

THE COUNTY  
OF SANTA CLARA

# Stanford University Community Plan



# Table of Contents

Table of Contents .....	2
Introduction .....	6
Purpose of the Community Plan and Relation to General Plan .....	7
Organization of the Community Plan .....	8
Implementation of the Community Plan .....	8
Municipal Services Study .....	9
Graduate Student Housing Affordability Study .....	11
Childcare Study .....	12
Major Policy Directions of the Community Plan .....	13
Growth and Development .....	15
Chapter Summary .....	15
Background .....	15
Location and Setting .....	15
Policy Context for the Community Plan .....	20
Stanford University Development Trends .....	23
Strategies, Policies, and Implementation .....	26
Strategy No. 1: Promote compact development and conservation of natural resources through use of an Academic Growth Boundary .....	26
Strategy No. 2: Engage in Cooperative Planning and Implementation .....	33
Strategy No. 3: Mitigate and Monitor the Impacts of Growth .....	37
Land Use .....	40
Chapter Summary .....	40
Background .....	41
Lands inside the AGB .....	46
Lands outside the AGB .....	46
Strategies, Policies, and Implementations .....	47
Academic Campus .....	47
Campus Residential – Low Density (CR-L) .....	49
Campus Residential – Medium Density (CR-M) .....	50
Campus Open Space (COS) .....	51
Public School (PS) .....	52

Open Space and Field Research (OS/FR) .....	53
Special Conservation Area.....	55
Housing.....	57
Chapter Summary .....	57
Background .....	58
Housing Demand and Supply – Regional and Countywide Historical Context .....	58
Housing in the Stanford Area .....	60
Strategies, Policies and Implementation .....	65
Strategy No. 1: Increase the Supply and Affordability of Housing .....	65
Strategy No. 2: Ensure Compatibility of New Housing with Existing Neighborhoods.....	74
Circulation .....	77
Chapter Summary .....	77
Background .....	79
Stanford’s Land Use and Circulation System .....	80
Traffic Congestion and Stanford University .....	83
Strategies, Policies and Implementation .....	84
Strategy No. 1: Avoid worsening of traffic congestion through land use and transportation demand management .....	84
Strategy No. 2: Alleviate local congestion in and around the Community Plan Area. ....	94
Strategy No. 3: Alleviate local congestion from special events. ....	98
Open Space .....	100
Chapter Summary .....	100
Background .....	101
Types of Open Space .....	101
Open Space Outside the Academic Growth Boundary .....	103
Open Space within the Academic Growth Boundary .....	105
Strategies, Policies, and Implementation .....	107
Strategy No. 1: Locate additional development inside the Academic Growth Boundary .....	107
Strategy No. 2: Balance recreational use and environmental objectives .....	110
Strategy No. 3: Plan for parks and open space land within the Academic Growth Boundary .....	113
Resource Conservation .....	116
Chapter Summary .....	116
Background .....	117

<i>Habitat and Biodiversity</i> .....	118
Background .....	118
Strategy No. 1: Improve Current Knowledge and Awareness of Habitats and Natural Areas .....	122
Strategy No. 2: Protect the Biological Integrity of Habitat Areas and Adequately Mitigate Impacts .....	123
Strategy No. 3: Encourage and Promote Habitat Restoration.....	128
<i>Water Quality and Watershed Management</i> .....	129
Background .....	129
Strategy No. 4: Reduce Non-Point Source Pollution .....	133
Strategy No. 5: Enhance and Restore Wetlands, Riparian Areas, and other Habitats that Improve Watershed Quality .....	134
Strategy No. 6: Prepare and Implement Comprehensive Watershed Management Plans .....	135
<i>Heritage Resources</i> .....	136
Background .....	136
Strategy No. 7: Inventory and Evaluate Heritage Resources .....	141
Strategy No. 8: Protect Heritage Resources Through Avoidance, Adaptive Reuse, and Sensitive Planning and Design .....	142
<i>Scenic Resources</i> .....	143
Background .....	143
Strategy No. 9: Employ Growth and Development Policies That Conserve Scenic Resources.....	145
Strategy No. 10: Maintain and Enhance the Scenic Values of Urbanized Area Settings.....	146
Health & Safety .....	147
Chapter Summary .....	147
Air Quality .....	149
Background .....	149
Strategy No. 1: Manage Campus Growth and Land Use for Cleaner Air.....	150
Strategy No. 2: Emphasize Transportation Alternatives and Transportation Demand Management to Reduce Vehicle Emissions .....	151
Strategy No. 3: Control Sources of Particulate Emissions .....	151
Geological Hazards .....	152
Background .....	152
Strategy No. 4: Design, Locate, and Regulate Development to Avoid or Withstand Hazards.....	156
Flood Hazards.....	157
Background .....	157
Strategy No. 5: Design, Locate, and Regulate Development to Avoid or Withstand Hazards.....	159

Hazardous Materials.....	160
Background.....	160
Strategy #No. 6: Manage Hazardous Materials Safely and Efficiently .....	162
Emergency Preparedness and Response.....	163
Background.....	163
Strategy No. 7: Adequate Plan for Risk Reduction, Immediate Disaster Response and Post-Disaster Recovery .....	166
Noise .....	168
Background.....	168
Strategy No. 8: Prevent or Minimize Excessive Noise .....	169
Law Enforcement .....	170
Background.....	170
Strategy No. 9: Provide Law Enforcement Oversight .....	170
Social, Mental and Emotional Health .....	171
Background.....	171
Strategy No. 10: Ensure Provision of Services, Policies, and Programs that address Social and Emotional Health .....	172
Climate Change and Adaptation .....	173
Background.....	173
Strategy No. 11: Plan for Climate Change and Adaptation .....	175
Acknowledgments.....	177

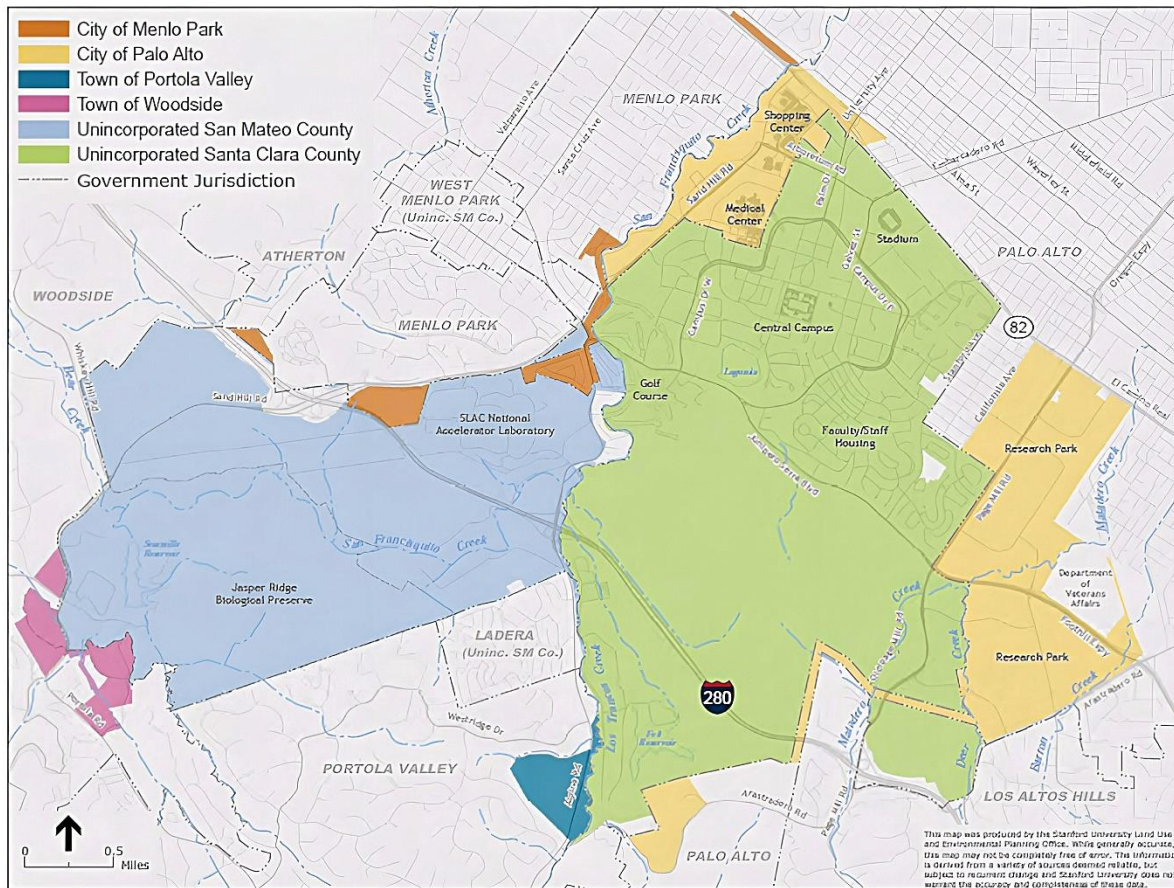


# Introduction

Stanford University (“Stanford” or “University”) is a private university located in the northwest corner of Santa Clara County, adjacent to San Mateo County. Founded in 1891, Stanford has grown over time to become a highly respected institution of higher learning and research. It contains over 4,000 acres of land within the jurisdictional boundaries of Santa Clara County, the area addressed under this Community Plan (the “Stanford Community Plan Area”). Stanford also owns lands in other jurisdictions, including Palo Alto, Menlo Park, San Mateo County, Woodside, and Portola Valley (see **Figure 1 - Government Jurisdiction on Stanford Lands**).

The unincorporated lands of Stanford University within Santa Clara County are subject to the land use jurisdiction and regulatory authority of the County. The 1995 Santa Clara County General Plan and subsequent General Plan Element updates serve as the regulatory document that establish the policy direction and set goals for use of lands and physical development within the unincorporated area. The Stanford Community Plan refines the policies and goal of the General Plan as they apply to Stanford lands within the County.

**Figure 1 Government Jurisdiction on Stanford Land**



## **Purpose of the Community Plan and Relation to General Plan**

Community plans focus on a particular region or community within the overall general plan area of a jurisdiction. As an integral part of the General Plan, a community plan must be consistent with the General Plan, in keeping with the requirements of state law that general plans be internally consistent. To facilitate consistency, the Stanford Community Plan builds upon the basic strategies and policy framework for each element of the General Plan, tailoring the treatment of each subject to those aspects of an element most applicable and pertinent to Stanford.

The Community Plan is also consistent with and furthers the implementation of associated planning instruments, such as the 1985 Land Use Policy Agreement. For more information on this notable land use agreement between the County, Palo Alto and Stanford University, please refer to the Growth and Development Chapter.

The primary purpose of the Stanford Community Plan is to guide the future use and development of Stanford lands in a manner that incorporates key General Plan principles of compact urban development, open space preservation, and resource conservation. Growth and development, in general, can have both advantages and disadvantages. The Community Plan attempts to achieve an appropriate balance between the reasonable expectations of the University to use and develop its land with the interests of the public to responsibly manage such growth. The 2000 Community Plan established a total development of 17,300,000 square feet inclusive of academic space, academic support facilities and student housing. This 2022 Community Plan update does not include development beyond this amount. Any additional increase would require a Community Plan amendment and concurrent General Use Permit (GUP) application.

The Community Plan is adopted as an amendment of the General Plan in the manner set forth by Government Code § 65350 et seq. Any and all revisions to the Community Plan considered in the future must also be made according to the provisions of State law for adopting and amending general plans.

## Organization of the Community Plan

Community Plan focused topics and policies are organized into seven chapters:

1. Growth and Development,
2. Land Use,
3. Housing,
4. Circulation,
5. Open Space,
6. Resource Conservation, and
7. Health and Safety.

Each chapter addresses focused topics and policies as they pertain to Stanford lands and its regional setting. The strategies and policies are not intended to duplicate all aspects of the General Plan chapters or “elements” on which they are based. Instead, each chapter provides the specific focus and context beyond that provided in the General Plan in order to provide policy direction and guide decision-making for Stanford lands.

Each chapter of the Stanford Community Plan uses the same organizational structure. Within each chapter, a summary is provided, indicating the strategies set forth in the chapter. These strategies are overall policy approaches to various areas of focus, and they form the framework for more detailed policies and implementation recommendations on the particular subjects, which are articulated in each respective chapter. Strategy statements correspond with those of the relevant General Plan chapters, with modifications to reflect the particular circumstances, topics, and policies as they relate to Stanford. Following the chapter summary, each chapter contains relevant background information, followed by discussion for each strategy and its associated policies and implementation measures.

## Implementation of the Community Plan

Prior to the adoption of the 2000 Community Plan, the principal means of guiding land use and development for Stanford lands was the “General Use Permit,” or GUP. The GUP served as a master use permit under which Stanford may obtain approvals for development, consistent with the provisions of the County’s Zoning Ordinance. Under the updated Stanford Community Plan, the GUP will remain as the principal land use entitlement for implementation of the Community Plan. The GUP contains conditions regarding review of individual projects, such as regular monitoring and reporting as well as other land use entitlements and approvals that may be required for development.

Additionally, the Stanford Community Plan contains implementation measures to enact and apply the policies specified in the Stanford Community Plan.



Individual projects allowed under the Stanford Community Plan, documented in the 2000 GUP, and noted in future GUPs are subject to the County’s Architecture and Site Approval (ASA) and/or Grading Approval permitting process. As such, the Stanford Community Plan is further implemented by the review and conditioning procedures of ASA and Grading Approval. In particular, certain conditions of development approval may be employed specifically to carry out environmental mitigations required under the Environmental Impact Report prepared for the adoption of the 2000 GUP, Stanford Community Plan and/or new approved GUP.

## **Informing Studies of the Community Plan: Municipal Services, Graduate Student Housing Affordability, and Childcare Studies**

In November 2016, Stanford University applied for a new General Use Permit (GUP). The County’s efforts to update the GUP included community outreach such as community meetings, public comment intake, and Planning Commission and Board of Supervisors meetings. As part of the County’s processing of the GUP application, the Department of Planning and Development recommended additional amendments to the Community Plan. The Stanford-proposed and County staff-recommended Community Plan amendments were considered by the Planning Commission and Board of Supervisors in tandem with consideration of the new GUP for Stanford in 2019. On November 1, 2019, Stanford withdrew the GUP and Community Plan amendment application (hereby referred to as the “2019 General Use Permit” or “2019 GUP”)<sup>1</sup>, and none of the Community Plan amendments were adopted at that time.

At the February 11, 2020 Board of Supervisors meeting, the Board directed County staff to continue its work on the Community Plan update, which would include the following three studies to inform the update:

- Municipal Services Study,
- Graduate Student Housing Affordability Study, and
- Childcare Study

### **Municipal Services Study**

The 1985 Land Use Policy Agreement and the 2000 Stanford Community Plan recognize Stanford’s status as a municipal service provider. The 1985 Land Use Policy Agreement is among Stanford University, the County of Santa Clara, and the City of Palo Alto.

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<sup>1</sup> The “2019 General Use Permit” or “2019 GUP” refers to the GUP that Stanford University applied for in 2016 and withdrew the application for in 2019. The environmental document associated with the 2019 GUP is titled the “Stanford University 2018 General Use Permit Final Environmental Impact Report.” The 2019 GUP and associated EIR were not adopted or certified.

The 1985 Land Use Policy Agreement states:

Stanford intends to continue to provide all municipal services to its academic facilities in the unincorporated area of Santa Clara County.

Furthermore, Policy SCP-GD 9 of the 2000 Stanford Community Plan states:

The provision of urban services to the academic lands of Stanford University shall be the responsibility of the University. This may be accomplished through direct provision of such services by Stanford, payment of in-lieu fees, or appropriate contractual relationships with local jurisdictions.

The Municipal Services Study was prepared in coordination with Management Partners, a consulting firm that offers strategic planning, process improvement, organizational analysis, and other services for local governments. Management Partners engaged in questionnaires, a survey, and/or interviews with Stanford staff, County staff, City of Palo Alto staff, and Stanford graduate students. Management Partners was retained by the County to gather information about municipal services provided by Stanford and describe any existing gaps in service provision or delivery that may exist. In the analysis of municipal services, Management Partners compared the service data to that of the City of Palo Alto, in addition to another large private university in California, the University of Southern California (USC).

An administrative draft was shared with Stanford University and City of Palo Alto staff, per the 1985 Land Use Policy Agreement (Section 1.c). Jurisdictions adjacent to Stanford were also provided the administrative draft and were given the opportunity to provide input to County staff at a multi-jurisdictional meeting that took place on April 6, 2022. A public draft was released in mid-April, and a Municipal Services Study community meeting was held on April 26, 2022.

The following is the list of key findings from the final Municipal Services Study:

1. (The Municipal Services Study) examines the data available for each of the 26 municipal services individually and concludes that the services provided are generally equivalent to those provided in other municipalities.
2. However, because the service delivery approach provided by Stanford is relatively unusual, (the report) offers recommendations aimed at improving the ability of Stanford community residents as well as County of Santa Clara officials to understand, measure, and evaluate service delivery.
3. The recommendations apply in most municipal service areas and relate to fiscal transparency and public accountability, although some sections have additional recommendations specific to challenges in those areas.
4. The recommendations also include a framework to document such services, which would be in keeping with public agency best practices. Recommended metrics are similar to those produced in the cities of San José, Palo Alto, and in the County of Santa

Clara. These are shown in their budget documents and available on-line to the public. A summary of the recommendations was included in (the report as) Attachment A. A matrix of municipal services along with the service providers and desired service metrics was also included (in the report) as Attachment D.

5. (The report) recommended that the County of Santa Clara, Stanford University, and the City of Palo Alto (as well as other affected jurisdictions) work collaboratively to identify and equalize payments in lieu of property taxes (“PILOT”) for any municipal services or public-school services.

## **Graduate Student Housing Affordability Study**

Keyser Marston Associates (KMA) prepared the Graduate Student Housing Affordability Study. This analysis was prepared to evaluate whether there is evidence of housing affordability challenges among graduate students at Stanford University. The analysis estimates the share of graduate students who have a gap in financial resources to meet their housing and other living expenses. Findings reflect consideration of funding sources used by Stanford graduate students to finance their education including stipends, fellowships, loans, and parental support. The analysis also includes additional student loan debt and estimated funding through Stanford’s Graduate Family Grant and Graduate Student Aid Fund, for those eligible, as possible sources to address an estimated gap in resources.

This study uses data from the Stanford Student Survey on University Life and a Faculty and Staff Survey (Stanford Student Survey on University Life or 2021 SCC Survey) that was released by the County in November 2021 requesting information for the Graduate Student Housing Affordability and Childcare Studies. In addition to survey questions informing these two studies, the surveys requested responses to questions pertaining to food sufficiency, dependent health care, mental health, and policing perceptions. County Staff and consultants received the raw data from the survey in January 2022.

An administrative draft of the Graduate Student Housing Affordability Study was shared with Stanford University and City of Palo Alto staff. A public draft was released in mid- May, and a Graduate Student Housing Affordability Study community meeting was held on May 19, 2022. Findings of this analysis are not specific to housing affordability. The analysis considers the ability to afford living expenses in the aggregate.

The following is a list of key findings from the final Graduate Student Housing Affordability Study:

1. Stanford provides housing to approximately 75% of graduate students. Rents for 85% of housing spaces are within a range affordable to households with Low or Moderate incomes. Despite this, some graduate students still experience affordability challenges.
2. 16% of graduate students responding to the 2021 SCC Survey experience frequent financial challenges and/or food insecurity to the extent they sometimes or often do not have enough to eat.

3. 10% of graduate students have inadequate resources to meet estimated living expenses, based on the 2021 SCC Survey.
4. 5% of graduate students have inadequate resources for housing and other living expenses after potential additional “gap” funding sources are considered. Potential gap funding sources include maximizing the use of student loans and Stanford’s Graduate Family Grant and Graduate Student Aid Fund programs. This 5% share of graduate students with a shortfall to meet living expenses after gap funding sources translates to an estimated 470 graduate students based on enrollment for the 2021-22 academic year. For these graduate students, the estimated average gap between available resources and living expenses exceeds \$20,000 per year.
5. Affordability challenges are most prevalent among international students, driven in part by the fact that the spouse of an international graduate student is permitted to come to the U.S. but typically not allowed to work based on visa restrictions, and by a lack of access to federal student loans.
6. Nearly 14% of graduate students with children have an estimated gap in resources to meet living expenses, triple that of graduate students without children. This estimate is after consideration of gap funding sources including Stanford’s Graduate Family Grant program, which provides up to \$20,000 to qualifying graduate students with children but is not estimated to be sufficient on its own to address the affordability challenges of eligible families.

## Childcare Study

The Childcare Study was prepared by Public Consulting Group (PCG). This review included original quantitative and qualitative research to learn more about the needs and suitability of the University’s current childcare offerings and comparison to a group of public and private peer institutions throughout the country. “Peer institutions” refers to those that:

1. Operate within the Carnegie classification system as R1 institutions, which are doctoral universities with high levels of research,
2. Offer on-campus childcare services, and
3. Have campuses located in regions with similar costs of living.

PCG conducted surveys and focus groups among Stanford students, including undergraduate, graduate, professional degree, and PhD students, and Stanford faculty and staff, including administrative staff, faculty, and all post-doctoral scholars. An administrative draft was shared with Stanford University and City of Palo Alto staff. A public draft was released in mid-May 2022, and a Childcare Study community meeting was held on May 25, 2022.

The following is a summation of key findings from the final Childcare Study:

1. Stanford’s on-campus childcare centers appear to offer similar levels of service and cost to that offered at peer institutions. It is important to state clearly that the services are only roughly comparable to services offered by peer institutions because, unlike those of

the peer institutions, most of the University's on-campus childcare facilities have not been rated by third-party organizations/systems such as the National Association for the Education of Young Children (NAEYC) and the California Quality Rating and Improvement System (CA QRIS).

2. The University offers more childcare programs and slots per potential use than its peer institutions; however, there remains unmet needs in the populations served, according to graduate students, faculty, and staff who reported long wait times and an inability to access on-campus childcare.
3. Stanford's reported cost for on-campus childcare remains higher than the reported average childcare costs incurred by students, faculty, and staff for on- and off-campus childcare, combined. More than half of responding graduate students (60%), and faculty and staff (60%), ranked cost of childcare as "most concerning," making it the single most concerning issue for both groups.
4. The majority of Stanford graduate students, faculty, and staff ranked "providing more substantial childcare subsidies" as the most preferred form of additional childcare benefit, regardless of whether that benefit would be applied to on- or off-campus childcare facilities.

**The findings, conclusions, and recommendations of these three studies informed sections of this updated Stanford Community Plan.**

## **Major Policy Directions of the Community Plan**

The major policy directions of the Stanford Community Plan are expressed within each chapter's major Strategies. In general terms, the major policy directions include the following concepts and principles:

- a. Promote compact urban development together with conservation of natural resources;
- b. Allow Stanford flexibility to develop its lands within a framework that minimizes potential negative effects ("flexibility with accountability");
- c. Accommodate development for academic uses and housing on lands only within an Academic Growth Boundary, or AGB, while limiting the uses and development potential for lands outside the AGB to conserve open space and natural resources;
- d. Differentiate the major land uses within the plan area according to areas in academic use, housing, and open space outside the AGB;
- e. Plan for and ensure that substantial new adequate housing development, on the Stanford campus, occurs before or concurrently with approval for increases in academic space and facilities;
- f. Meet mobility and access needs primarily through means other than major road



improvements, including a continuation of the “no net new commute trips” policy in combination with a VMT-focused approach, appropriate integration of land use, transit services, transportation demand management, and performance standards for controlling the new trips which may be generated; and,

- g. Achieve the various conservation, public health, and safety goals by emphasizing preventive measures or avoidance of impacts, requiring mitigation for impacts that may occur, and promoting resource restoration.

In conclusion, the Stanford Community Plan represents a continuation and evolution of well-established and successful policies to guide the regulatory processes employed by the County that regulates and implements development on Stanford University lands within Santa Clara County jurisdiction.

The Community Plan supersedes the previous Stanford Chapter contained within Part 4, Book B of the General Plan for Urban Unincorporated Area Issues and Policies, as well as the land use policies for Stanford University Lands - Campus and Stanford University Lands - Academic Reserve and Open Space in Part 3, Book B of the General Plan.

As needed, the Community Plan may be amended over time to improve its usefulness and effectiveness to decision-makers, Stanford, and the general public.

# Growth and Development

## Chapter Summary

This chapter of the Community Plan articulates the fundamental approach that the County will pursue when considering future growth on University-owned lands in unincorporated Santa Clara County.

This plan considers Stanford lands in Santa Clara County and identifies the portion of those lands which are most appropriate for future development. The County’s intent for development to achieve the primary General Plan policy directions of compact urban development and resource conservation. The primary mechanism to direct growth is the establishment of a long-term Academic Growth Boundary (AGB).

An important aspect of managing growth at Stanford is the coordination of land use decision making, consultation, and policies regarding annexation. This chapter reinforces the 1985 Land Use Policy Agreement, which is a tri-party agreement between the County, the City of Palo Alto, and Stanford University as it relates to the delivery of services, land uses, governmental organization, and cooperation. Finally, this chapter provides a basis for continued monitoring of Stanford’s development activities and mitigation of environmental impacts associated with growth and development.

Community Plan strategies for growth and development are:

- Strategy No. 1: Promote compact development and conservation of natural resources through use of an Academic Growth Boundary.**
- Strategy No. 2: Maintain Co-operative Planning Agreements and Implementation.**
- Strategy No. 3: Mitigate and Monitor the Impacts of Growth.**

## Background

### Location and Setting

#### Governmental Jurisdictions

Stanford University is located in Santa Clara and San Mateo counties, approximately 35 miles south of San Francisco and 20 miles north of San Jose, California. Stanford’s original land grant totals approximately 8,180 acres and is located in six jurisdictions: unincorporated Santa Clara and San Mateo counties, the cities of Palo Alto and Menlo Park, and the towns of Portola Valley and Woodside (see **Figure 1.1 Government Jurisdictions**). Approximately 4,000 acres containing Stanford’s academic, academic support, housing, open space and agricultural lands are located within unincorporated Santa Clara County (the distribution of Stanford lands is

shown in **Table 1.1** below).

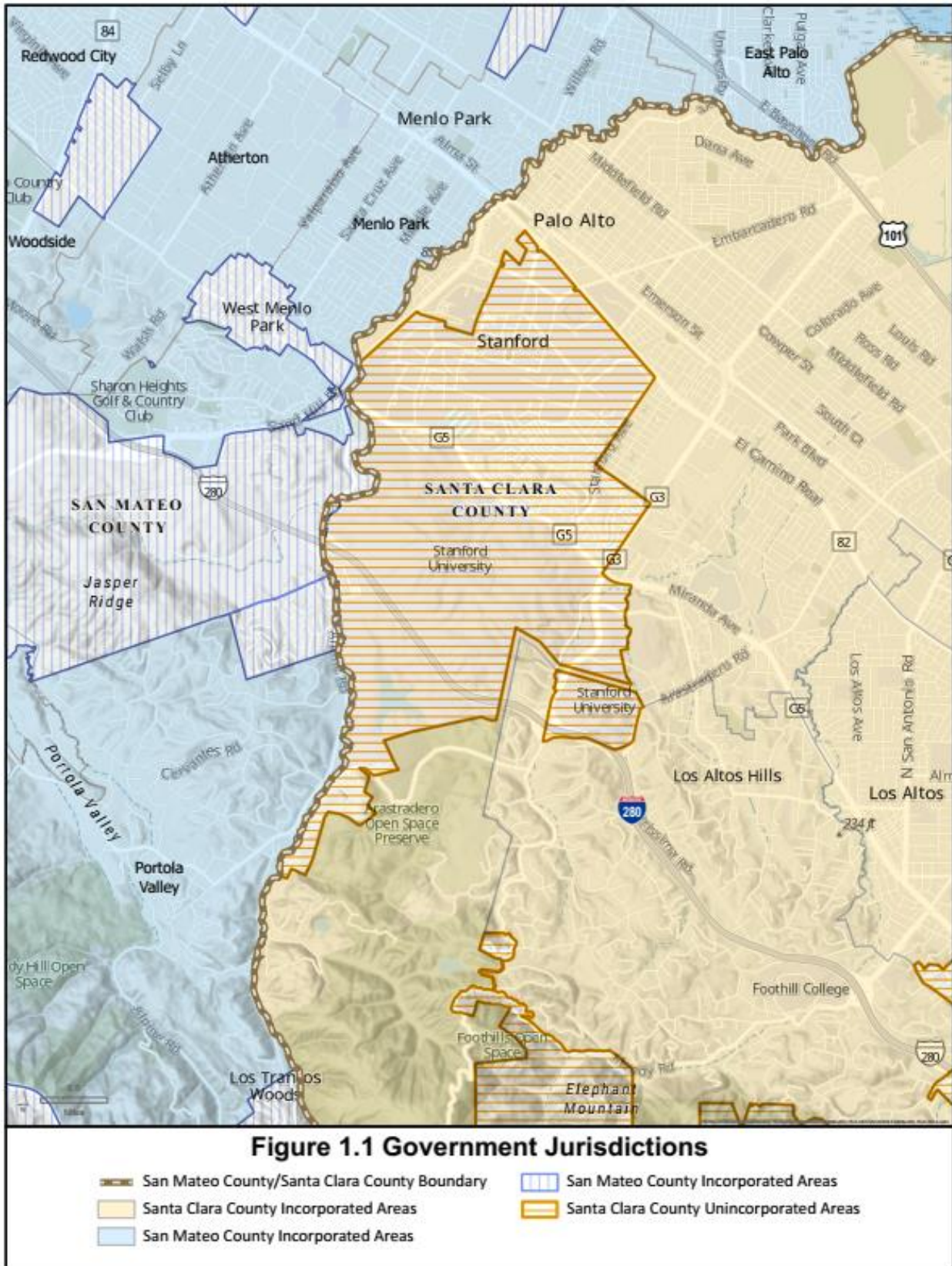
**Table 1.1 Distribution of Stanford Lands across Jurisdictions**

<b>Santa Clara County</b>	Acres	Percent of Total
Unincorporated	4,017	49%
Palo Alto	1,161	14%
<b>San Mateo County</b>		
Unincorporated	2,701	33%
Woodside	114	1%
Menlo Park	111	1%
Portola Valley	76	1%
<b>Total</b>	<b>8,180</b>	

Source: Stanford University

Unincorporated Stanford lands in Santa Clara County and San Mateo County are within different spheres of influence. A “sphere of influence” is a planning boundary outside of an agency’s legal boundary (such as the city limit line) that designates the agency’s probable future boundary and service area, as determined by the Local Agency Formation Commission (LAFCO). Some portions of Stanford lands are within the City of Palo Alto’s urban service area and sphere of influence. All unincorporated San Mateo County lands are within a city sphere of influence. Due to the unique nature and history of Stanford, the rules, regulations, and policy agreements relating to urban service areas are applied differently for Stanford than for other areas of the County.

Figure 1.1 Governmental Jurisdictions



In some cases, the uses on Stanford lands differ sharply between jurisdictions, most notably for those areas that are within the City of Palo Alto. These lands are expressly intended for interim non-academic uses that support the operation of the University (see Policy Context, below). Land uses within the City of Palo Alto include the Stanford University Medical Center, Stanford Shopping Center, Stanford Research Park, and apartment complexes. Lands in the San Mateo County jurisdictions are largely undeveloped, with the exception of the Stanford Linear Accelerator Center in unincorporated San Mateo County.

### **Community Plan Area Physical Setting**

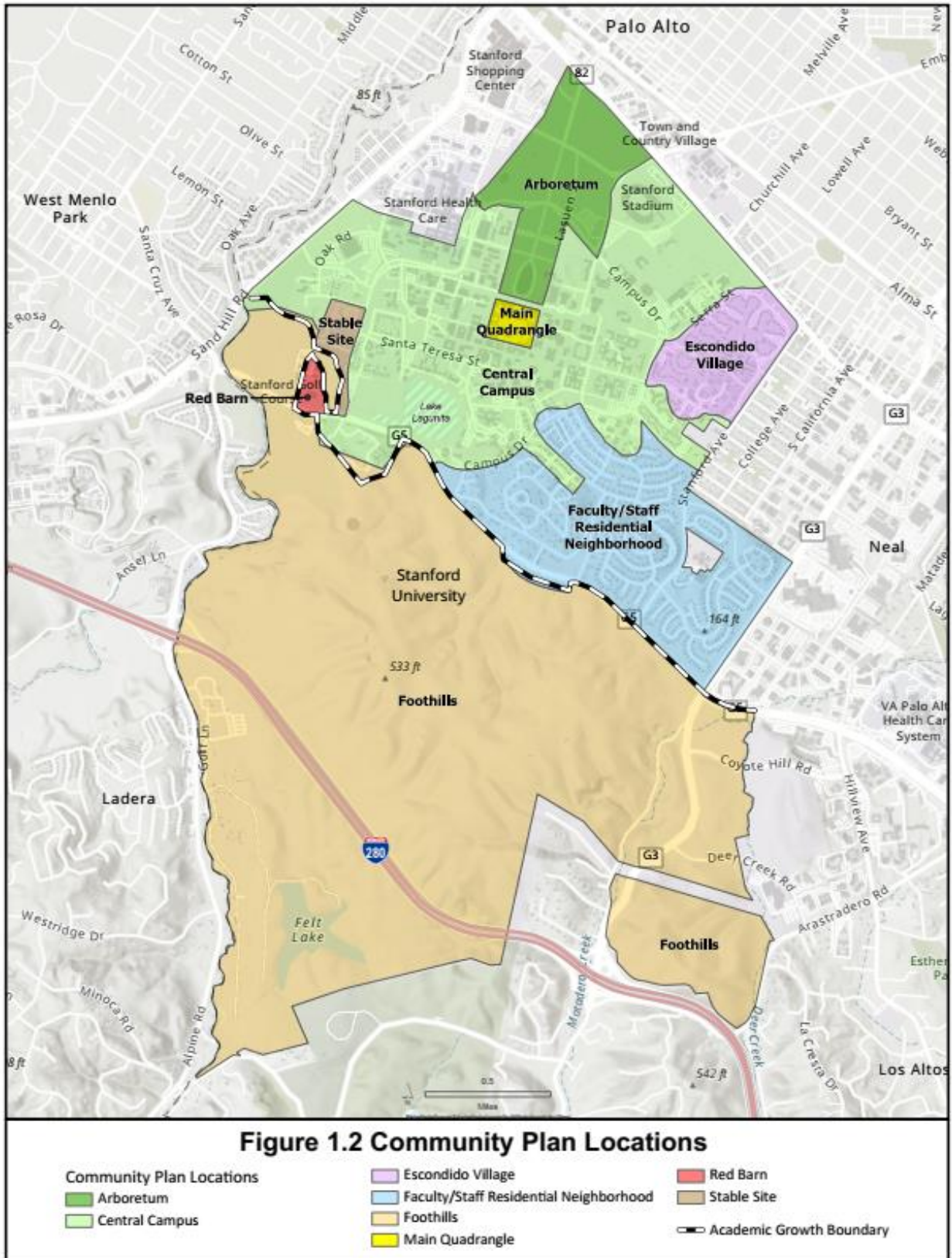
Both developed and undeveloped areas of the Stanford campus are distinctive. Stanford is a complex and active place with a wide variety of activities taking place throughout the campus. With its extent of academic buildings, housing, academic and student support services, and cultural and athletic facilities the campus has been compared by many to be the equivalent of a city.

The geographic distinction on the Stanford campus is between the central campus, where development is concentrated, and the foothills which have remained mostly undeveloped. Of the 4,017 acres of land in unincorporated Santa Clara County, 1,724 acres are north of Junipero Serra Boulevard and approximately 2,293 acres are located south of the roadway.

Within these two primary areas there are several important geographic areas and sites addressed throughout the Community Plan. These locations are defined on **Figure 1.2 Community Plan Locations**.



Figure 1.2 Community Plan Locations



## Policy Context for the Community Plan

Policies for Stanford are addressed in the Santa Clara County General Plan under the portion of the plan concerning urban unincorporated areas, recognizing the nature of the activities which take place at Stanford. However, Stanford is not subject to the General Plan strategies and policies for other urban unincorporated areas, which are “pockets” of unincorporated lands that are intended for future annexation. The Stanford University campus lands are unlike other urban unincorporated lands in Santa Clara County in a number of significant respects in that they:

- Are used for academic and academic support space, which includes housing;
- Are entirely under the ownership of a single landowner that
  - is both a major employer and a major provider of housing,
  - is responsible to provide all of its own urban services and facilities, and
  - has its own land use planning staff;
- Have limitations on the sale of their lands (due to restrictions in the Founding Grant);
- Are the subject of the 1985 Land Use Policy Agreement, a tri-party agreement between the County, the City of Palo Alto, and Stanford University; and,
- Encompass a unique integrated community whose members are all related, in one way or another, to the University.

Prior to the adoption of the Community Plan in 2000, Stanford’s policy framework was composed of:

- Santa Clara County General Plan Land Use Map designations and policies for Stanford;
- The 1985 Land Use Policy Agreement between Stanford, the City of Palo Alto, and the County; and,
- The 1989 General Use Permit, which stipulated the allowable amount of new development on Stanford lands and the conditions under which that development could occur.

### 1985 Land Use Policy Agreement

Due to Stanford’s multi-jurisdictional setting and the need to consider issues concerning annexation as they specifically apply to Stanford, the County of Santa Clara, the City of Palo Alto and Stanford University are parties to an agreement titled the 1985 Land Use Policy Agreement. This agreement sets forth the policies regarding land use, annexation, planning, and development of Stanford lands in Santa Clara County, and defines what uses may remain in the unincorporated County and what uses must be annexed to the City of Palo Alto.

The general policies of the Land Use Agreement outline Stanford University's uniqueness, and documents the agreement that all academic, academic support space, housing, open space, and agricultural uses should remain on unincorporated lands, while other non-academic uses on Stanford lands should be subject to city annexation. The Land Use Policy Agreement augments the sphere of influence by affording Palo Alto review opportunity for projects on all unincorporated Stanford lands (not just those within the delineated sphere of influence north of Junipero Serra Boulevard), and by identifying what types of uses are to remain unincorporated.

- **Academic Uses:** The Stanford Board of Trustees holds all Stanford lands for ultimate academic use. Unincorporated Stanford lands in Santa Clara County are subject to the County General Plan and Zoning Ordinance, as well as other land use approvals granted by the County. Pursuant to the 1985 Land Use Policy Agreement, the parties agree that neither seek annexation to Palo Alto of parcels designated for academic use, which also include academic support uses and housing.
- **Non-Academic Uses:** The Trustees allow non-academic use of certain designated parcels to produce income to support the University and its programs. These policies define "non-academic uses," state Stanford's intent to request annexation for parcels on which any non-academic use is proposed and describe the City of Palo Alto's review and approval procedure.

The Land Use Policy Agreement states that the County, the City of Palo Alto, and Stanford agree that Stanford lands "... are held in perpetual trust for educational purposes..." (Policy 1-a), and is responsible for providing its own (directly or by contract) municipal services. These policies also include agreements regarding multi-jurisdictional review procedures, which are to occur prior to any project or proposal.

The 1985 Land Use Policy Agreement also calls for maintenance of a document known as the Protocol, which outlines all adopted land use designations, regulation, restrictions, and review and referral procedures for land use and development on the Stanford campus. Revisions to the Protocol are made at a staff level with the most recent version occurring in 2000, after the Board of Supervisors approved the 2000 Community Plan and 2000 General Use Permit.

This Community Plan intends to maintain and enhance the 1985 Land Use Policy Agreement. The Protocol will need to be amended according to this policy agreement to reflect the strategies and policies of the Community Plan, as amended from time to time.

In light of the multi-jurisdictional agreement, unincorporated Stanford lands are exempted by the County of Santa Clara and the Land Use Policy agreement from the following two major General Plan strategies generally applicable to urban unincorporated area:

- Unincorporated lands within city urban service areas should be annexed to the cities in whose urban service areas they are located.
- Land uses for unincorporated lands within city urban service areas should conform to the general plan of the city in whose urban service area they are located.

The needs and issues which are commonly addressed through the mechanisms of annexation, sphere of influence, and urban service area are instead addressed at Stanford through the 1985 Land Use Policy Agreement. The County normally requires most forms of new development in urban unincorporated areas to conform to the land use and density requirements of the applicable city's General Plan, with the expectation that these areas will be annexed at some point in the future.

Since academic, academic support and housing uses at Stanford are not intended for future annexation, they are not required to conform to the requirements of the City of Palo Alto. Dispensation from the Palo Alto Comprehensive Plan through the 1985 Land Use Policy Agreement also applies to the Palo Alto Urban Service Area. By agreement of all parties, it is the County General Plan, of which this Community Plan is a part, defines the extent of urban growth at Stanford.

### **Stanford Community Plan**

The County determined in 2000, that a more deliberate planning instrument is needed to provide the County with a policy framework for decisions regarding development at Stanford, when faced with regional growth pressures impacting the quality of life in local communities. The Community Plan identifies policies and establishes land use designations that reflect the character and resources of the various Stanford lands in unincorporated Santa Clara County. The Community Plan is based on the need for a Stanford-specific policy framework within the context of the County's priorities for land use, growth and development, and other planning issues as expressed in the General Plan.

No portion of the Community Plan may be modified without the approval of a majority of members of the Santa Clara County Board of Supervisors, and modification of the AGB requires a four-fifths (4/5) vote of the Board. The Community Plan offers local communities a greater specificity in the planning and decision-making processes of both Stanford and ultimately the County. The General Use Permit serves within this framework as the general approval for a specified amount of development at Stanford.

## **General Plan Policy Direction**

This Community Plan is a part of and a supplement to the Santa Clara County General Plan. It is meant to be consistent with the General Plan and refine its strategies, policies, and implementation measures as they apply to Stanford. The Community Plan particularly emphasizes and is based upon two fundamental and complementary principles expressed in the General Plan and related to growth and development:

- Compact and efficient urban development; and,
- Conservation of natural resources.

## **Stanford University Development Trends**

Ongoing expansion of academic programs and research opportunities at Stanford has also engendered a corresponding increase in building area on the campus. New development attributable to growth in academic buildings, support services, and student housing has mostly occurred since World War II.

