability Center.

Placing a new undergraduate community in the lower valley significantly expands housing and recreation options for students. This building complex frames the central recreational open space on the valley floor, mirroring existing lower-division housing to the south. Lower valley buildings embrace south-facing pedestrian plazas and promenades that provide gathering places and activity areas.

Future State 2035 proposes to make the lower valley a multi-purpose meadow, a major recreational open space for new undergraduate housing. In addition, by featuring stormwater treatment, habitat restoration, and water recycling, this area will be a model for green infrastructure.

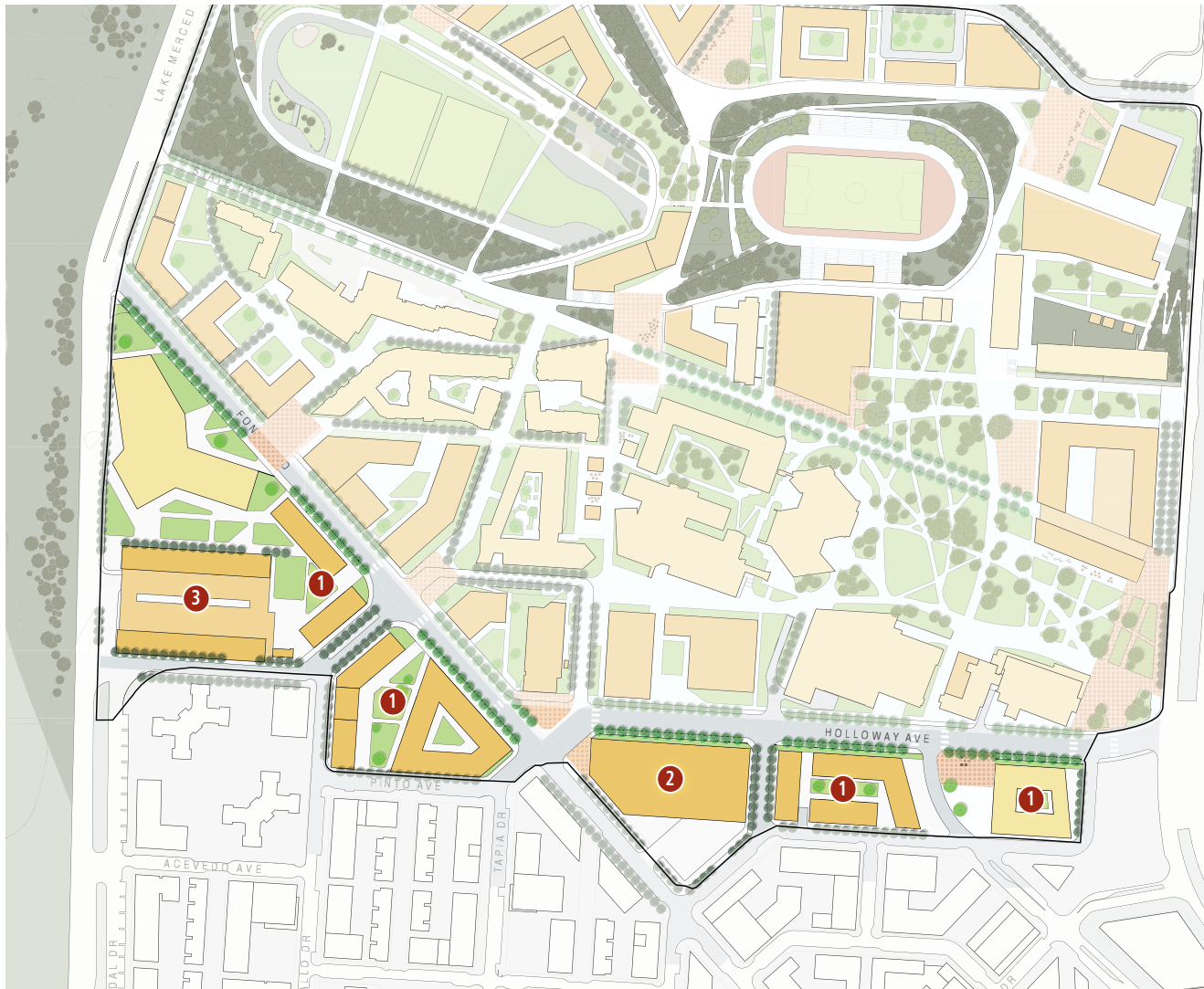
A pedestrian bridge, proposed as part of the structure for the Sustainability Center, will span the valley at its narrowest point and create a valuable new link to the north. Promenades sloping upward along the Sustainability Center lead to the Central Campus Neighborhood as well as to the stadium and proposed Science Building and Innovation and Leadership Center.





### LOWER VALLEY AND UPPER VALLEY NEIGHBORHOOD

In combination with existing student housing, a new housing village **(1)** will frame a shared student recreational zone on the valley floor. Additional student housing **(2)** will front on Font Boulevard and have views over the valley. The Sustainability Center and Central Plant **(3)**, along with the proposed pedestrian bridge, will frame the eastern edge of the valley. The proposed science building **(4)** will anchor the eastern edge of the neighborhood.



**SOUTH CAMPUS NEIGHBORHOOD**

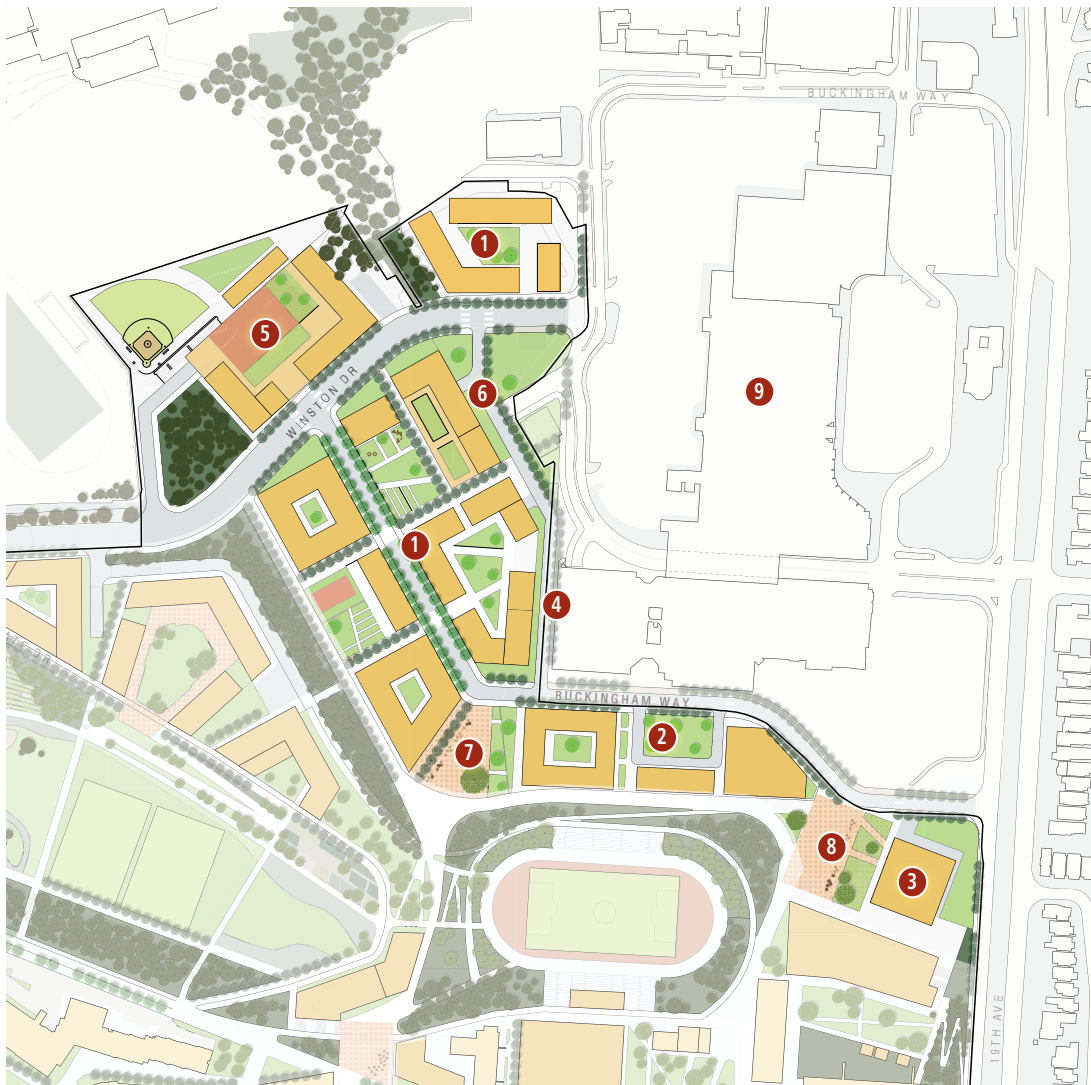
This neighborhood will include student housing (1) and the Events Center (2), which incorporates athletics functions currently in the gymnasium. This multi-purpose building can contain a 3,500-seat arena and related facilities. To integrate this large building into the street front, the University can program the front lobby with active uses such as exhibit and study space. A major parking structure (3) in the district benefits from access to Lake Merced Boulevard

**South Campus Neighborhood**

In contrast to the Central Campus and the Lower and Upper Valley neighborhoods, the South Campus Neighborhood is street focused. Buildings and open spaces front on Holloway Avenue, Font Boulevard, and adjoining streets, defining clear edges.

This mixed-use campus main street district accommodates residential, shared use, commercial, and student-life activities for both the campus and off-campus communities. The Events Center will be used by both the campus and the public. This neighborhood forges a stronger connection to the changing urban district of Parkmerced.

Future State 2035 proposes streetscape improvements to Holloway Avenue and Font Boulevard that increase pedestrian safety at crossings and enhance bicycle mobility. Major campus entry points are sited at key locations.



## NORTH CAMPUS NEIGHBORHOOD

Future State 2035 envisions the North Campus Neighborhood as a mixed-use urban village, with student housing, apartments **(1)**, a hotel/conference center **(2)**, and the Innovation and Leadership Center **(3)** in a walkable grid of streets. Buckingham Way **(4)** becomes a pedestrian-friendly street bordered by new residential buildings with a mix of student services and community or commercial uses on the ground floor.

At the north end of Buckingham, an apartment building incorporates a parking structure that steps down the grade to the north and offers a childcare center along Winston Drive **(5)**. A community center and park form a central shared space, adjacent to the fire station **(6)**, while a plaza offers a gathering space along the promontory with expansive views and a dramatic entrance to the pedestrian bridge **(7)**. Mid-rise towers provide punctuation and exceptional views.

On the east side of the plaza, the 400-room hotel and conference center **(2)** create a new campus identity and activity zone, complementing the retail uses to the north and diversifying the life of the campus. An entry plaza **(8)** between the conference center and Innovation and Leadership Center building offers a view into campus, as well as a terminus to 20th Avenue. This opens up a clear link to the Stonestown Galleria, **(9)** an important shopping and employment destination for students. Together, these projects create a campus neighborhood for events, activities, and services for both the campus and region.

### North Campus Neighborhood

The existing residential buildings in this neighborhood are cut off from the rest of the campus by steep valley walls and carport structures rimming the top of the slope. The curving roadways in the area create inefficient parcels, and outdated building types yield only a low number of housing units.

Yet these northern properties, close to both the campus and Stonestown Galleria, have enormous potential to be active parts of the campus and city scene. Future State 2035 proposes a new urban village with shared gathering spaces as well as a hotel and conference center at the University's important northeast corner on 19th Avenue.

## ENHANCED CAMPUS IDENTITY: EDGES AND ENTRIES

A coherent framework of outdoor spaces, edge treatments, openings, and circulation corridors build a sense of campus identity, leading to a stronger sense of community. These elements profoundly affect the experience of being on campus for potential applicants as well as for enrolled students and faculty.

The street edges around the campus convey the identity and stature of the University to visitors and the public. Recommended improvements include large trees and enhanced walks and crossings, along with the new buildings that engage and activate the street edge.

### Active Edges and Destinations

For many, SF State is a hidden jewel, largely invisible from nearby streets. Buildings block views into the campus from 19th Avenue and other edges, and steep slopes make seeing the campus even more difficult.

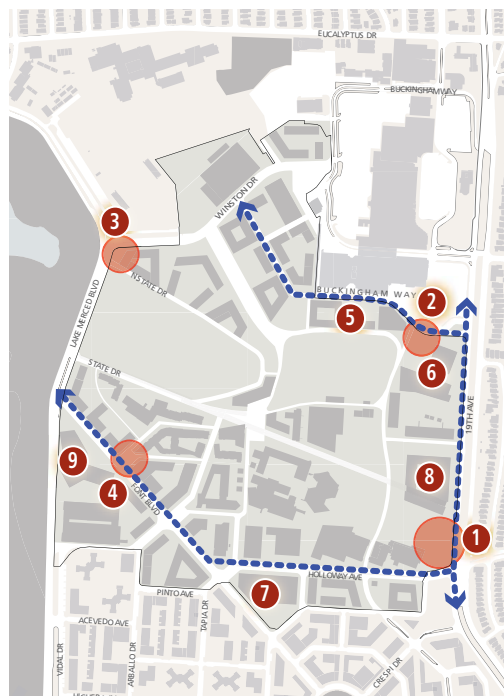
### EDGES AND ENTRIES

Future State 2035 proposes inviting entry points of appropriate scale on the four corners of campus. These also include a new main campus entry along 19th Avenue (1), an entry plaza (2) at the terminus of 20th Avenue at the (academic) science building and the Innovation and Leadership Center, a transit plaza (3) along Lake Merced Boulevard at the lower valley community, and a plaza (4) to connect the Mashouf Wellness Center to the proposed HSS/business school classroom complex.

Projects along the campus perimeter will heighten the presence and identity of the University. These include shared uses such as the hotel and conference center (5), the (academic) science building and the Innovation and Leadership Center (6), and Events Center (7) as well as destinations such as the transit plaza, and the lecture hall and welcome center (8) on 19th Avenue. Along with the Mashouf Wellness Center (9), these destinations demarcate the edges of the campus.

### LEGEND

-  Active Edges
-  Entry Plazas



### Campus Entries

The existing layout of buildings limits the visual openness and size of entry points to the campus. This, in turn, diminishes the sense of arrival, orientation, and welcome. Future State 2035 establishes a hierarchy of entry points, with the largest plazas serving circulation patterns of commuter and on-campus students.

### PROPOSED BUILDING USES

Future State 2035 organizes future building uses to concentrate academic uses in the Central Campus Neighborhood and prioritize the development of lower-division housing close to academic and student services. Future State 2035 makes fuller use of university properties along the campus perimeter for graduate, faculty, and staff housing and semi-public and commercial uses to create a vibrant mixed-use campus adjacent to city neighborhoods.

### Academic

Academic uses support the University's primary mission of education along with ensuring the academic success of students. Existing academic buildings are generally clustered around the Quad, alongside shared services such as the Chavez Student Center and J. Paul Leonard Library. This creates a unified composition despite considerable variety in the architecture and age of buildings. Additional new buildings will face 19th Avenue and the Font/Holloway corridor, connected to the Quad by a pathways and promenades.

### Housing

With a phased sequence of housing projects, Future State 2035 will transform SF State from a primarily commuter campus to a residential live-learn environment. This increase in student housing will improve student success by fostering strong student connections to the University community.

In particular, Future State 2035 prioritizes the development of housing for lower-division students. Proposed projects include both redevelopment of existing housing sites and creation of new residential neighborhoods. These projects will fit into

the existing framework of landscape and street networks in a way that respects existing assets, fosters connectivity, and enhances natural systems.

- North Campus Neighborhood student housing
- North Campus Neighborhood apartments
- Housing redevelopment of the Marys
- Housing redevelopment of the UPN Towers

Proposed residential and mixed-use projects in the lower valley and north campus provide opportunities for a variety of housing options, including undergraduate housing close to recreation and academic services and housing for graduate students, faculty, and staff on parcels adjacent to surrounding urban neighborhoods.

### **Student Life and Support**

As residential population grows, so will the need for expanded student services, including dining, health, wellness, counseling, event and support space, public safety, and recreation. Demand for administrative space will also increase, as will the need for childcare facilities.

Student support space falls into two main categories: spaces on the first floors of residential buildings (e.g., dining, meeting spaces, and counseling offices), and spaces near the Quad for campus-wide uses that may combine student life and administrative functions.

### **Recreation**

Recreation space at SF State currently includes both indoor space (in the Mashouf Wellness Center), and outdoor fields and courts (at west campus green, Mashouf Wellness Center, and the valley tennis courts).

### **Athletics**

Athletics Department buildings are the gymnasium, two field houses, a press box and restroom at Cox Stadium, with field space at Cox Stadium, Maloney Field baseball, and the softball field.

Future State 2035 proposes relocation of the current gymnasium athletics functions to the new Events Center along Holloway

Avenue. This multi-purpose building, estimated at 149,000 gsf, would support both athletics and cultural, entertainment and civic events.

### **Shared Uses**

Currently, the University offers interior space to serve the campus community and the public. These spaces are in the Seven Hills Conference Center in the western campus along State Drive, the Annex I building (containing a large event space) in the lower valley, and the Towers at Centennial Square that offers limited facilities.

Proposed new uses at the perimeter of campus will be shared with the public to increase community interaction and foster the development of a university district.

### **Infrastructure and Public Safety**

Facilities for infrastructure, maintenance, public safety, and parking are essential to the efficient, safe, and sustainable operation of the campus. Redevelopment of the lower valley for student housing will require relocating a number of functions currently along North State Drive, e.g., the corporation yard, university police, parking and transportation, and administrative offices. In order to open the valley and build student housing and support space, the existing parking structure will be removed along with nearby structures in the neck of the valley, such as the recycling/resource center and warehouse.

The proposed Sustainability Center offers the opportunity to relocate office uses from North State Drive as well as other functions such as IT. It will maintain portions of the central plant while providing for new pumps, a storm-water harvesting tank, heat exchangers, and other equipment. The sloping promenade from the central campus down to the valley could integrate with this terraced building, a design that also provides benefits for gravity-powered water treatment and other green infrastructure. Finally, the Sustainability Center reduces the length and cost of the pedestrian bridge by containing the southern portion of the bridge span in the building.

## ACADEMIC USES

Academic buildings reinforce the importance of the Quad as the heart of the campus, providing synergies of proximity and access between allied destinations.

Proposed academic projects include:

- HSS + Business replacement buildings **(1)**
- Creative Arts **(2)**
- School of Music and School of Theater and Dance **(3)**
- Lecture hall and classroom building (with Welcome Center) **(4)**
- Science Building **(5)**
- Academic/Administration building west of Ethnic Studies **(6)**
- Classroom modernization (various locations)

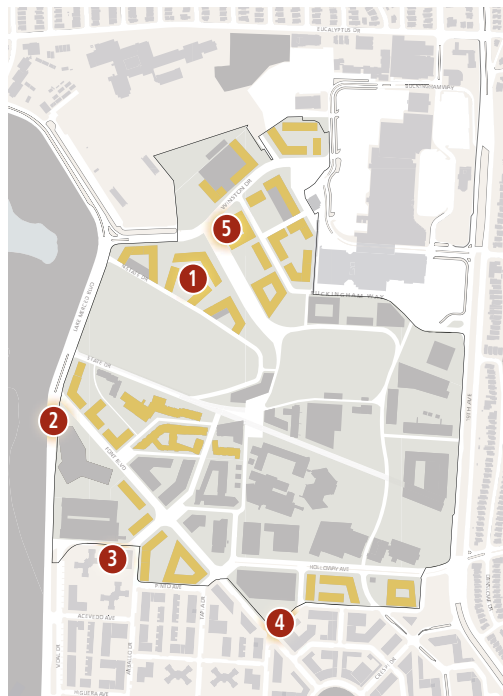


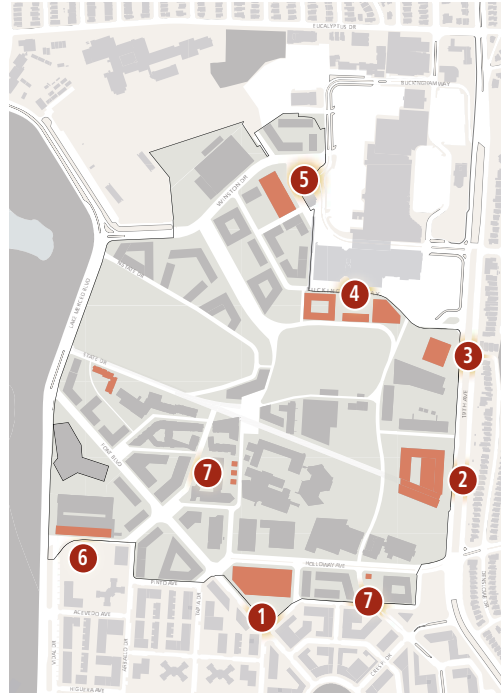
## RESIDENTIAL USES

Future State 2035 supports a range of residential offerings to lower-division, upper-division, and graduate students, faculty, and employee housing as well as some apartment units.

Proposed residential projects include:

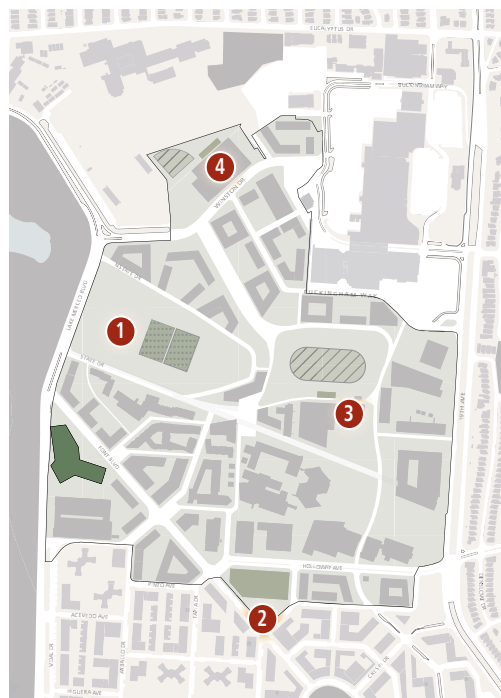
- Community student housing **(1)**
- Student housing (Font Boulevard redevelopment) **(2)**
- South Campus Neighborhood student housing **(3)**
- Holloway Avenue student housing **(4)**
- North Campus Neighborhood employee and family housing **(5)**





### SHARED USES

The Events Center (1) can be a venue for concerts and large gatherings, while the Lecture Hall and Welcome Center (2) in the Central Campus Neighborhood can support performances and exhibits. In the North Campus Neighborhood, the Science & Innovation Center (3) adds another shared use destination. The North Campus Neighborhood also includes a hotel with conference center and at least one restaurant (4) as well as a new community center (5) to support employee and family housing. New retail/mixed use activities are proposed for the Font Boulevard frontage of the South Garage (6). Finally, a number of pop-up cafes and small shops (7) offer informal locations for gathering and refreshments.



### RECREATION AND ATHLETIC USES

#### Recreation

SF State plans additional recreation fields (1) in the lower valley, close to existing and proposed undergraduate housing.

#### Athletics

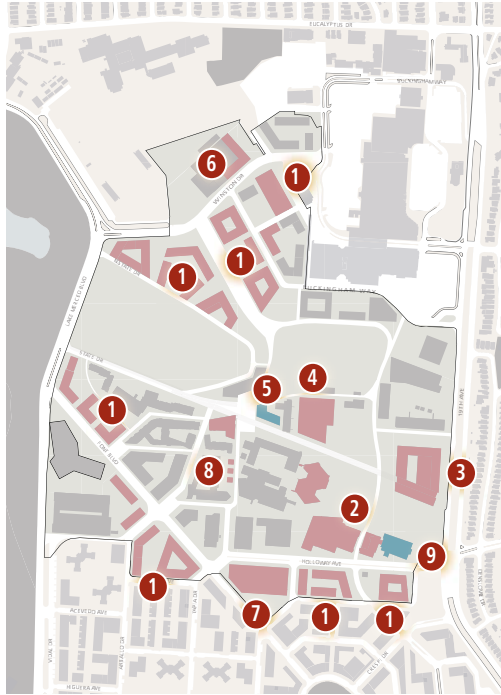
A new multi-purpose Events Center (2) will house current gymnasium athletics functions and related academic programs, cultural, entertainment, and civic events. The Events Center will include a 3,500-seat arena, practice gyms, lockers, weight rooms, and associated uses. As a study and social space and as a gallery for creative arts, the facility's windowed lobby will activate the Holloway Avenue street edge.

Other athletics buildings include a new press box and fieldhouse at Cox Stadium (3) and a new baseball field and softball/baseball fieldhouse on campus (4) adjacent to Lowell High School, or off campus, such as in the unoccupied area at Lowell High School where the facility could be shared by both institutions.

**STUDENT LIFE, SUPPORT USES, AND ADMINISTRATION**

The following proposed projects will support student life and administration functions for the campus:

- Shared functions: dining, meeting spaces, study areas, offices on the first floors of residential buildings (various locations) **(1)**
- Student Advising and Learning Addition Center **(2)**
- Lecture hall and Welcome Center **(3)**
- Student Union with Health Center Wing **(4)**
- Academic/Administration Building **(5)**
- Child care center (Children’s Campus relocation) **(6)**
- Events Center **(7)**
- Pop-Up Cafe **(8)**
- Administration **(9)**



**IMPROVED OPEN SPACE, STREETS, AND PEDESTRIAN CONNECTIONS**

Campus open space sets the stage for university life. Composed in concert with building placement and design, shared landscapes establish campus identity, instill a sense of belonging, and foster interaction, learning, collaboration, and a vibrant social community. Landscape spaces can supply SF State with much-needed gathering places for socializing and study. The campus landscape also provides space for the larger community, especially in conjunction with destinations such as the Events Center and Science Building and Innovation and Leadership Center.

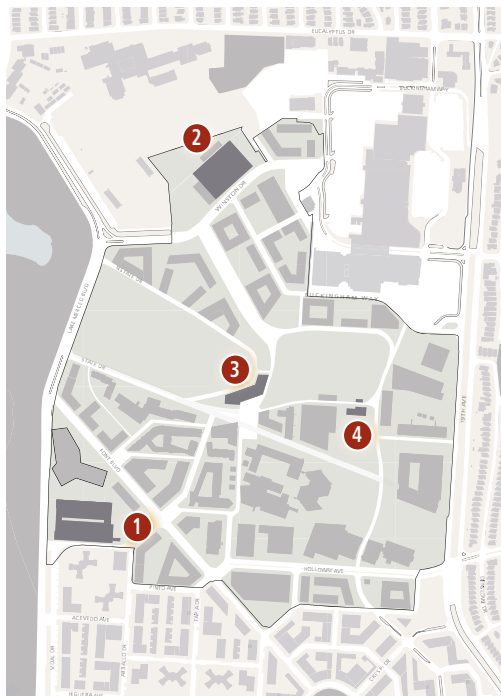
Proposals for open space and the public realm are integral to the Future State 2035.

**Gathering Places and Linkages: An Interconnected System**

Future State 2035 extends SF State’s memorable urban forest landscape by building on the character of existing spaces and creating new open-space connections and places.

**SERVICE CENTERS**

The east edge of the South Garage **(1)** at Lake Merced Boulevard and Vidal Drive will contain space for police and other office functions currently located along North State Drive. The North Garage **(2)** along Winston Drive will provide parking for residents in the North Campus Neighborhood. The Sustainability Center and Central Plant **(3)** provides for upgrades and new equipment for campus infrastructure, including HVAC and stormwater systems. The existing substation **(4)** will remain in place.



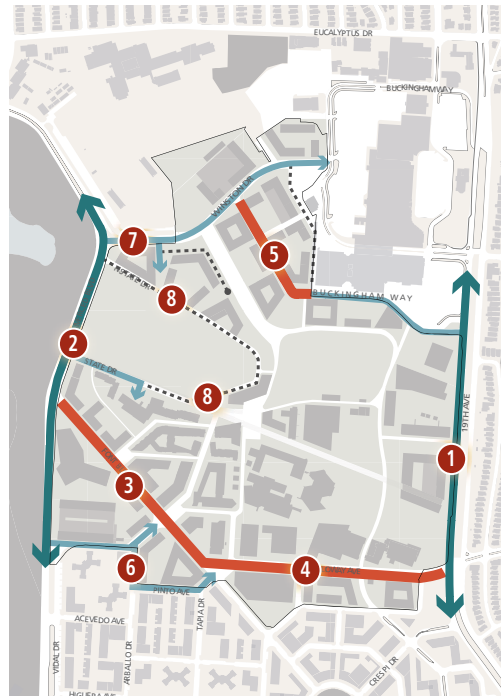


Future State 2035 removes the existing parking structure and creates continuous open-space connections east-west from Lake Merced to 19th Avenue and north-south from Holloway Avenue and across the valley toward Stern Grove.