Policy SCP-GD 12 of the 2000 Community Plan outlined that Stanford, in coordination with the County, would complete a Sustainable Development Study that would, in summary, 1) demonstrate how future development will be sited to prevent sprawl into the hillsides and provide long-term assurance of compact urban development, and 2) provide for protection and/or avoidance of sensitive plant and animal species and their habitats. This is referred to as the 2008 Sustainable Development Study (SDS). The SDS demonstrated that Stanford lands within the AGB demonstrated sufficient capacity to accommodate future campus growth through 2035. It explored long-term growth potential for Stanford lands through 2035 and demonstrated how future development could be sited within the AGB; addressed resource protection in the foothills through a sensitivity study; and identified principles and programs for environment sustainability in development and operation of the University.

The SDS demonstrated sufficient capacity of lands within Stanford's Academic Growth Boundary (AGB) to accommodate a high growth rate scenario (300,000 square feet of academic and housing per year) through 2035 without the need to adjust the AGB. Later, the County determined that current planning needs require a longer-term assessment. This resulted in the 2018 Sustainable Development Study Supplement (SDSS).

The 2018 SDSS assesses the long-term development capacity of the Stanford campus based on benchmark data from other research universities, anticipated development of surrounding communities, and resource constraints and other factors that may limit future growth. Beyond 2035, more than 500 acres of the Stanford campus have been identified that could theoretically be developed using a variety of land use intensification strategies, allowing up to 44 million square feet of total development on the campus over a period of 100 years or more.



This would nearly triple the existing density of the campus, demonstrating that campus development can be contained within the AGB over the foreseeable future, thus protecting these open space lands. The 2018 SDSS analyzed the following intensification strategies for development within the AGB:

- Redevelop Parking Facilities
- Redevelop Lower Density Areas
- Relocate Agricultural Lands and Facilities
- Relocate Athletic Facilities

The 2018 SDSS concludes that with implementation of these intensification strategies, Stanford land within the AGB could accommodate continued development at the historic rate (200,000 square feet of academic and housing per year) for 100 years or more if other constraints (including transportation capacity, water and housing supply, and wastewater treatment capacity) could be resolved. The SDSS explains that there are a variety of physical, environmental, and societal constraints that could limit future development, and it is reasonable to expect that Stanford's ability to manage these constraints, and societal and technological change would alter the rates of development outlined in the study. Both the SDSS and SDS do not approve development, but rather are planning exercises/studies.

**Table 1.2** shows the incremental and cumulative academic, academic support and student housing square footages from 1875-2021. The growth rate since 1960 has represented an average annual addition of approximately 200,000 square-feet (s.f.) of academic building area, academic support facilities, and student housing; however, this rate can vary considerably year-to-year.

**Table 1.2 Incremental and Cumulative Square Footages From 1875-2020**

<b>Time Period</b>	<b>Academic Building Area Added (square feet)</b>	<b>Cumulative Academic Building Area</b>	<b>Student Housing Area Added (square feet)</b>	<b>Cumulative Student Housing Area</b>	<b>Total Cumulative Building Area</b>
<b>1875-1960</b>	2,790,913	2,790,913	1,466,041	1,466,041	4,256,954
<b>1961-1965</b>	510,754	3,301,667	554,410	2,020,451	5,322,118
<b>1966-1970</b>	1,036,559	4,338,226	286,374	2,306,825	6,645,051
<b>1971-1975</b>	509,589	4,847,815	374,402	2,681,227	7,529,042
<b>1976-1980</b>	713,250	5,561,065	45,620	2,726,847	8,287,912
<b>1981-1985</b>	323,925	5,884,990	238,786	2,965,633	8,850,623
<b>1986-1990</b>	985,735	6,870,725	294,626	3,260,259	10,130,984
<b>1991-1995</b>	322,388	7,193,113	130,897	3,391,156	10,584,269
<b>1996-2000</b>	1,027,278	8,220,391	495,360	3,886,516	12,106,907
<b>2001-2005</b>	187,491	8,407,882	140,854	4,027,370	12,435,252
<b>2006-2010</b>	638,953	9,046,835	488,924	4,516,294	13,563,129
<b>2011-2015</b>	571,096	9,617,931	263,007	4,779,301	14,397,232
<b>2016-2020</b>	453,434	10,071,365	1,710,552	6,489,853	16,561,218
<b>2021</b>	90,221	9,981,144	N/A	6,489,853	16,470,997
<b>Total</b>	<b>9,981,144</b>		<b>6,489,853</b>		<b>16,470,997</b>

**Source:**

1875-2000 Data Obtained From Stanford University Land Use and Environmental Planning Office

2001-2021 Data Obtained From 2000 Gup Annual Report No. 21

## Zoning and General Use Permit

The General Use district or “AI” zoning district, as assigned per the County of Santa Clara Zoning Ordinance, the Special Purpose Base District, applied to Stanford University requires that a Use Permit be granted for development and operation of academic activities at Stanford. Since the 1960s, this Use Permit has been in the form of a “General Use Permit,” or GUP, for the University rather than a separate use permit for each building.

The 2000 GUP replaced the 1989 GUP after approximately 10 years, and it is the permit under which Stanford continues its academic and support uses, and authorizes the University to develop the following facilities:

- Academic and academic-support facilities (up to an additional 2,035,000 net s.f. plus the square footage remaining under the 1989 GUP)
- Childcare or community centers (an additional 40,000 s.f.)
- Temporary trailers and surge space (up to 50,000 s.f.)
- Parking structures and lots (2,300 net new parking spaces)
- Housing (3,018 housing units, increased to 4,468 housing units in 2016)

As of 2023, the 2000 GUP is still in effect, with some amendments over the past 20 years. To provide for more timely consideration and comprehensive updates, future GUPs shall be updated every 10 years, with both annual monitoring and periodic reports occurring throughout that time. The frequency and content of the periodic reports shall be determined by the GUP conditions of approval and shall serve to document and summarize development at Stanford University, GUP compliance, and indicate any recommended opportunities for amendments or clarifications of the GUP by the County. Guidelines for these reports are outlined in Strategy No. 3 of this chapter.

## Strategies, Policies, and Implementation

### Strategy No. 1: Promote compact development and conservation of natural resources through use of an Academic Growth Boundary

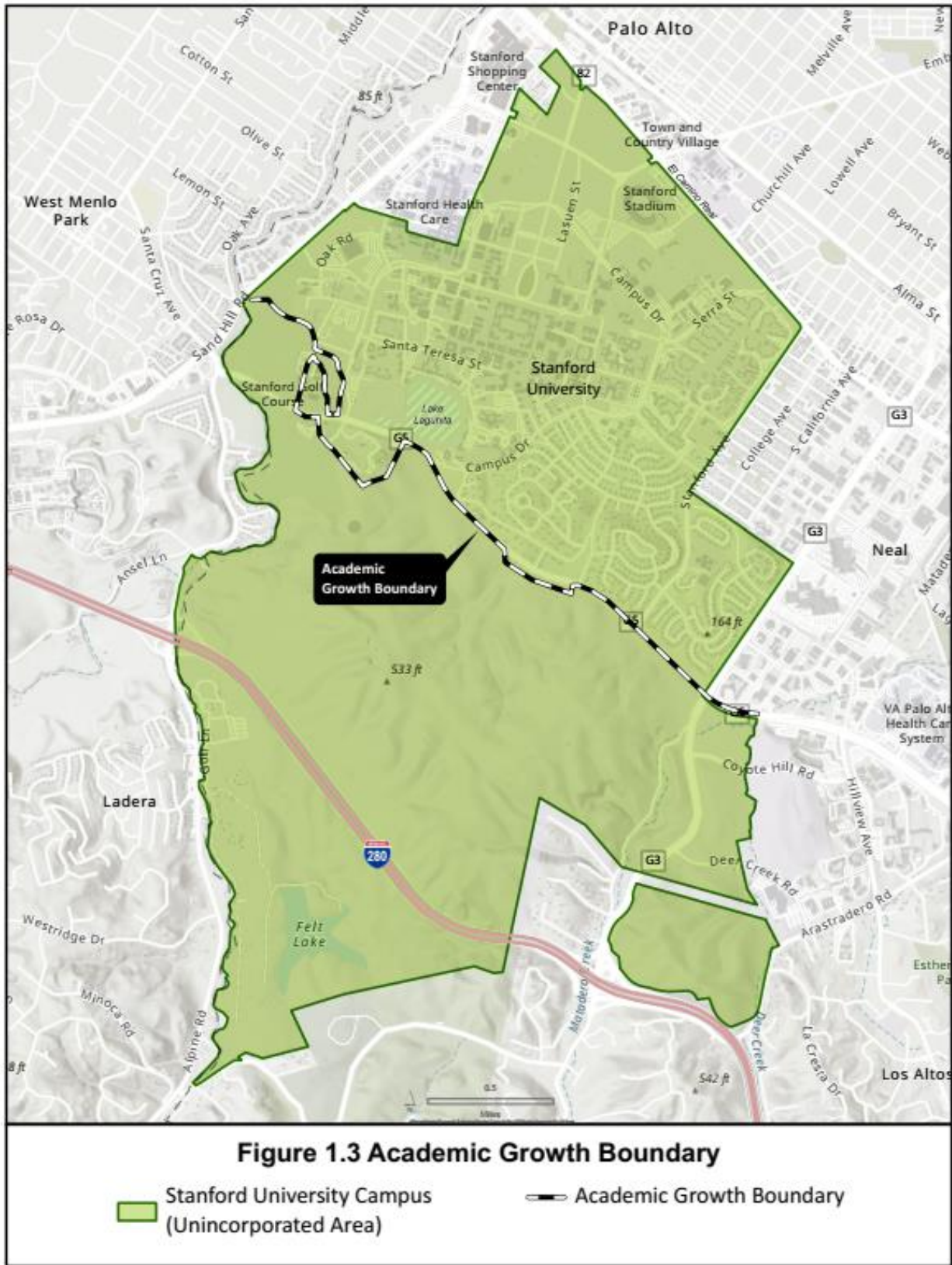
The County General Plan promotes the use of long-term urban growth boundaries by cities to delineate areas intended for future urbanization from those areas not intended for future urban use. Unlike an Urban Service Area boundary, which typically indicates the areas in which a city is able and willing to provide urban services in the short term (5 years), an urban growth boundary is meant to provide adequate land to accommodate urban development for a significantly longer time period. The delineation of urban growth boundaries can promote compact urban development and conservation of natural resources by (a) focusing development within existing urban areas and (b) excluding important habitat, hazard, or open space areas from the urban growth boundary area.

The General Plan identifies considerations for the establishment and periodic review of urban growth boundaries between the County and incorporated cities.

The Community Plan continues the use of an urban growth boundary at Stanford in the form of the “Academic Growth Boundary” (AGB), see **Figure 1.3 Academic Growth Boundary**. The concept of the AGB, as it applies to Stanford is a basic one: development must occur within the AGB, with lands outside the AGB remaining in open space.

Currently, there are 1,724 acres of land within the AGB, and 2,293 acres of land outside the AGB. The AGB is the primary mechanism for promoting compact urban development and resource conservation in the Community Plan, and it serves as the basis for associated policies throughout the plan that reinforce this basic demarcation line.

Figure 1.3 Academic Growth Boundary





## Academic Growth Boundary Location

The Academic Growth Boundary generally parallels existing developed areas (see **Figure 1.3 Academic Growth Boundary**). The purpose of this location is to direct all new development to infill sites rather than expansion areas, allowing for a compact form of urban development that promotes use of non-auto transportation modes and that conserves land and other natural resources. Over time, this location will primarily result in a central campus at Stanford that is developed more intensively than the campus today. The location of the AGB also allows for a variety of settings to meet different academic and research needs.

Throughout the Community Plan, areas within the AGB (generally north of Junipero Serra Boulevard) are considered “central campus” and the areas outside the AGB (generally south of Junipero Serra Boulevard) are considered “foothills” (see **Figure 1.2 Community Plan Locations**).

## Development Policies

Allowable development for areas within and outside the Academic Growth Boundary is defined in the Land Use chapter of the Community Plan. Different land use designations are applied in those areas that direct development to land inside the growth boundary. Essentially all uses associated with the educational and residential function of the campus are directed inside the boundary, while areas outside the boundary are reserved for open space and academic activities that require the foothill setting for their basic functioning. A major existing use which is outside the AGB is the Stanford Golf Course, which is considered an open space use under the Community Plan.

## Academic Growth Boundary Timing

The Academic Growth Boundary is intended to provide a planning boundary for academic, academic support, and housing development on the Stanford campus on a long-term basis if planned development can be accommodated within its boundaries. The land within the AGB totals 1,724 acres (developable), and the land outside the AGB totals 2,293 acres (open space). The AGB will remain in the established location for a period of at least 99 years. The Community Plan requires a super-majority vote of four-fifths (4/5) of all members of the Board of Supervisors for any modification to the AGB location during this 99-year time period, in contrast to the simple Board majority required for other General Plan amendments.

Additional growth and development beyond what is authorized in this Community Plan and the General Use Permit requires an amendment to the Community Plan and review under the California Environmental Quality Act (CEQA). The AGB should remain in its current location for a minimum of 99 years, and indefinitely so long as it provides adequate area to accommodate University development in a compact urban form. A review of the AGB should be conducted periodically to confirm that it continues to provide adequate development potential in its current location.

While the current location of the AGB should remain for a minimum of 99 years, should a request to consider an amendment sooner, the following factors shall be considered:

- University development patterns in the past and recent trends;
- Stanford growth projections and potential constraints to growth other than available area within the AGB;
- Strategies to increase efficient use of available land within the AGB;
- Feasibility of accommodating future growth within the AGB;
- Implications of AGB expansion for resource conservation.

Any modification of the AGB that would expand academic growth shall require a super-majority vote of the Board of Supervisors (four-fifths (4/5) vote required) and a finding, based on the above factors, that future development cannot be feasibly accommodated within the existing AGB.

This AGB serves several purposes, including:

- It provides for an adequate amount of additional building area to serve Stanford's needs over the long term.
- Encourages the efficient and sustainable use of Stanford lands within the AGB;
- Promotes a concentration of people and activity conducive to the use of transit and other non-automobile modes of transportation; and,
- Preserves open space, protects natural resources and scenic vistas, and avoids geologic hazards in foothill areas outside the AGB.

Actual development and population growth proposals by Stanford, both in the form of General Use Permit applications and as applications for individual building projects under the GUP, will continue to be evaluated for their environmental and policy impacts by County staff, the Planning Commission, and the Board of Supervisors.

Accommodating all future additional development within the AGB may require exploration of new areas for development in the future, such as the area of the west campus currently expected to remain undeveloped according to the development agreement between the City of Palo Alto and Stanford for the Sand Hill Road Corridor Projects.

**Table 1.3** compares campus development (cumulative academic, academic support, and student housing) within the AGB in 2000 and 2021. It does not include faculty and staff housing, or land designated to faculty and staff residential areas. Additional student housing over and above the limits in **Table 1.3** can be constructed in compliance with a certified environmental document and approved General Use Permit, and other required permits and approvals. Development in residential areas is regulated in the Community Plan under a different land use designation that defines allowable residential density for these areas.

**Table 1.3 AGB/Central Campus Development**

<b>Land Area (Excluding Faculty/Staff Residential Areas)</b>	1,370 acres
<b>Building Area (2000)</b>	12,106,907 square feet
<b>Building Area (2021)</b>	16,470,997 square feet
<b>Floor Area Ratio (2000)</b>	0.20
<b>Floor Area Ratio (2021)</b>	0.28

Source: 2000 GUP Annual Report No. 21

### **Community Plan Policies Supporting Academic Growth Boundary**

**Table 1.4** describes some means by which the Academic Growth Boundary, and the associated concepts of compact urban development and resource conservation, are reinforced in other chapters of the Community Plan.

**Table 1.4 Community Plan Reinforcement of AGB**

<b>Chapter</b>	<b>AGB Reinforcement</b>
Land Use	Land Use designations within and outside the AGB
Housing	Identification of housing sites within the AGB; promotion of higher density
Open Space	Protection of open space outside the AGB; promotion of balance between high intensity development and open space inside the AGB
Circulation	“No net new commute trips” and reverse commute trips monitoring during the peak hour and peak period, and Vehicle Miles Traveled (VMT) standards, which promote compact development to allow for use of transit, bicycle, and pedestrian networks

### **Policies**

#### **SCP-GD 1**

Establish and maintain an Academic Growth Boundary (AGB) as shown on Figure 1.3. Direct future development on Stanford lands within the AGB, consistent with the Community Plan land use designations.

#### **SCP-GD 2**

Retain the location of the AGB as shown in Figure 1.3 for a 99-year period (until December 31, 2122).

### **SCP-GD 3**

Modification of the location of the Academic Growth Boundary (AGB) within 99 years shall only be allowed upon a four-fifths vote of the Board of Supervisors based upon the following factors:

- a. Development of new academic facilities or housing cannot be feasibly accommodated within the boundaries of the existing AGB or on other property owned by Stanford in reasonable proximity to the Stanford campus.
- b. Development of new academic facilities or housing outside of the existing AGB will meet all transportation policies of the Stanford Community Plan and transportation requirements of the current General Use Permit (GUP).
- c. Adequate urban services and infrastructure can be provided to the proposed new academic facilities or housing outside of the existing AGB.
- d. Adequate water supplies are available to serve the expanded AGB without adversely affecting the water supplies to any other existing users.
- e. Implications of AGB expansion for resource conservation.

### **SCP-GD 4**

The design and intensity of growth within the Academic Growth Boundary (AGB) should facilitate transit usage. There should be a mixture of uses to allow for a high degree of pedestrian and bike trips. The location of uses should facilitate non-auto trips.

### **SCP-GD 5**

The design and intensity of development outside the Academic Growth Boundary (AGB) should be very low intensity supporting environmental restoration, utilities, academic field research, research needing remote locations, agricultural and outdoor recreational uses.

### **SCP-GD 6**

Development within the AGB may only be permitted through a General Use Permit (GUP) approved by the County. Additional growth and development within the AGB beyond what is authorized by the GUP shall not be allowed without a certified environmental document and approved GUP.

### **SCP-GD 7**

Maximum allowable development within the Community Plan area for academic and academic support spaces (including student housing) shall comply with the following, unless authorized through an amendment to this Community Plan and a concurrent General Use Permit (GUP) application: Maximum 17,300,000 square feet, which includes academic and academic support space, and student housing. The 17,300,000 square feet does not include faculty/staff housing.

## SCP-GD 8

Encourage new housing consistent with the County's list of housing opportunity sites within the Housing Element and applicable zoning.

### Implementation Measures

#### SCP-GD (i) 1

Require that Stanford, annually, prepare and submit an assessment of how annual construction from the previous year implements 'intensification strategies' to development within the Academic Growth Boundary (AGB).

## Strategy No. 2: Engage in Cooperative Planning and Implementation

The policies associated with this strategy articulate and reinforce the decision-making and cooperative arrangements among Stanford, the City of Palo Alto, and the County of Santa Clara, which have been in place for several decades. These policies clearly articulate a departure from General Plan policies for other urban unincorporated areas of the County; however, because the County's intentions regarding annexation, use regulation, and service provision differ from other urban areas, it is appropriate that specialized policies and consultation procedures apply to Stanford.

The 1985 Land Use Policy agreement stipulates that Stanford will provide all municipal services to unincorporated portions of Stanford lands, including contractual arrangements for services as needed. The Community Plan and General Use Permit create a need to ensure that service use by Stanford residents and Stanford's provision or contracting of services, are consistent with one another.

The policies also reflect the County's desire to understand the University's long-term development plans so that such development may accomplish the University's academic mission in a manner consistent with quality planning practices and the County's planning objectives. The Community Plan represents a commitment to quality stewardship of a unique regional asset.

To provide for consideration of these issues, Stanford prepared in cooperation with the County Planning Office, the 2008 Sustainable Development Study (2008 SDS) covering all of its unincorporated lands in Santa Clara County. The County then prepared the 2018 Sustainable Development Study Supplement (SDSS). Both documents were discussed earlier in this chapter.

The County may, at Stanford's expense, choose to do future analysis to supplement the SDS and the SDSS, through a major modification to the GUP and/or a community plan amendment. No CEQA analysis was done on the intensification strategies in the SDS or SDSS; therefore, the intensification strategies have not been evaluated under CEQA and should not be used to justify development, unless CEQA analysis is conducted.



## **Policies**

### **SCP-GD 9**

The use and development of Stanford lands in the unincorporated area of Santa Clara County shall be consistent with:

- the County General Plan, including this Community Plan;
- the County Zoning Ordinance;
- a Use Permit known as the Stanford University General Use Permit;
- other Use Permits and approvals as required, granted by the County within the parameters of the Zoning Ordinance and the General Use Permit; and,
- the Land Use Policy Agreement among the County, the City of Palo Alto, and Stanford University.

### **SCP-GD 10**

Academic and related development on unincorporated lands of Stanford University within Palo Alto's urban service area shall not be required to conform to the City of Palo Alto's Comprehensive Plan.

### **SCP-GD 11**

The provision of urban services to the academic lands of Stanford University shall be the responsibility of the University, based on the 1985 Land Use Policy Agreement and an evaluation prepared by the County. This may be accomplished through direct provision of such services by Stanford, payment of in-lieu or impact fees, or appropriate contractual relationships with local jurisdictions.

### **SCP-GD 12**

Annexation of Stanford lands shall be in accordance with the 1985 Land Use Policy Agreement:

- Academic land uses, and housing for faculty, staff, and students, for which the University provides or obtains its own services, will not be required to annex to a city.
- Open space and agricultural uses of land will remain unincorporated.
- Other non-academic uses of University land should be subject, in appropriate cases, to city annexation, as agreed to in the 1985 Land Use Policy Agreement.

### **SCP-GD 13**

In accordance with the adopted Land Use Policy Agreement and Protocol, provide opportunities for the City of Palo Alto to review and comment upon projects and proposals involving Stanford University that may affect the City.

#### **SCP-GD 14**

Any future Sustainable Development Study, and supplements thereof shall accomplish the following:

- Demonstrate how future development could be sited to prevent sprawl into the hillsides, contain development in clustered areas, and provide long-term assurance of compact urban development; and
- Identify concepts for protection and/ or avoidance of sensitive plant and animal species and their habitats, creeks and riparian areas, drainage areas, watersheds, scenic viewsheds, and geologic features such as steep or unstable slopes, and faults.

### **Implementation Measures**

#### **SCP-GD (i) 2**

Revise the Protocol with a report to the Board of Supervisors, which is maintained under the stipulations of the 1985 Land Use Policy Agreement, to reflect changes in land use policies and review procedures resulting from the Community Plan, and respective modifications.

#### **SCP-GD (i) 3**

Identify urban service levels and service needs of Stanford residents. If Stanford is not providing an appropriate level of urban services to its residents, require that Stanford either provide any needed municipal services, pay in-lieu fees, or contract with the appropriate agencies to provide them. Contractual agreements or services required by the County will recognize that individuals commonly use services independent of jurisdictional boundaries, that jurisdictions may employ policies that give priority to their residents for service use, and that service levels differ among jurisdictions.

#### **SCP-GD (i) 4**

Develop reimbursement agreements between the University and Palo Alto, the County and other jurisdictions for fair share costs of municipal services provided to Stanford as determined by a nexus study and based on current and projected costs for providing municipal services. Include unreimbursed services provided to properties located both on campus and those located in adjacent cities. Include reimbursement for additional expenses resulting from large University events.

#### **SCP-GD (i) 5**

Stanford shall provide and maintain a publicly available Municipal Services website that lists all of the municipal service areas identified in the Municipal Services Study, along with the appropriate contact information for those services. If multiple entities provide portions of a service, the website shall indicate that distinction and provide contact information for each provider.

**SCP-GD (i) 6**

Stanford shall provide complete service and performance metrics for all municipal services identified in Attachment A of this Community Plan, including appropriations and staffing levels, for the last three years, along with annual updates. Stanford shall provide this information on the Municipal Services website.

**SCP-GD (i) 7**

Stanford shall provide and maintain information on the Municipal Services website for each service area that includes direction on how the public may provide immediate and direct feedback to the service provider and informs the public of how to participate in, or access, any related customer satisfaction surveys. Stanford shall also provide a feedback form through the Municipal Services website where the public can provide input on municipal service concerns. Stanford shall provide a compilation of the feedback received through the Municipal Services website to the County on an annual basis.

**SCP-GD (i) 8**

The County should perform an assessment of Stanford residents' satisfaction with animal control services provided by the County.

**SCP-GD (i) 9**

Require a joint County and Stanford evaluation of survey results and analysis to determine if Stanford should contract with the City of Palo Alto, which has a fully functioning animal care system, for more convenient service to Stanford residents.

**SCP-GD (i) 10**

Stanford shall pay for their share of expenses with implementation of new, or improvements made to, fire emergency preparedness measures.

**SCP-GD (i) 11**

The County and Stanford shall collaborate to address food insecurity issues for Stanford affiliates.

**SCP-GD (i) 12**

Develop an agreement between the County, the City of Palo Alto, and Stanford for additional shared use of University fields and recreational resources.

**SCP-GD (i) 13**

Stanford shall provide fair-share maintenance funding for Palo Alto city parks used by Stanford affiliates.

#### **SCP-GD (i) 14**

The County, Stanford, and the Palo Alto Unified School District (PAUSD) should work collaboratively to identify and equalize payments in lieu of property taxes (PILOT) for any public school service provided to the Stanford community.

#### **SCP-GD (i) 15**

Stanford shall improve access and transparency of campus Childcare services by:

- Participating in the California Quality Rating and Improvement System (CA QRIS), or a nationally-recognized system by an entity such as the National Association for the Education of Young Children (NAEYC), and making this information on program quality readily available to all students, faculty, and staff;
- Increasing transparency and reducing redundancy for on-campus childcare applications;
- Conducting ongoing childcare needs assessments by an independent, outside evaluator;
- Providing greater information to Stanford affiliates about off-campus Childcare alternatives; and
- Designing Childcare benefits specifically for graduate students.

### **Strategy No. 3: Mitigate and Monitor the Impacts of Growth**

Growth under the Community Plan has the potential to result in impacts to the campus, surrounding communities and the natural environment. These impacts have been and will continue to be analyzed in accordance with the requirements of the California Environmental Quality Act (CEQA), and mitigation measures for those impacts have been identified. The policies and implementation measures in the Community Plan and the conditions of the General Use Permit (GUP) incorporate both mitigation measures for environmental impacts and other policy-level considerations.

Under the GUP, Stanford will be required to obtain additional approval for each individual building or project proposed. Depending on the nature of the project, each approval may require additional environmental review. Additional conditions will be required on a project-specific basis that are consistent with the conditions of the GUP.

Stanford's compliance with the GUP is monitored through an annual report process. The County intends to continue to monitor implementation of development under the approved GUP through an annual report prepared by the County. The preparation of the report shall be funded by Stanford. This report will need to track Stanford's compliance with each of the individual conditions of the GUP, for topics such as transportation, building area, housing, population growth, and habitat protection.

The conditions of the GUP may also require periodic reporting to document and summarize development at Stanford University, GUP compliance, and indicate any recommended opportunities for amendments or clarifications of the GUPs by the County. For example, such periodic review could enable a more immediate response to emergency declarations, compliance issues, or shifts in campus programming.

The County intends to ensure that ongoing development on the campus meets the policies under the Community Plan by requiring that Stanford demonstrate adherence to traffic and development policies prior to development permitted under future General Use Permits. It is important that future monitoring and reporting procedures be both verifiable and understandable. An additional aspect of monitoring will be ongoing communication between the County Planning Office and the local community regarding development at Stanford.

## **Policies**

### **SCP-GD 15**

Stanford University will mitigate environmental impacts of its growth and development in accordance with the conditions of the General Use Permit (GUP) and mitigation monitoring program for the Community Plan and GUP.

### **SCP-GD 16**

Review Stanford's compliance with mitigation requirements and conditions of approval of the General Use Permit (GUP) through the mitigation monitoring reporting program and annual reporting.

### **SCP-GD 17**

Promote ongoing exchange of information between the County and the local community regarding development activity at Stanford through the Community Resource Group (CRG).

### **SCP-GD 18**

The General Use Permit (GUP) shall be updated every 10 years with periodic progress reports as determined by the GUP conditions of approval. The Board of Supervisors may consider setting a different timeframe during its review of the next GUP application.



## **Implementation Measures**

### **SCP-GD (i) 16**

Prepare annual reports to evaluate Stanford's compliance with the conditions of the General Use Permit (GUP) and progress towards meeting the implementation recommendations of the Community Plan. Preparation of the report shall be funded by Stanford. The annual report shall be presented to the Community Resource Group (CRG) at its first quarterly meeting each year, and shall then be submitted to the Planning Commission no later than June of each year. The County will establish other periodic reviews through the GUP to ensure compliance with all conditions of approval and mitigation measures.

### **SCP-GD (i) 17**

Through the General Use Permit (GUP) conditions of approval, establish a procedure and mechanism to implement phased approvals (for example, every 5 years) within the GUP approval.

### **SCP-GD (i) 18**

Review and evaluate applications for individual building projects under the General Use Permit (GUP), and any other use permit applications, for consistency with the Community Plan, the conditions of the GUP, and all other relevant County policies and requirements.

### **SCP-GD (i) 19**

Maintain a Community Resource Group (CRG) comprised of 8-12 persons. The CRG members shall be selected by the County Department Planning and Development in consultation with the County Supervisor for the Fifth Supervisorial District. The CRG will meet at least quarterly and will serve as a mechanism for exchange of information and perspectives on Stanford development issues but will have no formal role as an advisory body.

### **SCP-GD (i) 20**

The County shall prepare periodic reports of the General Use Permit (GUP) to document and summarize development at Stanford University, GUP compliance, and indicate any recommended opportunities for amendments or clarifications of the GUP by the County.

# Land Use

## Chapter Summary

Land use, and the policies that govern it, contribute fundamentally to the character and form of a community. At Stanford, the combination and arrangement of land uses form a community that is self-contained for many of its functions, but which is also part of a larger regional setting. At the countywide level, institutions like Stanford are designated as “Major Educational and Institutional Uses” on the General Plan Land Use Map. This Land Use Plan designation differentiates universities and similar institutions from other major categories or classifications of land use. Policy R-LU 63 of the County’s General Plan states the description and intent of the institutional designation:

*The Major Educational and Institutional Uses designation is applied to lands belonging to a university, religious order, or private institution, used as a place of learning, an academic reserve for future university use, a seminary, or a research facility.*

With the establishment of the Community Plan, Stanford lands are further divided into a set of sub-categories of land use. Designations applied to lands within the Academic Growth Boundary (AGB) include:

- Academic Campus,
- Campus Open Space,
- Campus Residential - Low Density,
- Campus Residential - Medium Density, and
- Public School.

Two additional designations have been established to apply to lands outside the Academic Growth Boundary:

- Open Space/Field Research, and
- Special Conservation Area.

Consistent with the format of the General Plan’s Land Use Chapter, the policies in this chapter provide basic descriptions of the purpose of each land use designation, policy statements indicating the range of allowable uses, and development-related policies. Other strategies and policies for the overall form and extent of campus growth are contained in the Growth and Development chapter.

Stanford was founded as and remains a residential university, with academic, residential, athletic, campus serving commercial, and a variety of other land uses. Maintaining appropriate and adequate arrangements and inter-relationships between these uses, correlated with the transportation network, is as essential to the function and well-being of the University as an entity as it is to the function of any urban area. Furthermore, the built and open space environments of the campus lands complement each other and function together to define the campus' unique sense of place. As Stanford grows and changes over time and campus land use intensifies, it is important to maintain these inter-relationships and guide development. The most appropriate and optimal development locations are selected without sacrificing those qualities and areas which contribute to the quality of life on Stanford University land.

## Background

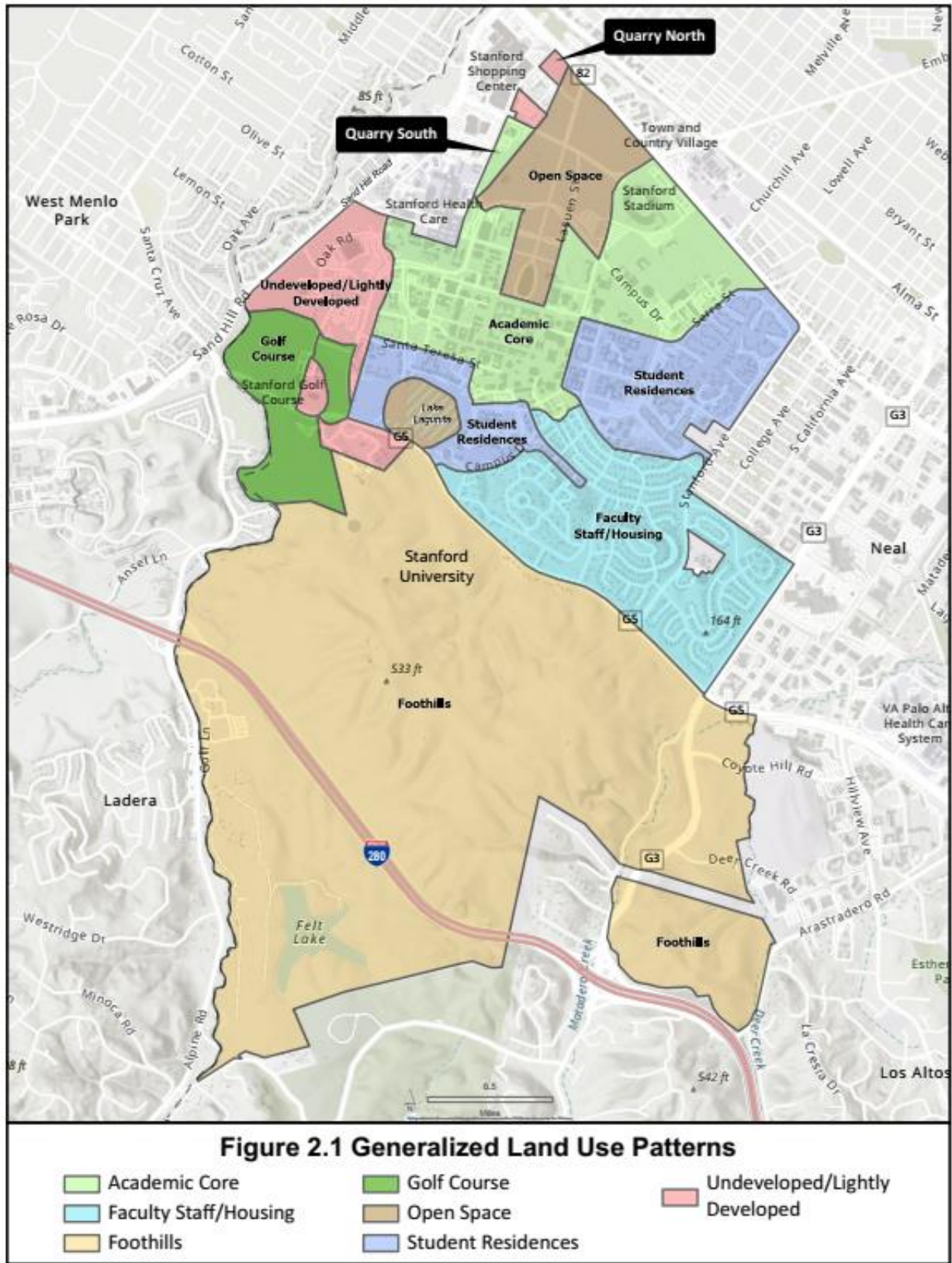
Academic buildings and land uses, student and faculty/staff residences, student and community services, and other types of land uses are closely integrated on the Stanford campus. However, the Campus does contain a distinguishable land use pattern, based on the original layout for the overall campus design (see **Figure 2.1 Generalized Land Use Pattern**).

- The developed portion of the campus is primarily contained between Junipero Serra Boulevard and El Camino Real.
- Uses within the central campus are in a generally concentric arrangement of residences around a core of academic buildings.
- Uses with a close relationship to one another, such as athletic facilities or science and medical buildings, are clustered together.
- Faculty and staff housing are concentrated in the southeastern corner of the central campus.
- Despite the highly developed nature of most of the central campus, important and extensive open space or undeveloped areas remain.

The clearest land use distinction on unincorporated Stanford land in Santa Clara County is between the developed central campus and the largely undeveloped foothills. Historically, these two areas were assigned separate land use designations, or sub-categories of the Major Educational and Institutional Uses designation, which previously served as the only differentiation in land use policy for the campus at the General Plan level.

This approach provided extensive flexibility for Stanford to arrange and integrate different land uses, particularly in the central campus, but it did not recognize the many different land uses which do exist at Stanford. Nor did it necessarily provide much certainty or future guidance regarding long term land use patterns, which is the principal purpose of land use elements in general plans.

Figure 2.1 Generalized Land Use Pattern



The concept contained in the Community Plan builds upon the former approach by establishing an Academic Growth Boundary (AGB) to reinforce the distinction between the urbanized campus area and the undeveloped portions of the foothill lands, while maintaining a significant amount of flexibility for the use of lands within the AGB. The Land Use Diagram indicating the locations of the land use designations is included as **Figure 2.2 Land Use Designations**.

The Community Plan Area is also characterized by its ten Development Districts. As illustrated in **Figure 2.3 Development Districts**, the Foothills district is the only district outside of the AGB. The other nine Development Districts are inside the AGB. The Development Districts are as follows:

- West Campus
- Lathrop
- Foothills
- Lagunita
- Campus Center
- Quarry
- Arboretum
- DAPER & Administrative
- East Campus
- San Juan

The building area allocated for each development district is outlined in the General Use Permit. As discussed in the Growth and Development chapter, the current cumulative building area on campus (cumulative academic, academic support, and student housing) is approximately 16.5 million gross square feet (s.f.).



Figure 2.2 Land Use Designations

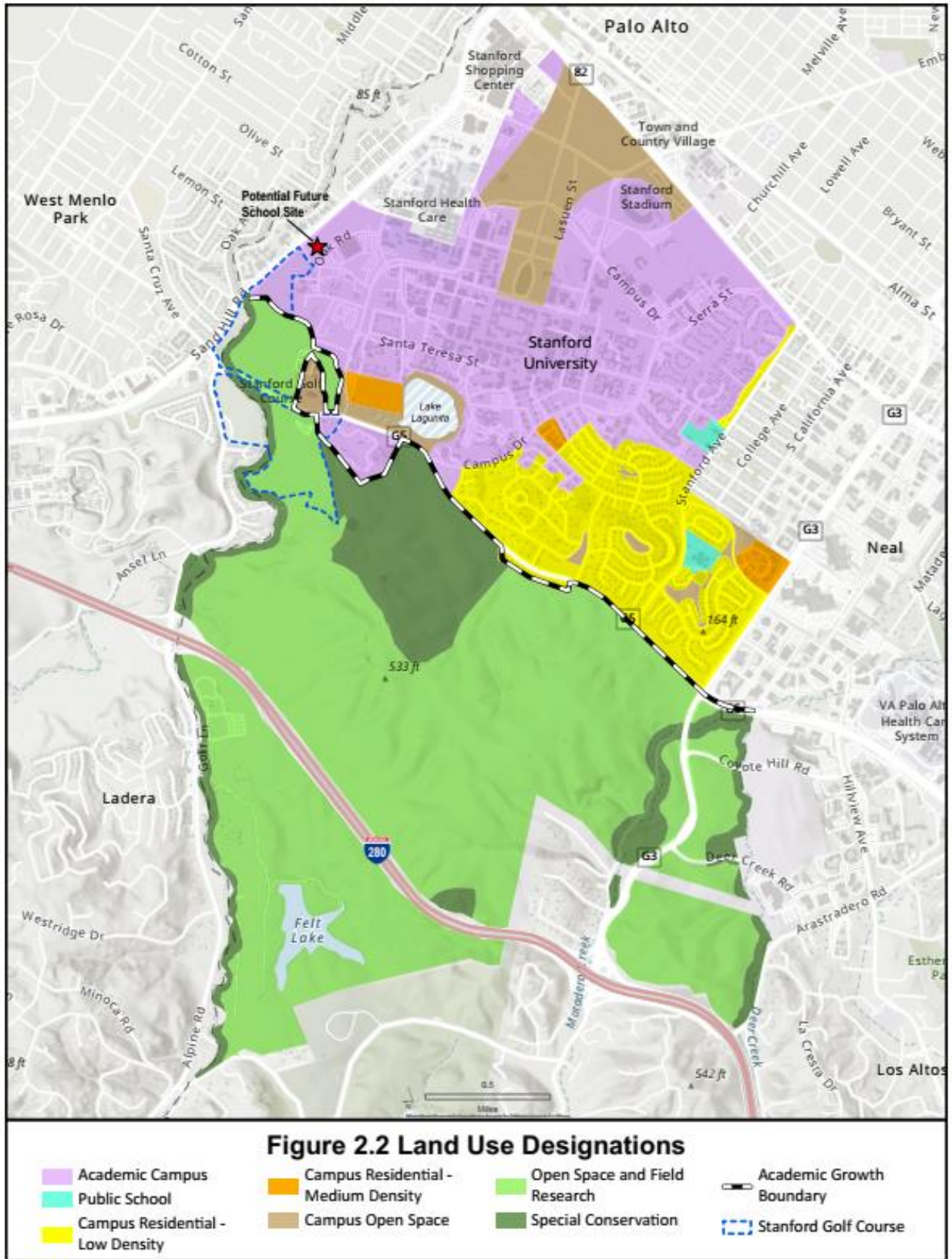
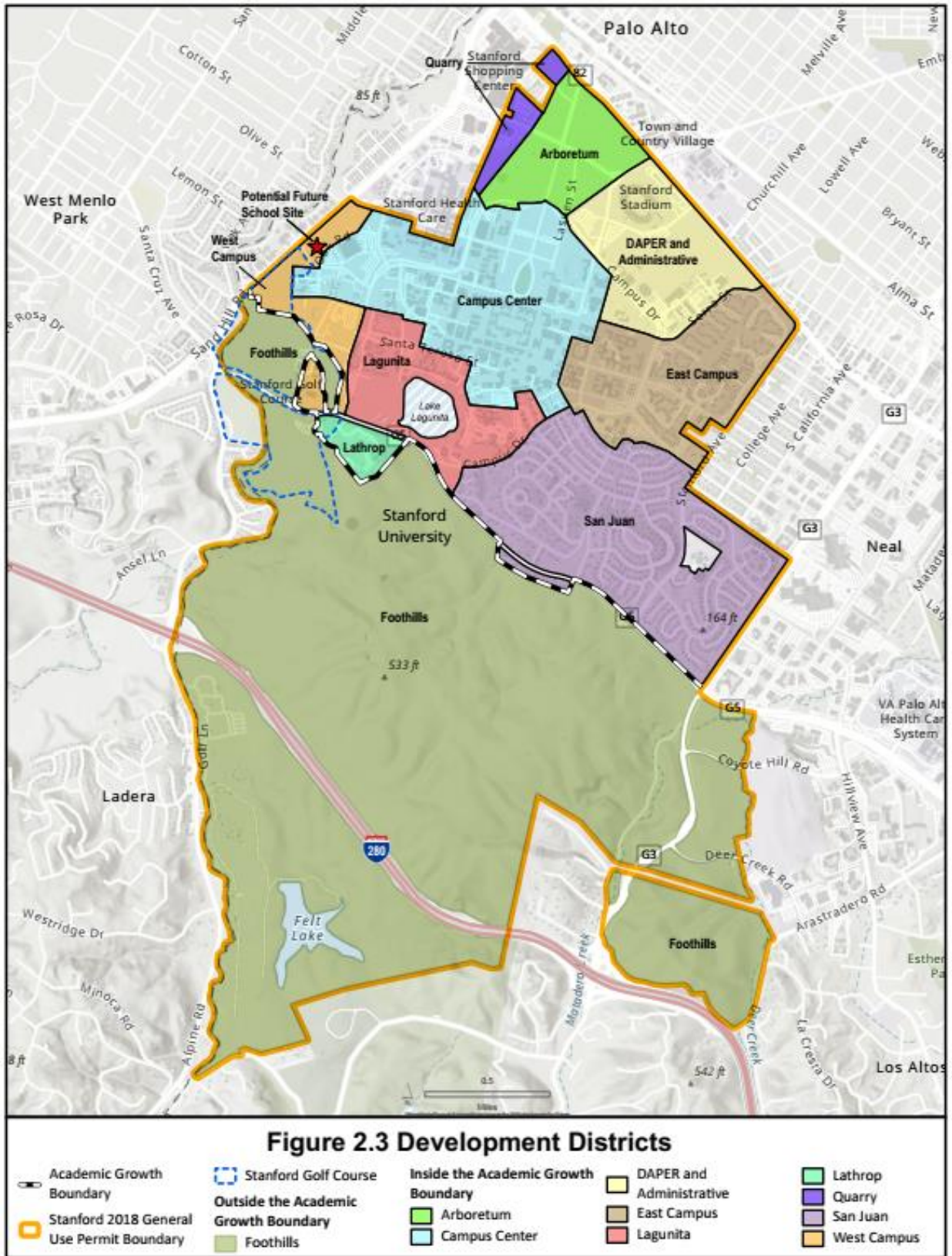


Figure 2.3 Development Districts





## Lands inside the AGB

Within the Academic Growth Boundary (AGB), the land use designations balance the need to maintain the proximity of related uses with the desire to conserve the character of some individual land uses and areas. Consequently, the concept of an “Academic Campus” land use designation, which encompasses areas with academic buildings, student housing, and student and academic support services, is retained from the previous designations. Additional designations for faculty/staff housing and for protected central campus open space are also provided. On-campus public schools are recognized as a separate land use.

Population density inside the AGB is indirectly controlled through limits on academic and residential development. In faculty/staff residential areas, residential population densities are provided through the Campus Residential-Low Density and Campus Residential-Medium Density land use designations. Based on 2021 Census data for Santa Clara County, the persons per household (2016-2020) average is 2.97. The Low-Density designation limits development to eight units per acre, which results in approximately 24 people per acre. The Medium Density designation limits development to 15 units per acre, which results in approximately 45 people per acre.

Higher density faculty/staff housing may be developed within the Academic Campus areas at densities that are 30 du/ac or higher. The Housing Element identifies specific opportunity sites where this housing is planned for. Near transit stations, development is anticipated in a range of 60 to 100 du/ac.

## Lands outside the AGB

The land use designation established for this portion of Stanford lands reflects its general open space character. In keeping with the concept of the Academic Growth Boundary (AGB), the Community Plan Growth and Development policies, the Stanford University Habitat Conservation Plan, and the zoning designations under the County Zoning Ordinance, future use of this area is limited to field research-related activities, utilities and public facilities, grazing and other low-intensity agricultural uses, specialized facilities and installations that require a remote setting, and open space uses. In keeping with the concept of the Academic Growth Boundary and the Community Plan Growth and Development policies, the future use of this area is limited to field research related activities and open space uses. Greater emphasis is placed on conserving the open space character of the land, and an additional designation, Special Conservation Areas, provides even greater protection to the most environmentally sensitive areas.

The individual land use plan designations that follow describe the uses that are allowed on Stanford lands. The designations correspond to those depicted on **Figure 2.2 – Land Use Designations**. All allowable uses are consistent with the policies of the 1985 Land Use Policy Agreement between the County, the City of Palo Alto, and Stanford.

## **Statement of standards of population density and building intensity for lands outside the AGB:**

For lands outside the AGB, the population density and building intensity are expected to be very low due to the nature of the uses allowed in the Open Space/Field Research and Special Conservation Area designations. The maximum allowable development on these lands is 15,000 sf. No additional population is included within these land use designations because it is already included in the population totals for land designations inside the AGB.

## **Strategies, Policies, and Implementations**

### **Academic Campus**

The Academic Campus designation applies to lands in current or intended academic use. Academic use includes both facilities used for teaching or research activities and the wide range of uses which support academic activity, such as administrative offices, athletic facilities, student housing, and student and administrative support services. This designation is meant to provide Stanford with the opportunity to locate these uses in relation to one another according to the University's programmatic needs.

### **Policies**

#### **SCP-LU 1**

Allowable uses within the Academic Campus designation include:

- a. instruction and research (including teaching hospital facilities);
- b. administrative facilities;
- c. high density housing intended for students, postgraduate fellows, and medical residents;
- d. high density housing for Stanford faculty/ staff, and other workers;
- e. athletics, physical education, and recreation facilities;
- f. support services (such as childcare facilities, the bookstore, and the post office);
- g. infrastructure, storage, and maintenance facilities;
- h. cultural facilities associated with the University; and,
- i. non-profit research institutions with close academic ties to the University.

## **SCP-LU 2**

Development intensity of individual facilities may vary with the type of allowed use. Maximum cumulative development amount permitted through the Stanford General Use Permit (GUP) and Community Plan (See Growth and Development Chapter) is 17,300,000 square feet of academic development. Any additional increase in development would require a Community Plan amendment and concurrent GUP application. Housing for faculty and staff at densities above 30 units per acre may be developed within the Academic Campus land use designation. Actual project approvals occur upon approval of Architectural and Site Approval (ASA), unless it is located in a designated housing opportunity site in the Housing Element.

## **SCP-LU 3**

The County should periodically evaluate zoning designations to ensure that they conform and are consistent with Community Plan policies and land use designations.

## **SCP-LU 4**

Development must be consistent with the 1985 Land Use Policy Agreement, amended as needed, with regard to allowable uses and provision of services.

## **SCP-LU 5**

Maintain appropriate clustering requirements for development in the Lathrop Development District, located south of Junipero Serra Boulevard, within the Academic Growth Boundary (AGB). Development in the Lathrop Development District shall occur only on the lands identified as Lathrop District Developable Areas. Structures which are not for the purpose of occupancy, such as fences or golf course access bridges, may be permitted in other areas of the Lathrop Development District in accordance with the requirements of the County of Santa Clara Zoning Ordinance.

## **Implementation Measures**

### **SCP-LU (i) 1**

The County will periodically evaluate the use of the A1, General Use Zoning District for areas under the Academic Campus land use designation as an appropriate implementation tool in relation to allowable uses, development standards, and land use intensity controls, and conditions governed further through the General Use Permit (GUP).

### **SCP-LU (i) 2**

Revise the County of Santa Clara Zoning Ordinance to allow faculty/staff residential development on Stanford lands zoned A1 at a minimum density of 30 du/ac.

### **SCP-LU (i) 3**

The County shall evaluate and recommend amendments to the Lathrop District Developable Areas boundary to include lands that have been disturbed by prior development or site improvement.

## **Campus Residential – Low Density (CR-L)**

The Campus Residential-Low Density designation applies to lands immediately adjacent to the Academic Campus area that have a low-density residential character and are used for housing University faculty, staff, and other workers. These areas are an important housing resource that allows Stanford faculty, staff, and other workers to live in close proximity to the academic portions of the campus. This designation applies to existing low-density residential neighborhoods and to new residential areas where lower density of development is desired for compatibility with adjacent development.

### **Policies**

#### **SCP-LU 6**

Uses within the Campus Residential-Low Density designation shall be primarily residential, with some provision for limited commercial services oriented to the residential neighborhood. Allowable uses include:

- a. Single-family housing, duplexes, and townhouses available as residences for University faculty/staff and other workers
- b. Residential support services such as childcare or convenience commercial facilities at a neighborhood-serving level.

#### **SCP-LU 7**

Residential density up to 8 units per acre is permitted within the Campus Residential-Low Density designation, with potential for clustering individual units to provide public or private open space. This residential density yields a population density up to 19 persons per acre.

#### **SCP-LU 8**

Residential support services shall be of a scale consistent with and appropriate to the surrounding neighborhood.

### **Implementation Measures**

#### **SCP-LU (i) 4**

Evaluate existing zoning designations and related development standards to ensure Community Plan goals are being implemented for the Campus Residential-Low Density areas, known as the faculty/staff subdivision or San Juan Residential District. The County shall evaluate the land development regulations and zoning as appropriate.



## **Campus Residential – Medium Density (CR-M)**

The Campus Residential-Medium Density designation applies to lands immediately adjacent to the Academic Campus area that have a higher density residential character and are used for housing University faculty, staff and other workers. These areas are an important housing resource that provides housing opportunities for faculty, staff and other workers and which promote the more efficient use of land for residential development. This designation applies primarily to new residential areas which provide opportunities for a more compact development pattern than the existing single-family residential neighborhoods.

### **SCP-LU 9**

Uses in the Campus Residential-Medium Density designation shall primarily be residential, supplemented by services oriented to the residential neighborhood. Allowable uses include:

- a. Single-family housing, duplexes, townhouses, condominiums, flats, and apartments available to University faculty, staff and other workers.
- b. Residential support services such as childcare, recreation services, or convenience commercial facilities.

### **SCP-LU 10**

Residential density between 8 and 15 units per acre is permitted within the Campus Residential-Medium Density designation, with potential for clustering individual units to provide public or private open space.

### **SCP-LU 11**

Residential support services shall be of a scale consistent with and appropriate to the surrounding neighborhood.

## **Implementation Measures**

None

## **Campus Open Space (COS)**

The Campus Open Space designation applies to open spaces essential to the historic form and character of the campus (including Palm Drive, the Oval, the Arboretum, the Red Barn area, and Lake Lagunita). It also applies to designated parks within residential neighborhoods and to important and substantial resource conservation areas such as wetlands or habitat conservation areas within the central campus.

### **Policies**

#### **SCP-LU 12**

Uses in the Campus Open Space designation must retain land in open space and must be consistent with the individual character of each area included in this designation. These areas shall be maintained as park-like areas, unimproved open space, landscape buffers, riparian corridors, and conservation areas. Temporary activities of a limited nature that are in keeping with the open space character are also permitted. Examples include limited duration special events or general recreational activities, such as those regularly occurring in the Oval area.

#### **SCP-LU 13**

No new permanent buildings or structures for occupancy are permitted within the Campus Open Space designation. Any non-conforming uses or buildings are subject to the County Code Chapter 4.50. Landscaping structures or features, such as walls, fences, arbors, fountains, and statues or other forms of public art, are allowed.

#### **SCP-LU 14**

Temporary structures associated with appropriate temporary activities may be allowed within the Campus Open Space designation, such as concession stands, tents, or similar structures. However, no temporary use which results in the degradation of biological resources is permitted.

### **Implementation Measures**

#### **SCP-LU (i) 5**

The County will enact and apply a new appropriate zoning district for Campus Open Space that will be applied to the Arboretum area covered under the Campus Open Space land use designation.

#### **SCP-LU (i) 6**

In coordination with the County, require that Stanford prepare and submit to the Board of Supervisors for approval a study to document historic landscapes on campus.

## **Public School (PS)**

The Public School (PS) designation applies to land used as public schools, such as the Lucille M. Nixon and Escondido Elementary schools located on the Stanford Campus.

The “potential future public school site” has been relocated from its prior planned location outside of the Academic Growth Boundary (AGB), to be inside the AGB on the west side of campus. The “potential future public school site” location is in the West Campus Development District, not including any portion of the Stanford Golf Course (see **Figure 2.3 Development Districts**). This area is within the AGB proximate to faculty, staff, postgraduate fellows, and other worker housing locations to facilitate planning for a new public elementary school, as appropriate.

### **Policies**

#### **SCP-LU 15**

The use of these Public School (PS) lands is limited to public school facilities, including appropriate buildings, parking, playgrounds, and athletics fields.

#### **SCP-LU 16**

Stanford and the appropriate school district shall make every effort to develop school sites in an efficient manner consistent with the environmental setting of the site.

#### **SCP-LU 17**

Stanford and each school district shall seek and promote opportunities for cooperative use of facilities, as appropriate.

#### **SCP-LU 18**

If Stanford land used for a public school is no longer required for school use at any time in the future, it may be converted to another use by the University if redesignated for the intended use through the Community Plan amendment process.

#### **SCP-LU 19**

The potential future school site in the West Campus Development District, but not within the Stanford Golf Course, may be relocated with approval by the Board of Supervisors if the need for a school at a different location of the campus is warranted by future development patterns.

## **Implementation Measures**

### **SCP-LU (i) 7**

Stanford may develop the area designated for use as a future public school for a non-public school purpose if the Board of Supervisors finds:

- a. Stanford has demonstrated its use of the area is necessary in order to implement the development authorized under the applicable General Use Permit (GUP);
- b. No other areas within the Academic Growth Boundary (AGB) are feasible for such development; and
- c. Another area within the AGB has been designated for future use as a public school by the Board.

## **Open Space and Field Research (OS/FR)**

The Open Space and Field Research designation applies to undeveloped lands outside the Academic Growth Boundary (AGB). These lands are important for their environmental resources and for their role in creating an open space setting for the campus and the region. They also serve as a resource for field research and research related activities dependent on the undeveloped foothill environment.

## **Policies**

### **SCP-LU 20**

Lands within the Open Space and Field Research designation are not eligible for uses other than those permitted under the policies of this land use designation except through a Community Plan amendment to change the land use designation of the property. If any of the Open Space and Field Research lands are proposed for a land use designation which is intended to be applied only to lands within the Academic Growth Boundary (AGB), the proposed amendment must include a modification of the AGB. Proposals to modify the AGB must be in accordance with the applicable policies governing its amendment contained within the Growth and Development Chapter.

### **SCP-LU 21**

The Open Space and Field Research designation does not include lands in which special biological resources or hazards exist and which are inappropriate for development under County, State, or Federal laws, regulations, or policies (see Special Conservation Areas designation).

### **SCP-LU 22**

Allowable land uses within the Open Space and Field Research designation include:

- a. field study research activities;
- b. utility infrastructure and public facilities, consistent with the use classification of “Utilities and Public Facilities,” and in keeping with the predominantly natural appearance of the foothill setting;
- c. grazing and other low intensity agricultural uses;
- d. outdoor recreational activities which are consistent with protection of environmental resources (e.g., not construction or operation of a new golf course) and with appropriate policies regarding foothill access;
- e. specialized facilities and installations that by their nature require a remote or natural setting, such as astronomical or other antennae installations or structures accessory to field research activities;
- f. commercial antennas, wireless telecommunications facilities, and composting and wood recycling facilities; and,
- g. environmental restoration.

### **SCP-LU 23**

No permanent buildings or structures are allowed within the Open Space and Field Research designation, other than utility infrastructure and a limited number of small, specialized facilities or installations that support permitted or existing activities, or require a remote, natural setting and cannot be feasibly located within the Academic Growth Boundary (AGB).

### **SCP-LU 24**

Existing non-conforming uses within the Open Space and Field Research designation, are allowed to remain, in accordance with the County’s requirements for non-conforming structures. Remodeling or reconstruction of existing facilities after a natural disaster may be allowed, but no further expansion is permitted. Modification of the configuration of the golf course generally within its existing boundaries is permitted.

### **SCP-LU 25**

Allowable development shall be clustered as feasible within the Open Space and Field Research designation, primarily in areas with low environmental sensitivity, to preserve expanses of open space, environmentally sensitive areas, and scenic vistas.

### **Implementation Measures**

None

## **Special Conservation Area**

The Special Conservation Areas designation applies to lands south of Junipero Serra Boulevard which is deemed unsuitable for development due to natural resource and development constraints. Accordingly, no physical development may occur in these areas other than that which supports conservation efforts or is required for safety reasons, or as authorized by the County Zoning Ordinance.

### **Policies**

#### **SCP-LU 26**

The Special Conservation Areas include areas with the following environmental constraints:

- a. Steep or unstable slopes;
- b. Seismic or other geologic hazard zones;
- c. Riparian areas extending 150 feet from the top of creek banks; and,
- d. Sensitive habitat areas, particularly for special status species.

#### **SCP-LU 27**

The use of the Special Conservation Areas is limited to conservation activities and habitat management, field environmental studies, and appropriate agricultural uses. Recreational use may be allowed if it is consistent with the particular environmental constraints of an area. Access for recreational use may be restricted.

#### **SCP-LU 28**

No new permanent development in the form of buildings or structures is allowed within the Special Conservation Areas, other than safety facilities, utilities, construction, modification, and maintenance of improvements to support conservation efforts, small markers or other identifiers indicating the presence of sensitive resources (such as Native American remains), new signs, bridges, and fences provided that they are constructed in accordance with the terms of the Stanford University Special Conservation Area Plan and Stanford University Habitat Conservation Plan. Existing non-conforming uses are allowed to remain, in accordance with the County's requirements for non-conforming structures.

#### **SCP-LU 29**

Promote management of the Special Conservation Areas to protect natural habitats, preserve sensitive species, promote public safety, and minimize human impacts in conformance with the Stanford University Special Conservation Area Plan approved by the County and the requirements of the Stanford University Habitat Conservation Plan approved by the U.S. Fish and Wildlife Service.



## **Implementation Measures**

### **SCP-LU (i) 8**

The County will review and comment on any proposed program, planned activities, or policy for recreational access to lands within the Special Conservation Areas designation in a manner consistent with the provisions of Stanford University Special Conservation Area Plan, the requirements of the SCA – Special Conservation Areas Zoning District, and the Stanford University Habitat Conservation Plan.

# Housing

## Chapter Summary

Housing is a regional issue of concern. It is of great importance throughout Santa Clara County and specifically to undergraduate students, graduate students, faculty, staff, postgraduate fellows, other workers, and the community at large in the northern portion of Santa Clara County, where Stanford University is located. Countywide, housing supply and affordability issues have been of paramount importance for decades. The effect of the housing market on Stanford as well as the university's effect on local housing demand is of particular concern to the County and the University for several reasons.

- The University has a large population of graduate students with very limited incomes who are at a severe disadvantage in the local rental market.
- Faculty, staff, postgraduate fellows, and other workers must compete for rental and ownership housing with other area residents. Unlike other Santa Clara County industries, where an individual employer is likely to compete with other local employers for workers, Stanford is competing for its faculty and staff with other universities which are generally located in areas with more affordable housing markets. Stanford considers the housing market as a significant obstacle in its recruiting and retention efforts for graduate students, faculty and staff.
- Undergraduate students, graduate students, faculty, staff, postgraduate fellows, and other workers that cannot afford to live in the vicinity of the Stanford campus must often commute very long distances to their classes and jobs at Stanford, leading to worsening traffic and greater personal stress affecting social and behavioral health.

Since its founding, Stanford University has taken steps to address the housing needs of its students and faculty many times, due to the limitations of the housing market and Stanford's nature as a residential university. However, as the limited housing supply and decreasing affordability trends within Santa Clara County and the Stanford area intensify, it is in the interest of both Stanford University and the County to ensure balance between housing demand and supply as it pertains to Stanford University's development.

Stanford lands represent one of the most important opportunities in the County to improve the balance between jobs and housing, due to the potential to provide housing on Stanford lands for University populations. While housing on Stanford lands is directly accessible only to Stanford undergraduate and graduate students, faculty, staff, postgraduate fellows, and other workers, it also benefits the wider community by relieving the additional pressure Stanford affiliates would otherwise place on the local housing market. To that end, development of additional housing on the campus is a fundamental policy direction of this Community Plan.

A primary means of ensuring the construction of needed housing identified in the Community Plan is a linkage policy that requires housing to be developed concurrent with or prior to new academic and academic support development. The linkage policy is essential for mitigating housing impacts of anticipated development as well as meeting transportation-related goals described in the Circulation Chapter.

The following strategies are included in the Stanford Community Plan to address Stanford's housing needs and to indicate the overall policy direction for Stanford with respect to housing issues:

**Strategy No. 1: Increase the Supply and Affordability of Housing**

- Sub-Strategy 1A:** Plan for an Adequate and Balanced Housing Supply
- Sub-Strategy 1B:** Facilitate and Expedite Needed Residential Development
- Sub-Strategy 1C:** Augment Affordability Programs and Funding

**Strategy No. 2: Ensure Compatibility of New Housing with Existing Neighborhoods**

## **Background**

### **Housing Demand and Supply – Regional and Countywide Historical Context**

The issues of housing supply and affordability at the countywide level are discussed extensively in the County's Housing Element. Housing issues have been at the forefront of the County's planning challenges for decades. At the heart of the County's housing issues is the jobs/housing imbalance. This imbalance is a multi-faceted problem which involves inadequate numbers of dwelling units to serve those who work and wish to reside in the County, housing which is not affordable to many households, and increasing distances between housing and job locations at a countywide and regional level.

As documented by the Association of Bay Area Governments (ABAG), the Midpeninsula subregion also has a substantial imbalance between jobs and housing. These problems are particularly acute in the northern portion of Santa Clara County and the southern portion of San Mateo County, which have long been particularly job-rich areas. The adverse social, economic, and environmental effects of this general imbalance are well-recognized and are compounded by each cycle of major economic growth. This imbalance between jobs and housing acutely affects both the local housing market and traffic congestion.

Increased employment and population growth has also resulted in ever increasing prices of market rate housing. This has resulted in the need for new housing at all income levels. According to the Regional Housing Needs Allocation (RHNA) provided by ABAG per California law, there is a severe shortage of housing in both Santa Clara County and the region that is affordable to Extremely Low-, Very Low-, Low-, and Moderate-Income Households. As a result, the Santa Clara County 2023-2031 Housing Element must meet a RHNA requirement of 3,125 housing units, with specific below market affordability requirements of 508 new Moderate-Income units, 477 new Low-Income units, and 828 new Very Low-Income units within the unincorporated area of the County.

Like other jurisdictions in the region, the County has adopted local land use ordinances to encourage the production of affordable housing. In September 2018, the County of Santa Clara adopted the Inclusionary Housing Zoning Ordinance (NS-1200.368) and the Affordable Housing Impact Mitigation Fee Ordinance (NS-300.929).

These ordinances specifically relate to Stanford University by requiring that a portion of all market rate housing constructed on-campus be set aside for restricted affordable housing and that the County receive payment of a housing impact fee on each net new square foot of academic and academic support development. The collection of this impact fee would fund new affordable housing projects within a 6-mile radius of the campus. However, this Community Plan update takes a different approach and includes a policy to require all new affordable housing be located on campus or nearby Stanford lands (SCP-H (i) 5) due to the historic inability of in-lieu fees to provide adequate resources to fully fund new housing developments.

The strategies in the Community Plan go beyond the policies and programs of the County's Housing Element because they focus on the specific supply and demand issues of housing Stanford faculty, staff, postgraduate fellows, other workers, undergraduate students, and graduate students.

To address these issues, the County's Housing Element includes three locations on the Stanford campus as housing opportunity sites, Quarry-El Camino, Quarry-Arboretum and Escondido Village. These sites provide an opportunity for Stanford to locate housing consistent with the County's Housing Element and not preclude the identification of other future locations for housing on campus and inside the Academic Growth Boundary (AGB), particularly within the Academic Campus land use designation. The Community Plan may also be amended to identify other areas appropriate for housing development over time to facilitate appropriate housing development.

## Housing in the Stanford Area

The communities within the Stanford area include the cities of Palo Alto, Menlo Park, Atherton, Woodside, Portola Valley, Los Altos Hills, Los Altos, East Palo Alto, Redwood City, and Mountain View. Stanford students, faculty, staff, postgraduate fellows, and other workers who seek housing in this area encounter common challenges: high housing costs and relatively few housing units available for sale or for rent. High household incomes, good school districts, climate, geographic location, amenities, and other factors make the Stanford area one of the most desirable and in-demand locations in the Bay Area.

The jobs/housing imbalance that is characteristic of Silicon Valley and Santa Clara County, as documented by ABAG, is most acute in the Stanford area. During the 1990s, when Silicon Valley experienced a notably strong economic growth cycle, the number of jobs in Palo Alto and Menlo Park increased by approximately 12,000, while the number of housing units increased by only 1,060 (California Department of Finance, ABAG Projections 2000). Since that time, the incomes and wealth creation associated with the high technology industries in this area have continued to result in an ability and willingness to pay the high market values for housing prices in these highly desirable communities.

Collectively the ongoing scarcity of housing, combined with very high prices, and limited affordable homes, are compelling factors in the housing situation for the Stanford area. Most recent data from the U.S. Census and the U.S. Bureau of Labor Statistics indicate that from 2010 to 2021, the population of Santa Clara County increased by 5.8% (from 1,781,642 to 1,885,508), employment increased by 18.2% (from 837,900 to 1,005,900), and the number of housing units increased by 9.7% (from 631,920 to 693,240). This information indicates that the jobs/housing imbalance Countywide increased from 1.36 jobs per housing unit in 2010 to 1.47 jobs per housing unit in 2021.

Other communities within the Midpeninsula subregion also continue to experience a substantial imbalance between jobs and housing. According to Housing Needs Data Packets prepared by ABAG and the Metropolitan Transportation Commission (MTC), all of the communities within the Stanford area experienced an increase in their jobs/housing imbalance between 2002 and 2018, with the exception of Los Altos Hills. The two cities in this area with the highest ratio of jobs to households in 2018 were Palo Alto (4.0 jobs per household) and Menlo Park (3.72 jobs per household), followed closely by Mountain View (2.74 jobs per household) and Redwood City (2.35 jobs per household). This imbalance between jobs and housing acutely affects both the local housing market and traffic congestion.

These basic calculations are intended to convey only an approximate indication of the severity of the jobs/housing imbalance within the Stanford area. The ratios address only those units needed by those employed in Santa Clara County, and do not include students and retirees. Even as the Silicon Valley economy experiences fluctuations in growth trends, vacancy rates in the County remain low. Furthermore, availability of for sale housing remains far below demand.

The housing supply and affordability concerns that are experienced countywide have a particularly strong effect on Stanford lands due to the high housing prices in the immediate area, the large population of students with low incomes, and Stanford's need to compete for faculty with universities in more affordable parts of the country.

As a residential university, Stanford has historically provided two types of housing on Stanford lands; housing for students and housing for faculty and staff. While this effort has helped to alleviate some of the university's housing challenges, as discussed throughout this chapter further efforts are necessary. Off-campus housing solutions pursued by the University reduces housing opportunities in the nearby communities by removing new or existing units from the local market and restricting most Stanford-owned housing to Stanford affiliates only.

Additional housing on the campus not only provides housing near jobs and augments the local and regional housing supply, but it also contributes to regional commute trip reduction and enables Stanford to meet transportation-related goals described in the Circulation chapter.

### **Current Campus Housing Types – Student Housing**

Student housing for undergraduates and graduate students is closely integrated within the campus core, reflecting the University's programmatic emphasis on an educational environment that extends to the residences.

As indicated in **Table 3.1**, the number of total students, including undergraduates and graduates, that reside on campus has grown by approximately 65% since the issuance of the 1989 GUP to 2021. This increase reflects growth attributed to the development of new housing units, as well as re-configuring existing units to accommodate a greater number of units. As described in the Growth and Development chapter, academic building area, academic support facilities, and student housing has cumulatively grown at an average rate of approximately 200,000 s.f. per year since 1960. The average annual addition of student housing since 1960 is 82,400 s.f.

The 2000 GUP authorized the University to develop 3,018 housing units with allocations for faculty and staff, graduate and undergraduate students, and postdoctoral and medical students. This was increased to 4,468 units in 2016.



**Table 3.1 Number of Students Residing on Campus**

1989	2000	2015	2018	2021
8,422	9,353	11,402	11,822	13,855

Source: Stanford University Land Use and Environmental Planning Office, Faculty Staff Housing, and Residential and Dining Enterprises.

Undergraduates primarily live in dormitories, remain on campus only during the academic year and will likely relocate to new residences the following term. According to Stanford’s published facts about campus life, entering undergraduate first-year students are guaranteed housing for four years. Of these eligible students, approximately 97% reside in one of the university’s 80 housing facilities.

Graduate students include individuals enrolled in a doctoral program, an academic master’s degree program, or a professional degree program. These students live primarily in apartments and often occupy their apartments year-round for multiple years while they obtain their degrees. Graduate student housing is mostly concentrated on the east side of campus, primarily in Escondido Village. Stanford’s published inventory of on- and off-campus graduate student housing as of the 2021-22 academic year is estimated to accommodate approximately 80% of reported graduate student enrollment.

At the direction of the County Board of Supervisors, the County commissioned a study on Graduate Student Housing Affordability by Keyser Marston Associates (“KMA Study”) during the preparation of this Community Plan. The KMA study, released in May 2022, evaluated whether there is evidence of housing affordability challenges among Stanford’s graduate student population. The KMA study found that Stanford provides housing to approximately 75% of its graduate students and that while 85% of housing spaces were rented within a range of affordability to low- and moderate-income households, some students still reported experiencing affordability challenges.

As of the 2021-22 academic year, Stanford has a published inventory of approximately 7,158 housing spaces available to graduate students. Spaces reserved specifically for graduate students in single-person households represent approximately 83% (5,946) of the total. Of these spaces, approximately 80% are private rooms in a shared apartment and 20% are studio units designated for single person occupancy. The remaining inventory of graduate housing spaces, approximately 17%, consist of the entire housing unit and are reserved for couples and households with children under 18.

The KMA study estimated that during the 2021-22 academic year 70% of Stanford's graduate student population were single person households, while the remaining 30% were multi-person households, including singles with children and couples with or without children. This estimation reflects a misalignment between supply and demand of housing for Stanford graduate students, relative to household size, where the demand for multi-person family housing spaces is nearly double the supply. As a result, Stanford graduate student households that reflect couples or families with children under 18, may not be adequately served by university housing and must compete for other limited low-income housing opportunities in the Bay Area housing market and commute from more affordable areas.

To offset housing costs the KMA study acknowledges that Stanford provides "gap" funding sources including Stanford's Graduate Family Grant and Graduate Student Aid Fund programs. However, even after considering gap funding sources of up to \$20,000; approximately 14% of graduate students with children have an estimated gap in resources to meet living expenses triple that of graduate students without children.

In response to the findings from the KMA study this chapter includes policies that locates all future student housing on campus, encourages on-campus housing for graduate students with children, and encourages the expansion of financial assistance for graduate students with special consideration for households with children.

### **Current Campus Housing Types – Faculty and Staff Housing**

On-campus housing opportunities are also available to active faculty, retired faculty, surviving faculty spouses, and senior staff. Currently, 937 on-campus units are available to faculty and staff. Most of these homes are situated in the San Juan neighborhood, located at the southeast area of the campus. These homes are on long term ground leases of 51 to 99 years, whereby the occupants lease the land and improvements from the University. The University also gives priority to faculty and staff for rental housing it owns outside unincorporated Santa Clara County, including Stanford West Apartments, Vi at Palo Alto Senior Housing, and Mayfield Place.

Stanford affiliates not housed on the campus or in other Stanford housing seek private market housing and commute to the campus from surrounding communities and from all over the Bay Area. For faculty, staff, postgraduate fellows, and other workers who live off campus, but are not accommodated by Stanford housing, the high rents in neighboring Palo Alto and Menlo Park may mean they must look further out to find housing. This chapter requires housing designated for extremely low-, very low-, low-, moderate-income and above moderate-income persons that are faculty, staff, postgraduate fellows, other workers.

## Housing Affordability Programs

As noted above, the University must follow the County's Affordable Housing Impact Mitigation Fee Ordinance (NS-300.929) and Inclusionary Housing Zoning Ordinance (NS-1200.368). In addition to these local mandates, the University has a variety of housing assistance loan programs intended to address the difference in the cost of home ownership in the Stanford area and areas in proximity to other major research universities. These programs include the Graduate Family Grant and Graduate Student Aid Fund programs, previously noted. The University is aware of the ongoing regional affordability challenges and their impact on the Stanford community. In an effort to learn more about these challenges Stanford formed an Affordability Task Force in 2018 with the goal to gather community input through surveys and focus groups. As a result of this effort, in January 2022, Stanford announced the following affordability enhancements:

- A 3% increase to base-salary for regular benefits-eligible faculty and staff, to take effect on March 1, 2022.
- A \$2,750 (max) stipend for regular benefits-eligible staff earning a base pay of \$150,000 or less, annually, that were required to be physically present and perform all work duties on-site between February and December 2022.
- Subsidies covering up to 100% coverage of Cardinal Care health insurance for eligible graduate students supported on assistantships and fellowships, effective September 2022. (Coverage cost \$6,192 for the 2021-22 term.)
- An increase to the maximum annual family grant for eligible graduate students from \$15,000 to \$20,000, and the amount for postdocs from \$5,000 to \$10,000.
- Launch of a pilot program that provides short-term market-rate rental housing for newly arriving postdoctoral scholars. The furnished housing units are at the Hawthorne Apartments in Palo Alto and available for 2-month minimum and 4-month maximum leases.
- A series of one-time grants for early-career, pre-tenure faculty with financial needs. The support options include an additional year on the tenure clock, a "post-pandemic leave quarter," a taxable salary grant up to \$30,000 for childcare expenses incurred during the pandemic, or research grants up to \$100,000.
- Enhancements to faculty housing assistance, including the Housing Allowance Program and the Restricted Ground Lease purchase program.

While these initiatives are improvements to Stanford's gap financing efforts, the challenge of meeting the university's demand for housing and minimizing the effects of increasing competition for market rate and affordable units in neighboring communities remain. The Strategies, Policies, and Implementation Measures that follow in this chapter aim to address these persistent housing and affordability issues directly on Stanford lands in unincorporated Santa Clara County.

## Strategies, Policies and Implementation

### Strategy No. 1: Increase the Supply and Affordability of Housing

This strategy expresses the fundamental objective of the Community Plan to increase the supply of housing on campus to meet the need generated by the Stanford University institution of higher learning and research. The Stanford campus provides a significant opportunity for new housing to be planned for and developed in Santa Clara County. Accordingly, Strategy No. 1 aligns with the strategies contained within the Housing Element for countywide housing objective. These strategies involve planning for housing, facilitating and expediting construction of needed housing, and augmenting affordability programs.

#### Linkage Policy

The principal means for assuring that additional housing supply is constructed in a timely manner is referred to as the “linkage policy” in the Community Plan. This policy requires that Stanford construct significant proportions of the potential housing units identified within the Housing Chapter of the Community Plan prior to, or concurrently with, approved increases in academic and academic support space. Additionally, a portion of that housing would be affordable to households at moderate-income levels and below.

To implement the linkage policy, the General Use Permit (GUP), which serves to implement the Community Plan, would contain specific provisions to require that approval of proposed increases in net new academic and academic support space may be granted only on condition that a specified amount and type of housing supply will be constructed concurrently. Such mechanisms ensure that approvals for net new academic and academic support space do not exacerbate already significant housing supply and affordability deficiencies in the regional housing market.

A linkage policy also ensures that Stanford can achieve transportation-related Community Plan goals and performance standards. Appropriate housing/academic linkage requirements are determined through the preparation of a nexus study upon submittal of a GUP application that would accomplish the following:

- Identify the increase in campus population with the proposed GUP application, including all faculty, staff, postgraduate fellows, other workers, undergraduate students, and graduate students.
- Estimate the number of housing units or spaces needed to accommodate the increased population.
- Estimate the distribution of household incomes for each major category of added population.
- Determine the number of housing units by affordability category and type that are needed to accommodate the added worker and student population.

The County acknowledges that there are a number of contingencies which can affect the feasibility of completing housing development within a specific time period. Funding, competing academic priorities, and other factors play a role. It is also important for the County to acknowledge its responsibility for housing development in the timely processing and approval of housing proposals.

However, in light of overall housing trends and County General Plan policy, it is essential that the County assure that housing development proposed in the Community Plan be constructed in manner concurrent with academic and academic support development approved through the life of the GUP.

Approval of significant new academic and academic support development without such requirements could exacerbate housing shortages by adding population without augmenting housing supply. Furthermore, existing General Plan policies call upon all jurisdictions in the County to address the continuing imbalances between employment-related land uses and housing. Providing housing commensurate with new academic and academic support development is therefore consistent with the policies of the Countywide Growth and Development Chapter and Housing Chapter of the General Plan.

### ***Sub-Strategy No. 1A: Plan for an Adequate and Balanced Housing Supply***

Planning for an adequate and balanced housing supply involves providing both diverse housing types that meet various Stanford population needs, as well as housing that is affordable to target populations.

Strategy No. 1A emphasizes the importance of designating lands for housing development, as a necessary precursor to actual housing production. The diversity of the Stanford community and the groups in need of housing requires a multifaceted approach to housing development that enhances Stanford's already varied housing stock.

Traditionally, only students and faculty have been prioritized for housing. However, the Community Plan requires increased housing supply to undergraduate and graduate students, post-doctoral fellows, faculty, staff, and other workers, upon further development of the campus.

This Community Plan further recognizes the differing characteristics between student housing and faculty/staff housing. Student housing consists of dormitories and apartments that surround the academic portions of the campus. Its occupants are more transitional, with students moving on a frequent basis and heavily involved in activities throughout the campus. The nature of this housing is reflected in its inclusion in the Academic Campus land use designation, which allows for flexibility in the location and use of new student housing by not separating it from the academic and academic support uses. As the Community Plan calls for more housing of additional workers who were not previously provided for, the plan is flexible on the location of housing within the Academic Campus area for housing of all types.

In contrast to the existing student housing areas, the San Juan District faculty and staff residential area more closely reflects a traditional residential neighborhood. The density of most single-family portions of the San Juan District is generally 3-5 units per acre, although some lots exceed one acre in size. There are two multi-family condominium complexes of approximately 15 units per acre and one complex of attached townhomes. Faculty and staff housing on the campus is almost entirely owner-occupied through long-term leases. New housing for staff and other workers will be encouraged in both the existing residential areas as well as suitable locations throughout the campus.

In recognition of the University and residents' interest in maintaining the character of the San Juan District residential area, the Community Plan contains separate land use designations for these portions of the campus to distinguish them from the academic core area. These two land use designations for low- and medium-density housing allow up to 8 and 15 units per acre, respectively (see Land Use Chapter). Higher density faculty/staff housing is a permitted use in the Academic Campus land use designation. With these designations, the Community Plan emphasizes higher densities than that characteristic of existing single-family areas in an effort to use land more efficiently and promote production of more affordable housing.

## **Policies**

### **SCP-H 1**

Promote diverse housing types and supply adequate housing to meet the needs of faculty, staff, postgraduate fellows, other workers, undergraduate students, and graduate students.

### **SCP-H 2**

Designate sufficient campus land at minimum densities for faculty, staff, postgraduate fellows, other workers, undergraduate students, and graduate students.

### **SCP-H 3**

Maintain and increase undergraduate and graduate student housing as an integral part of the Academic Campus land use designation, and locate the housing in proximity to related schools, colleges, and research facilities.

### **SCP-H 4**

Within the Academic Campus land use designation, develop housing at minimum densities (30 du/ac) that makes efficient use of land and enhances the affordability of housing.



#### **SCP-H 5**

Balance net new academic and academic support development with adequate housing, as documented by a linkage policy nexus study. The County shall contract with a third-party to provide a housing-linkage nexus study upon submittal of a General Use Permit (GUP) application by the University. The nexus study shall be completed before the GUP application is approved. The information provided in the nexus study shall be consistent with the requests in the GUP application and shall demonstrate that net new academic and academic support space do not exacerbate the housing supply imbalance and affordability deficiencies in the regional housing market. The nexus study may include innovative operational and academic strategies, such as, but not limited to, remote and telework practices. The study shall provide a timeline for the phasing of proposed development. A certificate of completion for any non-residential academic development may not be issued until the required housing units intended to balance said non-residential academic development receive a final inspection.

#### **SCP-H 6**

A nexus study shall determine required housing based on the income-levels of anticipated employees, including “post-docs” and graduate students.

### **Implementation Measures**

#### **SCP-H (i) 1**

Ensure that faculty, staff, postgraduate fellows, other worker, undergraduate student, and graduate student housing is included as a permitted use both within the Academic Campus land use designation and on Stanford lands zoned A1.

#### **SCP-H (i) 2**

Affordable housing provided over and above a nexus study determined amount is encouraged. Future General Use Permit (GUP) conditions of approval shall allow for additional affordable units over the required housing linkage policy units by providing a corresponding reduction in the number of required market rate units, as long as the total number of identified linkage policy units are provided for all net square feet of new academic and academic support uses.

#### **SCP-H (i) 3**

All required housing, both affordable and market rate, is required to be located on campus or on contiguous original Stanford land grant Stanford lands. A minimum of 70 percent of the housing shall be on campus and up to 30 percent may be off campus on original land grant Stanford lands in Palo Alto contiguous to the Community Plan Area.

#### **SCP-H (i) 4**

Provide 100 percent of all needed housing for new undergraduate and graduate students. Any graduate student housing unit that is not utilized by graduate students, may become available to faculty, staff, postgraduate fellows, and other workers.