The proposed outdoor spaces promote variety, continuity, and the sense of a unified campus.

**Quad**

SF State’s main quad is the iconic heart of campus and the focus of academic and student-life buildings. This large, ceremonial open space is the outdoor living room—a place of arrival, orientation, community gatherings, and celebrations. Although generally perceived as a single space, the quad encompasses several embankments and hardscape spaces as it slopes down from south to north, including Malcolm X Plaza at the Cesar Chavez Student Center and the paved area between the library and the administration building. On the north side, the Quad is cut off from the valley by the gymnasium.



**CAMPUS STREETSCAPE SYSTEM**

Campus perimeter streets promote a pedestrian-friendly environment in conjunction with access to transit and parking.

**Campus Frontage Streets**

The University controls the street frontage on one side of two major arterials: 19th Avenue (1) and Lake Merced Boulevard (2). 19th Avenue is envisioned as a formal urban street edge while Lake Merced Boulevard will be park-like in character.

**Double-sided Campus Streets**

The University controls all or most of the street frontage of Font Boulevard (3), Holloway Avenue (4), and Buckingham Way (5). These will become campus main streets for the South and North Campus neighborhoods, with pedestrian-friendly, activated ground levels and ample sidewalks, lighting, and furnishings.





**Campus Access Streets**

Vidal Drive/Pinto Avenue (6) and Winston Drive (7) will primarily serve vehicles and access to major parking structures with less emphasis on activated street frontages.

**Internal Restricted-Access Campus Streets**

State Drive north and south (8) will be reduced in width and restricted to limited service traffic.

**LEGEND**

-  Campus Frontage Streets
-  Double-sided Campus Main Streets
-  Campus Access Streets
-  Internal Restricted Access



**VALLEY PEDESTRIAN BRIDGE CONCEPT**

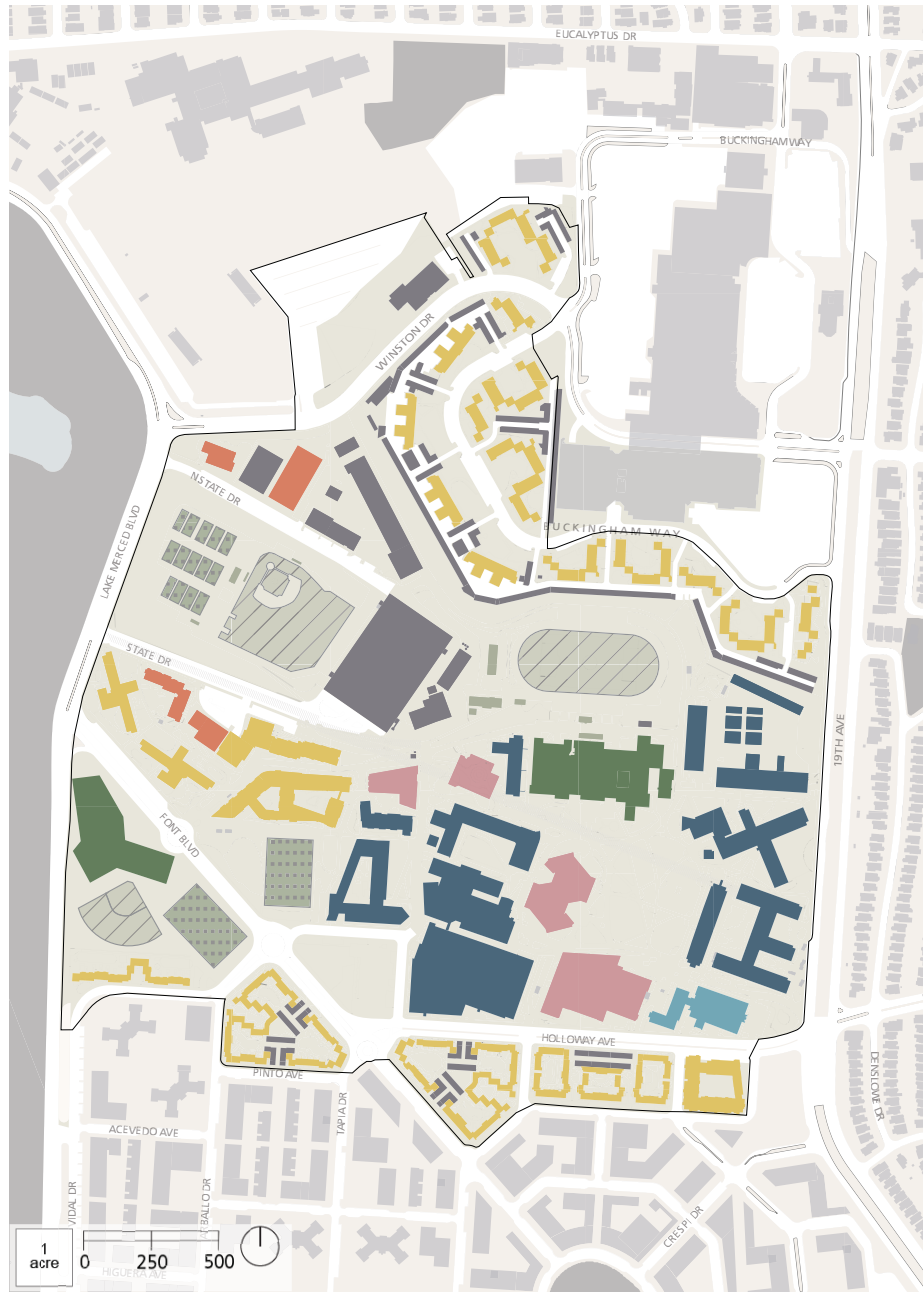
A pedestrian and bicyclist bridge (1) at the narrowest point of the valley, near the Sustainability Center (2), along with carefully sited stairs and sloping promenades, will stitch together the Central and North Campus neighborhoods.

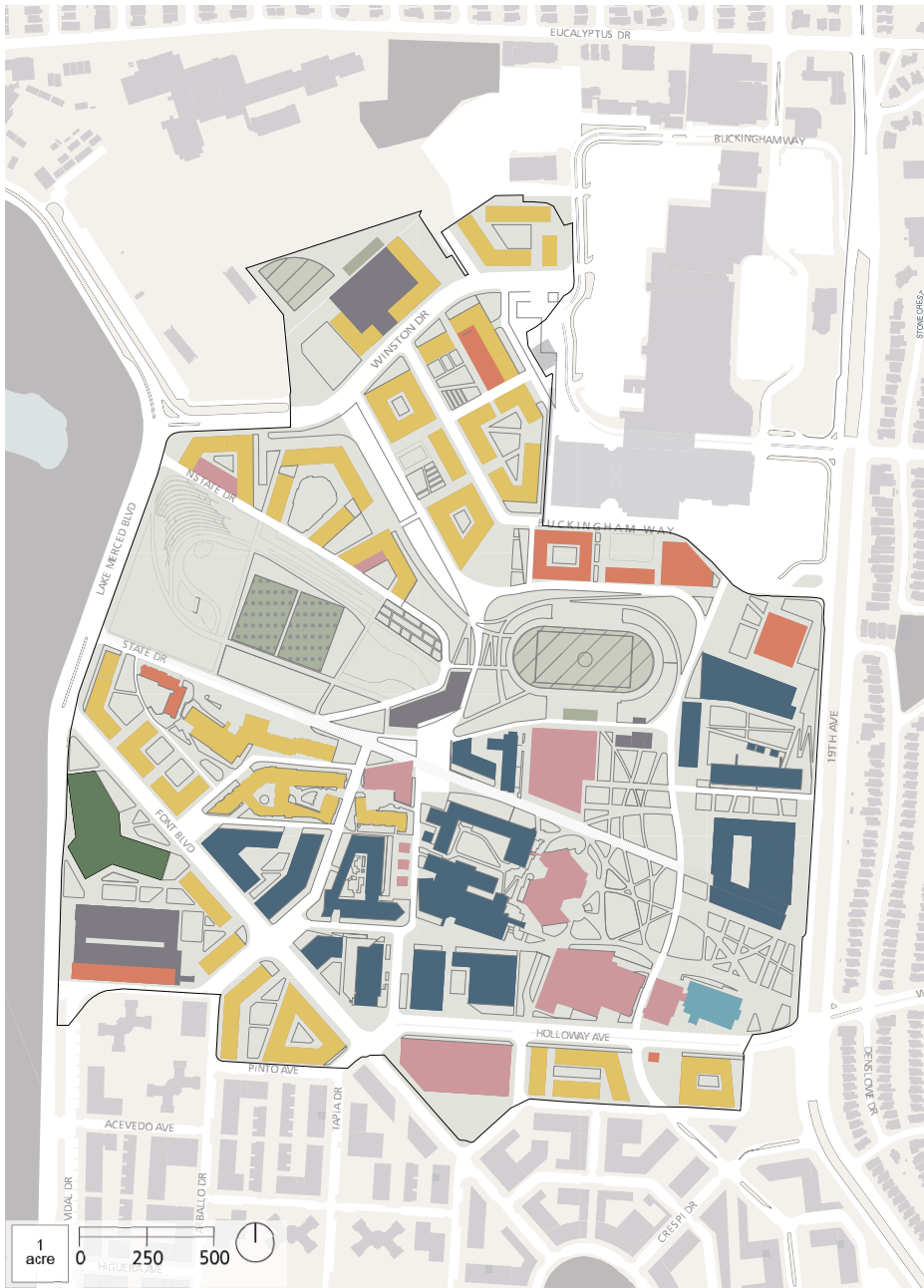
**EXISTING  
CAMPUS USES**

Currently, academic uses cluster around the Quad and along 19th Avenue and Holloway Avenue.

**LEGEND**

- Academic
- Residential
- Administration
- Student Life and Support
- Athletics (indoor and outdoor)
- Recreational (indoor and outdoor)
- Shared
- Parking and Service Centers
- Campus Boundary





**PROPOSED  
CAMPUS USES**

Proposed campus uses reinforce the existing pattern of activities on campus while making fuller use of University properties along the Font-Holloway corridor and north of the valley.

**LEGEND**

- Academic
- Residential
- Administration
- Student Life and Support
- Athletics (indoor and outdoor)
- Recreational (indoor and outdoor)
- Shared
- Parking and Service Centers
- Campus Boundary

**PROPOSED PEDESTRIAN CONNECTIVITY SYSTEM**

**Axial Promenades**

East-west promenades clarify circulation across campus. A major axial promenade (1) runs across the Quad from the proposed lecture hall with classrooms and welcome center to the existing Student Services building, extending to Lake Merced Boulevard through State Drive. At the central plaza the promenade connects to the valley with an accessible sloping pathway.

**Smaller Promenades**

The existing Centennial Walk (2) and other small promenades supply additional routes.

**Hilltop Walks and Valley Meanders**

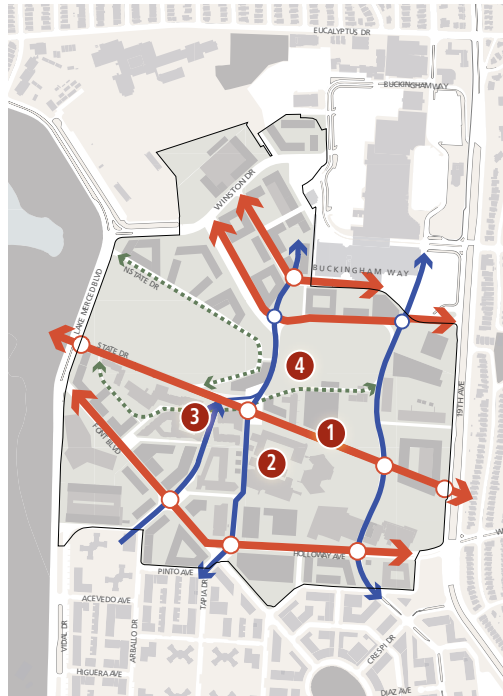
These use the tops and bottoms of sloping areas and open spaces to create a system of intimate walkways offering vistas, access to natural areas, and loops for exercise and enjoyment.

**Connections**





These are critical pathways between buildings, such as through the existing Towers and Centennial Square residence halls (3). Their twisting character suggests a medieval village, a quality memorable at SF State.

**Bridge, Stairs, and Sloping Promenades**

Given the varied topography of the campus, these elements celebrate campus character. All will be designed for universal access. The proposed bridge (4) spans the valley and provides a link to the growing areas north. Sloping promenades at lower valley housing and on either side of the Sustainability Center will include informal seating where people can enjoy the view and socialize.



**LEGEND**

-  Key Junction
-  East-West Axial Promenade
-  Valley Meanders
-  North-South Connections

**Plazas and Courtyards**

In contrast to the Quad, plazas and courtyards are smaller, primarily paved spaces in front of or internal to buildings or building clusters. Plazas at the important junctions of movement corridors can be larger to accommodate peak pedestrian and bike circulation. While pavement accommodates intensive foot traffic, the addition of trees and other planting will provide beauty, shade, and identity. Courtyards, smaller than plazas, serve multiple buildings or uses and are intimate, protected areas.



Plazas and courtyards act as outdoor rooms for grabbing a bite to eat, pausing to appreciate a sculpture, orienting oneself, and stopping to chat with a friend. They are also locations for art installations and donor recognition. To foster these activities, plazas and courtyards will provide options for sun and shade, seating, tables, wayfinding and building signage, plus recycling and trash receptacles. In residential neighborhoods, they can include play areas for families.

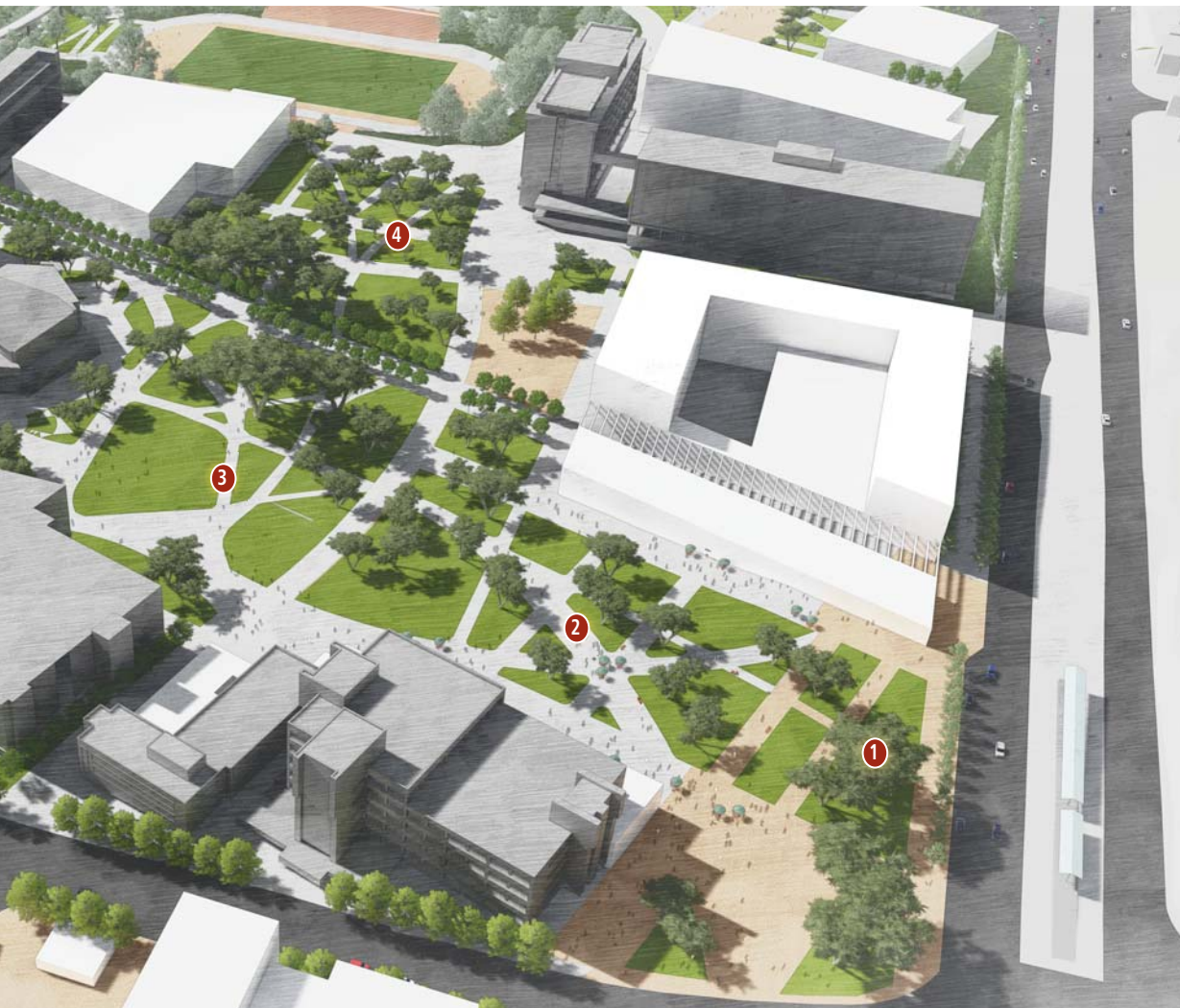
Plazas along the Font-Holloway corridor will slow traffic and increase access between the south and central campus.

### Promenades and Movement Corridors

The campus system of promenades, pathways, stairways, and other movement corridors are some of SF State's most hard-working outdoor spaces. This system enables the campus community to walk freely to various destinations, including classes, residence halls, meetings, and study groups. Bicycle traffic on these corridors is also essential to the overall circulation system.

### Campus Streets

The campus contains a variety of street conditions, each important to the identity and functioning of the University. Street design will provide traffic calming, safe intersection crossings, and easy connections between campus destinations.



### CAMPUS OPEN SPACE AS CONNECTORS

The proposed expansive main entry plaza (1) at 19th Avenue connects to new open space (2) that serves as an eastern extension of the Quad (3). Additional new open space (4) extends the Quad north, serving as a connection to Cox Stadium and a focal point for new shared facilities.

**EXISTING  
OPEN SPACE SYSTEM  
AND CONNECTIONS**

A variety of landscapes contribute to the distinctive character of the SF State campus. These range from intimate gardens to the iconic Quad. In particular, the campus inspires deep appreciation of the urban forest, with its flowing valleys, hidden gardens, tree-covered slopes, and Quad.

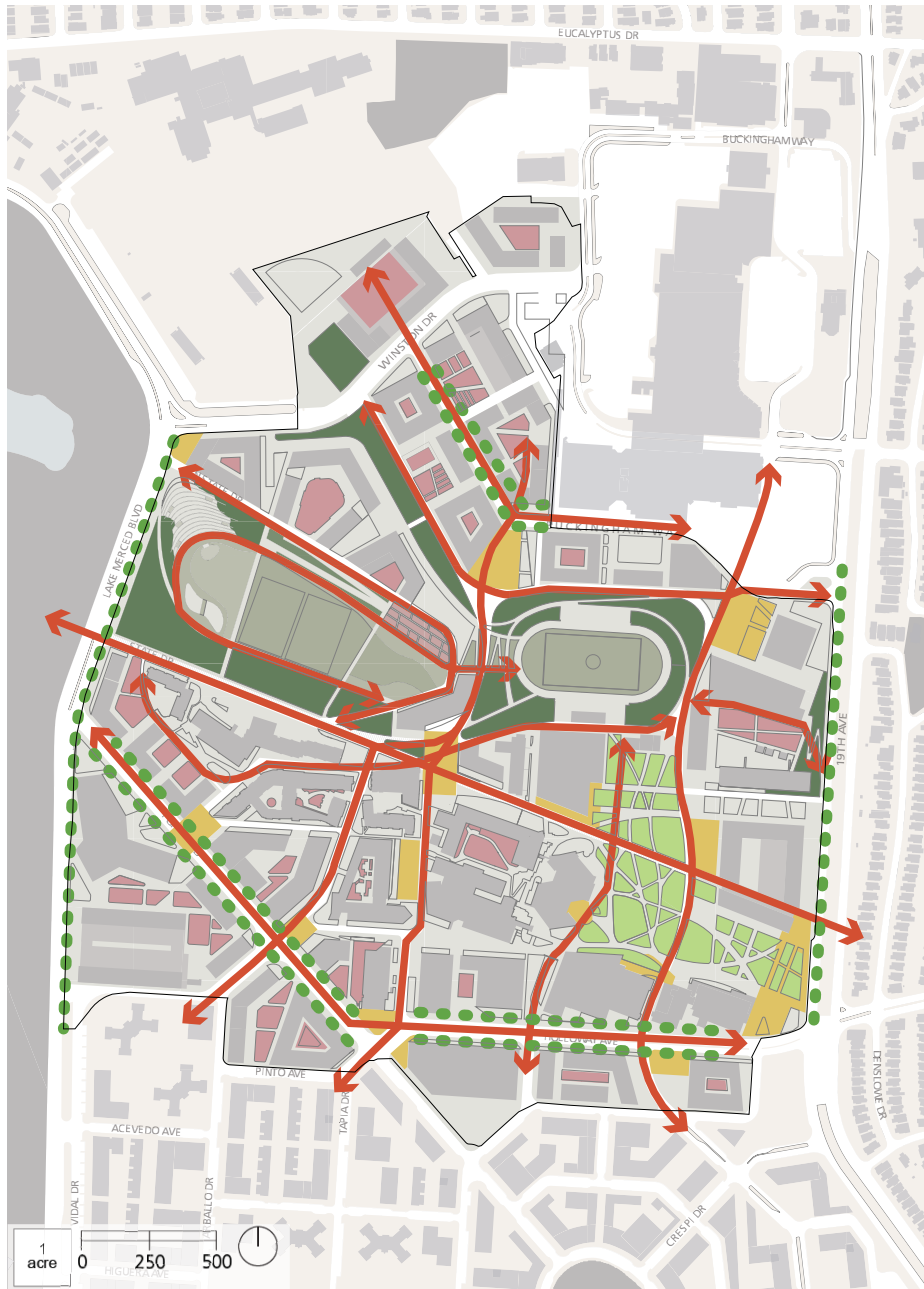
- LEGEND**
- Quad
  - Garden + Courtyard
  - Slope
  - Valley
  - Plaza
  - Connection
  - Campus Boundary



**Gardens and Groves**

There are a number of special landscape areas on campus, including the Garden of Remembrance and Memorial Grove. The special nature of these spaces conveys the sense of an intimate place to stop and rest, converse, or study. Gardens and groves may be programmed for a specific use or simply be ceremonial, and either densely or sparsely planted.

Future State 2035 proposes new garden-scale outdoor spaces as part of new academic and residential buildings. A space along the northern slope of the valley can offer productive landscape for horticulture and food gardens.



**PROPOSED  
OPEN SPACE SYSTEM  
AND CONNECTIONS**

Future State 2035 builds on the assets of the campus to establish a larger network of connected but distinctive landscapes, linked by promenades, pathways, campus streets, and corridors. This system can support a range of activities from quiet repose to active gatherings, in a landscape tuned to the terrain and microclimate of southwest San Francisco.

Most of the proposed open-space types have precedents on the existing campus. Others suggest new possibilities for green infrastructure, student recreation, and gathering areas shared by the campus community and the public.

Concepts for open space look beyond the campus to connect with Parkmerced, Stonestown Galleria, Lake Merced, Lowell High School, residential neighborhoods, and the urban transportation network.

**LEGEND**

- Quad
- Garden + Courtyard
- Slope
- Valley
- Plaza
- Streetscape
- Connection
- Campus Boundary

**Valley, Slopes, and Natural Areas**

With sensitive conditions of slope, poor soils, and forest cover, these open spaces are best suited for recreation and enjoyment of nature. Future State 2035 proposes that the lower valley be used for student recreation, with stormwater biofiltration and wetland gardens as well as a terraced amphitheater at the west end. The amphitheater is oriented to the south and tucked behind the embankment of Lake Merced Boulevard

to shelter it from chilling wind and to maximize solar exposure. Portions of the valley offer good locations for riparian zone restoration, habitat areas such as butterfly gardens, informal trails, seating, interpretive signage, and the working landscape of the Sustainability Center’s water recycling. Preservation of forested slopes reinforces the essential landscape character of the campus.

## THE QUAD

Future State 2035 confirms the Quad as the primary campus open space. It is framed by academic buildings and characterized by preservation of the major trees in the Quad **(1)**. This landscape, primarily turf with crisscrossing informal pathways, will be the focus for new buildings such as the proposed student union **(2)**.

Relocating the gymnasium allows the Quad to extend north **(3)**, connecting the campus's two major landscapes of quad and valley as well as facilitating more graceful, continuous connections to the north.



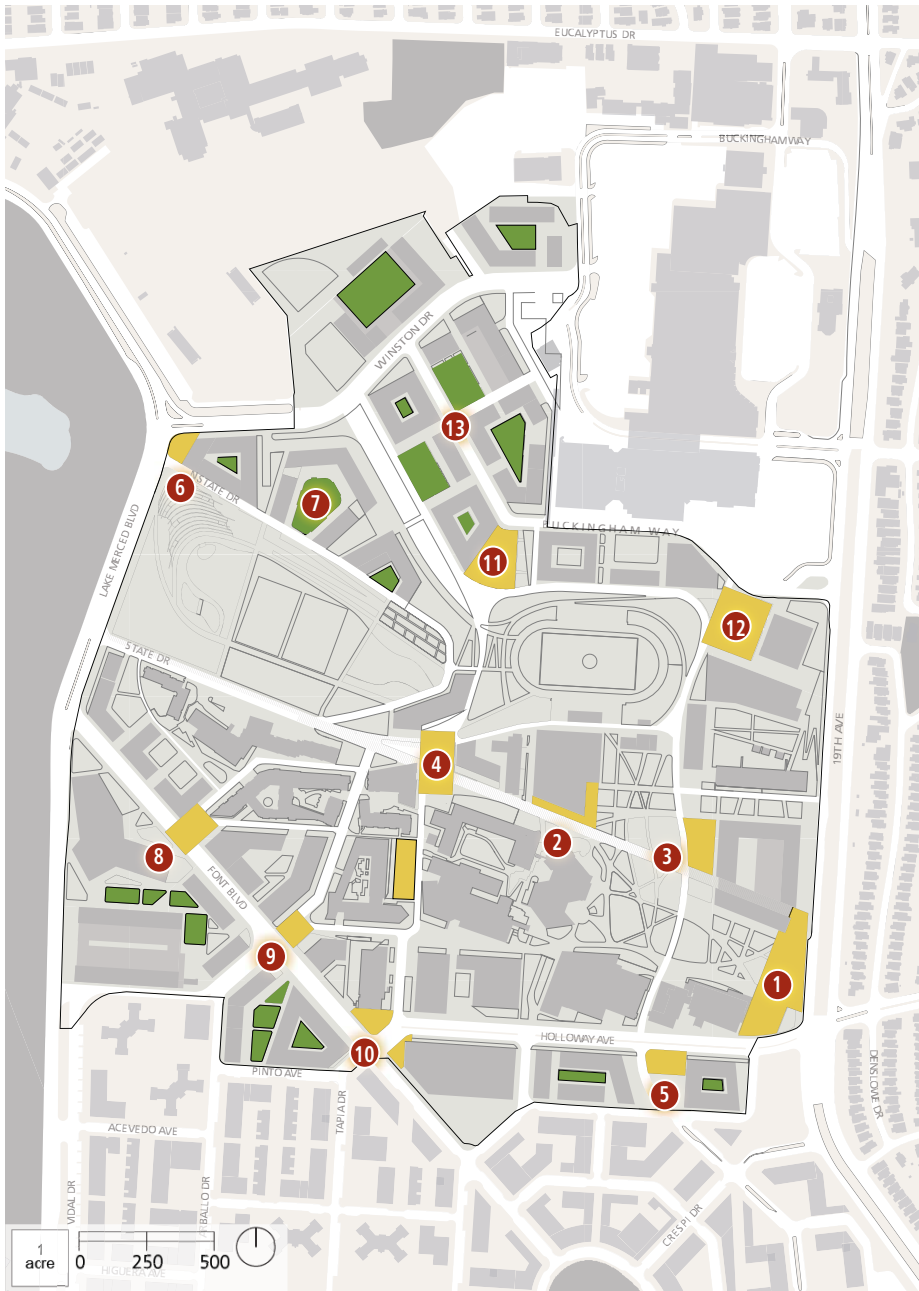
## GARDEN OF REMEMBRANCE

Designed by Japanese American artist and honorary SF State Master of Fine Arts recipient Ruth Asawa, the Garden of Remembrance, located in a quiet courtyard honors the 19 former SF State students who were pulled from their classes under U.S. military and government orders and forced to live in remote camps across the country during World War II.