#### **SCP-H (i) 5**

In order to implement the linkage policy, a major modification of the General Use Permit (GUP) shall include any increase in net square feet of new academic and academic support uses that would generate an increase in housing demand. The number of housing units required shall be determined by a nexus study and based on the proposed new academic and academic support development.

#### **SCP-H (i) 6**

Amend the Zoning Ordinance to establish housing at minimum densities (30 du/ac) within the Academic Campus land use designation, to make efficient use of land and enhances the affordability of housing.

### ***Sub-Strategy No. 1B: Facilitate and Expedite Needed Residential Development***

Once residential development sites are planned, the timing and enabling of housing construction are important considerations. Identifying land available for potential housing development provides the basis for housing development. Additional mechanisms at both the plan and implementation levels are needed to ensure that designated sites are developed in a timely manner. A variety of tools are available to facilitate and expedite needed residential development.

#### **Streamlining Permit Applications and Approval Processes**

Streamlining of environmental review and permitting processes are two means of facilitating housing development. The Community Plan and General Use Permit (GUP) afford the opportunity to minimize subsequent environmental review of individual projects by means of a program-level EIR to provide initial CEQA review for anticipated projects.

Time savings may also be achieved in the permitting of individual projects by coordinating to ensure that applications for Architecture and Site Approval (ASA) or for building permits are as complete and adequate as possible upon submittal. Other streamlining mechanisms are aimed at facilitating the planning and approval of new housing; these would include measures allowing consideration of General Plan amendments for additional areas within the AGB to be designated Campus Residential without first gaining Board of Supervisors approval of consideration of the amendment, as is required for other types of General Plan amendments. The Board would retain authority for final approval of the General Plan amendment.

#### **Housing in Other Jurisdictions**

The location of required housing for faculty, staff, postgraduate fellows, and other workers on the Stanford campus promotes a development pattern that minimizes commute trips to and from the University and promotes pedestrian and bicycle trips.

Although the County of Santa Clara does not regulate the use of Stanford-owned land that is

located within the surrounding cities or San Mateo County, the County recognizes that housing on Stanford lands in other jurisdictions can contribute to the supply of housing needed to serve the growing University population.

The 1985 Land Use Policy Agreement calls for a coordinated planning approach for addressing issues that affect the County, the City of Palo Alto, and the University. The Community Plan policies are meant to prioritize housing development on the Stanford University campus, and encourage housing development on all appropriate original land grant Stanford lands within the City of Palo Alto.

## **Policies**

### **SCP-H 7**

Recognize the connection between expansion of academic and academic support facilities and the resultant increase in housing demand, as well as the immediate need for additional on-campus housing to meet current demand.

### **SCP- H 8**

Through the General Use Permit (GUP), permit development of additional on-campus housing, including housing for designated extremely low-, very low-, low-, moderate-income and above moderate-income persons and faculty, staff, postgraduate fellows, other workers, undergraduate students, and graduate students.

### **SCP - H 9**

Require that new housing development occur commensurate with population growth and academic and academics support development approvals on campus. Through future major modifications of a General Use Permit (GUP), establish conditions of approval to require construction of needed housing prior to or concurrently with approval for increases in academic and academic support space.

### **SCP - H 10**

Streamline the review and approval of housing projects to the extent possible, consistent with County standards, land use policy, and State law.

### **SCP - H 11**

Support Stanford's efforts to develop housing on original land grant Stanford lands contiguous with the Community Plan Area, particularly housing specifically targeted to Stanford faculty, staff, postgraduate fellows, other workers, undergraduate students, and graduate students.

## **Implementation Measures**

### **SCP-H (i) 7**

Streamline and formalize permit processes, such as pre-design consultations where appropriate, and develop new mechanisms which would help facilitate County review.

**SCP-H (i) 8**

The County shall develop a streamlined approval process for on-campus housing within ½-mile of a public transit station or high-capacity transit stop.

**SCP-H (i) 9**

Allow County Planning Office consideration of applications for General Plan amendments to create additional Campus Residential areas inside the Academic Growth Boundary (AGB) without requiring that the Board approve the consideration in the annual General Plan amendment review process. The Board will retain authority for final approval of the General Plan amendment, after considering the Planning Commission's recommendation.

**SCP-H (i) 10**

Ministerially approve housing identified in previous and current Housing Elements as a designated opportunity site, based on objective standards. Quarry-El Camino, Quarry-Arboretum, and Escondido Village are identified in the previous and current Housing Elements.

**SCP-H (i) 11**

Adopt objective design guidelines for areas on campus eligible for streamlined permitting review.

**SCP-H (i) 12**

The County should consider more extensive utilization of on-campus permit streamlining, after implementing and processing streamlined projects identified as housing opportunity sites in the SCP and a certified Housing Element.

***Sub-Strategy No. 1C: Augment Affordability Programs and Funding***

For housing to meet the needs of its target population, its price must be consistent with the income of the intended residents. Affordability needs vary greatly with the population served; housing can be considered "affordable" by accepted regulatory agencies but can still be too expensive for specific populations. Graduate students and postdoctoral fellows at Stanford are two groups whose incomes are substantially below the County median used to calculate affordability for purposes of government-sponsored housing assistance programs.

To provide an affordability analysis of graduate student housing, the KMA study reviewed data from a 2021 survey ("2021 SCC Survey") conducted by the Public Consulting Group on behalf of the County and in coordination with the Stanford Graduate Student Council, as well as other graduate student organizations. A key finding from the KMA study indicates that 5% of graduate student respondents (approximately 470 students) reported having inadequate resources for housing and other living expenses after potential additional gap funding sources were considered. The KMA study attributes this difficulty in gap financing to the size of the gap, estimated to exceed \$20,000 per year.

All of Stanford's graduate student housing is affordable to the target population according to the standards related to area median income (AMI) supplied by the Federal government. The income range of this population requires that housing be priced accordingly, or it could not be occupied by graduate students. As a result, construction of new housing for this population is subsidized by the University.

Planning for this housing must consider the affordability implications for both the graduate students and the University.

The postgraduate fellow/hospital resident housing program also serves a population earning substantially less than the AMI.

Promotion of housing affordability is more complex for faculty and staff housing as it has traditionally been developed by the University. One important mechanism for promoting housing affordability is to reduce the cost of each unit through higher density, which is planned for most of the new housing under this plan. Additionally, restricted affordable ownership units can be created to serve multiple households over time, with re-sales completed to eligible buyers.

One approach to meeting this challenge would involve increasing the supply of on-campus rental housing for faculty, staff, postgraduate fellows, and other workers. Stanford could therefore control future rental prices and could retain a portion of such rental housing for designated populations.

Stanford's residential assistance programs are an important mechanism to make housing more affordable for eligible participants purchasing homes. The eligibility requirements for these programs reflect the University's educational objectives in their availability to faculty and senior staff.

However, other staff members, many of whom are in need of more affordable housing, are not currently eligible for the programs or for on-campus housing. New policies under this Community Plan update require that new housing be provided at all staff levels based on the new housing demand created by net new campus development.

As indicated above, the University's primary means of promoting housing affordability to faculty and staff is in the form of subsidies and direct financial assistance. Increasing assistance levels to those for whom assistance has traditionally been provided, such as faculty, or extending financial assistance to those who have not previously been eligible for such programs, will require a substantial increase in funding to those programs. The County supports increasing the funding of such programs by Stanford to the maximum extent feasible.

## **Policies**

### **SCP-H 12**

Encourage Stanford to continue and expand financial assistance for housing to faculty, staff, postgraduate fellows, and other workers through Stanford rental and home buying assistance.

### **SCP-H 13**

Encourage Stanford to continue and expand financial assistance for graduate students with special consideration for households with children, such as the Graduate Family Grant Program.

### **SCP-H 14**

Promote the creation of new affordable housing:

- Continue the Housing Linkage Policy,
- Maintain and implement the County's Inclusionary Housing Ordinance,
- Utilize the General Use Permit (GUP) process for Stanford to provide a sufficient level of affordable housing to meet the affordable housing needs generated by new academic and academic support development and housing; and,
- Require the construction of affordable housing to satisfy the Housing Linkage Policy for development demands of new academic and academic support space.

### **SCP-H 15**

Encourage Stanford to extend housing assistance to faculty, staff, postgraduate fellows, and other workers which have previously not been eligible.

### **SCP-H 16**

Provide on-campus housing eligibility to populations which have previously not been eligible (i.e. staff, postgraduate fellows, other workers, etc.).

## **Implementation Measures**

### **SCP-H (i) 13**

Monitor the effectiveness of housing ordinances and update as needed:

- Inclusionary Housing for the unincorporated areas of the County of Santa Clara Ordinance
- Stanford University Community Plan Area Academic Space Affordable Housing Impact Mitigation Fee Ordinance



**SCP-H (i) 14**

Amend the *Affordable Housing Impact Mitigation Fee Ordinance* to make it operative upon action by the Board of Supervisors.

**SCP-H (i) 15**

Encourage Stanford to provide more affordable on-campus housing for graduate students with children.

**SCP-H (i) 16**

Stanford should work with the Stanford Graduate Student Council (GSC) on increased transit access. Examples of this include: Restore and expand Marguerite services, including Shopping Express and late-night N & O lines; provide graduate student access to fully subsidized Caltrain monthly passes and the VTA SmartPass.

**SCP-H (i) 17**

Stanford should, in collaboration with the Graduate Student Council (GSC), conduct additional surveys of graduate students. Examples of this include: food insecurity, housing affordability, childcare and other costs of living.

## **Strategy No. 2: Ensure Compatibility of New Housing with Existing Neighborhoods**

The residential character of both the faculty and staff neighborhoods and the student housing areas contributes to the quality and experience of the campus and the lives of its residents. Residential neighborhoods are characterized not only by the houses or apartments they contain, but by their range of uses and the visual character provided by the density, infrastructure, and landscaping. Easy access to complementary services and transportation facilities can help reduce the need for automobile trips and enhance the residential quality of life.

Some important discussion topics regarding the residential character of the campus have been raised by various groups of campus residents.

- Existing residential neighborhoods present opportunities to expand the range of uses in easy walking distance of residents. Places to shop for food, eat, gather, and engage in recreational activities could have the dual benefits of reducing the need to travel off campus and enhancing the quality of life for residents. For example, graduate students have expressed a desire for retail and recreational opportunities convenient to their residential areas. Childcare is also a valued amenity that can directly serve neighborhood residents. Due to the potential of such amenities to reduce automobile trips, policies promoting an appropriate mix of such uses are also included in the Circulation Chapter.
- Parks and open spaces in the faculty/staff areas are a valued recreational amenity for

many residents. These spaces are considered neighborhood institutions but have had no formal protection from development in the past. For more detailed discussion of parks, refer to the Open Space Chapter.

- Accessory Dwelling Units (ADUs). The County strongly encourages the University to allow and encourage the construction of ADUs within the Faculty Staff Subdivision in order to expand the range of housing types available on campus.

These considerations are also applicable to new residential areas, which provide enhanced opportunities for the creation of a balanced range of uses in neighborhoods. The importance of ensuring compatibility of new housing with existing neighborhoods also extends to the off-campus environs of Palo Alto and Menlo Park located immediately adjacent to many of the potential sites for new or more intensely developed housing on the periphery of the campus.

With respect to potential new or additional housing along the Palo Alto and Menlo Park interfaces, community members have raised concerns about maintaining compatibility with existing neighborhoods and preservation of campus open space or athletic fields that serves as a buffer between the University and the surrounding community. As with the concerns expressed by campus residents, the concerns of off-campus residents, too, need to be balanced with the imperative to increase the housing supply and affordability.

## **Policies**

### **SCP-H 17**

Promote location of housing near compatible and neighborhood-serving support uses and facilities, such as childcare, shopping, and recreation, and promote inclusion of such neighborhood-serving facilities in housing areas, as appropriate.

### **SCP-H 18**

Plan housing areas and facilities to take maximum advantage of existing and planned transportation services and facilities.

### **SCP-H 19**

Balance concerns about the compatibility of new housing development in existing neighborhoods with the need for increased housing supply and improved affordability.

### **SCP-H 20**

Provide and maintain parks and related facilities in Campus Residential areas (see Open Space Chapter).

**SCP-H 21**

In collaboration with Stanford, encourage compatibility of new housing development on the campus periphery with existing off-campus neighborhoods through application of design guidelines that incorporate objective development standards consistent with State law.

**SCP-H 22**

Seek a balance between the maintenance of open space buffers between the University and Menlo Park and Palo Alto with the need for increased housing supply and improved affordability (see Open Space Chapter).

**SCP-H 23**

Accessory Dwelling Units (ADUs). Encourage Stanford to allow ADUs within the Faculty/Staff Subdivision consistent with state law and County regulations.

**Implementation Measures****SCP-H (i) 18**

Maintain zoning consistent with the General Plan designations for Campus Residential- Low Density and Campus Residential-Moderate Density (see Land Use). This zoning may incorporate height limits, lot coverage, floor area ratios, lot widths/frontage and setback requirements for appropriate compatibility with both existing Stanford neighborhoods and adjacent off-campus neighborhoods in Palo Alto and Menlo Park.

**SCP-H (i) 19**

Identify opportunities for creation of compact development through the provision of childcare facilities, commercial services, recreational facilities, or other types of support services in residential areas.

**SCP-H (i) 20**

Encourage and, as appropriate, require support facilities to serve residential areas through both the General Use Permit (GUP) and through subsequent review of individual projects based on the findings of a feasibility study, with the methodology defined by the County.

**SCP-H (i) 21**

Recognize and enhance the physical character of existing and new residential areas through the adoption of design guidelines and objective standards.

# Circulation

## Chapter Summary

One of the greatest challenges that jurisdictions throughout the Bay Area have faced as they try to alleviate local congestion is the degree to which the existing patterns of land use and development undermine efforts to reduce dependence on the single-occupant automobile. The objective of circulation systems is to allow for access and mobility, while congestion impedes achievement of this objective.

The Stanford University campus is a unique setting in which many of the limitations found elsewhere of land use, density, transit accessibility, and mechanisms for coordinated problem-solving are reduced, thereby creating opportunities for walking, bicycling, and transit uses.

This chapter of the Community Plan seeks to further improve upon the strong track record developed through the 2000 Community Plan. The next phase of building on the transportation potential of Stanford and its surrounding communities, is through a Vehicle Miles Traveled (VMT)-focused approach in addition to the long-standing “no net new commute trips” performance standard for the campus.

The plan defines this approach as no additional trips above a measured base level, established by monitoring data, during the peak hour and peak period commute times in the campus commute direction, as well as in the reverse commute direction. This results in the following three distinct transportation performance standards that will allow the University to continue to grow and evolve to serve its mission, while not substantially adding more traffic and VMT:

- **Vehicle Miles Traveled (VMT).** As of July 1, 2020, VMT is the required metric to evaluate transportation impacts under CEQA (Senate Bill 743). SB 743 encourages alternative modes of transportation, such as walking and biking, better access to daily destinations, reduction in commute times, less sprawl, and will improve air quality resulting from less auto emissions.
- **No net new commute trips (NNNCT).** This performance standard is defined as no additional trips above a measured base line during the AM and PM peak-hour (1 hour), in the predominate commute direction, and has been in effect since 2001. The AM and PM peak-period (3 hours or more) standard is new with this plan update and is during the peak commute. This standard ensures that there will be no additional automobile trips over an established baseline determined by the Stanford Traffic Monitoring

Program which includes extensive data collection efforts including cordon counts<sup>2</sup>, parking counts, parking ratios, cut through traffic percentages, and trip credits recorded on an annual basis since 2001.

- **Reverse Trips.** This performance standard controls the growth in reverse commute trips, the trips in the opposite direction of the predominate commute direction, so as to not contribute substantially to local area congestion. This applies to the peak hour (1 hour) and the peak period (3 hours).

The VMT-focused approach works collaboratively with the “no net new commute trips” and reverse trip performances standards. Meeting these standards will require a combination of land use planning, transportation demand management (TDM) and roadway system improvement efforts, that together will form a comprehensive circulation system and allow people to function without single-occupancy cars on a daily basis.

- **Land use.** On-campus housing will reduce the need for new commute trips to the campus. The availability of convenient support services on the campus is also crucial for reducing automobile trips.
- **Transportation Demand Management (TDM).** The innovation and effectiveness of Stanford’s current TDM programs are widely recognized, but new opportunities will need to be identified to continue meeting the “no net new commute trips” standard. While most TDM programs are directly commute-related, non-commute alternatives also need to be provided to allow workers to commute without cars and still be able to meet their daily needs.
- **Roadway system improvements.** Efforts such as traffic-calming improvements, pedestrian and bicycle infrastructure, roundabouts, and intersection and limited street widenings, are necessary for a functioning complete streets system and can reduce congestion and associated social and environmental impacts in specific locations.

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<sup>2</sup> A boundary, or cordon, was established around the campus to identify campus entryways where vehicle trips could be measured into and out of the campus (Stanford Traffic Cordon Count Credit Guidelines, 10/28/03 revised 3/19/04).

To provide focus for these various efforts, the guiding Community Plan strategies for Circulation are:

**Strategy No. 1: Avoid worsening of traffic congestion through land use and transportation demand management.**

**Strategy No. 2: Alleviate local congestion.**

**Strategy No. 3: Alleviate local congestion during special events.**

## **Background**

As congestion grows throughout the Bay Area, employers, government agencies, and the general public are increasingly concerned with the inability of existing roadways to meet current and future needs, especially as the demand for housing increases to accommodate job and population growth. While expansion of roads and intersections can help temporarily ease congestion, better use of the existing road system through less use of single-occupant automobiles is needed to avoid the social and economic costs of added roads.

The closely integrated nature of the uses within the Stanford area and the wide range of activities that take place on and around the campus have made traffic congestion a fact of everyday life in the region. Increasing intensity in the use of land has led to substantial concerns about traffic levels in the area immediately surrounding the University. On a more regional level, long-distance commutes from distant counties have become more common as rising housing prices and increasing demand for a fixed amount of housing force local employees to live farther from their workplaces. Commuters in ever-increasing numbers spend more time on freeways each day.

The increasing intensity of development on and around the Stanford campus can be offset by the high level of transportation accessibility in the area. Many locations, including the campus, have a number of amenities that make it possible to move to and around the area without using cars, thereby decreasing the potential for local congestion. These amenities include:

- A well-integrated mix of land uses, with employment and service opportunities in close proximity to housing;
- An environment that is pleasant and accessible to pedestrians and bicyclists; and,
- A variety of convenient transit services accessing major activity centers.

The Community Plan strategies, policies and implementation measures for circulation focus on enhancing the amenities to allow for new development to occur without corresponding increases in traffic to and on the campus, and on expanding the existing monitoring program to reduce the negative traffic impacts on the surrounding communities produced by the desired

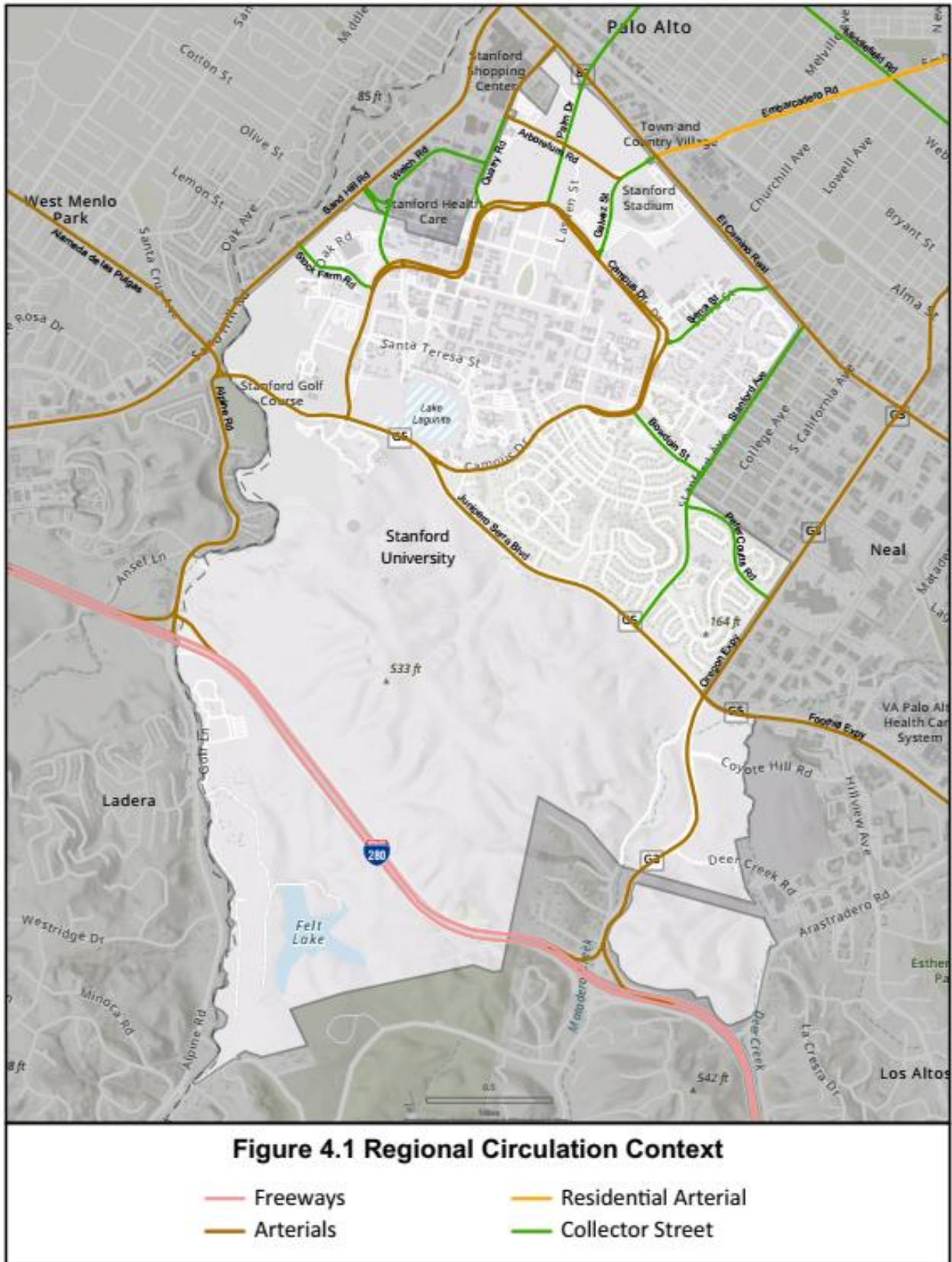


new residential development's reverse commute trips.

## **Stanford's Land Use and Circulation System**

Stanford's circulation system operates within the context of a larger regional system (see **Figure 4.1 Regional Circulation Context**). Local campus roadways provide links between academic facilities and between on-campus residences and academic facilities. Collector roadways on the campus operate as a traditional street network, providing connections from local on-campus roadways to the collectors and arterials surrounding the campus.

Figure 4.1 Regional Circulation Context



## Circulation Systems Supporting Stanford

Stanford students, employees and visitors regularly use road networks and transit systems and private services administered by a variety of agencies in the travels to and from campus. These systems are described in greater detail below.

### Transit

- Caltrain serves north-south Peninsula travel and the cities of San Francisco and San Jose. This rail service is operated by the Caltrain Joint Powers Board with Palo Alto stations at University Avenue and California Avenue. Both stations are highly accessible to residential and employment areas and are heavily used. The University Avenue Station is ranked second and the California Avenue Station is ranked eighth of the system's 32 stations in terms of ridership. There is also a "Stanford Special Events only Station" that serves the campus, primarily for large athletic events.
- Regional bus routes operated by the Santa Clara Valley Transportation Authority, Dumbarton Express, AC Transit, and San Mateo County Transit (SamTrans) stop at the Palo Alto intermodal Transit Center, which is one-mile from Stanford's main quad.
- Marguerite is a free shuttle system operated by Stanford University and serves both intra-campus routes and off-campus destinations such as the University Avenue Caltrain stations. According to Stanford, the Marguerite has 41 all-electric buses in its fleet (all equipped with bicycle racks), 19 routes, and has operated over two million miles. Prior to the pandemic in 2019, 2.74 million passengers rode the Marguerite. Stanford Transportation continued to offer service on 50% of its shuttle routes during the pandemic. Following the return to campus in fall of 2021, ridership steadily increased to nearly 640,000 passengers. Marguerite ridership is on track to double that number to 1.3 million passengers in 2022.

### Roadways & Networks

- Local and arterial street, bicycle, and pedestrian networks are maintained by surrounding cities.
- Interstate 280, US 101, and State Route 82 (El Camino Real) are maintained by the California Department of Transportation (Caltrans)

### Ride Share, Ride Hailing & Delivery Services

- Stanford students, employees, and visitors use ride share systems and ride share hailing services to travel to and from campus.
- Delivery services deliver food, goods, and services to campus, when requested by Stanford students, employees, and visitors.

## **Traffic Congestion and Stanford University**

Traffic congestion is of major concern throughout Santa Clara County. In addition to the inconvenience of traffic congestion, extensive use of single-occupant automobiles poses serious threats to the environment, requires extensive amounts of land to accommodate automobiles, and is expensive for both individuals and the public. The Stanford campus exists within an area with significant traffic generating destinations that has been and will continue to be attributable to both Stanford and other traffic generators in Palo Alto, Menlo Park, and other surrounding jurisdictions.

Several important campus access roads such as Embarcadero Road/Galvez Street, University Avenue/Palm Drive, Sand Hill Road, and Alpine Road carry significant amounts of traffic each day. The most heavily traveled roadway in the campus vicinity is El Camino Real (SR 82). The traffic throughout the area can be a significant problem for many of the residents and visitors.

In 2016, the average daytime population of the campus, which includes students, faculty and staff on unincorporated lands, was approximately 32,051 persons. The resident population of the campus was approximately 15,338 (Source: 2018 General Use Permit Circulated Draft Environmental Impact Report/Stanford University Land Use and Environmental Planning Office, in consultation with the Stanford Office of Institutional Research and Decision Support). This reduces the potential of campus residents to contribute to commute traffic.

In addition to the University's contribution to routine commute hour congestion and VMT, the hosting of special events during non-peak hours contributes to both on- and off-site congestion. The University frequently uses its public safety personnel and others to direct traffic entering and leaving the campus during special events. This approach helps mitigate but does not avoid the congestion resulting from the large number of visitors who arrive and depart from the campus within a relatively short timeframe.

## **Traffic Monitoring Program**

Using the data provided by the Stanford Traffic Monitoring Program, the strategies in this chapter aim to expand the existing program to reduce, to the extent possible, the negative traffic impacts on the surrounding communities produced by the desired new development's reverse commute trips. The Stanford Traffic Monitoring Program includes extensive data collection efforts including cordon counts, parking counts, parking ratios, cut through traffic percentages, and trip credits recorded on an annual basis since 2001.

The methodology for the annual traffic monitoring program pursuant to a major modification of the GUP to assess compliance with the no net new commute trips, peak periods and reverse commute trips performance standards, is as follows:

1. Continue use of the 2001 “Baseline” for the no net new commute trips one hour performance standard.
2. Establish the “Baseline” for the new performance standards.
3. Adjust all “Baselines” or thresholds to accommodate trips to and from housing built on Housing Element opportunity sites.
4. Annual Cordon Count.
5. Apply cut through trips and hospital parking adjustments.
6. Apply Trip Credits.
7. Determination of meeting transportation performance standards.

## **Strategies, Policies and Implementation**

### **Strategy No. 1: Avoid worsening of traffic congestion through land use and Transportation Demand Management**

The “no net new commute trips” and “reverse trips” standards combined with a VMT-focused approach are at the core of the transportation policies and implementation actions expressed in this plan. Achievement of these standards will require a comprehensive system that makes it possible for individuals to meet their transportation needs without using a vehicle. Such a system involves both land use solutions to bring a variety of uses together and thereby reduce the number of activities that require vehicle use, as well as a range of alternative means of transportation that can meet a variety of needs. Options will also need to be provided to make it possible for individuals to function throughout the day without their vehicles.

The County has provided Stanford considerable flexibility to achieve commute trip reduction within the overall goals. The monitoring system allowed for both land use and transportation demand management approaches, and it maintains the County’s role of establishing the overall performance standards, while allowing Stanford to use a variety of mechanisms and innovate as appropriate to meet the standards.

#### **Land Use and Trip Reduction**

An important land use pattern that supports non-auto transportation is the location of housing close to jobs and services. Stanford is a residential university with significant land holdings, allowing faculty, staff, postgraduate fellows, other workers, undergraduate students, and graduate students to live in close proximity to one another and to the academic facilities on the campus.



Integration of academic, residential and supporting land use, and the concentration of uses in the central campus are strategies for supporting travel alternatives to the single occupant vehicle. One reason behind the Community Plan's emphasis on on-campus housing is the potential to reduce commute trips by locating more housing close to the University's jobs, classrooms and laboratories.

The existing concentration of uses in the central campus allows for a circulation system that is well integrated with the campus land use pattern, enhancing the ability of those on campus to use travel alternatives. Comprehensive pedestrian and bicycle circulation systems and transit services to, from, and throughout the campus contribute to the ease with which people are able to move about without an automobile (see **Figure 4.2 Primary Pedestrian Pathways and Bikeways** and **Figure 4.3 Local Transit Services**).

While uses within the campus are well-concentrated, the campus as a whole is relatively isolated from many service destinations within the surrounding communities. This separation between the campus and the adjacent cities is partially by design. The Arboretum, which separates Stanford from downtown Palo Alto, was an important component of Leland and Jane Stanford's original campus layout, in collaboration with F.L. Olmsted. In other cases, the isolation results from the nature of the uses that border the campus, such as the Stanford Research Park and Stanford Shopping Center. Areas which currently separate the developed portions of the campus, such as the Quarry District, and which are conveniently located for both on- and off-campus activities, transit, and retail, should be a high priority for new housing.

### **Transportation Demand Management**

The range of transportation alternatives that can be provided by the private and public sectors to reduce congestion through peak hour trip reduction is collectively known as Transportation Demand Management (TDM). According to the 2020 American Community Survey by the U.S. Census, 81.2% of all commute trips in the County were made in single-occupant automobiles.

Because of the unique nature of the population, activities, and opportunities for mixed land uses on the campus, Stanford can and does achieve a much higher rate of alternative transportation mode use. Stanford's TDM program is the most extensive in the County, and it includes services ranging from informational website to a free shuttle system running throughout the campus and to major off-campus destinations. TDM at Stanford goes well beyond basic programs that make other transportation modes more available or easier to use; for example, Stanford is the only major employer in the northern portion of the County that charges employees for parking and has instituted a policy prohibiting a portion of campus residents (freshman students) from keeping cars on campus. The current system under the General Use Permit (GUP) of maintaining a "performance standard" (i.e., no net new commute trips) without mandating specific TDM programs has allowed Stanford to modify its programs as the University's needs change over time and as Stanford learns more about the effectiveness of individual measures.



Figure 4.2 Primary Pedestrian Pathways and Bikeways

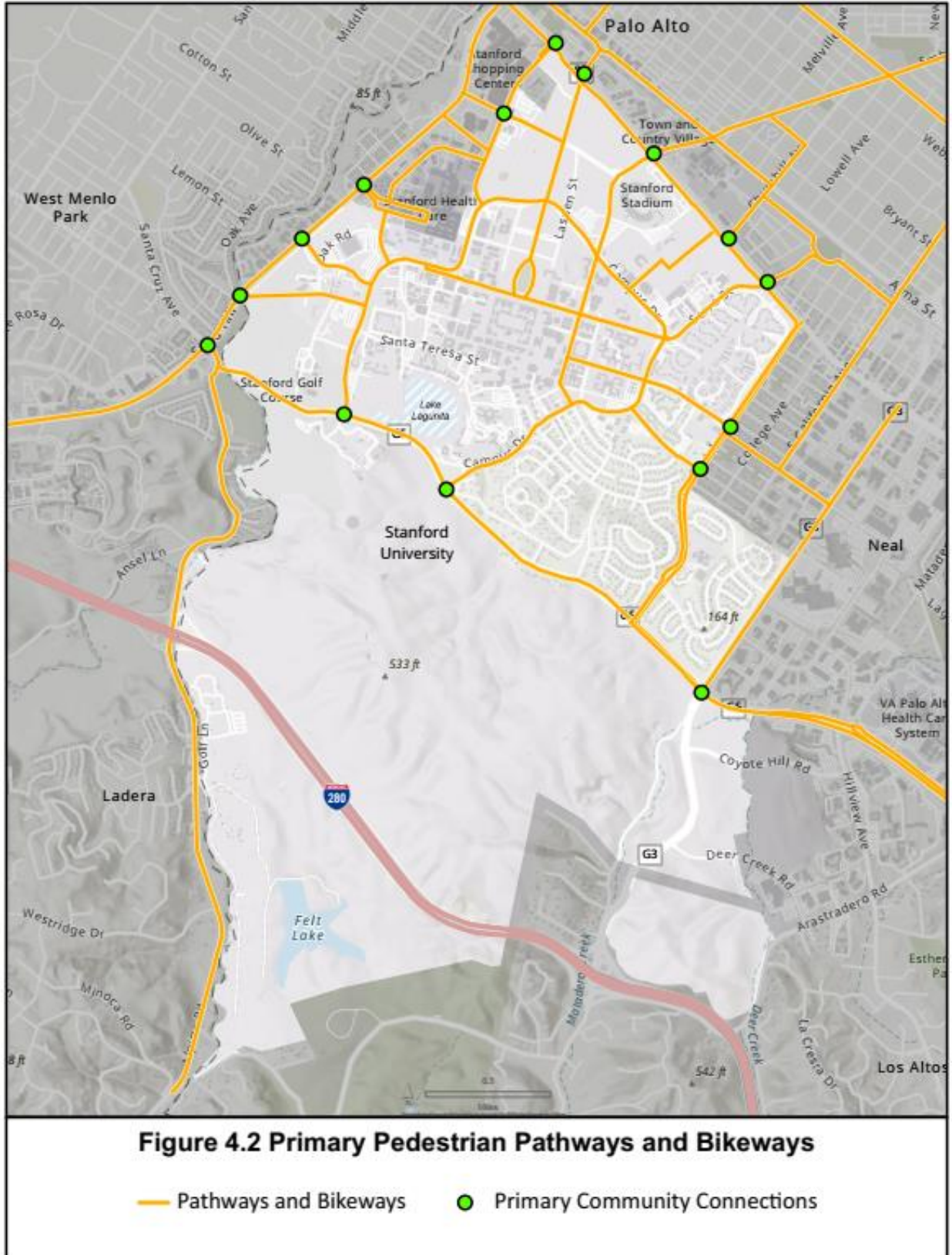
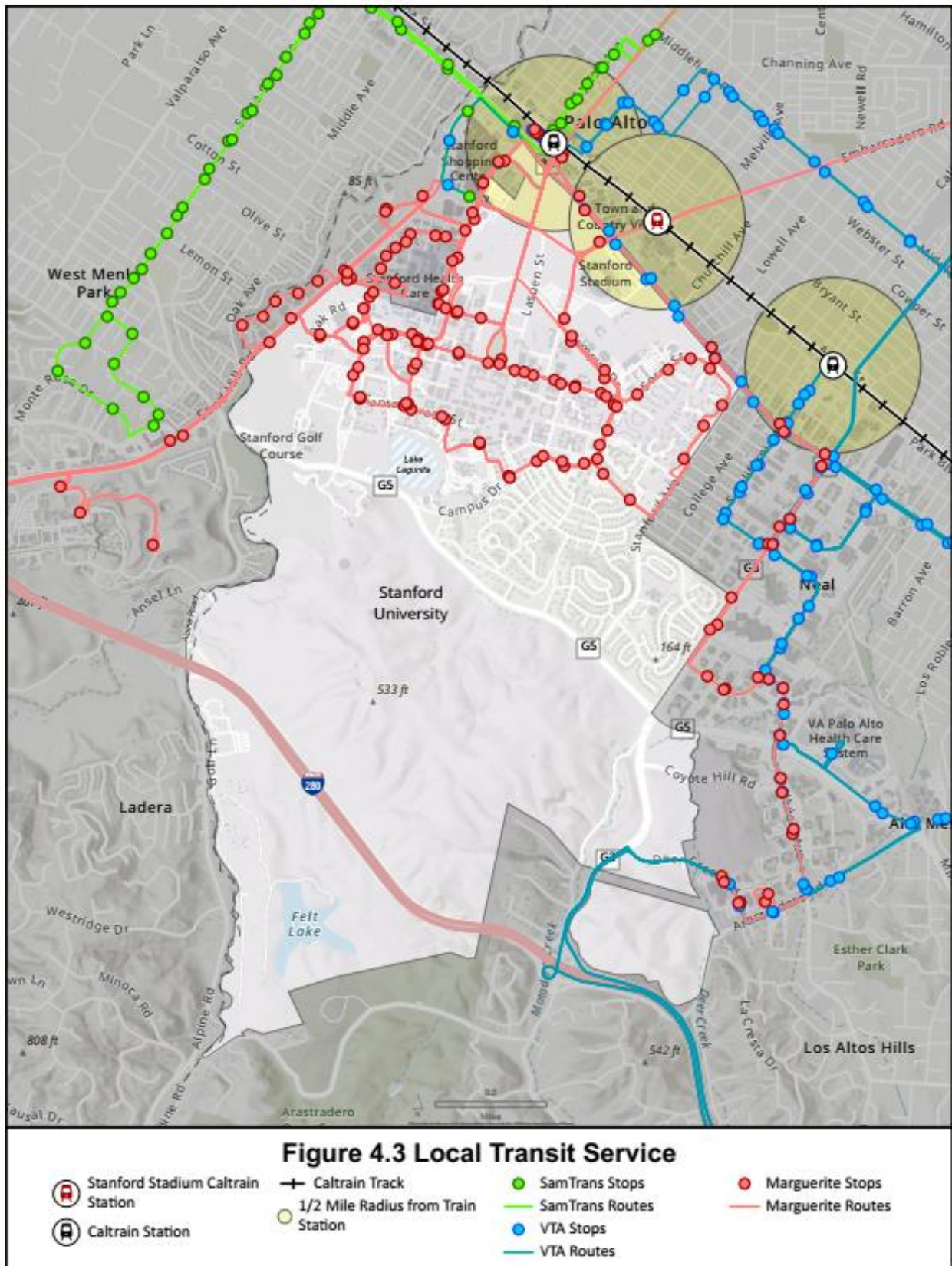


Figure 4.3 Local Transit Service





## Parking

Some transportation demand management programs, particularly parking fees and shortages, can affect neighborhoods adjacent to the campus through parking “spillover.” However, oversupply of parking on the campus could undermine efforts to encourage alternative transportation mode use. Any negative external impacts of individual transportation demand management strategies will need to be considered and balanced by the University and the County.

Provision of on-campus housing can help reduce the need for additional commuter-based parking, as on-campus residents would not require commute-related parking. The Community Plan seeks to moderate expansion of the current parking supply, particularly as the potential impacts of a limited parking supply can be addressed through other means (such as residential parking permit programs in neighborhoods near the campus).

Parking is distributed throughout the Stanford campus, with the exception of the pedestrian campus core. The campus includes parking structures and surface lots. Paid visitor parking is provided in most of the larger lots and structures. In the reporting period for Annual Report No. 21, changes in parking resulted in an estimated net increase of 1,716 parking spaces on the campus for a total cumulative increase since September 1, 2000 of 580 spaces. Changes in parking occurred in the Campus Center, West Campus, Quarry DAPER, and East Campus.

While there have been new parking structures constructed under the 2000 General Use Permit (GUP), they have largely replaced other parking facilities on campus. Stanford has replaced surface parking in the campus core with structures outside the campus core, with the goal of removing vehicles from the pedestrian areas of campus and maximizing opportunities for infill development.

## Current Stanford Transportation Demand Management (TDM) Programs

The following list summarizes programs that are current TDM strategies applied by the university:

### Marguerite Shuttle System

- Free local shuttle bus system
- 41 battery-electric and 8 diesel (backup) buses in a 19-route system
- Service to University Avenue train station (Stanford Station used for special events), El Camino bus stops, Palo Alto and Menlo Park shopping districts, as well as on-campus travel

### Carpool/Vanpools

- Full-time Stanford Employee Transportation Coordinator
- Vanpools to San Francisco, Fremont, San Jose, Santa Cruz, Morgan Hill, Manteca,

Fairfield, and stops along those corridors

### **Bicycle Support**

- Secure bicycle parking and clothes lockers
- Bike maintenance facilities, safety classes, discounted equipment

### **Stanford Transportation Website**

- Shuttle time information
- Ridesharing options and opportunities
- Parking permits
- Bike program information
- Transit pass benefits
- Real-time transit information and route maps
- Charter services
- Accessible Transportation Options

### **Parking Programs**

- Parking fees imposed
- Freshman prohibited from having vehicles
- Parking restrictions

### **Emergency Ride Home Program**

- Safety net for emergencies
- Provides free rideshare or car rentals

### **Vehicle Rentals/Car Sharing**

- Short- or long-term rental discounts are offered for Stanford affiliates

### **Transit Passes**

- Free Caltrain Go Passes to eligible hospital and University commuters
- The Go Pass allows unlimited travel on Caltrain between all zones
- Free VTA Smart Passes offered to eligible hospital and University commuters; the Smart Pass allows unlimited travel on VTA buses and light rail
- Free AC Transit Easy Passes allows unlimited travel on AC Transit lines for East Bay residents

### **Education and Information Programs**

- Provides education and information designed to encourage use of alternative transportation modes

### **Charter Bus Services**

- Charter bus services for large groups offered for on or off campus destinations, at a low cost to the campus community

### **Off-Campus Trip Reduction Efforts**

Recognizing the extreme challenge for Stanford to meet the “no net new commute trips” standard in the future, the Community Plan provides an additional mechanism for trip reduction efforts by the University through policies and implementation programs that recognize Stanford’s future participation in trip reduction efforts that occur in other jurisdictions. For example, a comprehensive trip reduction program for the Stanford Research Park operated in conjunction with the City of Palo Alto and the Research Park leaseholders and employers.

The Community Plan provides the mechanism for the County to recognize Stanford’s participation in such effort as an appropriate credit toward the “no net new commute trips” standard. The Plan provides for such recognition because:

- Stanford’s current rate of alternative transportation mode use is high, and additional efforts may prove to have reached the point of “diminishing returns” with regard to their effectiveness. In contrast, other workers in the region may prove to be more receptive to TDM programs because there are fewer programs now available to them.
- Both Stanford’s resources and the resources of neighboring cities may be more effectively leveraged in combination with one another than if they are devoted to separate programs.
- Cooperative measures that address traffic on streets around the campus may be of as much or more benefit to surrounding communities than measures directed only at Stanford residents and employees.

The County will carefully monitor Stanford’s participation and the effectiveness of such programs, and may choose to grant Stanford commute trip credit towards achievement of the “no net new commute trips” standard for such efforts.

### **Policies**

#### **SCP-C 1**

Apply a “no net new commute trips” performance standard for campus-related trips in the peak commute and “reverse commute” directions, during the morning and evening peak hours and the “3-hour peak periods” to the fullest extent feasible and allowed by law.

**SCP-C 2**

To encourage addition of transit-oriented housing, accommodate trips to and from housing built on opportunity sites identified in the Housing Element when calculating the “no net new commute trips” and “reverse trips” performance standards.

**SCP-C 3**

Reduce automobile dependency and greenhouse gas emissions through a reduction of Vehicle Miles Traveled (VMT)-focused approach which includes land uses and street system designs that support reduced vehicle use.

**SCP-C 4**

Encourage addition of housing consistent with housing policies in locations convenient to transit, jobs within the Community Plan area and contiguous Stanford land in other jurisdictions (i.e., Palo Alto) in order to reduce the need for vehicular trips.

**SCP-C 5**

Enhance pedestrian and bicycle networks and safe routes to school to and through the campus.

**SCP-C 6**

Support and encourage regular modification of Stanford’s Transportation Demand Management (TDM) program to allow for changes in user needs and in available services over time.

**SCP-C 7**

Regulate parking supply as a mechanism for transportation demand management to encourage non-automobile trips, while avoiding spillover of parking into neighborhoods near the campus.

**SCP-C 8**

In addition to meeting the no net new commute trips performance standard, minimize automobile travel at non-commute times and in non-commute directions.

**SCP-C 9**

Maintain the trip credit system for verified or modeled vehicle trip reduction projects and programs that improve off-campus motor vehicle trip reduction completed or funded by Stanford within geographic area impacted by Stanford-related traffic.

**SCP-C 10**

Encourage Stanford to provide appropriate supporting services, such as childcare and convenience retail, in new and existing residential areas or neighborhoods in order to reduce the need for vehicular travel.



**SCP-C 11**

Encourage broader access to Transportation Demand Management (TDM) programs for all Stanford campus workers, users, and visitors.

**SCP-C 12**

Encourage Stanford to maintain public access through campus to support the existing connections of the street system (i.e. Campus Drive, Quarry Road, Palm Drive, Galvez Street, Serra Street, and Stock Farm Road) with the surrounding off-campus areas to facilitate efficient and dispersed traffic patterns.

**SCP-C 13**

Encourage Stanford to coordinate with Transportation Network Companies (TNCs) to adjust their geolocation technology with the aim to direct passengers originating trips from on campus to meet their drivers at designated loading zones.

**SCP-C 14**

Encourage Stanford to explore integrated digital platforms for transportation services which would allow users to consume multiple aspects of transportation services through a single platform.

**SCP-C 15**

Encourage non-single occupant vehicle (SOV) travel by subsidizing the cost of carpooling, vanpooling, and transit for first/last mile trips.

**Implementation Measures****SCP-C (i) 1**

Adopt and maintain zoning regulations that support the reduction of automobile dependency and greenhouse gas emissions.

**SCP-C (i) 2**

Locate supporting services such as childcare and convenience retail in new and existing graduate student and faculty and staff residential neighborhoods in order to reduce the need for vehicular travel. Review applications for new residential development for provision of supporting services to determine if additional supporting services are needed.

**SCP-C (i) 3**

Review development project applications for access to and integration with the overall system of bikeways and pedestrian pathways both on and off campus. Particularly consider this issue for development with regard to enhancement of pedestrian access to the Palo Alto Transit Center, Stanford Special Event Station, California Avenue Station and El Camino Real.

**SCP-C (i) 4**

Establish a system for direct, independent, and verifiable monitoring of Stanford's level of achievement with the "no net new commute trips," "3-hour peak period trips," "reverse trips," and VMT performance standards through the annual monitoring procedure. Specific thresholds shall be determined at time of General Use Permit (GUP) approval or modification. For any housing built on opportunity sites identified in the Housing Element, trip thresholds shall be adjusted to allow an increase in trips equal to the number of affordable units multiplied by the trip rates for Multifamily Housing (Mid-Rise) Close to Rail Transit (221), as identified in the Institute of Transportation Engineers' *Trip Generation Manual*, 11<sup>th</sup> edition, or successor editions.

**SCP-C (i) 5**

Review the Transportation Demand Management system on an annual basis and consult with Stanford, and adjacent communities as appropriate, to ensure that new needs or opportunities are considered. Incorporate the following considerations into the review process:

- TDM strategies shall be primarily aimed at reducing the number of cars entering the campus during the morning peak hours and leaving during the evening peak hours and reducing VMT to meet reduction levels determined at time of General Use Permit (GUP) approval or major modification.
- Programs serving intra-campus or off-peak travel shall be primarily aimed at making it possible for employees and residents to conduct their daily activities without a car.

**SCP-C (i) 6**

Encourage Stanford to identify opportunities and develop proposals for participation in off-campus trip reduction efforts by public agencies and other private entities. Apply verified or modeled trip reduction credits to the annual calculation of Stanford's compliance with the "no net new commute trips," "reverse trips" and/or VMT performance standards, as appropriate.

**SCP-C (i) 7**

Promote a development pattern that reduces automobile dependency and greenhouse gas emissions through the following approaches:

- New academic and on-campus residential development shall occur within the Academic Growth Boundary (AGB).
- Encourage location of new development near existing transit services, particularly if extension of transit service to the new facilities would otherwise be infeasible or impractical.

**SCP-C (i) 8**

Enhance safe and efficient pedestrian and bicycle access through the campus, incorporating "complete streets" design principles that support their use, including wide bike lanes and

sidewalks, bicycle facilities, bike circles, roundabouts, marked crosswalks, crossing opportunities, buffer from vehicle traffic, median islands, streetscape, bus stops, tree shading, landscape treatments, appropriate rest stops, signage, wayfinding, and routes that connect different land uses (academic, residential, supportive commercial), and facilitate mobility on and off campus.

#### **SCP-C (i) 9**

Plan, design, and implement pedestrian and bicycle paths that provide safe routes to schools, incorporating design principles and routes that connect residences to existing and designated school sites.

#### **SCP-C (i) 10**

Support the facilitation of delivery services by providing areas in centralized locations for receipt of deliveries that offer one of the following: lockers for delivery services, temporary storage for package deliveries, and/or other delivery supportive measures as proposed that may reduce VMT by reducing the number of trips that may otherwise have been by delivery vehicles.

### **Strategy No. 2: Alleviate local congestion in and around the Community Plan Area.**

The Community Plan emphasizes on-campus housing and commute trip reduction as mechanisms to lower VMT and alleviate the potential effects of development at Stanford on the local street system. These approaches are meant to reduce congestion at a regional level, by making it possible for more Stanford students and employees to live within walking or biking distance of their place of work, and to reduce Stanford's contribution to peak traffic levels.

However, growth which occurs under the Community Plan will still affect the local street system. The addition of residents and employees to the campus community will increase the number of people in the area, creating more potential for congestion due to non-commute related trips. Some household members of Stanford-affiliated campus residents likely commute away from the campus to reach their workplaces and other non-work-related household trips. Special events at the campus during evenings and weekends have created, and will likely continue to create, traffic congestion on streets that access the campus.

While the increased traffic resulting from these activities does not outweigh the benefits of on-campus housing and commute trip reduction, the potential for this added traffic to inconvenience local residents needs to be considered and addressed accordingly. Current General Plan policies indicate that where local level of service impacts are unavoidable, particularly at locations that already have a poor level of service, making system-wide multi-modal improvements (such as transit enhancements) that provide regional benefits is an appropriate response.

However, in some situations, street system alterations such as widening roads or adding dedicated turning lanes at intersections may also be needed. In many locations surrounding the campus, such alterations may either be infeasible or undesirable.

### **Congestion Management**

The balance between land use and congestion is coordinated through the Congestion Management Program of the Santa Clara Valley Transportation Authority (VTA). The Congestion Management Program (CMP) works to maintain service levels on a designated network of roadways in the County. The CMP recognizes the potential for development in congested areas to create traffic that exceeds service level standards, particularly in locations that are highly accessible to transit, and therefore, desirable for higher density development, and sets direction for land use planning in these areas to focus on expanded capabilities for alternative transportation modes.

Following the direction set by the VTA, the County General Plan emphasizes the concept of transportation demand management (TDM) and the tradeoffs between local and regional congestion (see Circulation chapter of the Santa Clara County General Plan). As a goal, the General Plan calls for 35% of all trips to occur in ways other than the single-occupant automobile. Stanford has far exceeded this goal for many years.

### **System Capacity Expansion**

Local congestion can be reduced in two primary ways: 1) reducing the number of cars, or 2) expanding a street or intersection to allow more cars to pass through it more easily. Although the County's preferred approach at Stanford is to pursue trip reduction, there are some situations where system expansion may be needed to alleviate "bottlenecks" that would indicate system problems and contribute unduly to the social and environmental costs of traffic congestion.

In the Stanford area, traffic can be attributed partially to University activities and partially to other traffic generators, both on and off Stanford-owned land. When system expansions are needed, Stanford's growth and traffic impact shall be considered, and Stanford's responsibility for contributing to the cost of the projects should be proportional to its impact.

At Stanford, the transportation performance standards are designed to reduce the effects of growth at Stanford from impacting the transportation network. However, localized congestion may occur at specific locations as land uses and daily activities change over time.

Expansion of roadway capacity that involves modification of intersections is in most cases considered a mechanism when only done in combination with improving transit, bicycle, and pedestrian facilities to facilitate non-auto trip making. Stanford's participation in the trip credit program can assist in providing partial or full funding for these types of street improvements. Trip credits would be proportionate to the amount of funding provided by the University.

The following policies and implementation recommendations emphasize a set of priorities for consideration when considering roadway modifications:

- **Maintain the street hierarchy.** Efforts to increase through traffic capacity should be focused on appropriate streets that serve as important intra-campus or off-campus linkages.
- **Use the internal campus street system.** As much as possible, the internal campus street system, rather than roads bordering on areas outside the central campus should be used. The campus road system should be maintained and upgraded as needed to accommodate appropriate trips.
- **Recognize surrounding land uses.** Streets should be designed and operated in a manner consistent with the types of development they serve.
- **Consider jurisdictional priorities.** Different jurisdictions affected by Stanford traffic have different priorities for street expansion. Coordination between the County, Stanford, and the appropriate jurisdiction is needed to determine the most appropriate strategy for addressing the congestion.
- **Maintain a proportional approach.** Stanford should be responsible for its fair share of necessary expansion of off-campus roads and intersections based on the trip credit program and guidelines.
- **Think beyond cars.** Modifications, system, and network improvements for transit, walking and bicycles can complement Stanford's on-campus transportation demand management efforts in reducing trips and congestion. Look to invest in completing local and regional transit, bicycle, and pedestrian networks along routes to, from, and through the campus.

## Policies

### SCP-C 16

Where feasible and consistent with other Community Plan policies, maintain consistency with the procedures and adopted policies of the appropriate jurisdiction when evaluating off-campus local intersection service levels and defining mechanisms for addressing impacts.

### SCP-C 17

Modify street and intersection capacity and configuration in a manner that prioritizes and improves access and circulation for pedestrians, transit, and bicycles instead of or in addition to system expansions that prioritize or encourage automobiles, consistent with surrounding land uses.

### SCP-C 18

Prioritize use and improvement of the internal campus multi-modal circulation system over roadways on the campus edges.

### **SCP-C 19**

Consult with jurisdictions surrounding the campus regarding the potential traffic impacts of new development and activities at Stanford, and work with the jurisdictions to reduce potential effects on neighborhoods surrounding the campus.

### **SCP-C 20**

Expand the trip credit area to include areas that experience campus related traffic including, but not limited to, the Belle Haven and Bayfront areas in Menlo Park and East Palo Alto that experience Stanford related commute traffic.

## **Implementation Measures**

### **SCP-C (i) 11**

Require street network and design improvements on the campus that will ease traffic flow and internal circulation, particularly in situations where such capacity expansion would make on-campus routes preferable to off-campus roadways.

### **SCP-C (i) 12**

If Stanford does not meet the “no net new commute trips,” “3-hour peak period trips,” “reverse trips,” or VMT performance standards for new development on campus over any two years out of a consecutive three-year period, require Stanford to:

- 1) Plan and fund verifiable or modeled offsetting transportation trip credits as approved by the County; or,
- 2) Provide equivalent funding toward other transportation impact mitigation efforts in consultation with VTA and the City of Palo Alto, or other agencies within the “cordon credit area,” to a degree proportional to the number of trips over the identified trip thresholds, as verified by the County.
- 3) If Stanford does not fully offset its performance standard exceedances through items 1) and 2), the County shall not approve any additional development permits until Stanford fully offsets its exceedances.
- 4) If Stanford and the County enter into a compliance agreement pursuant to which Stanford agrees to fully offset all of its exceedances no later than two years after the exceedances occurred, the County may exercise its discretion to approve additional development permits during the two-year compliance period.

### **SCP-C (i) 13**

Cooperate with the Congestion Management Agency, which for the County of Santa Clara is the Valley Transportation Authority (VTA), in implementing deficiency plans, where needed, for Congestion Management Program system roadways and intersections in proximity to the Stanford campus.



**SCP-C (i) 14**

Continue to improve Junipero Serra Boulevard to reduce speeding, enhance bicycle, pedestrian and motorist safety, address the needs of residents taking access from the street, improve migration opportunities for the California tiger salamander, and maintain the scenic character of the roadway.

**SCP-C (i) 15**

The County and Stanford shall cooperatively work with surrounding jurisdictions and VTA to develop solutions to regional transportation problems.

**Strategy No. 3: Alleviate local congestion from special events.**

Stanford hosts a variety of special events. While generally not held during peak commute hours, these events draw large numbers of visitors to campus. Because these visitors tend to arrive in a compressed timeframe, they often overwhelm the local transportation infrastructure. The Community Plan addresses these impacts with the following policies and implementation measures.

**Policies****SCP-C 21**

Stanford will identify opportunities with transit agencies, including but not limited to Valley Transportation Authority (VTA) and Caltrain to promote the use of public transit and Stanford shuttle service for special events at Stanford.

**SCP-C 22**

Stanford will work with neighboring jurisdictions to manage special event traffic.

**SCP-C 23**

Stanford will provide advance notification of events expected to draw large crowds to on-campus residents and the surrounding community.

**SCP-C 24**

Stanford will consult with jurisdictions surrounding the campus regarding the potential non-commute traffic impacts of special events at Stanford, and work with the jurisdictions to reduce potential effects on neighborhoods surrounding the campus.

## **Implementation Measures**

### **SCP-C (i) 16**

Require Stanford to establish and maintain communication mechanisms for special events (social media, hotline, and website) that on-campus residents and the general public can access for information regarding upcoming special events and available public transit and Stanford shuttle transportation options.

### **SCP-C (i) 17**

Require Stanford to provide the public with notice of special events that meet or exceed 8,500 persons in newspapers of local circulation in the Palo Alto and Menlo Park area and on prominent social media channels at least 10 days prior to the event. For special events that meet or exceed 5,000 persons, Stanford will institute a list serve for interested parties that wish to be notified of such events.

### **SCP-C (i) 18**

Stanford shall comply with all requirements of the County and nearby cities for the management of traffic and parking associated with special events.

### **SCP-C (i) 19**

Require Stanford to coordinate the management of traffic and parking associated with special events with surrounding jurisdictions based on a Special Event Management Plan, which includes traffic and parking, reviewed and approved by the County.

# Open Space

## Chapter Summary

Open Space is a defining feature of Santa Clara County, and a resource that is becoming increasingly valued with the expansion and intensification of urban areas. At Stanford, formal open space and natural open spaces define the visual character of the campus and frame the academic core. Open spaces, particularly the foothills south of Junipero Serra Boulevard, are visible almost everywhere on the campus and from many locations in surrounding communities.

Preservation of open space and the natural character of undeveloped lands is a prominent goal of the Santa Clara County General Plan policies. The Academic Growth Boundary (AGB) will serve to define lands which are to be retained as open areas from those areas which should be targeted for future development. The strategies, policies and implementation measures in this chapter create a framework for open space protection based on a differentiation of open lands according to their location within or outside the AGB:

- Outside the AGB, land is to remain undeveloped except for uses associated with research activities that require a remote or foothill setting for their functioning. Recreational use of the areas outside the AGB is promoted through dedication of trails consistent with the Countywide Trails Master Plan.
- Future development should be targeted to areas inside the AGB. While some areas inside the AGB are currently undeveloped yet suitable for future development, others are to be preserved as campus open space, biological resource areas, or as recreational resources. On the whole, a balance between development, open space, and recreational facilities need to be achieved.

This Community Plan establishes ways to maintain the open lands in a manner consistent with both County goals and policies and Stanford's interests as a private property owner. To that end, this chapter incorporates land use strategies that preserve the character of these lands and conservation of all Stanford resources into the future, while retaining them under University ownership.

Strategies for open space preservation include:

**Strategy No. 1: Locate additional development inside the Academic Growth Boundary**

**Strategy No. 2: Balance recreational use and environmental objectives**

**Strategy No. 3: Plan for parks and open space land within the Academic Growth Boundary**

## Background

Open space at Stanford performs a multitude of functions beneficial to both the University and the community at large, including:

- preservation of natural habitats,
- protection of sensitive species of animals and plants,
- protection of watersheds and flood control,
- preventing development in hazard areas,
- preservation of scenic vistas,
- provision of respite areas and recreational opportunities, and
- buffers to define urban form.

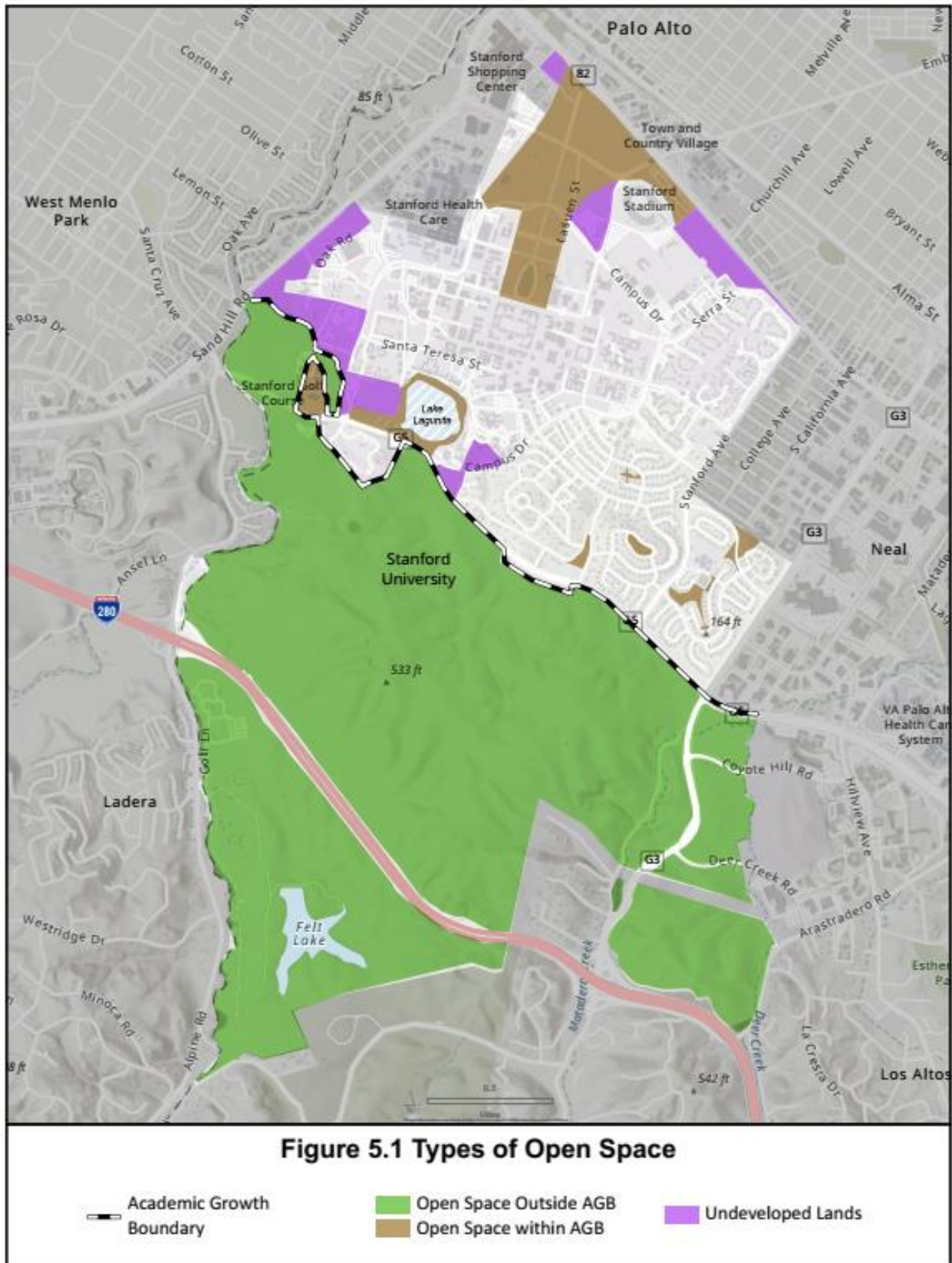
At Stanford, open space serves the additional purposes of supporting teaching and research, while preserving the beauty and character of the campus.

## Types of Open Space

The concept of “open space” applies to several types of land that serve a variety of purposes. At Stanford, open lands are located in both relatively flat areas within and bordering the central campus and in the foothills south of Junipero Serra Boulevard. Lands outside the Academic Growth Boundary (AGB) are to remain undeveloped except for field research purposes.

Within the AGB, some undeveloped lands are intended and targeted for future development, while others are meant to remain as open space that helps define the built university and is a key element in the campus design (see **Figure 5.1 Types of Open Spaces**).

Figure 5.1 Types of Open Spaces



## Open Space Outside the Academic Growth Boundary

### Current Use and Setting

Stanford's lands outside the Academic Growth Boundary (AGB) consist of undeveloped lands known as "the foothills," comprising approximately half of the Community Plan area and two-thirds of the University's total 8,180 acres. The future of these lands has been an issue of ongoing concern for both Stanford and the community.

These lands, which extend southwest of Junipero Serra Boulevard across I-280 and into San Mateo County, are comprised of grasslands, oak woodlands, and riparian areas. The area is largely undeveloped and used for low-intensity research agricultural leases, and recreation. It is also home to utility installations and the eighteen-hole Stanford Golf Course. The Stanford Linear Accelerator Center and the 1,200-acre Jasper Ridge Biological Preserve are in San Mateo County.

Past land use policies for the foothills have included a General Plan designation of Academic Reserve and Open Space (which limits allowable uses to low-intensity activities in keeping with the character of the land).

Other jurisdictions with Stanford lands have established land use policies for undeveloped Stanford foothill lands. Most of the undeveloped land in San Mateo County is designated Institutional/General Open Space/Future Study in the San Mateo County General Plan.

The City of Palo Alto maintains three scenic easements on a portion of Coyote Hill in the Stanford Research Park, south of Foothill Avenue. Two easements expired in 2002 and 2010, while the third one has an expiration date 2041 and is automatically extended by a year each January 1<sup>st</sup> unless the University gives the City notice of non-renewal.

By providing undeveloped settings for research and teaching, foothill open space at Stanford directly supports specific academic programs. Astrophysics, conservation biology, civil and environmental engineering and art are examples of academic programs directly supported by opportunities provided by open space in the foothills.



## **Competing Concerns and Priorities: Open Space Protection and Recreational Use**

The Stanford foothills are recognized throughout the Midpeninsula as a valuable open space resource. However, the potential for future development of these lands has been a contentious issue for several decades. Stanford's internal policies call for the maintenance of land for possible future academic use.

On the regional level, the Stanford foothills are a functional component of the open space system that forms a visual and environmental backdrop for northern Santa Clara County. A combination of County and city parks, publicly-owned watersheds, and preserves owned by the Midpeninsula Regional Open Space District north and south of Stanford lands create a chain of open space along the ridges of the Santa Cruz Mountains. Conversely, Stanford's immediate surroundings in the foothills include land which is primarily in residential use in Los Altos, Los Altos Hills, Palo Alto, Portola Valley, and Menlo Park, making the Stanford foothills a rare example of open space adjacent to the urbanized area. The extensive development that has occurred in these jurisdictions has caused many of these neighbors to place a high value on guarantees for long-term or permanent protection of the Stanford foothills.

Recreational use of Stanford land is enjoyed by residents of the Stanford campus and neighboring communities. The proximity of the Stanford foothills to the developed areas of the Midpeninsula make it a popular destination. Use of these lands is allowed by permission of the University. Recreational use of the foothills raises several associated issues:

- While the foothills are a popular recreation destination and used in the manner of a park by many visitors, they are not publicly owned or operated. Stanford does not provide the amenities that are normally associated with public trails and does not patrol the area to prevent visitors from leaving designated trails or manage the land as a recreation area. As a result, recreational use may contribute to trail and environmental degradation.
- Trail user parking is a particular concern to residents of the neighboring faculty/staff subdivision. As a result, Stanford instituted a residential parking permit program in this neighborhood, and trail users have been parking along Stanford Avenue, which is a County-maintained road. As a result of continued resident concerns, the speed limit has been reduced and the County has modified the road to manage parking but has continued to allow public parking along portions of the street.
- Visitor access to environmentally sensitive areas, particularly riparian areas which are home to special status species, has the potential to result in degradation of habitat and direct impacts on animals, as well as adverse effects on research, education, and restoration efforts.

Maintaining natural resources in the foothills will require achievement of a balance between environmental protection and access to open space.

## Open Space within the Academic Growth Boundary

### Current Use and Setting

Inside the Academic Growth Boundary (AGB), open spaces and undeveloped areas serve a variety of purposes:

- **Campus-defining open space.** Open spaces help define the form of the main campus. Major on-campus open spaces include the Oval, Palm Drive, the Arboretum, and Lake Lagunita. Several of these spaces serve additional purposes, such as storm water detention in the Arboretum and California tiger salamander habitat in Lake Lagunita.
- **Undeveloped central campus land.** Undeveloped tracts of varying size remain north of Junipero Serra Boulevard, primarily on the west side of the campus and in the faculty/staff subdivision. Some of these areas are planned for future residential development, while others could provide opportunities for new academic buildings.
- **Athletic fields.** Stanford maintains extensive athletic facilities, including playing fields located primarily in two areas (near El Camino Real and in the western portion of the campus near Sand Hill Road). These playing fields are programmed for use through the Department of Athletics, Physical Education and Recreation.
- **Recreational facilities.** Formal and informal recreation facilities such as Wilbur field and playgrounds in Escondido Village and the faculty/staff subdivision, are provided to serve campus residents. The golf driving range and the Stanford Golf Course (located outside the AGB) provide recreational opportunities to both Stanford students and others.
- **Buffer.** Undeveloped tracts along the Palo Alto and Menlo Park borders on Sand Hill Road, Stanford Avenue, and El Camino Real currently provide a buffer between the urban core of the University and the surrounding communities. Some of these areas are planned for future residential development while others will continue to provide a buffer.

### Open Space Protection Policies

In the past, open space protection at Stanford has occurred through General Plan land use designations, zoning designations, and through conditions of the General Use Permit (GUP).

The Stanford Community Plan identifies two different types of lands that serve both academic and open space purposes. Within the AGB, the Community Plan identifies Campus Open Space. Among other locations, these areas include the Oval, the Arboretum, and the area surrounding Lagunita.

Outside the AGB, the Stanford Community Plan identifies Open Space and Field Research and Special Conservation Areas. In 2003, the County of Santa Clara Board of Supervisors adopted new zoning for the Open Space and Field Research (OS/F) district. Under the OS/F zoning, a viewshed analysis is required for any project that requires Architecture and Site Approval.

In addition, County of Santa Clara Planning Commission approval is needed for buildings and structures over 1,000 square feet; towers and antenna over 35 feet tall that are located in a high visibility zone or corridor; and projects with environmental impacts that cannot be mitigated to less-than-significant levels.

The City of Palo Alto and Stanford entered into a development agreement in 1997 for projects along Sand Hill Road, inside the City limits, which also affects the land along Sand Hill Road that is located in the unincorporated portion of the County. Among many other stipulations, this agreement specifies that no use other than athletic fields may be developed along Sand Hill Road from Junipero Serra Boulevard to Pasteur Drive and east to Campus Drive West.

The exception to this arrangement was that housing may be developed east of Fremont Road in the area known as the Stable Site. This agreement was in effect until 2020 and is no longer in effect. The development agreement resulted from a negotiation between Stanford and the City of Palo Alto, and involved an agreement by Stanford not to pursue certain activities rather than a condition or limitation imposed by the County.

### **Competing Concerns and Priorities**

The open spaces within the AGB are subject to a variety of development pressures. While some of the areas are viewed as undeveloped lands which could be appropriate for future development, others provide important resources as open lands within the urban setting. Competing concerns and priorities for some of the open lands within the AGB include:

- The Arboretum is seen by many as the initial defining landscape at the main entrance of the University and as an open space buffer from the urban environs of Palo Alto.
- Lake Lagunita is the most critical and highest value habitat of the California tiger salamander at Stanford. Undeveloped lands surrounding the lake have been identified as potential future sites for housing and expansion of the academic campus.
- While existing athletic facilities and recreational areas for students are not generally proposed for development at this time, the Academic Campus designation applied to much of this area does allow for the future development of these open areas through the definition of allowable uses.
- Development of faculty/staff/other workers housing could require relocation of the Driving Range to a site adjacent to the golf course.

- Faculty/staff/other workers and student housing may be proposed on the Stanford Avenue and El Camino Real frontages which currently serve to buffer development on Stanford’s campus from the surrounding community.

## Strategies, Policies, and Implementation

### Strategy No. 1: Locate additional development inside the Academic Growth Boundary

The maintenance of the open space in the Stanford foothills is a central strategy for meeting the General Plan objectives of resource conservation and compact urban development. Concentration of the development of academic, academic support and housing inside the Academic Growth Boundary (AGB) allows for retention of the open space character of the land outside of the AGB, while continuing to meet the University’s land use objectives.

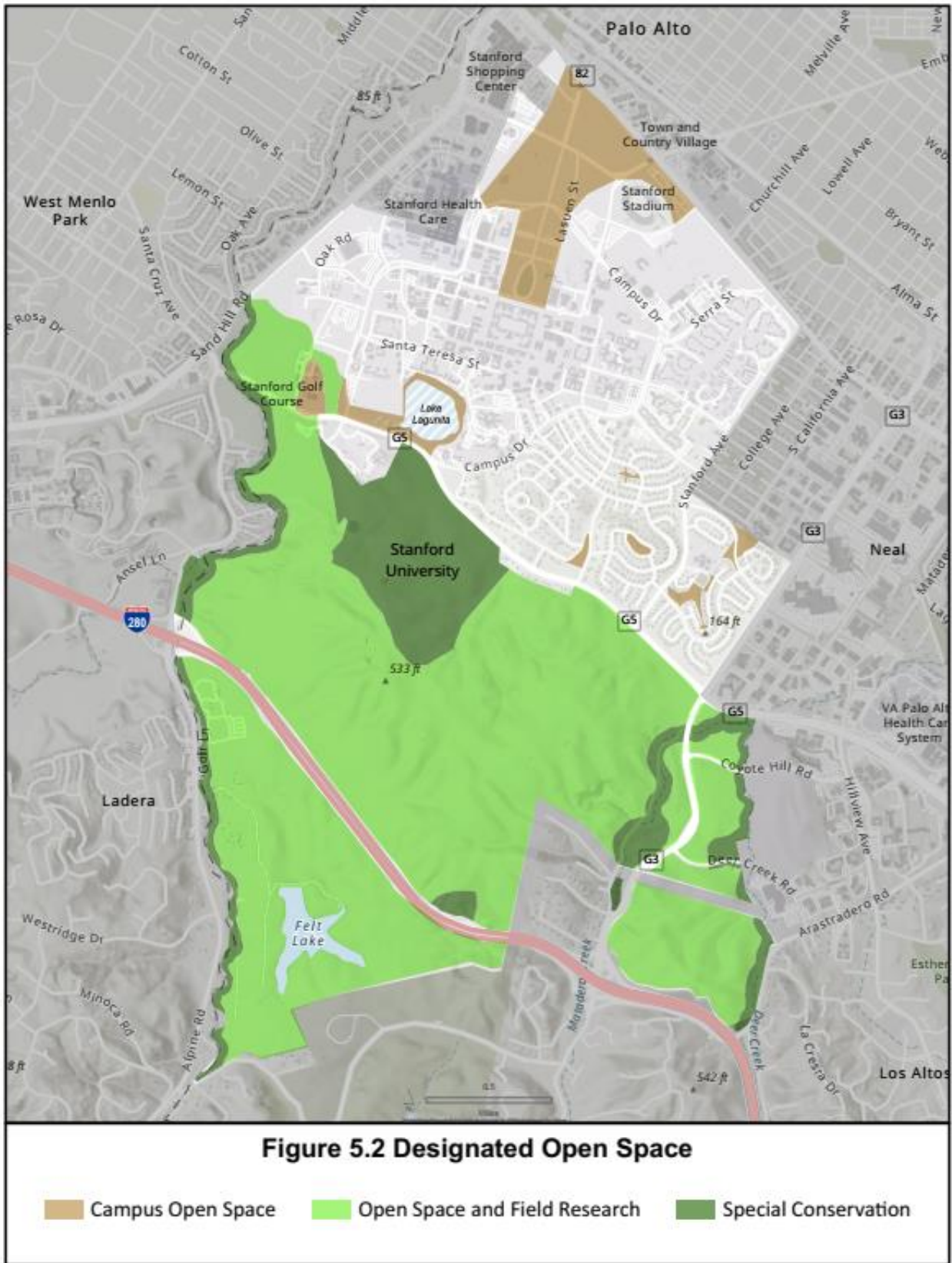
This strategy incorporates open space into the overall campus development approach, recognizing the area outside the AGB as an integral part of the campus environment that balances and moderates the intensity of the academic core. Efforts to preserve the foothills will require additional concentration and intensification of the central campus core.

Conversely, maintaining the central campus as the focus of all new development will allow the foothills to remain in their natural state. The implementation measures discuss mechanisms for achieving long-term open space protection in the foothills that build on the overall land use strategy. Such measures include conservation easements in critical habitat areas and identification of opportunities to secure Stanford’s commitment to open space protection.

This plan recognizes the need to protect open space in the Stanford foothills through the “Open Space and Field Research” land use designation, which allows for activities that support research and teaching requiring a remote or foothill setting for their functioning. Locations which are categorically not suited for development, such as habitats for rare species and geologic hazard areas, are designated Special Conservation and are completely restricted in terms of use and development.

This strategy and the associated policies and implementation recommendations reflect those policies articulated elsewhere in the Community Plan, particularly in the Growth and Development, Land Use, and Resource Conservation chapters. The policies are reiterated here to emphasize their value from the perspective of open space preservation. **Figure 5.2 Designated Open Space**, indicates those open space lands formally protected through Community Plan land use designations or other existing arrangements.

Figure 5.2 Designated Open Space





## **Policies**

### **SCP-OS 1**

Locate development inside the Academic Growth Boundary (AGB), allowing lands outside the boundary to continue as open space.

### **SCP-OS 2**

Allow only field research, a limited number of small, specialized facilities or installations that support permitted or existing activities, and other uses that require a remote or foothill setting for their functioning in areas outside the Academic Growth Boundary (AGB). Do not permit any new development that is not associated with such uses (see Land Use Chapter). Section E2-b of the 2000 Stanford University General Use Permit establishes that a cumulative maximum of 15,000 square feet of building area may be located in the Foothills district in a manner consistent with the General Plan and zoning. This amount may not be increased, and shall be accompanied by an identified corresponding equivalent decrease in allotted building area in the other development districts. No individual building or facility may exceed 5,000 square feet in size.

### **SCP-OS 3**

Preserve special conservation areas where they have been identified under the Special Conservation Area land use designation.

## **Implementation Measures**

### **SCP-OS (i) 1**

Prioritize and use infill sites and areas with potential for redevelopment within the Academic Growth Boundary (AGB) as locations for new development.

### **SCP-OS (i) 2**

Require easements as appropriate in Special Conservation areas. Locate easements in areas which serve critical habitat needs.

### **SCP-OS (i) 3**

Identify and pursue opportunities to remove existing obstacles to development within the Academic Growth Boundary (AGB) in exchange for easement protection of lands outside the AGB.



## **Strategy No. 2: Balance recreational use and environmental objectives**

Through its Countywide Trails Master Plan, the County has created the mechanisms to provide a comprehensive trail system throughout Santa Clara County. The plan articulates County policies for the location, management, dedication and use of trails.

Because Stanford lands border on a number of designated preserves and parklands, the Trails Master Plan identifies trail linkages in the regional trail system which cross Stanford lands. These trails are intended to provide links between developed urban areas and open space in the foothills and baylands. The Community Plan incorporates trails in accordance with the Countywide Trails Master Plan.

The Trails Master Plan identifies the following linkages on Stanford lands; actual alignments of these links must be designed to protect sensitive habitat areas, and on-going academic, agricultural, and residential uses. (See **Figure 5.3 County Trails Master Plan Designated Trails**):

- Route S1 is shown as a “sub-regional route on other public lands” in the Matadero Creek/Page Mill Road corridor and is partially on a public road. The alignment follows Matadero Creek and Old Page Mill Road in the Stanford Community Plan area.
- The connector route C1, in the San Francisquito/Los Trancos Creek corridors, is designated as a “trail route within private property.” The alignment generally follows the creeks and Alpine Road.

Since 2000, Stanford has completed all of the County’s requirements for dedication and construction of trails shown on the 1995 Countywide Trails Master Plan. Stanford dedicated easements for and completed the S1 Trail within Santa Clara County in 2011. Stanford also reached agreement with Portola Valley and constructed the portion of the C1 Trail that is located in Portola Valley in 2011. Stanford reached agreement with Los Altos Hills and constructed the C2 Trail in 2013.

The only jurisdiction that did not accept funding was San Mateo County. The Trails Agreement anticipated this potential outcome and required that, in such an event, Stanford would instead pay the County of Santa Clara the amount it was required to offer San Mateo County to construct the portion of the C1 Trail that is located in San Mateo County. To satisfy this requirement, Stanford paid \$10.4 million to the County Santa Clara in 2014 which was placed into a County Recreation Fund.

Figure 5.3 County Trails Master Plan Designated Trails



The County of Santa Clara Board of Supervisors conducted a proposal process to award the \$10.4 million in funding (County Recreation Fund) that it received from Stanford in lieu of constructing the C1 trail segment in San Mateo County. Various trail projects have been funded.

Stanford has completed all of the County's requirements for dedication and construction of the trails shown on the 1995 Countywide Trails Master Plan.

## **Policies**

### **SCP-OS 4**

Require dedication of trails on Stanford land as specified in the Countywide Trails Master Plan, consistent with environmental objectives, academic uses and with the priorities of the County Parks and Recreation Department.

### **SCP-OS 5**

Protect sensitive habitat areas, areas used for academic purposes, and areas under active agricultural use in the alignment and design of trails.

### **SCP-OS 6**

Plan for, design, and develop trails on Stanford lands in a manner consistent with the policies articulated in the Countywide Trails Master Plan.

### **SCP-OS 7**

Minimize impacts of recreational activities on academic uses and environmental resources.

### **SCP-OS 8**

Encourage Stanford to work with the community to allow public access to trails not included in the County Trails Master Plan in a way that minimizes impacts on academic uses and environmental resources.

## **Implementation Measures**

### **SCP-OS (i) 4**

Coordinate efforts among Stanford and local agencies to define more precise trail alignments for the trails crossing Stanford lands as described in the Countywide Trails Master Plan, and to determine terms for trail development, maintenance, and liability.

### **SCP-OS (i) 5**

Restrict access to sensitive habitat or hazardous areas, locations under ecological restoration, and research sites.

### **SCP-OS (i) 6**

Develop programs to protect and restore overused or misused recreational areas.

## Strategy No. 3: Plan for parks and open space land within the Academic Growth Boundary

The interplay between buildings and open space is an important distinguishing visual feature of the Stanford campus. The Stanford campus continually presents contrasts between intensive development and open space, and between formal and defined open space settings and informal, natural areas that evoke Stanford's natural setting.

The Community Plan identifies the areas within the Academic Growth Boundary (AGB) as the location for future development, maintaining the foothills as open space. As development of the academic core intensifies, treatment of open space areas becomes increasingly important for maintenance of the essential character of Stanford. In addition, implicit in the stated objective of maintaining Stanford as a residential campus is the provision of all of the physical elements of a complete residential community.

Planning for expansion of the basic academic, academic support and housing facilities should include open space necessary for a balanced environment. The competing concerns for open space on the campus, and the need to protect significant open spaces, is the basis behind the Campus Open Space land use designation. Undeveloped lands or open spaces which are not specifically protected through the Campus Open Space designation are addressed through Community Plan policies that will help ensure the availability of adequate amounts of open land for recreational use and to balance built areas. **Figure 5.2 Designated Open Space**, indicates those open space lands formally protected through Community Plan land use designations.

Recognizing the different types and roles of central campus open space, the Community Plan stipulates a variety of measures for protecting and enhancing these spaces:

- **Form-giving open space features:** Potentially historic open space and landscape features which are essential to the character of the campus are designated Campus Open Space in the Community Plan (see Land Use Chapter). This designation also applies to areas within the Academic Growth Boundary which are essential to the habitat value of critical natural areas located within the AGB.
- **Parks in residential areas:** Areas which have long been used as parks and playgrounds in the faculty/staff subdivision are a valued amenity for the resident community and are also designated Campus Open Space in the Community Plan. These designated Campus Open Space areas within and adjacent to the San Juan Residential District total 18.4 acres. This space can be considered adequate for a faculty/staff population of 3,680 according to the 5 acres per 1,000 residents standard recognized by the State of California as the maximum amount of park area that can be required in a new subdivision.