The garden exemplifies Future State 2035's intent to create such spaces for San Francisco State University students, faculty, staff, and visitors.







**PROPOSED ADDITIONAL PLAZAS AND COURTYARDS**

- Main Entry Plaza (1)**  
A strong campus identity, entry, and forecourt for the welcome center generously accommodates heavy pedestrian traffic, seating, wayfinding and trees that introduce the Quad landscape
- Student Union Plaza (2)**  
Expands opportunities for student life and community events such as rallies, farm-to-table events, or booths for clubs
- Lecture Hall Plaza (3)**  
A belvedere suitable for receptions and gatherings. North of the lecture hall a tree-planted corridor connects to 19th Avenue
- Central Plaza (4)**  
A wayfinding and orientation/assembly space to complement the proposed administration/academic building; includes art installation, seating, and large-scale graphics
- Events Center Plaza (5)**  
Ample space for large groups with places to seat and shelter pedestrians from traffic
- Transit Plaza (6)**  
An active urban space with access to retail, ridesharing, and bicycle facilities
- Lower Valley Housing Courtyards (7)**  
Undergraduate housing, courtyards to gather, study, enjoy a sunny day, and socialize
- West Campus Portal Plaza (8)**  
Connects Mashouf Wellness Center with the campus neighborhoods to the north
- Arballo Plaza (9)**  
Connects the South Campus to the proposed HSS/business, Creative Arts, and existing humanities buildings
- Cardenas Avenue Court (10)**  
Space for a pop-up retail café or shop, alongside the new pedestrian crossing joining the South Campus and Central Campus neighborhoods
- Promontory Plaza (11)**  
A paved outdoor room with wonderful vistas and space for an outdoor restaurant, shared student and community hub, farmers' market
- Innovation and Leadership Center Plaza (12)**  
Setting for a building and a connection to the Stonestown Galleria via 20th Avenue; a social mixing place for the proposed conference center and hotel, the Innovation and Leadership Center, residents, faculty, and students
- North Campus Neighborhood Courtyards and Park (13)**  
A series of interior and street-oriented outdoor spaces create destinations in this urban village and for passive and active recreation such as tennis and basketball or passive enjoyment. The community center park is a major gathering area and open space with play spaces for families



Draft

# Theme 2 Making Connections

San Francisco State University (SF State) is well known for valuing diversity and equity. To better serve a diverse student body in the future, the University plans to increase student enrollment and, most importantly, to increase campus housing substantially.

Adding students to the campus at all times of day requires improvements for movement on campus as well as better transportation from surrounding areas. The San Francisco State University Vision plan Future State 2035 (Future State 2035) identifies goals for mobility, wayfinding, and Transportation Demand Management, all in alignment with core values from the *San Francisco State University Strategic Plan 2015*.

Future State 2035 considers mobility within the growing campus as well as from areas surrounding the campus. On campus, mobility issues include pedestrian and bicycle movement and wayfinding signage for students and visitors. Off campus, mobility issues include access to campus and safety on streets surrounding SF State, and travel to campus from the region. By pursuing improvements in transit and using transportation demand management (TDM), the University can reduce single-occupant vehicles and their negative impacts.

These ideas shape Future State 2035's recommendations on access and mobility for all:

- Affordable, safe, comfortable, and sustainable transportation
- Community creation, also known as placemaking
- Connectivity within the campus and to outside destinations
- Innovative, affordable approaches
- Optimal campus experiences for commuters and the growing number of campus residents

## **MOBILITY GOALS**

The campus is currently characterized by pedestrian crossings that are infrequent, restrictive, and challenging, especially along Lake Merced Boulevard and 19th Avenue; by the lack of clear, safe orientation on campus; by minimal use of bicycles; and by sub-standard transit access and infrastructure. These conditions do not adequately serve the campus community now and will not enable the University to achieve its vision for the future.

Mobility goals of Future State 2035 are to:

- Provide universal access
- Increase safety and security
- Address the steep topography in and around the campus
- Create clear, intuitive lines of travel
- Build a people-centered campus transportation system in which pedestrians receive the highest priority and private cars the lowest
- Reduce conflicts between people traveling at different speeds
- Provide seamless integration of transit, bike, and pedestrian access to the campus

## **WAYFINDING GOALS**

The campus currently lacks a cohesive wayfinding system. Because of the circuitous routes on campus and the limited sight lines, this makes navigation challenging. The wayfinding goals are to:

- Increase legibility of the full extent of the campus
- Provide a rational, user-friendly wayfinding system with a clear information hierarchy
- Offer a sense of welcome and orientation to the campus for students, faculty, staff, and visitors
- Assist first-time visitors in navigation and encourage students, faculty, and staff to explore the campus
- Enhance the visual environment
- Inform visitors of mobility options
- Consider all users in wayfinding design

## **TRANSPORTATION DEMAND MANAGEMENT GOALS**

SF State has opportunities to reduce the time and cost of commutes to the campus and to encourage sustainable commute modes. The Transportation Demand Management (TDM) goals of Future State 2035 are to:

- Empower people to make informed, sustainable commute choices
- Provide no additional parking
- Work with Bay Area transit agencies to ensure adequate capacity for increased use and more convenient with high-quality service
- Discourage parking for those with other options, but make parking affordable and usable for those who need it
- Increase bicycle commuting by ensuring it is safe, easy, and fun

## **THE STATE AND REGION**

To increase the number of full-time equivalent students to 30,000 by 2035, SF State will construct new housing on campus. The high cost of housing in the Bay Area currently pushes students, staff, and faculty far from the campus. Providing reasonably priced campus housing will attract students, staff, and faculty, eliminate some commutes, and strengthen the equity and community focus fundamental to the University.

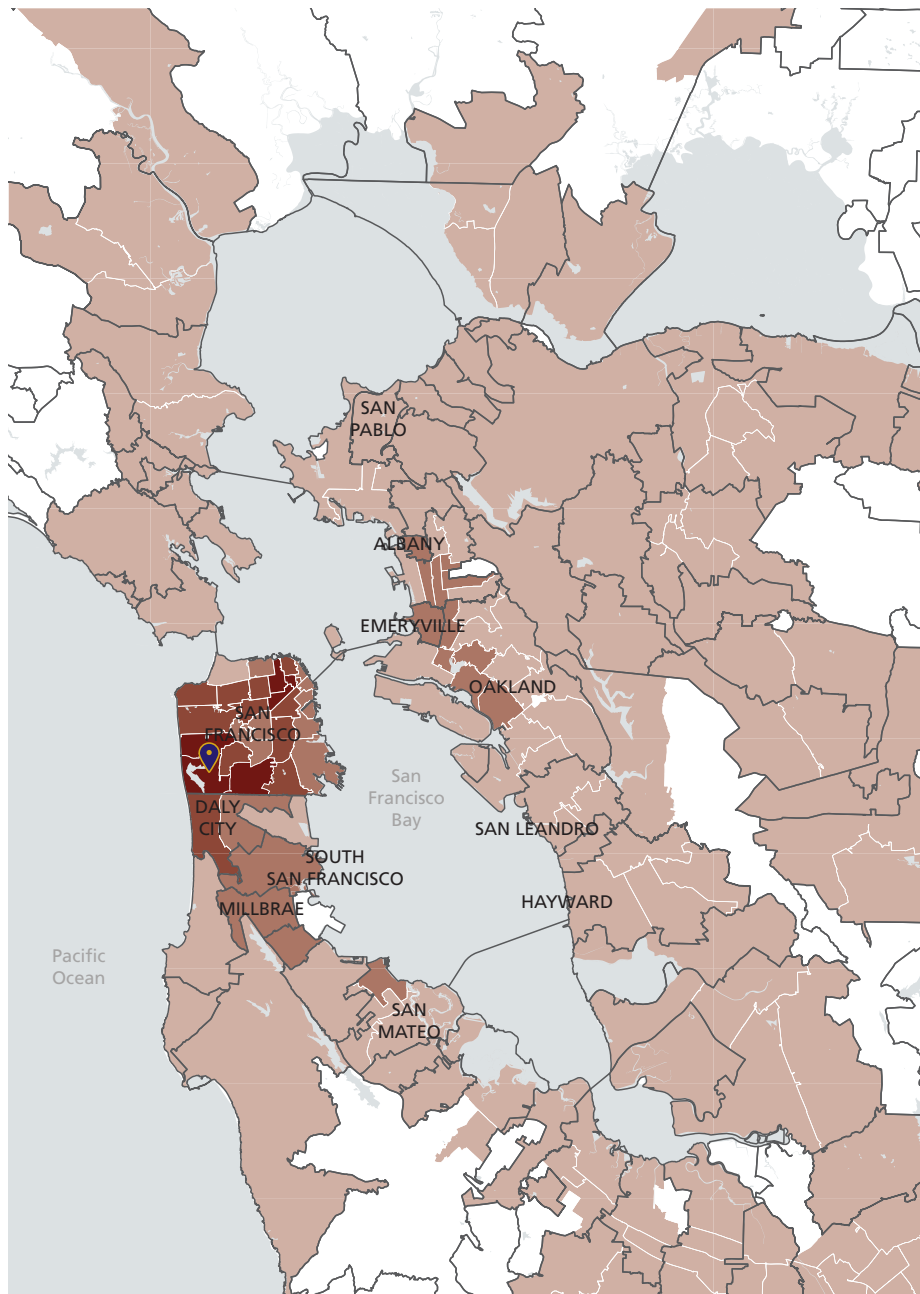
For people who cannot live on campus, SF State can work with Bay Area transit agencies to broaden access to transportation options, increase the availability of affordable transit, and improve the last-mile connections from transit to the campus.

## **THE CITY AND THE WESTSIDE**

San Francisco Municipal Transportation Agency's (SFMTA) Muni system serves the campus with the M Oceanview light rail and several bus lines. These carry commuters who live within the city and link other commuters to regional transit such as BART. However, there are no transit connections to the University from neighborhoods on the east side of San Francisco, such as Mission Bay and Bayview. For people who live one to five miles from campus but are not on a major transit line, walking to a transit stop on auto-oriented streets can be circuitous and uncomfortable. Wait times for transit connections are usually long, and the journey is often slow. Biking to campus is difficult for many because of the steep topography, inconsistent bike and pedestrian infrastructure, and auto-oriented conditions. This is apparent in the very low use of bicycles at SF State.

Expanding and improving pedestrian and bicycle facilities in and around the campus will give people more choices for access to the University.

SF State cannot fund all the improvements without collaborating with the City of San Francisco and the SF State campus is an opportunity for the city, regional agencies, and the state to invest in an area that has been underserved by transit and transportation funding.

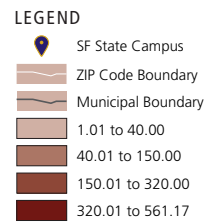


**SF STATE UNIVERSITY  
COMMUTER DENSITY BY  
REGION**

The primary regional transit system for SF State is BART. Muni buses link the campus to the Daly City and Balboa Park BART stations, and a dedicated campus shuttle bus serves the Daly City station. Transit is well used by students, with half using it to reach the campus.

However, the time and expense of transit, in addition to poor connectivity in the last mile to campus, discourage many potential students in the region from commuting to SF State, especially students in Peninsula and East Bay communities without direct access to regional rail. Transit commutes longer than one hour with multiple transfers are less competitive than vehicle trips.

Commuters living in sparsely populated communities, with limited or no transit access, have few commute options. SF State provides carpool and vanpool assistance programs, but the low density of some areas and varied commute times of riders make ride-matching difficult.











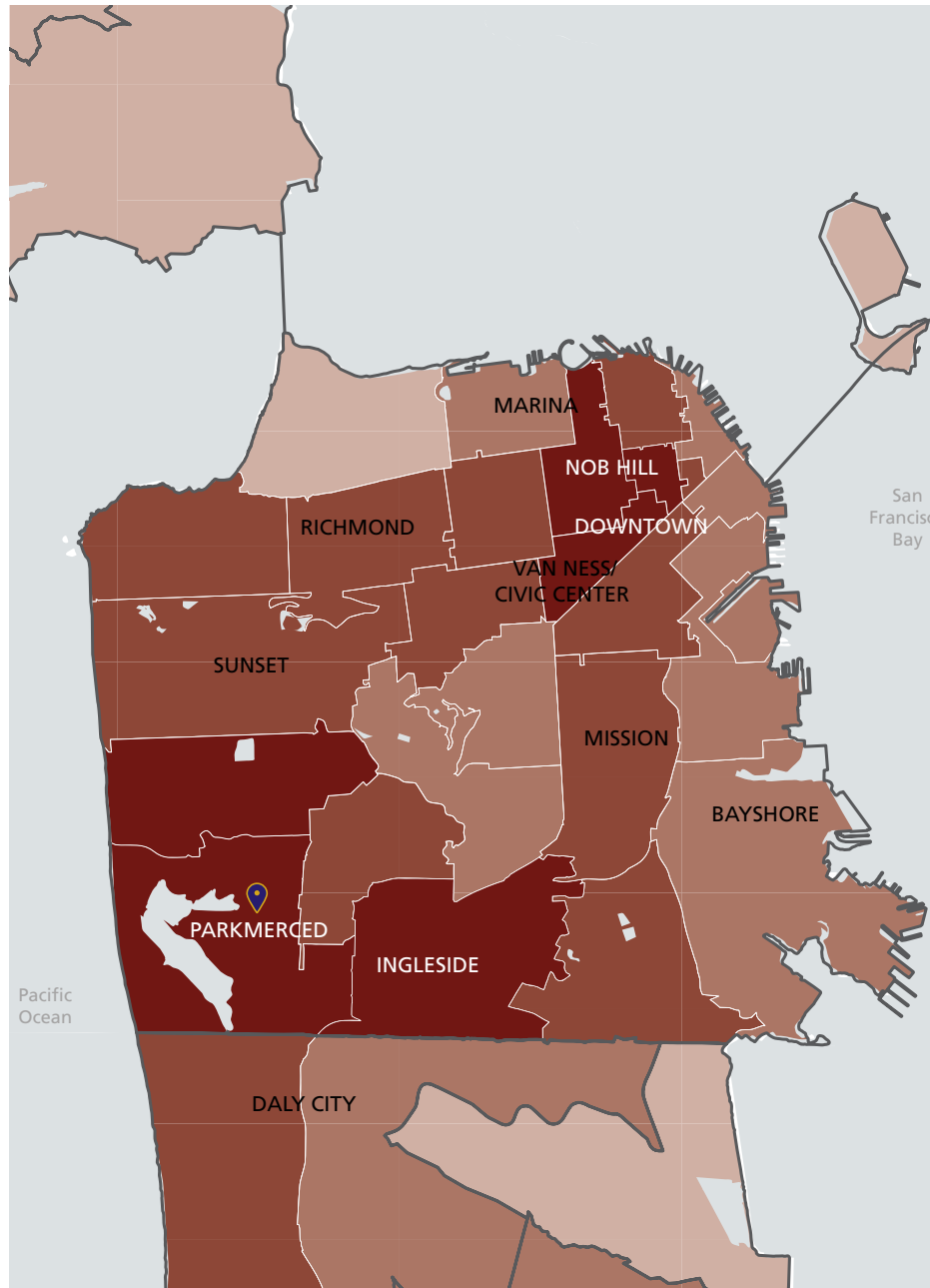
**SF STATE UNIVERSITY  
COMMUTER DENSITY -  
SAN FRANCISCO**

Forty-nine percent of SF State affiliates (students, faculty, and staff) live in the City of San Francisco. The neighborhoods surrounding SF State, i.e., Ingleside, Parkmerced, and Parkside, have the highest density of commuters, along with areas in the northeastern part of the city, i.e., Downtown, Nob Hill, and Van Ness Civic Center.

Although commuters living in the city are closer to the campus than regional commuters, many still face obstacles to a sustainable and reliable commute. The steep topography and the auto-oriented environment around the campus mean that even people within walking or biking distance of the University often choose to drive.

**LEGEND**

-  SF State Campus
-  ZIP Code Boundary
-  Municipal Boundary
-  1 or less affiliate per sq. mi.
-  1.01 to 40.00
-  40.01 to 150.00
-  150.01 to 320.00
-  320.01 to 561.17 ...



## CAMPUS DISTRICT MOBILITY PLANS

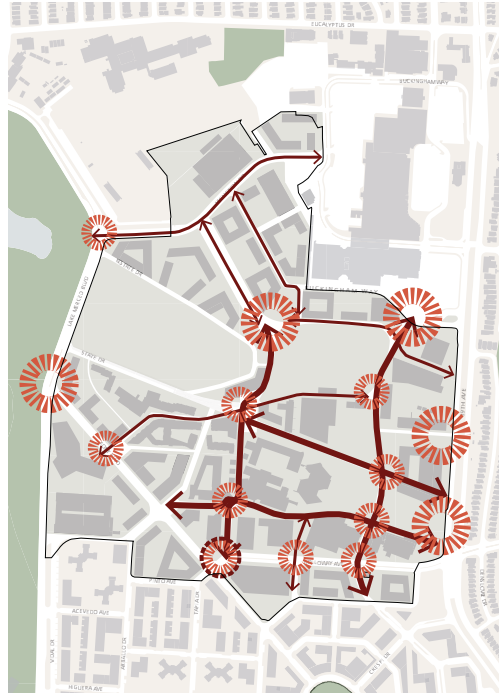
### Pedestrians

The transportation strategies in Future State 2035 prioritize access to the campus for pedestrians, bicyclists, and transit riders, and mobility on the campus for pedestrians and bicyclists, all in a balanced environment that is safe, comfortable, and convenient for everyone.

Although most people commute to campus by taking transit or driving, everyone becomes a pedestrian during the final segment of their trip. Pedestrians enter the campus from transit stops, curbside drop-off areas, street parking, Parkmerced, and Stonestown Galleria. SF State is surrounded by auto-oriented roads that are challenging and unwelcoming for pedestrians or cyclists. High traffic speed and volume increase the potential for crashes. The wide roads and intersections are intended to allow free movement of vehicles, but they do not consider other users. To improve walkability to and from the campus, Future State 2035 recommends combined efforts improving street design, curb management, and nighttime lighting.

Currently, pedestrian paths on campus often do not follow clear or intuitive lines of travel, and paths lack visual connections to other parts of the campus. Many areas are poorly lit and not visible from the street or the campus, which reduces real and perceived safety. Pedestrian paths should provide direct, accessible ways for people to travel short distances, which is a challenge on a campus with extreme variations in topography.

Future State 2035 identifies primary and secondary pedestrian routes as priority pathways to offer high-quality experiences for all users. This means the pathways must be accessibly connected with major destinations; must be visible, direct, and well lit with pedestrian-scale lighting; and must limit conflicts with vehicles and bikes. To achieve greater accessibility, the University can add bridges, path switchbacks, and vertical circulation to ease the challenges of the topography.



### PEDESTRIAN FLOWS AND NIGHTTIME LIGHTING

Walking is the primary mode of movement for people on the campus. On a typical day more than 42,000 pedestrian trips take place between 8 a.m. and 6 p.m. As the campus grows in area and population, it will be more important to have direct, legible pathways linking academic buildings, residential areas, and other key destinations.

#### LEGEND

- Primary Pedestrian Flows
- Secondary Pedestrian Flows
- ☀ Priority Pedestrian Lighting Locations
- ⊗ Raised Crossing



### CAMPUS BICYCLE FACILITIES

The north-south campus pathways are likely to become busy corridors as the number of students and residential units grows. Future State 2035 proposes north-south bike paths adjacent to but separated from pedestrian paths, with design features that slow bicyclists near heavy pedestrian traffic in the Quad. Bicycle parking facilities at the edges of the Quad will encourage cyclists to park before entering pedestrian areas. Bikeshare will provide a flexible option for students, faculty, and staff who use bikes occasionally.

#### LEGEND

- ⋯ Class I (pedestrian / bike, shared)
- - - Class II (pedestrian / bike, segregated)
- Class IV (on-street, segregated)
- Pedestrian zone
- 🚲 Bike Parking
- 🚲 Bike share

## BICYCLE NETWORK

Only three percent of the SF State community commutes by bike, which is low for an urban university. This is caused by the lack of regional bike network connectivity, steep topography, disconnected poor-quality infrastructure such as bike routes and bike parking around campus, and the lack of wayfinding tools.

Challenges, such as gaps in the bicycle network and safety issues, affect both potential cyclists living near campus and people who could use bikes to connect to BART. Improvements needed around the campus include on-street bicycle lanes on Holloway Avenue (1) and a shared-use path on Lake Merced Boulevard (2). Working with stakeholders, principally the SF Municipal Transportation Agency, Stonestown, and Parkmerced, SF State can build, improve, and consolidate the bicycle network surrounding campus.

### LEGEND

#### SF State (proposed)

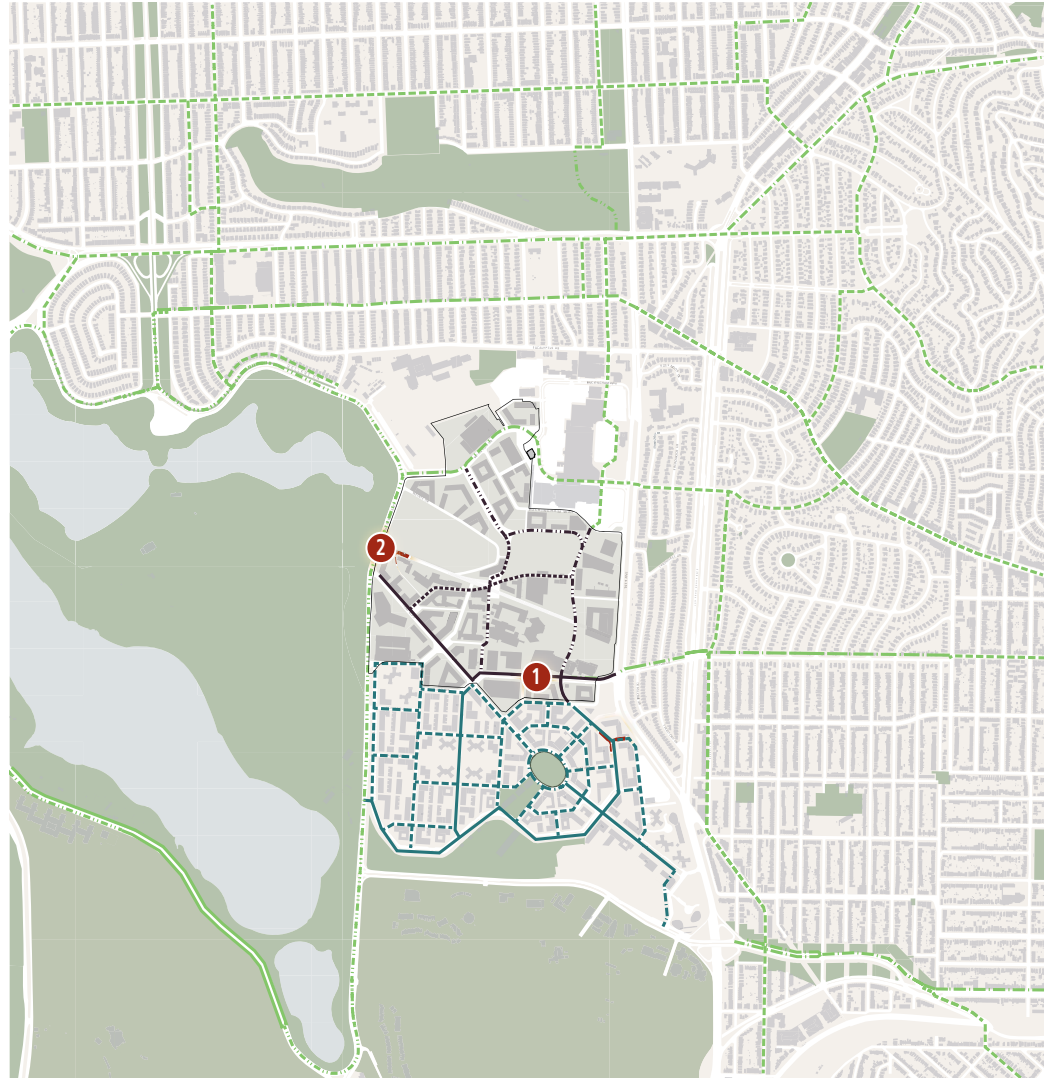
- Class I (pedestrian / bike, shared)
- Class II (pedestrian / bike, segregated)
- Class IV (on-street, segregated)

#### SFMTA (existing)

- Class I (pedestrian / bike, shared)
- Class II (pedestrian / bike, segregated)
- Class III (on-street, segregated)
- Class IV (on-street, segregated)

#### Parkmerced (planned)

- Class I (pedestrian / bike, shared)
- Class II (pedestrian / bike, segregated)
- Class III (on-street, segregated)
- Class IV (on-street, segregated)
- Campus Boundary



At the primary campus entries, it is particularly important to offer a high-quality pedestrian environment. Wayfinding signage and lighting should give a clear sense of arrival, and the path into the campus should be inviting. At spots where several modes of transportation converge, paths and signage should reinforce the movement hierarchy, showing that pedestrians have first priority over bikes, transit, and other vehicles. At major pathway intersections on the campus, a similar approach can slow speeds and minimize conflicts between bikes and pedestrians.

After the proposed restoration of the valley and removal of the parking structure, visibility across the campus will significantly improve. Introducing distinctive design for signage and intuitive pathways will create a more navigable, engaging pedestrian environment.

For internal pedestrian circulation and access to and from the campus, the following principles shape Future State 2035:

#### **Universal access.**

Improve transit accessibility, wayfinding, crossing conditions, and conditions of campus pathways, such as widths and pavement materials.

#### **Legibility and security**

Provide generous primary paths for large pedestrian flows and multiple secondary paths; improve the wayfinding system; and enhance nighttime lighting at intersections.

#### **Pedestrian safety**

Normalize (straighten) intersections; introduce safety islands and pedestrian bulbs at wide crossings such as on 19th Avenue and Lake Merced Boulevard; and reduce vehicle lanes to 11 feet wide.



## Bicycles

Making SF State a bicycling campus is a key goal of Future State 2035.

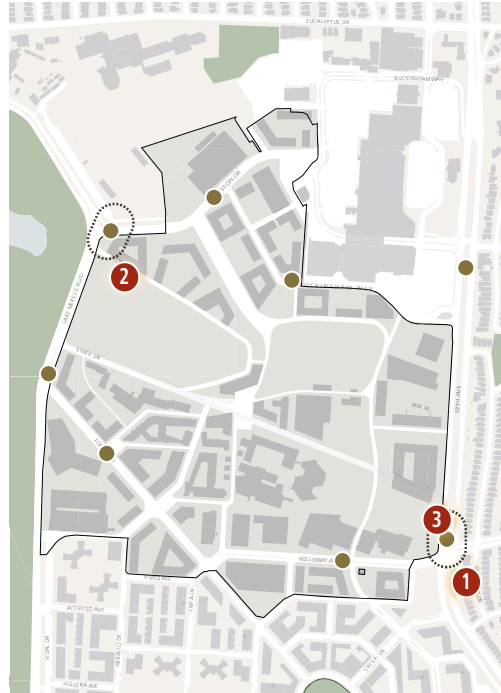
The recommended internal bicycle network hierarchy addresses the main regional connections to the campus and the projected demand from residential areas, while protecting pedestrians.

Currently, biking is discouraged by the limited number of designated bicycle routes and the inconvenient, inconspicuous, and unsecured bicycle parking. The large bike-free zone prevents cyclists from reaching key destinations in the Quad, and north-south campus routes are nonexistent. These internal campus routes will become more necessary as SF State expands the residential and 18-hour uses in University Park North and University Park South because students will need better links to adjacent neighborhoods and facilities.

## Transit

Transit is the mode of choice for more than 50 percent of SF State students, faculty, and staff. Transit that connects directly to the campus includes buses (Muni, SamTrans, and the SF State Shuttle) and light rail (Muni Metro M Line). BART is very important for regional commuting, and last-mile service from the campus to the Daly City and Balboa Park stations is provided by Muni buses and the SF State Shuttle.

Transit commuters face a range of challenges, including lack of information (wayfinding and fully integrated real-time vehicle tracking), unsafe pedestrian access to stops, and the lack of amenities such as shelters and seating at many stops.





### TRANSIT STOPS AND MOBILITY HUBS

Two transportation hubs on campus will consolidate transit stops, bicycle parking, and bikeshare stations: one at the entry plaza at Holloway and 19th Avenue **(1)** and one at Lake Merced Boulevard and Winston **(2)**.

To increase access to transit, Future State 2035 proposes transit stops at the most convenient spots for users, improved pedestrian access, and better conditions at stops.