- **Athletic fields:** Athletic and recreational facilities also function as open space. The designated athletic facilities, intramural playfields, and informal fields near residences directly support academic and residential programs and are included in the Academic Campus designation. Community Plan policies call for provision of adequate outdoor athletic facilities to support the student population.
- **Buffers:** Undeveloped land on the periphery of campus both defines the gateway to the campus and provides a buffer to the surrounding community from the University's development. These buffer areas carry a variety of land use designations. Many of the important frontages are designated Campus Open Space. Others with some potential for development are designated Residential or Academic Campus. Community Plan policies call for the need to balance new development with the importance of maintaining adequate open space buffers along the interfaces with neighboring off-campus communities.

## Policies

### SCP-OS 9

Identify and preserve significant open space through use of the Campus Open Space designation in order to maintain the quality and character of the central campus.

### SCP-OS 10

Require Stanford to maintain recreational open space to meet existing and future recreational needs of the Stanford community.

### SCP-OS 11

Balance concerns about the maintenance of buffers between the University and Cities of Palo Alto and Menlo Park with the need for increased housing supply and improved affordability (see Housing Chapter).

### SCP-OS 12

Park and recreation areas should be designed and landscaped, incorporating safety features, and maintained in accordance with County requirements.

## Implementation Measures

### SCP-OS (i) 7

Identify, protect, and restore historic campus open space features essential to the organizing principles of the campus plan.

### SCP-OS (i) 8

Require Stanford to provide sufficient campus parks and open space in the residential areas, at the rate of 5 acres for 1,000 population. The population served varies by residential area, and

may include faculty, staff, students, and other household members.

**SCP-OS (i) 9**

Review development applications for continued provision of recreational and athletic facilities convenient to student residences and in adequate amounts to serve student needs.

**SCP-OS (i) 10**

Incorporate open space in redevelopment of the core campus.

**SCP-OS (i) 11**

Review development applications in the Academic Campus land use designation for continued provision of buffer between development on the campus and surrounding off-campus communities.



# Resource Conservation

## Chapter Summary

Stanford contains a great wealth of natural resources which the Community Plan aims to preserve and protect in a manner that balances conservation and development of the campus.

Resources include plant and wildlife species, creeks and other special habitat areas, water resources, historic and prehistoric resources, and visual resources. All types of resources contribute to the natural and built environment of the campus.

Many types of resources are protected through various state and federal laws. The policies and implementation recommendations in this chapter reinforce, enhance, and supplement these mandated resource conservation approaches for the particular natural and built environment of Stanford lands.

This chapter of the Stanford Community Plan addresses a range of resource conservation subjects, and each has a subsection of the chapter devoted to it. These subsections include:

- Habitat and Biodiversity,
- Water Quality and Watershed Management,
- Heritage Resources, and
- Scenic Resources.

Other Resource Conservation topic areas are discussed in the County of Santa Clara's General Plan, including Water Supply, Agricultural Resources, Mineral Resources, Solid Waste Management, and Energy Resources, in sufficient detail to guide activities at Stanford.

**Community Plan strategies for resource conservation are:**

### Habitat and Biodiversity

- |                        |   |
|------------------------|---|
| <b>Strategy No. 1:</b> | <b>Improve Current Knowledge and Awareness of Habitats and Natural Areas</b>            |
| <b>Strategy No. 2:</b> | <b>Protect the Biological Integrity of Habitat Areas and Adequately Mitigate Impact</b> |
| <b>Strategy No. 3:</b> | <b>Encourage and Promote Habitat Restoration</b>  |

## Water Quality and Watershed Management

- Strategy No. 4: Reduce Non-Point Source Pollution
- Strategy No. 5: Enhance and Restore Wetlands, Riparian Areas, and other Habitats that Improve Watershed Quality
- Strategy No. 6: Prepare and Implement Comprehensive Watershed Management Plans

## Heritage Resources

- Strategy No. 7: Inventory and Evaluate Heritage Resources
- Strategy No. 8: Protect Heritage Resources Through Avoidance, Adaptive Reuse and Sensitive Planning and Design

## Scenic Resources

- Strategy No. 9: Employ Growth and Development Policies That Conserve Scenic Resources
- Strategy No. 10: Maintain and Enhance the Scenic Values of Urbanized Area Settings

## Background

While the concept of resource conservation encompasses a diverse set of topics that involve both the built and the natural environment, there are common themes that bring these issues together. These themes are expressed in the General Plan but are discussed in this Community Plan to provide a sense of their application to Stanford and the importance of resource conservation in the overall approach to development on University lands:

- **Value:** Stanford's resources discussed in this chapter all provide a variety of types of values to both the Stanford community and the wider area. For example, species and habitats have value from both the ecological viewpoint and for scientific research purposes. Historic buildings house Stanford's academic programs and enhance the physical identity of the University and the wider community.
- **Stewardship:** The concept of stewardship involves recognition of the value of natural and heritage resources, leading to active efforts to preserve and enhance the quality of the environment and its resources. Stanford's preservation of the vast majority of its foothills is an example of stewardship, particularly in times when the University actively chose not to develop this land. As pressure to grow increases, stewardship becomes both more difficult and more important.

- **Challenges:** Challenges to effective resource conservation stem from the increasing demands on natural resources presented by growth at the University and elsewhere, from the limited capacity of the environment to absorb impacts from human activity, and from the need for cooperative, regional action to implement effective measures.

The General Plan advocates a set of overall strategies for resource conservation efforts, which include:

1. Improving and updating current knowledge of resources;
2. Emphasizing pro-active, preventive measures to avoid impacts;
3. Minimizing or compensating for impacts which do happen;
4. Restoring resources where possible; and,
5. Evaluating the effectiveness of mitigation measures employed.

Strategies and policies for various subjects as they relate to Stanford's lands are based upon these overall strategies, and may be tailored or limited to the specific resources and circumstances involved with Stanford lands. One advantage for resource conservation at Stanford is the tremendous amount of knowledge that has been gathered and activities that have been initiated over the years. These measures are discussed more fully for each topic area.

One of the most important tools available to local government for resource conservation is the California Environmental Quality Act (CEQA), which requires that the significant environmental impacts of development projects be recognized and mitigated, as appropriate. At Stanford, the County has taken the approach to require comprehensive environmental review of potential impacts associated with the issuance of the General Use Permit (GUP). This analysis is then supplemented by additional environmental review of the impacts of each new project.

## *Habitat and Biodiversity*

### **Background**

Stanford's natural setting is an asset to both the University and the region. The diversity of local flora and fauna, and close proximity of the main campus to relatively unspoiled areas, allow for laboratory activities, teaching, and research to be closely linked to field-based studies, providing Stanford with academic opportunities unique among its peer institutions. The large acreage in open space supports relatively uninterrupted habitat and wildlife corridors connecting to publicly-owned open spaces in the region. On lands which are not owned by Stanford and are not under public ownership, extensive development has occurred, leading to habitat fragmentation and increasing local interest in maintaining Stanford as open lands.

Protection of species depends on protection of the habitats in which they live. Stanford's lands support a rich array of native biological communities including riparian oak woodland, other oak woodlands, and annual grasslands. A number of species and biotic communities found on Stanford lands are protected by one or more local, state, or federal statutes such as the Federal Endangered Species Act (ESA), the California Endangered Species Act (CESA), and the Federal Migratory Bird Treaty Act. These species are collectively referred to as "special status species" and include the following:

- The ESA lists the steelhead trout, California red-legged frog and the California tiger salamander as "threatened." Although the latter two species are not aquatic they typically associate with ponds or creeks with surrounding vegetation, at least seasonally. All of these species can therefore be protected through use of buffers around creeks and ponds, and protection of water quality. Another important consideration for creek species is the effect of water use from creeks for irrigation and other purposes.
- Trees in the riparian forest, oak woodland savanna, and central campus provide breeding and foraging habitat for a wide variety of birds, including several species of special concern such as the Cooper's hawk, sharp-shinned hawk, golden eagle, and loggerhead shrike. The Land Use designations and Open Space chapter policies are in part intended to conserve the resources of these areas for the habitat value they provide.

### **Stanford Conservation Efforts**

Stanford has engaged in efforts over time to preserve habitats and biodiversity.

In 2013, the United States Fish and Wildlife Services (USFWS) approved a Habitat Conservation Plan (HCP) prepared by Stanford as part of an effort to address Federal Endangered Species Act requirements pertaining to the California red-legged frog and California tiger salamander. The purpose of the HCP is to describe Stanford's anticipated operational and development activities and identify measures that will minimize and mitigate the effects of those activities on identified species of concern. The HCP asserts that proper stewardship of Stanford's lands "has been, and will continue to be, essential to the success of the University."

A five-point policy initiative clarifies elements of the HCP program as they relate to the following:

1. Measurable biological goals and objectives,
2. adaptive management,
3. monitoring,
4. permit duration, and
5. public participation.

Based on the conservation programs and commitments identified in the HCP, the USFWS issued Stanford an Incidental Take Permit (ITP) in compliance with Section 10(a) of the ESA. In May 2016, the California Department of Fish Wildlife (CDFW) determined that the ITP issued by the USFWS, including the incorporated measures in the HCP, is consistent with the CESA. Stanford's HCP thereby provides compliance with both the ESA and CESA for protected species on most of Stanford's land within unincorporated Santa Clara County.

The HCP key resource conservation components include:

- Dedication of a 90-acre permanent conservation easement along the most biologically sensitive portions of Deer and Matadero creeks.
- Establishment of a 300-acre, 50-year no-build area in the lower foothills. Within this "California Tiger Salamander Reserve," construction of eight seasonally filled ponds and designation of 30 acres as a permanent conservation easement.
- A 50-year commitment for the management of Lake Lagunita for the benefit of seasonal wetland-dependent species, including the California tiger salamander.
- Construction of four new ponds suitable for California red-legged frog reproduction and year-round occupation.
- Annual monitoring of species of conservation concern, including federally and State listed species, and species which may potentially cause environmental problems (mainly invasive non-native species).
- Widespread vegetation management, including weed control and the planting of native species.

Additional conservation efforts pursued by the University include:

- Implementation of steelhead trout restoration projects in San Francisquito Creek, such as removal of the Happy Hollow (Lagunita) Dam to allow for improved dispersal of fish and installation of a fish-ladder at the Los Trancos diversion facility.
- Monitoring of conditions and review of land use activities in Special Conservation Areas that are outside the HCP Plan Area, along Los Trancos and San Francisquito creeks, and according to measures outlined in the Stanford HCP.
- Construction of three tunnels under Junipero Serra Boulevard to facilitate California tiger salamander dispersal.

- Collaboration with the jurisdictions of Portola Valley and San Mateo County on environmentally sound creek bank stabilization efforts (partly in Santa Clara County) along Los Trancos Creek.
- Promotion of the overall health of tree canopy and biodiversity in the central campus through planting of native and climate-adapted introduced species, preservation of existing trees and widespread vegetation management, including weed control.

An important aspect of these conservation activities is the opportunity to learn from these efforts. As an academic institution and long-term landowner, Stanford is able to monitor and test different methods of habitat conservation and restoration in search of the most effective strategies. In addition to the Jasper Ridge Biological Preserve, Stanford faculty, students, and researchers have long-term research and teaching interests in San Francisquito Creek, Los Trancos Creek, Matadero Creek, and the oak woodlands and annual grasslands.

The oak reforestation program is perhaps the best-known habitat restoration program on the campus, involving Stanford, nonprofit organizations, and numerous volunteers from the campus and neighboring communities. This program was initiated by Stanford in the early 1980s, following the preparation of a Vegetation Management Plan which found a lack of young oak trees and a decline in mature trees in the natural areas on the campus. After several years of operation in the foothills, the reforestation program has been extended to the Arboretum, and it has also involved reintroduction of native understory shrubs, grasses and forbs (broadleaf herbs) in addition to oaks.

This continuing program has yielded many lessons and insights that have been used to modify techniques for planting and maintenance. The oak reforestation program is an excellent example of comprehensive land stewardship and management that restores habitat and contributes to the knowledge of the natural environment.

### **California Tiger Salamander**

Lake Lagunita and the surrounding undeveloped lands provide both aquatic breeding and terrestrial habitat for the California tiger salamander (CTS). Stanford's population is the only remaining known population of this species on the San Francisco Peninsula. The rarity of this population and the fact that the salamander habitat is located in potential development areas create a particularly high level of interest in the potential effects of development under the Community Plan on this species.

The CTS have a life cycle which requires upland and seasonally aquatic areas. At Stanford, CTS reproduce in Lake Lagunita and several of the ponds located in the lower foothills (which were specifically constructed for CTS reproduction). After hatching and developing to their terrestrial form in water, juvenile salamanders migrate to upland habitats up to one kilometer or more from the breeding site, where they live in holes created by ground rodents. These estivation sites are located both north and south of Junipero Serra Boulevard. Adult salamanders return to



their breeding ponds with the first heavy rains of winter. Aquatic breeding sites and usable upland habitat, particularly within 500 meters of the lake, comprise the salamander's crucial habitat needs.

Primary threats to the California Tiger Salamander at Stanford are:

- Changes in the amount and timing of rainfall due to climate change, which affect the availability and quality of CTS breeding habitat from year-to-year;
- Traffic mortality due to crossing of Junipero Serra Boulevard during migration, although tunnels and fencing along Junipero Serra Boulevard have successfully reduced road-related mortality;
- Impacts associated with the CTS population being located in highly fragmented and altered environment; and

In 1998, the USFWS, CDFW, the County and Stanford adopted a management agreement to reduce impacts to CTS. This was replaced by the Stanford HCP, which was adopted by the USFWS and CDFW in 2013 and 2016, respectively. On August 13, 2013, the Santa Clara County Board of Supervisors acknowledged the County Planning Director's determination that the HCP provides "equal habitat value and protection for the California tiger salamander."

## **Strategies, Policies, and Implementation**

The Community Plan incorporates the major habitat preservation concepts or strategies included in the General Plan, namely, acknowledging habitat and biological resources, preserving habitat, mitigating impacts, and restoring habitat. The Community Plan implements these concepts through restrictions on development in the foothills to only those activities which support academic activity based on the foothill setting and through emphasizing development in the central campus that is sensitive to the natural resources affected by the development.

### **Strategy No. 1: Improve Current Knowledge and Awareness of Habitats and Natural Areas**

This strategy acknowledges the need for accurate and up-to-date information on local biodiversity in order to conduct successful conservation and land use planning. Stanford maintains an evolving database on many levels of local biotic diversity. In particular, data on the distribution and condition of protected species and plant-defined biological communities, such as serpentine grasslands, are incorporated into the database on an annual basis and should be transmitted to the County as well. Stanford is also conducting ongoing studies investigating the impacts of non-native species on local ecosystems. The policies associated with this strategy call for continued data collection and information transmission to the County.

## **Policies**

### **SCP-RC 1**

Stanford shall maintain and update inventories and maps of important biological resources on Stanford lands, including protected species, species considered at risk of local extinction, and habitat types (biotic communities), for use in conservation efforts, land use decision making, and monitoring of resource status.

### **SCP-RC 2**

Allow field research and other academic activities related to improving knowledge and understanding of habitat resources to occur in areas south of Junipero Serra Boulevard.

## **Implementation Measures**

### **SCP-RC (i) 1**

Stanford shall, as needed, prepare California Natural Diversity Database records for species of concern.

### **SCP-RC (i) 2**

Stanford shall transmit natural resource map updates to the County using the County's current electronic map format standards, upon request by the County.

### **SCP-RC (i) 3**

Stanford shall provide a copy of the annual report provided under the Stanford Habitat Conservation Plan (HCP) to the County.

## **Strategy No. 2: Protect the Biological Integrity of Habitat Areas and Adequately Mitigate Impacts**

Protection of existing natural resource areas is an essential component of successful conservation planning. At Stanford such protection involves the management and long-term commitment to the preservation of environmentally significant areas, particularly in the foothills.

The question of what habitat areas are "sensitive" and most in need of protection is not a simple one. Habitats for some special-status species under state or federal law are clear candidates for protection. Such habitats at Stanford include Lake Lagunita, other breeding ponds, and the upland habitat (undeveloped land within 500 meters of breeding sites) for the California tiger salamander. It also includes the creeks and their riparian surroundings which support steelhead and red-legged frogs. While much of this habitat area is located in the foothills, which will remain largely undeveloped, some areas around Lake Lagunita on the north side of Junipero Serra Boulevard are within the Academic Growth Boundary (AGB). This area is viable salamander habitat and should be considered a sensitive area for management purposes.

While location of development and activities outside of the most sensitive habitat areas is important, appropriate management within already developed areas and in locations used for agriculture and recreation is also critical to the protection of species and habitats. For example, there is concern about the effects of recreational activity in the foothills in terms of erosion and effects on habitat and wildlife. Unlimited access to the creeks in these areas could pose a threat to the special status species in such aquatic environments. Resource management of some of these areas can be particularly challenging in areas that are not directly controlled by the University, such as on agricultural leaseholds on undeveloped lands.

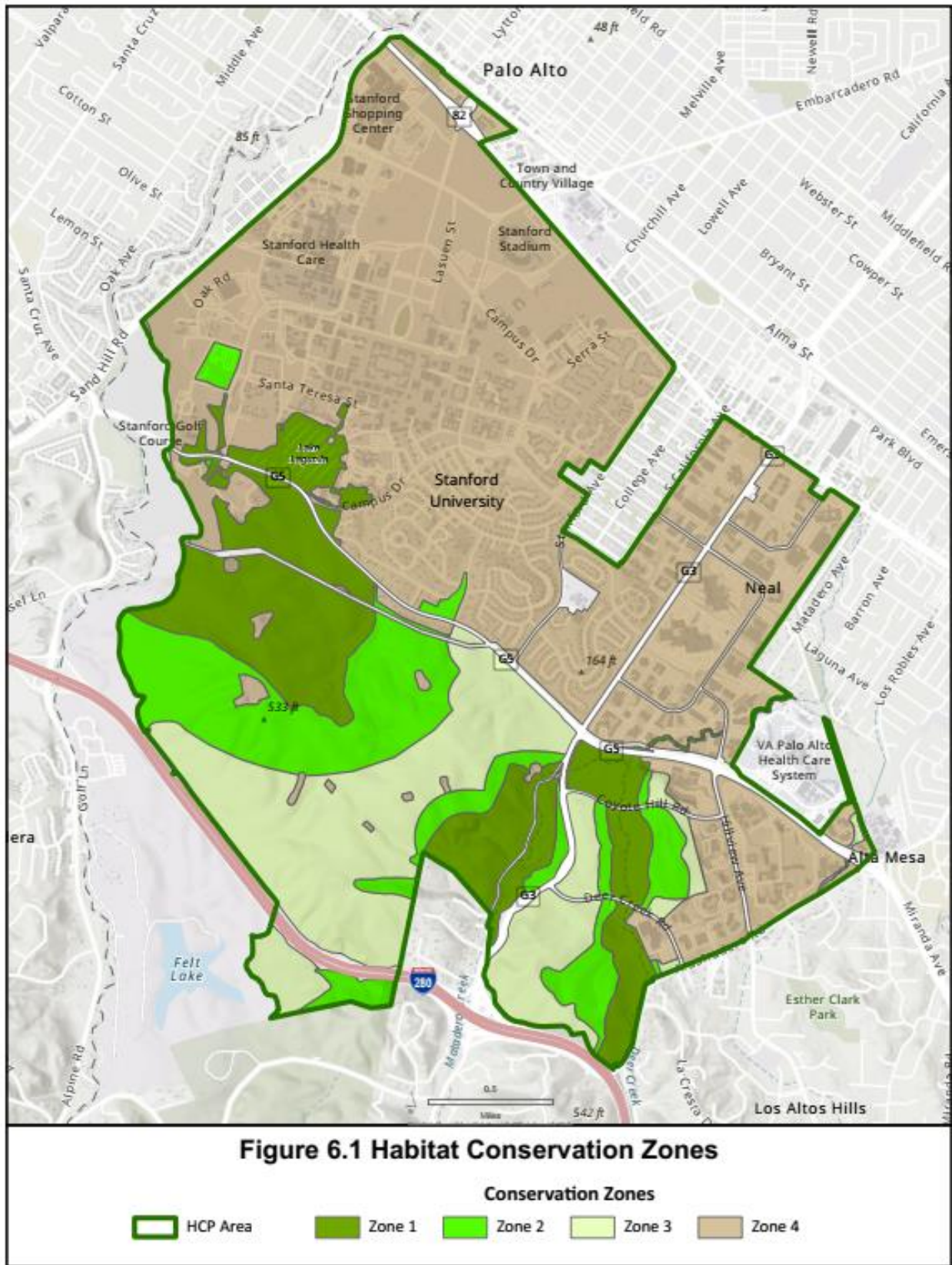
### **California Tiger Salamander**

Stanford's HCP provides compliance with both the ESA and CESA for protected species, including CTS, on most of Stanford's land within unincorporated Santa Clara County. The policies associated with this strategy include references to the HCP as appropriate and emphasize both avoidance of disturbance to sensitive habitat areas and mitigation of any impacts that do occur.

These sensitive areas are generally located within Zone 1 of the HCP's conservation zones. (See **Figure 6.1 Habitat Conservation Zones**).

Stanford's HCP provides compliance with both the ESA and CESA for protected species on most of Stanford's land within unincorporated Santa Clara County. The policies associated with this strategy include references to the HCP as appropriate and emphasize both avoidance of disturbance to sensitive habitat areas and mitigation of any impacts that do occur.

Figure 6.1 Habitat Conservation Zones



## **Policies**

### **SCP-RC 3**

Assure the protection of habitats for special status species in approving the location and design of new development. Avoid habitat areas for these species in the location of development whenever feasible.

### **SCP-RC 4**

Protect and maintain habitats, natural areas, and wildlife corridors in development and redevelopment.

### **SCP-RC 5**

Protect habitat areas through use of the Open Space and Field Research, Special Conservation, and Campus Open Space land use designations, and through use of the Academic Growth Boundary (AGB). If land use designation changes or AGB relocation is proposed, conduct detailed studies for presence of special status species and their habitat prior to decision making.

### **SCP-RC 6**

Require Stanford to mitigate any impacts on special status species (e.g. locally important species not covered by the Habitat Conservation Plan - HCP) or other biological resources that result from land use and development through:

- a. Mitigation measures that have proven to be effective which shall be implemented prior to commencement of site preparation and construction activities as appropriate.
- b. Mitigation measures such as provision of new habitat areas which shall be monitored and, if necessary, revised over time to ensure the viability of these measures as mitigation.

### **SCP-RC 7**

Stanford shall support the Biological Goals of the Habitat Conservation Plan (HCP) which include:

- a. Maintain and enhance natural communities so that they benefit the Covered Species.
- b. Stabilize the local California tiger salamander population and increase its chance of long-term persistence at Stanford.
- c. Maintain ponds to promote California tiger salamander reproduction in the Foothills.
- d. Increase the local California red-legged frog population and increase its chance of long-term persistence at Stanford.
- e. Maintain or improve habitat that could support the San Francisco garter snake and continue to contribute to the body of information about garter snakes at Stanford.



**SCP-RC 8**

Maintain and restore riparian buffer zones along creeks as described in Santa Clara County General Plan Policy R-RC-37.

**SCP-RC 9**

Recreational uses should not occur in sensitive habitat areas and should be limited.

**Implementation Measures****SCP-RC (i) 4**

Stanford shall comply with all regulatory standards for review and approval of research and teaching activities in habitat areas, particularly in those areas which support special-status species.

**SCP-RC (i) 5**

Stanford shall manage ongoing recreational activities with regard to the habitat impacts of these activities and in conformance with the Stanford University Habitat Conservation Plan (HCP).

**SCP-RC (i) 6**

All development shall conform with the Habitat Conservation Plan (HCP) for Stanford lands approved by the U.S. Fish and Wildlife Service and any corresponding requirements by the California Department of Fish and Wildlife.

**SCP-RC (i) 7**

Require long-term habitat protection measures in appropriate locations as mitigation for development in habitat areas that support special-status species or that are protected through local, state, or federal regulations.

**SCP-RC (i) 8**

To improve implementation of Habitat Conservation Plan (HCP) protections, project-specific HCP mitigation related to the proposed development must be identified and included in the permits and other approvals issued for the individual project, if applicable. Coordinate with Stanford to standardize an efficient system to verify project-specific HCP compliance.

**SCP-RC (i) 9**

Require replacement of trees per the County's Tree Preservation and Removal Ordinance. Trees greater than 12 inches in diameter shall be replaced at a ratio of 3:1 for oaks and 1:1 for other protected trees. A Vegetation Management Plan for the entire campus may be submitted by Stanford to the County Planning Office for review and approval, to replace the project-by-project tree replacement requirements. This plan must provide for the same or greater level of tree protection as required by the County's Tree Preservation and Removal ordinance.

**SCP-RC (i) 10**

Stanford should identify opportunities to conserve water used for irrigation and other purposes



in order to limit use of water from creeks.

### **Strategy No. 3: Encourage and Promote Habitat Restoration**

Just as protection of existing natural resources is a critical element to successful resource conservation planning, so too is habitat restoration. After well over 200 years of occupation by European settlers and their descendants, and more than 8,000 years of occupation by Native Americans, Santa Clara County, including the Stanford area, has been modified significantly by humans. Habitat loss, habitat fragmentation, and habitat modification have all occurred on a large scale in the region, with most changes occurring in the last 150 years. For example, the Stanford foothills, which are considered an important natural resource, are primarily comprised of non-native grasses and have been substantially altered through cattle grazing. Both foothill areas and flatlands in areas surrounding Stanford lands have been extensively developed.

Habitat restoration is also a potential mitigation measure for development in sensitive habitat in other locations. The policies associated with this strategy encourage continued habitat restoration as part of a comprehensive approach to habitat preservation and management.

#### **Policies**

##### **SCP-RC 10**

Stanford should establish priorities for the restoration or rehabilitation of sensitive habitat areas and include habitat restoration as a key component of conservation management and planning.

##### **SCP-RC 11**

Stanford should continue and support efforts to enhance habitats and populations of protected native species, including, but not limited to:

- a. reduction of non-native invasive species;
- b. wetland creation efforts, particularly to increase breeding sites for the California tiger salamander; and
- c. the oak reforestation program in the foothills, the Arboretum, and in other natural areas.

#### **Implementation Measures**

##### **SCP-RC (i) 11**

Coordinate wetland preservation for flood control purposes with habitat restoration efforts.

##### **SCP-RC (i) 12**

Encourage location of facilities and trails out of sensitive habitat areas and areas undergoing habitat restoration.

# *Water Quality and Watershed Management*

## **Background**

Healthy watersheds with good water quality are a critical component of resource conservation because watercourses are home to many of the campus' sensitive species, and because the quality of the watershed affects the larger San Francisco Bay ecosystem. Activities on Stanford lands have the potential to affect the quality of creeks and their associated riparian habitats, creating lasting impacts on both terrestrial habitat and water quality and species.

Stanford lands are included in two watersheds: the San Francisquito and the Matadero (see **Figure 6.2 Watershed Boundaries**). The San Francisquito Creek system, including San Francisquito, Los Trancos, Corte Madera, Sausal, and Bear creeks, and the Searsville Reservoir, is the larger of the two and is located in the west and north portions of the University. Stretches of this system form the boundary between Santa Clara and San Mateo Counties. Stanford has three water diversions in this watershed: the Searsville Dam, a recently redesigned pumping facility located at the Stanford Golf Course near Junipero Serra Boulevard, and the Felt Lake diversion on Los Trancos Creek (at Arastradero Road).

The Matadero system encompasses the eastern areas of the University and consists of Matadero and Deer creeks. This watershed is located entirely in Santa Clara County. The Stanford portion of this watershed in unincorporated Santa Clara County is in natural streambeds with substantial existing riparian vegetation. Downstream portions of the system are maintained in artificial channels. Stanford has no water diversions in this system.

Portions of Stanford lands also contain a groundwater recharge area, which crosses the central campus (see **Figure 6.3 Groundwater Recharge Area**). This area is referred to as an "unconfined" zone where groundwater recharge is not generally precluded by soils and geologic features. As additional development occurs in this portion of the campus, there is less opportunity for infiltration and recharge of the aquifer through ground percolation and more runoff into creeks and storm drain systems. Drainage design and detention pond systems can offset increases in impervious surfaces, ensuring opportunities for recharge.

As part of the 2000 General Use Permit, Stanford had the option to prepare a site-specific groundwater recharge study for each building project within the unconfined zone or a comprehensive groundwater recharge study for all development that could occur within the unconfined zone. Stanford chose to develop a comprehensive approach to groundwater recharge and the Santa Clara Valley Water District approved the study in 2015.

The study outlines calculation methodologies for groundwater recharge lost by development and Stanford's operational practice for conveying water to Lagunita from Stanford's surface water sources for the benefit of California tiger salamanders. These surface water sources include water diverted from creeks and/or impounded by dams and filter backwash water from

Stanford's irrigation water supply filtration facility. Lagunita has a high infiltration rate and groundwater recharge is very effective. The accounting of recharge is tracked to ensure that all future development would continue to result in an annual net positive recharge to the unconfined zone.

Stanford participates in a regional Joint Powers Agency (JPA) for the San Francisquito Creek Watershed, along with the Cities of Palo Alto, Menlo Park, and East Palo Alto, the County of San Mateo, and the Santa Clara Valley Water District. This JPA focuses on both habitat protection and flood control in the watershed. It grew from the Coordinated Resource Management and Planning (CRMP) process for San Francisquito Creek. Watershed management and planning in Santa Clara County is conducted under the auspices of the Santa Clara Valley Water District (SCVWD or "Valley Water").

### **Strategies, Policies, and Implementation**

The strategies, policies and implementation recommendations related to water quality and watershed management reflect the General Plan's comprehensive approach to this issue. These focus on reducing pollution sources and maintaining streamside environments rather than on treatment of polluted water. Comprehensive watershed management requires coordination among a multitude of landowners and jurisdictions. As a major landowner with a variety of uses on its lands, Stanford is an important contributor to the overall health of the watersheds in which it lies.

Figure 6.2 Watershed Boundaries

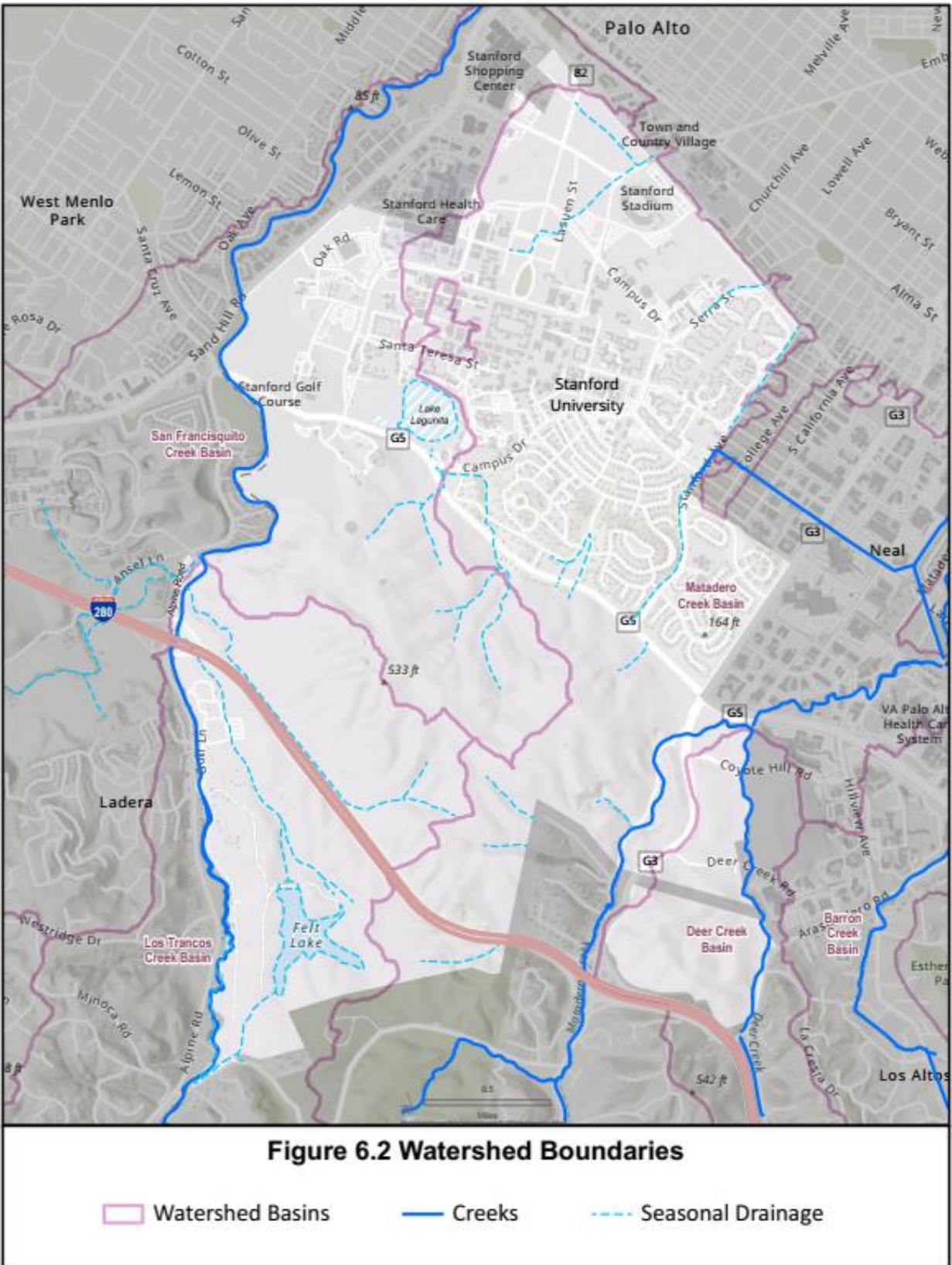




Figure 6.3 Groundwater Recharge Area

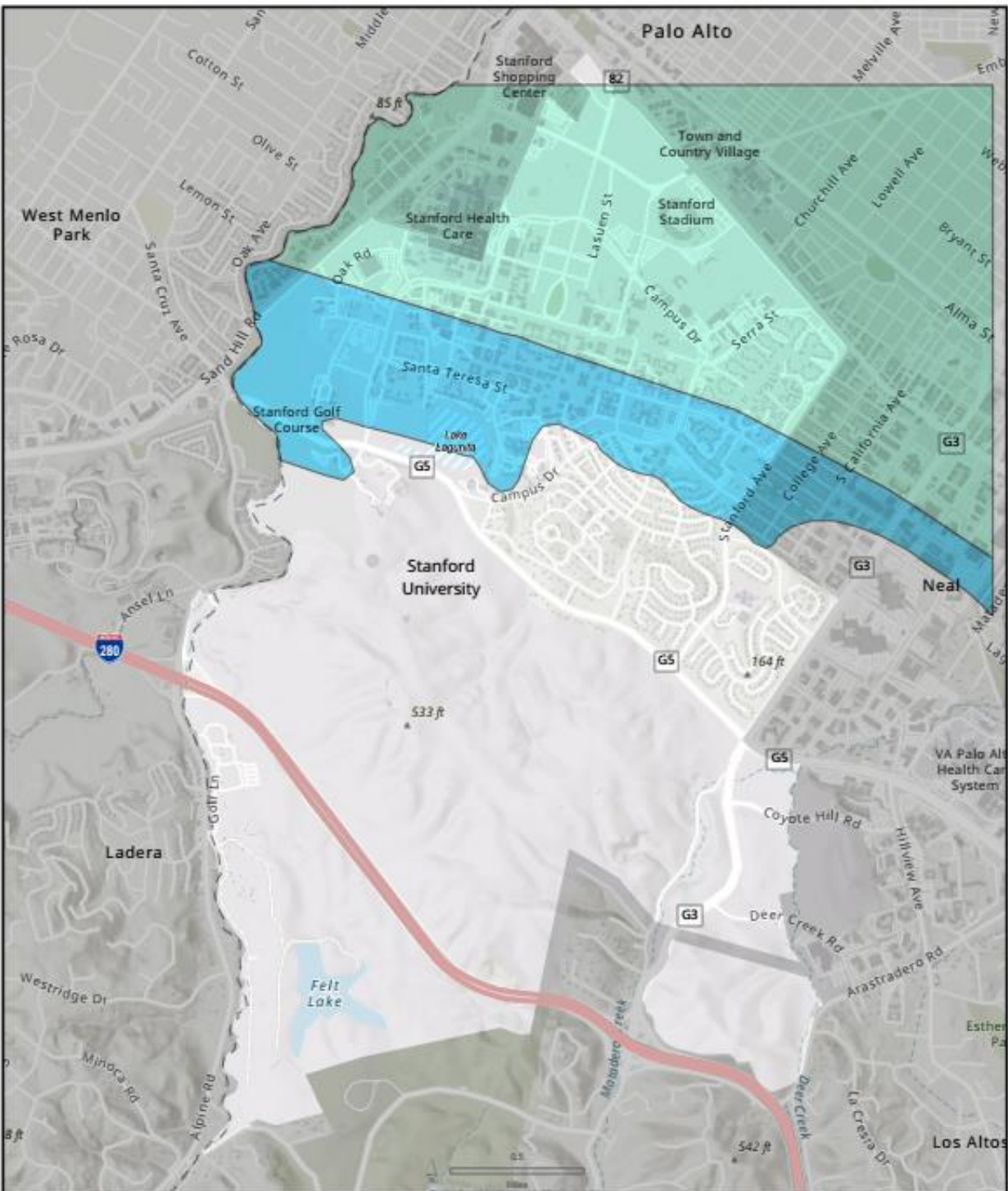


Figure 6.3 Groundwater Recharge Area

- Santa Clara Valley Confined
- Santa Clara Valley Unconfined

## **Strategy No. 4: Reduce Non-Point Source Pollution**

Non-point source pollution has been identified as a major regional problem, accounting for approximately half of the contaminants discharged into San Francisco Bay. This type of pollution stems from a variety of sources on the campus, such as streets, parking lots, agricultural waste and runoff, erosion, and chemical or other waste from research activities. Stanford and the County's efforts to reduce non-point source pollution are diverse, ranging from public education to development and implementation of best management practices.

Agricultural activities on leased lands owned by the University have been a particular source of water pollution. These activities are under the influence of Stanford as a land-owner, but not the direct control of Stanford as an operator. As a landowner, Stanford has the ability to require water pollution prevention practices as terms and conditions of its leases.

### **Policies**

#### **SCP-RC 12**

Require Stanford to continue the use of appropriate best management practices to reduce non-point source pollution in agricultural, recreational, and academic areas and for construction activities, and include these practices as terms and conditions of leases of Stanford lands.

#### **SCP-RC 13**

In planning for new development and redevelopment, utilize site, building and landscape design features which serve to reduce non-point source pollution.

#### **SCP-RC 14**

Promote and participate in interjurisdictional efforts to identify and reduce non-point source pollution and to develop economically viable best management practices for improving water quality.

#### **SCP-RC 15**

Emphasize groundwater recharge through natural percolation and filtration over increased runoff to storm drains and creeks.

### **Implementation Measures**

#### **SCP-RC (i) 13**

Stanford shall develop education programs for relevant University personnel and for campus lease-holders on water quality issues.

#### **SCP-RC (i) 14**

Stanford shall conduct regular maintenance on existing storm water systems.



#### **SCP-RC (i) 15**

Incorporate conditions within approvals for new development to minimize sources of non-point source pollution and employ best management practices as mitigations.

### **Strategy No. 5: Enhance and Restore Wetlands, Riparian Areas, and other Habitats that Improve Watershed Quality**

A critical feature of efforts to improve regional water quality is the existence of functioning wetlands and surrounding vegetated areas. Wetlands and associated vegetated areas act to reduce erosion, absorb runoff, and reduce the intensity of flood events. Natural areas contribute to water quality of both surface water features and underground aquifers. This function adds to the County and Stanford's interest in the protection of riparian areas through streamside buffers and in the protection of central-campus wetlands, particularly in the Arboretum and around Lake Lagunita.

#### **Policies**

#### **SCP-RC 16**

Assist Stanford in identifying and implementing agricultural and other land management practices that promote native species and that contribute to erosion control.

#### **SCP-RC 17**

Avoid development in Special Conservation Areas, riparian areas and wetlands.

#### **SCP-RC 18**

Maintain native plant communities south of Junipero Serra Boulevard and in Campus Open Space areas such as oak woodland, chaparral, and riparian trees and shrubs that serve to prevent soil erosion and creek bank collapse.

#### **SCP-RC 19**

Enhance seasonal wetlands in the Arboretum.

#### **SCP-RC 20**

Continue to seasonally fill Lake Lagunita and create seasonal wetlands habitat, creek flow permitting, where not in conflict with the Stanford University Habitat Conservation Plan (HCP).

#### **Implementation Measures**

#### **SCP-RC (i) 16**

Where appropriate during development and redevelopment, Stanford shall be required to relocate structures, roads, and trails away from creeks and in a manner that minimizes the addition of impermeable surfaces.

**SCP-RC (i) 17**

Incorporate flood control features such as detention basins into new development. Design and engage in flood control activities for entire drainage areas rather than on project-by-project basis for each new campus facility.

**Strategy No. 6: Prepare and Implement Comprehensive Watershed Management Plans**

The primary goal of watershed management planning is greater assurance of water quality, with the important additional benefits of habitat and natural resource protection. Because watershed management issues are complex and involve multiple parties, efforts have increased in the last several years to approach water quality issues from a comprehensive watershed management approach. One such ongoing endeavor is the Watershed Management Initiative for Santa Clara County, in which numerous jurisdictions and stakeholders have worked together over time to address watershed management and water quality collectively from a comprehensive perspective.

Stanford's participation in the preparation and implementation of watershed management plans is important due to the amount of land owned by the University and the variety of activities and resources on University lands. In order to manage watersheds on Stanford lands and to contribute to regional planning, Stanford contributes scientific information and participates in regional planning efforts such as that of Joint Powers Authority for San Francisquito Creek Watershed.

**Policies****SCP-RC 21**

Support and encourage Stanford's participation in regional watershed management planning and implementation for watersheds including Stanford lands.

**Implementation Measures****SCP-RC (i) 18**

Stanford shall continue to participate in region-wide watershed conservation and management activities (e.g. Coordinated Resource Management Program and the Joint Powers Authority for San Francisquito Creek).

**SCP-RC (i) 19**

Stanford shall periodically prepare an updated Drainage Master Plan based on County-specified design criteria upon approval of a new or major modification of a General Use Permit (GUP).

## *Heritage Resources*

### **Background**

Heritage resources at Stanford include those features which reflect and embody the campus history. Many of these features are central to the visual and functional form and character of the campus. While many equate heritage resources with historic buildings only, these resources encompass a range of features that contribute to the campus heritage, including archaeological sites from prehistoric and historic times as well as major landscape features.

### **Archaeological Sites**

Archaeological sites are an important link to the past and source of understanding of the area's history. Archaeological sites at Stanford reach as far back as remains indicating a human presence 7,600 years ago. Resources on the Stanford campus include sites from the local Muwekma Ohlone culture and their ancestors, as well as nineteenth- and earlier twentieth-century archaeological deposits associated with Spanish, Mexican, early American, and Stanford history.

Stanford faculty and students have conducted archaeological digs on campus since the 1920s. In 1986, the Campus Archaeology program made the first effort to systematically investigate the entire 8,180-acre land holding. More than 50 prehistoric archaeological sites relating to the ancestors of the local Muwekma Ohlone culture, primarily along the creeks at the campus edges, were identified during that process.

Historic records have also been investigated to ensure documentation of deposits associated with European settlers and their descendants. It is customary not to include maps of archaeological sites in plans in order to help protect the integrity of the sites. Stanford makes efforts to protect these ancient sites and has designed development to avoid or to permit and mitigate potential impacts to prehistoric resources.

The University created an 11-acre archaeological preserve along San Francisquito Creek in 1986 that encompasses one of the oldest prehistoric sites on the campus. A conservation easement was dedicated over this preserve in conjunction with the City of Palo Alto's development agreement for the Sand Hill Road projects in 1997.

Prehistoric sites are generally protected from development disturbance by the Community Plan land use designations and Academic Growth Boundary (AGB). In the event that future development does occur that affects prehistoric sites, such as in the golf course, protective measures would be required. Ecological restoration and flood control in creeks also pose a threat to archaeological resources, which should be considering in the planning and implementation of such efforts.

## Historic Structures and Sites

The Stanford University campus contains a number of significant historic structures and sites associated with the Stanford family and the University, as well as with the previous occupants of the land. Stanford's academic, academic support and residential facilities include approximately 365 structures that meet the minimum age criteria for being potentially historic, i.e., constructed more than 50 years ago. (See **Figure 6.4 Age of Existing Structures**). In addition to these resources related to Stanford's history over the past 120 years, the University lands contain a small number of older structures dating from the 1860s and 1870s, prior to the establishment of the Stanford Palo Alto Stock Farm and the University.

Some campus buildings appear on federal, state, and County lists of historic resources, including the Santa Clara County Heritage Resources Inventory. (**Figure 6.5 Listed Historic Structure**). Stanford's faculty and staff housing area, referred to as the San Juan Residential District, also contains significant historic structures associated with prominent architects. The area includes seven buildings that are listed resources including one listed on the National Register; four listed locally on the County's Heritage Resource Inventory (HRI); one listed on the HRI and designated as both a National Historic Landmark and California Historical Landmark; and one listed on the HRI and as a National Historic Landmark.

The County Planning Office commissioned a historic resources survey for four out of eight neighborhoods of the Residential District (**Figure 6.6 San Juan Residential District Survey Area Map**) to assess if the Residential District or portions of it merit designation as a historic district. The survey identified a potential historic district in Lower San Juan Neighborhood as eligible for listing and provided a context for individual property evaluations and future district studies, as documented in the San Juan Residential District Historic Resources Survey Report, dated March 2021.

The County's HRI is a publication of the Santa Clara County Historical Heritage Commission. Stanford projects which involve structures included in the HRI, or structures determined by the County Planning Office to be eligible for listing, or new development in proximity to listed or potentially historic structures are referred to the Historical Heritage Commission for review and comment, and potential impacts on any historic resources are also considered in the environmental review process associated with a development proposal. The County has an established process for evaluation and protection of historic resources.

As with other resource conservation issues, the strategies for conservation of historic resources call for inventorying and evaluating the resources involved, preventing and minimizing impacts, and restoring and enhancing resources, as appropriate.

Figure 6.4 Structures Older than 50 Years

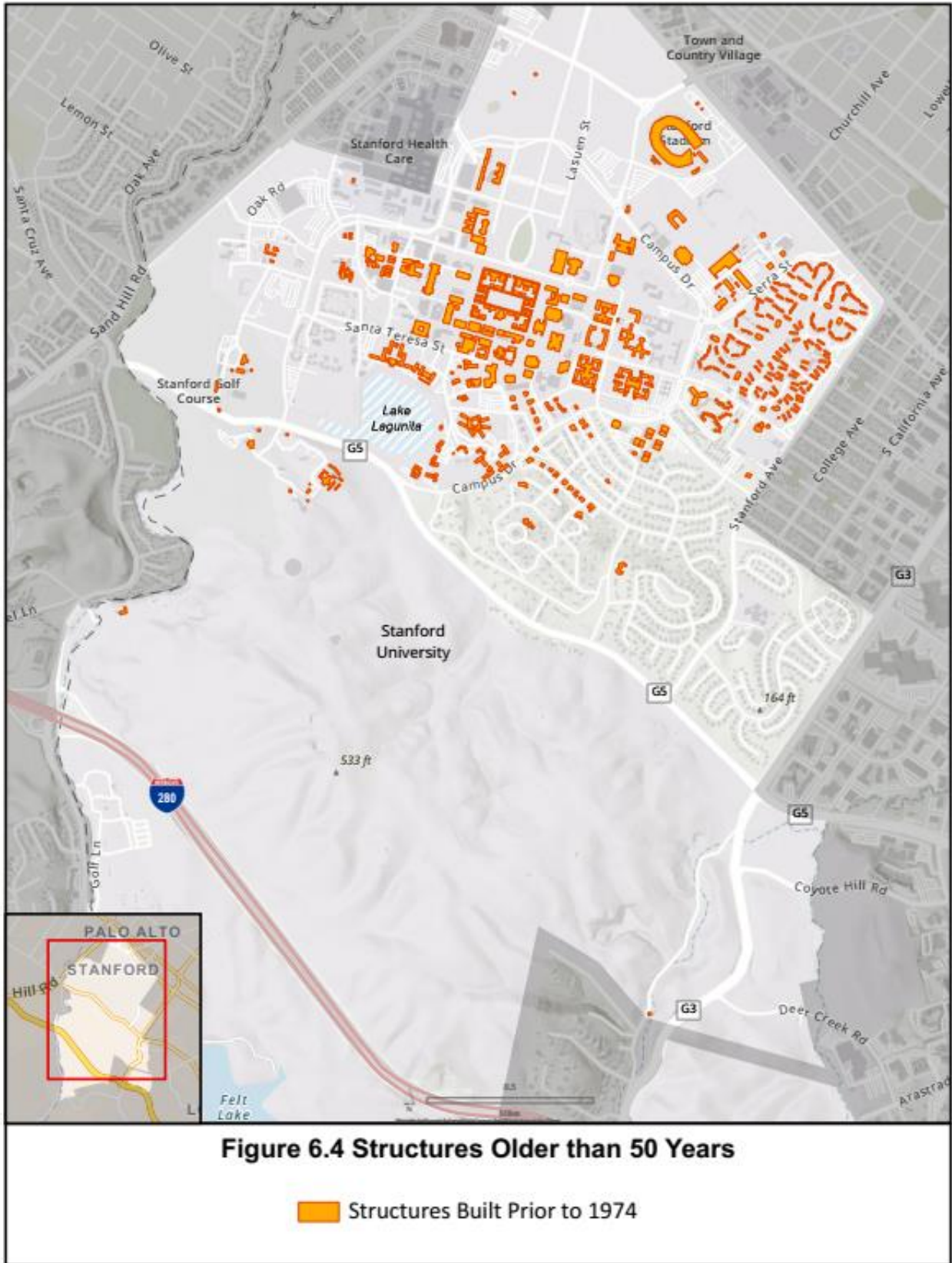




Figure 6.5 Listed Resources

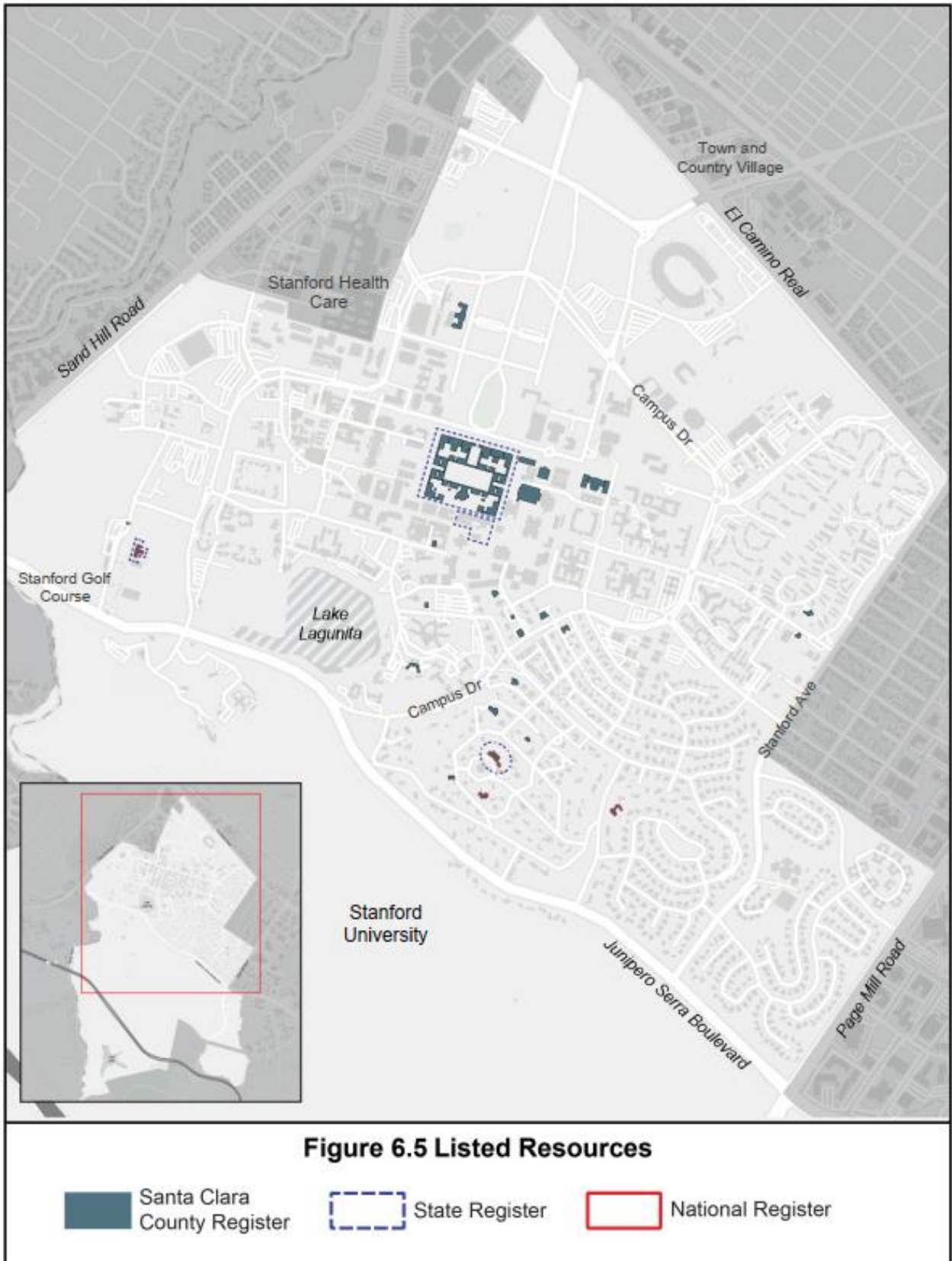




Figure 6.6 San Juan Residential District Survey Map

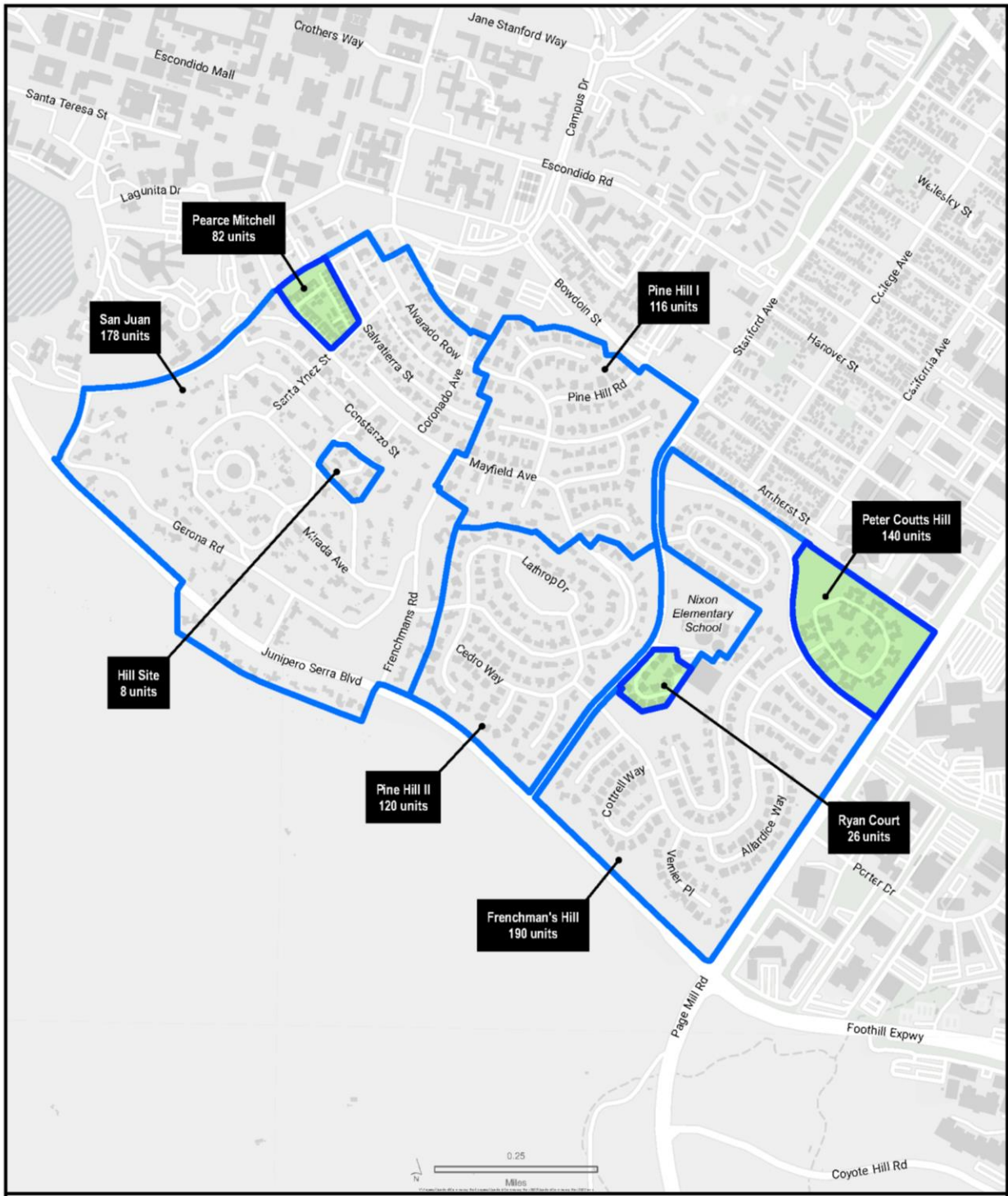


Figure 6.6 San Juan Residential District Survey Area

- San Juan District Subareas
- Areas Not Included in Historic Survey

## Strategies, Policies and Implementation

### Strategy No. 7: Inventory and Evaluate Heritage Resources

The key architectural and landscape elements that define the character of the campus should be identified and evaluated for the purpose of ensuring their protection in future planning.

The County's primary mechanism for identifying and evaluating heritage resources is the Historic Heritage Commission and the Heritage Resources Inventory. Structures that are 50 years or older are assessed for historic value through the trigger of proposed building projects, such as demolition, remodeling, or alteration. If through the review process, the structure in question is found to be eligible for listing, it is individually considered and included within the County's Heritage Resources Inventory by action of the Board of Supervisors. Evaluating Stanford's historic resources for inclusion in the Heritage Resources Inventory is an important ongoing aspect of the conservation of these resources.

#### Policies

##### SCP-RC 22

Maintain informational databases and formal inventories of heritage resources as the basis for local decision-making regarding historic buildings, archaeological and paleontological sites, heritage trees, and landscape features.

#### Implementation Measures

##### SCP-RC (i) 20

Stanford shall inventory, map, and monitor the status of archaeological and paleontological resources on Stanford lands and prepare and update archaeological site records for transmittal to the California Historical Resources Information System.

##### SCP-RC (i) 21

Review existing and potential historic resources at Stanford for possible inclusion on the County's Heritage Resources Inventory, including heritage trees. As part of a development application, provide for documentation of existing and potential historic resources at Stanford for possible inclusion on the County's Heritage Resources Inventory (HRI), including historic landscapes and heritage trees.

##### SCP-RC(i) 22

Evaluate and enact appropriate designation for areas of San Juan Residential District identified by the historic resources survey as potential for historic district designation if significant development is proposed in those areas, specifically the Lower San Juan Neighborhood area.

## **Strategy No. 8: Protect Heritage Resources Through Avoidance, Adaptive Reuse, and Sensitive Planning and Design**

Heritage resources can be protected in a variety of ways. Of primary importance are land use planning and site design that incorporate historic features, heritage trees, and archaeological resources in ways that avoid the need for relocation or destruction of the resource. Another involves the careful review and consideration of alternatives to the potential loss of a resource when plans or individual development proposals conflict with heritage resource preservation.

One opportunity for heritage resource conservation is adaptive reuse of historic structures rather than demolition when a building becomes obsolete. Stanford has employed both adaptive reuse and avoidance in site design in numerous cases over time. For example, the Stanford Museum (now the Iris and Gerald B. Cantor Center for the Visual Arts) was extensively restored in conjunction with construction of a new building to expand the facility. While it is common to recognize, acknowledge and restore important historic buildings, the preferred approach for archaeological resources is to allow the sites to remain undisturbed and leave their locations undisclosed.

The General Plan recognizes the importance of preserving heritage resources as well as the difficulties and financial burdens of adapting older structures to modern use. The challenge for Stanford and the County in the future is to plan for preservation and provide incentives rather than disincentives for adaptive reuse.

### **Policies**

#### **SCP-RC 23**

Protect heritage resources, including sites, structures, and trees in campus development through careful campus land use planning, individual project design, project review, use of appropriate guidelines, and other implementation measures.

#### **SCP-RC 24**

Protect the integrity of significant archaeological sites and other heritage resources. Ensure the confidentiality of archaeological site locations in conformance with state laws.

#### **SCP-RC 25**

Stanford shall protect archaeological and paleontological resources in any environmental enhancement activities involving creek restoration and flood control.

#### **SCP-RC 26**

Give priority to the avoidance or adaptive reuse of historic structures over demolition whenever possible.

## Implementation Measures

### SCP-RC (i) 23

Require adequate background information, site plans, and appropriate Secretary of the Interior's Standards compatibility analysis to assist in evaluation of potential impacts to heritage resources resulting from project development.

### SCP-RC (i) 24

The County should identify appropriate incentives and seek opportunities to encourage preservation of historic structures on the campus.

## Scenic Resources

### Background

The Stanford University campus and its associated undeveloped lands are a significant visual resource on the northern edge of the County. The largely undeveloped hillsides, natural streams, landmark architecture, and landscape setting of the central campus are important to the quality of life in this area of the County.

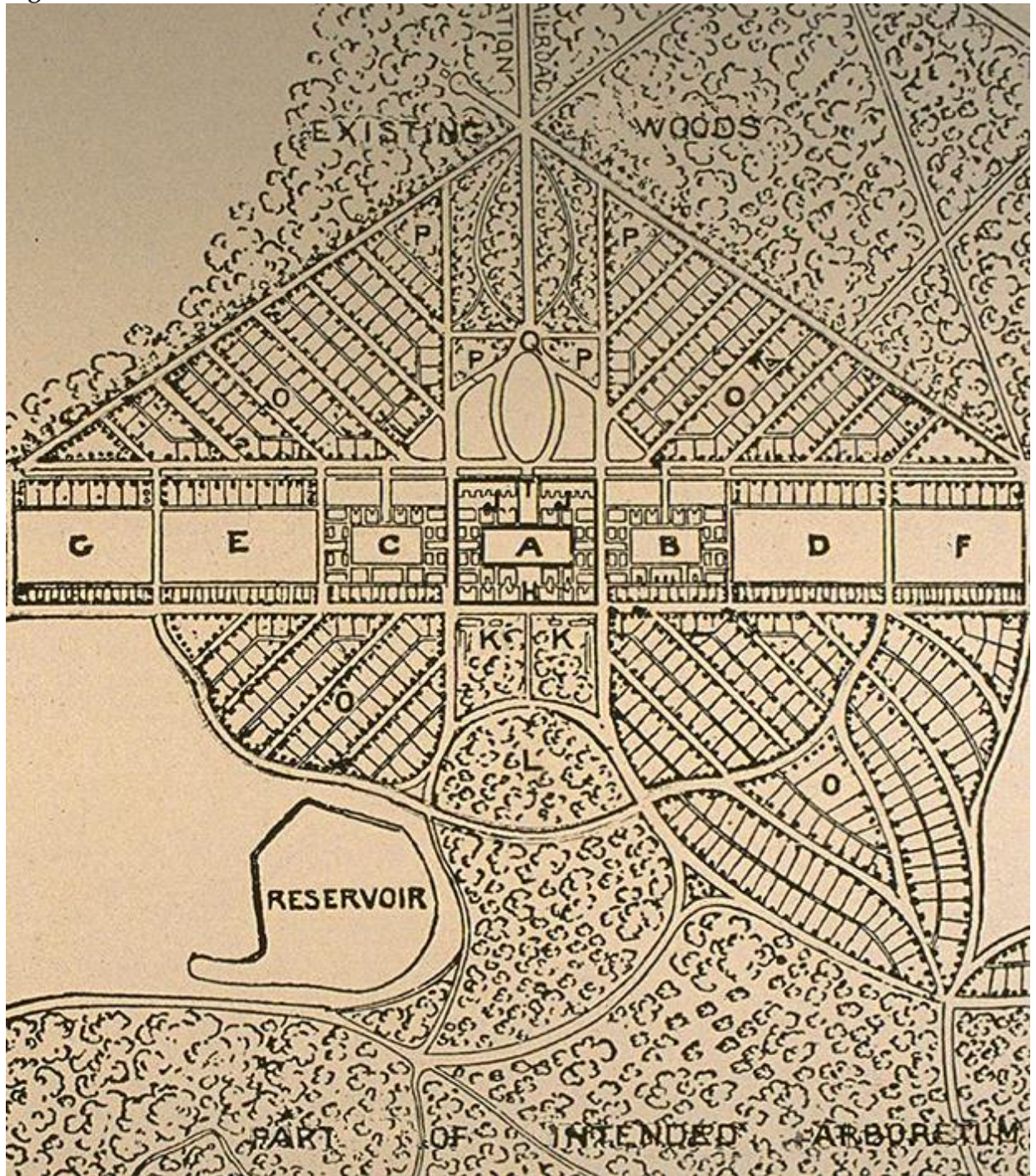
### Central Campus

Stanford has made substantial efforts to improve the visual character of the central campus through a return to the concepts behind the original Olmstead campus plan (see **Figure 6.7 1889 Olmsted Plan**), which called for a series of interconnected quads in a formal setting. The Olmsted Plan put in place a series of design strategies that have become defining features of the Stanford University campus. These core features of the plan are strong enough that, even with development decisions in the intervening decades that ran counter to the plan, the framework carried through and provides the grounding principles for planning and architecture that is undertaken today. These elemental features of the Olmsted, as seen in Figure 6.7, include:

- The juxtaposition of the open hills and the buildings of the main campus
- The buffers for the campus created by the foothills to the south and the arboretum to the north
- The envisioned series of east-west quadrangles
- The network of malls that run both north-south and east-west



Figure 6.7 1889 Olmsted Plan



Recently, the University has focused on emphasizing the major axes crossing the campus and on enhancing the natural landscape and creating contrasts between formal landscaped areas and more natural settings. Additional efforts have been made to translate the campus architectural vernacular of sandstone, red tile roofs, and arcades to a contemporary use in new campus buildings.

Open spaces in the central campus also contribute significantly to Stanford's visual character; both major spaces like the Arboretum or Lake Lagunita and small open and landscaped settings are integral to the campus.

### **Foothills**

While the central campus is a setting that is generally experienced only by those actually on the campus, the undeveloped foothills are an important component of the regional setting that help define the visual character of the surrounding communities. Strong limitations on foothill development espoused and established in this Community Plan will help protect the predominantly natural appearance of the foothills. If appropriate development does occur consistent with the Open Space and Field Research land use designation, screening or other strategies that minimize the impact of any new structures or developed areas can be incorporated in project design and mitigations.

The strategies for protection of visual resources differentiate between the open space and the central campus built environment, reflecting the differences in these two visual environments and in appropriate protection mechanisms.

## **Strategies, Policies and Implementation**

The land use designations adopted in the Community Plan afford significant protection for lands both in the Campus Open Space areas and in the Open Space and Field Research areas beyond the limits of the Academic Growth Boundary (AGB). The natural streams which cross the campus are protected by riparian buffer zones, as discussed in the Habitat and Biodiversity and Water Quality and Watershed Management sections of this chapter. In addition, the Community Plan provides for parks and recreational open space in the Open Space chapter. These land use policies are reflected in the Land Use Designations, described in the Land Use chapter.

## **Strategy No. 9: Employ Growth and Development Policies That Conserve Scenic Resources**

### **Policies**

#### **SCP-RC 27**

Protect the scenic and aesthetic qualities of the natural setting of Stanford lands in the County by means of appropriate land use designations, growth management tools, and careful review of individual development projects.



## **Implementation Measures**

### **SCP-RC(i) 25**

Ensure adequate screening and reduction of visual impacts of any development in designated open space areas through the development review process.

## **Strategy No. 10: Maintain and Enhance the Scenic Values of Urbanized Area Settings**

The Community Plan includes measures designed to protect open space and historic landscape elements on the central campus, as well as significant architectural landmarks contributing to the scenic quality of the area. In addition to the policies described above in the Heritage Resources section, the Campus Open Space land use designation has been adopted in part to protect the scenic character of major campus open spaces (see Open Space Chapter).

The County's role in enhancing the scenic character of the central campus is reviewed through the Architecture and Site Approval process. This review ensures adequate and integrated landscaping and screening, when appropriate. Through the University Architect/Planning Office the University takes the lead role in defining the character of the campus-built environment.

## **Policies**

### **SCP-RC 28**

Preserve and enhance attractive, scenic urban settings on the Stanford campus and within Stanford's residential areas.

### **SCP-RC 29**

Preserve significant historic landscape elements within the fabric of the campus' architecture and design.

### **SCP-RC 30**

Maintain elements of the native landscape in Campus Open Space areas and throughout the developed portion of the campus.

### **SCP-RC 31**

Maintain sign standards to ensure that signs are harmonious with the character of scenic area.

## **Implementation Measures**

None

# Health & Safety

## Chapter Summary

This chapter of the Stanford Community Plan addresses a range of public health and safety issues. It includes policies that are intended to minimize potential human or environmental injury and property damage. This chapter refines the Strategies identified in the County's General Plan Health and Safety chapter for the following sections that require further refinement for Stanford lands:

- Air Quality,
- Geological Hazards,
- Flooding,
- Hazardous Materials,
- Emergency Preparedness and Response,
- Noise,
- Law Enforcement,
- Social and Emotional Health, and
- Climate Change and Climate Adaptation

Other Health and Safety topic areas discussed in the County's General Plan include Aviation Safety, Fire Hazards, Health and Safety Facilities Planning, and Wastewater Disposal. These subjects do not require refinement in the Stanford Community Plan because the strategies, policies, and implementation recommendations contained in the General Plan are in sufficient detail to guide Stanford land use.

The overall strategies or public policy approach to addressing Health and Safety issues involve prevention, mitigation, or minimizing risk, and preparedness. The COVID-19 pandemic reinforced the need for a renewed and heightened commitment to make communities better prepared and resilient against all forms of public health threats. These overall strategies provide a framework for understanding the more detailed social, behavioral, and physical policies that have been developed with respect to natural hazards, for example. Where most applicable, these strategies also provide the basic framework for public policy with regard to the Stanford Community Plan.

It should be further noted that with regard to sanitary wastewater disposal, the University maintains a sanitary sewer collection system that serves all areas of the main campus. The campus sewer system consists of approximately 46 miles of sewer lines. The Stanford sewer system connects to the Palo Alto sanitary sewer system and the sewage is treated at the Palo Alto Regional Water Quality Control Plant (RWQCP). The City of Palo Alto operates the RWQCP for the communities of Palo Alto, East Palo Alto, Los Altos Hills, Mountain View, and Stanford University.

The Community Plan contains the following strategies for health and safety:

### **Air Quality**

- Strategy No. 1: Manage Campus Growth and Land Use for Cleaner Air**
- Strategy No. 2: Emphasize Transportation Alternatives and Transportation Demand Management to Reduce Vehicle Emissions**
- Strategy No. 3: Control Sources of Particulate Emissions**

### **Geologic Hazards**

- Strategy No. 4: Design, Locate, and Regulate Development to Avoid or Withstand Hazards**

### **Flood Hazards**

- Strategy No. 5: Design, Locate, and Regulate Development to Avoid or Withstand Hazard**

### **Hazardous Materials**

- Strategy No. 6: Manage Hazardous Materials Safely and Efficiently**

### **Emergency Preparedness and Response Noise**

- Strategy No. 7: Adequately Plan for Risk Reduction, Immediate Disaster Response and Post-Disaster Recovery**

### **Noise**

- Strategy No. 8: Prevent or Minimize Excessive Noise**

### **Law Enforcement**

- Strategy No. 9: Provide Law Enforcement Oversight**

### **Social and Emotional Health**

- Strategy No. 10: Ensure Provision of Services, Policies and Programs that address Social and Emotional Health**

### **Climate Change and Adaptation**

- Strategy No. 11: Plan for Climate Change and Adaptation**

## Air Quality

### Background

Air quality is a regional concern that requires regional participation for improvement. Air quality is affected by emissions from automobiles, industrial facilities, construction, and other activities; the effects of these activities on air quality is further influenced by weather, wind and topography. Pollution created in one location has the potential to affect air quality many miles away. Air quality is measured and described through concentrations of pollutants and is evaluated based on state and federal standards for a variety of pollutants.

Pollutants of the greatest concern in the San Francisco Bay Area, and which are most applicable to Stanford, are ground-level ozone (O<sub>3</sub>) and respirable particulate matter (PM<sub>10</sub>). The Bay Area is “non-attainment” for O<sub>3</sub> according to state and federal standards and is “non-attainment” for PM<sub>10</sub> according to state standards.

Ozone is produced primarily from motor vehicle emissions and is the primary component of smog. The concentration of ozone can primarily be reduced through reductions in automobile use that stem from location of homes, jobs, and services in close proximity to one another and through use of alternative transportation or alternative fuels.

Respirable particulate matter is a combination of pollutants that includes dust, pollen, ash, smoke, and other similar pollutants. While some forms of PM<sub>10</sub> result from natural processes, others can be reduced or avoided through “best management practices” that reduce dust from construction activities and through control on industrial emissions. For more detailed information on air quality issues, refer to the Countywide Health Element of the General Plan.

Stanford University’s remaining three primary sources of air pollution are:

- **Motor vehicle exhaust:** Stanford’s Transportation Demand Management (TDM) program is meant to reduce use of automobiles, leading to corresponding reductions in the emission of pollutants. The same strategies that are applicable County- and region-wide for reducing motor vehicle use are applicable to Stanford as well: coordinated land use patterns that allow for reduction or elimination of automobile trips and measures to facilitate the use of alternative transportation modes. Programs to encourage these methods are in place and will be continued at Stanford. Electric, hybrid, and other alternative-fuel vehicles are other options for automobile emission reduction.
- **Facility maintenance and laboratory activities.** Stanford produces intermittent, low-volume emissions of odorous and/or toxic substances resulting from various facility maintenance and research activities. Stanford currently reduces these emissions through various operational procedures.

- **Construction.** Construction projects on campus create particulate matter pollution during ground disturbance. Stanford utilizes procedures to control particulate matter during construction projects and from equipment exhaust which have been identified by the Bay Area Air Quality Management District (BAAQMD).

## **Strategies, Policies, and Implementation**

The strategies and policies for managing campus growth, together with the Land Use Designations of the Community Plan are consistent with the fundamental approach to improved air quality outlined in the General Plan. By focusing future campus development within the Academic Growth Boundary (AGB), emphasizing higher density of residential development, locating new residential development close to related academic and academic support facilities, and providing neighborhood commercial services and amenities close to residential development, land use patterns can contribute greatly to the success of related strategies to manage travel demand and reduce dependency on the automobile.

### **Strategy No. 1: Manage Campus Growth and Land Use for Cleaner Air**

#### **Policies**

##### **SCP-HS 1**

Limit campus growth and development to lands within the Academic Growth Boundary (AGB) in order to minimize cumulative impacts on air quality.

##### **SCP-HS 2**

Within the Academic Growth Boundary (AGB), emphasize concepts of appropriate integration of land uses, compact campus development patterns, and more efficient, higher density residential development to reduce VMT, automobile dependency, and greenhouse gas emissions, and promote use of alternative transportation modes.

##### **SCP-HS 3**

Encourage Stanford to prepare a campus-wide construction laydown areas management plan to improve application of performance standards (Best Management Practices - BMPs) for reducing particulate matter pollution on campus. Identify potential centralized construction laydown areas to serve multiple construction projects and reduce the number of laydown sites dispersed across campus.

#### **Implementation Measures**

None

## **Strategy No. 2: Emphasize Transportation Alternatives and Transportation Demand Management to Reduce Vehicle Emissions**

Closely linked to growth management and land use patterns, provision of travel alternatives and transportation demand management (TDM) are also instrumental in reducing vehicle emissions and improving air quality. The subjects of transportation alternatives and TDM are most thoroughly addressed in the County's General Plan within the Transportation Chapter and Air Quality Section of the Health Element. Additional information on Stanford's use of these strategies is also provided in the Circulation Chapter of the Community Plan.

### **Policies**

#### **SCP-HS 4**

Maintain and enhance the use of transportation alternatives and demand management to the extent allowed by law for the purpose of reducing automobile dependency, reducing trip generation, and reducing vehicle emissions.

#### **SCP-HS 5**

Promote the use of alternative fuel and propulsion systems for shuttle vehicles, other transit vehicles, construction, and fleet vehicles.

### **Implementation Measures**

#### **SCP-HS (i) 1**

Consider a program that would provide incentives for the increasing use of electric, hydrogen, or other zero-emission vehicles towards meeting the transportation performance standards.

## **Strategy No. 3: Control Sources of Particulate Emissions**

Particulate emission sources range from earthmoving and construction equipment to gasoline-powered leaf blowers, wood-burning fireplaces and charcoal grills. Each contributes to various types of pollutant emissions to varying degrees. Primary emphasis for Stanford involves the reduction of construction-related emissions.

Trucks, earthmoving equipment, and construction activities can introduce particulate matter and dust that have localized impacts as well as cumulative impacts in the region. There are a variety of best management practices (BMPs) intended to reduce the amount of particulates generated by these sources. Potential air quality impacts from significant construction projects are typically addressed within the environmental assessments and conditions applicable to each development project. The latter often involve best management practices as defined the Bay Area Air Quality Management District (BAAQMD) for such purposes.



## **Policies**

### **SCP-HS 6**

Reduce particulate matter pollution originating from road and building construction. Require all best management practices (BMPs) and feasible control measures through project conditions and mitigations, as appropriate.

## **Implementation Measures**

### **SCP-HS (i) 2**

Require Stanford to use appropriate best management practices (BMPs) and other feasible mitigation for the reduction of particulate matter pollution during construction.

## **Geological Hazards**

### **Background**

The Stanford campus is located on the boundary between the San Francisco Bay alluvial plain to the northeast and the foothills of the Santa Cruz mountains to the south and southwest. The western boundary of the Community Plan area lies approximately two miles east of the San Andreas fault.

### **Earthquake Faults**

Earthquake faults are the contact areas between major plates of the earth's surface. The San Andreas fault is the contact surface between the North American plate on the east and the Pacific plate to the west. Over many millions of years, the relative movements of these two plates have deformed bedrock units which have, in turn, been eroded differentially, resulting in the northwest-trending ridges and valleys present in Santa Clara County and throughout the Coast Range. Continued movement of the Pacific plate northwards relative to the North American plate causes strain to accumulate in the bedrock, which is periodically released by fault rupture along the San Andreas and other related faults nearby, producing earthquakes of various magnitudes.

While the San Andreas fault is the most well-known fault in the vicinity of the University, there are other related faults which are also sources of seismic activity in the area. These include the Hayward, Calaveras, San Gregorio, and Monte Vista/Berrocal faults.

Stanford has been substantially affected by earthquake activity in the past, including the 1906 earthquake which originated on the San Andreas fault (Richter magnitude 8.25) and the 1989 Loma Prieta earthquake (magnitude 7.1), which occurred on a fault subordinate to the San Andreas. The 1906 earthquake completely destroyed several major unreinforced masonry buildings on the campus. While no buildings collapsed during the 1989 earthquake, moderate damage was widespread.

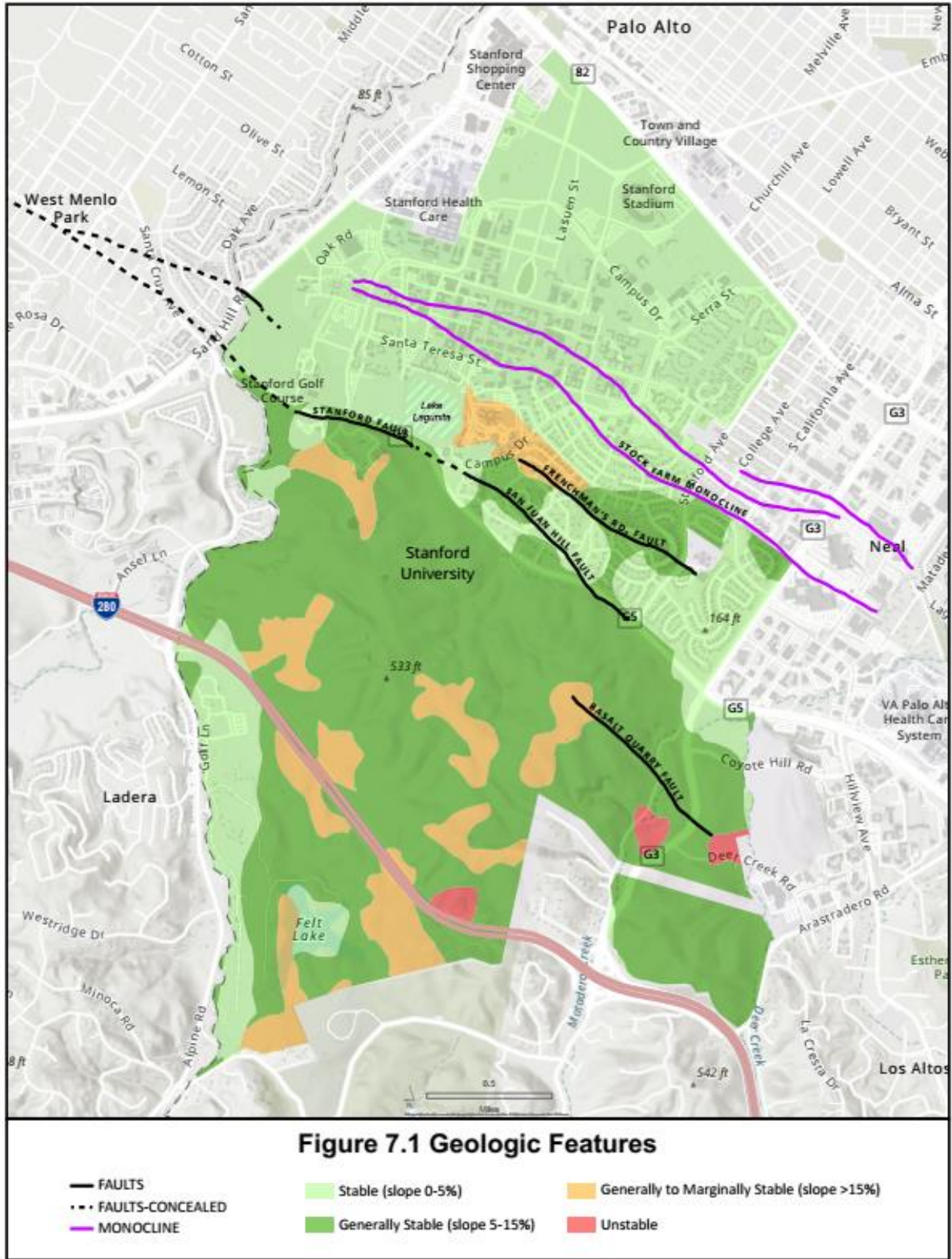
Several small faults have been mapped on Stanford lands, including the Frenchman's Road, Stanford, San Juan Hill, and Basalt Quarry faults (see **Figure 7.1 Geologic Features**). These faults are all 2.5 miles or less in length. The degree of activity of these faults is not known with any certainty, and they are subject to investigations prior to development approvals within their fault zones.