Future State 2035 proposes relocating the Muni M Line tracks and station on the west side of 19th Avenue for a better connection with the campus **(3)**. This provides universal access, safer street crossings, adequate space for longer trains, and more platform space for people.

#### LEGEND

-  Transit Stops
-  Mobility Hubs






### PROPOSED SHUTTLE ROUTES

Making changes in operation of the SF State Shuttle will ensure that it meets growing demand, provides efficient and effective last-mile service from the Daly City BART station, and plays a meaningful role in circulation around the campus:

- Add enough vehicles to meet demand and decrease waiting times (shorten headways)
- Split service into two routes:
  - Direct, frequent shuttle between BART and the 19th Avenue transit hub
  - Two-way circulator route around campus with timed transfers to BART shuttle at the 19th Avenue transit hub

#### LEGEND

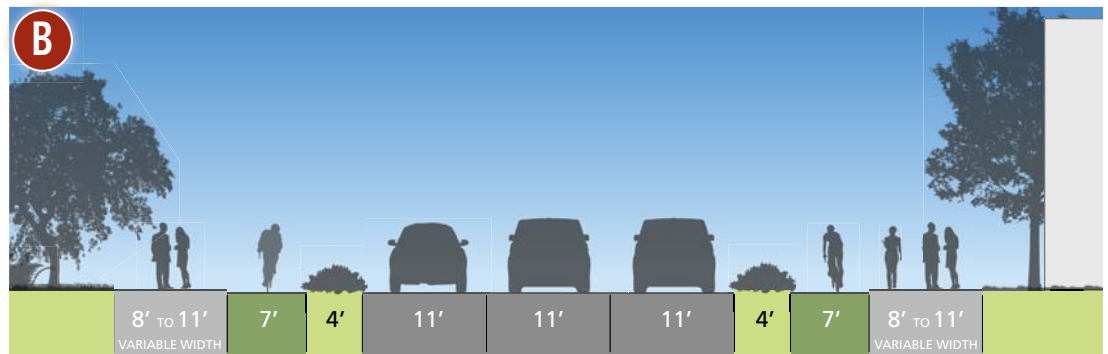
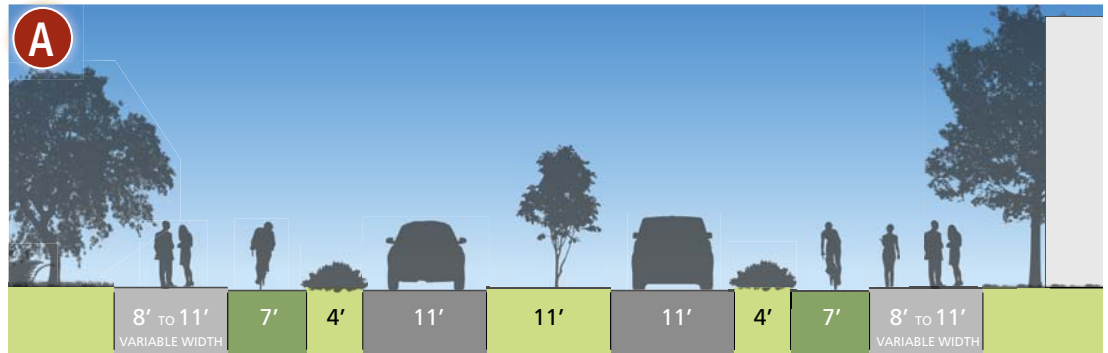
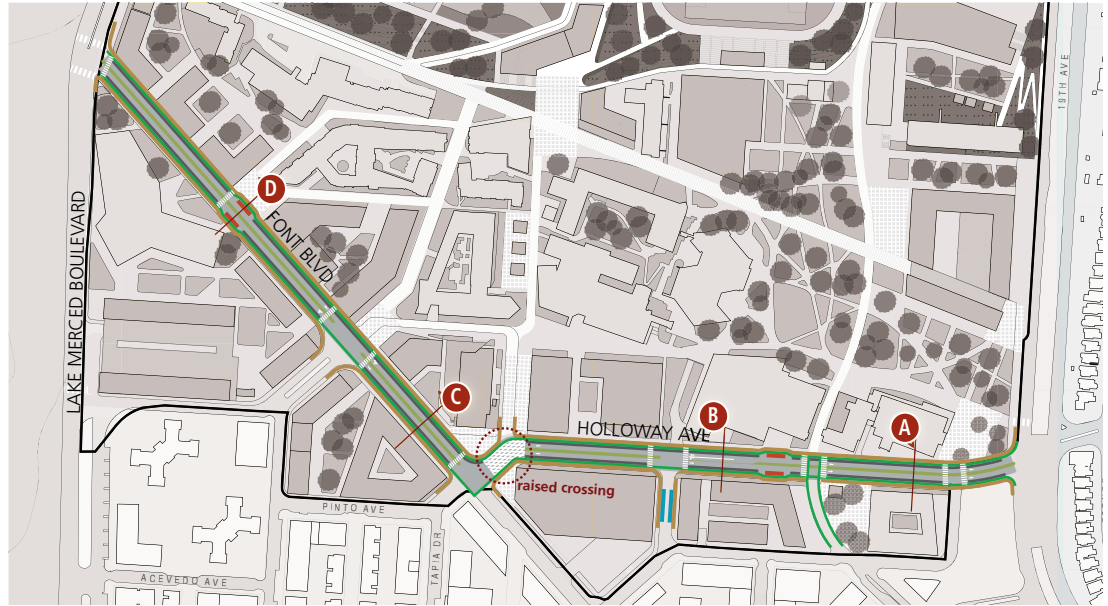
-  Circular Route (two-way)
-  Potential Expanded Route
-  Express (to Daly City)

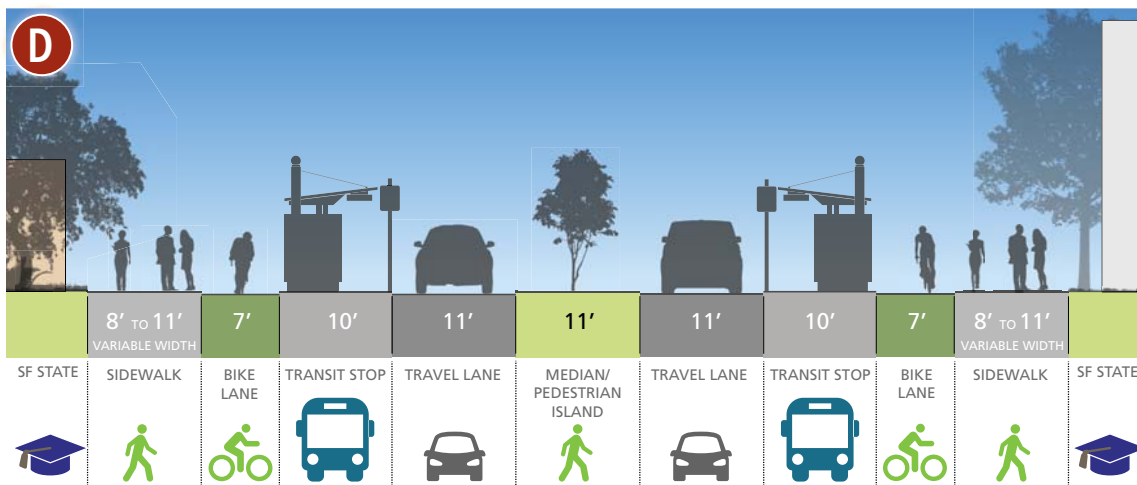
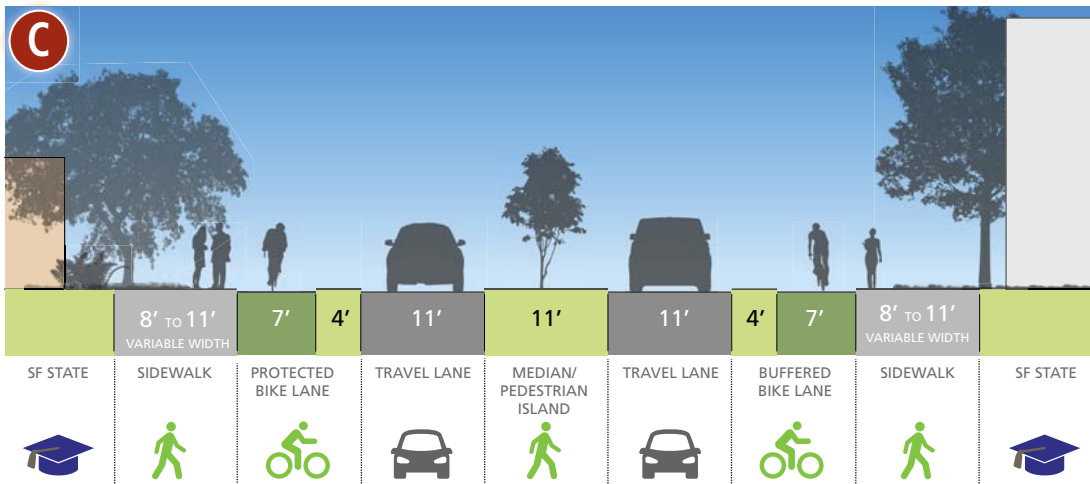
## HOLLOWAY AVENUE AND FONT BOULEVARD IMPROVEMENTS

Holloway and Font are important streets for access to the campus. Bike lanes and crosswalks exist, but the configurations do not provide safe space for pedestrians and cyclists. This is because of competition for curb space by vehicles parking or making pick-ups and drop-offs, and because of the lack of signal-controlled pedestrian crossings.

Future State 2035 proposes:

- Adding protected bike lanes
- Realigning Cardenas Avenue to make a seamless connection for the north-south bike lane
- Eliminating street parking
- Moving drop-offs and pick-ups to side streets to eliminate conflicts with the bike lane
- Creating defined bus stops
- Reducing vehicle travel lanes to 11 feet wide
- Reconfiguring lanes with one lane per direction, and a left turn only at the Serrano Drive intersection
- Widening medians so they are protected pedestrian islands, especially at crossings
- Eliminating the roundabout by redesigning the connection with Pinto Avenue and Tapia Drive
- Realigning the M Line tracks and platform at SF State to improve access to the station, and redesigning the intersection of 19th Avenue and Holloway
- Relocating the M Line station on the west side of 19th Avenue, allowing passengers to board at an expanded entry plaza without crossing the street. The proposed station will accommodate four-car trains to handle growth in ridership. This will require coordination with SFMTA and Parkmerced as well as significant funding.





SFMTA has decided to proceed with the Parkmerced Development Agreement baseline option that maintains the M Line rail in the median on 19th Avenue and moves the station to the southwest corner of 19th Avenue and Holloway Avenue. SF State will continue to work with SFMTA and Parkmerced to optimize M Line safety and access for the University. (The SF State-proposed realignment of the M Line is discussed further in the section Complete Streets Design.)

The Gator Pass, funded by a student fee, is a transit benefit the University introduced in 2017. It offers free rides on Muni buses and Metro, and a 25 percent discount on rides to the Daly City BART Station. This is an example of how the University can engage its students and staff to develop sustainable transportation alternatives. But

the introduction of the Gator Pass is likely to increase riders during peak hours on services already at or near capacity, such as the M Line and the SF State Shuttle. The M Line platform at the SF State station is also at capacity, constrained on the narrow median of 19th Avenue, so passengers often get stuck between traffic lights.

Adequate design for all bus stop locations should include:

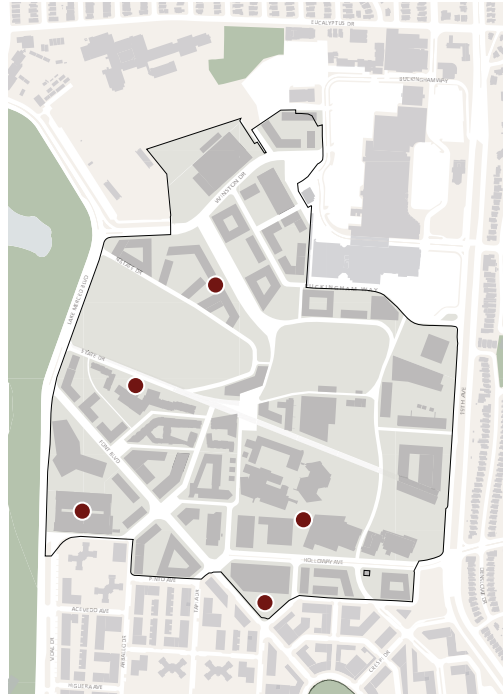
- Dedicated curb space for buses to stop
- Sheltered seating with space for wheelchair users
- Transit maps with information on routes that serve the stop
- Schedule of transit services for the stop and real-time information about arrivals

### LOADING AREAS

To adapt to the expansion of the campus and the closure of some streets, Future State 2035 proposes a combination of new and existing loading areas on periphery of campus, minimizing the impact of vehicles within the campus.

#### LEGEND

- Freight Loading Areas

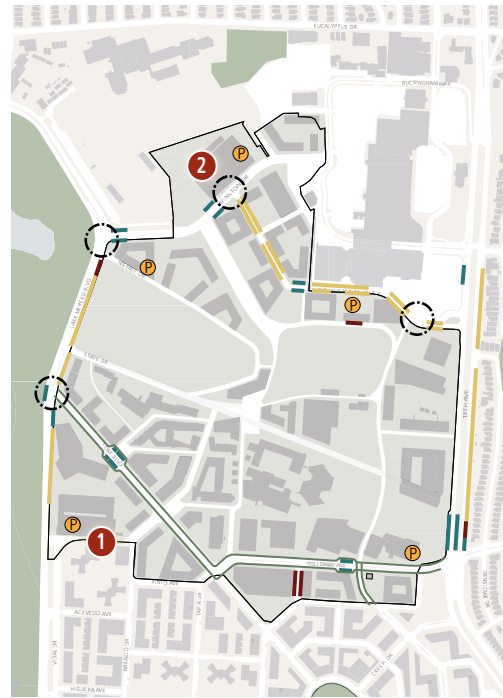


### PARKING AND PASSENGER LOADING

Future State 2035 proposes demolishing the central parking garage to transform the valley into open space and recreation uses. This parking will be replaced by structured parking on the periphery of campus, with one garage at Lake Merced Boulevard and Vidal Drive (1), and another north of Winston Drive near Lowell High School (2). These locations keep cars out of the campus interior and are slightly less convenient to most locations on campus, thus encouraging people to switch from drive-alone commutes to other modes of transportation. Accessible parking will be maintained close to the campus core, including on State Street, Font Boulevard, and 19th Avenue.

#### LEGEND

- Transit Stops
- Protected Bike Lane
- Pick-up / Drop-off
- On-street Parking
- Ⓟ On-campus Parking
- Street Daylighting



### Complete Streets

The road network surrounding the campus is auto-oriented, designed for high-speed traffic, which makes walking, biking, and using transit challenging and at times unsafe.

A Complete Streets approach emphasizes safety for all users and reallocates some road and curbside space to pedestrians, bikes, and transit.

These design strategies can improve mobility for all campus users:

- Calming traffic, by reducing lane widths and tightening intersection radii to slow vehicle turns
- Improving pedestrian safety, by creating high-visibility crosswalks on all sides of intersections, reducing traffic conflicts by narrowing crossing distances with pedestrian bulbs and median islands, and providing adequate street lighting
- Adding bicycle facilities, especially protected bike lanes
- Implementing curb management, by replacing some parking with bus stops, drop-off/pick-up areas, and curbside bike lanes
- Heightening legibility and predictability by simplifying intersections to avoid skewed and offset alignments, including intersections of pathways on campus, and by straightening roads to increase sight distance

Some locations require specific design solutions, including:

- Font Boulevard
- Holloway Avenue
- M Line station area at Holloway Avenue and 19th Avenue
- Lake Merced Boulevard crossings

Lake Merced Boulevard is a high-speed traffic road with three lanes per direction. The portion adjacent to the campus is listed in San Francisco’s High Injury Network because of its history of injuries and fatalities. Students and staff cross this street on bicycle and foot to reach Lake Merced and the path around it. SF State will work with SFMTA and stakeholders to improve the design of this road, addressing:

- Crossings, with crosswalks at every intersection leg, longer pedestrian crossing times, pedestrian median islands, and adequate lighting
- Enhanced bicycle facilities, with separated bicycle lanes on the east side of roadway

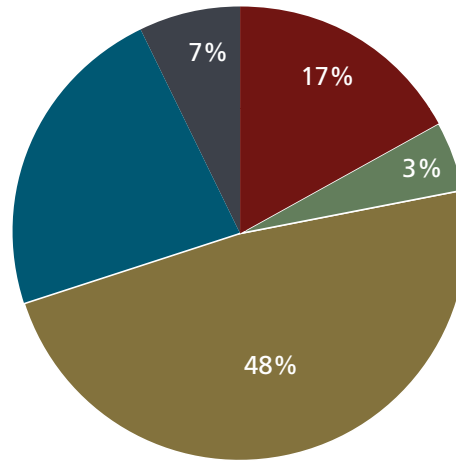
**Private Automobiles and Transportation Network Companies**

Slightly more than 20 percent of commuters at SF State now arrive on campus by using single-occupancy vehicles, with most entering or exiting the campus on Holloway Avenue or Lake Merced Boulevard. A large portion of automobile commuters use free or metered street parking near campus. Convenient free parking encourages drive-alone commutes that contribute to congestion around the campus.

Other private options include carshare and transportation network companies (TNC) such as Uber and Lyft.

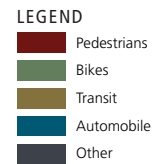
Future State 2035 proposes new lane configurations and redesign of road alignments to improve predictability, visibility, and safety at pedestrian crossings, safety along bicycle lanes, and traffic calming. Tapia Drive will be closed to traffic to expand the pedestrianized area of campus.

Parking and curb management are discussed below in Parking and Passenger Loading. Measures to reduce automobile trips to and from campus are in Transportation Demand Management.



**MODE OF ARRIVAL**

Because SF State is located in an auto-oriented part of the city, the University faces challenges in providing and promoting more sustainable transportation alternatives. As part of its MOU with the City and County of San Francisco, SF State conducts a transportation survey every three years. The 2018 results are shown in the figure. The survey revealed that 51 percent of students, faculty, and staff commute by transit, 23 percent drive alone, 5 percent use Transportation Network Companies (TNC) or taxis, 14 percent walk, 1 percent bike, and 5 percent use other modes.



**Service**

Small trucks drive into the campus to supply restaurants, coffee shops, and residential areas. Current loading areas accommodate delivery services such as the US Postal Service and United Parcel Service.

**Parking and Passenger Loading**

Parking is currently available off campus (street parking free or metered) and on campus (permit and pay-per-use). The on-campus parking is located primarily in the central parking garage that offers more than 2,000 stalls. In 2012, peak parking use was only 67 percent of all available campus parking spaces, demonstrating that supply is underused, despite very low permit costs for staff and faculty. Approximately 40 percent of drivers park free on streets near the campus.

Future parking demand will be shaped by the growing number of campus residents, by decreased availability of street parking, and possibly by shared automated vehicles. Parking demand in 2035 is likely to be slightly less than today.

New mobility services, such as Transportation Network Companies and Mobility as a Service, along emerging technology for autonomous vehicles will increase the need for curbside drop-offs and pick-ups. To meet this demand, Future State 2035 proposes passenger loading zones on side streets south of Holloway Avenue and other locations.

## Wayfinding

Wayfinding is a system of elements that help people navigate, explore, and enjoy spaces and places. Each semester, as new students arrive and returning students begin new class schedules and activities, they must all get oriented on the campus, find the best routes to classes and other destinations, and find out what is going on around the University. SF State is developing a clear, consistent, and user-centric wayfinding system to guide people to destinations and encourage exploration, regardless of how they arrive on campus.

The wayfinding strategy proposed for SF State will help people overcome the physical and perceptual barriers to exploring the campus and to understanding the campus layout. Currently, there are many entry points to the campus for people arriving by transit or on foot, but most lack a clear sense of arrival and orientation.

As pedestrians and cyclists venture out from the main Quad, the campus layout becomes less clear and navigation becomes more difficult because the challenging topography causes circuitous routes and limits sight lines.

At some intersections on the campus, multiple paths converge with no indication of where the paths lead. Building identification signs do not always align with building entrances, and the location of ADA entrances is not always clear. Cyclists have limited information about paths through the campus and where to park bikes. Overall, regulatory and information signs are inconsistent in placement and design. No central location offers students and visitors up-to-date information about events and activities.

In the future, some campus activities and uses will be located farther from the Quad, and a larger number of residential students will be live on the expanded campus. Therefore, students and staff will find it even more important to have a clear mental map of the campus.

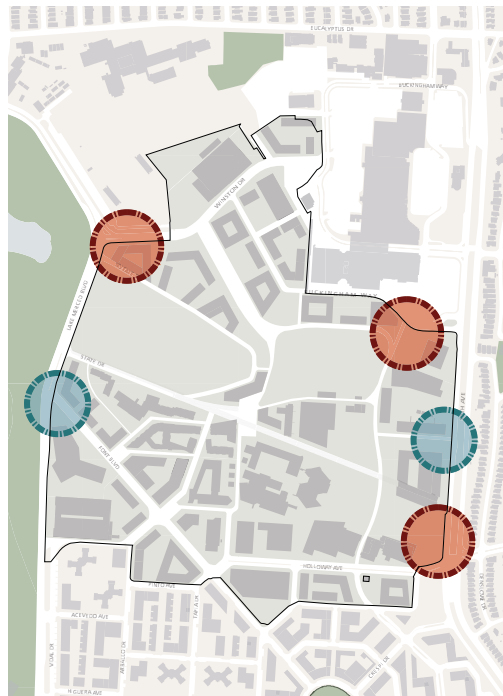
Campus neighborhoods can appear on all campus maps, with expanded focus areas for additional detail. Campus neighborhoods can appear on directional signs throughout the campus in clear, minimal messaging rather than posting long lists of destinations. Color-coding can be used on all directional signs to help people understand which neighborhood they are in.

To enhance the campus environment, SF State will establish campus entries providing information to help people orient themselves and find destinations. For cyclists, there should be clearly identified routes into and out of the campus and directions to the nearest bicycle parking. Identification, along with campus maps and directional signs, should be provided and visible from future transit stops.



A wayfinding plan for the campus is now in development. As projects in Future State 2035 are carried out over the next two decades, the sign system will need to be modified and updated regularly.

### WAYFINDING ENTRIES

Future State 2035 proposes primary and secondary campus entries supported by on-campus directional and map signage located at strategic decision points. This will create a wayfinding spine to help people understand the campus layout while not over-signing minor, less-traveled pathways. This system will allow people to explore with the confidence that they can return to a primary route. Information kiosks at major gathering points will provide information about events on campus. A set of direction and identification signs for parking will lead drivers quickly to the parking facility nearest their destination in order to minimize vehicle traffic circulating around campus looking for parking.



#### LEGEND

-  Primary Entryways
-  Secondary Entryways

## **TRANSPORTATION DEMAND MANAGEMENT**

Transportation Demand Management (TDM) is a set of strategies that discourages people from commuting by driving alone by providing or supporting alternatives. Strategies may include marketing transportation alternatives, providing new ones, offering subsidies, and adjusting pricing.

Future State 2035 aims to increase bicycle use and reduce drive-alone trips to promote a more sustainable campus. To achieve this, SF State will implement its own internal strategies and work with external stakeholders to implement strategies beyond its exclusive control.

### **Internal Strategies**

Strategies to encourage bike commuting include:

- Improved on-campus bicycle parking, including secure and weather-protected sites, and bike paths
- Last-mile bikeshare subsidies
- Subsidized bike commuter expenses

Strategies to make transit more attractive are:

- Transit gamification
- Mobile phone payment options for Gator Pass
- Increased shuttle capacity

Strategies that use parking regulation to discourage driving are:

- Restrictions on residential parking for students
- Higher parking prices or restrictions
- Daily parking charges
- Parking locations moved farther from the Quad

Other recommended strategies are:

- Increased housing on campus
- Full-time TDM Coordinator
- Improved mobility app and software platform, integrated with the SF State Shuttle
- Increased marketing of TDM Programs
- Preferential parking for carpoolers
- Dynamic Rideshare, such as Scoop and Waze
- More amenities located on campus
- Increased availability and convenience of car sharing

### **External Strategies**

Strategies to improve transportation external to the campus require SF State to coordinate with others. They include:

- Bike connections to BART stations
- Bikeshare
- Increase SF State population residing in Parkmerced
- Regulation and restriction of off-campus street parking
- Improved pedestrian safety and access around the campus
- A Transportation Management Association (TMA) with Parkmerced and Stonestown
- Scoot electric scooters
- Increased bus capacity from BART to campus
- Better real-time transit information
- Improved transit stop conditions and access
- Extended Gator Pass for discount on BART trips to Balboa Park
- Gator Pass for faculty and staff





# Theme 3 Fostering Conservation and Resiliency

## WATER AND ENERGY SCENARIOS

The following definitions apply to water and energy:

### Business-As-Usual Scenario

Describes improvements required to serve planned growth and meet basic code requirements. The Business-as-usual energy and water scenarios do not meet SF State goals and are included for comparison only.

### Baseline Scenario

The Baseline Scenarios describe the minimum recommended infrastructure improvements to serve the planned growth, and meet the sustainability and resilience goals of the vision plan.

### Goal Scenario

The scenarios achieve SFSU's sustainability and resilience goals to a greater degree, however with generally higher upfront costs and more challenging implementation pathways.

## Leaders in Sustainability

In their commitment to a sustainable future, San Francisco State University (SF State) and the California State University have set ambitious water and energy goals. To achieve these goals, Future State 2035 San Francisco State University Campus Vision plan (Future State 2035) presents recommendations to improve the campus infrastructure that can be carried out efficiently and economically. Specific strategic objectives and performance goals for each infrastructure system follow SF State's *Sustainable Development Framework (SDF)* and *Climate Action Plan (CAP)*.

Infrastructure systems include mechanical, electrical, information technology, water, wastewater, rain and stormwater, potable and fire water, and waste management. All of these require changes to accommodate the planned growth of the campus. The recommendations in this chapter will need more detailed study as SF State proceeds with implementing Future State 2035. Implementation strategies and infrastructure initiatives are addressed in Theme 4.

## Resilience

In this plan, resilience refers to creating adaptable infrastructure that enables students, faculty, staff, and visitors to remain on campus safely under stressed conditions. Resilient infrastructure allows the campus to minimize day-to-day disruptions caused by utility maintenance, to adjust to climate change, to meet evolving campus needs, and to minimize risk during emergencies. The proposed improvements create systems that are flexible and adaptable.

## Green Scholars

In the past, campus infrastructure was considered only ancillary to the primary role of the University as a place for scholarship. However, the sustainable infrastructure solutions proposed in Future State 2035 offer opportunities to integrate academic research and infrastructure design. For example, the central and district utility plants, wastewater treatment facility, and centralized stormwater facility can be living laboratories for SF State departments such as engineering and environmental studies.

## ENERGY MODEL AND ZERO APPROACH

SF State's commitment to climate-neutral operations is specified in the following goals:

- By 2020, reduce green house gas (GHG) emissions to 25 percent below the 1990 baseline
- By 2040, reduce GHG emissions to 40 percent below the 1990 baseline

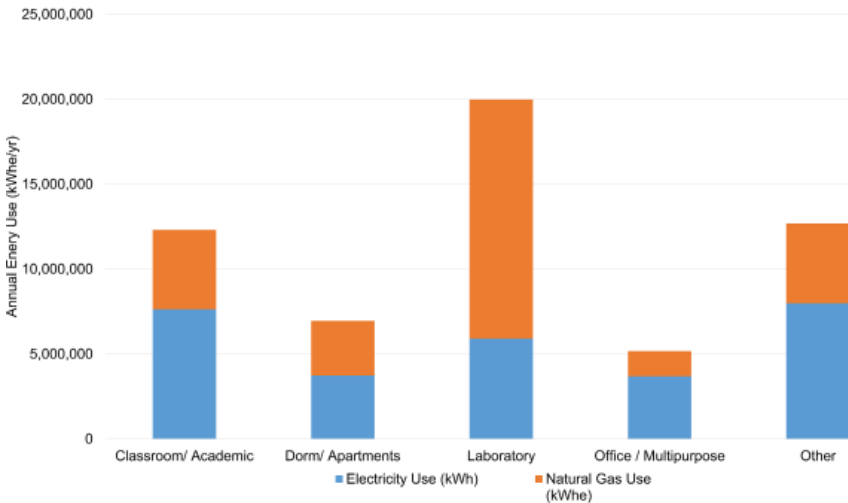
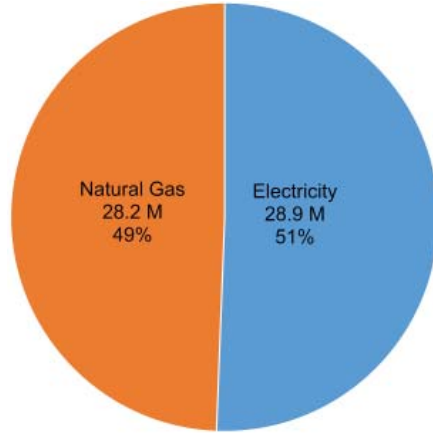
To accomplish these goals, SF State has targeted zero energy for the campus and for all new buildings. Existing buildings will undergo energy-efficiency retrofits to reduce energy consumption. In addition, the University plans to switch from natural-gas to all-electric building systems.

## Deep-Green Building Retrofits

Energy efficiency measure (EEM) upgrades for lighting, building envelopes, and HVAC systems can significantly reduce energy use in existing buildings. Upgrades considered at SF State include:

### EXISTING ANNUAL ENERGY USE (KWHE)

The campus currently uses 28 million kWhe (955 thousand therms) of natural gas and 29 million kWh of electricity, based on natural gas data and metered electricity use.



### ANNUAL ENERGY USE BY BUILDING TYPE

Laboratory and classroom buildings consume the majority of energy on campus. Existing energy use intensities (EUIs) range from approximately 40 for classroom/academic and core campus (Central Campus and Lower Valley and Upper Valley neighborhoods) residence halls to nearly 200 kBtu/sf/yr for laboratory buildings. These figures align with buildings at other universities with comparable climates. Most of the buildings on campus, aside from laboratories, use an average of 16-23 kBtu/sf/yr of natural gas.

- Lighting power reductions and controls: LED lighting with occupancy and daylighting controls
- Plug load reductions: Energy Star plug load equipment

#### HVAC system upgrades:

- Digital programmable thermostats
- Whole building zone direct digital controls (DDC)
- Variable frequency drive (VFD) on hot water pumps and Control to Differential Pressure Reset
- Windows interlocked with HVAC system
- Conversion from constant air volume (CAV) HVAC air system to variable air volume (VAV)

#### Building envelope upgrades:

- Upgraded wall and roof structures, including insulation systems
- Reduced infiltration by sealing leaky envelopes
- Window replacement

The practicality and economic feasibility of implementing EEM retrofits varies with specific buildings. A survey of retrofits applicable to each building on campus can be found in the Appendix separate from this document. As part of its evaluation, the University should consider the following strategies to streamline implementation:

- Prioritize retrofits in buildings with equipment nearing the end of useful life
- Bundle EEM retrofits to leverage holistic energy savings and improve economics (See Appendix)
- Time and phase construction to minimize classroom disruption
- Consider drivers beyond energy savings, including building modernization, enhanced controllability, improved occupant comfort, and reduced maintenance needs

### Energy Model – Future State 2035

At full buildout in 2035, the total floor area of the campus will nearly double. If the University pursues the Business-As-Usual Scenario to infrastructure, the larger campus will result in increased energy consumption and cost. To minimize the increase in energy use, this plan proposes to implement deep-green building retrofits, upgrade the central plant infrastructure, and employ highly efficient mechanical systems for new development. These strategies are described in more detail in the Mechanical Systems and Deep-Green Building Retrofits sections.

### Path to Zero Energy

Generating renewable energy on site is the first step to achieving the University's Zero Energy and carbon neutrality goals. A preliminary analysis of the capacity for photovoltaic (PV) arrays at SF State suggests that PV could produce approximately 23.5 million kWh/yr at full buildout. This equals approximately 57 percent of campus electricity use at full buildout for the Baseline Scenario and 28 million kWhe (955 thousand therms) of natural gas scenarios.

After SF State maximizes energy efficiency and develops on-site renewable energy, it can explore renewable energy power purchase agreements (PPAs) and carbon offsets to achieve carbon neutrality. The University can purchase carbon offsets to account for the carbon emissions associated

with electricity provided under the contract with Shell Energy North America, and purchase 100 percent renewable energy from PG&E Solar Choice.

**Baseline Scenario**

In the Baseline Scenario, SF State undertakes the minimum recommended upgrades, replacing the natural gas-fired boilers with air-source heat pumps that produce high-temperature hot water at a coefficient of performance (COP) of 2.5. This option allows existing building mechanical systems to remain. The estimated annual heating electricity use for this scenario is 12,000,000 KWh/yr (a 74 percent saving over the Business-As-Usual Scenario).

**Goal Scenario**

In the Goal Scenario, SF State replaces the natural gas-fired boilers with air-source heat pumps that produce low-temperature water even more efficiently at a COP of 3.5. The estimated annual electricity use for heating in the Goal Scenario is 9,400,000 KWh/yr (an additional 22 percent energy saving over the baseline scenario for a total of 96 percent saving over the Business-As-Usual Scenario).

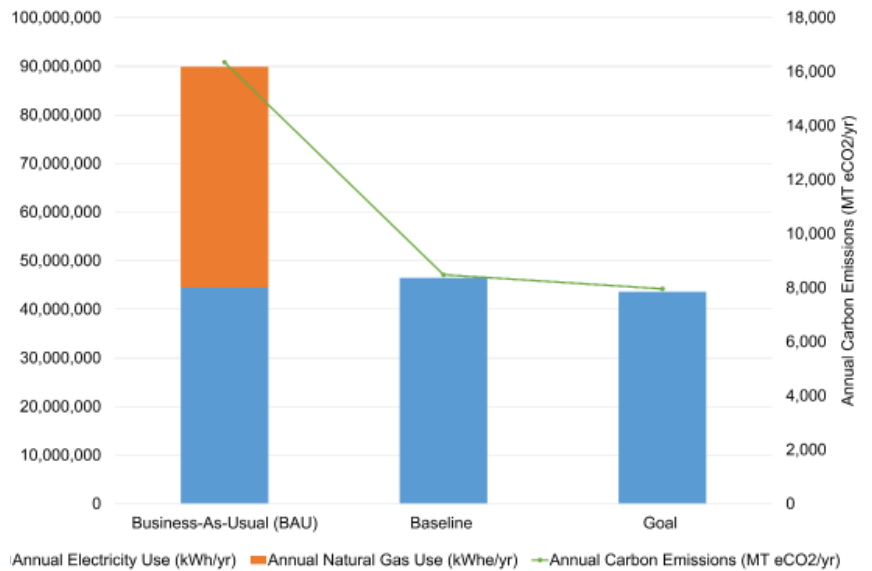
**MECHANICAL SYSTEMS**

**Existing**

The existing campus central plant houses four natural gas-fired boilers that heat water for distribution in the campus heating loop. The central plant also contains two natural gas-fired cogeneration systems, but these are inoperative. The campus buildings are controlled by an upgraded Building Management System (Automatic Controls Logic).

University Park North (UPN) (North Campus Neighborhood) uses traditional natural gas-fired heating hot-water boilers with hot-water convectors for room heat in all 14 block properties. University Park South (UPS) (South Campus Neighborhood) uses natural gas-fired wall furnaces and fan units for heating.

The central plant makes domestic hot water (DHW) with several plate-and-frame heat exchangers. Domestic hot water is now provided to all buildings in the core campus (Central Campus and the Upper Valley and Lower Valley neighborhoods), with the exception of residence halls. Each residence hall makes the large DHW load locally with natural gas-fired hot water boilers.



**ENERGY CONSUMPTION AND CARBON EMISSIONS AFTER FUTURE STATE 2035 FULL BUILDOUT**

The Business-As-Usual Scenario, which assumes continued use of natural gas-fired boilers or furnaces and small-scale building EEM upgrades, is shown for comparison. The Baseline and Goal scenarios show the results of an energy analysis that projects energy use and carbon emissions at full buildout. The two implement sustainability measures to varying degrees.

SF State uses a limited amount of mechanical cooling for environmental temperature control, predominantly for laboratories, IT support spaces, and gallery and archival spaces.

Additional information on the heating and cooling systems of existing buildings can be found in the Appendix.

**Proposed**

The current central hot-water plant has insufficient capacity for new construction proposed in the North Campus and South Campus neighborhoods. The proposed systems contribute to SF State’s goal of climate neutrality by targeting zero energy for the campus as a whole, including all-electric mechanical, electrical, and plumbing (MEP) systems for buildings. In addition, thermal cooling will be used only for select buildings, including apartments and the Science Building and Innovation and Leadership Center.

The hilly campus topography, as well as the need to phase improvements over time, drive a district approach for the proposed mechanical systems. Dividing the campus into topographic zones allows each district plant to be best served efficiently by its thermal loop.

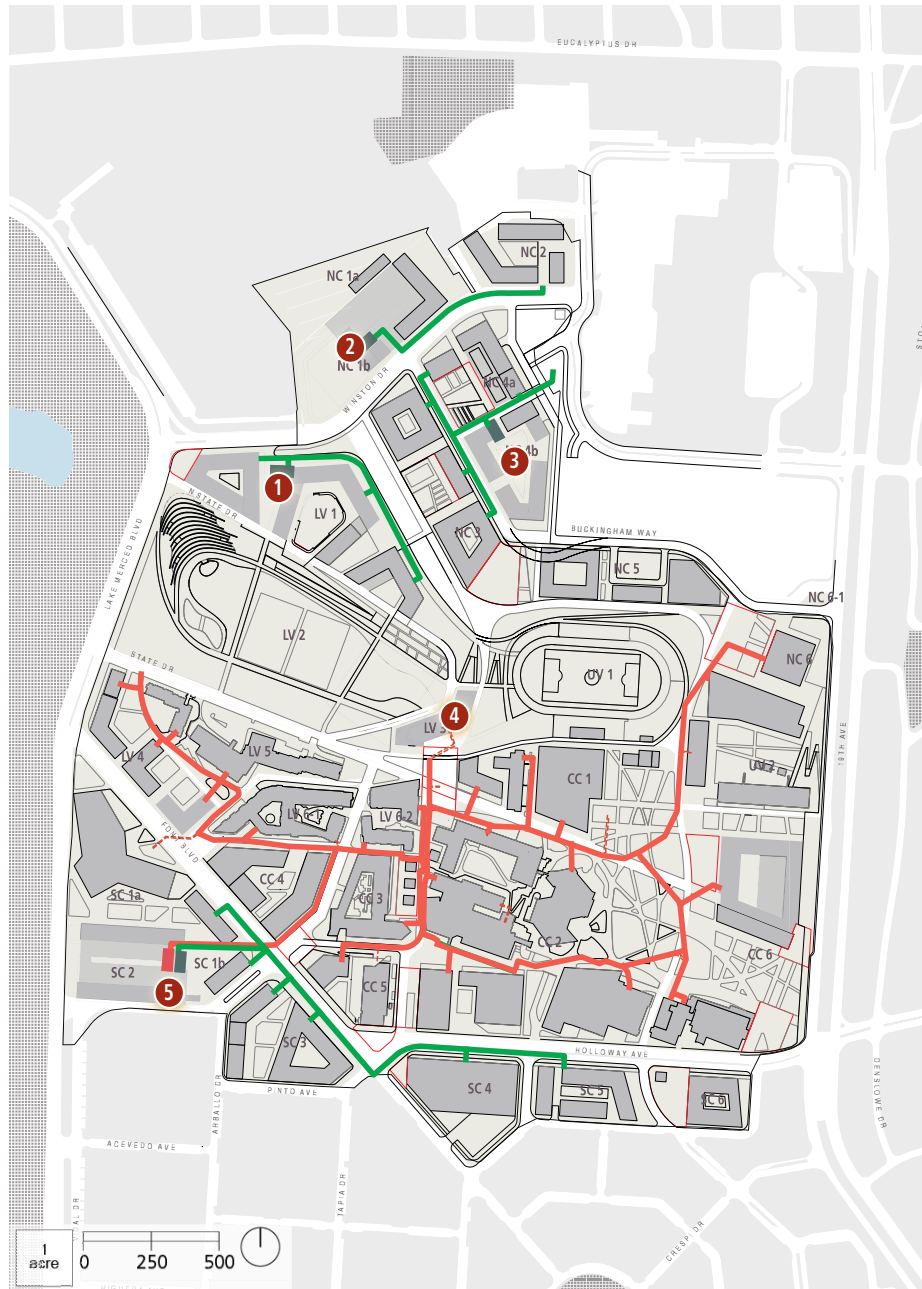
**PROPOSED MECHANICAL SYSTEMS**

Key improvements include:

- District Plant N-1 (ambient) (1)
- District Plant N-2 (ambient) (2)
- District Plant N-3 (ambient) (3)
- Central Plant (heating hot water) (4)
- District Plants S-1 (ambient) and C-2 (heating hot water) co-located at parking garage (5)

**LEGEND**

- Existing-Mechanical (HHW)
- Proposed-Mechanical (HHW)
- Proposed-Mechanical (Ambient)
- Central Utility Plant (HHW)
- District Plant (Ambient)
- Campus Boundary



**North Campus Neighborhood and South Campus Neighborhood**

For new construction in the North Campus and South Campus neighborhoods, Future State 2035 proposes energy-efficient ambient loops to provide heating for buildings via four district plants N-1, N-2, N-3, and S-1.

**Central Campus Neighborhood and Lower Valley and Upper Valley Neighborhood**

Most buildings on campus now use forced-air heating systems. The current design of these systems uses high-temperature hot water (180 deg F) produced at the central plant. Future State 2035 proposes two district plants to serve buildings in the Central Campus, Upper Valley, and Lower Valley. District plants C-1 and C-2 will produce hot water. District plant C-1 will be in the same location as the existing central plant, which will be phased out over time.

Although the University should consider the feasibility of a low-temperature hot-water conversion in detail during design and construction phases, the Goal Scenario requires mandatory, potentially disruptive, building retrofits to accommodate lower-temperature hot water and provide ventilation through dedicated outside air units. In addition, the existing natural gas-fired boilers in the central plant must run while the low-temperature air-source heat pumps are installed and the existing buildings are retrofitted. But the new district plant C-1 equipment cannot occupy the same footprint as the existing central plant. These constraints add significant cost and construction phasing challenges over the Baseline Scenario.

A more detailed explanation of the proposed technology and process is in the Appendix.

## ELECTRICAL SYSTEMS

### Existing

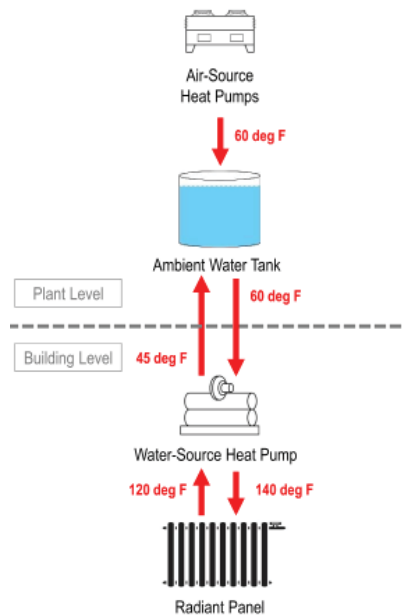
A single underground 12kV Pacific Gas and Electric (PG&E) service to the SF State substation feeds the majority of the core campus. University Park North (UPN) (North Campus Neighborhood) is fed by overhead PG&E lines to individual metered transformers at each building, and University Park South (UPS) (South Campus Neighborhood) is fed by underground PG&E lines to individual metered transformers at each building.

The current system has a number of limitations:

- Aside from the core campus system, which is on a single PG&E service meter, all other campus buildings are fed from individual PG&E service meters. This results in many PG&E services and meters for the campus to manage.
- Although some buildings have redundant feeders, the core campus (Central Campus and the Lower Valley and Upper Valley neighborhoods) distribution is configured radially and thus is not fully redundant. If one of the main medium-voltage lines is disrupted or needs maintenance, the rest of the system beyond that point is no longer in service. The overhead system serving

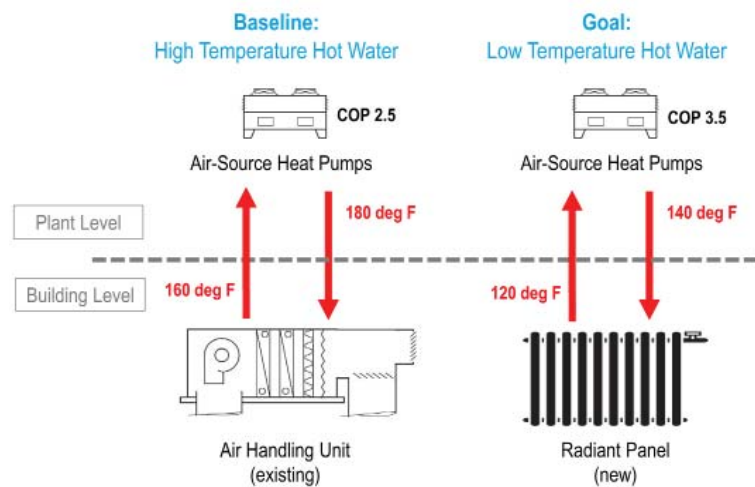
UPN is especially vulnerable to events such as storms and high winds that could cause the power lines to go down.

- The system has been built over decades of campus growth and is fed by a variety of voltages. This complexity makes maintaining and documenting systems difficult and confusing.
- Many of the feeders are very old and thus more susceptible to faults and failure.



### AMBIENT LOOP SCHEMATIC

At each district plant in the North Campus and South Campus neighborhoods, air-source heat pumps will create ambient-temperature water (60 deg F). The water is circulated to all buildings in the district, where building-level water-source heat pumps create low-temperature hot water (140 deg F) suitable for heating. The Appendix contains a detailed explanation of the technology and process.



### HOT WATER LOOP

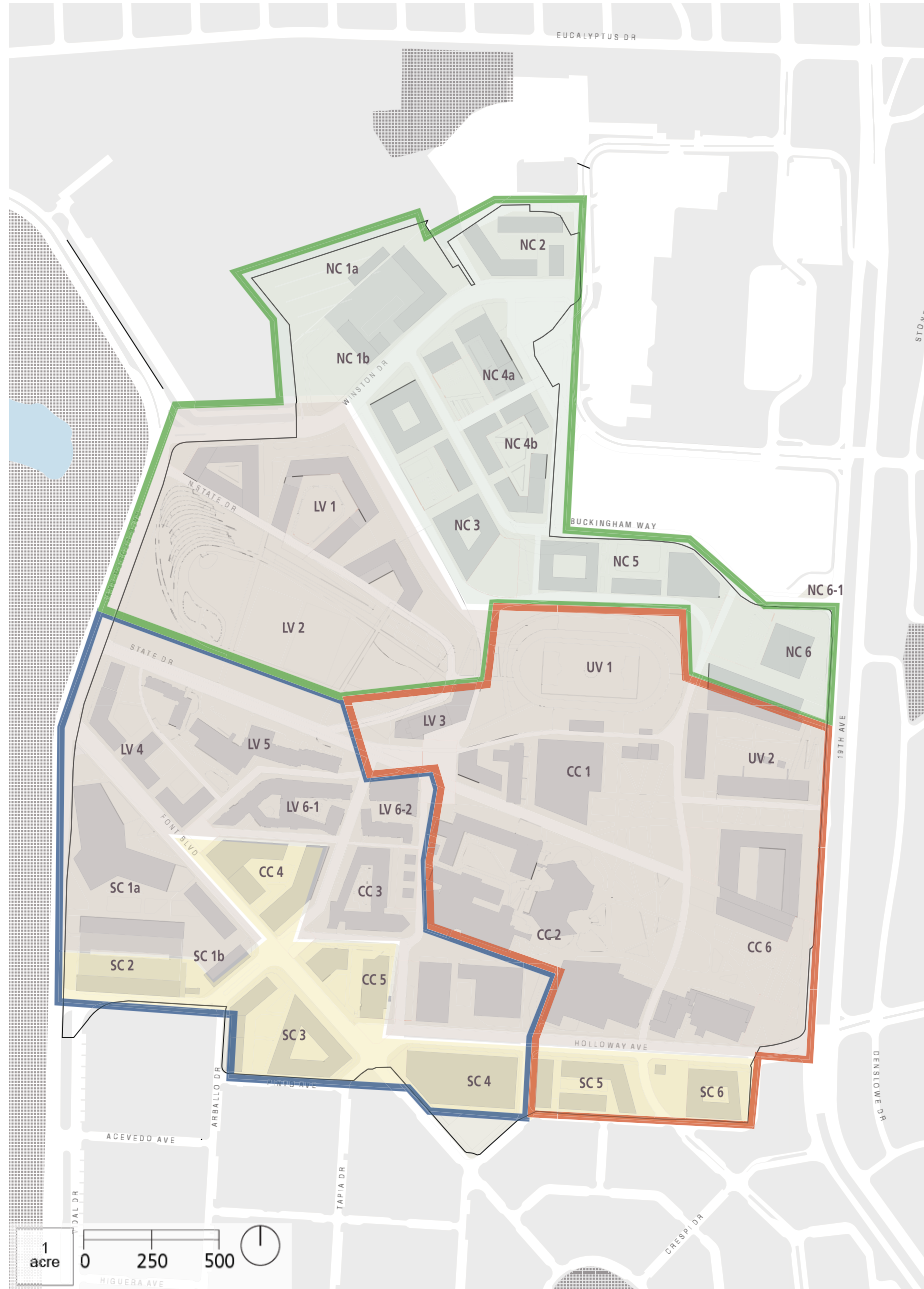
There are two scenarios for heating existing buildings in the Central Campus Neighborhood and a portion of the Lower Valley and Upper Valley Neighborhood: the Baseline Scenario (high-temperature hot water) and the Goal Scenario (low-temperature hot water). Both replace the existing natural gas-fired boilers at the central plant with electric air-source heat pumps, in alignment with the University carbon neutrality goals.

## EXISTING AND PROPOSED ELECTRICAL SERVICE AREAS

To expand the electrical system's capacity to serve new development and add redundancy and resilience, create three service areas by adding substations in the North Campus and South Campus neighborhoods

### LEGEND

- Proposed Central Campus
- Proposed North Campus
- Proposed South Campus
- Existing North Campus
- Existing Central Campus
- Existing South Campus
- Campus Boundary



### Proposed

In order to expand capacity to serve new development and add redundancy and resiliency, Future State 2035 proposes the following system improvements:

#### *District Substations*

Maintain the existing substation and install two new 10MVA 12kV substations, one in the North Campus Neighborhood radially and one in the South Campus Neighborhood. This will consolidate each campus district on a single service and PG&E meter.

### *PG&E Utility Feeder Redundancy*

Discuss with PG&E the feasibility of feeding the SF State substations from at least two PG&E substations.

### *Campus-level Redundancy*

Interconnect the three 12kV loops with selector switches to provide additional redundancy. In the event that one substation is out of commission, the other two can maintain power throughout the entire campus.



### PROPOSED ELECTRICAL SYSTEMS

Key improvements include:

- Connection to PG&E with San Francisco State University new PG&E maintenance hole with splice box **(1)**
- New 12KV PG&E service feeder **(2)**
- 10MVA, 12 KV switchboard **(3)**
- Replacement of overhead PG&E feeders with 12KV underground feeders **(4)**
- 4MW 20MWhr battery plant co-located with district plant **(5)**
- Six **(6)** 10MVA selector switches located at district plant C-1 **(6)**
- Existing substation and 12KV switchgear to remain **(7)**

### LEGEND

- Existing (PG & E)
- - - Existing (SFSU)
- Proposed (PG & E)
- Proposed (SFSU)
- Battery Plant
- Switch Gear
- Campus Boundary

#### Building-level Redundancy

Provide a 12kV loop from each of the three substations to serve all buildings in the district. If maintenance is needed or damage has occurred at any part of the loop, the loop can be switched to bypass the affected building while maintaining power throughout the system.

#### Medium-Voltage Upgrades

Replace and simplify the existing system as part of creating new 12kV loops. New feeders and conduit will be needed to complete loops for the reconfigured electrical system. Consolidate all feeders so that all new and existing medium-voltage feeders will be 500A 12kV and stepped down to 480V across the campus. As much as possible, reuse existing conduit pathways when installing new feeders, and maintain recently installed 12kV feeders. Abandon in place the conduits that become obsolete because of system reconfiguration.

### ***Renewable Energy***

A key step to achieving carbon neutrality is developing on-site renewable energy generation. SF State has completed a preliminary analysis of the capacity for photovoltaic (PV) arrays. To estimate renewable energy potential, the analysis assumes that PV will cover 30 percent of roof area of each existing building and 60 percent of roof area of each new building. This analysis suggests that PV can produce up to approximately 23.5 million kWh/yr, or about half of the projected demand at full buildout (see Energy Model).

Future State 2035 proposes a centralized battery plant in each of the three 12kV loops. The battery plant, in conjunction with the distributed PV and a battery control system, will be a microgrid for each loop. The microgrids contribute to the University's resilience and sustainability goals by providing:

- Battery backup power to each loop in the event of a utility power disruption or failure
- Peak-demand and time-of-use energy reduction and cost savings by using excess energy produced by the PV systems

### ***Emergency and Life Safety Power Systems***

Typically, battery systems must be segregated so they supply only normal or only code-required emergency loads. In this case, batteries are intended for nonemergency standby loads. Therefore, buildings should be designed with either emergency generators or emergency lighting inverters. Each building should be reviewed by the owner and the engineer of record to determine whether a generator is required. For buildings where emergency power is required by code, but only for emergency egress lighting, Future State 2035 recommends that emergency lighting be powered by a lighting inverter rather than a generator.

## **IT SYSTEMS**

### **Existing**

#### ***Data Center***

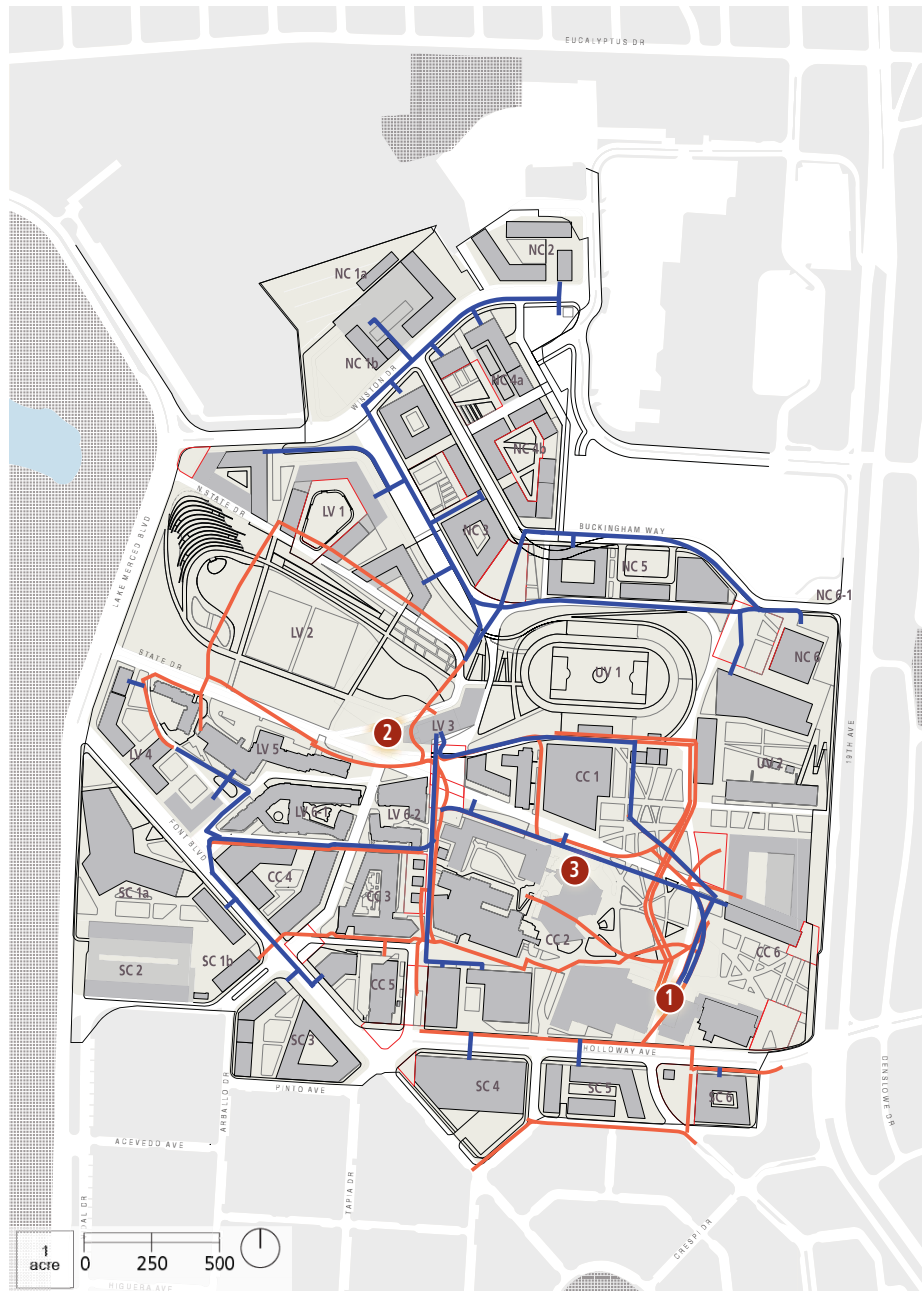
The main campus data center is now in the Main Distribution Center in the basement of the Administration Building. The center is on the lower level, below grade, making it vulnerable to flooding. The center has a raised floor environment to facilitate distributing air and routing cable. Two computer-room air-conditioner units cool the data center. Utility power comes in via two uninterruptable power supply units and is distributed to the server cabinets by a redundant StarLine-type overhead power busway system. Vertical power distribution units provide an organized method to plug in all network equipment in the cabinets. A backup generator outside the building provides emergency power.