### **Stock Farm Monocline**

Another geologic feature of concern on the Stanford campus is the Stock Farm Monocline. The monocline is a northwest-trending feature indicated by a northeast-facing slope located between Page Mill Road and Campus Drive West. It has been studied extensively and judged to be an active fold in the geologic strata. An underlying "blind" thrust fault is believed to produce the folding, but it is not certain whether the thrust fault is capable of generating earthquakes.

Although no surface deformation has been detected on the monocline as a result of the 1906 or 1989 Loma Prieta earthquakes, it is considered capable of having minor ground deformation along its lower hinge in association with a strong earthquake originating on the San Andreas fault.

Figure 7.1 Geologic Features



## **Seismic Hazards and Slope Stability**

Seismic hazards include ground shaking, surface rupture, ground deformation, liquefaction, and differential settlement. Shaking intensity is a measure of the effect of an earthquake at a specific location. The intensity of ground shaking depends on several factors including:

- the amount of energy released during the earthquake (magnitude)
- the distance between the source fault and the site (attenuation)
- the type of geologic material underlying the area (amplification).

Slope instability, which can also be related to seismic activity, is the other primary geologic hazard that potentially affects Stanford land. Landsliding can occur when soils rich in clay minerals are saturated with water, reducing the shear strength of the soil and underlying rock. Modifications of topography or drainage can also destabilize slopes and lead to landsliding. Earthquakes can also cause landsliding in areas prone to slope instability. Areas with high landslide potential in the foothills portion of Stanford lands are shown on the map of Geologic Features.

## **Measures for Hazard Reduction and Management**

The areas of Stanford land in the County that might be subject to greatest slope instability are located outside the Academic Growth Boundary (AGB). Land uses within these areas have been restricted by the Land Use designations and policies included within the Community Plan, consistent with the General Plan. In particular, the “Open Space and Field Research” designation applied to most of the land area in question limits allowable land uses and minimizes the potential risk to people and property from seismic and geologic hazards. “Unstable” slope areas are designated “Special Conservation Areas” in the Community Plan Land Use Map (see Figure 2.2).

Following the Loma Prieta earthquake in 1989, the University prepared the Earthquake Risk Management Report of 1990. The report recognizes the risks from earthquakes on the Peninsula Segment of the San Andreas Fault, outlines ways to strengthen potentially hazardous buildings and improve organizational preparedness, and establishes institutional goals during and following an earthquake nearby.

Since 1989, the University’s seismic strengthening and replacement program has resulted in the investment of approximately \$600 million in over 100 seismic rehabilitation projects. This includes the retrofit and/or mitigation of approximately forty-five unreinforced masonry (URM) buildings that were completed by 2000 to conform to the Santa Clara County URM Ordinance, as well as numerous voluntary seismic strengthening projects.

Additionally, the University published Seismic Engineering Guidelines to supplement the Department of Project Management's Project Delivery process in October 2017. This document provides guidelines, codes, and practices that ensure new facilities meet applicable design and safety standards and that existing facilities meet seismic evaluation and retrofit standards. The document also provides analysis and defines a process for workflow and peer review to ensure buildings perform appropriately under postulated earthquake levels.

## **Strategies, Policies, and Implementation**

The strategy of the Community Plan for geologic hazard mitigation involves the adequacy of the design, location, and review of individual development proposals within areas of the campus designated for academic, academic support and residential development.

Given the considerable amount of state and local regulation concerning seismic safety for building and development, policies of the Community Plan essentially reiterate existing General Plan policies, with particular geologic review requirements for Stanford lands in the Stockfarm Monocline "zone of special consideration."

Otherwise, the policies of the Growth and Development, Land Use, and Open Space chapters of the Community Plan serve to significantly limit the potential use and development of areas outside the Academic Growth Boundary (AGB) such that the risk of exposure to natural hazards is low. The information provided within the Community Plan, General Plan, and the maps and inventories of the County Geologist, including the County's Geologic Hazard Zone Maps are utilized in land use and development permit decision-making processes. Lastly, educational programs or efforts related to natural hazards for Stanford campus residents and employees are described in the Emergency Preparedness and Response section of this chapter.

### **Strategy No. 4: Design, Locate, and Regulate Development to Avoid or Withstand Hazards**

Campus areas designated for academic and academic support uses and development north of Junipero Serra Boulevard are generally not subject to significant slope stability problems or greater ground-shaking intensities than other similar areas within the region. The primary means of assuring adequate building safety are the provisions of the County's Geologic Ordinance, state law, and adherence to applicable provisions of the Uniform Building Codes.

#### **Policies**

##### **SCP-HS 7**

Avoid significant geologic hazard areas, such as unstable slopes, in locating new development. For projects proposed within areas of concern, provide geologic reports of investigations which quantify the risks and recommend mitigation measures. Such reports must be reviewed and approved by the County Geologist.



### **SCP-HS 8**

Through the development review process, ensure compliance with all applicable County ordinances and other laws, regulations, and codes for seismic evaluation and the design of new and existing buildings and campus infrastructure.

### **SCP-HS 9**

Maintain designation of lands with significant geologic hazards identified as “hazard areas” on the Special Conservation Areas and Categories map, in the Stanford University Special Conservation Area Plan, which was approved by the County Planning Office on August 5, 2015.

### **SCP-HS 10**

Encourage the preparation of comprehensive mapping of fault zones within the area of the campus inside the Academic Growth Boundary (AGB) to facilitate review and consideration during the General Use Permit (GUP) application process by the County Geologist.

## **Implementation Measures**

### **SCP-HS (i) 3**

Refine geologic hazard maps based on the results of reports submitted to and reviewed by the County Geologist upon submittal of a new General Use Permit (GUP) application.

## **Flood Hazards**

### **Background**

#### **Watersheds**

Stanford lands in Santa Clara County are primarily located in the San Francisquito and Matadero creek watersheds, and contain several creeks, reservoirs, and dams (see Figure 6.3 Watershed Boundaries).

The San Francisquito Creek watershed encompasses 40 square miles. Stanford lands in unincorporated Santa Clara County comprise approximately 1,800 acres or about 8 percent of the watershed, of which approximately 510 acres are developed. The watershed extends from the ridge of the Santa Cruz Mountains to San Francisco Bay and is characterized by a wide variety of both developed and undeveloped areas across five municipalities and two counties. Both San Francisquito and Los Trancos Creeks on Stanford lands are within the watershed, as well as Felt Lake, Searsville Lake, and Lake Lagunita.

Stanford lands in other jurisdictions that are within the San Francisquito Creek watershed include all land in San Mateo County, which is largely undeveloped with the exception of the Stanford Linear Accelerator Center (SLAC) and the Stanford Hills residential neighborhood. These lands also contain several agricultural leaseholds and the 1,200-acre Jasper Ridge Biological Preserve. The northern portion of Stanford’s land in the City of Palo Alto, which



contain the Stanford Medical Center, the Stanford Shopping Center, and several residential complexes are also in this watershed. All told, Stanford lands comprise approximately 21% of the total watershed land area.

Approximately 2,100 acres of the project area are located in the Matadero Creek Watershed. This watershed encompasses the eastern portion of Stanford lands and includes Matadero, Arastradero, and Deer Creeks. The watershed also contains the Stanford Research Park and residential and commercial areas in Palo Alto. The Barron Creek watershed, which is located to the southeast of the Matadero Creek watershed, drains portions of Los Altos Hills, the Stanford Research Park, and the Barron Park residential neighborhood; this creek ultimately drains to the Bay through Matadero Creek.

Approximately 2,100 acres of the Community Plan project area lies within the Arastradero Creek Watershed. Arastradero Creek flows in a southerly direction.

### **Storm Drainage System**

The University campus storm drain system consists of a number of systems working together to manage storm water runoff. The system's main working components are more than 800 catch basins, approximately 40 miles of pipeline, and six miles of open soil drainage ditches. Stanford also has runoff detention areas in topographically low areas, such as the Arboretum and the Oval. Once storm water is collected in the drainage network, it flows by gravity from the campus to Matadero Creek or San Francisquito Creek. Storm water flows to Matadero or San Francisquito Creek, in many cases through the City of Palo Alto's storm drainage system, before joining San Francisco Bay.

### **Hazard Potential**

Like many other issues addressed in the Community Plan, flood hazards and flooding are multijurisdictional in nature, in that the manner in which development and drainage are handled in one location can have substantial effects on other property owners or communities. Primary hazard potential involves creek overflow and storm drainage system overflow.

No portion of the Community Plan project area is located within the 100-year flood zones defined by the Federal Emergency Management Agency (FEMA) (1996 data). However, flooding may at times occur due to extraordinary events. For example, flooding occurred on the campus and downstream of Stanford in February 1998, when prolonged and steady rainfall caused San Francisquito Creek and local storm drainage systems to overflow. Overall, an estimated 11,000 acres of land in Palo Alto, Menlo Park, and East Palo Alto were flooded due to the creek overflow, resulting in an estimated \$28.1 million in damage, according to the Santa Clara Valley Water District.

Regional and local flood hazards also include inundation due to dam failure. The University coordinates with the California Department of Water Resources, Division of Safety of Dams, to inspect the dams yearly for structural integrity and proper maintenance.

Effective flood control requires extensive cooperation of government agencies, landowners, and land users. Stanford, as the owner of extensive amounts of land within the watersheds, has the potential to affect downstream flooding and flow along San Francisquito and Matadero Creeks. Stanford has worked closely with the San Francisquito Creek Joint Powers Authority (SFCJPA) to produce the watershed Comprehensive Plan to address the interrelated issues of flood protection, ecosystem restoration and creation of recreational opportunities along the creek and in the watershed. The report released October 2021 highlights the SFCJPA's commitment to working with Stanford for access to and information about the area to adequately evaluate potential options for flood protection and mitigations efforts on Stanford lands.

## **Strategies, Policies and Implementation**

### **Strategy No. 5: Design, Locate, and Regulate Development to Avoid or Withstand Hazards**

Policies and implementation have been included to address two different flooding issues: 1) possible flooding and storm drainage issues on and near the campus that could result from campus activities, and 2) the effect of campus activities on the hydrology of the watersheds and creeks.

One effect of the Community Plan's growth and development-related policies, which encourage compact development and infill use of campus lands, will be the intensification of land use within the Academic Growth Boundary (AGB). More development and associated parking and streets will increase impervious surfaces over time, with the potential to marginally increase creek flooding and stormwater flooding on campus as well as downstream flow within the watersheds. The Community Plan therefore focuses on accommodating all increased peak drainage flows on site until storm water can be accommodated within local streams and creeks after the time of peak flows.

Policies and implementation specific to maintenance of riparian corridors are included in the Resource Conservation chapter.

#### **Policies**

##### **SCP-HS 11**

Design development and infrastructure improvements, including storm drainage detention facilities, to accommodate runoff from future development so as to achieve no increase in peak flows.

##### **SCP-HS 12**

Maintain and enhance surface and subsurface drainage systems.

### **SCP-HS 13**

Control erosion from future development in order to limit sediment from reaching the storm drain system and creeks, to avoid hydrological impacts.

### **SCP-HS 14**

Encourage Stanford to coordinate with the San Francisquito Creek Joint Powers Authority (SFCJPA) on efforts to address flooding and other watershed-related issues in the San Francisquito Creek Watershed.

## **Implementation Measures**

### **SCP-HS (i) 4**

The State Division of Safety of Dams shall annually inspect Stanford dams for structural integrity and encourage repairs as needed.

### **SCP-HS (i) 5**

Review proposed Stanford projects and require best management practices (BMPs) for reducing erosion at construction sites.

### **SCP-HS (i) 6**

Stanford shall provide public education/information on erosion and drainage issues for University project managers and leaseholders.

### **SCP-HS (i) 7**

Stanford shall construct and maintain storm drainage detention facilities and other improvements as needed to ensure no net increase in downstream flows.

## **Hazardous Materials**

### **Background**

Transportation, use, storage and disposal of hazardous substances are governed through numerous state and federal legislative measures. While the regulations originate with federal and state government, the County plays a role in enforcing these regulations within its jurisdiction. The County Department of Environmental Health is a primary agency responsible for addressing hazardous materials, along with the Planning, Building, and Fire Marshal's Offices.

At Stanford, hazardous materials are used in the academic areas and the Medical Center in teaching, research, and patient care programs. Hazardous materials are addressed through a variety of programs and procedures by both the County and the University.

Stanford University's Department of Environmental Health and Safety (EH&S) is responsible for the safe storage, handling, and disposal of chemical, radiological, and medical/biological wastes generated by laboratories, shops, and studios at the University. These waste types are managed under the University's Hazardous Waste Program.

Hazardous Materials Management Plans for campus buildings are prepared, regularly updated, and submitted to the County of Santa Clara Department of Environmental Health's Hazardous Materials Compliance Division. As documented in Stanford's 2019 General Use Permit (GUP) application, to facilitate hazardous materials tracking and reporting, Stanford has implemented an online chemical inventory database system whereby authenticated chemical users may maintain their hazardous materials inventories, supporting timely and accurate submission of required regulatory reports.

In addition, Stanford requires that employees involved in hazardous materials handling receive appropriate training. Stanford's EH&S oversees the campus Environmental Safety Facility, which currently operates as a "RCRA large quantity generator" facility that provides interim storage for hazardous waste for less than 90 days. This facility is regulated by Santa Clara County Department of Environmental Health. Over time, Stanford has focused increasingly on off-site rather than on-site waste disposal. Hazardous wastes that are shipped off-site are packaged, marked, labeled, manifested, and transported in accordance with applicable governmental regulations to a permitted disposal facility. In the area of waste reduction, waste generating processes have been evaluated in laboratories producing larger volumes of waste to determine options to reduce sources and to minimize wastes.

EH&S reviews proposed plans for new campus facilities and for remodels to address health, safety, and environmental risks associated with activities conducted in the buildings, in accordance with applicable environmental and health and safety laws, codes, and regulations. Building plans are also reviewed by the County's Building Inspection Office and Fire Marshal's Office for compliance with applicable codes.

The County reviews building design and occupancy standards based on a reported inventory of chemicals or other hazardous materials which are to be stored and used inside a building. Over time, the use of the building and the needs of its occupants changes, creating a risk of unsafe circumstances whereby more or different materials are being used in a building than the design and construction allow.

The inventory of materials in a building is reviewed at the time that any building permits are reviewed and issued and through regular inspections by the County Fire Marshal's Office. It is important that the inventory of materials in a building remain consistent with the building construction. Obsolescence in building design is a major factor behind the continuing redevelopment of the campus.

## **Strategies, Policies and Implementation**

### **Strategy #No. 6: Manage Hazardous Materials Safely and Efficiently**

The strategy for hazardous material management and its associated policies focuses on issue of oversight and emphasizes compliance with the significant existing array of regulations and laws governing hazardous materials. It also incorporates a broadly recognized need to find substitute materials and reduce volumes of hazardous materials as much as possible to reduce risk levels.

#### **Policies**

##### **SCP-HS 15**

Employ all feasible measures to safely and effectively manage hazardous materials and wastes and to site hazardous wastes treatment facilities.

##### **SCP-HS 16**

Ensure compliance with all federal, state, and local regulations concerning hazardous waste management and disposal.

##### **SCP-HS 17**

Evaluate, as required under the California Environmental Quality Act, the potential health risks and effects of buildings proposed by Stanford in which hazardous materials will be used.

##### **SCP-HS 18**

Encourage the substitution of less hazardous materials and/ or use of smaller volumes of hazardous materials, while maintaining amounts necessary to support University activities.

#### **Implementation Measures**

##### **SCP-HS (i) 8**

The County shall collaborate with Stanford and other regulatory agencies to develop appropriate standards for review of possible health risks from air emissions of future Stanford laboratory facilities.

##### **SCP-HS (i) 9**

The County shall require the implementation of good laboratory practices to prevent release of odorous and toxic air contaminants. Good laboratory practices shall be defined as adhering to state and local regulatory practices such as, but not limited to, Health and Safety Code 25200.3.1 on lab waste accumulation, the University's Safe Manual on Toxic Gas Users Guide, and Santa Clara County Ordinance B11 (Chapters XIII and XIV) on chemical handling and storage.

**SCP-HS (i) 10**

Stanford shall provide adequate training for staff and students to segregate incompatible chemicals, use earthquake protection for chemical storage areas, and employ secondary containment. Training shall be compliant with the Department of Environmental Health training standards.

**SCP-HS (i) 11**

The County shall support Stanford's provision of an integrated waste management program to manage collection of chemical, radioactive and medical waste, and ensure environmentally protective disposal.

**SCP-HS (i) 12**

Stanford shall prepare Risk Management Plans for compliance with California Accidental Release Prevention Laws as needed, or reduce/substitute quantities of materials to levels below that which requires such plans.

## **Emergency Preparedness and Response**

### **Background**

In Santa Clara County, the first responsibility for emergency response lies with the individual jurisdictions. Under the provisions of the 1985 Land Use Policy Agreement, Stanford functions in this case as a jurisdiction, with its own plans and programs for emergency response, preparedness, and prevention. The County's role is to collaborate with Stanford in ensuring adequate emergency response and to consider emergency-related issues in review of development applications from Stanford, and support the City of Palo Alto in response to any major event occurring on the Stanford campus, and on an as-needed basis. All response activities must be coordinated with the City of Palo Alto or other relevant agencies for the unincorporated areas of the campus as necessitated by the situation.

### **Emergency Preparedness at Stanford**

Emergency preparedness addresses the response to, and recovery from, natural and human-induced emergencies. Stanford University emergency plans include the Stanford Emergency Plan, Cabinet Emergency Planning Guidelines, and Department Emergency Planning Guidelines. These documents provide a management framework for responding to major emergencies that may threaten the health and safety of the University community or disrupt its programs and operations.



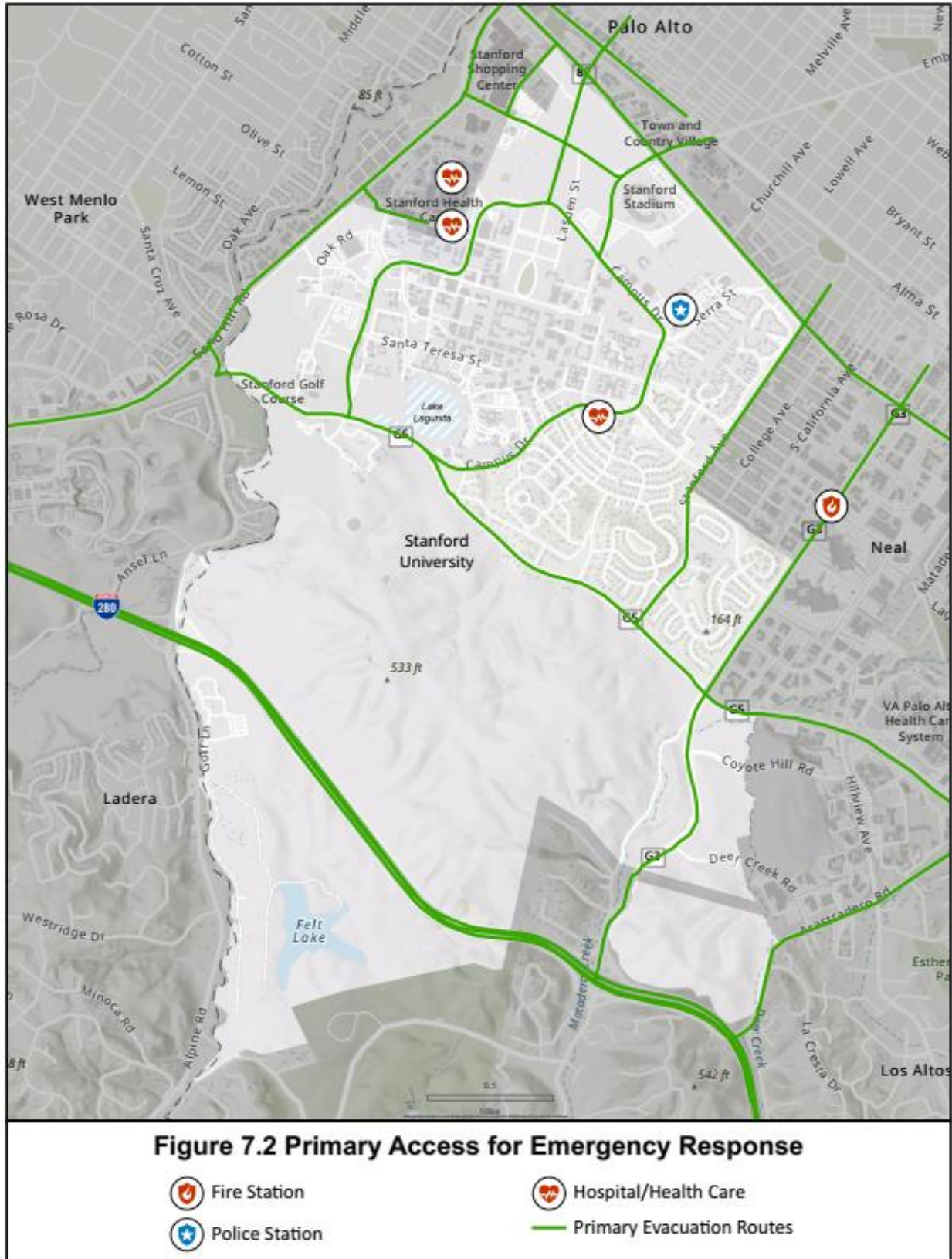
The plans address a variety of types of emergency situations, including earthquakes, fires or explosions, hazardous material releases, extended power outages, floods, and mass casualty events. In accordance with these emergency plans, the University maintains supplies to support post-disaster recovery. For example, the University currently stores emergency food supplies for on-campus residents, and maintains water reservoirs to increase the emergency water supply.

The Stanford Emergency Plan establishes an Emergency Management Team (EMT) that ascertains the scope of an incident and advises the University President. EMT emergency response actions are guided by the University's overriding emergency priorities:

1) protect life safety, 2) secure critical infrastructure and facilities, and 3) resume the teaching and research program.

**Figure 7.2 Primary Access for Emergency Response**, illustrates current major access routes within the campus, the location of existing fire and police facilities, and major evacuation routes.

Figure 7.2 Primary Access for Emergency Response



## **Strategies, Policies and Implementation**

Stanford University engages in emergency prevention, preparedness, and response through its plans and programs. In addition, the Stanford Hospitals and Clinics are an important regional resource for the surrounding area in the case of an emergency that results in injuries and casualties. The County and Stanford should continue to work as partners in the emergency response arena, with each entity assuming the appropriate responsibilities. The County's role in the emergency process includes:

Review of development projects in the Planning, Building Inspection, and Fire Marshal's Offices and in the Department of Environmental Health to ensure avoidance or reduction of risks associated with the location, access to, or design of new buildings or the use of hazardous materials.

Ongoing inspection of facilities for code compliance.

Application of appropriate land use designations or building requirements in areas more prone to hazard.

Support for Stanford's emergency response efforts through implementation of the Santa Clara County Emergency Plan, prepared and implemented through the County Office of Emergency Services.

### **Strategy No. 7: Adequate Plan for Risk Reduction, Immediate Disaster Response and Post-Disaster Recovery**

This strategy and the associated policies emphasize a multifaceted approach to reduction of risk, emergency response, and recovery. Like many aspects of the Community Plan, disaster preparedness and response is in many ways a multijurisdictional issue that requires efforts on the part of Stanford, the County, and other jurisdictions. Community Plan strategies and policies are largely implemented through existing programs, efforts, and procedures. However, in the event of certain types of emergencies, particularly earthquake and fire, most households and businesses are individually under-prepared for the aftermath of a significant disaster.

Policies emphasize the continuation of existing programmatic efforts by Stanford for emergency preparedness and response, while also promoting the potential for improving coordination and preparedness for faculty, staff, and student residents of the University. Improved neighborhood coordination, campus-wide preparedness, and communication capabilities will enable Stanford's many populations to cope with the effects of a major disaster, such as an earthquake, more effectively.

## **Policies**

### **SCP-HS 19**

Consider emergency prevention and ability for emergency response in review of development projects on the campus with regard to access, seismic risks, flooding, fire, and other emergency issues.

### **SCP-HS 20**

Provide for adequate planning for risk reduction, immediate disaster, and post-disaster recovery.

## **Implementation Measures**

### **SCP-HS (i) 13**

Coordinate with Stanford and local jurisdictions in both reducing general risk levels and preparing for emergency response.

### **SCP-HS (i) 14**

Stanford shall prepare and maintain effective and feasible emergency plans for disaster response and recovery.

### **SCP-HS (i) 15**

Stanford shall promote coordination at the neighborhood level and within campus student housing areas to achieve improved earthquake or other disaster preparedness and response capabilities.

### **SCP-HS (i) 16**

Stanford shall communicate with all residents at least twice a year, informing them of current emergency preparedness and response plans applicable to their neighborhood.

### **SCP-HS (i) 17**

Stanford shall provide training and general public education for faculty, staff, and students regarding improved emergency preparedness and response.

### **SCP-HS (i) 18**

In coordination with other jurisdictions, Stanford shall periodically assess emergency preparation and recovery plans for adequacy as consistent with the Multi-Jurisdictional Hazard Mitigation Plan and the Santa Clara County Emergency Operations Plan (EOP) that is updated and revised on a 5-year cycle.

### **SCP-HS (i) 19**

In coordination with other jurisdictions, Stanford shall conduct emergency drills, training, and simulations on a periodic basis to enhance preparedness and make needed improvements to emergency response plans.

# Noise

## Background

The overall purpose of addressing noise in general plans is to limit the exposure of the community to excessive noise levels. Various kinds of noise generators, such as airports, roads, and train corridors, are identified, evaluated, and the noise levels generated are used to guide various kinds of land use planning and development decision-making processes.

Noise on or near the Stanford campus can affect both the campus population and residents of surrounding areas. Stanford lands inside the Academic Growth Boundary (AGB), like the surrounding area, are urbanized and contain a variety of noise sources. The most notable sources include transportation-related uses such as arterial roadways, railroad tracks, and airplanes, as well as construction projects and miscellaneous sources.

Noise sources on the campus include traffic on major campus streets and adjacent arterial roadways, construction noise, and operational noise sources, such as mechanical equipment, delivery vehicles, and garbage pickup. Noise sources also include athletic events at the University's outdoor athletic facilities, including Stanford Stadium and Sunken Diamond; performances and other events at Frost Amphitheater; and Life Flight emergency helicopter landings and takeoffs at Stanford University Medical Center. Noise from these sources is intermittent and often seasonal. Its potential for impact on off-site residences is a direct function of the responsible operation of these facilities.

In order to address some of these concerns, Stanford maintains a noise hotline accessible to the general public and campus residents twenty-four hours a day, seven days a week. The Noise Hotline operator captures noise complaint information and callers are offered forwarding to the non-emergency dispatch for a timely response to the noise disruption. If the caller does not want to be connected to the non-emergency dispatch, the complaint is logged and recorded for tracking purposes.

Growth at Stanford has the potential to increase noise on the campus and in the surrounding area through an increase in traffic and through additional construction related noise. It also increases the campus population which may be subject to sources of excessive noise.

The County of Santa Clara regulates noise under the standards identified in the County noise ordinance and noise element of the General Plan. The ordinance applies to all unincorporated lands, including those at Stanford University.

## Strategies, Policies and Implementation

### Strategy No. 8: Prevent or Minimize Excessive Noise

The effects of noise can be reduced through either minimizing or eliminating the noise itself or through land use and development that reduces the effect of noise. Some of the means of minimizing noise conflicts include:

- Reducing activities which create noise. Trip reduction at Stanford helps reduce roadway noise both on and off the campus.
- Locating noise sources away from sensitive noise receptors (such as residences) or, conversely, locating sensitive receptors away from noise sources in new development.
- Design and construction of buildings in a manner that reduces interior noise levels.

#### Policies

##### SCP-HS 21

Identify potential noise-producing uses and determine needs for mitigation using applicable County, local, and other government standards when evaluating proposals for new Stanford facilities.

##### SCP-HS 22

Locate new land uses and development projects to conform with County noise compatibility standards for land uses.

##### SCP-HS 23

Minimize noise from construction equipment and other operational sources, through engineering solutions, hours of operation, delivery schedules, and the location of specific noise sources as far away from sensitive receptors as possible.

#### Implementation Measures

##### SCP-HS (i) 20

Stanford shall provide noise buffers as needed and control excessive noise sources from future facilities.

##### SCP-HS (i) 21

Stanford shall comply with the County noise ordinance and other applicable standards.

##### SCP-HS (i) 22

Require that Stanford design and construct new buildings with soundproofing materials as necessary and appropriate.

##### SCP-HS (i) 23

Require that Stanford maintain a hotline/communication mechanism that members of the public can access to register noise complaints.



#### **SCP-HS (i) 24**

Stanford shall report on the number of noise complaints registered through their hotline as part of their annual report submitted to the County.

## **Law Enforcement**

### **Background**

The Stanford University Department of Public Safety historically has provided law enforcement services for the University under authority delegated by the County Sheriff. However, the County Sheriff is ultimately responsible for law enforcement on Stanford's unincorporated lands. The County and the Sheriff have the responsibility to ensure that the Stanford University Department of Public Safety is staffed with qualified personnel, provides necessary law enforcement information to the Sheriff, maintains an appropriate reporting relationship with the Sheriff's office, and complies with state laws and regulations regarding public access to law enforcement information.

### **Strategies, Policies and Implementation**

#### **Strategy No. 9: Provide Law Enforcement Oversight**

##### **Policies**

##### **SCP-HS 24**

The Stanford University Department of Public Safety may be permitted to undertake law enforcement activities on unincorporated Stanford lands if it enters into an agreement with the County Office of the Sheriff setting forth the terms and conditions under which the Stanford University Department of Public Safety will be authorized to undertake law enforcement activities.

##### **Implementation Measures**

##### **SCP-HS (i) 25**

The County Office of the Sheriff and Stanford will develop and maintain an agreement setting forth the conditions under which the Stanford University Department of Public Safety is authorized to undertake law enforcement activities on campus. The issues addressed in the agreement shall include, but not be limited to, adequate qualifications and training of Stanford University Department of Public Safety personnel, appropriate reporting relationships between the Stanford University Department of Public Safety and the Sheriff, complete and timely submission of law enforcement information to the Sheriff, and compliance with legal requirements regarding public access to law enforcement information.

##### **SCP-HS (i) 26**

The County, may as needed, undertake an evaluation of the effectiveness and adequacy of the

law enforcement agreement (*Memorandum of Understanding Regarding Police Services Between County of Santa Clara and Stanford University*) and negotiate any changes as deemed appropriate by the Board of Supervisors.

#### **SCP-HS (i) 27**

Stanford shall provide law enforcement service data that indicate the number of crimes reported by type, the number of crime prevention presentations and attendees, the number of sworn and non-sworn staff and the number of cases filed with the District Attorney's Office, the number of emergency and non-emergency calls received and the response time in minutes to those calls, the number of officer-initiated calls, and budgeted appropriations and staffing levels for law enforcement services. This shall be provided on the Stanford Municipal Services website, which is described in the Growth and Development Chapter of this document.

## **Social, Mental and Emotional Health**

### **Background**

Social, mental and emotional health is an integral aspect of overall health and directly impacts the quality of life of individuals, families, and communities on the Stanford University Campus. Within the context of family, community and culture, social and emotional health refers to a state in which a person is able to cope with everyday events, think clearly, be responsible, meet challenges, and have meaningful relationships with others.

Social and emotional health issues are perceived differently than physical illness. Varying socio-cultural norms may support or impede wellness. When serious mental illness occurs, individuals must cope with not only the symptoms and disabilities from their illnesses, but also the societal stigma attached to the disease that manifests in stereotypes and prejudice. As a result of both, people with mental illness lack access to opportunities that define a quality life, such as good jobs with access to good pay and benefits, safe housing, satisfactory health care, and affiliation with a diverse group of people.

The physical, social, and environmental factors that affect social and emotional health are specific to culture, race, and income. Experiences of racism and discrimination increase stress levels and threaten social and emotional health.

The policies and implementation plans established herein are adapted from the Health Element of the Santa Clara County General Plan, which was adopted by the Board of Supervisors on August 25, 2015. The applicable County Health Element policies are identified in parenthesis following each policy.

### **Mental Illness and Substance Abuse**

Mental illness and substance abuse are problems that severely compromise social, emotional, and physical health. More recently referred to as *behavioral health problems*, they include

schizophrenia, bipolar disorder, depression, and addiction to alcohol, illegal drugs (methamphetamines, heroin, hallucinogens, hazardous chemicals, etc.) or prescription drugs.

### **Tobacco/Nicotine and Vaping Use**

According to the Centers for Disease Control and Prevention (CDC), tobacco use is the leading preventable cause of disease, disability, and death in the United States. Cigarette smoking results in more than 443,000 premature deaths in the United States each year—about 1 in every 5 U.S. deaths—and an additional 8.6 million suffer with a serious smoking related illness. For every one person who dies from smoking, 20 more suffer from at least one serious tobacco-related illness.

### **Suicide**

Suicide is the 10th-leading cause of death in the United States, accounting for more than 36,000 per year and an even greater number of people attempt suicide. According to a CDC study, more than 2.2 million adults reported making suicide plans in the last year. Approximately 90 percent of all individuals who committed suicide met criteria for one or more diagnosable psychiatric conditions. Because considering that social, mental, and emotional health treatment providers are in regular contact with patients at risk for suicide, they are an important resource for early detection and prevention. Substance use disorders are also linked to suicide risk. Individuals with a diagnosis of abuse or dependence on alcohol or drugs are almost six times more likely to report a lifetime suicide attempt.

In Santa Clara County, suicide is the leading cause of death by fatal injury. While suicide is confounding, it is preventable, given effective education, services, and supports. Prevention for suicide must be focused on risk detection and reduction through a variety of means. The earlier treatment is sought, generally the better the outcome. In Santa Clara County, death by suicide is the 10th leading cause of death, the same as the national rate. Santa Clara ranks 54th out of California's 58 counties in the rate of adolescent self-inflicted injury. Death by suicide occurs, on average, every three days. There are two attempts and an estimated 14 suicidal behaviors every day in Santa Clara County.

## **Strategies, Policies and Implementation**

### **Strategy No. 10: Ensure Provision of Services, Policies, and Programs that address Social and Emotional Health**

#### **Policies**

##### **SCP-HS 25**

Stanford should expand and coordinate suicide prevention and intervention programs, including increasing suicide awareness and prevention through public messaging of availability of services (HE-B.31; HE-B.32).

### **SCP-HS 26**

Stanford should offer behavioral health services to individuals employed or living within the Stanford Community Plan Area, addressing areas such as mental illness and substance abuse and supporting and providing services to LGBTQ populations, culturally diverse and traditionally underrepresented communities, and veterans.

### **SCP-HS 27**

Encourage Stanford to be maintained as a smoke free campus and to take measures to limit access to tobacco, including providing services that implement tobacco cessation treatment services, banning smoke in public spaces, and encouraging onsite retailers to eliminate the sale of tobacco products, including electronic smoking devices (HE-B.20; HE-B.23; HE-B.24; HE-E.9).

## **Implementation Measures**

### **SCP-HS (i) 28**

Stanford shall improve its behavioral health and suicide prevention programs for its students and employees.

### **SCP-HS (i) 29**

Stanford shall provide annual information on behavioral health services that may include metrics that reflect the quality of services such as utilization rates and total number of users, percent of individuals accessing alternative health care (i.e. Kaiser or Blue Shield), and staffing levels.

### **SCP-HS (i) 30**

Stanford shall conduct an annual customer service survey of mental and behavioral health services to gauge program satisfaction levels of students, employees, and residents.

### **SCP-HS (i) 31**

Stanford shall implement the County ordinance requirements to ensure the campus remains a smoke free environment and restricts the sales of tobacco products.

## **Climate Change and Adaptation**

### **Background**

“Global warming”, “global climate change”, and “climate emergency” are the terms used to describe the increase in the average temperature of the earth’s near-surface air and oceans since the mid-20th century and its projected continued rise in temperature. It is estimated that global surface temperatures have increased approximately 1.33 degrees Fahrenheit (°F) over the last 100 years. Continued warming is projected to increase global average temperature between 2°F and 9.7°F over the next 100 years.

Greenhouse Gases (GHGs) naturally trap heat by impeding the exit of solar radiation that has reached the earth. Increases in GHG concentrations in the earth's atmosphere are the main cause of human-induced climate change. Some GHGs occur naturally and are necessary for keeping the earth's surface habitable. Increased GHG concentrations resulting from human activity such as fossil fuel burning and deforestation are believed to be responsible for most of the observed temperature increase.

Potential adverse impacts of global warming within California include an exacerbation of air quality problems, a reduction in quality and supply of water to the State from the Sierra snowpack, a rise in sea levels resulting in the displacement of coastal businesses and residences, damage to the marine ecosystems and the natural environment, and an increase in health-related problems

The Sierra snowpack, an important source of water supply for the state, has shrunk 10 percent in the last 100 years. It is expected to continue to decrease by as much as 25 percent by 2050. World-wide changes are causing sea levels to rise – about eight inches of increase has been recorded at the Golden Gate Bridge over the past 100 years – threatening low coastal areas with inundation and serious damage from storms.

Temperature projections show a warming trend across the Bay Area for the rest of the century. Although Santa Clara County has a milder climate than other areas of the State, it is expected to experience an increased number of extreme heat days. According to the California Department of Public Health's October 2013 Report entitled "Preparing California for Extreme Heat: Guidance and Recommendations," projections report San Jose will experience an estimated 71 extreme heat days by 2050 and 111 extreme heat days by 2099. Extreme heat poses severe danger to human health and is one of the most dangerous forms of natural disasters. It can cause a range of health problems, from rashes, dehydration, and cramps, to heat exhaustion or heat stroke, which can result in hospitalization and death. It can also worsen chronic conditions such as cardiovascular and respiratory disease.

Particular groups are at greater risk of heat-related health effects, including people living in poverty, seniors, pregnant women, young children, people with chronic conditions, the socially isolated, the disabled, and workers in outdoor jobs. Temperatures will also be greater in more densely developed urban areas with higher concentrations of materials such as asphalt and glass that intensify the heat. This urban heat island effect can be reduced by planting shade trees, maintaining urban canopy trees or urban forests, and creating cool roofing, including living roofs. Changes in temperature and precipitation may lead to expansion of insect and rodent populations, resulting in increases in vector-borne diseases such as Hantavirus, Lyme disease and West Nile virus.

In 2015, Bay Area Air Quality Management District (BAAQMD) estimated that annual GHG emissions in Santa Clara County for basis year 2011 were listed as 16.0 million metric tons of CO<sub>2</sub>e. As evaluated in the Environmental Impact Report (EIR) prepared for the 2019 General

Use Permit (GUP) application, total GHG emissions for Stanford University in 2018 were 125,672 metric tons of CO<sub>2</sub>e.

There has been a general decrease in GHG emissions attributed to Stanford over the last several years due to several factors. There have been ongoing improvements in the vehicle fleet as old vehicles are replaced with newer, cleaner vehicles, and existing regulatory standards that are resulting in lower emitting vehicles and cleaner fuels. In addition, Stanford has changed its energy systems, including an overhaul of its campus heating and cooling system in 2015, known as Stanford Energy System Innovations (SESI), which replaced Stanford's steam-based heating system with a hot-water based heating system, and replaced its cogeneration plant with a more efficient Central Energy Facility (CEF).

As part of SESI, Stanford now procures renewable electricity as a "Direct Access" (i.e. wholesale) customer of the California Independent System Operator (i.e., the California electric grid) via long-term contracts for output from two utility-scale solar projects. Stanford receives Renewable Energy Credits (REC) for the electricity produced, and these RECs offset the non-renewable energy GHG emissions Stanford consumes locally.

The 54-megawatt Stanford Solar-Generating Station ("SSGS1"), which began operations in 2017, is located in Kern County. The 63-megawatt Stanford Solar Generating Station 2 (SSGS2), which began operations in 2022, is located in Kings County and generates approximately 185,000 MWh/year and includes a 200 MW/50 MW battery energy storage system.

In addition, Stanford has rooftop solar panels on some of its buildings, including the Science and Engineering Quad and the Knight Management Center, providing approximately 5 percent of Stanford's total electricity use.

The policies and implementation plans established herein are adapted from the Health Element of the Santa Clara County General Plan, which was adopted by the Board of Supervisors on August 25, 2015. The applicable County Health Element policies are identified in parenthesis following each policy.

## **Strategies, Policies and Implementation**

### **Strategy No. 11: Plan for Climate Change and Adaptation**

#### **Policies**

##### **SCP-HS 28**

Greenhouse gas (GHG) reduction. Land Use and Transportation systems and programs at Stanford should be designed and implemented to reduce GHG emissions from mobile sources, such as reducing vehicle trips, vehicle use, vehicle miles traveled (VMT), vehicle idling, and traffic congestion. (HE-G.5).



**SCP-HS 29**

Renewable energy. Stanford should continue to obtain energy used within the Community Plan Area from renewable sources, including solar and wind turbines, on academic, academic support, and residential buildings (HE-G.11).

**SCP-HS 30**

Energy technologies. Stanford should evaluate potential adoption of advanced energy technologies to reduce greenhouse gas emissions (GHG), including integrated building systems, distributed generation, demand response programs, smart grid infrastructure, energy storage and backup, and electric transportation infrastructure (HE-G.12).

**SCP-HS 31**

Heat island mitigation. Ongoing development and redevelopment of lands within the Stanford Community Plan should incorporate, where feasible, urban greening and the use of green infrastructure to minimize the urban heat island effect (HE-G.16).

**SCP-HS 32**

Access to emergency cooling. Stanford should promote improved access to cooling during heat events, particularly for the most vulnerable populations. Measures can include on-site cooling, emergency generators, and cooling centers (HE-G.17).

**Implementation Measures****SCP-HS (i) 32**

Stanford should minimize new impervious surfaces in new development and incorporate greening, including landscaping, green roofs, green walls, and other aspects of biophilic (community greening) design into new development.

**SCP-HS (i) 33**

Stanford, the County, and City of Palo Alto should collaborate on the potential for the campus and surrounding areas to become an “EcoDistrict” utilizing sustainable urban systems. An EcoDistrict provides for district wide sustainability solutions at a larger scale than individual buildings. An EcoDistrict links energy, transportation, water and land use in an integrated, efficient resource system.

# Acknowledgments

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