#### ***Fiber and Copper Infrastructure***

The telecommunications infrastructure consists of single- and multi-mode fiber-optic and copper backbone cables distributed through an underground conduit and vault system. Multi-mode fiber delivers a faster communication signal than single-mode fiber. The system originates in the Main Distribution Center and is laid out in a star topology via underground manhole infrastructure. Manholes are interconnected in a loop topology throughout the campus. The campus currently has a copper cable infrastructure from the main point of entry (MPOE)/Voice Switch room to the main distribution center in each campus building via a manhole system. The voice signal is administered by an NEC PBX-based voice switch that will be replaced by a campus Unified Communications system by year 2020.

At strategic locations throughout the campus, fiber and copper breaks off the loop duct bank and delivers local area network (LAN) signal to main distribution centers in individual buildings. There is a residential MDC in the Village at Centennial Square. It extends network services to core residential buildings, as well as network service to University Park North buildings 1 through 6.





**PROPOSED IT SYSTEMS**

Key improvements include:

- Construction of a temporary, modular data center in the short- to mid-term, which is maintained until new data center is constructed
- Construct the new data center in the short- to mid-term, co-located with the Sustainability Center/District Plant C-1 (2)
- Provide approximately 288-strand, single-mode fiber-optic cable from the old data center to the new data center (3)

**LEGEND**

- Existing IT System To Remain
- Proposed IT System
- Campus Boundary

The remaining buildings in University Park North and all buildings in University Park South are currently served individually by local phone, Internet, and television companies, with no direct connection to University services or networks.

The University Housing, Dining, and Conference Services group (HDCSS) currently provides network, telephone, and television services (triple play) to residential units connected to the core campus. Network and television services (double play) are provided to units served individually by local providers.

**Proposed**

Future State 2035 proposes the following improvements to expand capacity to serve new development and address existing constraints.

**Data Center Relocation**

Permanently relocate the data center to a more central site on campus, elevated above ground level. The new data center should include redundant utility power feeds to keep it running in case of a substation failure. The current University Park South

units are close to the end of useful life and should not be reused. Install new units with a more efficient power loss on the inverter.

To facilitate relocation of the data center, temporarily lease a modular data center and connect it to the existing University Park South units adjacent to the existing data center.

#### **Fiber Infrastructure**

Continue to install single-mode fiber-optic cable to existing and new buildings built on campus. Install multi-mode fiber-optic cable to support specific activities and devices on the campus.

#### **Copper Infrastructure**

Convert the copper-based voice system to a voice-over-Internet protocol (VoIP) system in alignment with the Campus Unified Communications System. By converting to a VoIP system, the campus will eliminate the need for at least 90 percent of the existing copper cable system. The backbone copper cable can be removed from each building to the MPOE/Voice switch room. Recycling this copper could offset some of the cost of the VoIP system. Removing the copper will also free up conduit space for new fiber services.

### **INTEGRATED WATER SYSTEMS**

The University's high-level goal, based on the *Climate Action Plan* and *Sustainable Development Framework*, is to "reduce to the greatest feasible extent the campus's demand for potable water through efficiency and conservation, and serving non-potable demands with recycled water." The integrated water systems proposed in Future State 2035 align with SF State's principles and sustainability goals. The following recommendations consider opportunities and risks at both the campus and regional water-management scales:

#### **Conservation**

As a first step, the University can reduce water use with efficient fixtures, appliances, and a climate-appropriate landscape. In addition, educational campaigns can promote changes in behavior.

#### **Fit-for-Purpose Water**

In the future, the University should match water quality to its end use. This reduces the amount of potable water imported and

reduces the energy used to treat water to excessively high standards.

#### **Ecological Water Flows**

To increase groundwater recharge, reduce flooding risk, and promote sustainable landscapes and habitats, the University is advised to create systems to restore natural hydrologic patterns and add to on-site infiltration.

#### **Resilience**

Designing resilient infrastructure will minimize simple day-to-day interruptions caused by utility maintenance and improvements.

#### **Education**

Implementing systems that are visible and provide active learning opportunities benefit SF State students, faculty, staff, and the public.

#### **Economic Drivers**

Implementing integrated water systems will offset rising water and sewer fees.

#### **Existing Water Demand**

The campus currently uses approximately 110 million gallons per year (MGY). Water used inside buildings accounts for approximately 83 percent, and irrigation accounts for the remaining 17 percent.

Potable water currently supplies the vast majority of campus demand. The University purchases potable water from the San Francisco Public Utilities Commission (SFPUC). There are no alternative sources of water on campus, aside from a small rainwater harvesting system at the Recycling Center that collects about 60,000 gallons of rainwater per year for irrigation adjacent to the building.

#### **Projected Water Demand**

Water demand at full campus buildout is projected to be 211 million gallons per year, nearly double current demand. This increase results primarily from the addition of residence halls and other housing. The plan to increase campus enrollment to 30,000 FTE students also contributes to rising demand.

#### **Building Demand**

Existing water-use data and projected campus growth are the two keys to estimating future water use in buildings.

Existing buildings will continue to be served entirely with potable water. Future State 2035 proposes no changes to existing building plumbing because of the high cost of replumbing. However, the water model assumes that water use in existing buildings can be reduced 15 percent by replacing outdated fixtures and appliances. SF State needs to audit existing buildings to identify opportunities for water efficiency retrofits.

All new buildings will include efficient fixtures and will be dual plumbed to allow non-potable water to be used to flush toilets. The *Sustainable Development Framework* specifies building efficiency requirements and assumptions for different building categories.

Calculations for water demand assume that housing and apartments are occupied year round, but student residence halls are occupied seasonally, similar to the current academic schedule.

**Irrigation Demand**

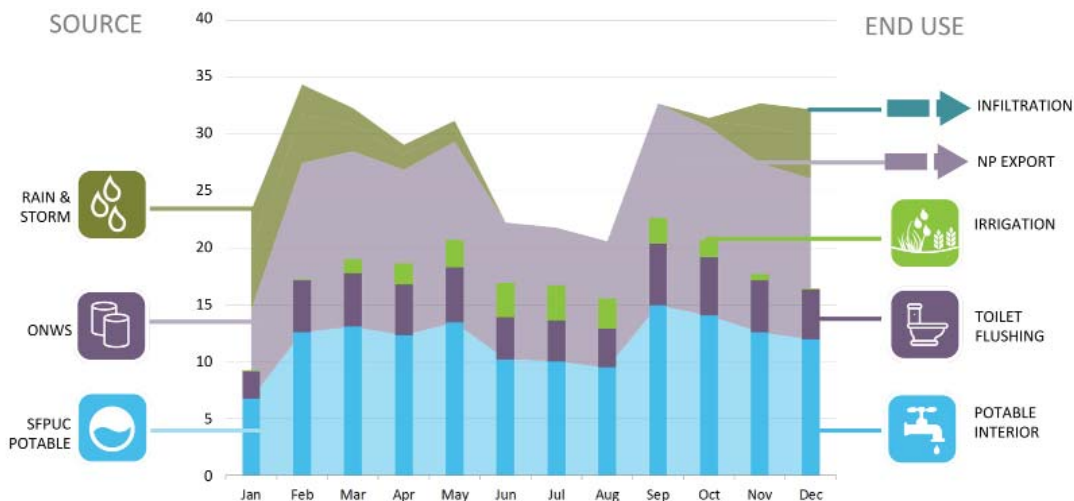
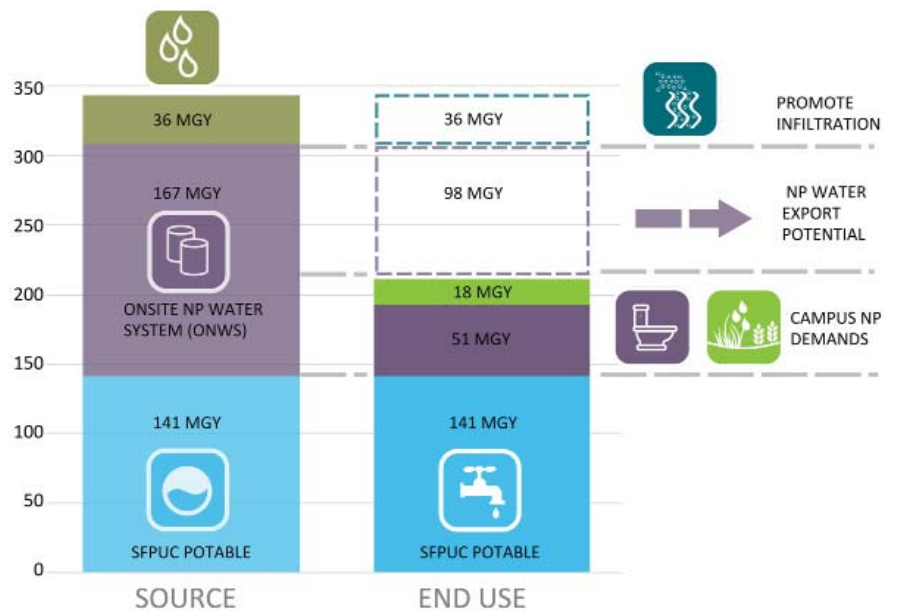
The model for predicting irrigation demand makes use of data on existing irrigation, local rainfall, and evapotranspiration. It assumes irrigation systems are efficient and planting is converted to drought-tolerant plants in alignment with the SF State's *Landscape Framework/Forest Management Plan*. Future State 2035 recommends that at full campus buildout, all campus irrigation systems use non-potable water. Existing irrigation systems will be converted over time in conjunction with the phased expansion of the potable water system.

**Path to Zero Water**

If SF State adopts a Business-As-Usual Scenario to water management, its potable water import would balloon from the current 110 MGY to a projected 211 MGY. The proposed integrated water approach leverages campus water resources to minimize imports with separate, sustainable, closed-loop systems that provide water for both human and environmental needs.

A) ANNUAL WATER BALANCE (ABOVE); B) SEASONAL WATER BALANCE (BELOW)

Annual demand for irrigation water is shown for an average rainfall year. In wet and dry years, the water model predicts that irrigation demand will vary about plus or minus 10 percent. The amount of runoff available for harvesting is much more sensitive to rainfall variation, and the model predicts that rainwater and stormwater runoff varies from approximately 30 MGY (dry) to 48 MGY (wet).



SEASONAL WATER SUPPLY AND DEMAND

### *Campus Wastewater*

At full buildout, the campus will generate an estimated 167 million gallons of wastewater per year. Future State 2035 proposes an on-campus non-potable water system (ONWS) to reclaim wastewater and then use it for toilet flushing and irrigation. Reclaiming wastewater on campus will reduce the burden on the City of San Francisco's combined sewer system.

Reclaimed wastewater is preferred over rainwater or stormwater harvesting as a non-potable source. This is because it is available consistently throughout the year. Demand for irrigation peaks during the dry months, and supply exceeds demand in the wet months. Furthermore, changing rainfall patterns and more frequent, prolonged droughts predicted for California may make dependency on rainwater and stormwater tenuous.

### *City Wastewater*

City wastewater flowing in large combined sewer mains running through the campus is an additional resource that could be leveraged to augment campus wastewater resources.

### *Rainwater and Stormwater*

In a typical rainfall year, the campus generates an estimated 36 million gallons of rainwater and stormwater runoff. A goal of Future State 2035 is to restore natural water flow patterns and increase retention of this water in the Lake Merced watershed. Increasing infiltration should contribute to recharge of the Westside Aquifer that underlies the campus and is a source for the SFPUC potable water system. In addition, managing stormwater on campus reduces wet weather flows to the City of San Francisco combined sewer system and Oceanside Wastewater Treatment Plant. For these reasons, Future State 2035 prioritizes infiltration of rainwater and stormwater, using green stormwater management throughout the campus.

The estimated amount of potable water imported per year, after using the on-campus sources described above, is estimated in the following scenarios.

### **Baseline Scenario**

At the minimum, non-potable water reclaimed on campus supplies all University irrigation and toilet-flushing demands (69 MGY) in this scenario. The remaining potable

water import is 141 MGY, or approximately 67 percent of the total 211 MGY campus demand. The stormwater management measures proposed for implementation across the campus could be considered to indirectly offset potable water import, but they do not directly reduce campus potable water consumption.

### **Goal Scenario**

SF State could explore a district solution to strive for Zero or Positive Water. The campus generates far more wastewater than it can use for irrigation and toilets. City wastewater is potentially available to augment supply to the on-site non-potable water system (ONWS). With these wastewater resources, the ONWS could be sized to treat more water than required to meet campus demand. The University could export treated non-potable water to neighboring developments such as Parkmerced, giving SF State the potential to offset potable water demand. The campus would need to treat and export approximately an additional 141 MGY to reach Zero Water at a district scale.

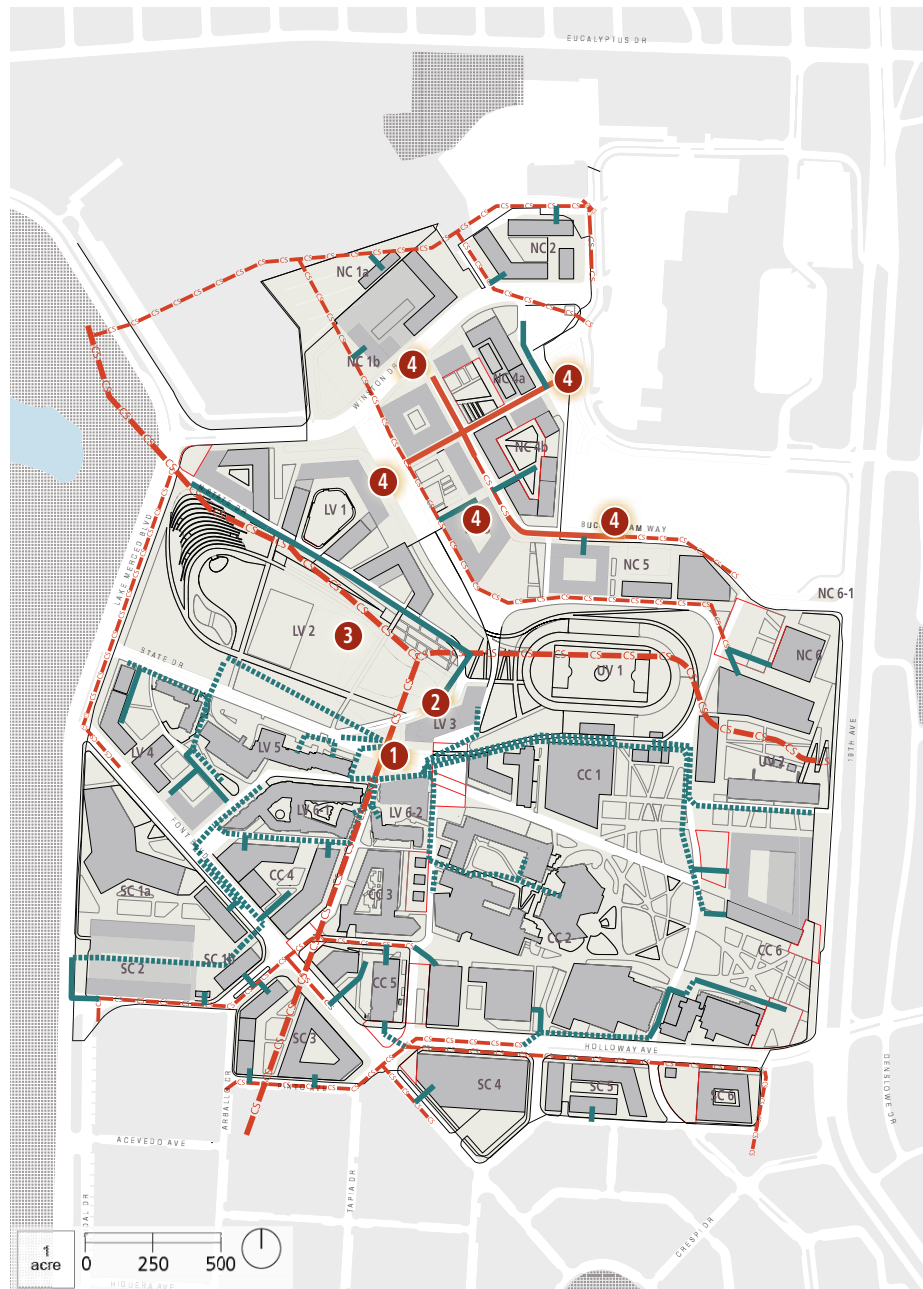
The wastewater, non-potable water, stormwater, potable, and fire water systems described in the following sections, reflect this integrated water approach.

## **WASTEWATER AND NON-POTABLE WATER SYSTEMS**

### **Existing**

Wastewater from all campus buildings collects in a gravity system with multiple points of connection to the City of San Francisco Public Utility Commission (SFPUC) combined sewer system (CSS). Two major public CSS trunk lines enter the campus from the east and west, converging near the middle of campus into a sewer tunnel that exits the campus near the intersection of Arballo Drive and Pinto Avenue. The city tunnel continues south, around Lake Merced to the city's West Side Pump Station, terminating at the Oceanside Wastewater Treatment Plant.

Buildings in the core campus (Central Campus and Upper Valley and Lower Valley neighborhoods) connect to a private, SF State-owned gravity sanitary sewer (SS) system that connects to the city's CSS system. The majority of campus stormwater is collected separately from sanitary sewer up to the points-of-connection to the city



**PROPOSED WASTEWATER SYSTEMS**

- Key elements include:
- Existing SF State system connection to the city combined sewer system (CSS) **(1)**
  - Proposed onsite non-potable water system (ONWS) co-located at District Plant C-1/ Sustainability Center **(2)**
  - Potential sewer mining on existing city-owned CSS where the city pipe is not too deep below grade **(3)**
  - Realign existing city-owned CSS with Buckingham Way realignment **(4)**

**LEGEND**

- (City) Existing Combined Sewer
- (SFSU) Existing Sanitary Sewer
- (City) Proposed Combined Sewer
- (SFSU) Proposed Sanitary Sewer
- Campus Boundary

CSS. Existing residential buildings within UPN and UPS usually connect directly at each building or cluster of buildings into the public CSS mains in adjacent right-of-ways.

**Proposed**

Future State 2035 proposes to keep the majority of the SF State gravity sewer network. New gravity sanitary sewer infrastructure will serve proposed buildings. The proposed buildings in the Central Campus and the Lower Valley and Upper Valley neighborhoods will connect to SF State’s private sanitary sewer system. In the North Campus and South Campus neighborhoods, proposed buildings or

clusters of buildings will connect to the city CSS in adjacent right-of-ways.

A proposed ONWS will meet non-potable water demands of approximately 69 MGY at full buildout. The University can explore two options described here to supply wastewater to the ONWS.

**SF State Wastewater**

Collecting campus wastewater would require either routing gravity mains to the proposed ONWS location or, if gravity conveyance is not feasible, installing a pump station to convey wastewater to the treatment plant.

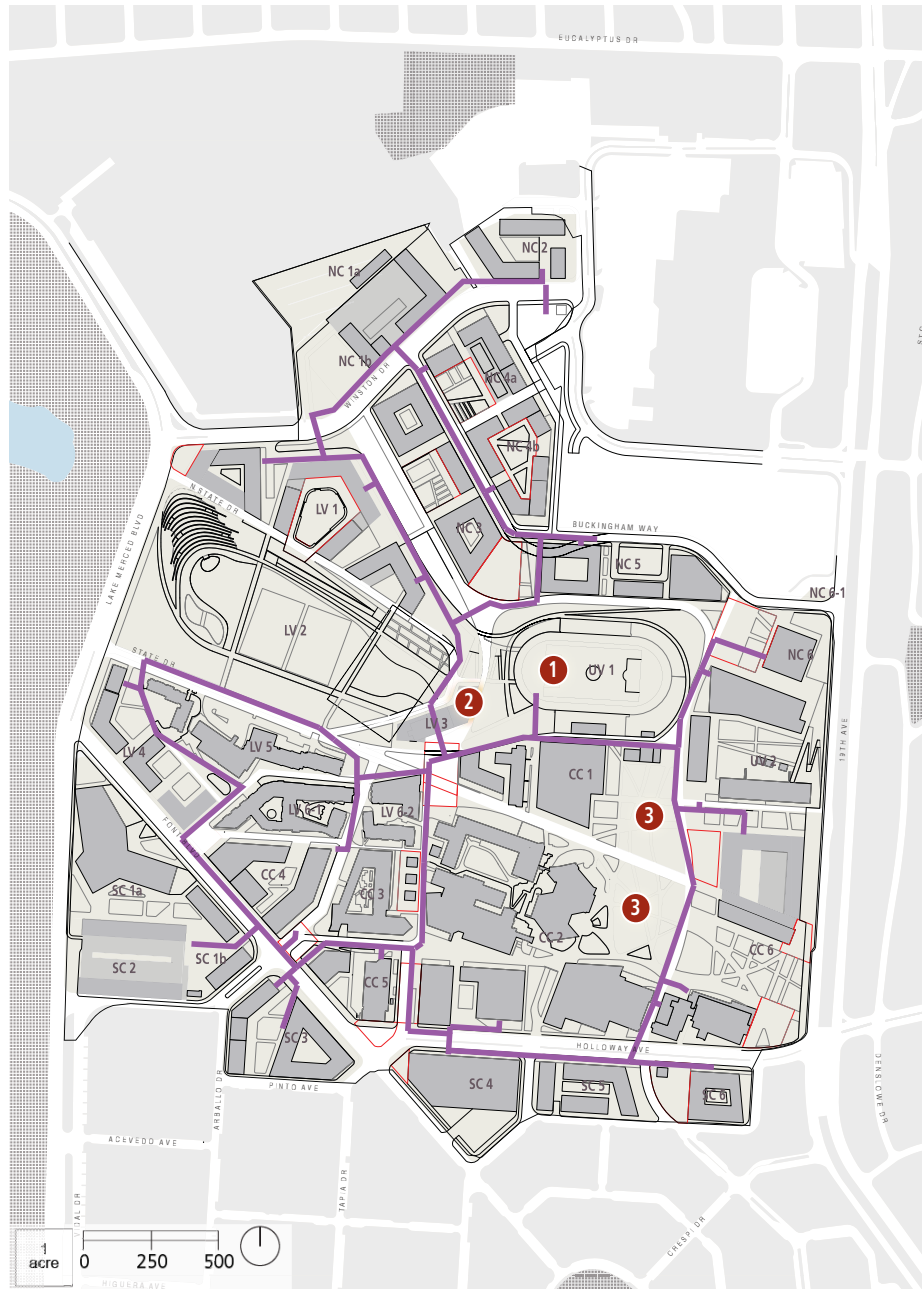
**PROPOSED NON-POTABLE WATER SYSTEM**

Key improvements include:

- Connection to Cox Stadium irrigation system in the Short-Term **(1)**
- Non-potable water storage and distribution pumps co-located at District Plant C-1/ Sustainability Center **(2)**
- Connection to Quad irrigation system in the Short-Term **(3)**

**LEGEND**

- Proposed Non-Potable Water (SFSU)
- Campus Boundary



**Sewer Mining**

The large City of San Francisco CSS mains that run through the campus present an opportunity to extract (“mine”) wastewater for reclamation at the proposed ONWS. Sewer mining on city mains is likely to be less costly than routing campus wastewater to the ONWS. In addition, the consistency of flow-rate and water quality from city CSS mains could provide operational benefits. The feasibility of sewer mining requires further study of the city system at the potential mining location, as well as

approval from the city. Initial conversations with SFPUC indicate that it is developing regulatory procedures for mining stations on city infrastructure.

Non-potable water produced at the ONWS will undergo treatment to tertiary standards for unrestricted use. To create system resilience, the University should store enough non-potable water to equal a minimum of one day of peak demand. Ensuring uninterrupted operation of non-potable water systems will require a back-

up connection with approved back-flow and air-gap protection. Both the ONWS and non-potable storage tanks can be phased in to meet increases in demand as buildout proceeds. The ONWS infrastructure is described in more detail in the District and Central Plant section.

Non-potable water distributed by a pressurized pipe network will flow to dual-plumbed buildings and irrigation systems. This distribution system requires a central pump station and may require booster pump systems at some buildings to achieve the required pressure and flow rates at the highest floor elevations on campus. The system may need to operate with multiple pressure zones given the varied topography of the campus.

The campus could explore the possibility of exporting non-potable water to surrounding developments as described in the integrated water Goal Scenario.

## **STORMWATER SYSTEMS**

### **Existing**

The campus covers approximately 151 acres, including 98 acres of impervious roofs, roadways, and hardscapes, and 53 acres of pervious landscaped areas. The majority of stormwater runoff from these surfaces flows into the city's combined sewer system.

Most stormwater runoff at SF State enters the piped network without any management of water quality or quantity. A few areas on campus have incorporated stormwater management features, including the rain garden adjacent to the Corporation Yard; the campus flagship rainwater harvesting system collecting 12,000 gallons of rainwater per year for irrigation; and the Academic (Science) Building Bioswale that captures, treats, and infiltrates approximately 60,000 gallons of rainwater per year from the Academic (Science) Building roof. Newer buildings on campus typically meet SFPUC stormwater management requirements. The Mashouf Wellness Center, for example, incorporates flow-thru planters and pervious pavements to meet stormwater retention requirements.

Runoff from approximately 12 acres of the lower valley, encompassing the tennis courts, Maloney Field, surrounding paths, and maintenance roads, flows into a dedicated storm drain pipe that sends water into Lake

Merced. This pipe is a Municipal Separate Sewer Storm System (MS4), meaning it collects only stormwater and is regulated by a National Pollutant Discharge Elimination System (NPDES) permit to prevent pollutants from being released into Lake Merced. The City of San Francisco is the permit holder. SF State has initiated a memorandum of understanding with the city that requires some best management practices (BMPs) to ensure that water quality requirements are being met.

### **Proposed**

The University will strive to have new buildings on campus meet or exceed the City of San Francisco Stormwater Ordinance and Stormwater Management Requirements (SMR). The majority of the campus lies within the city combined sewer area. New developments will be required to meet stormwater discharge reductions using green infrastructure methods, such as bioretention and permeable pavements. Specific requirements vary, depending on the existing and proposed site coverage.

Future State 2035 recommends combining decentralized (parcel-based) stormwater facilities and centralized facilities to meet campus-wide requirements. A new centralized bioretention facility in the lower valley will maximize treatment and infiltration of stormwater from adjacent watersheds and exceed regulatory requirements. By over-complying at the centralized facility, SF State can bank stormwater credits for future projects that have limited space or other site-specific constraints, such as zero lot line developments along Holloway Avenue or developments on podiums.

The centralized facility will also be a focal point that celebrates stormwater, ecology, and sustainability. Research opportunities on topics such as groundwater recharge and stormwater-quality management can be integrated into the design as well.

The central bioretention facility will require an overflow when large storms occur. Two options are identified for this overflow, and they should be explored in detail during design and implementation.

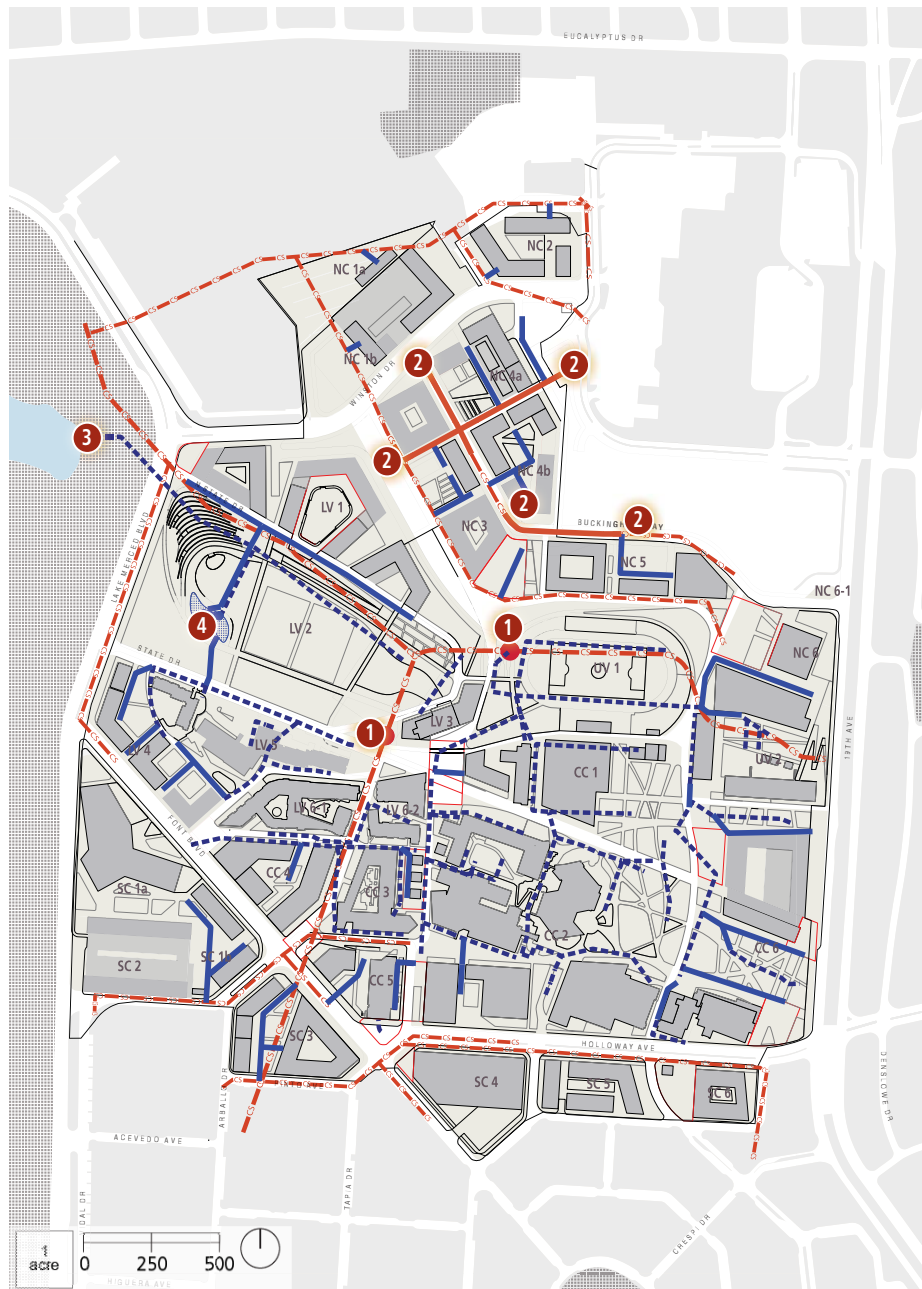
## PROPOSED STORMWATER SYSTEMS

Key elements include:

- Existing SF State system point of connection into city combined sewer system (CSS) **(1)**
- Realignment of the city CSS with realignment of Buckingham Way **(2)**
- Existing Municipal Separated Storm Sewer System (MS4) outfall into Lake Merced **(3)**
- Proposed centralized bioretention facility **(4)**

### LEGEND

- (City) Existing Combined Sewer
- (SFSU) Existing Storm Drain
- (City) Proposed Combined Sewer
- (SFSU) Proposed Storm Drain
- Bioretention
- Campus Boundary



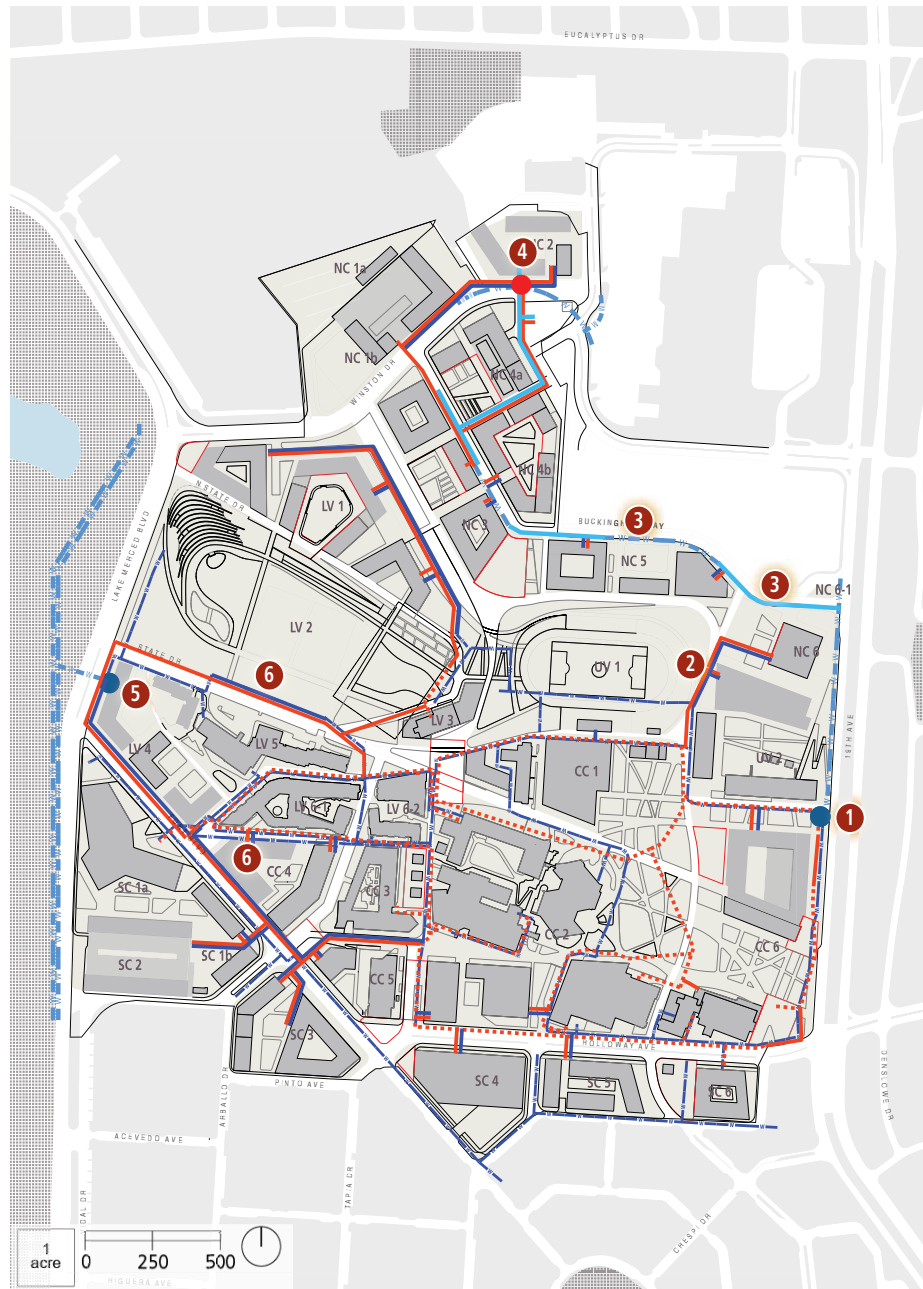
### Overflow to MS4

Previous plans highlight the opportunity to open the historic stream in the valley and restore natural flow into Lake Merced. Benefits of overflowing to the existing Lake Merced outfall include reducing wet weather discharge to the city sewer and potential recharge of the aquifer. This approach requires submitting an application to the city to expand the MS4 area. Initial meetings with SFPUC recognize the need for further study of Lake Merced hydraulics and potential impacts and benefits in order to assess the desirability of this alternative.

### Overflow to Combined Sewer

This option specifies a facility designed to overflow into the combined sewer system. This approach would not require special regulatory processes or approvals. Because the facility would overflow only during large storm events, the majority of benefits of retaining and infiltrating water on site for typical storm events can still be achieved.





## PROPOSED WATER SYSTEMS

Key elements include:

- Maintaining the existing campus water meter at the east side of the Central Campus Neighborhood **(1)**
- Realigning the city-owned water main with realignment of Buckingham Way **(2)**
- Extending separate fire water and potable water laterals from existing campus mains to new buildings **(3)**
- Adding new fire connection and meter to the city-owned water main **(4)**
- Maintaining South Campus Neighborhood water meter **(5)**
- Extend campus water and fire main to provide loop **(6)**

### LEGEND

- (City) Existing Water
- - - (SFSU) Existing Domestic Water
- · · (SFSU) Existing Fire Water
- (City) Proposed Water
- - - (SFSU) Proposed Domestic Water
- (SFSU) Proposed Fire Water
- Campus Water Meter
- Fire Connection & Meter to City-owned Water Main
- Campus Boundary

## POTABLE AND FIRE WATER SYSTEMS

### Existing

Implementing decentralized stormwater facilities will remain a requirement for development parcels without site-specific constraints. The University can determine whether development parcels must build their own stormwater facilities or whether they can use stormwater credits from the central facility. An impact fee will be charged if using stormwater credits.

The SF State water systems provide both domestic water (DW) and fire water (FW) to campus buildings. The University's private water systems serving the core campus (Central Campus and Upper Valley and Lower Valley neighborhoods) connect to SFPUC public water mains at two metered locations on 19th Avenue and Lake Merced Boulevard. A portion of the core campus is served by both the DW system, which also

### CENTRALIZED BIORETENTION

Manassas Park Elementary  
School, Charlottesville, VA



### DECENTRALIZED BIORETENTION

Bagby Street Reconstruction,  
Houston, TX



supplies irrigation demands, and a separate dedicated 8-12 inch fire water system. All hydrants and building fire services in the core campus connect to the dedicated FW system, with the exception of the parking garage, Maloney Field, Mary Park Hall, Mary Ward Hall, Seven Hills Center, and the Towers. Potable water from the SFPUC serves both the domestic and fire water systems. Both systems have interspersed isolation valves so sections of the system can be shut down for repairs and maintenance.

#### Proposed

The majority of the existing DW and FW systems will remain in place in the Central Campus and the Lower Valley and Upper Valley neighborhoods. New buildings in these neighborhoods will connect directly to these systems. The locations of some buildings will require rerouting University-owned water and fire mains.

Future State 2035 proposes to expand the dedicated FW system to all existing and new buildings and hydrants in the Central Campus and the Lower Valley and Upper Valley neighborhoods. It also proposes to expand the dedicated FW system across Font Street and Holloway Avenue to new buildings in the South Campus

Neighborhood. Extending the private campus DW system and fully separating the FW system will provide operational benefits for the University including simplified:

- Life and safety protocols and reducing costs because of the ability to perform maintenance on the potable water system without disrupting the fire protection system
- Operation and maintenance of campus water systems because SF State will be able to operate independently of the SFPUC water system for the full campus

The North Campus Neighborhood will remain on separate meters as currently configured because it requires a longer extension from the campus systems. The private SF State water main in Buckingham Way will be realigned with the proposed street realignments. A separated FW system will be in this area for the reasons noted above.

#### DISTRICT PLANTS

The proposed District Plant C-1 will be at the Sustainability Center, replacing the existing central plant building. The Sustainability Center will maintain portions of the existing central plant while providing space for new pumps, a recycled water tank, heat exchangers, and other equipment. The Sustainability Center will be a place for research and learning, where students and faculty can interact with the campus infrastructure systems.

The on-site non-potable water system (ONWS) will be located at the Sustainability Center. The treatment facility will include primary, secondary, tertiary treatment, and disinfection. Different treatment technologies will be evaluated during implementation. These technologies could include mechanical systems, such as a membrane bioreactor (MBR), or could be combined with biological treatment.

In general, hybrid biological systems require larger footprints because they include landscape-based biological treatment, but they are less energy intensive. Mechanical systems have smaller footprints but must be housed in the District Plant C-1, and they have higher energy-use intensity. The sloping promenade from the Central Campus to the valley integrates into the terraced building, which provides space for potential visible biological treatment.

## WASTE

### Existing

SF State is working toward a goal of zero waste by 2020, and it has been a leader in waste management among California State University campuses. The University manages waste in separate bins distributed throughout the campus for recycling, compost, and garbage. University publishes guidelines on its website for disposal of waste items, including special items such as batteries, E-waste, light bulbs, and hazardous waste. SF State grounds staff collects yard waste, which is picked up by Recology for composting.

The University collects and manages waste separately at academic buildings, the Cesar Chavez Student Center, and residential areas. These three areas collect waste streams internally, and Recology collects this for processing at the Pier 96 recycling facility, the Tunnel Avenue transfer station, or the Jepson Prairie composting facility.

In 2015, SF State generated approximately 4,400 tons of waste and achieved the following:

- Academic buildings and student center: 70 percent diversion
- Residential: 60 percent diversion
- Compostables: 13 percent of the total waste stream

Although total waste generation has increased slightly, the diversion rates have increased faster, meaning that the amount of waste sent to landfills declined from 2008 to 2015.

### Proposed

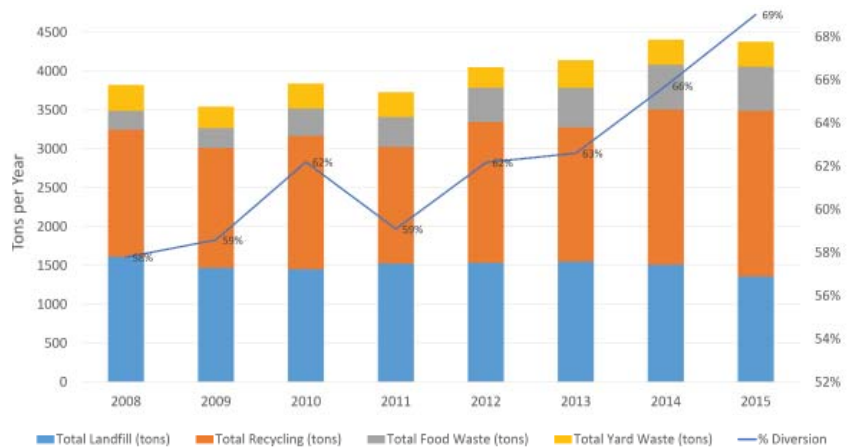
The SF State waste management goal stated in the SDF and CAP is to achieve 80 percent solid waste recycling by 2020 and to “promote environmental integrity through increased community engagement while decreasing resource use by ten percent.”

Projected campus growth will increase waste generation, and because the majority of waste generated on campus is from residential buildings, the planned increase in housing will drive up waste generation significantly. In addition, the current 60 percent diversion rate for residential buildings is lower than the 70 percent rate for academic buildings. If new residential buildings continue at low diversion rates, the overall campus rate could drop. If



### Emory Water Hub

The Emory University Water Hub is an example of a moving-bed biological reactor (MBBR) treatment system.



WASTE GENERATION BY TYPE AND DIVERSION RATES (2008-2015)

current trends continue, the projected waste generation at full campus buildout would increase to 6,800 to 10,200 tons, or 150 to 230 percent of 2015 numbers.

SF State plans to continue using a variety of sustainable waste management strategies to limit this impact. Because SF State has limited staff and resources, undertaking on-site management of campus-generated waste, such as waste to energy technologies, is not likely to occur in the near term. In addition, because Recology provides composting and resource recovery at the municipal scale, the life-cycle impact of on-campus waste management may not significantly exceed off-campus management.

Together, these factors suggest the University should continue to prioritize programs and policies that reduce waste, increase diversion, and promote campus engagement and education. Recommended strategies, which align with the SDF and CAP, include:

***Reduce Waste/Increase Diversion***

- Improve waste signage and availability of bins
- Achieve 100 percent compostable food containers by banning products that go to landfill
- Place compost bins in every restroom
- Replace two-bin systems with three-bin systems
- Conduct regular trash audits to identify areas for improvement
- Expand move-in and move-out waste programs, such as furniture and nonperishable food donation drives
- Reduce construction and demolition waste by selecting sustainable materials and promoting on-site reuse
- Add small-scale on-site waste management, such as organic composting for community gardens at residence halls

***Engagement and Education***

- Sponsor campus events that showcase integrated waste management
- Mount regular education campaigns on campus
- Conduct waste reduction competitions, for example, between residence halls
- Integrate campus waste management into education and research opportunities, for example, fostering behavioral and social sciences research on recycling and waste production habits

# Theme 4 Implementing Strategically

Future State 2035 San Francisco State University Campus Vision plan (Future State 2035) aids the University in furthering its strategic and academic goals through physical planning and daily decision-making about the campus environment. Its implementation-oriented approach is both visionary and pragmatic. Each project on the campus must build on the core values of the University, addressing program needs and contributing to the entirety of the campus environment. Proposed campus projects take into account national, state, and regional issues, and current case studies, as well as specific local concerns of cost, schedule, and logistics.

San Francisco State University's (SF State) strategic plan of 2015 establishes institutional priorities and identifies five core values: Courage, Life of the Mind, Equity, Community, and Resilience. These values underpin the Future State 2035 plan and are essential to successful implementation, sequencing, and outcomes

For example, the directive to transform SF State from a commuter campus to a residential one brings up the opportunity to apply University values to new residential projects. Such projects offer potential to do more than build basic structures, but to enhance learning, equity, collaboration, and resilience. This will make the housing an introduction to and a sustaining setting for the unique culture of SF State.

## **ADMINISTERING AND MONITORING THE PLAN**

Future State 2035 guides development planning and design processes for the University. All decisions about the physical form and ongoing management of the campus should be consistent with the plan and its frameworks. The plan is a living document, and some aspects will evolve. The overall vision, principles, and frameworks will to guide development and design for the campus following these implementation principles:

- Encourage opportunities for innovative research and learning practices
- Introduce new, high-quality green spaces and expand existing ones
- Organize growth strategically consistent with campus neighborhoods and design guidelines
- Promote the growth of a complete university district integrated with the surrounding community
- Address deferred maintenance of infrastructure
- Reduce life-cycle costs of operation, maintenance, and housekeeping
- Design flexible buildings that are less costly to modify during their lifetimes

## RECOMMENDATIONS

### Build Institutional Capacity

To implement Future State 2035 effectively, the University must develop a program of institutional capacity building. This will require the University's long-term commitment of time, oversight, and funding. The American Council on Education explains capacity building as follows: "Colleges and universities continually work to build capacity in both personnel and programs. This includes the continuing development of leaders who will facilitate the changes essential to deploying resources to increase productivity. The key tasks necessary to achieve an institution's mission with greater efficiency also involve the buy-in of the campus community. These include improving the skill sets of key personnel, developing strategies to effect change, and facilitation of discussions to achieve buy-in."

### Foster Community and Corporate Partnerships

SF State has many, long-standing collaborations, including work with the mayor's office and city agencies. As the University expanded its regional presence, it has developed relationships with other cities and counties, as well as with colleges and universities. To implement Future State 2035, the University will deepen existing relationships and increase partnerships with the private sector to generate additional research collaborations and third-party campus development. Thus, components of Future State 2035 may be implemented in partnership with private entities. These may range from partnerships with businesses to provide services (such as food service, retail operations, and housing), to partnerships for developing land and new buildings (potential market-oriented uses).

### Engage the Biotech Community

As a long-term initiative, the University's strategic plan prioritizes the continuous upgrade of "academic technology to ensure that classrooms and labs are consistent with or better than the industry standards of specific fields of study." SF State should build on its already strong relationship with the nearby biotech community in South San Francisco, potentially integrating these efforts with the planned Academic (Science) building and the Innovation and Leadership Center.

## FUNDING

For many years, public universities depended primarily on state government to fund capital projects for academic and residential facilities. Universities funded other campus facilities, such as student activity space, parking, and childcare buildings, by borrowing that was backed by fees for service.

Until the past decade, California universities developed capital plans with these funding practices in mind. However, since the recession beginning in 2007, state funding has diminished. With continuing pressure on California state universities to grow, the funding drop has led universities to take increasing interest in third-party funding.

Below is a list of capital financing options in addition to state funding.

### System-wide Revenue Bonds

Issued by the CSU Board of Trustees, the System-wide Revenue Bond Fund (SRB Fund) provides capital for construction of revenue-producing projects, including student residence and dining hall facilities, continuing education buildings, student unions, parking facilities, health facilities, and other auxiliary facilities at designated campuses as specified by the individual bond documents. The SRB Fund offers lower cost debt and greater flexibility to finance projects. Rather than relying on specific pledged revenue for specific debt obligations, the program pools several sources of revenue as the pledge for the related revenue-producing projects.

## **ADMINISTRATIVE LEADERSHIP ROLES AND RESPONSIBILITIES RELATED TO PLANNING**

### **Philanthropy**

#### ***University Advancement***

University Advancement instills pride in SF State's accomplishments, strengthens awareness and support among the University's key stakeholders, and builds a culture of philanthropy and support for SF State's academic, research, and public service missions. Efforts include strategic communications, government and community relations, development, alumni relations, athletics, and advancement services.

#### ***San Francisco State Foundation***

The San Francisco State Foundation focuses on philanthropy. The foundation's mission is to increase private funding for University programs, scholarships, and facilities, as well to increase the endowment, which is currently \$72 million. All SF State philanthropy, including alumni giving, falls under the purview of the foundation.

### **Third-Party Funding**

#### ***Public/Private and Public/Public Partnerships (P3)***

In these arrangements, a CSU campus collaborates with the private sector or a public institution such as the city. This type of partnership has funded recent projects in the CSU system ranging in cost from \$30 million to \$200 million. Housing development is the most common type of project financed in this way.

#### ***Power Purchase Agreement (PPA) and Solar Leases***

In these agreements, a university contracts service with providers to fund, install, own, and operate solar energy installations that sell carbon-free electricity to the campus for a specified period, reducing carbon emissions from electricity purchases without impacting the university's credit capacity.

### **President**

Campus presidents in the CSU system have numerous responsibilities as chief executive officers. They are the primary liaison between the university and the community and serve as the public face of the institution. Presidents maintain a close working relationship with the CSU system-wide office, reporting to the chancellor and representing the campus on the system-wide Executive Council. A campus president has authority and responsibility for oversight of all state funds held by the campus and all funds held in a fiduciary capacity.

### **President's Cabinet**

Members of the cabinet include the Provost and Vice President of Academic Affairs, Vice President of Administration and Finance and CFO, Vice President of University Advancement, Vice President of Student Affairs and Enrollment Management, University Counsel, Vice President of University Enterprises, Chief of Staff, and Deputy Chief of Staff. Their principal responsibility is to advise the president on major issues and events.

### **University Enterprises Division and the Office of Capital Planning, Design, and Construction (CPDC)**

University Enterprises focuses on creating the spaces and opportunities that support the University's mission. Because of the unique delivery strategies required to carry out an ambitious building program, the University launched this division to align its physical planning and development units with its real estate and entrepreneurial activities. As an division within University Enterprises, the following offices within CPDC provide management of programming, planning, architecture, engineering, and construction of new and remodeled capital projects in line with the university's mission:

### Planning and Design

Directs physical planning to carry out the University's strategic plan. The group leads a broad range of planning efforts, including capital planning and space analysis, land use and master planning, infrastructure planning, environmental planning and entitlements, and mobility and transportation planning. Planning and Design leads programming, sets development standards for all campus buildings and landscapes, and leads campus, landscape, building design and related efforts.

### Office of Sustainability

Ensures that all development projects realize campus and national goals in waste reduction, energy and water efficiency, and greenhouse gas emission reduction.

### Capital Project Management

Oversees all new construction and renovation on campus. The department provides guidance and assistance through the development process, and coordinates consultants and contractors from planning to occupancy. The department is responsible for ensuring code compliance and life safety for all projects.

### Real Estate Development (RED)

Addresses the development and implementation of capital projects through public/private partnerships (P3) and other

delivery and financing mechanisms. This includes conceiving of, developing, and managing the business and contractual aspects of the University's real estate development programs in alignment with physical planning, environmental, and financial goals.

### The University Corporation, San Francisco State (UCorp)

A not-for-profit public benefit corporation devoted to furthering the university's educational mission. Comprised of students, faculty, administrators, and leaders from the community, UCorp oversees commercial operations, administers educational grants and contracts, oversees the fiscal administration of numerous programs, and provides accounting services to campus auxiliaries.

### Facilities Services

As a department in Administration and Finance, Facilities Services provides smooth day-to-day operations of campus facilities and grounds as well as the central utilities. FS is responsible for maintaining the grounds and ensuring they meet high aesthetic and sustainability standards. The division values safety, comfort, and efficiency, and strives to respond quickly to routine maintenance issues that arise, as well as to building or campus emergencies.

### PROGRAM CHANGE BY INCREMENTS

Future State 2035 anticipates four increments of growth to achieve program goals by 2035.

The increments are:

- Short-Term
- Short- to Mid-Term
- Mid- to Long-Term
- Long-Term

The program table identifies the amount of space for each land use, along with the area gained by projects under construction, compared with area that will be added over time, leading to ultimate builtout in 2035. The measures vary depending on use: gross square footage (GSF) is used for new buildings other than housing; apartment units or student beds for residential buildings; and acreage for outdoor space.

		Program Change by Increments					Total	
		2018	Underway	Short-Term	Short- to Mid-Term	Mid- to Long-Term	Long-Term	Future State 2035
		(rounded)						
<b>Student Enrollment</b>	FTE <sup>1</sup>	25,000			27,500		30,000	30,000
<b>Uses</b>								
Academic	GSF <sup>2</sup>	1,500,000	75,000	140,000	255,000	(20,000)	(40,000)	1,910,000
Student Life and Support	GSF	645,000	45,000	125,000	45,000	300,000	125,000	1,290,000
Student Housing	Beds	3,500	370	2,800	1,450	2,600	1,900	12,600
Apartments	Units <sup>3</sup>	570	(10)	780	(160)	240	20	1,440
Shared Uses	GSF	35,000		(1,600)	530,000	30,000		590,000
Administration	GSF	200,000		(5,000)				195,000
Service Centers	GSF	155,000		(130,000)	40,000			70,000
Student Recreation (Indoor)	GSF	120,000						120,000
Student Recreation (Outdoor)	Acres	5.0		(2.0)	8.0			11.1
Athletics (Indoor)	GSF	160,000		10,000	150,000	(160,000)		160,000
Athletics (Outdoor)	Acres	15.0		(1.0)	(1.5)			12.5
Parking	Spaces	3,550		2,300	(2,300)	(300)	(350)	2,900
SOURCE		SF State Planning and Design, 2018						
NOTES		1 Full time equivalent student: Undergraduate FTE = 15 credit units per semester; graduate FTE = 12 student credit units per semester						
		2 Gross square feet						
		3 55-60 percent studios and one-bedroom units and 40-45 percent two- and three-bedroom units, with an average size of 1000 gsf per unit.						



## INCREMENTS

Future State 2035 proposes four groupings of initiatives, from short-term to long-term, over a 15-year period (2020 to 2035). Each grouping, or increment, includes a program of specific projects and related infrastructure improvements. The increments prioritize critical projects and a progression of land use and program relocations to allow construction of new and infill projects and site restorations. The phasing of improvements aims to maximize benefits to the campus in the short term, while maintaining continuity and resilience of campus operations and constructibility.

The implementation strategy responds to vision plan objectives as follows:

- Prioritizes lower-division housing, identified as the greatest housing need, early in the sequencing of projects
- Identifies critical academic projects that advance University curriculum, including projects identified in the Capital Improvement Plan
- Creates a balanced residential campus through incremental development of a variety of housing options
- Provides a balanced program of student services and support areas in tandem with the phased increases in on-campus residential population
- Coordinates phasing of projects with system-wide and project-specific infrastructure improvements to maximize efficiencies and achieve sustainability objectives
- Includes campus-wide improvements, such as open space and landscape, circulation and parking, and services, in coordination with building projects
- Partners with the private sector and/or a public institution in the implementation of projects such as housing
- Enters into power purchase agreements with energy service providers to fund, install, own, and operate needed infrastructure
- Integrates revenue-producing projects, such as a hotel and conference center, to support academic and other University activities

Future State 2035 allows flexibility so the University can adapt to evolving needs, opportunities, and changes in the community it serves. These changes might include unforeseen challenges or new opportunities for funding such as grants, partnerships, or philanthropic gifts. Therefore, the University will review Future State 2035 regularly to ensure that timing, projects, elements, and requirements in the plan remain consistent with the vision for SF State.

### Quick-Win Initiatives

Because the campus has had no substantial growth in new buildings or improvements in landscape for some time, it will be valuable to show immediate results. The following projects offer improvements that do not require excessive groundwork or fiscal allowances. They are projects that the University can complete initial phases early in the campus development process. These projects are simple, effective steps toward revitalization. Most are site interventions that improve the visibility and accessibility of the campus, make the campus feel safer, increase the use of open spaces, and create visual continuity and identity:

- Establish seating areas throughout the campus for study and lounging
- Replace street trees that are severely damaged
- Implement a site furnishings standards program, including consistent exterior lighting
- Fund the signage design phase of the wayfinding program; phase implementation of new building, pedestrian, bicycle, and vehicular signage
- Install new map kiosks
- Provide campus information boards for flyers, posters, and other information
- Install campus entrance markers
- Create and fund a public art program

### Short-Term

First, the plan emphasizes critical needs for student housing and improved academic space by completing the lower valley undergraduate housing and academic projects identified in the five-year Capital Improvement Plan. Short-term initiatives include new parking garages and athletics facilities to make way for restoration of the valley.

**SHORT-TERM INITIATIVES**

**Major Building Projects**

- Student advising and learning center (1)
- Academic building modernizations, including energy and water retrofits (2)
- Apartments, community center, and childcare (3)
- Cox Stadium renovation (4)
- North parking garage (5)
- South parking garage (6)

**Open Space**

- Relocated softball field (7)

**Water Systems**

- Centralized bioretention for rainwater and stormwater (Phase 2)
- Wastewater Treatment Plant (Phase 2)
- Non-potable water storage and distribution to buildings and irrigation

**Mechanical**

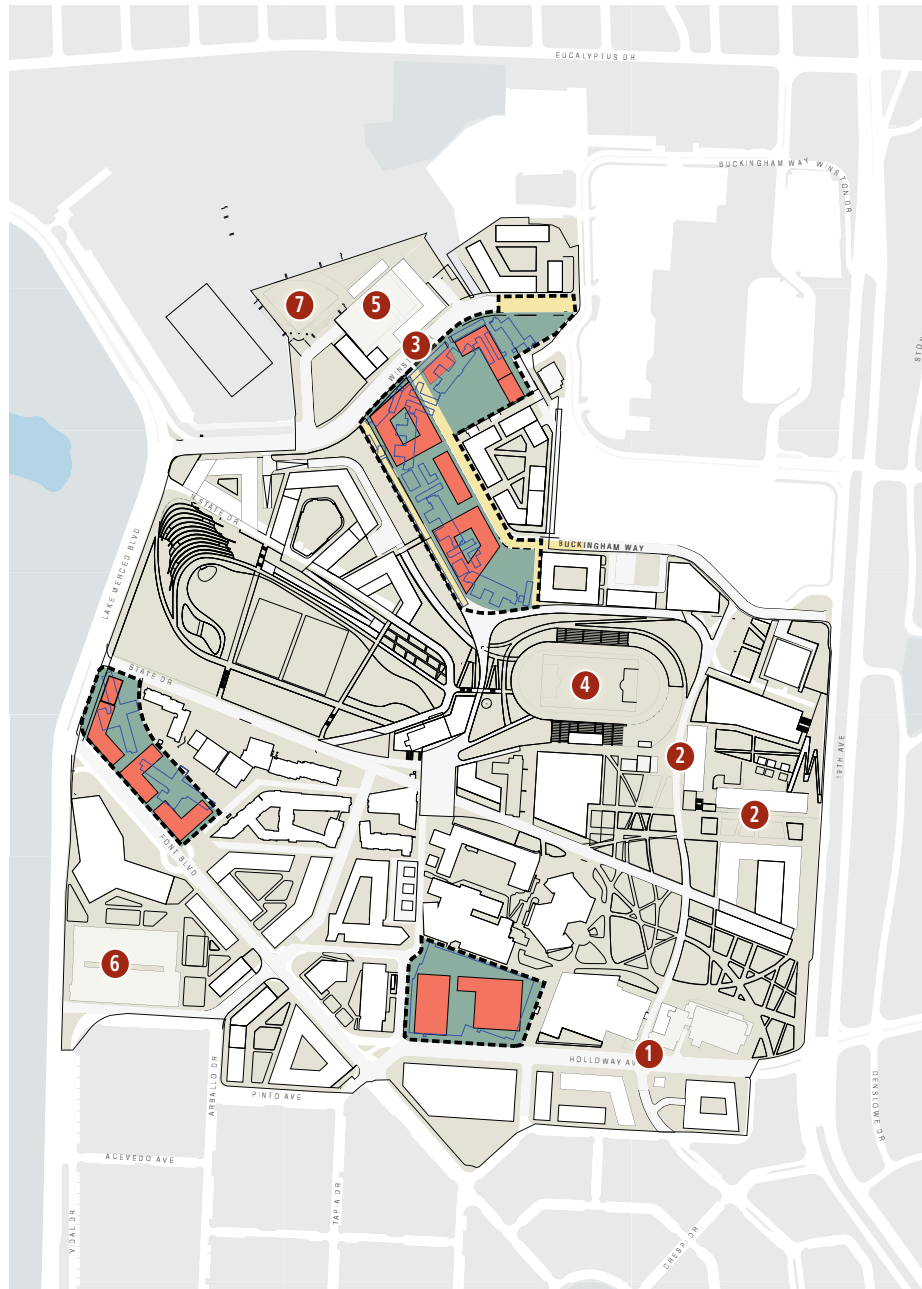
- District plants

**Electrical Systems**

- New feeders, substation, loop extensions, and battery plant
- Overhead line replacements

**LEGEND**

- Building projects
- Landscape projects
- Major pathways
- Demolitions
- Affected area
- Infrastructure Projects
- Land Swap
- Athletics
- Campus Boundary

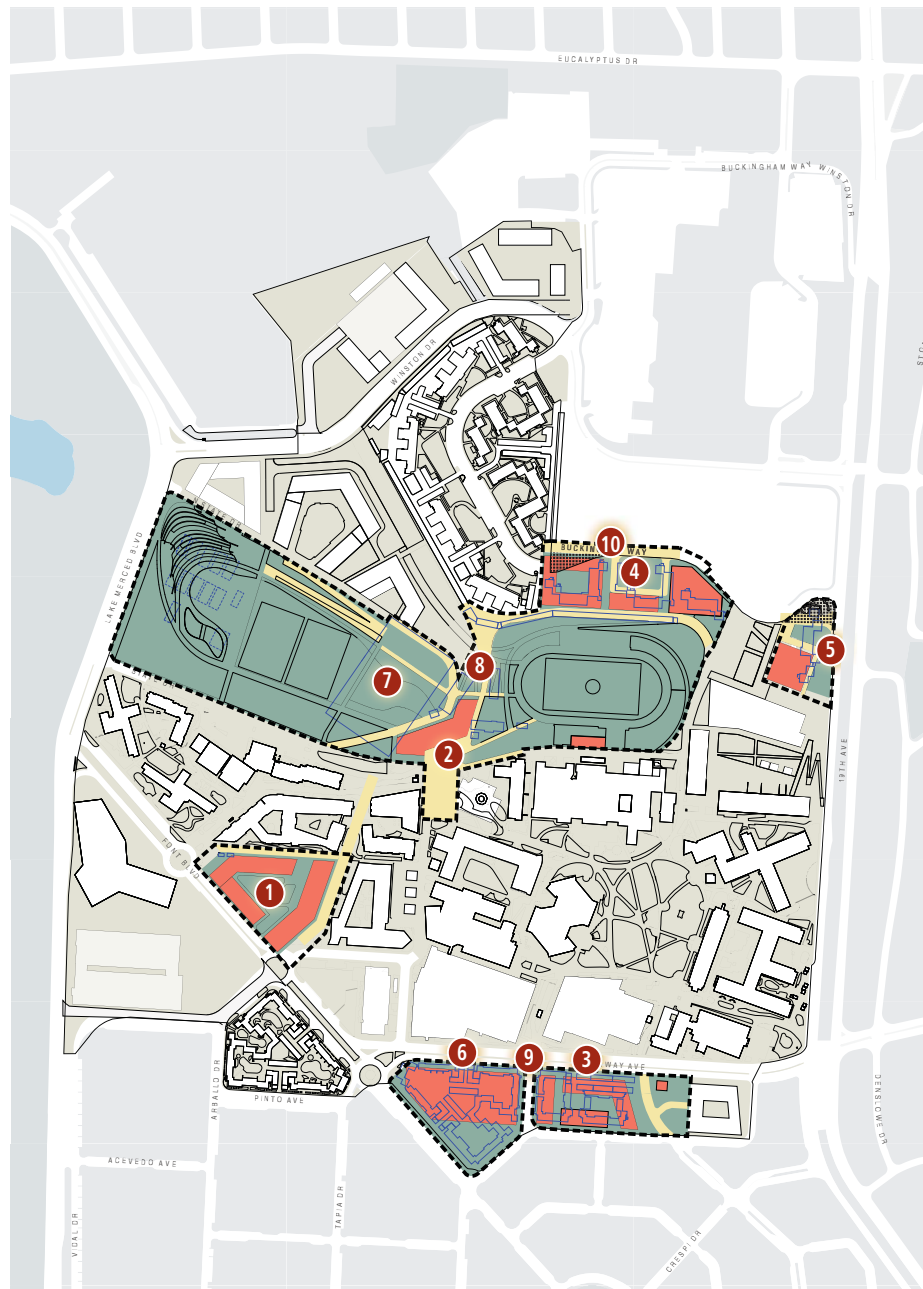


**Lower Valley Community Undergraduate Student Housing — Phase 1**

This new lower-division student housing community will have approximately 1,500 beds in residence halls overlooking the lower valley. As an active living and learning neighborhood, the community will include student support and study space, meeting rooms, dining, retail, recreational areas, and apartments for faculty or counselors-in-residence. The existing childcare center, police station, administrative offices, and corporation yard will be relocated as part of the larger project.

**(Academic) Science Building**

A contemporary science building will support instruction and research for the College of Science and Engineering (CoSE). The project will advance significant work of the college that is currently restricted by very outdated facilities. The building program will include modern, flexible interdisciplinary lecture spaces, wet and dry labs, student success services, maker space, and offices for faculty and research support staff.



**SHORT- TO MID-TERM INITIATIVES**

**Major Buildings**

- Academic replacement buildings (1)
- Sustainability Center (2)
- Student housing (3)
- Hotel and conference center (4)
- Innovation and Leadership Center (5)
- Events Center (6)

**Open Space**

- Valley restoration (7)

**Circulation**

- Bridge (8)
- Bicycle routes
- Holloway Avenue improvements (9)
- Buckingham Way realignment and rerouting of underground utilities (10)

**Water Systems**

- Centralized bioretention for rainwater and stormwater (Phase 2)
- Wastewater treatment plant (Phase 2)
- Non-potable water storage and distribution to buildings and to irrigation

**Mechanical**

- District plants

**Electrical Systems**

- New feeders, substation, loop extensions, and battery plant
- Overhead line replacements

**LEGEND**

- Major Building Projects
- Open Space
- Major Pathways
- Demolition
- Affected areas
- Infrastructure Projects
- Athletics
- Land Swap
- Campus Boundary

**Short- to Mid-Term**

A new science quad, in the space enclosed by this new building and Hensill and Thornton halls, will connect the new center to 19th Avenue — providing the first step in redesigning the valley as a green-space network.

**Infrastructure**

The University will make upgrades to the central plant and establish a rainwater/stormwater bioretention area.

The north and south sections of the campus, once isolated from one another, will be connected by an accessible pedestrian and bicycling bridge. East and west will be connected from 19th Avenue to Lake Merced with a path through the restored valley, complete with major new recreational open space and green infrastructure. Project program important to the campus and the larger community strengthen San Francisco's University District.

**MID- TO LONG-TERM INITIATIVES**

**Major Building Projects**

- Welcome Center (1)
- Academic buildings, including interdisciplinary lecture hall and classroom building (2)
- Student union and health center (3)
- Student housing (4)
- Apartments (5)

**Open Space**

- Main campus entrance plaza and transit hub (6)
- Quad improved and expanded (7)

**Circulation**

- 19th Avenue improvements (8)
- Font Boulevard improvements (9)
- Buckingham Way realignment begun (10)
- Bicycle routes (11)

**Water Systems**

- Wastewater treatment plant
- Recycled water distribution to new buildings

**Mechanical**

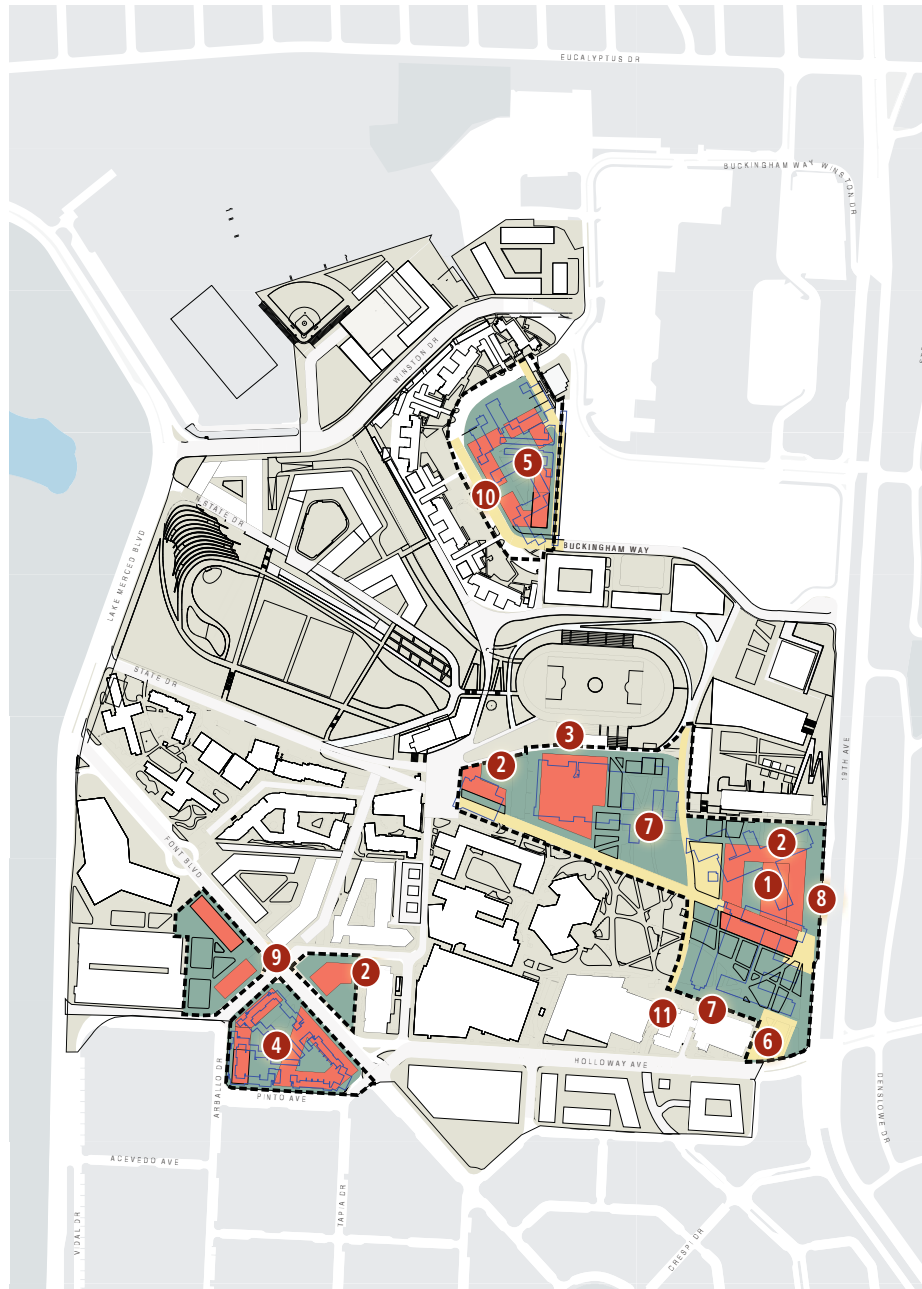
- District plant and expansions

**Electrical Systems**

- Central campus battery plant
- Replacement feeders, loop extensions, and unit substation

**LEGEND**

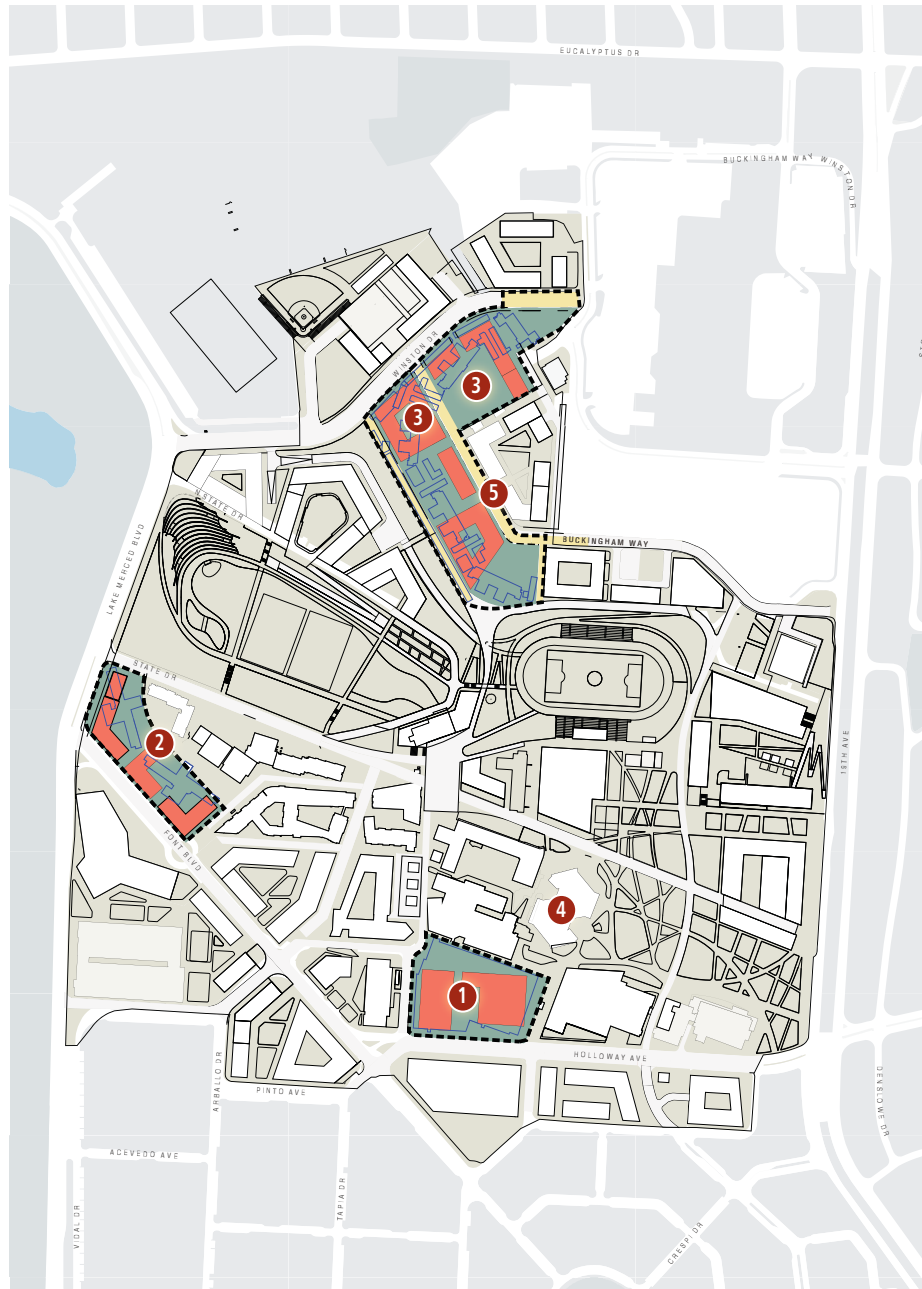
- Major Building Projects
- Open Space
- Major Pathways
- Demolition
- ⋯ Affected areas
- Infrastructure Projects
- Land Swap
- Athletics
- Campus Boundary



**Mid- to Long-Term**

The east edge of the campus will be revitalized, giving a new face to SF State. Along 19th Avenue will be a series of new academic, student services, community-serving buildings, and open spaces, including a new main entrance to the campus featuring a welcome center.

A new student union and health center will front on the Quad that now links to the valley open space system. The North Campus Neighborhood will continue to evolve, and new South Campus Neighborhood projects will increase pedestrian-oriented activity along Font Boulevard.



**LONG-TERM INITIATIVES**

**Major Building Projects**

- Academic buildings for humanities and social sciences, the business school, and other academic needs **(1)**
- Student housing **(2)**
- Apartments **(3)**
- Cesar Chavez Student Center restoration and renovation **(4)**

**Open Space**

- Buckingham Way realignment completed **(5)**

**Water Systems**

- Wastewater treatment plant (Phase 4)
- Recycled water distribution to new buildings

**Mechanical**

- District plant expansions

**Electrical Systems**

- New selector switches, replacement feeders, loop extensions, and unit substation

**LEGEND**

- Major Building Projects
- Open Space
- Circulation
- Demolition
- Affected areas
- Infrastructure Projects
- Land Swap
- Athletics
- Campus Boundary

**Long-Term**

The final set of initiatives will complete the campus neighborhoods and a walkable street network integrated with open spaces that capture vistas across the campus. The redevelopment of the existing residential area along Font Boulevard will complete the process.

The historic Cesar Chavez Student Center, designed by the architect Paffard Keatinge-Clay, will be restored in the first comprehensive remodel since it was constructed in 1975.

### **NEXT STEPS**

Future State 2035 proposes the following studies as part of due diligence for proposed large-scale redevelopment:

- Neighborhood and guidelines
- Market analysis for student housing
- Policies for living on campus including housing requirements and/or guarantees
- Market analysis for apartments
- Market analysis for Innovation and Leadership Center
- Market analysis for hotel and conference center
- Market analysis for Events Center
- Review of parking program and potential for integration with neighboring commercial/retail uses in a P3 agreement
- Investigation of performance contracting arrangements for building renovations and infrastructure modernization projects
- Investigation of power purchase agreements to complement onsite power generation
- Investigation of alternative financing mechanisms for water and energy infrastructure.

# Appendices

## Summaries of Studies

Summaries of the studies prepared prior to and for Future State 2035 San Francisco State University Campus Vision plan (Future State 2035) follow.

[Click on report titles to access reports.](#)

### **PREPARED IN SUPPORT OF FUTURE STATE 2035**

#### **Community Outreach**

[SF State Campus Plan Update — Draft Appendix on Community Outreach](#)

Author: Crowdbrite, SWA  
Date: January 2018

In May 2017, San Francisco State University (SF State) launched a major nine-month engagement effort to inform and involve the community in shaping Future State 2035. The multi-stakeholder, multi-channel campaign used a variety of techniques to maximize participation and capture the ideas and feedback of students, faculty, staff, and neighbors. The process included visual surveys, workshops, community events, and opportunities for online feedback.

Nearly 5,000 people took part. This high level of participation was invaluable in developing Future State 2035. Technology enabled the public to easily understand the value of placemaking and land planning for campus improvements, and to offer comments during all phases of the vision plan.

#### **Guidelines**

[Future State Campus Vision plan Design Guidelines](#)

Author: SWA, ARUP, Sherwood Engineers  
Date: 2018

The guidelines provide a comprehensive framework for implementing projects and interventions described in the campus vision plan, while maintaining the flexibility to adapt to future conditions and public-private partnerships. The document provides a set of general guidelines, as well as provisions for developments in different areas, to ensure a cohesive outcome without sacrificing the existing character of the campus or ignoring its connections with the city and its environment.

#### **Housing**

[Strategic Community Development Plan Phase I + 2](#) (no link)

Author: Brailsford & Dunlavy  
Date: May 2017

The University engaged Brailsford & Dunlavy to prepare a community development plan in response to the University's desire to create a residential campus. The study identified housing demand and assessed how changes in the off-campus market would impact on-campus housing demand. The work also identified how SF State can leverage its housing assets to become a residential campus as it makes decisions to advance the strategic value of its housing program, and to enhance its housing and residential life program. The document provides recommendations for improvements to the overall housing program in three phases. This document outlines the key findings of their work for Phases I and II.

## Infrastructure

### SFSU Sustainable Infrastructure/Existing Infrastructure Condition and Vision plan Condition

Author: Sherwood Design Engineers/Integral Group, Inc.

Date: June 2018

This study, an important step in achieving SF State's Sustainability goals, summarizes Sherwood's review of all existing materials in order to understand the opportunities and constraints of the SF State campus — its physical site, open spaces, potential utility corridors, and existing infrastructure. This document describes the condition of existing infrastructure, and it will be a baseline when weighing different approaches to meeting the goals. The key outcomes of work for Step 1 (Due Diligence/Analysis/Themes) include the Existing Conditions Report, as well as the Preliminary Loads Assumptions and Net Zero Approach memorandums. Step 1 prepares Sherwood to move to Step 2 (Infrastructure Alternatives) in which they evaluate alternatives in detail, and propose and develop conceptual designs.

## Signage

### San Francisco State University Wayfinding Strategy

Author: Arup

Date: 2018

The wayfinding plan establishes an overall organizational and functional system logic for the campus sign program. The sign system will be implemented in the near term and will be flexible to accommodate future campus changes. The wayfinding system will reinforce neighborhoods on the campus and will be highlighted on campus map and directional signs. A hierarchy of corridors on the campus will create a wayfinding spine, further helping people understand the layout of the University and minimizing excess signage on smaller paths meant for meandering and exploring. The strategy includes the following elements to guide content: placement, quantity, and types of signs needed; goals and objectives for the sign system; principles of a good wayfinding system; target user groups and scenarios; information hierarchy; sign location framework; sign types; and ADA guidelines.

## Transportation

### Campus Mobility

Author: Arup

Date: 2018

The mobility report considers movement within the growing campus as well as access to the campus from surrounding neighborhoods and the region. For on-campus areas, this study examines pedestrian and bicycle mobility. For off-campus areas, the study investigates local access to the campus, safety on adjacent streets, and regional travel to campus, with a focus on transit and transportation demand management to reduce the impact of single-occupant vehicles.

## PREPARED PRIOR TO FUTURE STATE 2035

### Climate Action Plan

Author: San Francisco State University

Date: May 2010

The 2010 plan guides the University in making reductions to greenhouse gas emissions through 2030. In the plan, the University commits to reducing emissions below 1990 levels: by 25 percent by 2020, and by 40 percent by 2030. The plan lists specific actions to reach these goals. SF State is currently updating the plan.

### Facility Condition Assessment (no link)

Author: ISES Corporation

Date: 2014

This report provides a tool for planning building upgrades and replacements. In 2014, architectural and engineering assessors from ISES surveyed campus buildings with particular attention to conditions of site, exteriors, interiors, ADA accessibility, energy and water conservation, health, fire and life safety, HVAC, plumbing, electrical, and vertical transportation. The ISES team ranked facilities using a Facility Condition Needs Index, which is the ratio of a building's renewal costs to current replacement value.



### Landscape Framework / Forest Management Plan

Author: WRT

Date: January 2018

The firm WRT assessed the condition of the campus landscape and urban forest and provided design guidelines for the landscape. The guidelines promote a robust system of open spaces that enhance campus identity, ecology, and social function. The mixed-forest zones on campus are in decline, and the plan specifies a reforestation strategy to enable the campus forest to be a thriving asset for future generations.

### San Francisco State University Strategic Plan 2015

Author: San Francisco State University Strategic Plan Coordinating Committee

Date: 2015

At SF State, diversity and pluralism are the conditions for intellectual advancement, creativity, and innovation. In June 2013, the Strategic Planning Coordinating Committee (SPCC) was appointed and was charged with conducting a broad-based, collaborative strategic planning effort to establish the University's institutional priorities for the years ahead. Emerging from SF State's long-standing commitments to teaching, learning, and social justice, the 2015 strategic plan is anchored by five core University values: Courage, Life of the Mind, Equity, Community, and Resilience. The plan highlights aspirations and objectives in each of those areas, and it offers initiatives to meet the objectives. The plan is as a living document that offers direction and inspiration to future University leadership without overly proscribing the outcome of its shared decision-making.

### San Francisco State University 2018 Transportation Survey Results Final Report

Author: Nelson\Nygaard

Date: 2018

SF State has conducted an online transportation survey and cordon count at least every three years beginning in April 2008 with subsequent surveys taking place in April 2011, April 2014, and April 2016. This report summarizes the results of a survey and cordon count conducted on May 2, 2018. Survey data are used to track a number of key factors such as mode split, peak hour vehicle trips, peak hour Muni ridership, and greenhouse gas (GHG) emissions.

### Sustainable Development Framework

Author: Urban Fabrick

Date: February 2017

The framework delineates SF State's sustainability mandates and expectations for all planning, design, major renovation, and construction projects. It describes specific performance requirements, from energy and water efficiency and reuse, to renewable energy production, and provides guidance and tools to assist project teams in meeting them.







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